

# SIMULATION CENTER

2017  
Annual  
Report

Live Your Healthiest Life. **NYC HEALTH+ HOSPITALS**

Simulation Center Central  
1400 Pelham Parkway South  
Building 4, 2nd Floor, Room 200  
Bronx, NY 10461  
[www.nychealthandhospitals.org/simulationcenter](http://www.nychealthandhospitals.org/simulationcenter)



STAY CONNECTED. FOLLOW US.



**SIMULATION:**  
Improving the safety  
and quality of  
healthcare delivered by  
NYC Health + Hospitals.

**NYC  
HEALTH+  
HOSPITALS**

**SIMULATION  
CENTER**



The Simulation Center serves the entire healthcare system providing simulation services to advance system-wide patient safety and quality improvement initiatives.

Established in 2010, The Simulation Center is continuing to grow a Devolved Model of Simulation that expands the reach of simulation with several new satellite centers and in-situ programs being established in 2017. This allows better access locally to NYC Health + Hospitals' clinicians, administrators, educators, and support staff.

Currently, the Center hub and newly established satellite centers offers courses that have been developed based on an examination of root cause analysis, claims data, and hospital performance data. Team training is an integral part of the course design and delivery. The "in-situ" or unit-based simulation program is growing in selected units throughout the hospital system. Better patient outcomes and improvement in staff satisfaction have been seen in the areas where these programs have been established.

**The Simulation Center Hub**  
1400 Pelham Parkway South  
Building 4, 2nd Floor, Room 200  
Bronx, NY 10461

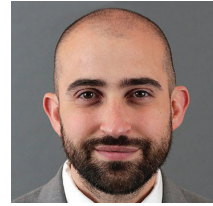
# CONTENTS

- 1 **EXECUTIVE SUMMARY**
- 3 **SIMULATION HUB UTILIZATION**
- 4 **SATELLITE CENTERS**
- 5 **INAUGURAL SIMULATION SYMPOSIUM**
- 6 **SIMULATION FELLOWSHIP GRADUATION**
- 7 **VISITING PROFESSOR PROGRAM**
- 8 **INAUGURAL HEALTHCARE SIMULATION WEEK**
- 9 **IN-SITU SIMULATION ANNUAL CELEBRATION**
- 10 **NETEC COURSE**
- 11 **SCHOLARLY SPOTLIGHT**
- 12 **HARLEM COMMUNITY OUTREACH**
- 13 **SOCIETY FOR SIMULATION IN HEALTHCARE ACCREDITATION**
- 14 **SHOULDER DYSTOCIA FOR RISK MANAGEMENT ATTORNEYS**
- 15 **"UNDER THE HOOD" FELLOWSHIP DAY**
- 16 **THE SIMULATION CENTER RESOURCE TEAM**

# THE SIMULATION CENTER RESOURCE TEAM



**Komal Bajaj, MD, FACOG, FACMG**  
Clinical Director



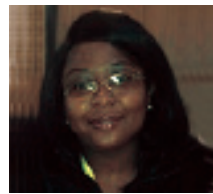
**Michael Meguerdichian, MPH, MD**  
Clinical Director



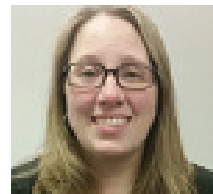
**Juan Cruz, MICP**  
Education Manager



**Kimberley Miller, BBA**  
Coordinating Manager



**Tatiana Malvoisin, MS**  
Simulation Coordinator/Specialist



**Jessica Pohlman, MPA, MEd, NREMT-P**  
Director of Operations



**Casey Chafe, MD**  
Simulation Specialist



**Katie Walker, MB, RN**  
Director

# EXECUTIVE SUMMARY

Calendar Year 2017 marks the Simulation Center's seventh year of service to the clinicians and staff of New York City Health + Hospitals. The Simulation Center's core mission is to support the service of the Health + Hospitals system through more efficient clinical skills acquisition, teamwork and communication training, and process improvement to improve patient care, in both inpatient and ambulatory care settings. In January 2017, we welcomed the New Year with visiting professor Dr. Walter Eppich coming from the Feinberg Academy of Medical Educators (FAME), Northwestern University in Chicago. Dr. Eppich trained over 80 Behavioral Health staff, a multidisciplinary group of MD's, nurses, behavioral health associates, psychologists, and support staff, in a 2-day train-the-trainer debriefing course. That group of trainers went on to train more than 3,000 behavioral health staff across the system in the PEARLS model of debriefing.

