

Commencement Address

“Remembering the Suffering”

Northeast Ohio Medical University

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May 19, 2018

- Thank you, President Gershen
- Members of the Board of Trustees and the Leadership Team
- The Platform Party
- Faculty, Family Members, and Friends
- and, of course, the Class of 2018

- It is a great honor to come before you today on the occasion of this distinguished institution’s commencement.

- I have many thoughts looking out upon the audience
 - The graduates are a diverse group, and represent three colleges: Medicine, Pharmacy, and Graduate Studies
 - You have worked hard to be where you are today, have had the usual ups and downs during the course of your education, but now enjoy the glow of real accomplishment

- But there are others who also deserve our thanks:
 - The School’s leaders, teachers, and staff
 - And let’s not forget those who have supported you along the way - families, spouses, partners, and friends
 - Let’s give them a round of applause

- My talk today is tempered by the realization that beginning immediately after I finish, and lasting a lifetime, no one will remember who the commencement speaker was

- But I am reminded of something attributed to Maya Angelou. She said “I’ve learned that people will forget what you said, people will forget what you did, but people will never forget how you made them feel.”
- So I aspire today to leave a message with you that you will “feel” throughout your career
- And that message is directly aligned with the theme of this year’s commencement: Humanities and Healthcare
- It is relevant whether you are in direct patient care, in health-related education or research, or in some form of healthcare administration
- My message to you is simple, but in the course of a busy professional life could get lost
- It is **the importance of remembering the suffering of those who are ill**
 - Hold that thought – More to come!
- I’d also like to offer you some relief with the assurance that I will follow the “3-B’s” of commencement speaking, as told to me by my late friend and university president, Andrew Sorensen
 - **Be** to the point
 - **Be** brief
 - **Be** seated
- Now to my address
- Arguably, medicine, science, and healthcare are undergoing the fastest and most significant changes in their history
- Let’s take a moment to look backward and forward

- When I graduated from medical school, about a thousand years ago, the world that I worked in as a resident, fellow, and eventually faculty member was so different in many respects from what it is today
- Can you imagine a world without personal computers, cell phones, or the internet?
- Admitting patients to the hospital back then often included, in addition to those who were acutely ill, patients whose blood pressures or blood sugars were just a little out of whack, or who needed some routine GI studies
- Of course, we would never admit these patients today, as our hospitals have essentially become fast-paced, rapid turnover ICUs
- But it never really occurred to me as I was going through my education and training how different medicine might become over the course of my career
- I'm not sure why I didn't think more about it, probably because I was so caught up in what I was doing that I really didn't have any idea about what changes might be coming down the pike
- But today we are constantly hearing and thinking about the future, a future driven by great leaps in technology which, I believe, will fundamentally reshape medicine and science
- And the tech gurus tell us that the changes to come will be exponential in scope – such that the next 30 years will witness faster and even more dramatic changes than the past 30
- Let's see, 32 years from now will be the year 2050, when most of you will still be practicing your profession

- What might it be like for you compared to today?
- A recent book I read provided an interesting perspective on the changes we are experiencing. The authors commented that we are undergoing the profound shift from a print-based industrial society to a technology-based internet society¹
- And the major driver of these changes has been described as the “fourth industrial revolution” of human history, following steam, electricity, and computers
 - A key feature of this revolution is something called “technologic convergence, ” which involves the integration of a whole range of technologies - such as big data, artificial intelligence, robotics, sensors, 3-D printing, crowd sourcing, nanotechnology, and many, many others – all working together to create a vast and somewhat uncertain infrastructure
- By working together, these technologies will provide real-time information about patients along with the latest scientific findings to quickly inform patient care and research – data that is collated, organized and managed using artificially intelligent platforms
- It seems to me, as a result, that a new ecology of healthcare is being created, an ecology led by four fundamental transitions²:

First, a transition from health care to self-care (going online not just for advice but also for diagnosis, referral, and self-management)

¹ The Future of the Professions. Richard Susskind and Daniel Susskind, Oxford University Press: 2015.

² West J and Mehrotra A. The future ecology of care. Annals of Internal Medicine 2016;164:560-561.

Second, a transition from visit care to virtual care (for example, Kaiser Permanente in Northern California reports that 40% of all physician encounters are virtual and growing³)

Third, a transition from in-person care in hospitals and offices to a wider range of settings (retail clinics and “hospital-at-home” models)

And fourth, a transition stimulated by the growing field of precision medicine, in which medical care is customized to optimize therapeutic benefit for a particular individual or select groups of patients, using tools such as genetic and molecular profiling

- This particular transition speaks to a highly individualized form of healthcare that will increasingly rely on interdependent teams of health professionals using large data sets and sophisticated computer algorithms
- While these transitions open up important new avenues and techniques for healthcare and scientific research, they are also creating the potential for the development of a true learning healthcare system, where every patient and every scientific development informs care and treatment in real time.
- So it is clear that the fourth industrial revolution is bringing deep changes to the role and scope of the health professions and the directions of scientific research – something that will shortly bring me to my theme of **“remembering the suffering of those who are ill”**
- Of course there are many other forces that will impact healthcare of the future, such as the marketplace and politics
 - But I think you’ll agree that it’s best not to try to make any definitive predictions on these points!

