Medical Education in Thailand: Past, Present and Future

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Scope

- General information
- History of western medicine in Thailand

- Present medical education
- Works in Khon Kaen Hospital

- Future of medical education in Thailand

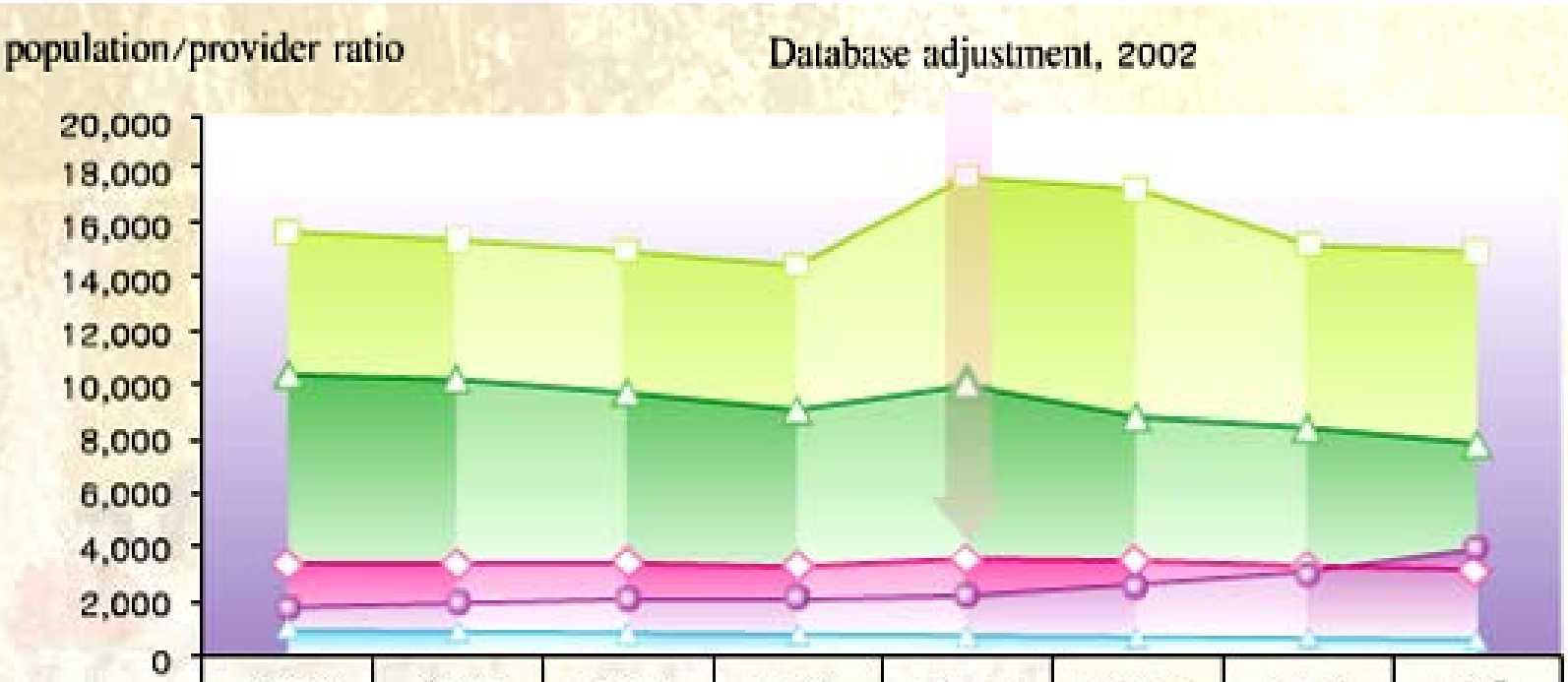
Thailand in General

- Population 65 millions
  - 67% age 15-64
  - 32% of population living in urban area
- Ethnic groups: Thai 75%, Chinese 14%, others 11%
- Lower middle income country
- Language: Thai
- Religion: Buddhism

Health Information

- Death rate 7.17: 1,000 population
- Birth rate 13.57: 1,000 population
- Maternal mortality: 44: 100,000 population

