Aim

- Systems Thinking for leading and reforming the educational and healthcare systems

- A bird's eye view of the complex ecosystem of Health Professions Education

- The current rapid changes and reforms in healthcare and health professions education systems (The topography of the land)

- The challenges of leading and managing Health Professions Education in this new world

The Eco System of Health Professions Education

- Medicine is a **social science**

- It is about **people**, **societies** and **human interaction**,

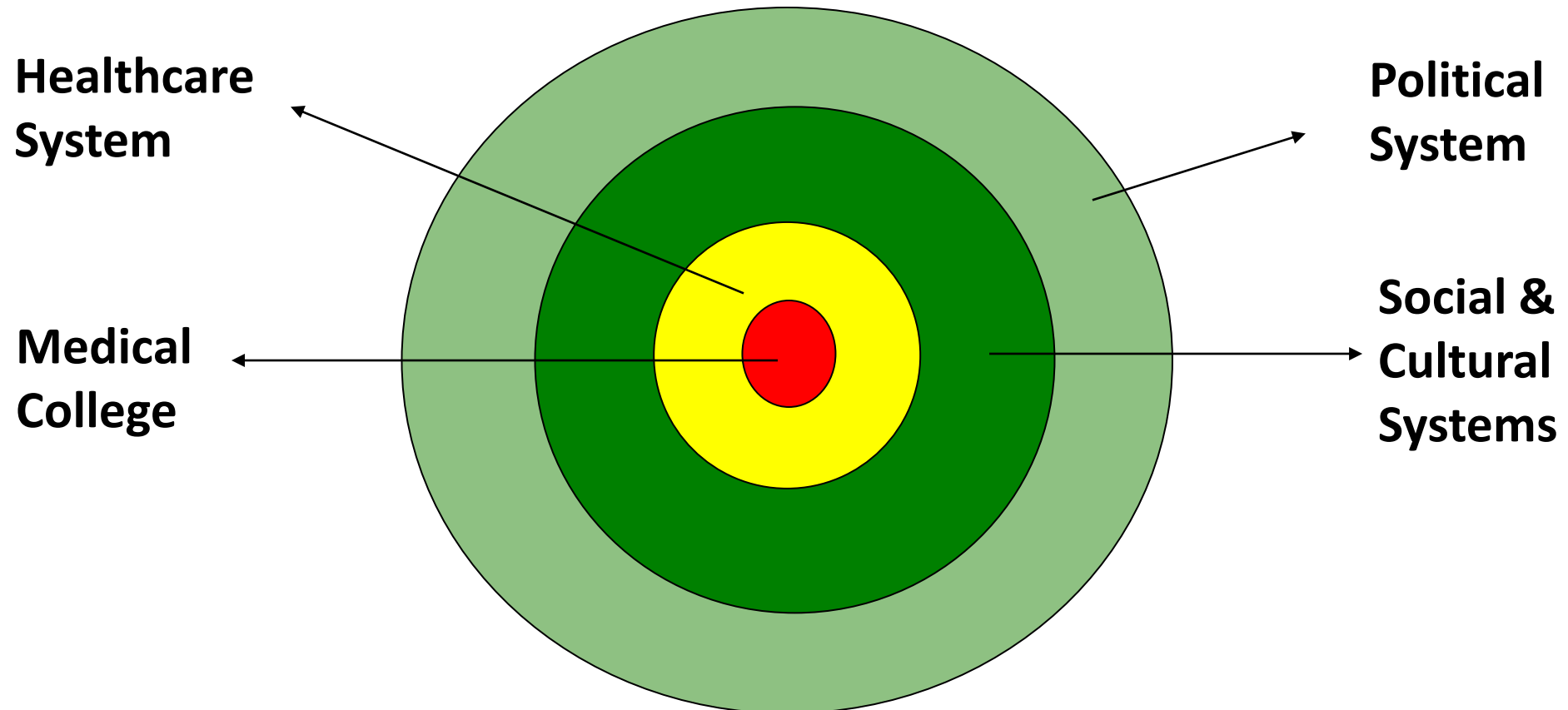- **Inseparable** and **embedded** in a rapidly **changing Healthcare System**

Health Professions Education Eco System

Health Professions Education is inseparable from the **healthcare system** of the country, its economic, political, social and cultural systems.

Healthcare System

Medical College

Political System

Social & Cultural Systems

The Complex Relation of Medical Education and Healthcare Systems (The Wicked Problem)

