William Haseltine Presentation of "World Class" to The Brookings Institution
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John R. Allen (JA): Ladies and gentlemen, thank you for joining us today. I am John Allen. I am the president of the Brookings Institution. I am very pleased to have you here this afternoon to welcome our Brookings Trustee as our guest this afternoon, Dr. William A. Haseltine.

From 1976 to 1993, Dr. Haseltine was a professor at Harvard Medical School and the Harvard School of Public Health where he was the founder of the chair of two academic research departments, the Department of Biochemical Pharmacology and the Division of Human Retrovirology.

He is also known for his pioneering work on cancer, HIV/AIDS, and genomics. He has authored more than two hundred manuscripts in peer reviewed journals during his career. Dr. Haseltine was also a pioneer in the field of biotechnology, having founded more than a dozen biotech companies in fields ranging from the development of cutting edge pharmaceuticals to new materials and fuels. He was the founder of Human Genome Sciences Incorporated and served as the chairman and CEO of the company for twelve years.

Today, Dr. Haseltine is the chair and president of ACCESS Health International and is also the chairman of the Haseltine Foundation for Science and the Arts. Relevant to today, Dr. Haseltine is also the author of numerous books, including the management and leadership bestseller, *World Class: The Story of Adversity, Transformation, and Success at NYU Langone Health,* for which we are gathered here today. It is an excellent book. It is also a subject where he will talk about increasing hospital productivity. This is also the subject of an upcoming panel that will be running here in Brookings as well.

Professor, please know that both in your capacity as a trustee but as a friend, with such great experience under your belt, that we deeply, deeply appreciate your assistance to the Institution with your presence here today to talk about your book.

After I have concluded, Dr. Haseltine will talk for about fifteen minutes and then he will be joined on stage by Brookings Senior Fellow and Director of the USC Brookings Shaeffer Initiative on Health Policy, Dr. Paul B. Ginsberg. We will then take questions from the audience. As a final reminder, we are on the record.

William Haseltine (WH): Thank you. It is a different experience for me to be on this side of the podium having spent many years listening to our distinguished speakers. I thank you for the opportunity.

Let me begin with a disclaimer: I have no official affiliation with NYU Langone other than I became a patient there after my initial research for the book convinced me of their very high standards of care.

A bit of background about why I wrote this book. I am concerned about the rising costs and poor quality of the American healthcare system. We spend a lot more than any other country on health services, and we do not get very much for what we pay. Our healthcare costs are rising to such an extent that the former chairman of the Joint Chiefs of Staff told us, from this podium, that the biggest strategic threat to the United States is healthcare costs. That grabs your attention.

I also listened to Isabel Sawhill, a senior fellow here, address the Brookings Trustees almost fifteen years ago when she described a Brookings report entitled *Restoring Fiscal Sanity*. She and Brookings sponsored the subsequent Rubin-Hamilton report that laid out a similar case in chilling detail. Healthcare costs alone are projected to squeeze out most discretionary spending, including military spending, infrastructure spending, education spending, and social welfare spending. Those predictions have largely come true. Witness the present state of our budget, ever increasing debt, and pressure to reduce government spending in key areas necessary for our security, education, infrastructure, and social welfare.

Would that such profligate spending result in superb healthcare for all of our citizens, but that is simply not so. That observation may be a bit puzzling to most of you here in this room. You do have access to excellent care. However, that is not the case for most of our fellow Americans. The National Academy of Medicine issued a report a few years ago titled *US Health Care in International Perspective: Poorer Health, Shorter Lives, Especially for Women.* Today, the United States ranks thirty fifth in health outcomes among the one hundred and ninety five nations of the world. Measures included in this comparative study include infant mortality, maternal mortality, death under the age of five, and life. The United States ranks well behind all other OECD countries and even below Cuba and Slovenia – that despite spending almost twice as much of our GDP on healthcare as other OECD countries. The amount we in the United States spend on healthcare is staggering, in excess of three trillion dollars in 2018, about eighteen percent of our GDP. Profligate spending and poor results. We can do better.