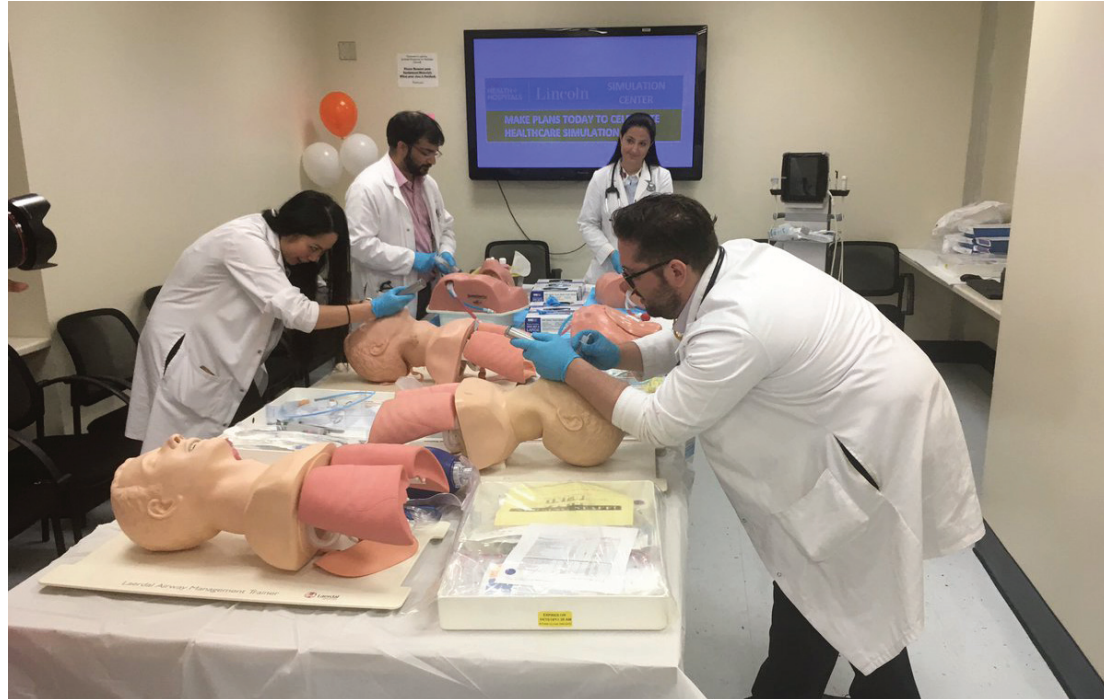
The Simulation program continues to expand the number of NYC Health + Hospital staff who are engaged in simulation, the areas of healthcare we are touching with simulation, and the way the Simulation Center is deploying simulation. To date, we have built a cadre of 40 simulation instructors who provide simulation in various forms to clinicians and staff throughout the system, and the number is growing, with 11 new simulation fellows graduating from our Simulation Fellowship in 2017. We believe that the only way to meet our 2017-2021 strategic plan goals of active satellite simulation centers established in most acute facilities (including Correctional Health) is to promulgate the growth of experienced simulation educators.



*Jessica Pohlman, the Simulation Center Director of Operations discussing simulations for premature babies with Coney Island CEO.*

One of the most popular ways that simulation was deployed at the hub center at Jacobi in 2017 was through Grand Rounds. This is an innovative use of simulation whereby large numbers of participants can be trained. In 2017, there were 635 Grand Rounds training encounters for both Emergency Medicine and Pediatrics. The next leading courses were the Central Line Placement and Skills course with a total of 343 participants over 34 courses, followed by the course for multiprofessional CAUTI trainers, with 185 participants over 13 courses. The Introduction to Debriefing course remains in demand, with 181 NYC Health + Hospitals interprofessional staff members completing the course. The art of debriefing, we believe, will have a major impact on improving the Health System's culture of teamwork and communication around patient-centered care. Calendar Year 2017 brought over 3,555 learners to