Healthcare, Culture and System   **Education, Culture and System**
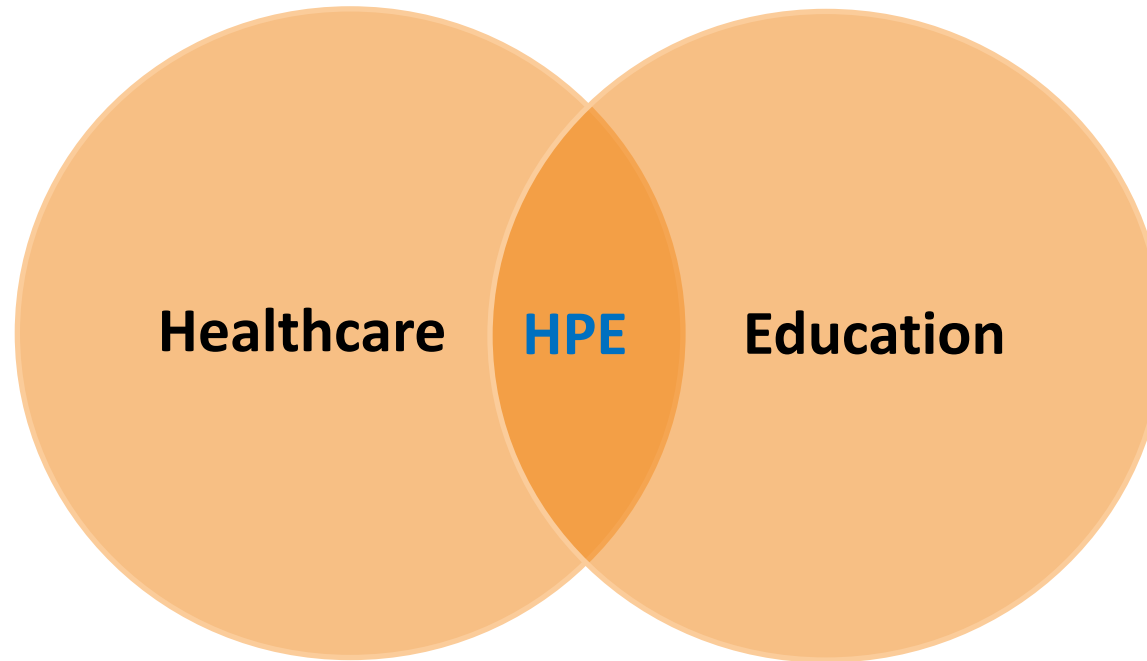
Healthcare   HPE   Education

"Systems Thinking"

- A philosophy, **mindset** and tools.
- To consider **whole** and **not** only the component parts **"The elements"** of a system
- Systems are **complex, interdependent and unstable**
- Systems communicate within **"Intra-Systems communication"** and between Systems. **"Inter-Systems communication"**
- Applied for **planning, implementation, evaluation** and **transformation**

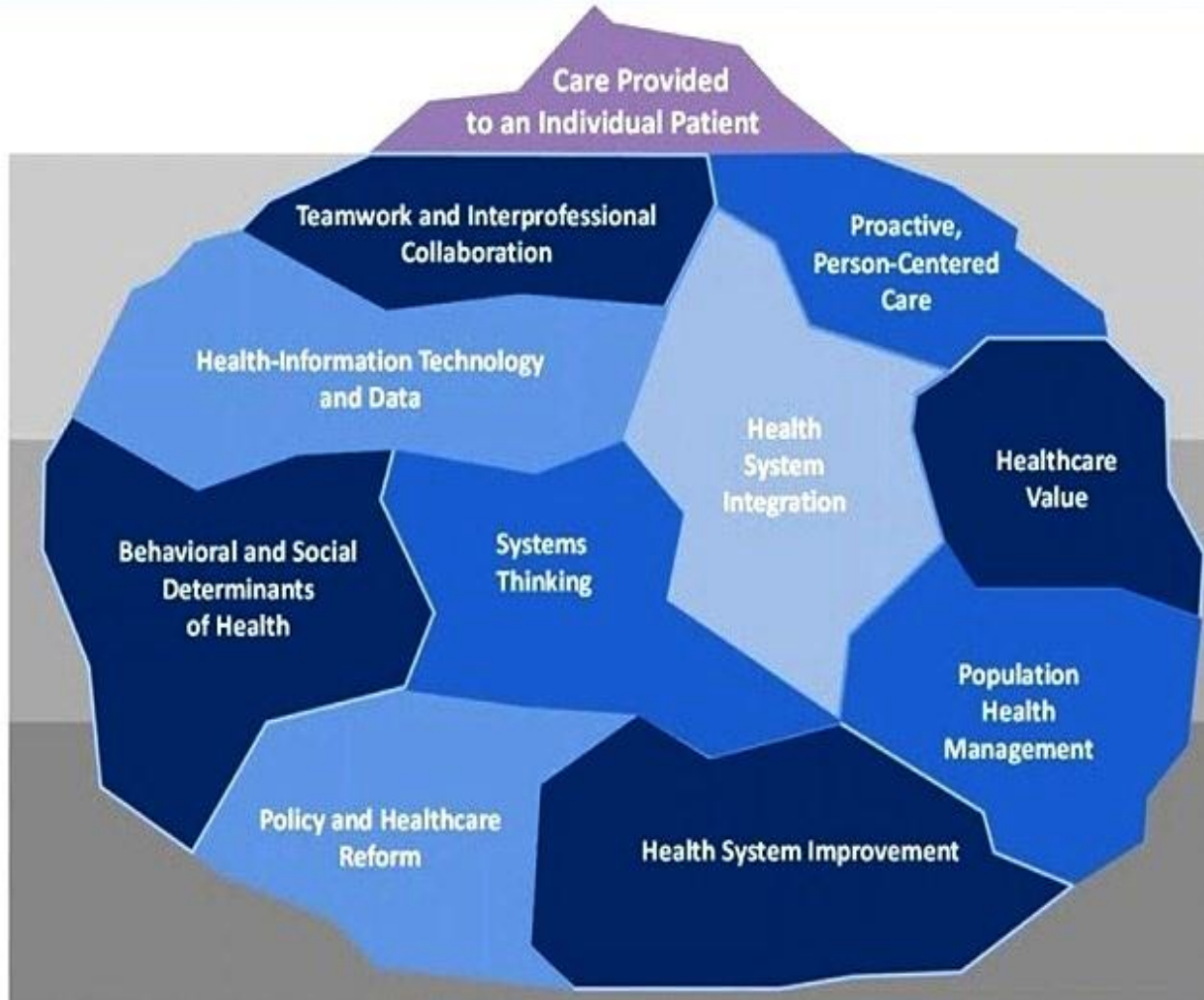# Healthcare and Health Professions Education - The Disruptive Forces

