

# Transforming Medical Education to Prepare Health Leaders – Our Social Responsibility

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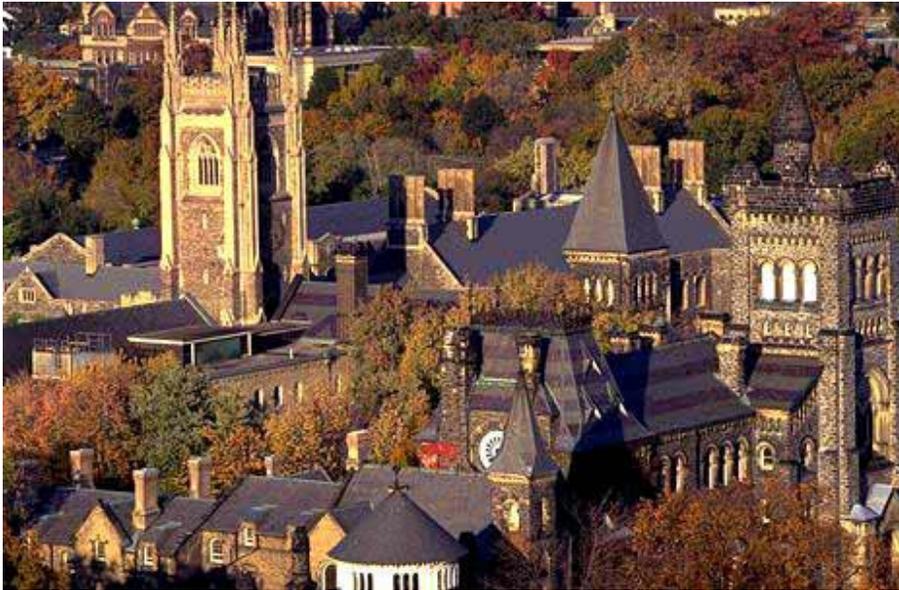
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# Greetings from the University of Toronto President David Naylor



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UNIVERSITY OF TORONTO  
FACULTY OF MEDICINE

# Transforming Medical Education to Prepare Health Leaders – Our Social Responsibility

## *Goals*

- Medical Education – past, present and future
- Physician Leaders – legacy of transformation
- Health Care and Social Responsibility – Role of Medical Education



# Medical Education – past, present and future

## *Our Past (100 years ago)*

- **Germany, France and England – models (Medical Sciences; Clinical Instruction; Curriculum and Examination)**
- **United States and Canada – developing University and Hospital medical teaching**
  - **Flexner Report transformed medical education in the US and Canada**



**MEDICAL EDUCATION  
IN THE  
UNITED STATES AND CANADA**

**A REPORT TO  
THE CARNEGIE FOUNDATION  
FOR THE ADVANCEMENT OF TEACHING**

**BY  
ABRAHAM FLEXNER**

**WITH AN INTRODUCTION BY  
HENRY S. PRITCHETT  
PRESIDENT OF THE FOUNDATION**

**BULLETIN NUMBER FOUR (1910)**

*(Reproduced in 1960)*

*(Reproduced in 1972)*

**437 MADISON AVENUE  
NEW YORK CITY 10022**

## Medical Education – Our Past

### *Abraham Flexner (1866 – 1959)*

- Research Scholar at the Carnegie Foundation for the Advancement of Teaching (graduate studies at Harvard in Berlin)
- 1908 – published criticism “The American College”
- President of the Foundation – established a series of studies of professional education
- Visited 155 medical schools in the US and Canada
- 1910 – public report criticized mediocre quality and emphasized the scientific basis of medical practice which contrasted with the university-based system of medical education in Germany



# Outcomes of the Flexner Report

- ***Identified top-rated schools:*** Harvard, Johns Hopkins, Michigan, Pennsylvania, McGill and Toronto cited as positive models of “intellectual training of physicians” linked to academically oriented hospitals
- ***Heralded importance of research:*** “Clinicians should pursue research stimulated in the course of patient care and should teach medical students to do the same.” – Clinical investigation



surgeons and allows those on active duty or relieved from duty to get a license without examination.

A. B. 961, Bloodgood, extends wide open reciprocity for everyone having a license anywhere, including osteopaths, and licenses here, without examination, any graduate of any school that is recognized by the licensing board in its home state. Under this act, no one would ever be examined in California again!

