NTSA | NATIONAL TRAINING & SIMULATION ASSOCIATION

M&S LEADERSHIP SUMMIT PROCEEDINGS

24 February 2020

Lexington Hotel & Conference Center

Jacksonville, FL

TrainingSystems.org/MSSummit

ACKNOWLEDGMENTS

The thirteenth annual Modeling and Simulation Congressional Caucus Leadership Summit, sponsored by the National Training and Simulation Association (NTSA), was held in Jacksonville, Florida Monday, 24 February 2020. RADM Jim Robb USN (Ret.), President of NTSA, and his organization, provide support to the Modeling and Simulation Congressional Caucus, co-chaired by Congressmen Bobby Scott, John Rutherford, Jack Berman, and Congresswoman Stephanie Murphy.

CONGRESSIONAL MODELING AND SIMULATION CAUCUS MEMBERS

(DECEMBER 2019)

Bobby Scott** Virginia 3rd District	Ken Calvert* California 42nd District	Doug Lamborn* Colorado 5th District
John Rutherford** Florida 4th District	John Carter* Texas 31st District	Elaine Luria Virginia 2nd District
Stephanie Murphy** Florida 7th District	Steve Cohen* Tennessee 9th District	Scott Peters* California 52nd District
Jack Bergman Michigan 1st District	Mike Conaway* Texas 11th District	Bill Posey* Florida 8th District
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Vern Buchanan* Florida 16th District	Duncan Hunter California 50th District	Joe Wilson* South Carolina 2nd District
Mo Brooks* Alabama 5th District	Susan Davis* California 53rd District	Robert Wittman* Virginia 1st District
** denotes members of the Congressional M&S Caucus | ** denotes Caucus Co–Chair*		

From doctors performing hands-on simulated surgeries, to homeland security models that account for details such as wind direction and construction sites, to transportation models that show projected traffic patterns in your hometown decades into the future, modeling and simulation – originally founded in the defense industry, is now a part of the everyday lives of Americans. The Modeling and Simulation Caucus showcases today's M&S initiatives, promotes the M&S industry, and serves as a forum to understand the policy challenges facing this growing and versatile technology.

LEADERSHIP SUMMIT PROCEEDINGS SUMMARY

BACKGROUND

The National Training and Simulation Association (NTSA) conducted the thirteenth Annual Modeling and Simulation (M&S) Leadership Summit on February 24, 2020 in Jacksonville, Florida. RADM Jim Robb, USN (Ret.), President, NTSA, provided opening comments and greeted the meeting participants and attendees. The spirit of the 2020 M&S Leadership Summit resonated throughout the distinguished keynote and panel presentations focused on establishing an actionable agenda for Capitol Hill on the theme, "*Zero Harm and Patient Outcomes: Leveraging Modeling and Simulation for Process Improvement and Organizational Change*."

We are indebted to Congressman Bobby Scott, VA, 3rd District, M&S Caucus Co-Founder and current Co-Chair for lending support for this event. Congressman Scott, along with Congressman Jack Bergman, MI, 1st District, provided opening remarks to challenge the participants to create M&S solutions that are game changers for our future. They continued to participate throughout the day, with Congressman Jack Rutherford, FL, 4th District, along with Congressman Bergman providing closing remarks. They each stressed the critical importance of the role that modeling, and simulation can play as we strive towards zero harm due to medical errors and the resulting improvement to patient safety across our nation.

The first keynote in the morning, following the Congressional Remarks, was by Dr. Mary Patterson. The Lou Oberndorf Professor in Healthcare Technology at the University of Florida, Dr. Patterson established a call to action to address the critical healthcare statistics by highlighting the national need to raise awareness of the rate of preventable medical errors and the opportunity for modeling and simulation to play a critical role in eliminating these errors. She was followed by a distinguished panel of key public and private healthcare researchers and practitioners from across the country who described the best practices needed to create organizational change that promotes patient safety. A second keynote in the afternoon by Dr. Aaron Calhoun, a Professor in the Department of Pediatrics at the University of Louisville, described several best practices which resulted in data to support significance performance improvement and increases in patient safety due to measurable outcomes using modeling and simulation technologies. The second panel of experts from Government agencies, hospital systems, universities and industry, described scalable efforts that achieve competency-based outcomes in healthcare which can serve as a model for others around the country. All of these presentations served as the basis for working group discussions to establish the year's recommended priorities and an action plan. These working groups focused on:

- What of the Top10 Patient Safety Issues can be solved by simulation and/or by policy changes?
- What are the top three blockers for adoption/standardization of simulation in mainstream healthcare?
- What are next steps to achieve collaboration among all healthcare stakeholders to reduce harm and increase patient safety?