Eleven years ago, I created a new foundation, ACCESS Health International. The founding vision is that: *Everyone, no matter where they live, no matter what their age, has the right to high quality affordable healthcare.* The initial strategy was to study the best practices in healthcare around the world, ones that delivered excellent care at an affordable cost. I have written five previous books, each an extended case study of a particular health delivery system in countries as diverse as Singapore, India, Sweden, and the United States. Brookings was kind enough to publish two of these books, *Affordable Excellence,* a book that describes the Singapore healthcare system, which delivers some of the best care in the world at a cost of less than five percent of their GDP, and *Every Second Counts*, a public-private partnership emergency response system in India that provides free ambulance service to 750 million people at a cost of fifteen dollars per pick up. That system has saved over three million lives over the past ten years. ACCESS Health has also studied best practices around the world in maternal-child care, eldercare, and those with physical and mental disabilities. That is a short summary of our think tank activities. ACCESS Health also provides advisory and implementation support services to both the private sector and to governments, based on our knowledge of best practices globally. We work in India, China, the Philippines, MENA region, and ASEAN countries.

World Class is my first book devoted to an extended case study of a health provider in the United States. The book addresses what I believe is a gap in the current political and public dialogue on health system reform. So much of the debate today centers on how we pay for healthcare services - private insurance, employer sponsored insurance, federal and state payments, or out-of-pocket payments - or should we maintain the status quo or move to single payer. Little of our public discourse addresses the concerns of most people: What do we get for what we pay? Does the treatment we receive actually provide the remedy to what ails us? Can we control or a least manage the long term consequences of disease? Are our treatments safe or do they expose us to new danger, particularly hospital acquired infections? Is the service patient friendly and convenient? And, yes, is it affordable?

The providers of healthcare services, not the payers, must ultimately answer these questions. It is the providers, hospitals, outpatient facilities, nursing homes, clinics, and home care services that must address the fundamental questions of healthcare outcomes, their safety, convenience, and patient-centeredness. Regulations and payment regimes may guide, but do not determine provider behavior. It is for that reason I looked for an American healthcare delivery service that does its very best to meet patient needs. I was fortunate to find one right in my own backyard, New York University Langone Health which I will refer to going forward as NYU Langone. NYU Langone is far more than a health service delivery organization. NYU Langone includes hospitals and outpatient care facilities as well as a medical school and a vibrant research enterprise. It is what we call an academic medical center responsible for patient care, education, and research. The lessons I have learned from this detailed study are applicable to all three domains important for our present and future health.

Why Study NYU Langone Health?

The first reason NYU Langone is an attractive institution to study is that it is one of the country's top performing academic medical centers. Over the last few years, NYU Langone has been rated in independent surveys as among the very best, sometimes number one, in patient care, providing the highest standards in the nation in both quality and safety. Last year NYU Langone was ranked as the number three medical school in the United States, just behind Harvard and Johns Hopkins. It is now ranked as the best biomedical research facility in New York State and has the highest research support per capita in the country. Moreover, the combined enterprise of patient care, education, and research generates very substantial financial surpluses in addition to receiving strong charitable donor support.

The second reason I chose to study NYU Langone is its history. Ten years ago, it was a failing institution. The combined losses of the medical school, the hospital, and the research activities threatened bankruptcy not only to the medical center but to the entire New York University. The quality and safety of patient care ranked in the bottom third, sixtieth of the then ninety academic medical centers. The medical school was ranked fortieth or below. Research support was declining at a time when external research support for many other institutions was increasing rapidly. In other words, NYU Langone is a spectacular turnaround story, a trifecta of achievement. I thought lessons gained from the story of transformation might be applicable to many other troubled healthcare institutions, be they focused on patient care, teaching, or research.

A third reason to study NYU Langone is that in many ways NYU Langone resembles a vast majority of healthcare providers around the country. I am well aware of exceptional providers such as Kaiser Permanente that provide comprehensive cradle-to-grave care of resident populations. That is not the case for most hospitals and patient care organizations. Like NYU Langone, most healthcare systems treat all comers with multiple sources of support including private insurance, employee based insurance, Medicare, Medicaid, out of pocket payments, and even the uninsured. Lessons learned from a study of how NYU Langone turned around its performance might be generally useful.

What are the central lessons of the NYU Langone turnaround story, lessons applicable to other institutions here in the United States and elsewhere? Today I will not focus on questions of leadership and culture as important as those are. I encourage you to read the book that describes the change form a culture of complacency to one of aspiration, as well as the key levers of change that enabled the transformation. Instead I will describe several fundamental changes in the organization that can, and I believe should be adopted by all healthcare systems both here in the United States and around the world.

To describe these changes, I must take a step back and paint a picture of the social and technology background that both drove and enabled the transformation.