NYC Health + Hospitals/  
Lincoln residents  
practicing intubation.



the Simulation Center. The Simulation Center was instrumental in the successful rollout of two Performance Improvement (“PI”) projects in 2017. The third quarter project was Debriefing for Behavioral Health Teams, in which the goal was to use debriefing to decrease staff and patient injuries and decrease seclusion. The initial data appears promising. The second PI project was aimed at decreasing the number of Catheter-Associated UTI (“CAUTI”) infections. This was also a successful endeavor, with CAUTI rates in each facility falling. The Simulation Center continues to fulfill an important role in the National Ebola Training and Education Center. The Center assisted with the delivery of two courses throughout the year to train clinicians from across the country in the care of patients with Ebola, while donned in personal protective equipment. The debriefings held after each scenario provided rich, reflective learning environments.

The Simulation Center continues to push simulation into all of the acute care facilities in a “devolved” model of simulation. The Simulation Center’s hub is at Jacobi, and now Satellite Centers have been established at Elmhurst, Harlem, Lincoln, and Correctional Health, providing simulation training to learners within those facilities, eliminating the need to travel to the hub at Jacobi Medical Center. These Satellite Centers are providing better access to simulation in those facilities.

The Simulation Center works closely with all of the units of the Medical & Professional Affairs division of the hospital system and quickly responds to emergent needs by developing simulations to drive new policy guidelines and address knowledge, teamwork and communication gaps. This “modus operandi” sets the NYC Health + Hospitals Simulation Center apart from other simulation programs.



“Obi” Juan Cruz demystifying simulation magic “under the hood” with the 2017-18 simulation fellowship group.

When, as Simulation Educators, we ask our learners to “suspend disbelief,” we do our part to help them use their imagination with the simulation tools available, throughout the scenario. High fidelity mannequins are powerful training tools that can add exceptional level of realism for the participants. This new technology comes with many benefits; however, it takes time for the mannequin operators to be proficient at working the mannequins to the best advantage for the learners. These new marvels can be wondrous and engaging to our learners but can be very intimidating to our faculty. A way to demystify these tools is to spend some time “under the hood.”

It provides a quick peek behind the simulation curtain for faculty, and allows them to see how the magic is created. This allows the faculty to become more competent with trouble shooting and understanding some of the learner’s possible difficulties during simulations. For example, our SimMan 3G offers pulses, lung sounds, and various levels of airway complexities to our learners. The very technology that provides the chest rise may overwhelm the tiny speakers providing the breath sounds. Knowing this and how to mitigate it makes our faculty more confident and competent, and allows them to troubleshoot on the fly to create a more realistic encounter.

# SHOULDER DYSTOCIA FOR RISK MANAGEMENT ATTORNEYS

Shoulder dystocia is an obstetric emergency complicating 1-2% of births that has potential for both serious maternal and neonatal consequences. Injuries associated with this obstetric emergency are a common cause of litigation and indemnity payouts nationally. The safe resolution of this emergency requires a series of choreographed maneuvers, involving the entire interprofessional team. Simulation-based training to address shoulder dystocia has demonstrated improved management of this emergency in the simulated and clinical environments, nationally, and within our system.

In an effort to share perspectives and best practices, six attorneys from the NYC

Health + Hospitals Central Office came to the New York City Health + Hospitals Simulation Center. They experienced our 4-hour Shoulder Dystocia Teamwork and Skills course, providing them with key insights into the challenges faced by healthcare teams during this emergency. Each attorney had the opportunity to serve as a team leader, resolve a shoulder dystocia, and deliver a baby. During the debriefings after each simulation, both simulation educators and attorneys reflected upon their experience and strategies to enhance performance/ documentation were shared.