- Advances in medical knowledge and sciences

- New technology

- Fast changing demographics (Elderis and chronic diseases)

- Patients better educated

- Informatics and big data analytics

.   [Samarasekera 2018]

"Systems Thinking: Application for planning, implementation, evaluation and transformation

The 'Iceberg' of Health Professions Education

Ref: Health System Sciences AMA Educational Consortium 2017

Care Provided to an Individual Patient

Teamwork and Interprofessional Collaboration

Proactive, Person-Centered Care

Health-Information Technology and Data

Health System Integration

Healthcare Value

Behavioral and Social Determinants of Health

Systems Thinking

Population Health Management

Policy and Healthcare Reform

Health System Improvement

Problems with the Current Systems of Healthcare

- **Fragmented delivery** of care with inadequate processes for communication and collaboration

- **Fragmented Systems** leading to poor patient and community satisfaction (low quality, high cost and low value)

- **Single provider model** within a clinic, hospital etc.

Reform I - The New Healthcare System

- Delivery of care beyond the walls of Hospitals (Ambulatory, homecare and telemedicine)

- Multiple Social and Ecological determinants of Health

  "Population Healthcare Based"

- Shift from **"Disease Models"** to **"Wellness Models"**

- Shift from **"Volume"** to **"Value"**

    Value Based Healthcare   Value = Quality / Cost

Healthcare Workforce Development

"The Problem & Goals are Global; the Solutions are Local"

⬆ Increase demand for competent Health Workforce

⬇ Shortage of Training Facilities

⬇ Limited Government investment, cannot support workforce development

H. Hamdy
Academic Medicine (2017)

Academic Healthcare Systems

"Medical education institutes as 'Academic system' will integrate with 'Healthcare system', transforming and developing **Academic Healthcare Systems**"
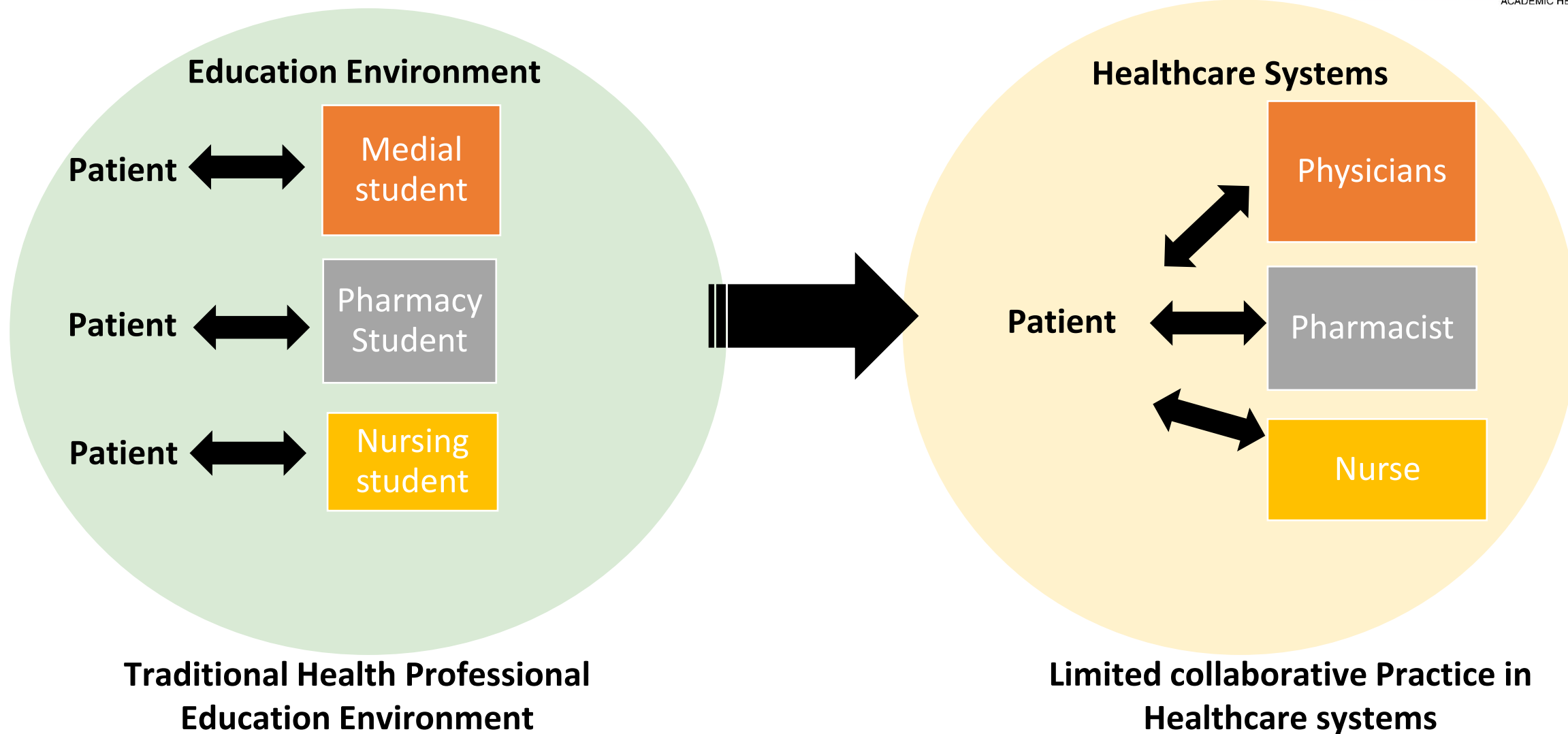
It will be