A. B. 1053, Gelder, a "Bohanon" amendment pure and simple; to license any one practicing a special branch.

A. B. 1054, Gelder, requires the state printer to print and offer for sale the Official Register and Directory of Physicians, the book that has been printed by the State Society for many years—at a loss! It would cost the state of California many thousands of dollars a year—for nothing!

A. B. 1274. Cram. prepared by the attorneys for

a large number of people to "take a whack" at the sick or afflicted and perhaps it would be a good thing to abolish the law entirely and let everyone treat anyone.

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#### MEDICAL EDUCATION IN EUROPE.

The Carnegie Foundation's report upon Medical Education in the United States and Canada created much excitement, from east to west, because of the disclosures it made concerning the evil conditions of the many proprietary schools extant. Even the daily press became interested and occasionally it approved the report's attitude, but more commonly it came to the defense of some criticized school which had local favor. The Foundation's second volume on the subject of medical education treats of European conditions and its advent has created no stir. This is easily



# Reference to the Flexner Report

“...medical education has followed and not led medical practice, and that only lately, when the science of medicine had gradually caught up to and then overtaken the art of medicine, has medical education been improved and to a certain extent standardized.

This is perhaps less true of Germany than other parts of the world, for it is only in Germany that medical education has been, from the beginning, a part of University work and as such it has partaken in the evolution of University activity.

The possession of an ideal and of university methods is shown to be the great attraction which German schools have over others for medical students.....German medical teachers are primarily teachers, not primarily practitioners, and that, as teaching is their “major subject”, they are earnest and zealous – they are, in fact, teachers who teach, and to such teachers students will always flock.”



## **Flexner's view not limited to medical sciences:**

Medical knowledge should be grounded in basic sciences, but did not intend that knowledge be the sole or even the predominant basis for clinical decision making.

1925 – Flexner – “Scientific medicine in America – young, vigorous and positivistic – is today sadly deficient in cultural and philosophic background” – exclusion of the social and humanistic aspects.





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## REVIEW ARTICLE

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Malcolm Cox, M.D., and David M. Irby, Ph.D., Editors

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## American Medical Education 100 Years after the Flexner Report

*Molly Cooke, M.D., David M. Irby, Ph.D., William Sullivan, Ph.D., and Kenneth M. Ludmerer,  
M.D.*



## “Transformation of Medicine in the 20th Century”- our present

- research outstripped teaching in importance
- research productivity became the metric for judging faculty accomplishment
- teaching, caring for patients and public health became less important
- clinical teachers less likely to be first-tier researchers
- clinical teachers under increasing pressure to increase patient care activities
- clinical teachers no longer exemplify Flexner’s model of the clinician-investigator



# Today's Challenges in Medical Education

- Biomedical knowledge doubles every 7 years
- Moral dimension to education - medical students and residents acquire a crucial set of professional values focused on patient-centered care
- Well-being of trainees and safety of their patients demands a new understanding of professional dedication
- Teaching and learning includes conscience role modeling, self-directed goals, understanding the power of the narrative, direct interaction with the health care environment
- Complicated interaction with the health-related private sector (Pharma, Biotech)



## Preparing Physicians for the 21st Century – Our Future

- Access to evidence-based knowledge and practice standards – information technology advances
  - Learners at all levels must have opportunities to compare their performance with a standard and to practice to an acceptable level of proficiency
  - Continual opportunity to learn and refresh skills in a safe practice environment through simulation and virtual experience
- Recognize “hidden” elements in the curriculum and ensure explicit instruction in professionalism including attitudes and behaviours
- Rigorous assessment – to inspire learning, influence values, reinforce competence and reassure the public



## Communities of Learning – Our Future

- Medical students and residents must learn in communities where they will practice
- Public health and health care delivery to “vulnerable” individuals and populations
- Patient-and family-centered care delivered by multi-professional teams
- Inter-professional teaching and learning
- Integrate clinician-scientists and clinical teachers in team teaching
- Cultivate clinician teachers and clinician education scholars – as the foundation for curriculum development and implementation



## Challenges for Academic Health Science Centers – Our Future

“If you consider that education is expensive, you should consider ignorance”  
..... *Socrates*

- remuneration of clinician teachers in a public/private health system
- integration of teaching and learning in community-based health systems
- innovation in health professions' education leading innovation in care delivery
- social responsibility of the medical profession



## *Summary*

# Medical Education – Past, Present and Future

- Evolution of accreditation standards
- Academic health science centers – innovation and excellence
- *Challenges*: financing; social responsibility