We invite other teams to participate in such experiences and help strengthen not only how we care for patients, but



*Dr. Komal Bajaj and Dr. Daisy Grueso giving NYC Health + Hospitals Central Office attorneys the opportunity to deliver a baby using simulation.*

# SIMULATION HUB UTILIZATION CY 2017

Sim Center Course / Event	# of Sessions Conducted	Course Hours Delivered	# of Staff Training Encounters
Adult Cardiac Code Team	15	45	112
Advanced Airway Skills	17	68	159
Advanced Trauma Life Support Cert/Recert Program (Jacobi)	4	7	72
Airway Skills for Critical Care Unit (Jacobi)	1	0	9
Angio Dynamic Midline Training (Metropolitan and Coney Island)	2	0	18
Bard CAUTI Training	13	0	185
Bard Midline Training	6	0	31
Care Team Development Workshop Small Group (meeting)	30	210	49
Central Line Placement Skills	34	136	343
Code Team 2.0	9	27	45
Critical Care Simulation Session (Jacobi nursing)	1	4	9
Debriefing for Behavioral Health Teams (prior to the performance improvement)	8	32	37
Debriefing for BH Teams Train the Trainer	10	70	158
Indwelling Catheter Care (Jacobi)	23	46	88
Grand Rounds (Emergency Medicine and Pediatrics, Jacobi and Metropolitan)	20	80	635
Grand Rounds Small Group (emergency medicine, Jacobi)	8	16	41
Introduction to Debriefing	18	126	181
IV Insertion Skills (Coler, Carter & Jacobi)	11	28	82
Medical Students Simulation Session (Jacobi)	5	10	38
Lead Poison Testing Session	1	4	5
Live On NY Organ Donor Sim Session	13	52	89
Neonatal Resuscitation Program (Jacobi, North Central Bronx)	14	98	123
Obstetrical Emergencies	11	44	81
Patient Safety Council (Jacobi meeting)	1	2	13
Pediatric Airway Skills	7	28	67
Pediatric Code Team	7	28	59
Postpartum Hemorrhage Teamwork and Skills	5	22.5	45
Practice: Central Line Insertion	1	2	1
Shoulder Dystocia Teamwork and Skills	6	24	46
Sim Wars Prep	1	2	6
Stop the Bleed (Jacobi staff and Community)	3	12	26
Teamwork & Communication in Acute Care and Common Emergencies	10	40	170
Trauma Resuscitation (Jacobi surgery)	16	32	118
Unit Based Simulation: Crash Cart Orientation (Carter)	13	26	120
Unit Based Simulation: EKG (Carter)	9	18	77
Unit Based Simulation: EM (Jacobi)	2	4	21
Unit Based Simulation: Medicine (Bellevue)	3	6	75
Unit Based Simulation: OB (Bellevue)	7	14	73
Unit Based Simulation: OR (Woodhull)	1	4	27
Virtual Reality Simulation: Bronchoscopy	17	68	51
Virtual Reality Simulation: Laparoscopy	13	52	21
<b>Grand Total</b>	<b>394</b>	<b>1483.5</b>	<b>3556</b>

# SATELLITE CENTERS

Active satellite simulation centers have now been established in most of the NYC Health + Hospitals acute facilities, promulgating the growth of experienced simulation educators.



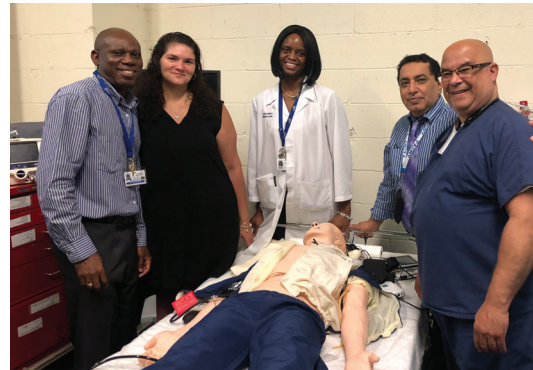
## Elmhurst Satellite

Elmhurst Simulation Center had a busy 2017, delivering 14 different programs including: Adult Cardiac Code, Adult Advanced Airway, Code Team (In-situ), Trauma Team (In-situ) Adult Trauma Team (In-situ) Peds Mock Code (Nursing), CL Placement, CL Maintenance, EM Procedures, Peds Procedures, EM Scenarios, Neonatal Code/NRP Trauma Team Role, and Urinary Catheter. There were 123 sessions delivered and a total of 1258 learners. The learners were interprofessional groups



## Lincoln Satellite

Lincoln had another full year of presenting excellence in simulation education. The Simulation Director, Dr. Nehad Shabarek, completed the one-year Simulation Fellowship program through the system simulation center. One of the highlights of the Lincoln Simulation Center year was the wonderful Simulation Fair that was held in the inaugural SimWeek, September 2017.



