AAHCI MENA Regional Conference:

"Transformation of Medical Education in the New Era: Humanism, Technology, and the Physician of Tomorrow"

September 27 – 29, 2018 | American University of Beirut, Lebanon

Kamal F Badr, MD

Associate Dean for Medical Education

American University of Beirut

American University of Beirut (AUB)

1862: The state of New York granted a charter under the name: Syrian Protestant College. It opened in 1866.

In 1920, the name was changed to American University of Beirut. Mission became secular.

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Faculty of Medicine: 1867-2018

- Following Harvard, AUB was the first American medical school to adopt a 4-year program of study for the MD degree.
- Vast majority of faculty are trained in the USA, are American Board certified, or have had Fellowship training in the USA
- Class size: 115. Rank among top 30 MCAT scores of admitted students to US schools
- Graduates in USA: >3500
- Ranked by QS Ratings among top 300 Elite Universities in Medicine worldwide

TRANSFORMATION OF MEDICAL EDUCATION IN THE NEW ERA

Humanism, Technology, and the Physician of Tomorrow

SUBMIT YOUR ABSTRACT

AAHCI
Association of Academic Health Centers International
Leading institutions that serve society

COLUMBIA | NARRATIVE MEDICINE

LAU
الجامعة اللبنانية الأميركية
Lebanese American University

In joint providership with
Cleveland Clinic

1902 AUBMC

AAHCI Middle East and North Africa (MENA) Regional Meeting Update

Intellectual Constructs

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1. Artificial Intelligence will lead to radical disruption of the entire edifice of medical education and practice.

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1. Artificial Intelligence will lead to radical disruption of the entire edifice of medical education and practice.

2. Personalization of care in the new era will require that physicians acquire new knowledge and skills in two domains:

   Technology and AI

   Medical Humanities and Narrative Medicine

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1. **Technology and AI**

Intellectual Constructs

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1. **Technology and AI**…to address competently three questions:

Intellectual Constructs

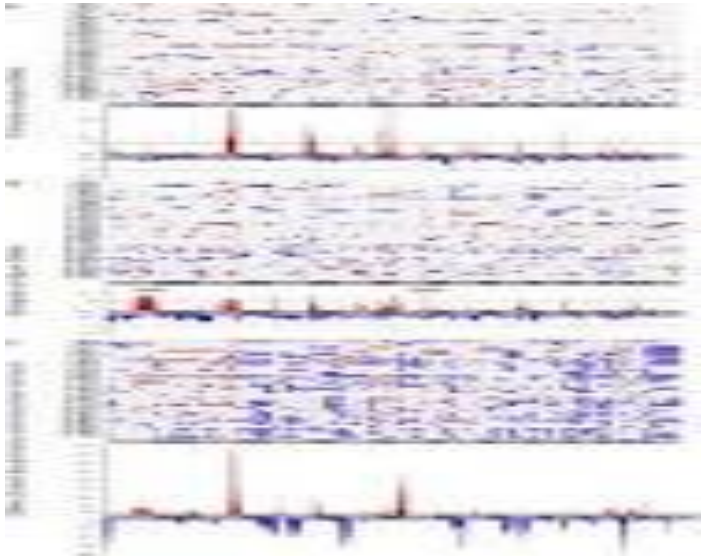
Technology and AI…to address competently three questions:

1-How is my patient's body unique?

Intellectual Constructs

Technology and AI…to address competently three questions:

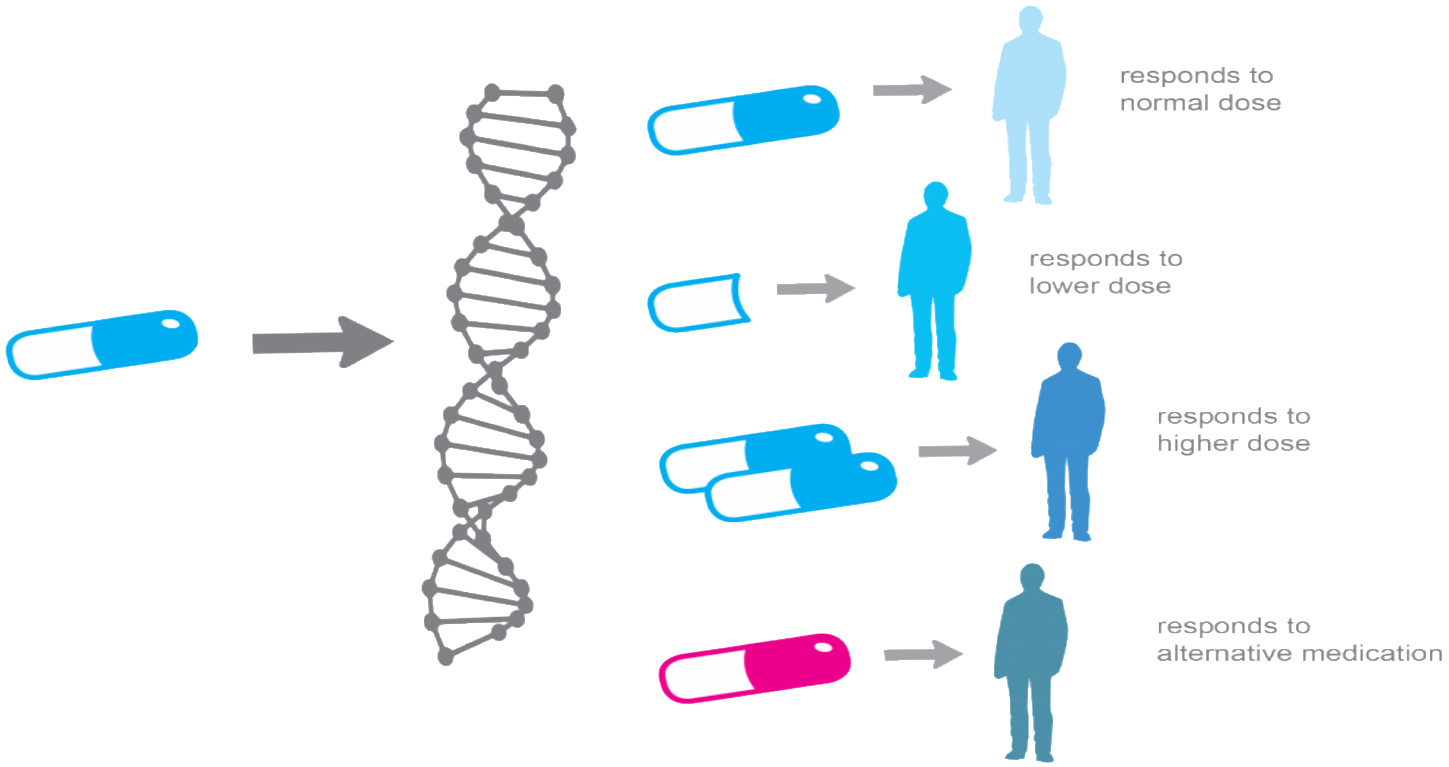
2- How is my patient's disease unique?



Intellectual Constructs

Technology and AI…to address competently three questions:

3. How my patient's treatment unique?



Intellectual Constructs

Personalization of care in the new era will require that physicians acquire new knowledge and skills in two domains:

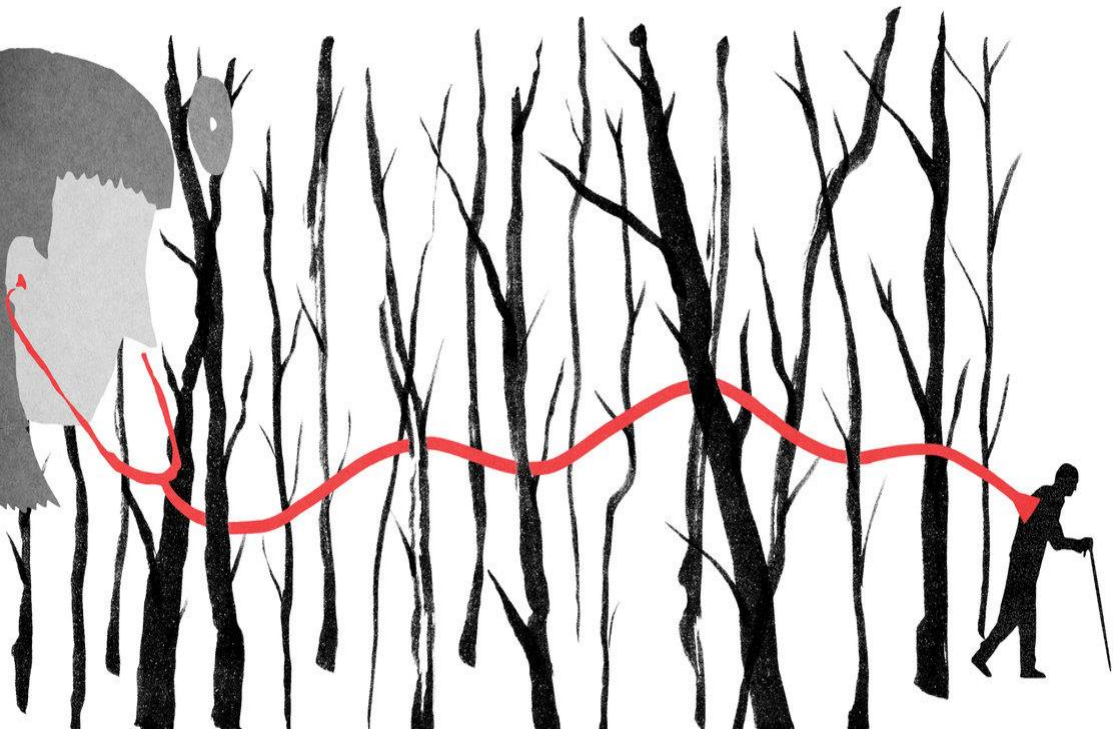
1. Technology and AI

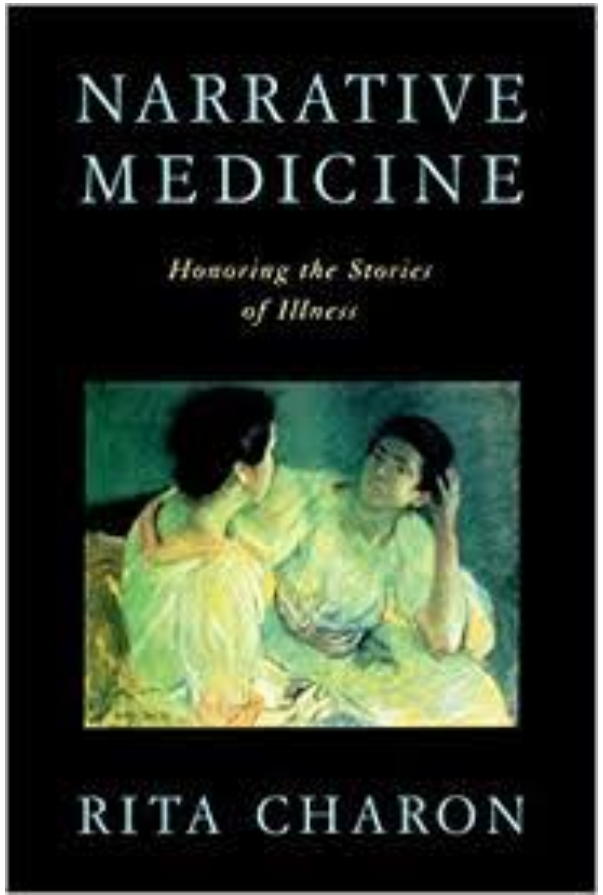
2. **Medical Humanities and Narrative Medicine**