The balance of this meeting report summarizes the presentations and working group sessions.

SUMMARY

Dr. Linda J. Brent, CEO and Managing Associate, The ASTA Group, LLC, called the meeting to order and introduced the Patient Safety Working Group and Planning Committee members. This group, along with participants from this meeting will be charged with taking forward the call for action developed to Capitol Hill. She then introduced Rear Admiral James Robb, USN (Ret.), President of the National Training and Simulation Association, for Opening Remarks.

Rear Admiral Robb: RADM Robb stated that the purpose of the meeting was to establish an actionable plan for Congressional action to be implemented by NTSA and our patient safety working group. This is the 13th Leadership Summit to be held and it is the intention to create and implement an action plan to meet the priorities established by the M&S community and the Congressional Caucus. He discussed the need for public outcry on the criticality of improving patient safety. He called on all the stakeholders in the discussion to come together to figure out a clear path for modeling and simulation to play a key role in reducing patient harm. This discussion is the next step in the process of moving an action plan forward. He then introduced Congressman Bobby Scott, Co-Founder and Co-Chair of the M&S Congressional Caucus.

Keynote: Congressman Bobby Scott: Congressman Scott discussed the fact that healthcare has been and continues to be a focus of this Congress. As the Corona Virus begins to grow around the world, this is a critical time in our history. He seeks ways to educate his colleagues on the Hill regarding the role that modeling and simulation can play in the future of healthcare. He challenged the participants to establish a strategic vision for modeling and simulation in healthcare – one that encourages its use for research, drug testing, medical practice and assessment and diagnosis.

Keynote: Congressman Jack Bergman: Congressman Bergman discussed the critical importance of strong healthcare for our country and for our warfighters and their families. He described his views on the similarities between the aviation communities and the healthcare community relative to the acceptance of modeling and simulation as a valuable and realistic training tool. In his work with Veteran's Affairs he understands the need to ensure quality healthcare, and the importance of maintaining health for our veterans and their families after their sacrifices for our country. Congressman Bergman described multiple examples of ways in which simulation is and can be applied to the healthcare community and challenged the participants to provide him with special examples of best practices, and benchmark programs that are scalable to sustain improvement.

Keynote: Dr. Mary Patterson, Associate Dean of Experiential Learning, Lou Oberndorf Professor in Healthcare Technology, University of Florida: Dr. Patterson discussed the importance of taking a systems-based approach to the improvement of patient safety outcomes. The need for deliberate practice to improve performance drives the important role that modeling, and simulation can play creating a safety culture. There is strong evidence regarding "what works", but it requires a paradigm shift in the way in which safety is viewed in the culture. Transitioning to the notion that we have an urgency to "make healthcare safe" for our patients, versus simply managing risk is critical to changing the overall culture of healthcare. Another key element is focused training in communication and team collaboration. Healthcare professionals operate more and more in a team environment, representing yet another cultural shift. Operating collaboratively in a team environment, with a common perspective on how to enhance the safety of our patients can be practiced and rehearsed in a simulation environment.

PANEL PRESENTATION: ORGANIZATIONAL CHANGE TO PROMOTE PATIENT SAFETY: BEST PRACTICES

Panel Moderator: Mr. Bob Armstrong

- **Dr. Jennifer Arnold**, Medical Director, Simulation Center, Johns Hopkins All Children's Hospital
- **Dr. Paul Phrampus**, Director of Winter Institute for Simulation, Education & Research (WISER), Professor, Emergency Medicine, University of Pittsburgh School of Medicine
- **Ms. Ginny Riggall**, CHSE Clinical Practice Consultant for Simulation and Tea STEPPS for Kaiser Permanente Northern California Regional Risk and Patient Safety
- **Dr. Jennifer Cowart**, Internist, Pharmacologist, May Hospital Systems
- **Dr. Bre Banks**, Director of Clinical Education, Centerstone Research Institute