A Changing Healthcare Landscape

Demographic change is a fundamental feature of most countries today. The population of high income countries is aging rapidly. People live longer and have fewer children. Changing demographics means changing healthcare needs. The needs of the older populations are very different from those of young populations. Most high income countries built hospital-centric healthcare systems designed to treat acute illness typical of the young, episodic incidents that can be treated quickly and definitively. Chronic diseases are typical of older populations. Chronic diseases cannot be treated episodically. They must be managed over long periods. The goal is often not to eliminate the disease but rather to manage one or more chronic diseases to reduce the impact on both the activity and lifespan of each person. Such care is best delivered in outpatient and community care centers or at home. The cost of such care is lower than the care delivered in the most expensive setting-the hospital. Many middle income countries are under similar demographic pressure, most notably China.

A second enabling transformation occurred in medicine itself. Medicine has undergone profound changes over the past thirty years. Imaging and diagnostic technologies allow disease to be diagnosed with speed and precision. Science has produced cures and treatments never before possible. Life threatening maladies can be managed to provide patients with many decades more of active and productive lives. Minimally invasive surgery, laparoscopy, and other advances, now permit eighty percent or more surgeries to be performed in outpatient settings, in the morning and out the same day.

The revolution in information technology has similarly transformed where and how healthcare can be delivered. Disease status and progress can be monitored remotely by wearable and home sensors. The outcomes of medical interventions can be evaluated in terms of the effect on underlying conditions, safety, and patient satisfaction while at the same time measuring the fixed and variable costs of each intervention. Information technology allows the relative performance of health systems, hospitals, and individual physicians to be made transparent to patients and managers within the health system and even to individual doctors themselves. Artificial intelligence applied to medicine is beginning to provide important decision support for diagnosis and the selection of treatment options for doctors, allied health workers and for patients themselves.

Lessons from the NYU Langone Story

Twelve years ago, the new CEO of the Langone Medical Center and Dean of the NYU Medical School, Dr. Robert Grossman, foresaw several fundamental changes of how NYU Langone functioned. His vision was that NYU was to become a *World Class, Patient Centered, Integrated Academic Medical Center* that performs at the highest level in patient care, education, and research. The changes highlighted I believe can and must be adopted by health systems globally to assure high quality, affordable care for all.

Change 1: Transit from Hospital-Centric to Outpatient and Community Care

The first change is structural. When Grossman became CEO and Dean, NYU Langone was a hospital-centric system. The vast majority of patients were treated in one hospital complex located in Manhattan. There were only four outpatient, day treatment centers. Today the majority of patients are treated in a network of almost four hundred outpatient centers spread across Manhattan, Brooklyn, and Long Island. Grossman was one of the first to realize that

modern medical and information technologies allow the transition from hospital to outpatient care, in the morning and out the same day, no overnight stay. Outpatient care has many advantages. It is much more convenient for patients. Outpatient centers can be located near, to where patients live. Proximity to care is especially vital for the elderly and the disabled. Outpatient care is safer. The risk of hospital acquired infections is lower. Outpatient care is far less expensive than in-hospital care. The great majority of the substantial annual surplus of NYU Langone comes from outpatient, not in-hospital care. The transition from a hospital-centric to the outpatient centric system did not occur overnight but rather was built carefully over a decade.

Change 2: Build a Comprehensive, Interface Free, Real Time, Transparent Information System

One of Dr. Grossman's first priorities was to create an information system that would allow him to improve the quality and safety of patient service, reduce costs, recover payments due, improve medical education, and provide support for the research enterprise. All this proved to be possible. He sought to build an information system that was in his words is, "*comprehensive, interface free, real time, and transparent.*" I will briefly describe what each word means in this context.

Comprehensive: The NYU Langone information system includes information produced by all components of the academic medical center including patient care, teaching, and research. The term comprehensive includes all data relating to internal and external financial matters - all billable expenses and the status of payments outstanding, all information pertaining to facilities and their function, all regulatory issues, all the information relevant to students teachers and admissions, all information relevant to management of research including grants received, clinical trials, research reports submitted and research impact measures and much more. Having all the information in one data set is an essential component of NYU Langone's success or that of any modern medical institution. It is the *sine qua non* of success.

Those who created and manage the information system told me the hardest part is not building the hardware and software, although that is a never ending, expensive process. The hardest task is adjusting work flow to capture all the relevant data as it is generated. Teams of doctors, nurses, and information technology specialists labor full time to ensure that work that is done is captured and flows into the system continually and seamlessly. This is where most medical information systems fail. Many medical information systems impede rather than enhance patient care. Poorly designed information systems create new obstacles and add work to an already overfilled day. Good ones, such as that of NYU Langone, improve the performance of the doctor, increase patient satisfaction, and improve financial performance.