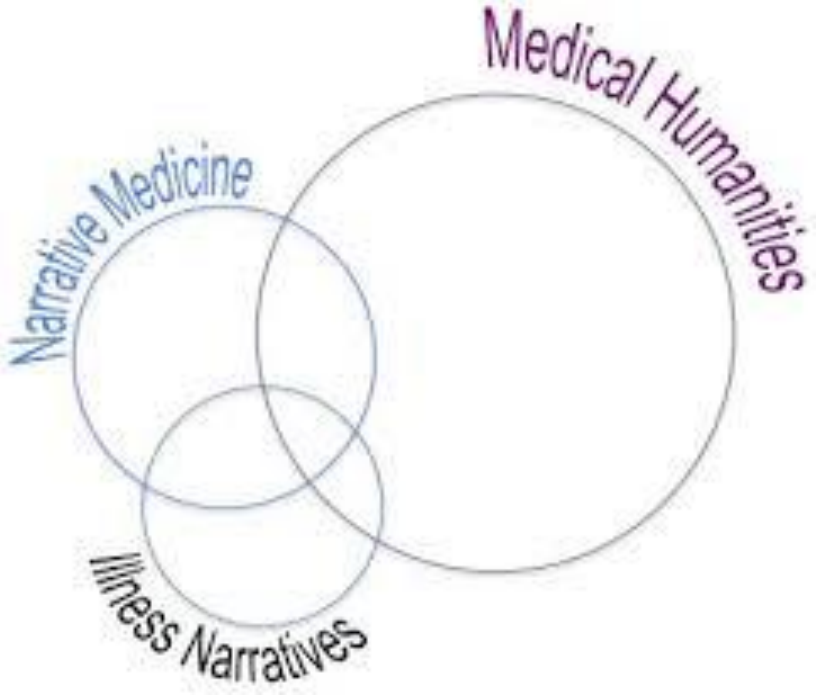
Intellectual Constructs

Medical Humanities and Narrative Medicine….. to answer the question:

How is my patient's story unique ?







Meeting Objectives

Objectives of this meeting are to pose two major challenges, and set goals aimed at meeting them:

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Challenge #1: How do we prepare and select future physicians to be competent in both humanities and technology?

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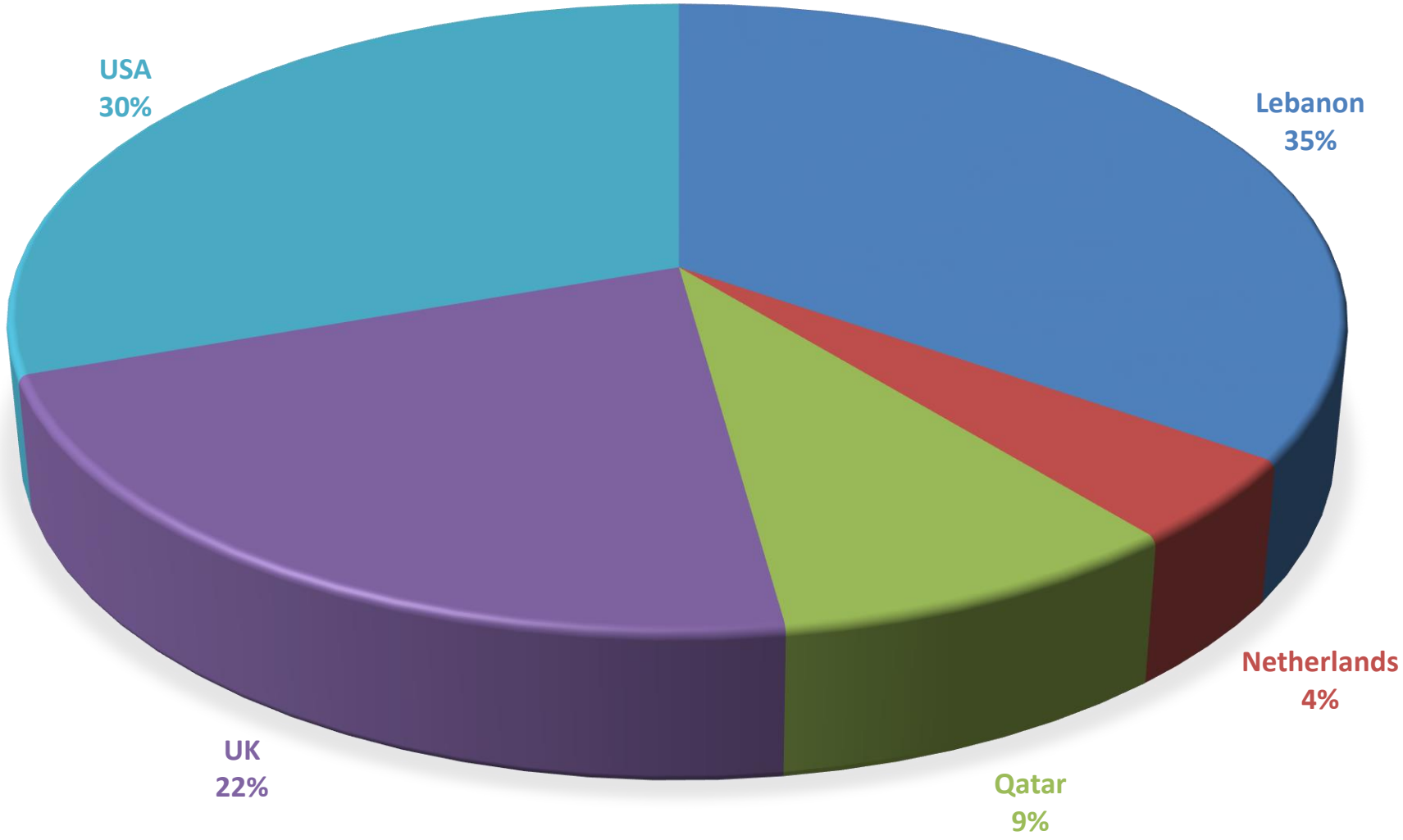
Challenge #2: Will technology and AI further alienate doctors from patients and widen the gap in health disparity between rich and poor, or will they provide a disruptive change that will restore and deepen the doctor-patient relationship, and make healthcare more widely affordable?