All members of the panel emphasized the need for proactive approaches to patient safety outcomes, and the need for a systems-based approach, highlighting the points made previously by Dr. Patterson. Healthcare is experiencing a generational change among its professionals, with all now appreciating the role that technology can play in improving out comes. Key to the broader implementation of modeling and simulation (M&S) is the need to capture data, to demonstrate substantive change, and to support treatment outcomes. In the area of behavioral health, the application of modeling and simulation is in its infancy. There are no models for treatment in behavioral health using modeling and simulation. For example, in the area of suicide prevention, currently a substantial treatment issue in behavioral health, nearly 80% of graduates receive no training in this area. Thus, this area of behavioral health is ripe for the incorporation of modeling and simulation for suicide prevention. The panel summarized the need for the following to support the application of M&S to improve patient safety outcomes:

1. Incentivization of both simulation training for individually licensed behavioral health clinicians (i.e., Licensed Professional Counselors, Psychologist, Licensed Clinical Social Workers, etc.), and health systems that embed simulation training into their care models.

2. Incentivization of programs and/or mandates for higher education health training programs, primarily at the graduate level, to embed simulation training as a requirement for graduation and/or internship.

3. Increased research (NIH, NIMH, PCORI) and programmatic (SAMHSA, HRSA, etc.) grant funding mechanisms for simulation-based training process and outcome studies in real world care contexts; with preference for those that incorporate cost analyses and/or address the intersection of training with medical risk reduction.

Keynote Address: Dr. Aaron Calhoun, Professor, Department of Pediatrics, University of Louisville and Norton Children's Hospital: Dr. Calhoun discussed the International Network for Simulation-Based Pediatric Innovation, Research, and Education (INSPIRE) program (see slides included) and its impact on pediatric patient safety outcomes. In this presentation, he discussed the need to create uniform reporting mechanisms for outcomes within simulation as a means of conclusively linking training with actual risk reduction. He also discussed the best practices for applications using virtual reality (VR). He advocated for the following based on the outcomes of this day's events and his participation:

1. Creation of incentives for institutions to actively incorporate ongoing simulation activities in their ongoing patient safety practices via reduced insurance premiums and other mechanisms for financial reward. "Meaningful Use" criteria for this should include both the use of simulation as a training modality and the use of simulation as a diagnostic tool to detect latent safety threats at all levels (e.g. from the bedside level to the institutional level) before harm occurs.

2. Re-instatement of substantial simulation-focused patient safety grants via the AHRQ. Again, these should focus on both simulation as training modality and as a diagnostic tool for the detection of latent safety threats at all levels of the system.

3. Specific grant-based incentivization of simulation and patient safety-oriented collaborative research networks and outcome registries.

PANEL PRESENTATION: MODELING AND SIMULATION TECHNOLOGIES TO ACHIEVE COMPETENCY-BASED OUTCOMES IN HEALTHCARE

Panel Moderator: Dr. Marjorie Zielke, Director, Center for Simulation and Synthetic Humans, University of Texas at Dallas

- **Dr. Linda Brown**, Associate Professor of Pediatrics and Emergency Medicine, Vice Chair of Pediatric Emergency Medicine, Alpert Medical School of Brown University
- **Dr. Chad Epps**, Professor and Executive Director, Center for Healthcare Improvement and Patient Simulation, University of Tennessee Health Science Center
- **Dr. Gary Geis**, Medical Director, Center for Simulation and Research, Cincinnati Children's Hospital
- **Ms. Connie Lopez**, FSSH Department of Clinical Education, Practice and Informatics, Kaiser Permanente Walnut Creek Medical Center
- **Mr. William Lewandowski**, COO and Chairman, IVIR, Inc.
- **Mr. Jude Tomasello**, Deputy Project Manager, Joint Project Manager for Medical Modeling and Simulation Defense Health Agency & US Army Program Executive Office for Simulation, Training and Implementation

The panel each presented specific project and programmatic examples from their disciplines and organizations, each focused on demonstratable outcomes in patient safety. Panelists also identified several ongoing projects that support the data collection and correlation necessary to demonstrate the results. The International Simulation Data Registry (ISDR) project benchmarks simulation-related results and care members outcomes across member sites. Several projects within the Global Network for Simulation also focus on tracking data and outcomes across sites and applications.