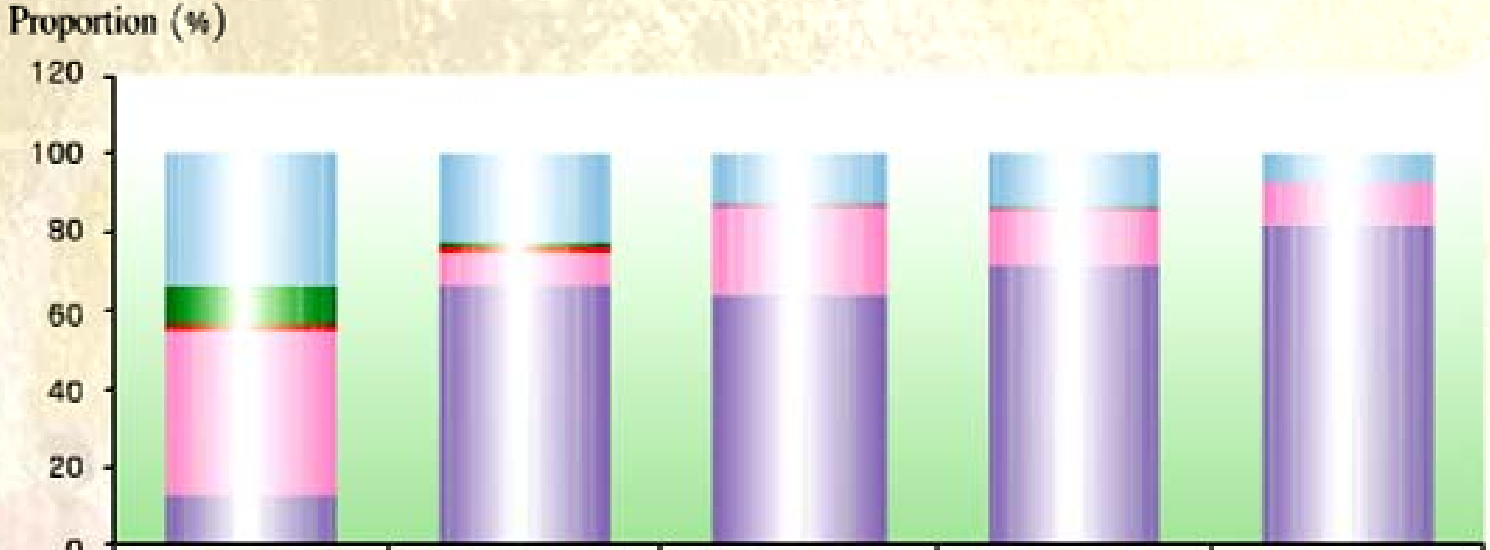
Ratios of population to healthcare provider, 1998-2005



	1998	1999	2000	2001	2002	2003	2004	2005
Pop./Doctors	3,406	3,395	3,427	3,277	3,569	3,476	3,305	3,182
Pop./Dentist	15,613	15,295	14,917	14,384	17,606	17,182	15,143	14,901
Pop./Pharmacist	10,346	10,158	9,676	9,054	9,948	8,807	8,432	7,847
Pop./Profes. Nurse	960	905	870	796	739	687	652	613
Pop./Technical Nurse	1,806	1,952	2,096	2,080	2,233	2,625	3,085	3,910

Source: Report on Health Resources Survey, Bureau of Policy and Strategy, MoPH.

Proportions of doctors by region, 2005



	Bangkok	Central	North	South	Northeast
Private sector	33.8	23.4	12.9	13.9	7.0
Local agencies	9.9	0.1	0.3	0.2	0.1
State enterprises	1.5	1.5	0.3	0.0	0.03
Other ministries	42.5	8.9	22.5	14.5	10.9
MoPH	12.4	65.9	64.0	71.4	81.9

Source: Report on Health Resources Survey, Bureau of Policy and Strategy, MoPH.

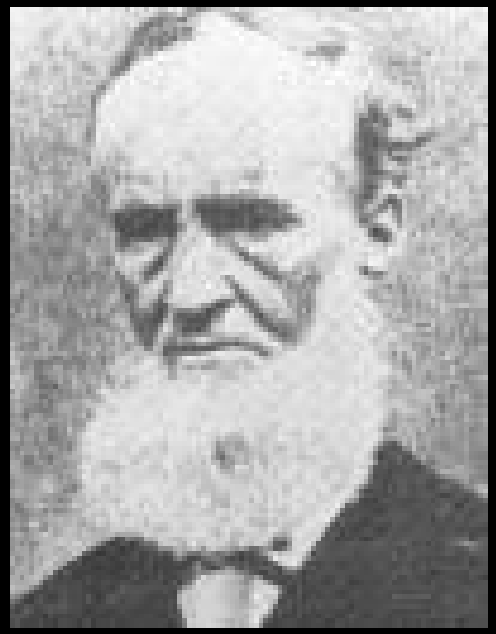
History of Western Medicine in Thailand

- In 1752 King Narai, Ayudhaya initiated diplomatic relations and trade with French King Louis XIV
- A small western hospital was constructed and maintained by missionaries

