Challenges in the pathological assessment of cancer (in the low & middle income countries)

By

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CONTRIBUTION OF PATHOLOGY TO CANCER CARE

- **Screening**
  - Early detection of cancer and premalignant conditions

- **Diagnosis**
  - Classification and subtyping
  - Prognostic and predictive indicators

- **Monitoring**
  - Adequacy of treatment
  - Recurrence
  - Complications

- **Research**
  - Aetiology
  - Cancer pathways
  - Clinical trials
Cancer assessment is resource demanding

- All branches of pathology
  - Staff adequacy & training
  - Techniques
    - Basic to mutational analyses
  - Quality assurance
  - Funding & infrastructure
Challenges for Pathology in Low and Middle income countries (LMIC) are particularly acute

- **Inadequate investment in pathology**
  - Pathology competing poorly for health budget
    - Inadequate infrastructure
    - Inadequate diagnostic repertoire
    - Inadequate training

- **Brain drain from poorer to richer communities**
  - Within countries
  - Between countries

Health is a fundamental right! Pathology services has pivotal role in health & disease

How do LMIC catch up with the rest of the world?
Development of Pathology Laboratory Services in Malaysia: A story of capacity building & advocacy

Training
Accreditation
Legislation
Professional engagement
International collaboration
Ethnic distribution
- 50.1% Malay
- 22.6% Chinese
- 11.8% Indigenous
- 6.7% Indian
- 8.8% other

Population: 30 million

Independence from the United Kingdom
- Federation of Malaya - 31 August 1957
- Malaysia (Peninsular Malaya, Sabah, Sarawak, Singapore) - 16 September 1963
- Expulsion of Singapore - 9 August 1965

GDP (2014) in USD
- Total $338.10 billion
- Per capita $7304.14
Training of pathologists

- **Upon independence (1957)**
  - IMR lost expatriate officers (75% of staff)
  - Rapid growth of medical and laboratory services
  - Shortage of pathologists

- **Immediate post-independence era**
  - Training via DCP (London) or MRCPath (UK)
  - Expensive; unable to keep up with country’s needs
  - Local Master of Pathology (MPath) programmes
  - UM (1973), UKM (1988), USM (1992); UPM, UiTM

- **Model against international practices**
  - 1987- MPath conversion from 2-yr to 4-year fulltime programmes
  - Train mono-discipline pathologists at FRCPath level
  - Mandatory research project

Pivotal role of Universities & international connections
**Human Resource Development**

- **1994: 120 medically-qualified pathologists; 10% private practice**
  - 1994: Landmark workshop between MOH and Universities
  - Acknowledged that production of pathologists not meeting national needs.
  - Strategy: Utilize accredited Departments of Pathology of MOH hospitals as training ground
  - Recruit MOH pathologists into training Faculty
  - Step-up production of pathologists

- **2007: 300 medically-qualified pathologists; 150 trainees**
  - Population >25 million; Pathologists: Population ratio 1:90,000
  - Target for 2010: 1: 75,000

- **Today: >500 medically-qualified pathologists**
  - Population 30 million; Pathologists: Population ratio 1:60,000

- **Training for other LMICs**
  - Sudan, Yemen, Iran, Sri Lanka, Myanmar.
A rapidly expanding market!

- 2006: 240 million pathology laboratory tests
  - 46% in MOH, 10% in University hospitals, 44% in private laboratories
  - Private sector: > 200 labs; > 40 pathologists

- Concerns over Quality
Established through Standards of Malaysia Act, 1996

Accreditation functions
- Accreditation services to certification bodies & testing organizations
- Identify & develop accreditation schemes needed by country
- Liaison with similar overseas bodies
- Develop mutual recognition arrangements to enhance Malaysian competitiveness
- Signatory to APLAC and ILAC

Accreditation of certification bodies (ACB)

Skim Akreditasi Makmal Malaysia (SAMM)
- Good track record since 1990
- Expanded to Medical testing laboratories in 2004
College of Pathologists
Academy of Medicine Malaysia
supports Accreditation

- **Sole Professional body of medically qualified specialist pathologists in Malaysia (since 1975)**

- **Objectives**
  - To promote and maintain the highest moral, ethical and professional standards in pathology practice
    - Quality & appropriate practices
    - Scientific advances & Research
    - Continuing professional development
    - Postgraduate education & training
    - Public education
Development of MS/ISO 15189

- Memorandum of Understanding between DSM and College of Pathologists, Academy of Medicine Malaysia in late 2002
Steps in development of MS/ISO 15189

- Public forum in December 2003
  - Need for accreditation of Medical Testing Laboratories
  - Rationale for adoption of ISO 15189

- Training of 20 lead assessors & 60 technical assessors throughout 2004
  - Collaboration with CPath
  - Training by IANZ
  - Writing of specific documents

- Launch of MS/ISO 15189 in December 2004
Development of 6 Professional Practice Guidelines by CPath by April 2005

- Retention of Pathology Records and Materials
- Minimum qualification, training and experience of professional personnel working in a pathology laboratory
- Laboratory construction and design
- Maintenance and operation of equipment in a pathology laboratory
- Safe laboratory practice
- Sample management
Advocacy for legislative regulation of pathology laboratories

