Medical Education in South Africa: IS THE CURRICULUM FIT FOR PURPOSE?

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Is the curriculum fit for purpose?

a) Yes
b) No
c) Maybe
d) Somewhat
e) It depends
f) All of the above
g) None of the above
What does curriculum mean?

Whose opinion counts?

Fit for what purpose?
WHO HAS AN INTEREST OR INFLUENCE IN THE CURRICULUM?
WHAT IS A CURRICULUM?
WHERE DID THE CURRENT CURRICULUM COME FROM?
### Opportunistic Apprenticeship

Teacher-centred

- Scientific
- Systematic
- Silos

Learner-centred

- Integration
- PBL

Patient-centred

- Competency
- Contextual
- Interprofessional

#### 100+ Years of Modern Medical Curricula

<table>
<thead>
<tr>
<th>INFORMATIVE</th>
<th>FORMATIVE</th>
<th>TRANSFORMATIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1890's</td>
<td>1910</td>
<td>1940</td>
</tr>
<tr>
<td>1960</td>
<td>1970</td>
<td>1990</td>
</tr>
<tr>
<td>2010</td>
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</table>

**Stages:**

- **1890’s:** Clerks
- **1910:** Clinical psychology
- **1940:** Community health
- **1960:** Social accountability
- **1970:** Self-directed learning
- **1990:** Competency-based learning
- **2010:** Interprofessional teamwork

**Curricular Models:**

- **Informative:** Clerks
- **Formative:** Clinical psychology
- **Transformative:** Community health

**Educational Paradigms:**

- **Social Accountability:** Community health
- **Cognitive Psychology:** Clinical psychology
- **Community Health:** Self-directed learning
- **Social Accountability:** Competency-based learning

**Educational Approaches:**

- **Opportunistic Apprenticeship:** Informative
- **Teacher-centred:** Formative
- **Learner-centred:** Transfomative
William Osler (1849 – 1919)

- Father of modern medical education
- Clinical clerkships

- “As is your pathology, so is your medicine”

- “The good physician treats the disease; the great physician treats the patient who has the disease”
Abraham Flexner

- Systematic, scientific
- Holistic patient care
Sydney & Emily Kark

- Rural Natal
- Primary care
Cognitive psychology

- How do we learn?
- How can we support/facilitate student learning?
Alma Ata

- Primary Health Care
- Community-based/oriented learning
WHO : Social accountability

- Pentagon of stakeholders
- Conceptualisation, Production, Utility
CanMeds

- Medical expertise Plus
- Core competencies
Frenk, Chen et al

- Curriculum transitions
- Partnerships between Health and Education
- Interprofessional Education and Practice

The Lancet

Health professionals for a new century: transforming education to strengthen health systems in an interdependent world
WHAT IS “FIT FOR PURPOSE”?
fit-for-purpose
Adjective (comparative more fit for purpose, superlative most fit for purpose)
1. (UK) appropriate, and of a necessary standard, for its intended use

HPCSA Core Competencies

- Healthcare Practitioner
- Collaborator
- Leader & Manager
- Health Advocate
- Scholar
- Professional
- Communicator
As healthcare practitioners, healthcare professionals integrate all of the graduate attribute roles, applying profession-specific knowledge, clinical skills and professional attitudes in their provision of patient/client-centred care. The healthcare practitioner is the central role in the framework of graduate attributes.
As communicators, healthcare professionals effectively facilitate the carer-patient/carer-client relationship and the dynamic exchanges that occur before, during and after interventions.
3. ROLE: COLLABORATOR

As collaborators, healthcare professionals work effectively within a team to achieve optimal patient/client care.
4. ROLE: LEADER AND MANAGER

As *leaders and managers*, healthcare practitioners are integral participants in healthcare organisations, organising sustainable practices, making decisions about allocating resources, and contributing to the effectiveness of the *healthcare system*. 
As health advocates, healthcare professionals responsibly use their expertise and influence to advance the health and well-being of individuals, communities and populations.
As scholars, healthcare professionals demonstrate a lifelong commitment to reflective learning as well as the creation, dissemination, application and translation of knowledge.
As *professionals*, healthcare professionals are committed to ensure the health and well-being of individuals and communities through ethical practice, profession-led self-regulation and high personal standards of behaviour.