In addressing these challenges, we were in fact addressing three of five urgent challenges defined by the AAHC and AAHC-I In 2018:

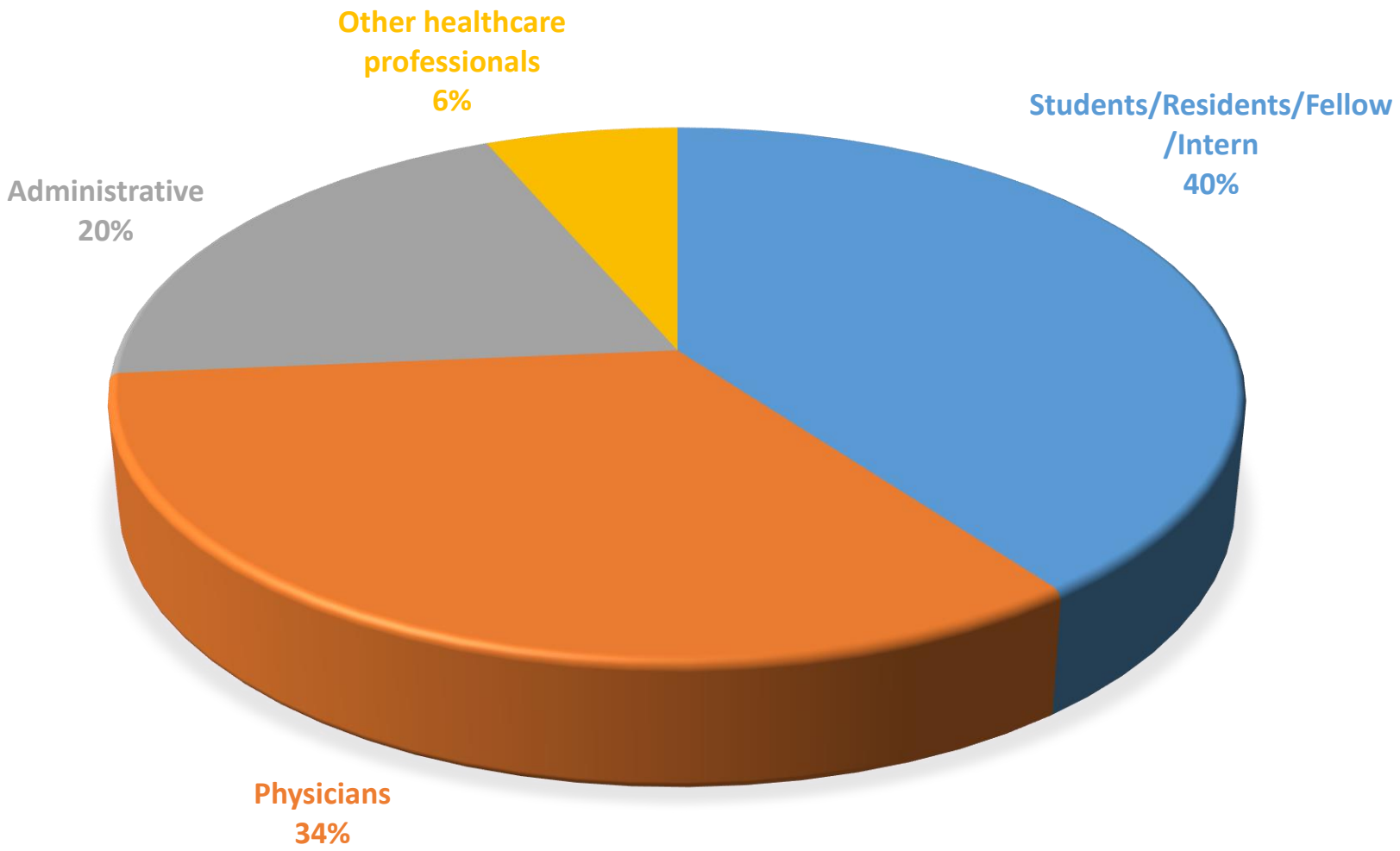
1. **Interprofessional education/practice and team-based care**
2. ***Simulation/augmented reality***
3. ***Training the 21st century healthcare workforce***
4. ***Adapting graduate medical education to 21st century medicine***