Several panelists described the criticality of team training, and the need to create expert teams to support patient safety outcomes. Examples were provided both from the Department of Defense medical programs, and also from a large healthcare system focused

on enhancing perinatal patient safety through team training. Key contributors to patient safety issues include: a lack of leadership that values data-driven decision making in the healthcare system; an overall lack of a systems-based approach; and, poor communication among professionals working in a team environment. In summary, the panel made the following points:

- We have known for 20 years that poor communication and systems errors are major causes of preventable death (1).
- Consistently, the top three identified root causes of sentinel events reviewed by the Joint Commission are Human Factors, Leadership, and Communication.
- A Johns Hopkins analysis estimates more than 250,000 deaths each year from preventable medical error, making it the third leading cause of death (2). Other studies suggest as many as 440,000 deaths may occur each year from preventable error (3).
- It's difficult to estimate actual number of patients who suffer preventable medical error because there is not a diagnosis code (ICD-10) code for this. Diagnosis codes for patients who suffer preventable medical error are based on downstream sequelae (heart attack, sepsis, respiratory failure, etc).
- Other high-risk industries rely on simulation to create a culture of safety and prevent unnecessary deaths (nuclear, aviation, etc).
- When simulation was introduced to commercial aviation as a required activity (via Crew Resource Management, or CRM) in 1982, it took about 10 years before a culture change was established and there was a steep decline in aviation fatalities.
- Crew Resource Management was adapted for healthcare, first for anesthesiology but later for all health professions, in 1992 and called Crisis Resource Management (4). Though this was 20 years ago, it has not been adopted widely and certainly isn't viewed by payers, hospitals, etc. as a necessary endeavor.
- The simulation environment is ideal for teaching and reinforcing effective leadership, teamwork, communication, and systems thinking.
- Multiple studies have shown improved outcomes (such as decreased mortality and adverse events in multiple healthcare environments including operating rooms, labor and delivery, and pediatric ICU (5-8) when teams are trained using simulation-based approaches. Decreases in error after communication training for handoffs have also been published. (9)
- The Global Network for Simulation in Healthcare in partnership with the Patient Safety Movement Foundation is creating a series of 30-minute weekly team engagements to improve teamwork, communication, and systems thinking. These are quick, easily delivered in the clinical environment, and connected to a real story of patient who suffered preventable medical error. A controlled pilot of these engagements will begin in April 2020.
  All cases are freely available on their website: http://www.gnsh.org/30-minute-weekly-initiative/weekly-challenge/
- The Joint Project Manager for Medical Modeling and Simulation (JPM MMS) is an office established to meet requirements and fill gaps identified in the military medical modeling and simulation enterprise. Goals of this office include: 1) Fulfill shared medical training requirements for the Services, 2) Standardize MMS capabilities, 3) Centralize life cycle management, and 4) Transition medical science and technology capabilities to the stakeholders. Issues related to these goals are familiar and common to those in both civilian and Government medical simulation fields.
    - When used as part of a systematic approach, simulation and related technologies, are part of the solution for improving patient outcomes and lowering healthcare costs. Properly used, these technologies can efficiently and cost effectively: decrease time to proficiency, maintain proficiency over time (particularly for rarely occurring but critical events), provide objective performance measurements of individuals, teams and organizations, and identify problematic areas in organizational and individual tools, processes and procedures. This is not a complete list but rather a starting point for what can be achieved through the proper use of simulation.

The group discussed the following needs:

- Ways to incentivize institutions towards a common focus of patient safety.
- Ways to hold the health care systems accountable
- Providing advocacy for Low-resource settings
- The application of simulation as part of a practical solutions strategy
- Appeal to the Joint Commission for recommendations across the healthcare spectrum
- Broaden awareness of the data driven results and success stories of modeling and simulation applied to patient safety outcomes
- Consider the patient safety issue concurrently from both the civilian and DoD/VA sides. There are differences, similarities, and tremendous opportunities for synergies between these domains that will ultimately save lives.

In summary, the panel made the following recommendations:

1. At the Federal level, create an FAA-type oversight for how medical training, and medical training devices such as simulations, are designed, developed, delivered, evaluated and certified.
2. Through grants, facilitate the creation of procedural task analyses for all high risk and error prone clinical procedures and create a freely accessible database for sharing them. A procedural task analysis is a key element in the design and development of instruction, the evaluation of learners, and the design and evaluation of training simulations. Having a ready source of vetted task analyses will significantly decrease the amount of time and costs it takes to properly create effective instruction, criterion-based evaluation and valid simulations.
3. Liability and tort laws should be reformed to protect and facilitate learning - particularly those aspects of instruction related to practice, feedback and remediation. No learners, or organizations, should ever have to feel concerned that mistakes made as part of the learning process will subject them to future liability. Where scrutiny should fall is on the efficacy and appropriateness of the instruction, the validity of the tests, and learners' performance on valid tests - both individually and collectively.
4. While a great amount of care occurs in community and rural settings, affordability and resource/effort allocation are often obstacles to simulation-based training and assessment in these areas. Consider research funding at the federal and state level or though policy support to find ways to generalize findings from academic centers to these relatively lower resource areas.
5. Find new ways to train and assess for low frequency, high risk events, and communicate these findings and resources across settings (both urban and rural).
6. Create incentives for healthcare individuals who or organizations that participate in simulation-based training such as decreased malpractice insurance premiums.
7. Require simulation-based activities at medical and nursing conferences in order to obtain continuing education credits (CMEs, CNEs).
8. Create funding opportunities for simulation-based programs and research such as AHRQ grants.

SMALL GROUP SESSIONS:

The participants broke into small groups to prioritize issues affecting the improvement of patient safety outcomes, and the ways in which modeling and simulation can address these issues. The following questions and discussion results follow:

1. WHAT ARE THE KEY ELEMENTS OF SUCCESS TO ACHIEVE ORGANIZATIONAL CHANGE AND IMPROVE PATIENT SAFETY OUTCOMES?

- Achieve stakeholder inclusion and buy-in (they have to agree to it) as well as incentives
- Shift incentives towards patient safety
- Understand change and ROI- this is a gradual shift and requires a long-term investment; currently there is limited historical perspective to know how long change will actually take
- Identify ways to best capture the information needed to document change and demonstrate benefits
- Make healthcare organizations more accountable

2. WHAT ARE BEST PRACTICES FOR PROCESS IMPROVEMENT FOR PATIENT OUTCOME?

- Remove “egos” and address the issue of stigmatization surrounding mistakes
- Shift to a systems-based mindset which focuses primarily on the organization rather than the individual
- Value the importance of measurement, and provide the freedom to fail. Note: Some states have reporting requirements that make it difficult (i.e. Florida has to report license numbers of those included in an incident). This goes against the “just” culture concept and can lead to potentially punitive outcomes; Policy change can help with this
- Improve quality and accuracy of data collection, storage, accessibility and retrievability to support the use of data in positive and proactive ways.
- Improve access to data collection and measurement tools
- Employing individuals trained in process improvement (i.e. Team STEPPS®, etc.) and change management within teams is critical to best practices
- Provide access to statistical resources

3. WHAT TOP 10 PRIORITY SAFETY ISSUES CAN BE SOLVED BY SIMULATION AND WHAT ARE BEST SOLVED BY POLICY? *NOTE: TOPICS ARE LISTED, WITH “POLICY” OR “SIMULATION” IN PARENTHESES*

1. Diagnostic stewardship and test result management using EHRs (Policy)
2. Antimicrobial stewardship in physician practices and aging services (Policy)
3. Burnout and its impact on patient safety (Simulation/Technology)
4. Patient safety concerns involving mobile health (not ranked)
5. Reducing discomfort with behavioral health (Both)
6. Detecting changes in a patient’s condition (Simulation/Technology)
7. Developing and maintaining skills (Simulation)
8. Early recognition of Sepsis across the Continuum (Simulation)
9. Infections from Peripherally Inserted IV Lines (Simulation)
10. Standardizing Safety Efforts Across Large Health Systems (Simulation/Technology)

4. WHAT ARE THE TOP 3 BLOCKERS (IN CLINICAL SETTING) FOR ADOPTION OF SIMULATION IN MAINSTREAM HEALTHCARE?

- Resources, time off, non-revenue generating time (not making money), Allowing faculty to assist with simulations as needed
- Ability to learn through self-study and then ability to assess
- Demonstrate cost savings (cost avoidance is less impactful than cost savings
- Poorly designed simulations or using simulation ineffectively
- Lack of administration awareness of the value of simulation (when C-suite folks are not clear on the value) is challenging; if we provide fragmented messages, it can make this more difficult