Charuluxananan S, et al. Asian Biomedicine 2007; 1(1): 97-101

Return of Western Medicine in Thailand

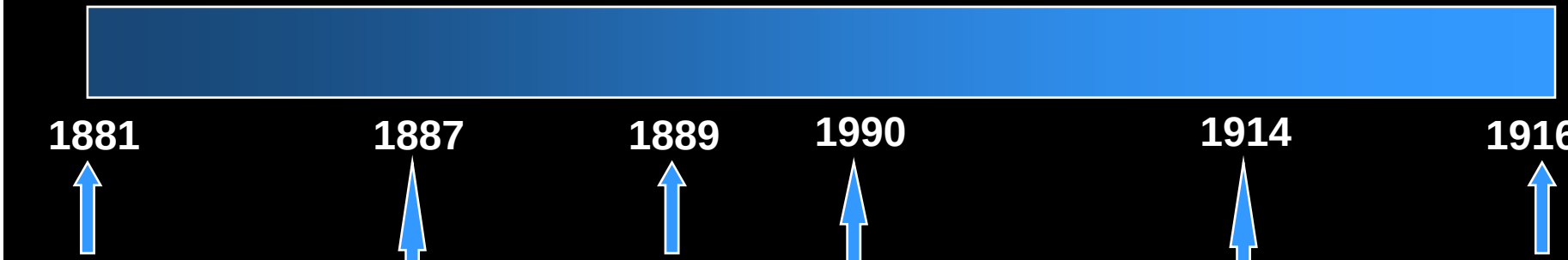
- An American doctor arrived Siam on 1835
- Provided medical care
  - Cholera
  - Pioneer small pox vaccination
  - 1st surgery
  - 1st blood transfusion
- Translated 1st Obstetrics book into Thai



Dr. Dan Beach Bradley (1804-1873)

Charuluxananan S, et al. Asian Biomedicine 2007; 1(1): 97-101

Early Hospitals and Medical Education in Thailand



1881 — Temporary hospitals were built for treatment of cholera outbreak

1887 — King Chulalongkorn donated a piece of land and money for the construction of Siriraj Hospital

1889 — The 1st medical school opened (3 yr course)

1990 — Opening of the "Royal Medical College"

1914 — The founding of King Chulalongkorn Memorial Hospital

1916 — Chulalongkorn University was upgraded from a school and established the Faculty of Medicine, Siriraj Hospital

Prince Mahidol of Songkla
“The Father of Thai Modern Medicine”

From 1923 Prince Mahidol..

- Upgraded the teaching of Biology, Physics and Chemistry
- Developed curricular
- Ensured up-to-date equipments
- Oversaw laboratories and classroom buildings construction

The Hippocrates Oath

- In 1930
- The first ceremonial awarding of the 1st degree graduates of the medical school
- The graduates took the Oath for the first time

The First Thai National Conference on Medical Education

- November 1956
- Only 2 medical schools, 280 graduates/yr
- Doctor: population = 1:8,000

Conclusion

- Curriculum
  - Should not attempt to teach a detailed systematic knowledge of all fields of medicine
  - Integration between basic and clinical sciences
- There was an urgent need for more medical schools

Present Medical Education

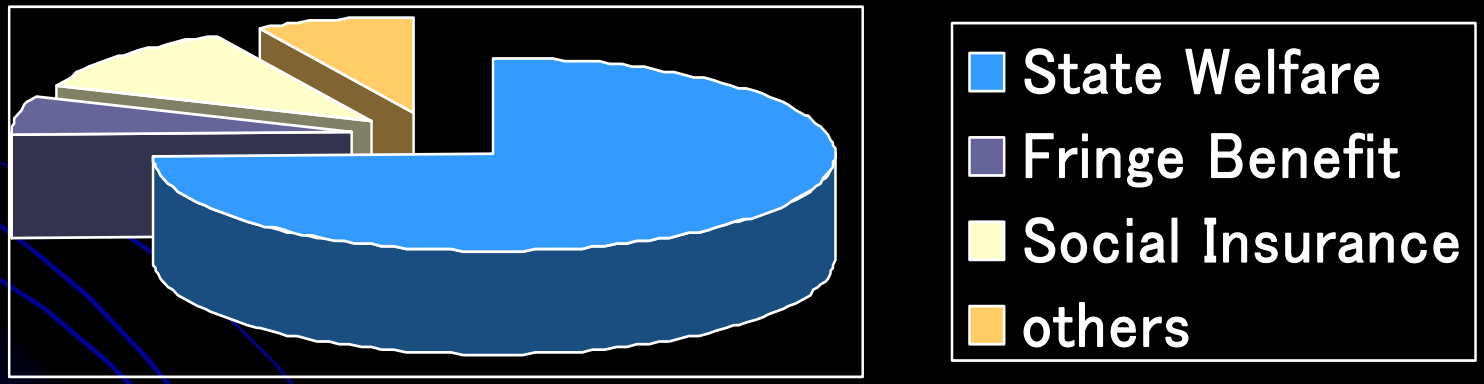
- 17 faculties of medicine as parts of the universities
- 1995 Collaborative Project to Increase Production of Rural Doctor (CPIRD) has been launched
- 23 new medical education centers at provincial and regional hospitals
- To increase medical doctor graduates up to 3,000 per year