Real Time: Real time means the information flows into the information systems that are produced. There is no waiting period. Real time data is actionable in a way the data entered with delay is not. Problems can be quickly identified and rectified.

Interface Free: Each system that produces information has unique characteristics of how the information is encoded and transmitted. In many organizations, information is produced by legacy systems that may or may not encode and transmit information similarly. If they do not, an interface must be built between each of the transmitting and receiving data system. The interface problem becomes exponentially more difficult as additional, non-compatible information generating systems are added. The problem eventually becomes unmanageable.

The NYU Langone solution is to require each and every device that produces or receives information to encode and transmit the information using the same standards. No interface is required if such a comprehensive program is implemented and enforced. That means all data exists in the same relational database. Patient outcomes can be seamless and related to costs, both fixed and variable. Performance of healthcare workers in one location can be compared to that of others, even across the four hundred or more outpatient centers. Data generated by one doctor or one imaging instrument can be analyzed by all doctors and health workers within the NYU Langone system. Exclusion of non compatible devices comes at a cost. NYU Langone must forgo some useful devices. Doctors that insist on coming with their own, non-compatible information systems are not hired.

Transparent: Vertical and horizontal transparency is central to the NYU Langone culture, transparency of information within the NYU Langone system and transparency with the patient. Transparency within the NYU system is achieved by equipping everyone with dashboards tailored to each function. The content of each dashboard is developed in a dialogue between the functional groups and the information technology group. Each dashboard includes information regarding key performance metrics. For the emergency department, that may include metrics relating to the waiting time of each patient, the time of transit of the emergency service to the hospital or to discharge. For the surgeon, the dashboard may provide data on the number of units of blood used per patient, the infection rate, the length of recovery in and out of the hospital or the number of patients who return for similar care with thirty days. For doctors working in out-patient centers, the dashboard may reflect the number of patients seen daily and patient satisfaction scores. For nursing units, the dashboard may display the fraction of patients discharged before noon. For the scientist, the dashboard may reflect the number of grants received, the fraction of salary covered by external grants and contracts and the extent of collaboration with other scientists and doctors or the amount of papers published in distinguished journals.

Each dashboard also contains a visual display of the goals in each category. The goals are often displayed as national standards to be achieved and standards NYU Langone itself may set, often exceeding the national standards. Performance data is also transparent up and down the chain command within the system extending from the immediate supervisor to the CEO and Dean.

The data is also, and unusually, horizontally transparent. A doctor, a nurse or scientist can compare key metrics of performance with those performing similar work. Surgeons performing the same operation, say for example hip replacement, can compare the number of units of blood, the infection rates of their patients and other key measures to that of other NYU doctors performing the same operation.

Change 3: Accountability: Hold Individuals, Groups and Departments, and Institutions Accountable for Data Based Performance Measures

Accountability based on real time, transparent data is a key requirement for everyone at NYU Langone, from the most senior executives to all the support staff. Each person in a health system must be held accountable for the performance based on data. Clear, agreed upon measurable performance goals are assigned to each person, each group, each department and the entire institution. Individual and collective goals are set each year. Performance against agreed upon goals is measured throughout the year and summarized annually. Those that meet or exceed the goals are rewarded appropriately. Those that do not are counseled and helped to do better. Those who do not improve encouraged to work elsewhere.

Data is the key to accountability. Without clear and precise real time data, performance cannot be measured. Without mechanisms to hold people accountable improvement will not happen. As I look at health systems around the world, I am saddened by the lack of even the most rudimentary forms of data collection and utter lack of accountability in those who provide for some of the most sensitive needs of our lives and the lives of those we love.

Change 4: Passion for the Patient

Throughout my more than forty interviews I found that the driving passion for all the changemakers is a passion for the patient. Their individual and collective drive are to ensure the best medical outcome possible, the highest safety standard, the maximum possible convenience, and a friendly welcoming environment for the patient and their families.

In some instances, the connection between the focus on the patient and the change is clear. The vision statement begins with the words, "*World class, patient centered*…" From the very outset it was clear that Dr. Grossman and his team drove the medical center towards improving the quality and safety of patient care. The result was a rapid and dramatic improvement in national rankings for quality and safety, an effort that brought them to the very top of performance in the United States.