- **1983:** Memorandum to MOH by Malaysian Society of Pathologists - need for legislative control of laboratories
- **Annual dialogues with Minister of Health**
- **Consultations with relevant professional bodies & stakeholders (1997 & 2000)**
  - Malaysian Association of Private Medical Laboratories
  - Malaysian Institute of Medical Laboratory Scientists (MIMLS)
  - Malaysian Society of Clinical Biochemists
  - Malaysian Medical Association (MMA)
  - Federation of Private Med Practitioners Association Msia
  - Others
- **Issues raised (2001-2006)**
  - MMA wants Labs to conform to fee schedule
  - Discrepancies in test results from different labs
  - Controversies over “Walk-ins”
  - Abuse of screening tests; test vouchers; etc
  - Support for Pathology Act: “Why the delay?”
Legislation:
The Pathology Laboratory Act 2007

- What the Pathology Act sought to ensure
  - Lab is accountable to the public
  - Lab meets required standards of practice
  - Participate in QA programmes
  - Run by qualified staff
  - Comply with safety requirements
  - Subject to continuous audit

- Requirements are similar to Accreditation, but backed by legislation
Landmark Developments

- National Accreditation Standard for Medical Testing Laboratories (MS ISO 15189) - 2004
- National guidelines for Good Laboratory Practice – CPath 2005
- Pathology Act 2007
- QA programmes - MOH, LABQAS (CPath-MIMLS), MEQAS (CPath-AMM)
- Malaysian Journal of Pathology
  - Encourage research; now 38th year and ISI
What is WASPaLM?

- **A global network of physician-led Pathology Societies**
  - 1947: Founded in Paris

- **Global geographical distribution**
  - 45 Societies in 34 countries
  - North America (4)
  - South America (7)
  - Europe (19)
  - Asia (12)
  - Australasia (1)
  - Africa (2)

- **Elected Bureau**
  - President
  - Vice-President
  - Secretary-Treasurer
  - Regional Directors
    - North America
    - Latin America
    - Europe
    - Asia
    - Australasia
    - Africa
  - 4 Directors-at-large
Objectives of WASPaLM

● **Mission**
  ◆ To promote health throughout the world by promoting the teaching and practice of all aspects of Pathology/Laboratory Medicine

● **Goals**
  ◆ To promote education, research and international quality standards, through WASPaLM Committees & Secretariats, and the World Pathology Foundation
  ◆ To promote high quality, cost effective medical laboratory services
  ◆ To encourage the formation of, and cooperation between, societies of Pathology and Laboratory Medicine throughout the world
  ◆ To foster cooperation between WASPaLM and other international health organisations
What WASPaLM does

- **Voice of Pathology**
  - World Health Organisation
  - International Health Terminology Standards Development Organisation (IHTSDO)
  - ISO/TC 212
  - Others through constituent members e.g. *International Collaboration on Cancer Reporting*

- **Collaborations with related professional bodies**
  - International Federation of Clinical Chemistry & Laboratory Medicine (IFCC)
  - Asia-Pacific Federation of Clinical Biochemistry (APFCB)
  - Labs -are-Vital
What WASPaLM does

- **Capacity-Building**
  - Education for countries-in-need
    - Seminars and workshops in South-East Asia, Sri Lanka, India, Middle-East and Africa
    - WASPaLM provides seed grants
    - Expertise contribution from strong/donor Societies
    - Ground support from recipient/hosting Societies
Educational Workshops/Symposia in Countries-in-need

- 2003: Vellore, India
- 2004: Sri Lanka
- 2005: New Delhi, India
- 2006: Bangalore, India
- 2007: Pune, India
- 2008: Penang, Malaysia
- 2009: Muscat, Oman
- 2010: Chandigarh, India
- 2011: New Delhi, India
- 2012: Sri Lanka, Malaysia
- 2014: Khartoum, Sudan
- 2015: Yangon, Myanmar

- **Intensive workshops & seminars to enhance expertise**
  - Areas of need decided with recipient countries
  - Attendance often >200 participants
  - Draws participants from neighboring countries
WASPaLM Education and Visiting Lecturer Programme (2012-)

- **Funds for visiting faculty travel to educational programmes organised through WASPаLM Constituent Societies**

- **Seminars/ Symposia**
  - Luthuania, Cyprus, Turkey, Malaysia, Riyadh, Indonesia, Sudan, Myanmar
Gordon Signy Fellowships (1975-)

- Enable young pathologists from countries with limited resources to visit centres of renowned excellence to acquire special skills and expertise
- 50 beneficiaries from 22 countries esp. LMIC: Fiji, Nigeria, India, Malaysia, Jordan, Hungary, Hong Kong, Yugoslavia, PR China, Tanzania, Thailand, Brazil, Iran, Zimbabwe, Turkey, Bulgaria, Peru, Lithuania, Sri Lanka, Mongolia, Ethiopia, Cameroon, Nepal.

“Mediator of Pathology Knowledge between those who generate it and those who need it” Robby Bacchus, WPF President
The 29th
World Congress of World Association of Societies of Pathology and Laboratory Medicine

The 64th
Annual Meeting of Japanese Society of Laboratory Medicine

Contribution to Medical Innovation of the Next-Generation

President
Masami Murakami, MD, PhD
Department of Clinical Laboratory Medicine
Gunma University Graduate School of Medicine
Maebashi, Japan

Date  November 14 (Tues) - 19 (Sun), 2017
Venue  Kyoto International Conference Center, Kyoto, Japan
Thank you!