## Correctional Health

Our latest satellite simulation center is the Correctional Health Simulation Center, commenced in late 2017. This is an innovative space where healthcare teams can come and practice their clinical and communication skills for correctional health services. The team is led by David Viera, who participated in the Simulation Fellowship in 2016.



## Harlem Satellite

Harlem Simulation Center delivered a range of simulation courses both in the center and in-situ in the clinical units. Dr. Michael Meguerdichian heads up the Harlem Simulation Center and was busy developing and delivering courses, presenting to potential funders through the Friends of Harlem, and leading the Simulation Fellowship program.

# SOCIETY FOR SIMULATION IN HEALTHCARE ACCREDITATION

In 2017, the NYC Health + Hospitals Simulation Center received accreditation from the Society for Simulation in Healthcare in all five standards including assessment, research, teaching/education and systems integration. The accreditation award was the culmination of a magnificent effort by all Simulation Center staff, including Harlem and Elmhurst

Satellites. The accreditation status is current until December 31, 2022.

The NYC Health + Hospitals Simulation Center proudly joins the other accredited centers world-wide and is seen as a leader in Simulation Fellowship development, In-situ simulation, and large scale healthcare system simulation deployment.



Recipients of Simulation Center accreditation at the annual international meeting.

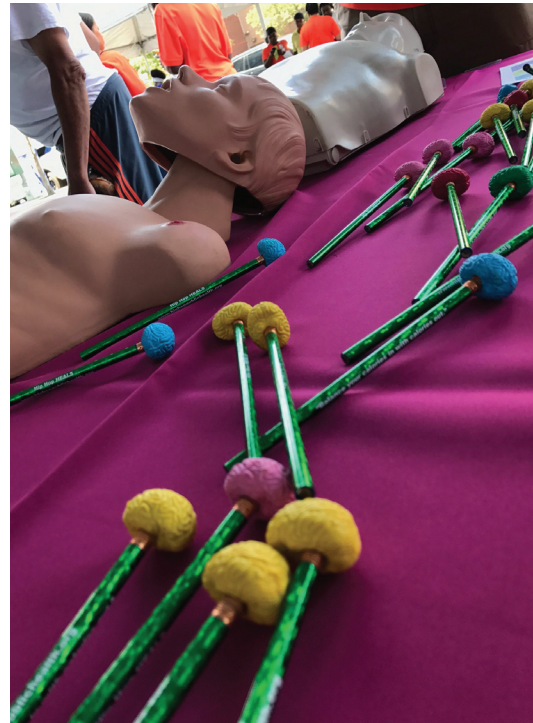


Receiving our accreditation plaque

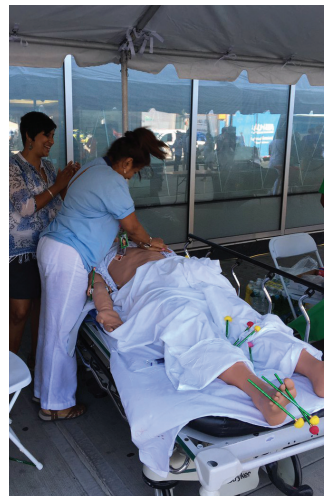
# HARLEM COMMUNITY OUTREACH

During the summer of 2017, the Harlem Simulation Center brought simulation education to Lenox Avenue outside of Harlem Hospital Center. The team focused its efforts on what would have greatest impact within the community. Airway heads were used to teach the fundamentals of atomizing narcain in the midst of an opioid epidemic.

Learners of all ages were introduced to the proper technique for administering epinephrine, using simulated epi-pens, when faced with an allergic reaction. And lastly, awareness to the importance of chest compressions was emphasized by community members practicing the rate and depth of compressions to songs like *Staying Alive*. This is the first of many community outreach initiatives that the Harlem Simulation Center will be driving as it looks to impact community health literacy.