" The norms not the exception"

Health Systems Implications to Medical Education:
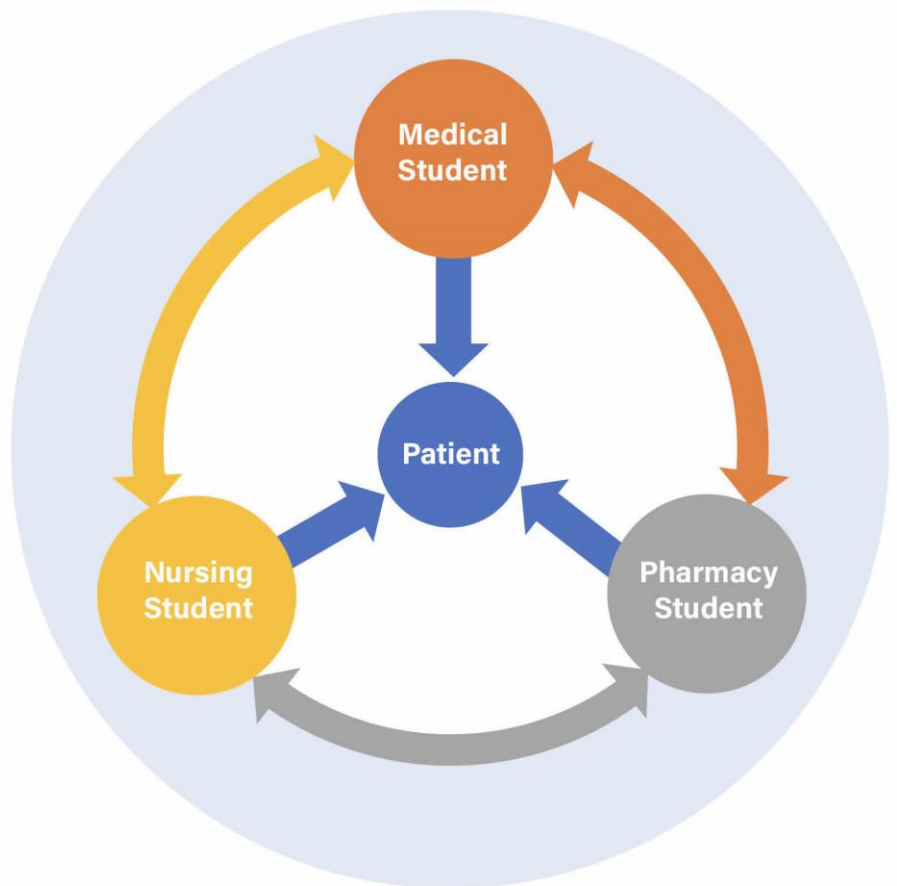## Team-Based Models of Care and Education

GULF MEDICAL UNIVERSITY
ACADEMIC HEALTH CENTER
جامعة الخليج الطبية

Education Environment

Patient ⟷ Medial student

Patient ⟷ Pharmacy Student

Patient ⟷ Nursing student

Healthcare Systems

Patient ⟷ Physicians

Patient ⟷ Pharmacist

Patient ⟷ Nurse

Traditional Health Professional Education Environment

Limited collaborative Practice in Healthcare systems

Health Systems Implications to Medical Education: Team-Based Models of Care and Education

"Learning Together (IPE)
Learning Context
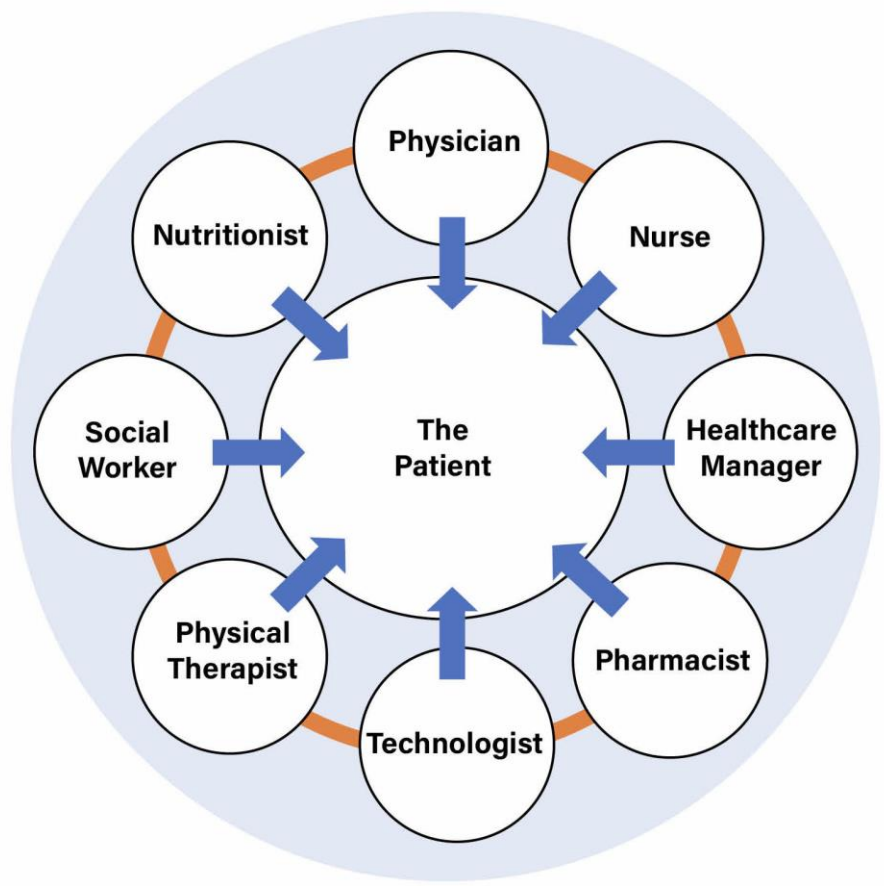
For