Thailand Health Care System

- 2001 Thailand encountered a major health care reform
- Universal coverage scheme namely “30 Baht treat all”
- Decentralization to primary health care
- Hospital accreditation scheme

Thailand Health Profile 2005-2006; Ministry of Public Health

Universal Health Security Scheme



Levels of Hospital

- Primary care unit (PCU)
- Community hospital (30-120 beds)
- Provincial hospital (120-300 beds)
- Regional hospital (600-800 beds)
- University hospital (800-1000 beds)

Primary care

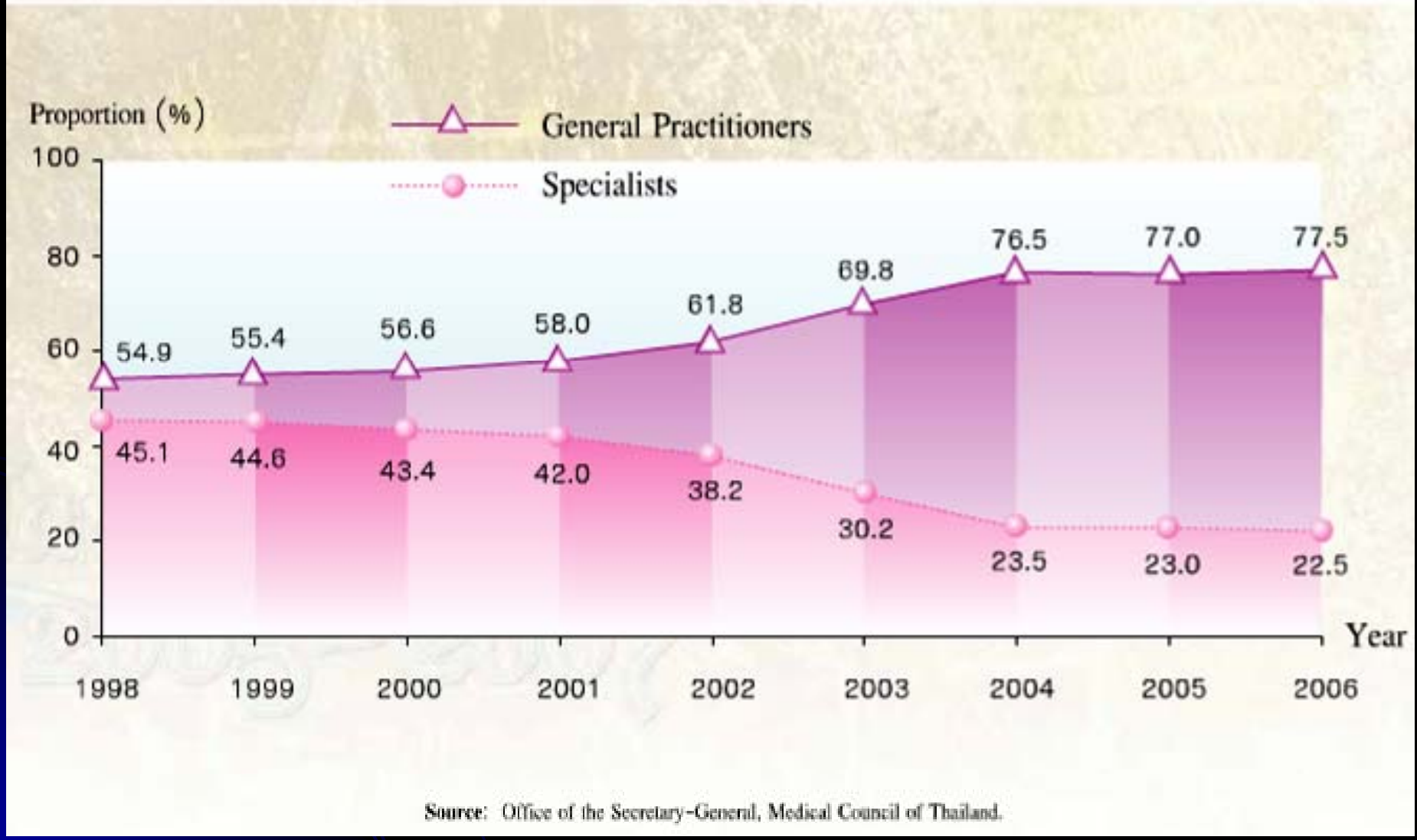
Secondary care

Tertiary care