The creation of outpatient centers which provide care close to where people live makes a big difference in convenience and access especially to the elderly and those with disabilities and even those with limited resources or heavy work obligations. Travel time in the busy city for care can be reduced from hours to minutes. A topic not included in *World Class* is NYU Langone's recent telemedicine programs. Virtual urgent care, teleconsultation for minor medical emergencies, is now available. Post surgical teleconsultation, another recent innovation, is often vastly more convenient for those recovering from surgery than is a trek to the doctor. An information system that provides transparent health data to patients and their doctors improves the quality and safety of care. An insistence on promptness reduces patient waiting time to an average of less than fifteen minutes for appointments.

Key to patient experience is the respect and consideration from everyone they encounter, the doorman, the receptionist, the security guard, the medical technician, the nurse, and the doctor. Ken Langone's maxim is that, "respect given is respect received". Everyone in contact with patients at NYU Langone are treated equally. There is no tolerance for prima donna behavior in the operating room or the laboratory. Care for customers via care for employees is an approach Ken Langone brought with him from his years of experience as a founder of Home Depot.
A demonstration of such respect came in the immediate aftermath of Hurricane Sandy. The hurricane shutdown the entire NYU medical center - hospital, medical school and laboratories. One of the very first acts orchestrated by Grossman and Langone was to assure all employees that they would receive full salary until normal operations resumed, however long that took.

It may not be evident that a concern for patients drove the recent decision to provide free medical education to all entering and current NYU medical students. Some of my friends who are deans of prestigious medical schools viewed this as a competitive strategy to acquire the best students. Not so from my understanding. The current enrollees at NYU Medical School are the equal of those admitted to Harvard, Stanford, and Johns Hopkins. From my conversations, the fundamental motive is to improve patient care by improving who can become a doctor and what kind of medicine they practice. The belief is medicine is best served if all those with the passion and talent for medicine can do so. High tuitions are a barrier to many. Medicine is also best served by allowing doctors to follow their passion when choosing a career rather than to be drawn to high paying specialties to pay off a massive debt. I have heard some argue that tuition

should be waived based on need but not for the students of wealthy parents. When asked that question Ken Langone responded. “Not all the children of wealthy parents are wealthy themselves. Additionally, my hope is that one day such a doctor will remember the grace given by NYU and will return the gift when encountering a person who cannot pay for treatment." Like many of the changes instituted by the leadership at NYU their goal is not only to improve their own performance but also to serve as an example that others may follow, free tuition for example.

These then are some of the many lessons of the NYU Langone story, lessons I believe that are applicable to health system through the United States and globally.

To summarize they are:

Transit from Hospital Centric to Outpatient and Community Care

Build a Comprehensive, Interface Free, Real Time, Transparent Information System

Hold Individuals, Groups, Departments and Institutions accountable for Data Based Performance Measures

Passion for the Patient

I urge you to read *World Class* for the many other lessons the story contains, not the least of which are lessons in leadership and management common to most business and organizations.

Questions from the Moderator

Paul Ginsburg (PG): I really enjoyed reading the book. I am glad you wrote it. When something important happens, people need to learn from it. You answered some of my initial questions. In the book, you placed importance on integration of the medical school with the hospital and the decision to have one executive who is responsible for both. Could a capable but lesser leader have succeeded in this role and have you seen other academic medical centers pursue such an integration?

WH: My answer will be a little bit of inside baseball. Many of you are members of the academy and know of which I speak. Doctors in an academic medical center have three responsibilities, patient care, research, and teaching. Typically, they report to a hospital CEO for patient care (very often a businessman not a physician), and the Dean of the medical school for teaching and research. Medical schools almost always require subsidies from the hospital. The CEO and the Dean often engage in fierce fights over resources. Let me illustrate with a story Dr. Grossman told me. When he first arrived at the NYU Medical Center he was responsible for rebuilding the radiology department both to serve patient needs and to do research. Shortly after he arrived, a pipe burst in his office. The damaged wall remained for many months while the CEO and the Dean battled it out for who would pay for the repair. All the while Grossman had to recruit new staff in his partly destroyed office. That is a petty example of a much deeper problem.

Yet another lesson from the NYU Langone story for academic medical schools: **Combine the functions of the CEO and Dean into one executive with authority over budgets and**

performance. That is true of existing institutions wherever possible and certainly true for the creation of a new academic medical center whether in the US or elsewhere.

PG: How doable is that job?

WH: Rush University in Chicago has just done it. They took it one step further. They created the position of a CEO who oversees a medical school, a nursing school, a school for allied health professionals, as well as four hospitals and all associated clinical services.

PG: You spoke about how important the very large investments in health information technology were in the success of the NYU Langone transforming. Can you tell us a little bit more?