Working Together"
Practice Context

Reform II - Competency and Trust-based Education

COMPETENCY AND ENTRUSTABILITY IN HEALTH PROFESSIONS EDUCATION

Course Based ➡ **Competency Based** ➡ **Trust Based**

What the graduate knows | What the graduate is able to do | What the graduate is entrusted to do "EPAs"

"Accumulating Credits"   **"Fitness For Purpose"**

Competency – Frameworks

The Problem:

- **Competencies overlap**
- **The challenge is how to translate, implement and assess it**

| SaudiMEDs	CanMeds	ACGME	GMC
Scientific approach to practice	Medical expert	Medical knowledge	Good clinical care
Patient care	Communicator	Patient care	Relationships with patients and families
Community oriented practice	Health advocate	Systems-based practice	Working with colleagues
Communication and Collaboration	Manager	Interpersonal and communication skills	Managing the workplace
Research and Scholarship	Scholar	Practice-based learning and improvement	Social responsibility and accountability
Professionalism	Professional	Professionalism	Professionalism

Reform III - The New Curriculum

- One size does not fit all – **Context dependent**

- We cannot imagine that there is one best type of curriculum which can be applied to all medical colleges globally

The Traditional Model - Layered, Subject-based

100 YEARS OLD TWO PILLARS MODEL

Clinical Sciences

Basic Sciences
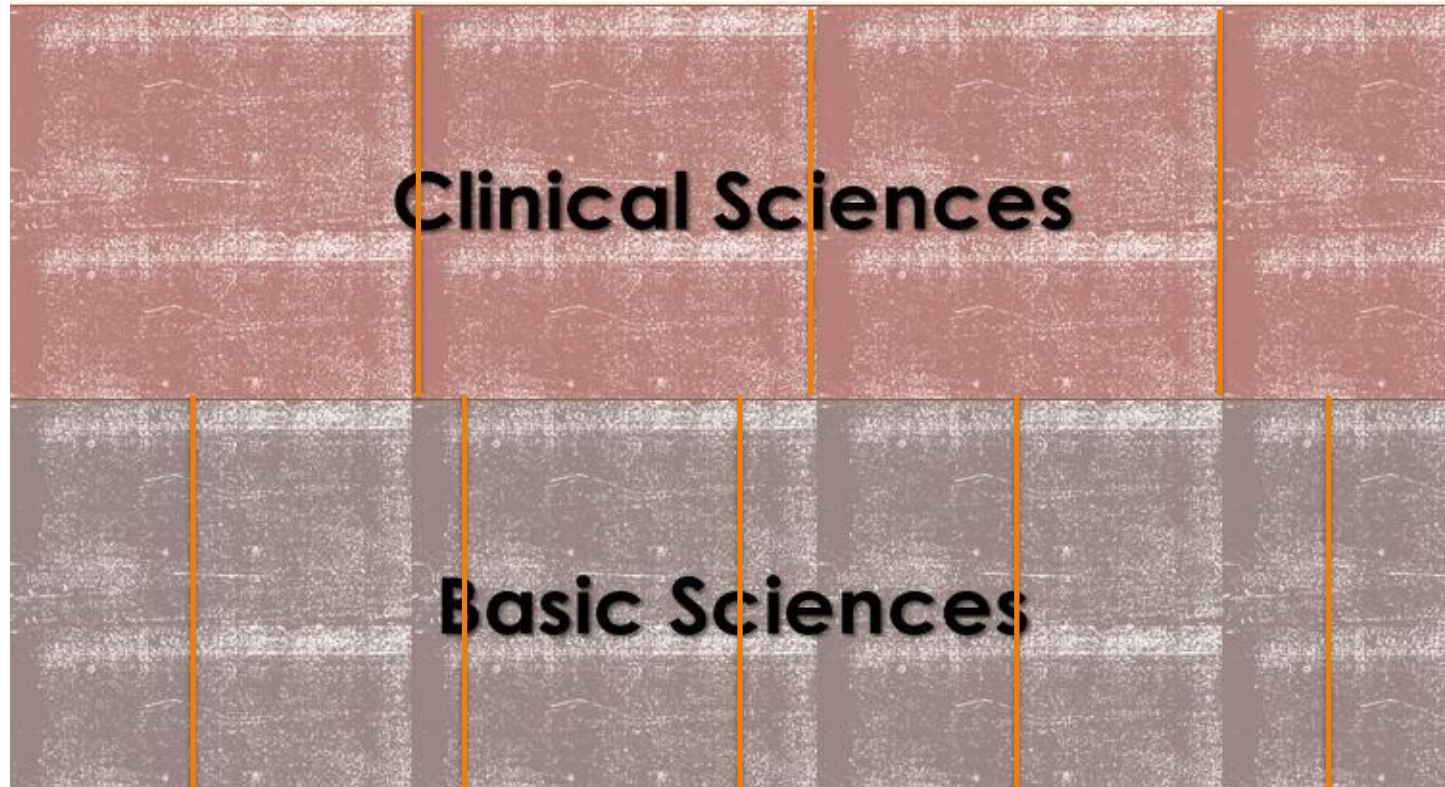
NO INTEGRATION

Conceptual Models of the Integrated Medical Curriculum
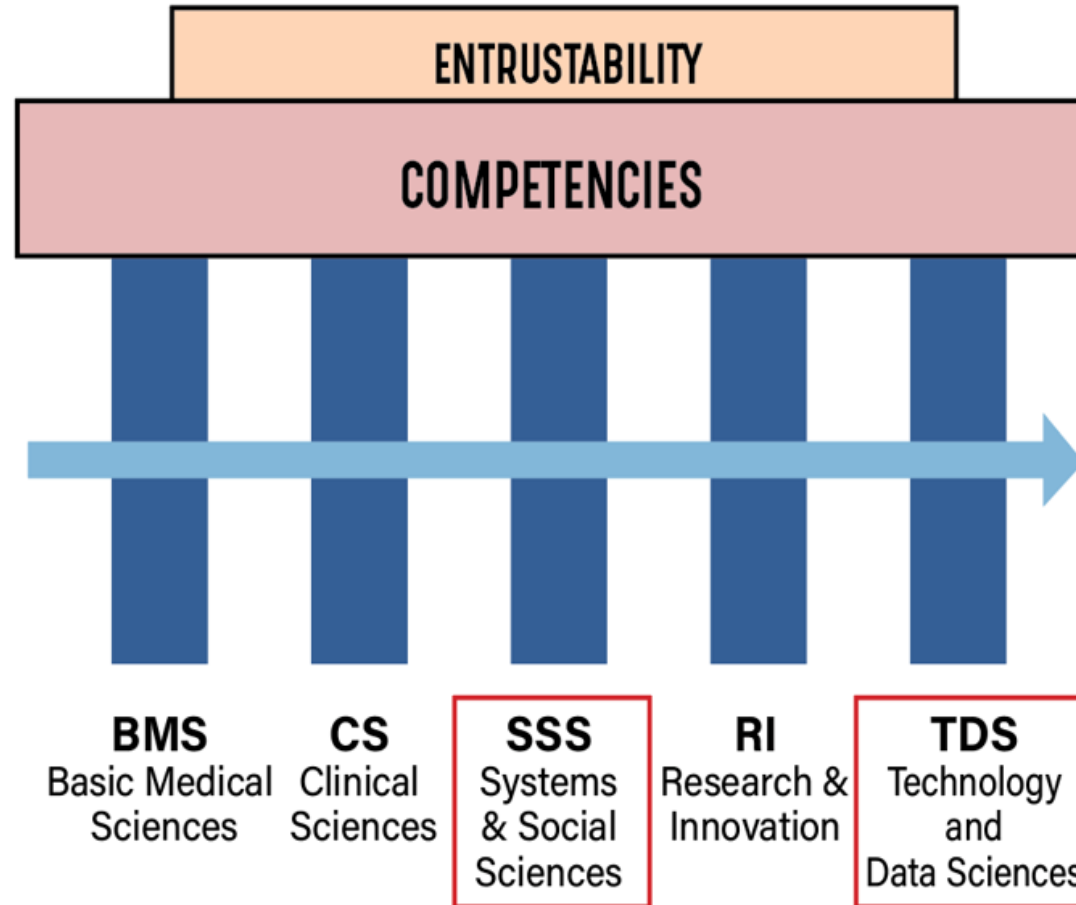