Medical Education in The New Era of Health Care System

- **Undergraduate medical education**
  - To serve the government's health care plan
  - Under supervision of the Medical Council of Thailand
- **Postgraduate medical education**
  - Specialist training
  - Under supervision of professional organizations and the Medical Council of Thailand
    - The Royal College of Medicine
    - The Royal College of Surgery, etc.

Proportions of medical general practitioners and specialists, 1998-2006

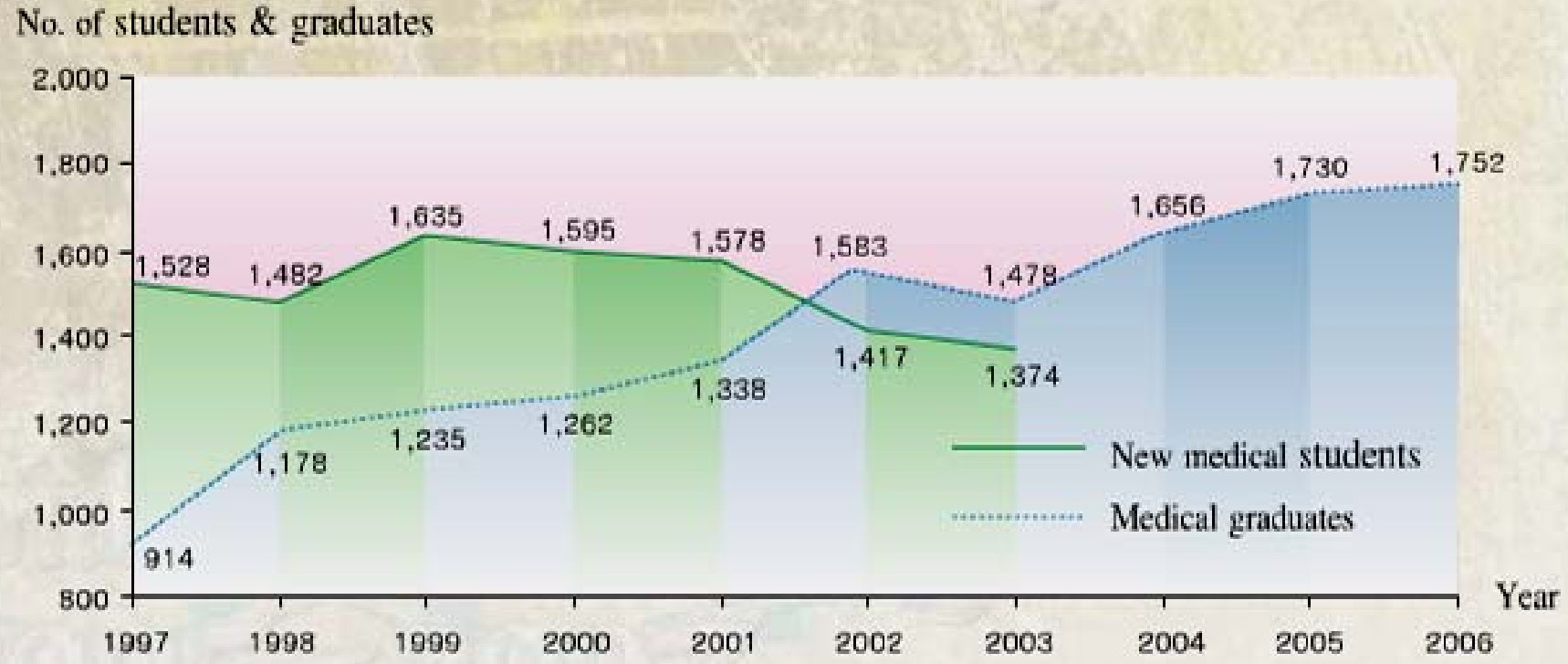


Source: Office of the Secretary-General, Medical Council of Thailand.