Twenty five regional and international speakers reflected the global scope of the Meeting:



326 Attendees from 12 countries (Excluding Speakers and Session Chairs)

- Bahrain
- Egypt
- Canada
- Cyprus
- Jordan
- Lebanon
- Oman
- Romania
- Saudi Arabia
- UAE
- UK
- USA



326 ATTENDEES: Reflected the success of AAHC-I in bringing together regional and global healthcare experts/students

Attendees from Lebanon (21 medical centers/universities):

- AUB/MC
- AUN
- BAU
- Bekhazi - BMG
- CMC
- Dallaa General Hospital
- Fouad Khoury Hospital & Associates - Bikhazi
- Geitaoui Hospital
- Global Informatics and Analysis
- Hotel Dieu
- Iman Aley
- Instrumed Global
- Kamouh
- LAU
- Lebanese University
- LIU
- None
- Pharmacy private
- Ragheb Harb
- Saint George University of London Medical School
- University of Balamand

Attendees from Abroad (30 medical centers/universities/companies)

- AAHCI
- Arabian Gulf University
- CCF
- College of Medicine Qatar University
- Columbia University
- Emory University School of Medicine
- Foundation for Advancement of International Medical Education and Research
- Genesis Health Care System
- Gulf Medical University
- Harvard Medical School
- Maastricht University Medical Center
- Massachusetts General Hospital
- Med star Union Memorial Hospital
- Medicalchain
- Memorial Sloan Kettering Cancer Center
- Oman Medical Specialty Board
- Partner's Healthcare International
- Princess Al Jawhara Center
- Private practice
- Proximie
- Qatar University
- Royal College of Physicians
- Royal College of Surgeons
- Royal Hospital
- Saint George Hospital University Medical Center
- Specialized Medical Center
- The Hashemite University Faculty of Medicine
- University of Illinois College of Medicine
- Viz.ai.
- Weill Cornell Medicine-Qatar

PROGRAM STRUCTURE

I - Medical Humanities and the New Curriculum

Pre-medical Requirements in Medical Humanities

Teaching the Principles and Practice of Narrative Medicine

II - AI and the New Medical Curriculum

AI, Simulation, Technology and Clinical Training

III - Transformation of Medical Practice in the AI Environment

Advancing Care Through Decentralization

Robotics, Devices and the Future of Surgery

Round Table and Open Forum: Towards a symbiotic synthesis of humanism and technology in shaping the future of medicine

IV – Regional Challenges in Medical Education. Role of AAHC-I

PROGRAM STRUCTURE

I - Medical Humanities and the New Curriculum

- **Pre-medical Requirements in Medical Humanities**
- **Teaching the Principles and Practice of Narrative Medicine**

FEATURED INTERNATIONAL SPEAKERS: MEDICAL EDUCATION/MEDICAL HUMANITIES/NARRATIVE MEDICINE

Rita Charon

Professor and Chair of the Department of Medical Humanities and Ethics and Professor of Medicine at Columbia University.

General internist, literary scholar, and the originator of the field of narrative medicine.

Elizabeth Gaufberg

Associate Professor of Medicine and Psychiatry, Harvard Medical School. Director, Arnold P. Gold Foundation Research Institute. Director, Cambridge Health Alliance Center for Professional Development

John (Jack) R. Boulet

Vice President, Research and Data Resources, for both the Educational Commission for Foreign Medical Graduates (ECFMG®) and the Foundation for Advancement of International Medical Education and Research (FAIMER®).