Integrated Model

80's

Fusional Model
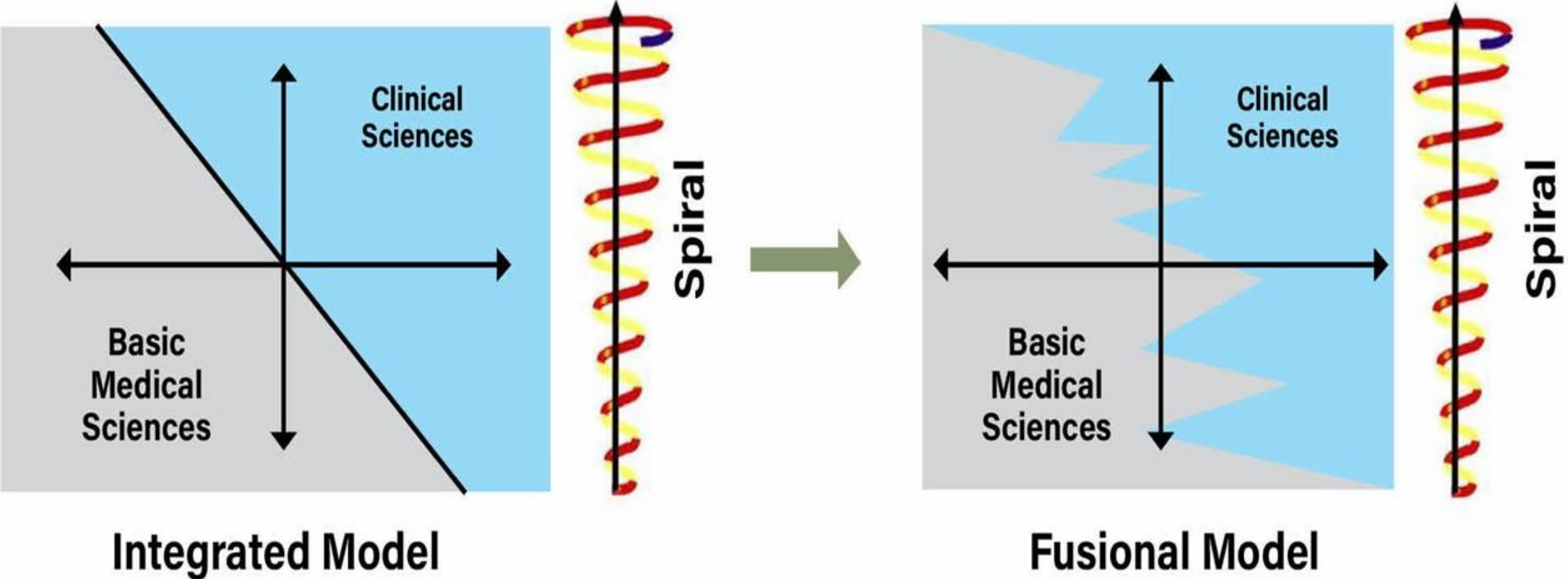
2015

GMU Five Pillars Model Curriculum

2020

Five Pillars Model

Reform IV - The New Students

- Tech natives – **Used to distance learning " The COVID effect"**
- Students will be learning and working in teams with other health professionals – **Interprofessional Education and Practice**
- Students from year one, day one **exposed to the workplace**
- **Research and Innovation** will be integral to the students' learning experience

Reform V - The New Faculty

- From "**Information Giver**" to "**Facilitator of Learning**", "**Role model**", **Expert and an Innovator**"

- **Faculty Track Systems** will be the norms (Education, Research, Clinical)

- Faculty workload will be redefined – New system of measurement - **Roles Based**

Teaching Load ⟶ **Educational Load**

Reform VI - New Knowledge

- Precision Medicine
- Genetics
- Molecular Medicine
- Global Health – Health Economics – Social Medicine
- Leadership, management and entrepreneurship
- Healthcare System Sciences

The Challenge:
Tension between
Coverage Vs Mastery

Reform VII - Technology in Practice and Education (Digital Competency of students and Practitioners)