WH: When I visited Dr. Grossman for the first time, he fired up his computer. He told me they see everything that happens in the medical center in real time. He showed me how many people were in the emergency care waiting room just at that moment. As I recall eight people were waiting to be seen. The number of minutes each one had been waiting was displayed. The longest waiting time was seven minutes. The same data was displayed in the emergency department waiting room for all patients to see. Grossman said to me, "We measure everything. We are really concerned about the safety of blood in New York and how expensive it is." He pulled up a screen that showed how many units of blood are used by the entire hospital system versus their target. He showed me how blood usage varied over time. He displayed the total number of units of blood used by each doctor. He drilled into the case record of specific patients who received the blood to understand the rationale behind the use of each unit. He told me that doctors now work together to try to understand how to minimize blood transfusions.

Let me share with you my experience as a patient at NYU Langone. During and then after writing *World Class*, I needed serious medical care for two different issues. I chose NYU Langone for the care as my research convinced me that NYU Langone provided both high quality care and was patient friendly. I filled out paperwork exactly once when I entered the system. For all subsequent visits, and there have been many, I merely place my hand over a palm reader to register. All relevant appointment, medical and insurance data is captured by that simple act. Every doctor I see has a complete set of information displayed on his screen describing what every other doctor has done in a clear and transparent way. When I arrive home, I have a copy of all they have done on my computer. If I want, I can now read my own X-rays and MRIs. A typical appointment begins with a blood test and standard measures of weight, blood pressure and temperature. By the time I see the doctor, on average ten or fifteen minutes later, all the results, with the exception of some specialized blood tests are available to the doctor. That is what an information system can do for a patient.

PG: How did they build such a system other than saying I want Epic?

WH: The NYU Langone system does use Epic but it is only one of the fifty or more data collection and data processing systems that have been melded into one seamlessly integrated database. They worked for four years hand in glove with Epic to suit the needs of an academic medical center. It was the first use of Epic for a center that included teaching and research. They still collaborate with Epic on design improvements.

The information team repeatedly emphasized that it is not only hardware and software that allows the system to function. Equally important is constant effort to make sure the work process allows the information to flow into the data system in real time. They told me, “We don’t change medicine, we do change how it is done so that it compatible with information capture.” A

very large group of professional staff, doctors, nurses, and information technologists work full time on work process information flow integration.

The story of the creation of the information system is interesting. *World Class* describes some of the key events. When Dr. Grossman was first appointed the Dean and Chief Executive Officer, he told his senior team “I need information.” Three months later he did not have it. He said “I am flying a 747 that is about to crash into a mountain. I do not have the key control levers in my hands. I am flying blind."

The person responsible for installing and repairing information systems throughout the medical center heard his plea and responded. He said, "I know where the information you need is. I can solve your problem, but I have a condition.” "What is the condition?” Grossman responded. “My condition is that my staff and I meet with you alone without your direct reports. They may have the information you need but it not in an easy to use format. In fact, they may not want you to have it all.”

There is another important lesson here. Building a smoothly functioning information system needs a sophisticated hardware and software team. It needs a professional team to optimize work flow and information. But most importantly the information must be designed by a singular mind, not a committee, or a group of department chairs. Another key lesson from *World Class* is: **The information system must be designed by a singular mind, not a committee. That person must be the one ultimately responsible for all operations of the institution, namely the CEO**.

PG: You have a significant section of the book describing a major cultural change, one from a culture of complacency to one of aspiration. That change occurred without inciting a revolution. Please elaborate for this audience.

WH: One aspect of the NYU Langone transformation of which Dr. Grossman is especially proud of is making really significant changes with inciting serious opposition. Let me list some of those changes. On the very day, he assumed responsibility he walked out the CEO, the CFO, and the COO of the hospital and the Dean, CFO, and COO of the medical school. Over the next few years he replaced thirty of the thirty two department chairs, several more than once. He also required researchers to obtain sixty seven percent of their salary from external support or have their salary reduced. Yet there was no revolution.

How do you do all of that without a revolution? It is data that allowed him to make the most of these changes without serious objection. He showed by quantitative measures that people were not performing well by national standards. Departments were lagging behind those in other comparable institutions. Data demonstrated that some researchers were not as productive as their peers. He also had the very strong support of the board, especially from the chair Ken Langone. I believe it would have been impossible to make all the changes needed without the resolute support of a very strong chair and the entire board of the medical center and the university.

There were other favorable circumstances. Under threat of bankruptcy, a financial wall was erected between the finances of the medical center and those of the university. That granted NYU Langone fiscal and practical independence from the university.