³ ibid

- But the somewhat predictable transitions I've described have important implications for what you will be doing, whether directly interacting with patients and clients, educating students, helping run healthcare organizations, or conducting research
- Consider, for example, the observation that the amount of medical information is already much too large to be mastered by a single health professional – and that this information is growing daily
- The result is that the care giver each day becomes less the exclusive bearer of medical and scientific knowledge – something that for millennia has been the strength and basis of trust of the health professions
- How does this change impact your role as care giver, when machines and occasionally patients know more than you do?
- It seems to me that a new paradigm for healthcare is being created – something that would amaze and certainly disorient the historical greats, from Hippocrates to Osler
- And this new paradigm in my opinion demands that those of us in the healthcare fields become expert at both some new and old skills

Let's begin with some of the newer skills:

- First, sophisticated mathematical (mainly statistical) skills will be necessary to understand and communicate to patients the meaning of probabilities generated by computer algorithms
 - The analyses by smart computers of thousands of data points for a single patient, including not just blood tests and imaging, but also information coming directly from the patients' bodies using wearables and insideables, will produce a series of probabilities

- For example, this patient has a 81% chance of having disease X or a 66% chance of responding to treatment Y.
- As one author described this: “The new tools for tailoring treatment will demand a greater tolerance for uncertainty and greater facility for calculating and interpreting probabilities that we have been used to as physicians and patients”⁴
- Second, learning how best to work with machines
 - As pointed out by a futurist, “machines and systems will work alongside tomorrow’s professionals as partners...Human professionals will have to come to terms with the need to defer to the superior capabilities of machines”⁵ [in certain areas]
- Third, becoming competent in the management and oversight of delegated responsibilities within newly designed multiprofessional healthcare teams, as patient care becomes more complex and specialized
- And fourth, skill in adapting clinical practice to new payment and performance systems that will likely include proactively promoting population health in addition to treating individual patients
- You might at this point wonder if you are prepared for all these new developments, but I want to assure you that you will be prepared because of your already demonstrated abilities in self-learning and technological adoption
- So let’s not lose sight of this most important observation:
- **YOU HAVE THE PRIVILEGE OF WORKING IN THE MOST EXCITING TIME IN THE HISTORY OF MEDICINE AND SCIENCE!!!**

⁴ Hunter DJ. Uncertainty in the era of Precision Medicine. *New Eng J Med* 2016;375:711-713.

⁵ Susskind R and Susskind D, op.cit.

- Let me repeat that: **THE MOST EXCITING TIME IN THE HISTORY OF MEDICINE AND SCIENCE!!!**
- Science will further unlock the mysteries of biology with new insights into disease and aging
 - Those of you engaged in research will investigate areas that were unimaginable just a few years ago
- Highly effective and individualized therapies on an unprecedented scale will become available, with the result of enhancing health and well-being
 - And those of you in healthcare administration will have to figure out how to make this all work in an efficient and effective manner
- I also believe that solutions will be found to solve the insidious problem of health disparities, perhaps on a global scale using new and affordable technologies
- But, you will recall, I also mentioned the need for expertise not just in new skills, but also in some old ones
- It's very common at ceremonies and graduations to talk about health professionals' duties to their patients. We affirm that we will do our best to provide our patients with honest and appropriate care – and, above all, do no harm
- But there are other duties and skills we must consider
- My first message is to always remember that patients are your most important teachers, beyond the medical literature, colleagues, grand rounds, artificial intelligence, or the growing virtual world of knowledge
- It is through learning from patients that you become the best clinicians and researchers you can be

- Because of this, every working day you owe each and every patient your gratitude and respect
- I urge those of you doing lab-based research to reflect regularly on how this work might impact patient care one day, and to talk occasionally about your work with clinicians – and that your work, no matter how basic, is ultimately directed to improve health and well-being
- My second message brings me at last to what I want you to feel good about: the importance of “remembering the suffering of those who are ill”
- This was the famous mythologist Joseph Campbell’s definition of compassion in medicine⁶
- And it is this skill of compassion that may be the most important of all in the coming era of technologically-enhanced healthcare
- A famous computer scientist reflected 40 years ago that “There are some things people come to know only as a consequence of having been treated as human beings by other human beings”⁷
- And the writer Anatole Broyard put it another way: “Not every patient can be saved, but illness may be eased by the way caregivers respond”⁸
- In other words, these writers recognize what medicine has known for millennia: the paramount importance of concern for the sufferings and misfortunes of others

⁶ From *The Power of Myth* with Bill Moyers. Anchor Books, 1991

⁷ Joseph Weizenbaum. *Computer Power and Human Reason*. W.H. Freeman and Company, 1976, p 209.

⁸ Adapted from *Intoxicated By My Illness*. Anatole Broyard, Ballentine Books: 1992

- This means respecting the right of patients to make choices according to their values, and understanding how these values impact care decisions
- It means having real and tested abilities to provide the uniquely human services that patients need -- to go beyond probabilities to address uniquely human complexities
- I mentioned earlier that the greats of medicine, like Hippocrates and Osler, would be amazed and disoriented by the changes taking place
- But they would be very comfortable with this part of my talk!
- Hippocrates is credited with having written: “It is more important to know what sort of person has a disease than to know what sort of disease a person has”
- And Osler has said that “Medicine is science of uncertainty and an art of probability”
- I implore you, as you begin your careers, to be guided by the importance of sympathy and concern for the sufferings and misfortunes of others, and to be steered by the principle that patients are your best teachers
- This feeling of compassion will endure the test of time, and serve you well in both your professional and personal lives, regardless of the changes coming down the pike
- I wish all of you, on the threshold of such a promising future, a world filled by achievement, fulfillment, peace, and – above all – compassion.
- As Maya Angelou has said, “When someone shows you who they are, believe them the first time.”

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CONGRATULATIONS AND THANK YOU!