Undergraduate Medical Education

- A 6-year program
- Traditional curriculum
  - Discipline-based
  - 3 Preclinical years
  - 3 Clinical years
- New track
  - A 4-year program
  - Biomedical sciences graduate
  - 1 Preclinical year
  - 3 Clinical years

Numbers of medical student admissions and newly graduated doctors, 1997-2006



Sources: Student admissions data, from the Bureau of Policy and Planing, Office of the Higher Education Commission (HEC).

Notes: Number of medical students actually admitted.

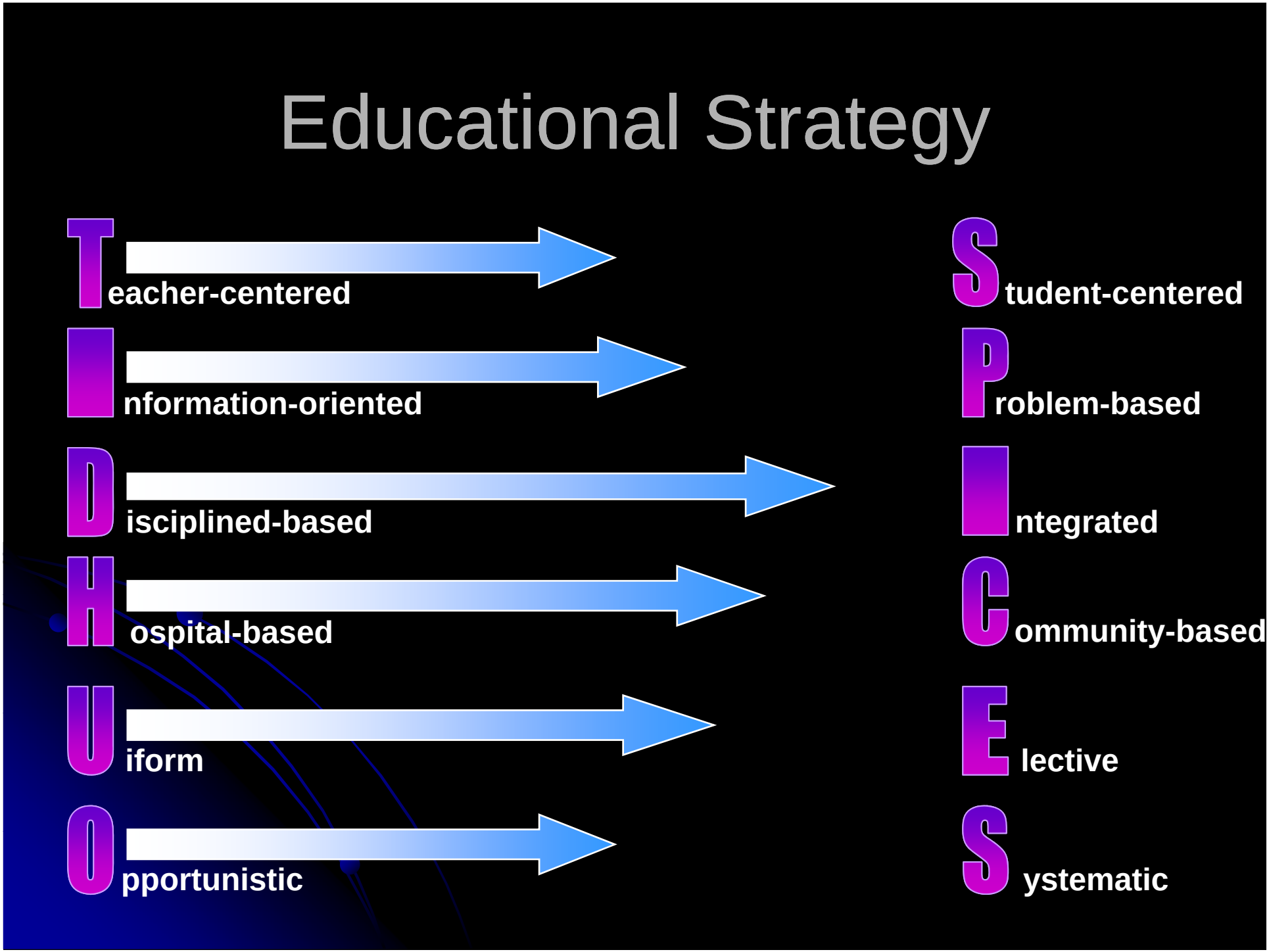
Medical graduates data, from the Medical Council of Thailand and the Project on Increased Production of Medical Doctors for Rural People, MoPH.