Bob Grossman is also very a determined leader. In many ways, the partnership between Grossman and Langone reminds me of the partnership between Marshall and Eisenhower as

described in the book *Partners in Command*. Pick your leader, support your leader, do not allow end runs and second guessing. The story of cultural change at NYU Langone is far more nuanced than I describe here. If you are interested, I devote a good part of the book to this topic.

Yet another lesson: **Give the leader freedom, give the leader resources, but hold the leader accountable for results.**

PG: One major change you describe is a change from consulting doctors who have private practices and hospital privileges to on staff physicians. Other hospitals have done the same without improving the bottom line. What is the difference?

WH: The simplest answer to the question is that the majority of physicians were brought as outpatient care, not as in-hospital practitioners. The cost of outpatient care much less than that of in-patient care.

You might also ask why is working as an on staff physician at NYU Langone attractive to a doctor in private practice or a doctor that is part of an independent group practice. Why has NYU been able to hire more than four thousand doctors in the New York area? It is interesting that NYU has not had to purchase a single private or group practice.

The demands of independent or group practice are becoming increasingly untenable. The pace of technological change means that facilities and equipment must be continually upgraded. Some upgrades are expensive. Modern medicine also emphasizes sophisticated information systems. That too is hard for the independent practitioner to keep pace with.

Finally, the paperwork demands on independent and group practices are extraordinary. More and more time is devoted to meeting documentation and reimbursement.

By contrast, NYU Langone offers to create an outpatient care center near where the doctors already practice. They provide new facilities with all the latest equipment and information services. They handle much of the back office paperwork. They also pay the employees as much or more than they were making previously and give bonuses for good performance especially with regard to quality, safety, and patient satisfaction. There is a downside. If they do not meet agreed upon annual goals repeatedly, they may be terminated.

This highlights another important lesson: **Bring all physicians on staff. Eliminate the dependence upon of consulting physicians.**

PG: You told the story about how NYU Langone acquired this bankrupt safety net hospital in Brooklyn and turned it around. Is this a potential salvation of many struggling safety net hospitals?

WH: The answer is yes, but a conditional yes. The conditions are several. NYU Langone did not absorb (I say absorb because they did pay for the hospital) the Brooklyn Hospital as part of a strategy to grow by hospital acquisitions. NYU Langone's decision over the past ten years not to make major acquisitions distinguishes them from their peers in the New York metropolitan area. By the time they absorbed the Brooklyn hospital they had already established a network of almost one hundred outpatient centers in Brooklyn. That justified the need for a local hospital to meet the needs of the growing population of patients and their families. NYU made a similar decision to absorb Winthrop Hospital in Long Island nearby another large collection newly

established outpatient facilities. Restructuring a safety net hospital absent surrounding out-patient facilities and an established patient base is a much riskier undertaking. That being said, the NYU system, including replacing existing senior managers with NYU staff and installing best practices, is a critical component of success in both stabilizing the finances of NYU Langone-Brooklyn and in improving quality and safety. Today NYU Langone-Brooklyn is either break-even or near break-even financially and has met the same high quality standards as the Manhattan campus.

Questions from the Audience

PG: We will now take questions from the audience.

Lou Gagliano (LG): Lou Gagliano, Coalition to Transform Advanced Care. How can we serve the people with serious illness in a way that does not bankrupt Medicare, Medicaid and families, in a way that is more compassionate, family focused, and responsive the will of the patient?

WH: You touch on a topic of great importance, especially as all high income countries and many middle income countries are facing the twin problems of low birth rate and aging populations. Many of the elderly suffer from multiple chronic diseases. Similar considerations also apply to younger people with chronic disease. As I mentioned, chronic disease management is best delivered at home and in communities not in hospitals. The teams that care for patients in the home and community centers include social workers, physical therapists, nutritionists, and psychologists as well as specialized nurses and medical technicians. I believe that health systems need to be reorganized to allow integration of care across all caregivers. Care in the community, not the hospital, is much less expensive.

The ACCESS Health office in China has documented several best practices. In Shanghai, we have studied community care and adult recreation centers. The centers are typically placed in dense urban areas and serve the needs of nearby local residents. When healthy, people use the centers as a social club. When ill, they can call upon nurses in the center and use of the beds in the facility. They return home when well enough. Daily health status can be tracked if needed.

In the United States, several organizations provide a full range of services in hospital services, except surgery, that are normally hospital or clinic based including dialysis, infusions, and radiology. These services are offered to people who seek hospital care very frequently, the five percent of chronically ill patients that account for almost fifty percent of healthcare costs. These services claim that at home hospital care saves half of the expense for these patients. That may be another answer to your question.