5. WHAT ARE THE TOP 3 BLOCKERS FOR STANDARDIZING SIMULATION IN MAINSTREAM HEALTHCARE?

- Lack of knowledge and application of simulation standards; simulation is not a "specialty" so no recognized experts. *Note: Some standards have been created for programs which helps in best practices for development of simulation- the gap is in ensuring folks use and execute these standards, such as the Society for Simulation in Healthcare (SSH), IIC-American Group, now AIC, and the American College of Surgeons (ACS) standards.*
- Standards for curriculum implementation are not consistently recognized and employed.
- Definition of patient level outcomes (Note: There is a lack of outcome data.)
- Consistency in design, execution and evaluation of simulation centers (as managed by SSH)
- Standards for the procedures to use in medical practice applied to simulation. (e.g. Airway procedures and suturing skills)
- Process for broad and collaborative exchange of data, outcomes, and measurement

6. WHAT MOTIVATORS EXIST TO SUPPORT HEALTHCARE SIMULATION AT A GIVEN ORGANIZATION?

- Personal safety, personal experience with simulation
- While some tools have been available for decades, they haven't been used
- Standards for simulation analysis, design, development and measurement
- Scalability of programs to other sites and organizations; creating sustainability and extensibility of programs.
- Financial resources can better enable integration of simulation (e.g. salary support for those involved in doing simulation)

7. WHAT CAN HELP THE MOST IN PROMOTING AND ADOPTING SIMULATION?

- Top level administration support and recognition that this work is of value
- Demonstrating value to administrators
- Demonstrating notion that success breeds success
- Finding opportunities for quick wins (e.g. are there easy "wins" across institutions/organizations)
- Documenting and publicizing performance improvement in residencies
- Access/relationship building between C-suite folks and simulation personnel to educate and advocate
- Demonstrating that simulation provides good stewardship of the institution's money

Congressional Keynote: The Honorable John Rutherford, 4th District of Florida: Congressman Rutherford welcomed all to his district and discussed the many avenues for healthcare in the Jacksonville area. He discussed first responders, and his experience in law enforcement and the ways in which simulation plays a key role is preparation, practice and rehearsal. He joined his colleagues in asking for ways in which Congress can help to better integrate simulation into the healthcare area, and was joined by Congressman Bergman who summarized his perception of the day's events, and next steps that he intended to take to support the healthcare community in focusing on patient safety issues. Both were committed to the importance of lower the risk to patients through the appropriate integration of simulation in preparation and medical practice.

SUMMARY

In summary, the group identified key elements in patient safety that need to be solve moving forward. These elements include the:

- Inclusion of the effects of modeling and simulation for practice and rehearsal on improvement in performance and in-patient safety outcomes as organization metrics
- Adaptation of current policies to allow room for the integration of modeling and simulation into the analysis, training and education, and evaluation models for patient safety
- Reinstatement of funding that was lost from organizations like the Agency for Healthcare Research and Quality (AHRQ) coupled with an increase of research funding for the National Institute's of Health the Department of Defense and other healthcare agencies. This funding should be targeted toward outcomes-based research on the use of modeling and simulation to improve patient safety and the establishment of standard metrics.
- Creation of incentives for healthcare professionals and organizations to embrace simulation as a tool to attract simulationists to practice in healthcare.
- Creation of standards and regulatory guidance for the use, process and procedures, and outcome measurements in the application of simulation to healthcare and outcomes
- Incentivization of organizations and agencies that support healthcare (e.g. insurance companies, device providers, etc.) to increase the use of simulation for education, training, and rehearsal of procedures.
- Establishment of metrics clearly highlighting the return on investment to organizational leadership for the application of modeling and simulation to improve patient safety outcomes.

NEXT STEPS

NTSA will be facilitating the following next step actions resulting from this Leadership Summit:

- Collaborate with the Caucus to facilitate informational Lunch and Learn sessions on Capitol Hill to educate staff and Congressional representatives about patient safety issues and the role and simulation can play in reducing harm.
- Provide opportunities for the Society for Simulation in Healthcare (SSH) to have a visible presence at the M&S Caucus Capitol Hill Expo to be held in July 2020.
- Work with Caucus on legislation and a proposed pilot study focused on improved patient safety outcomes through simulation
- Hold a healthcare summit during the 2020 I/ITSEC conference to bring key stakeholders together to develop a plan of action.
- Hold a healthcare track at the 2020 I/ITSEC focused on outcomes-based research in Patient Safety.

The results of the Leadership Summit will be provided to the leadership of the Modeling and Simulation Caucus for consideration. Additionally, NTSA and the Patient Safety Working Group will be addressing the recommendations from this report in collaboration with the Congressional Caucus.