Notes: Number of medical graduates registered with the Medical Council of Thailand.

Planned admissions of medical students in Thailand, 2004-2013

Source: Bureau of Policy and Planning, Office of the Higher Education Commission.

Educational Strategy



Student Admission

- New students 288 per year
- Aptitude test: written examination
- Attitudes evaluation
- Personality test
- Interview
- Physical examination

New Outcome-Based Curriculum

1. Scientific knowledge, skills in medicine and professional attitudes
2. Holistic approach to treatment and prevention of diseases
3. Leadership, collaboration and consultation
4. Continuous professional development
5. Using evidence-based medicine
6. Communication and interpersonal skills

Learning Strategy

INSPIRED educational strategy

- IN = Integration
- S = Systematic
- P = Problem-based learning
- I = Interpersonal skills
- R = Research exposure
- E = Evidence-based medicine
- D = professional Development

Year	1st trimester	2nd trimester
1st	• Life and life cycle + Lab • Life and environment • Learning process • Man., society and culture • English for health sciences • Art, design, music and creative thinking • Elective	• Life and life cycle • Life and environment + lab • General principles for medical sciences • Professional development • English for health sciences • Elective
2nd	• General principles for medical sciences • Skin and related connective tissues • Hematopoietic and lymphoreticular system • English for health sciences	• Musculoskeleton system • Nervous system • Gastrointestinal system and nutrition • Endocrine system
3rd	• Urinary system • Reproductive system • Respiratory system • Community and Family medicine	• Cardiovascular system • Correlated basic medical sciences and clinical sciences • Introduction to clinical sciences • English for health sciences • Elective

Clinical Years

Major subjects

- Medicine
- Surgery
- Pediatrics
- Obstetric and Gynecology
- Orthopedics
- Community and Family medicine

Minor subjects

- Forensic medicine
- Rehabilitation
- Psychiatry
- Opthalmology
- Ear, nose and throat
- Anesthesiology
- Clinical radiology

Assessment

- Written examination: MCQ, MEQ, Essay
- Clinical competency: OSCE, Long case examination
- Professional attitude: direct observation

National Licensing Examination

- The Medical Licensing Examination of Thailand (MLET) was launched in 2007

- 3 steps
  - Basic sciences examination (MCQ)
  - Clinical sciences examination (MCQ)
  - Clinical skills examination (OSCE)

After Graduation

- Internship 1 yr in provincial or regional hospital
- Working in rural area (community hospital) for another 2 yr
- Fine 1.2 million yens

Postgraduate Medical Education

- Under supervision of professional organizations and the Medical Council of Thailand
- Quality assurance scheme
- 3-5 years on-the-job training program
- National Board Examination for licensing
  - 35 Board-certificate for specialty
  - 35 Sub board-certificate for subspecialty

What We Do in Khon Kaen Hospital

- Medical ethics OSCE has been used since 2004
- To evaluate student's
  - awareness and attitudes in medical ethics
  - communication skills