# Physician Leaders – Legacy of Transformation

- Individuals can change the system
- Opportunities for medical trainees to develop leadership skills

## Dr. Elizabeth Blackwell 1821- 1910 – “*The Pioneer*”

Born in England - moved to the US as a teacher

“The idea of winning a doctor’s degree gradually assumed the aspect of a great moral struggle, and the moral fight possessed immense attraction for me”

1847 – rejected by all the leading US medical schools, except Geneva Medical College in NY where the administration asked the students to decide whether to admit her or not. The students, reportedly believing it to be only a practical joke, endorsed her admission. Most students became friendly, impressed with her ability and persistence. She graduated first in her class in 1849 as the “*first woman doctor of medicine in the modern era*”.



## Dr. Elizabeth Blackwell, *cont'd*

- Sought further training in Paris, France and England (St. Bartholomew's Hospital – Dr. James Paget and Florence Nightingale)
- 1851 returned to NY – refused to opportunities to practice and opened her own dispensary in the slums of New York City with her sister Dr. Emily Blackwell and Dr. Marie Zakrzewska
- 1857 – Established the New York Infirmary for Women and Children and then toured for one year in Great Britain encouraging women to take up medicine as a profession
- 1859 – American Civil War trained nurses and helped to create the United States Sanitation Commission
- 1868 – Founded Women's Medical College in New York
- 1869 – Founded London School of Medicine for Women in England
- 1875 – Appointed as the Professor of Gynecology at the London School of Medicine for Children founded by Dr. Elizabeth Garrett Anderson



## **Dr. Alice Hamilton 1869-1970 – “*The Public Servant*”**

“I chose medicine because as a doctor I could go anywhere I pleased – to far-off lands or to city slums – and could be quite sure that I could be of use anywhere.”

1883 – Medical Degree from the University of Michigan

Following internships in Minneapolis and Boston she traveled to Germany with her sister Edith Hamilton and together they attended Universities of Munich and Leipzig for a year in bacteriology and pathology (agreed to be inconspicuous to male students and professors)

1897 – Professor of Pathology at Women’s Medical School of Northwestern University, Ill.

1902 – Bacteriologist at Memorial Institute of Infectious Diseases in Chicago Ill, during a typhoid fever epidemic when she made the connection between improper sewage disposal and flies in transmitting the disease – led to reorganization of the Chicago Health Department

Reported that health problems in the immigrant poor were due to unsafe conditions and noxious chemical, e.g., lead dust, exposure during employment.



**Dr. Alice Hamilton.....cont'd**

1910 - Heads Occupational Disease Commission for the State of Illinois – seeking laws regulating safety at work and the rights of workers who became ill at work.

“Founder of Occupational Medicine”

1919 – First woman to serve on faculty at Harvard Medical School (on the condition that she not be allowed into the Faculty Club, no access to football tickets, could not march in the academic procession at commencement)

1924-30 – Serves on the health committee at the League of Nations in Geneva

1925 – Publishes the book: *“Industrial Poisoning in the United States”* – and joined the inaugural faculty at the Harvard School of Public Health

1935 – Emeritus Assistant Professor of Industrial Medicine at Harvard University

1947 – Recognized with the Lasker Award of the US Public Health Association



## Dr. Virginia Apgar 1909-1974 – “The Renaissance Women”

Born in Westfield, New Jersey in a family of musicians, she became a skilled violinist

1929 – graduated from Mount Holyoke College, zoology and premed curriculum. Supported herself by working as a librarian, waitress, musician, and earned an athletic letter and wrote for the school paper.

1933- Graduated from Columbia University College of Physicians and Surgeons (4th in her class), and became the 5th women to hold a surgical internship at Columbia Presbyterian Hospital in NY but experiencing bias against female surgeons entered anesthesia training.

1945 – Director of the Department of Anesthesiology, Columbia-Presbyterian Medical Center –

1949-59 – First female full professor at Columbia University College of Physicians and Surgeons and first full professor in anesthesia in any institution



## Dr. Virginia Apgar ....cont'd

1949 – Developed the Apgar Score – (published in 1953), five-category observation-based assessment of newborn health in the delivery room (Appearance, Pulse, Grimace, Activity, Respiration)

1959 – Earned a doctorate at Johns Hopkins in Public Health and developed research in birth defects

1959-67 – Served as Head of the Division of Congenital Malformations, National Foundation – the March of Dimes organization (refocusing from polio to birth defects)

1965-71 – Professor at Cornell University – first medical professor in the US to specialize in birth defects (heralding the era of developmental biology)

Dr. Apgar's hobbies included music (violin, viola and cello), made instruments, airplane pilot (after age 50), fishing, photography, gardening and golf.