**7. ROLE: PROFESSIONAL**
**NO CURRICULUM IS NEUTRAL**

| WHERE IS THE POWER? |  |
|--------------------|-----------------
| Tertiary care      | Primary care   |
| Medical doctors    | Allied health  |
| Private health     | Public health  |
| Urban              | Rural          |
| Specialists        | Generalists    |
| Curative           | Preventative   |
THE NATIONAL CURRICULUM PROJECT

• Does the curriculum respond to the local need?
• Can students independently manage the common cases they will encounter at entry to internship?
• Do students have the appropriate skills?
• How consistent are curricula nationally?
Databases

1. Management of non-acute conditions
2. Management of emergencies
3. Procedures & Skills

<table>
<thead>
<tr>
<th>Level</th>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>T</td>
<td>Independent management by intern</td>
<td>The patient is primarily managed by the intern. He/she is expected to make a diagnosis with basic tests, manage the patient independently using guideline-based care, and discharge.</td>
</tr>
<tr>
<td>L1</td>
<td>Management by intern with support</td>
<td>The patient is primarily managed by the intern. He/she is expected to make a diagnosis with basic tests; manage the patient independently using guideline-based care, and consult a more senior doctor in the event of poor progress, complications or recurrence.</td>
</tr>
<tr>
<td>L2</td>
<td>Management by intern under direct supervision</td>
<td>The patient is primarily managed by the Registrar or MO, working through the intern. The intern is expected to make a provisional diagnosis utilising relevant investigations available at the district hospital, and then investigate and manage the patient further as instructed by a senior.</td>
</tr>
<tr>
<td>L3</td>
<td>MO/registrar management pending referral</td>
<td>The patient is primarily managed by the Registrar or MO, pending handover or referral for specialist care. The intern is expected to consider the possibility as part of a differential diagnosis and then assist a senior in preparing the patient for transfer or referral for specialist investigation or care.</td>
</tr>
<tr>
<td>X</td>
<td>Specialist management</td>
<td>No knowledge expected of average intern; distinction graduates may know about the condition.</td>
</tr>
</tbody>
</table>
NON-ACUTE DATABASE CATEGORIES

- ANAESTHESIOLOGY
- GYNAECOLOGY
- INTERNAL MEDICINE
  - Cardiology
  - Dermatology
  - Endocrinology
  - Gastroenterology
  - Haematology
  - Hepatology
  - Infectious diseases
  - Metabolic
  - Nephology
  - Neurology
  - Pulmonology
  - Rheumatology
- NEONATOLOGY
- OBSTETRICS
- ORTHOPAEDICS
- PAEDIATRICS
  - Cardiology
  - Dermatology
  - Endocrinology
  - Gastroenterology
  - Haematology
  - Hepatology
  - Infectious diseases
  - Nephology
  - Neurology
  - Pulmonology
  - Rheumatology
- PSYCHIATRY
- SURGERY
- SURGICAL SPECIALTIES
  - Neurosurgery
  - Ophthalmology
  - Otorhinolaryngology
  - Paediatric
  - Urology
EXAMPLE: PAEDIATRICS - Cardiology

Level L1. Management by intern with support

Rheumatic fever, acute

Level L2. Management by intern under direct supervision

Pericarditis
Myocarditis
Hypertension, chronic
Endocarditis, infective

Level L3. MO/registrar management pending referral

Pericardial effusion
Tetralogy of Fallot
Hypertension in children Heart failure
Dilated cardiomyopathy
Cyanotic congenital heart disease: hypoxaemic spells
### MANAGE ACUTE EMERGENCIES: LEVELS