Egon Toft

Vice President for Medical and Health Sciences
Dean of the College of Medicine
Qatar University

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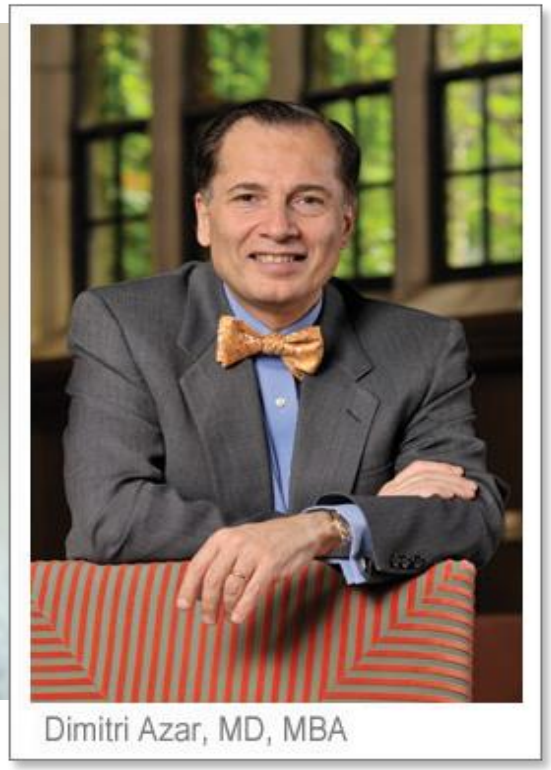
FEATURED INTERNATIONAL SPEAKERS: TECHNOLOGY/ARTIFICIAL INTELLIGENCE

Abdullah Albeyatti

Co-Founder and CEO of Medicalchain, bringing blockchain technology to healthcare



Senior Director, Verily Life Sciences. Distinguished Prof. & BA Field Chair/ Ophthalmology; Former Dean of Medicine Univ. of Illinois

Nadine Hachach-Haram

Plastic surgeon and co-founder of Proximie. Recipient of a British Empire Medal by Her Majesty the Queen for innovative work within the field of surgery and medicine

Manoj Ramachandran

Co-founder of Viz.ai, an artificial intelligence start-up in medical imaging.

Ahmad Tarhini

Professor of Medicine, Lerner School of Medicine of Case Western Reserve University. Director, Melanoma and Skin Cancer Program & Center for Immuno-Oncology Research at Cleveland Clinic Taussig Cancer Institute

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Students

STUDENT RECOMMENDATIONS: I

I. Medical Humanities and the New Medical Curriculum

1. Incorporating more substantially **Medical Humanities in the premedical curriculum**. The courses would include creative writing, fine arts, history, and philosophy.

2. **Medical Humanities** should be included in the **criteria of acceptance**, alongside the MCAT score and major average.

3. Integrating the **humanities deeply within the MD curriculum**, not as separate courses, but rather present in every single module. Designing these courses by partnering with members of the community to serve our population better.

4. Including students in the curriculum committee

Challenging Traditional Premedical Requirements as Predictors of Success in Medical School: The Mount Sinai School of Medicine Humanities and Medicine Program

David Muller, MD, and Nathan Kase, MD

Abstract

Purpose

Students compete aggressively as they prepare for the MCAT and fulfill traditional premedical requirements that have uncertain educational value for medical and scientific careers and limit the scope of their liberal arts and biomedical education. This study assessed the medical school performance of humanities and social science majors who omitted organic chemistry, physics, and calculus, and did not take the MCAT.

Method

The authors compared and contrasted the academic outcomes of 85 Humanities and Medicine Program (HuMed) students at Mount Sinai School of Medicine with those of their 606 traditionally prepared classmates for the 2004–2009 graduating classes. The authors analyzed basic science knowledge, clerkship performance, humanism, leadership, community service, research fellowships, distinctions, and honors.

Results

There were no statistically significant differences between the groups in clerkship honors other than psychiatry (HuMed students outperformed their peers, $P < .0001$) or in commencement distinctions or honors. Although HuMed students were significantly more likely to secure a scholarly-year mentored project ($P = .001$), there was no difference in graduating with distinction in research ($P = .281$). HuMed students were more likely to have lower United States Medical Licensing Examination Step 1 scores (221 ± 20 versus 227 ± 19, $P = .0039$) and to take a nonscholarly leave of absence ($P = .0001$). There was a trend among HuMed students toward residencies in primary care and psychiatry and away from surgical subspecialties and anesthesiology.