## **Dr. James Orbinski – 1960 – “Humanitarian Activist”**

1990 - MD from McMaster University - in his final year engaged in Pediatric AIDS research in Rwanda and considered advanced immunology training to become a clinician-scientist.

1990 -92- Completed Family and Community Medicine Training and practiced in Ontario and with a small group of physicians formed Médecins Sans Frontières (MSF) Canada

### ***Worked with MSF:***

1992 –in Peru during a cholera epidemic and in Somalia during civil war

1993 – in Afghanistan during the civil war

1994 – in Rwanda during the Genocide

1996 – in Zaire during early stages of civil war and in Zambia with the Canadian Public Health Association on a national immunization program

1997 – UofToronto receiving an MA in International Relations

1998-2000 – President of MSF International

1999 – Accepts the Nobel Peace Prize for MSF – please read his acceptance speech

## Médecins Sans Frontières

1971 - small group of French physicians formed in the aftermath of the Biafra secession and famine, who believed that all people of the right to medical care regardless of race, religion, creed or political affiliation and that the needs supersede respect for national borders.

2008 – MSF International – governed by International Board in Geneva, Switzerland with 3000 nurses, midwives other professionals and 1000 permanent staff.

- Annual budget of USD 400 million – with work in 80 countries

“I don’t think it is heroic....I think it is decent. I think it is normal.”  
...James Orbinksi

## ***Speaking of James Orbinski:***

“Facing threats of violence, lack of supplies and worsening corruption by governments who would co-opt the word “humanitarianism” in support of their destructive agendas, Orbinski chooses decency over callousness, care over cynicism and life over darkness even when making impossible decisions about who lives and who dies. “

***- film journalist...Angie Driscoll***

2008- Associate Professor at Uof Toronto in Medicine and Political Science. Research scientist and clinician at St. Michael's Hospital in Toronto.

His research focuses on medicine and humanitarianism; the emerging discipline of global health; equitable access to health care and health care technologies. He is part of a team developing a multi-disciplinary PhD Program Global Health.

# Health Care and Social Responsibility – Role of Medical Education

Social Responsibility of Medical Schools has been defined as being open to society in the 3 following ways:

1. Learning from society
2. Working with society
3. Influencing the health policy, the health system and the health care of the society

..... Professor Charles Boelen, France



## Role of Medical Schools

- Recognize that the rights and privileges of the medical profession are only justified through dedication to the welfare of the community (which provides these rights and privileges)
- Establish balanced partnership among the University – Government – Communities involving research, teaching and services, focusing on the problems and needs of the community.

.....Professor Robert Woolard, Canada



## **“US Medical Schools Failing Social Responsibility Test, MD says”**

Canadian Medical Assoc J. 143(11), 1990

Keynote address to the Association of Faculties of Medicine of Canada by Dr. David Rogers, former Dean of Medicine at Johns Hopkins

“...he argued that the US health care system has not maintained medicine’s attractiveness as a profession and has failed to produce an appropriate generalist/specialist mix and to control health care costs...”

Dr. Morton Low, President of the University of Texas Health Science Center in Houston .

“..Curricula must be modified to provide greater emphasis on prevention, gerontology and health promotion...”

.....more doctors and more hospitals do not equate with more health”.



## US medical schools failing social responsibility test, MD says

**Douglas Waugh, MD**

**T**he theme of this year's joint annual meeting of the Association of Canadian Medical Colleges and Association of Canadian Teaching Hospitals was timely — the social responsibility of the academic health complex. In his keynote address Dr.