Health Professionals functions - Enhanced not replaced by technology (Major paradigm shift)

- AI and Machine Learning

- Robotics

- Data Analytics

- Informatics

Technology &
Data Sciences

Reform VIII - New Assessment Systems

- **Workplace based assessment** capturing **longitudinal** students' patients' **experiences**

- Evidence of **competency acquisition - Readiness for Practice and Entrustability – The community will ask – Can I trust him/her**

- Competency to access resources and apply it in context (Information and use of **Open AI in examinations**)

Reform IX - New Accreditation and Quality Assurance Systems

- The **credit hours systems**. A system developed from the 19th century for giving pension to school teachers cannot be used in the 21st century "**Revisiting the Metrics**"

1 x 1 CH (US) = 15 Contact Hours

2 x 1 ECTS = 30 Contact Hours   Structured + SDL ???

4 x 1 CATS (UK) = 60 Contact hours

Reform IX - New Accreditation and Quality Assurance Systems

- Accreditation Standards focuses on evaluation of **inputs and processes** needs to focus on **outcomes and impacts**

- New Program Evaluation Systems – **New Kirkpatrick – CIPP**
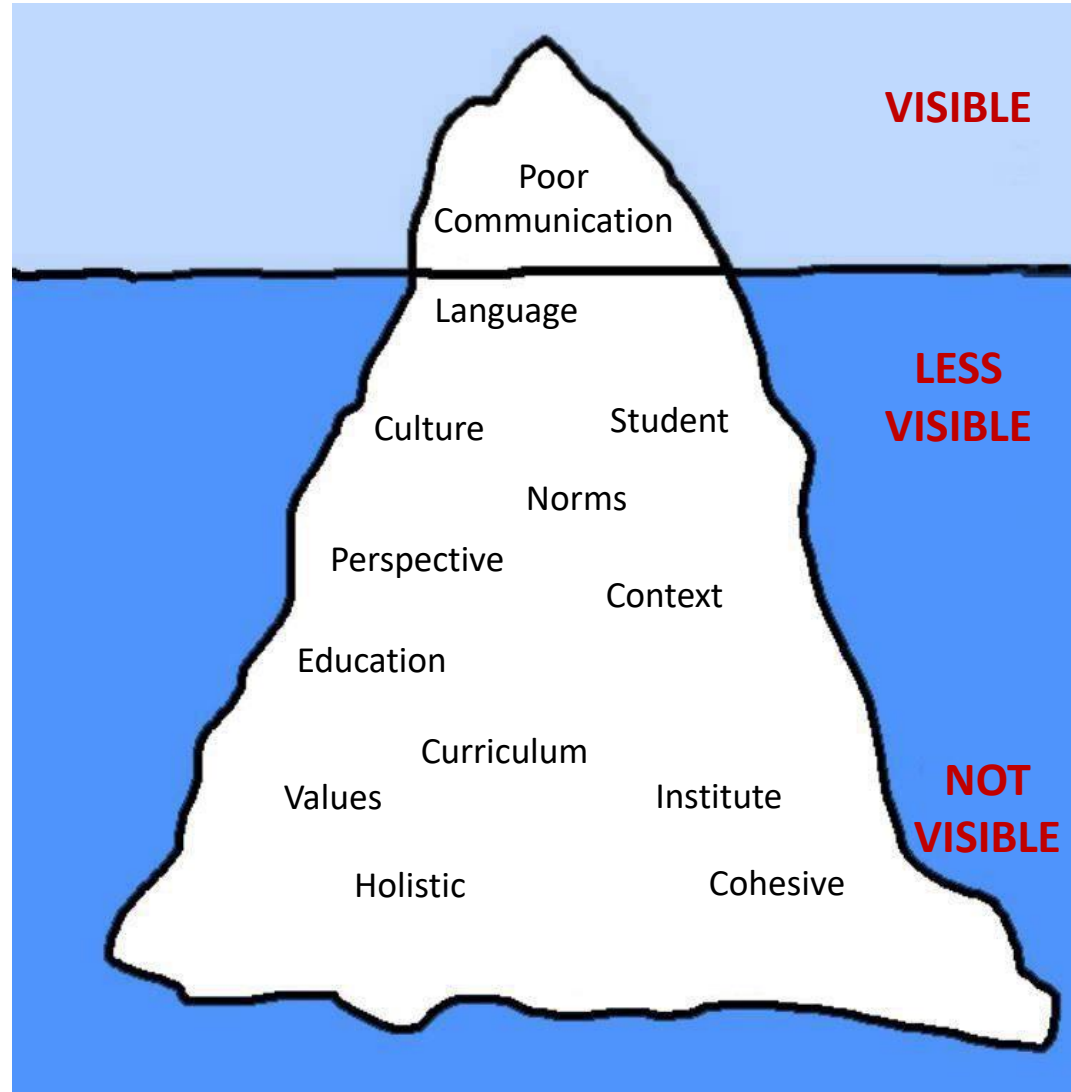
New Accreditation and Quality Assurance Systems

