

HEALTHCARE TODAY and THE FUTURE OF SURGERY

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Welcoming Remarks by **Victor E. Giovanetti, FACHE**, EVP LifePoint Health
American College of Healthcare Executives of Middle Tennessee (ACHE/MT)

Thursday, February 28, 2019

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Opening the evening of ACHEMT's event at LifePoint Health on Thursday, February 28th, was returning speaker **Victor E. Giovanetti, FACHE**, Executive Vice President (EVP) of Hospital Operations at LifePoint Health, which just got merged by Apollo Global Management with RCCH Healthcare Partners. Victor was a co-founder of our ACHE/MT chapter. As before, Victor warmly connected with the attendees, this time weaving, by way of example, into his career a very personal and defining experience involving his own family.

From the perspective of a healthcare executive who started his career as a clinician, Victor exclaimed some bold and challenging statements:

1. **What you do matters every day.**
2. **When we make a mistake, somebody, the patient and also the family, pays the price.**
3. **If you are not committed to continuously improving the quality of care, then you should leave the business and do something else.**



We have all been consumers of healthcare, with births, appendectomies, deaths, etc. These experiences have informed Victor about his own responsibilities, and those for whom he has responsibility, at the bedside. He shared his personal story about the diagnosis of his brother, Tony, at the age of 48, with Type A Leukemia. The treatment required a stem cell transplantation from their sister, which was followed by graft host disease. Victor felt at a deep loss as to how to tell his brother that he was going to die and also how to tell their father, who had recently lost his wife and was now a widower in his 70's, that his son was going to die. Victor was able to get an oncology nurse to help communicate what had to be communicated.

We have a tremendous opportunity to show that we really care about the people we serve, the patients and also their families. Patients assume, but deserve, to get more than good quality care. What really matters is that they feel like we care about them, we listen and respond!

As healthcare executives, Victor drew our attention to the **four key elements** of leadership:

- 1. Formal Training**
- 2. Experience Matters**
- 3. God-Given Talent**
- 4. Life-Long Learning**



With these four key elements top of mind, Victor implored us to find something worth learning in everything that we do, through learning experiences, reading, encounters with different people, situations, life, etc.

Dr. Alexander Langerman, our second speaker, is the very embodiment of all of that. While Dr. Langerman has all of the confidence needed by a surgeon to perform, he shatters the classic stereotype of a surgeon, having a humanity and a humility that thoroughly endear himself to those who have the privilege to encounter him. He did nothing short of captivating the entire audience with his unbridled passion and relentless commitment to improve the quality of care and covering the topics set forth here with contagious enthusiasm.



1. Versatility versus Specificity. One of the main challenges facing surgical environments today is balancing versatility with specificity. Structural equipment needs change with each clinical task. Some clinical tasks require significant infrastructure and devices (*e.g.*, advanced imaging equipment), yet too much specificity can adversely limit the extensibility of the space needed.

The long-standing way of organizing is to use a preference card, but there is significant inefficiency and disorganization with the lack of certainty as to preferences. Staff fear being reprimanded or that the patient could suffer harm if the wrong instrument or material is selected. When instruments are not present when needed, this causes delays, threatens patients, and pulls a surgeon out of the mental “zone” of operating. Overprovisioning also causes problems: waste from open-but-unused instruments (“Remains of the day”) that some estimate is a multi-billion dollar annual loss to the healthcare system, as well as cognitive interference for the team from the overwhelming number of unnecessary supplies arranged on the surgical table.

As an example of reducing this waste and cognitive overload, Dr. Langerman showed his own results from an institution-wide tray reduction effort (e.g., 7 trays with over 400 instruments were reduced to 2 trays, 1 universal, the other contingency, specialized, with only 60 instruments).

The challenge in improving the efficiency and quality of surgery by reducing variability is collecting better data. What data to collect pertains to procedures (what actually got done), activity (the team and how its members interacted), perception (how is it understood) and performance (how to operate better).