Rogers cited the intense focus on biomedical research as a reason for the US problems. This, while laudable because of its accomplishments, has tended to divert medical schools from their primary role — training doctors to care for the sick.

which all postgraduate physician education is under university control; in the US it is largely hospital controlled. He also favours the flexibility of Canadian training programs that permit more effective exploitation of ambulatory patient experience than is possible

# Teaching Medical Students Social Responsibility: The Right Thing to Do

Academic Medicine 75:346, 2000

“While ensuring that medical students have the potential to learn the curriculum has obvious implications for the medical school admissions process, most medical students will take their lead from the faculty. “

- recognize the “hidden” curriculum
- faculty of stature and influence must be knowledgeable and interested
- concerted faculty development necessary



2008 **World Health Organization**  
has defined the social accountability  
of medical schools as:

“The obligation to direct their education,  
research and service activities towards  
addressing the priority concerns of the  
community, region, and/or nation they have  
a mandate to serve. The priority health  
concerns are to be identified jointly by



## Canadian and Global Examples:

1. Elder Care (Geriatrics and Chronic Disease Management)
2. Aboriginal and Native populations

*Who are the leaders?*

*How do we prepare leaders in our  
Medical Schools?*



## Health Care and Social Responsibility – Role of Medical Education

In Canada:

- Major shortage of gerontologists
- Family medicine not integrated with specialist and community-care services
- Elder care at home or in institutions – underserved
- Management of complex continuing care – major crisis

Role of Medical Schools??



# Transforming Chronic Care for Older Persons

.....C. Boult et al. Academic Medicine 83:627, 2008

## ***Premise:***

Size and impending morbidity of the aging baby boom generation may overwhelm the health care system

## ***Solution:***

- Rapidly increase the number of physicians skilled in providing chronic care
- Prompt adoption of new models of high quality, cost-effective chronic care

***How could this be accomplished?***

## ***Solutions to barriers; recognition and financing***

- Private Foundation and Government support for education programs and fellowship –
- John A. Hartford Foundation funded 40 medical schools in the US to develop undergraduate curriculum in geriatrics
- Donald W. Reynolds Foundation – funded 30 academic health science centers to strengthen instruction in geriatrics to medical students, residents and practicing physicians
- American Geriatric Society have launched programs to improve geriatrics training in postgraduate medical and surgical residencies, 70% had no previous curriculum.
- American Board of Internal Medicine has declared Geriatrics as a separate specialist program



## Leadership in geriatric education, research and care

- Geriatric training must include leadership skill development in organizational management, education, research, health policy
- Accreditation standards in undergraduate and postgraduate medical education programs must emerge as a priority
- Consumers – must demand high quality geriatric care – to ensure government responds with incentives for medical schools and the health system
- Target specific outcomes – number of geriatric specialists required by 2030



# Health Care and Social Responsibility – Role of Medical Education

## In Canada:

- **Aboriginal and Native Peoples – major health care problems**
- **Live on reserves in rural and remote areas or in the inner cities**
- **Generally in the lowest socio-economic conditions**



## Solutions:

- Establish local care delivery - telehealth
- Train native community health professionals, e.g., Inuit Nursing Program
- Educate health professionals in the communities, e.g., Northern Ontario School of Medicine
- Educate the youth
- Population health research to identify effective treatments





Northern Ontario  
School of Medicine

## “Northern Ontario School of Medicine – “mandate of social accountability”

- Established in partnership with 2 northern Ontario Universities 1200 km apart
- First new medical school in 30 years – recruiting aboriginal and francophone students
- Emphasizes small group, community-based and e-learning
- Themes throughout 4 years:
- northern and rural health
- personal and professional aspects of medical practice
  - social and population health
  - foundations of medicine
  - clinical and communication skills in health care



# ***Transforming Medical Education to Prepare Health Leaders - Our Social Responsibility***

## ***Medical Education – past, present and future***

1. Science and art of medicine – continual evolution
2. Professionalism and inter-professionalism – priorities
3. Leadership development – central mandate



# *Transforming Medical Education to Prepare Health Leaders - Our Social Responsibility*

## *Physician Leaders – legacy of transformation*

1. Public health
2. International and global health
3. Health system reform

# Dr. Samantha Nutt

- MD graduate McMaster University, Assistant Professor at UofT Family Medicine
- Masters of Public Health from the London School of Hygiene and Tropical Medicine
- Founder and Executive Director of **War Child Canada** – humanitarian support and long-term programming for children and their families in war torn countries

“Dr. Samantha Nutt and Dr. Eric Hoskins are the driving force behind War Child Canada, an organization through which Canada's leading rock bands perform benefit concerts attracting hundreds of thousands of youth. Today the organization is sponsoring eight projects - in Ethiopia, Sierra Leone, Thailand, Colombia, Uganda, Iraq, Pakistan, and Afghanistan. As a result, many thousands of Canadian and American youth have become empowered peace activists, along with a number of socially committed musicians who would not otherwise have an NGO vehicle for expressing their concern.”