- "**Time Based Education**" will be replaced by "**Trust Based Education**"

- Accreditation Bodies should adapt to changes and **lead the transformation. "Transformative Quality Assurance Systems"**

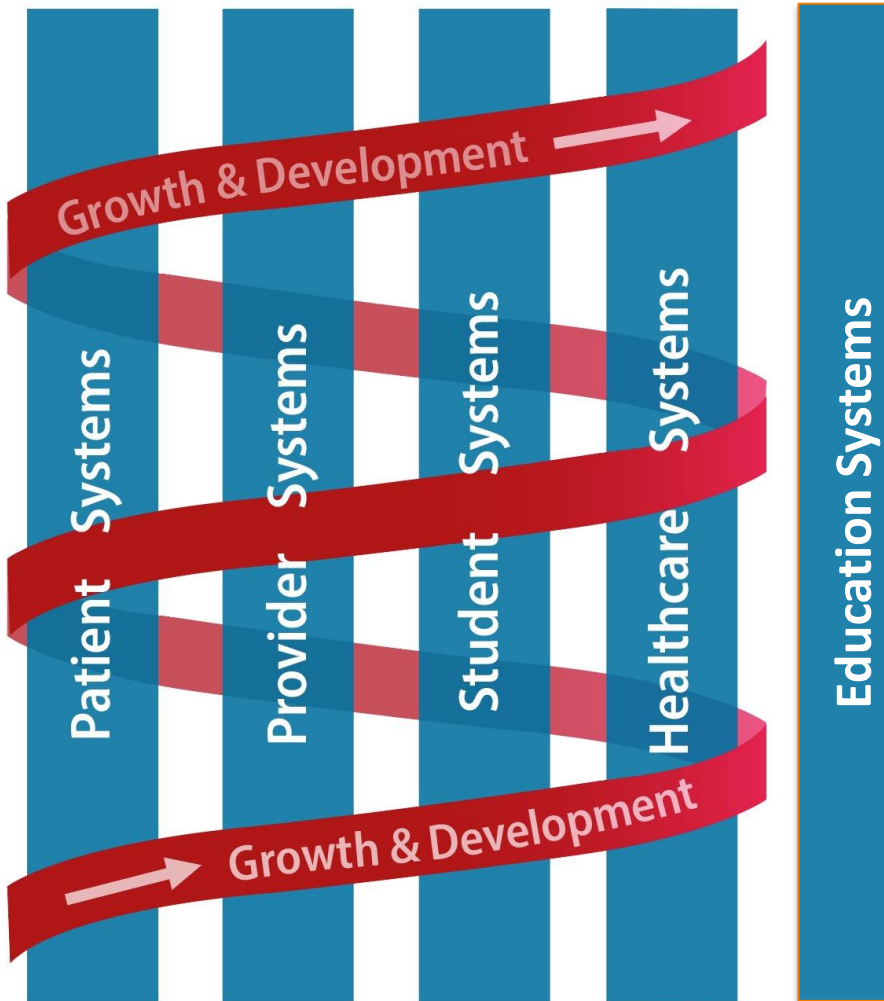# The Communication Iceberg in Health Professions Education

Visualizing the **seen** and **unseen drivers** and **consequences** of interactions in any situation

Systems Thinking in Health Professions Education (Helical Model)

- Analysis of the **power dynamics** between systems

The Graduate (Competent)

- Take account **of all the Systems** in **different contexts**

Growth & Development

Growth & Development

Patient Systems

Provider Systems

Student Systems

Healthcare Systems

Education Systems

The Student (Novis)

H. Hamdy (2024)

Leadership in the Changing World of Health Professions Education

- The rapid change in technology, economics, lifestyle etc.…. will need not only knowledge, skills and prior experience but more:

Adaptation to changes

and

Transformative abilities

Personal Views

- We are **preparing students** who will work **in a world we don't know,** how it will be.

- Be sensitive to the **fast changes** in **practice** and **education** Systems. The curriculum is in a continuous dynamic changes and evaluation.

- Think holistically

- "Failure is not always due to a **person's mistake**, but it is always due to **underlying systems failure**"