Medical Ethics OSCE

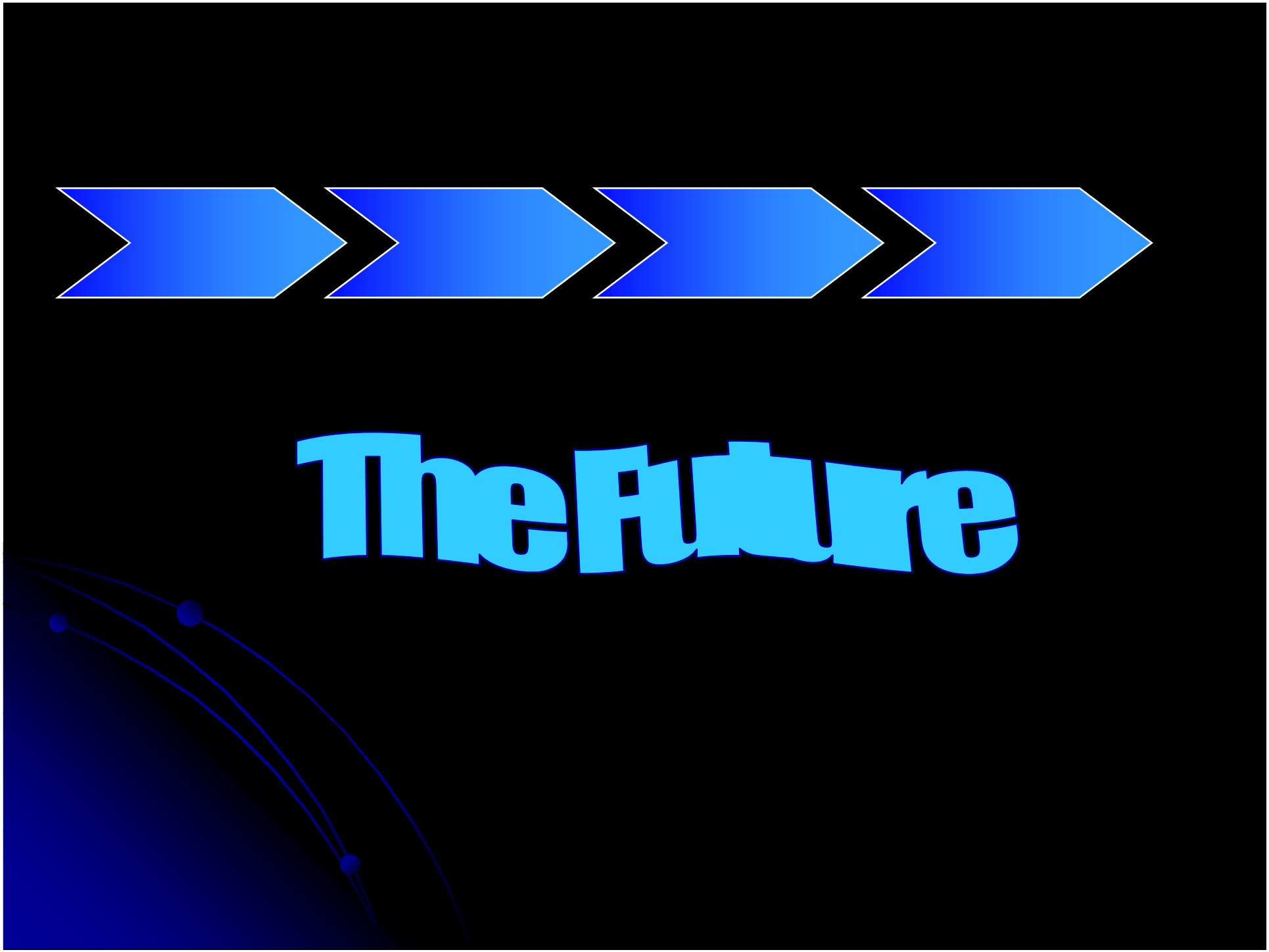
- 15 stations
  - VCD stations: medical ethics attitudes
  - Simulated patients stations: medical ethics attitudes + communication skills
- Scored by 2 examiners using check lists

Medical Ethics OSCE and Workplace Performance

- 22 rural doctors (31.9%) were visit and assessed.
  - 13 were assessed 1 year after graduation
  - 9 were assessed 2 years after graduation
- Workplace performance was assessed using..
  - Questionnaire by Self, Peer doctors, Nurses, Other healthcare workers
  - Medical record audit
  - Patient interview

Conclusion from the Study

- Although there was no correlation between medical ethics OSCE and professional performance scores, the OSCE perceived to be helpful
- The rural doctors' performance at workplace were rated high among other doctors, healthcare workers and patients
- Overall performance of rural doctors were good as shown by medical record audit and patient interview


The Future

Challenges

- Shortage of doctors in rural area
  - Produce more doctors
  - Need more medical educators
  - New medical schools
- Decentralization of doctors to community
- Teaching and assessing professionalism

The Need for More Medical Teachers

Increase the number of new doctors

Need more medical teachers

Increasing number of new medical schools

Staff Development Plan

Staff Development

- Government fund for oversea studying of medical education
- Local medical education conference and workshop
  - CPIRD conference yearly
  - Exploratory course
    - New teacher 2 times/yr
    - Pro teacher 2 times/year
    - Assessment 1 time/ye
- International conference
  - AMEE
  - OTTAWA
  - AMPEC

Decentralization of Doctors

- Incentives for doctors in rural areas
  - Additional payment
  - Career path opportunity
- More community-based learning
- Encourage more training of family doctor

Teaching and Assessing Professionalism

- Increase social expectation
- Changes in doctor-patient relationship
- **Increasing lawsuit**

- More effective teaching strategy
- Long-term assessment of professionalism

Thank You for Your Attentions