Together with my colleagues, I have written three books describing best practice in the US and Europe on care of the elderly, including one on care of elderly patients with cognitive dysfunction- *Aging With Dignity*, *Aging Well*, and *Voices in Dementia Care*.

Howard Striker (HS): What is the role of medical and technology innovation in improving care and reducing healthcare costs?

WH: Howard, it is good to see you again after these years. We are witness to what can only be described as amazing improvements in our collective ability to diagnose, manage, and even cure diseases. The progress we have seen in our lifetimes is literally unimaginable to those of us who began the journey of discovery fifty years ago**.** That is certainly the best of news.

Unfortunately, that is not the whole story. Progress in diagnosing and treating disease has not come at lower cost. Quite the contrary. Some, but not all, of the increased cost of healthcare today can fairly be attributed to new and expensive treatments.

You may be interested in one of my central motivations in creating a foundation that focuses on high quality affordable care for all. After an academic career devoted to discovery research and a second career as a pharmaceutical executive, I came to realize that the cost of healthcare was rising so steeply that it threatened the discovery and innovation essential to medical progress. If people cannot access healthcare because of cost, if the benefits of discovery and innovation are not available because of price, I fear that our society will be reluctant to continue to provide the generous support to both fundamental and applied research. We must find better, more cost effective ways to deliver high quality, affordable care for all. That is why my focus today is on reducing the cost of care while improving quality.

Maureen Lewis (ML): Hi, I am Maureen Lewis, CEO and Founding Director of Aceso Global. How do you compare NYU Langone to an organization like the Cleveland Clinic and other accountable care organizations? My second question pertains to the interoperability of information systems. How important is the problem of lack of interoperability?

WH: Maureen, thank you for your questions. Aceso Global is a great partner for ACCESS Health. I just returned from the Philippines where we are working jointly on several projects. Your partner, Gerald La Forgia, has been an important resource for us beginning in our formative phase in India.

The concept of affordable care organizations, and capitated payments for populations is attractive. Organizations like the Cleveland Clinic and Kaiser Permanente have been successful in providing high quality care to large numbers of people. The incentives for keeping people healthy and for treating those that are ill at home and in communities seem properly aligned. It is somewhat of a puzzle that such organizations have not taken root throughout the country. The Affordable Care Act does provide incentives to create accountable care organizations. Today the results on their ability to control costs have been disappointing. I have not seen their quality and safety data.

NYU Langone operates in a different space, one similar to that which predominates in most parts of the country. NYU Langone cares for all comers, regardless of whether or not they are long term patients. I believe the lessons of NYU Langone's success are applicable to all types of health delivery organizations.

In answer to your second question: Lack of interoperability with and between information systems is a serious issue. I stressed the importance of an interface free information network earlier. Interfaces are meant to address issues of interoperability. They do so poorly as a change in one system demands a change in other systems with which they interact. Interoperability between different hospital systems poses an even bigger problem. It is very difficult to import information from one closed system to another, a problem that creates great difficulty in the continuity of patient care. Similar problems bedevil the interface between personal health monitoring devices and medical center information systems. Despite heroic efforts to address these problems, I fear interoperability issues will be with us for a long time. There are solutions but they are more in the realm of government rather than in the realm of technology.

PG: Is NYU Langone planning to participate in accountable care organizations?

WH: Not that I know of.

Eva Havas (EH): Will the insurance industry affect the ability to make the changes you propose?

WH: Payers do influence behavior, no doubt about it. Insurance companies generally follow the lead of Medicare and Medicaid in determining what to pay for and to some extent how they will pay. Health systems are coming under increasing pressure to produce higher quality results at a lower cost. Demographics once again is a major factor. Baby boomers are aging into Medicare and may are already part of Medicaid. The profit margins are much smaller for Medicare-Medicaid beneficiaries than they are for privately insured patients. Medicare and Medicaid are moving away from fee-for-service payments and towards either capitated, DRG, or bundled payments. There is an increasing emphasis on-pay-for-performance, paying to the results of treatment, not necessarily for all the individual components that comprise the treatment. Medicare and Medicaid have introduced financial penalties for avoidable errors and may not pay the cost of rectifying such errors.

PG: Our time is up. Thank you Dr. Haseltine, for speaking with us this evening. Copies of his book *World Class* are available at the back of the room.

WH: Thank you for your interest and attention.

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