Conclusions

Students without the traditional premedical preparation performed at a level equivalent to their premedical classmates.

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II. AI and the New Medical Curriculum

1. Attracting students who can propel medicine in the age of AI. Enhance diversity among medical students by "marketing" towards potential **applicants from non-biology backgrounds**.
2. **Emphasizing tech literacy, computer coding skills, and digital sciences in undergraduate coursework**.
3. **Encouraging non-traditional majors** to apply to medical school by **integrating core "pre- med" courses into nontraditional majors** (Vanderbilt's example: https://engineering.vanderbilt.edu/eecs/Undergraduate/PremedicalCS.php)
4. Embracing various forms of technology (ex: Augmented body, virtual labs, etc.) in teaching subjects that require visualization such as anatomy and histopathology.
5. **Creating interactive artificially intelligent, virtual patients complete with personalities and credible clinical circumstances.**
6. Offering coding, or technology literacy classes (including classes on management and interpretation of large datasets) to medical students.
7. Shifting focus in evaluation criteria; assign more weight to skills that will be of value in the setting of AI integration into medicine: data acquisition and analysis, critical thinking, and innovation. Students of the future should be evaluated on HOW they find the information and not solely on whether they know it or not.
8. **Standardizing the evaluation of students with the help of AI**: intelligent standardized patients provide an objective assessment of medical students and help eliminate bias in OSCEs.

STUDENT RECOMMENDATIONS: III

III. Devices, Robotics, and the Future of Surgery and Advancing Care Through Decentralization

1. **Establishing new regulatory and legal frameworks on an international and local level that will govern the research, implementation, and use of intelligent surgical robots.** These frameworks must ensure that: a. New machines are adequately vetted before their deployment into operating areas to **avoid the use of any premature systems that could endanger patients' lives.** b. An override function is mandated in all future intelligent surgical robots, that will allow surgeons to have the last say in all medical decisions, and using this, a clear chain of responsibility will be instituted for the handling of robotic errors.

2. Developing standardized courses to train current and future surgeons in the basics of artificial intelligence and machine learning with the end goal of making them aware of the technology's thought processes, advantages, and limitations in all clinical settings.

3. Enacting strict and high-level encryption standards in all current and future technologies to reduce and prevent malicious exploitation by local or international agents

4. **Providing all social classes equal access to intelligent systems from the beginning instead of widening the gap in healthcare and delaying their use until these technologies become more affordable.** This can be done by increasing public-private partnerships to allow sufficient research funding and to decrease production and implementation costs and mandating financial coverage by insurance companies and welfare programs.

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FEATURED INTERNATIONAL SPEAKERS: REGIONAL/GLOBAL ISSUES IN MEDICAL EDUCATION AND THE FUTURE OF SURGERY

Albert Scherpbier

Dean of the Faculty of Health, Medicine and Life Sciences of Maastricht University and Vice Chairman Maastricht University Medical Center

Ali S Jawad

Hans Sloane Fellow and Medical Director of the Global Office, Royal College of Physicians, London.

N. Lynn Eckhert,

Director Academic Programs Partner's HealthCare International (PHI).

Richard Kerr

Council Member, Royal College of Surgeons. Chair, "Commission on the Future of Surgery in the United Kingdom"

REPORT FROM THE PRESIDENT: OCTOBER 4, 2018

MENA Meeting: Global Look at Medical Education in a New Era

"At the conclusion of the meeting, **a planning session was held to develop program ideas for the AAHCI MENA Regional Office**, both around challenges unique to the MENA region and opportunities for significant collaborations around the globe. Among the issues discussed were educating a workforce in which multiple languages and fluencies are required, dealing with the health and well-being of a significant refugee population, increasing opportunities for publication and residency placements in the region, and the need for accredited distance learning programs in areas where travel is restricted. **This planning session, led by the AUB, was productive,**

Principal Meeting Outcome/Recommendations

Consensus was reached on the urgent need for:

A new medical education model, which will graduate physicians committed to a symbiotic synthesis of humanism, AI, and technology and that restores the direct intimate doctor-patient relationship, and provides wider access to healthcare.

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* **Radical revision of the premedical and MD curricula**

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*** Radical revision of the structure and duration of medical training**

*** Radical revision of the premedical and MD curricula**

*** Integrating medical education into holistic (cross-professional) healthcare training from the outset**