<table>
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</table>
| E1    | **Acute problem for management by intern with support**  
The patient is **primarily managed by the intern**. The intern is expected to make a diagnosis, request and interpret relevant investigations available at the district hospital and initiate guideline-based treatment, subject to checking and approval by the Registrar or MO. |
| E2    | **Acute problem for management by intern under direct supervision**  
The patient is managed by the **intern under the immediate direct supervision of the Registrar** or MO. The intern is expected to make a provisional diagnosis, immediately call in support from a senior colleague and under their direction, request relevant investigations available at district level hospital and initiate guideline-based treatment. |
| E3    | **Acute problem requiring management by MO or registrar**  
The patient is primarily managed by the Registrar or MO, **with the assistance of the intern**. The intern is expected to consider the problem in the context of a differential diagnosis and initiate basic care while waiting for a senior colleague to take over management. |
| EX    | **Acute problem requiring specialist management**  
The patient is primarily managed by the Registrar or MO, with the assistance of the intern, pending handover or transfer for specialist care. |
DATABASE FOR ACUTE MANAGEMENT

- Anaesthetic
- Paediatric
- Neonate
- Pregnant women
- Women’s health
- Men’s health
- Adult health
- Other non specific

- Listed alphabetically
- Setting identified
- Discipline identified
### EXAMPLE:
Level E1. Acute problem for management by intern with support

<table>
<thead>
<tr>
<th>Condition</th>
<th>Setting</th>
<th>Discipline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abortion, threatened</td>
<td>Acute abdominal pain</td>
<td>Gynaecology</td>
</tr>
<tr>
<td>Abscess</td>
<td>Acute pain, other</td>
<td>Surgery</td>
</tr>
<tr>
<td>Acute urinary retention</td>
<td>Acute abdominal pain</td>
<td>Surgical specialties /Urology</td>
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## SKILLS AND PROCEDURES

### EXPECTED LEVEL OF COMPETENCE

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<tbody>
<tr>
<td>L1</td>
<td>Perform independently</td>
</tr>
<tr>
<td>L2</td>
<td>Requires assistance/supervision</td>
</tr>
<tr>
<td>L3</td>
<td>Have observed and understand process</td>
</tr>
<tr>
<td>X</td>
<td>Not required at start of internship</td>
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CATEGORIES FOR SKILLS & PROCEDURES

- Anaesthetic
- Clinical
- Counselling and Patient Education
- Diagnostic
- Evaluation & documentation
- Interpretation of investigations
- Obstetric
- Orthopaedic
- Resuscitation
- Surgical
- Therapeutic
**EXAMPLE OF SKILLS: OBSTETRICS**

**L1: Perform independently**
- Examine a pregnant woman
- Perform vaginal speculum examination in pregnancy and labour
- Complete an antenatal growth chart
- Palpate the abdomen in pregnancy
- Assess progress of labour using a partogram
- Interpret a partogram
- Carry out a cardiotocographic assessment

**L2: Requires assistance/supervision**
- Perform a normal vaginal delivery
- Perform manual removal of placenta
- Perform and suture episiotomy

**L3: Have observed and understand process**
- Perform a vaginal breech delivery
- Perform an assisted vaginal delivery
- Perform a caesarean section

**X: Not required at start of internship**
- Repair a third degree vaginal tear
THE LEARNING JOURNEY

School → Undergraduate → Internship → Comm. Serve → Post-graduate → CPD
WHAT ABOUT THE NHI?
WHAT ABOUT THE TECHNOCAL FUTURE?
GRADUATES FIT FOR WHAT FUTURE?
If you want a second opinion I’ll ask my computer.
I have no idea what’s wrong with you.
I just collect information.
My computer makes the decisions
DIGITAL HEALTH:

1. Equal Patient Doctor Relationship
2. A Re-organisation of Healthcare
   .... You need to become the point-of-care!
3. We are afraid of the unknown
   Robots will not replace us, but may enhance us!

A culture of transformation, where data from disruptive technology leads to...

E.g. Drones delivering drugs (Rwanda)

3D printed drugs!

Technology and sensors e.g. car early warning lights

Bertalan Mesko
AMEE 2019
My motto is that if a certain technology can replace me because it’s cheaper, faster, and more efficient than me, I would like to get replaced.

One of the most important traits of all healthcare professionals though, is empathy, which is among the hardest to replicate artificially.

Bertalan Mesko
THANK YOU