The first hard data as to how to redesign operating rooms for efficiency came out of a study performed at the Clemson School of Architecture (RIPCHD.OR). Healthcare facility design has moved toward the use of lots of booms, but what is not taken into consideration are logistics, for example, that a surgeon cannot see the clock on the operating room wall. Another example given is the lack of access to computers resulting from poorly thought through trash flow, or a vital monitor being located in a terrible place. Dr. Langerman showed how these can be identified with real-time simulation using full-sized, mocked-up operating room spaces.

An early example of this was Frank and Lillian Gilbreth's Surgical Motion Studies in the early 1900's. This has evolved to the "OR Black Box" project at the University of Toronto, where everything happening in the operating room is recorded and analyzed. The next horizon for these data will be automated analysis using artificial intelligence techniques, eventually enabling real-time analysis of surgical activity. Dr. Langerman noted that ubiquitous operating room video is a "treasure trove" of data opportunities but also carries privacy risks and cultural challenges.

2. Enhanced Teamwork Support. To increase efficiency and quality in surgery, we need to create technological and environmental supports for enhanced teamwork. Most surgical care includes fractured teams resulting from breaks, handoffs and cross-coverage. When the operating room staff is 100 people, there are millions of potential combinations. This means that many teams lack situational awareness and a consistent "game plan" for the surgical intervention. This leads to wasted materials, work revisions and errors.



3. Human Interoperability. While medical interoperability is an important trend in healthcare information technology, we need to also focus on "human interoperability". How does information get into and out of information technology systems via the human participants? This includes tailored information for decision support, cognitive hierarchy and inclusiveness to the patient. We need to look at the patient and his or her experience, talk to the patient and ask the

patient, and determine “how would the patient feel better” and “how can we learn to make better spaces for our patients”.

4. Transparency. One of the hidden, but critical incoming trends in healthcare is “transparency”.

Consumerism, increased liquidity of data and the erosion of trust in professions, including medicine, and the growing publicity of conflicts of interest and “bad behavior” all combine to create an expectation that hospital processes be transparent. While historically a surgery theater was open to the public, then with glass walls as late as the 1980’s, in large part the result of the significant increase in medical malpractice litigation starting in the 1960’s, the modern-day operating room is one of the most secluded of environments. It is generally hidden on account of the patient being anesthetized, yet what really happens in the operating room is critical to patient care and quality improvement.



Mentioned was “Dr. Death”, the podcast from Laura Beil (multiple award-winning health and science journalist), and the 2015 “Julie Ayer Rubenzer” Bill in Wisconsin promoting operating room video recording and proposing to protect the right of patients to see and know everything done during their surgery. There is much opposition, but this “pulling away of the curtain” in surgery is gaining public support. Patients have a certain expectation of sacredness in the operating room. This is an important part of their lives, certainly their healthcare lives. Are we really “ready for our close up”? The patient should probably have access to their *procedural* video, as there is a legitimate need for the patient’s treating physicians to know what happened during the surgery. On the other hand, videos of the *surgical team* might not be the right thing to share with patients. as this may adversely affect our practitioners, forcing a need to “perform” for the camera, and risking burnout. This is echoed by a study examining the response of TSA employees to “coercive surveillance”, causing depersonalization and adverse behaviors as a result of cameras at work. While the “panopticon effect” suggests that surveillance will chill bad behavior, the “Hawthorne” effect suggests that changes from observation may be temporary.



There are definitely some policy and cultural changes that will need to take place in order to enable this, along with technology/environmental enhancements to the operating room.

Regarding electronic health records, screens should prioritize clinical information like conditions and infections. Limited or no thought has been given to how to deliver relevant information in a meaningful way to the team.

The future of surgery will entail a balance of versatility and specificity, technological and environmental supports created to enhance operating room teamwork, human in addition to medical interoperability and transparency, all with the goal, not only to continuously improve the quality of surgical care, but to improve patient experience. Now, . . . Do you have unbridled passion? Are you relentlessly committed?

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