Mannequins ready and waiting

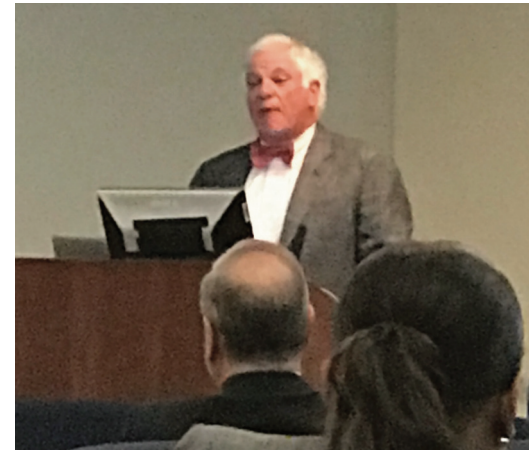


Dr. Sonali Mantoo is with Dr. Michael Meguerdichian and Ms. Joy Sarabosing, teaching chest compressions to the community.



EpiPen training

# INAUGURAL SIMULATION SYMPOSIUM



Dr. Dan Raemer



The Simulation Center Team and Fellows



Simulated patient, Tatiana, ready to deliver

The inaugural NYC Health + Hospitals Simulation Symposium was a great success with over 150 delegates from across the hospitals system.

The day was inspired by Dr. Dan Raemer from the Center for Medical Simulation in Boston and by our local speakers, Dr. Komal Bajaj and Dr. Michael Meguerdichian.

## JOIN US FOR THE NYC HEALTH + HOSPITALS SIMULATION CENTER INAUGURAL SYMPOSIUM



### Theme: Precision Simulation – The Key to Improving Healthcare Culture

**GUEST SPEAKER** Dan Raemer, PhD Center for Medical Simulation

Wednesday, April 26, 2017  
8:00am - 4:00pm

NYC Health + Hospitals | Jacobi Corporate Conference Center  
Training Center Building 4, Second Floor  
1400 Pelham Parkway South, Bronx, NY 10461

Breakfast and lunch will be provided.  
Registration begins January 2017 through Eventbrite.

For more information please call the Simulation Center: (718) 975-6500

#### PURPOSE

To showcase NYC Health + Hospitals Simulation Center satellite centers, unit-based simulation programs and Healthcare System Preparedness capabilities

NYC HEALTH + HOSPITALS

SIMULATION CENTER

# SIMULATION FELLOWSHIP 2017

Our simulation fellows for 2017 were an outstanding group of individuals who participated wholeheartedly in the program and graduated with excellent knowledge of simulation design and delivery. The Fellowship curriculum addressed the topics listed below through attendance at Fellowship Development Days. The Fellowship curriculum also addressed new trends in the healthcare simulation sector.

- Introduction to healthcare simulation/fellowship administration
- Developing a sim center/center design
- Return on investment, prioritization and investing in sustainable programs
- Introduction to Debriefing/Debriefing 2.0
- Use of video in debriefing and cognitive load
- Introduction to in-situ simulation/in-situ simulation 2.0 (checklists and Safety II)
- Hospital system/public health preparedness using simulation
- Behind the glass – mannequins and moulage
- Learning procedural skills including part-task trainers and virtual reality trainers
- Embedded participant/simulated patient methodologies
- Scenario design/curriculum design
- Teamwork and deliberate practice
- Research and presentation skills

In addition to the above topics, there were 3-4 days of Simulation Center professional development offered and facilitated through the Center's visiting professor program.

2017 Fellows and Simulation Center Staff



# SCHOLARLY SPOTLIGHT

Dr. Komal Bajaj and Dr. Michael Meguerdichian, along with national and international colleagues, developed the PEARLS debriefing cognitive aid, which was subsequently published in *Academic Medicine*, the premier medical education journal.

Healthcare debriefings are facilitated conversations following a clinical or simulated event that aim to improve future clinical practice. Debriefings should contribute to a safe learning environment,

actively engage participants, and focus on learning and improvement. The various approaches to healthcare debriefing may confuse educators.

The PEARLS (**P**romoting **E**xcellence **A**nd **R**eflective **L**earning in **S**imulation) framework addresses this problem by integrating three common educational strategies: learner self-assessment, focused facilitation (including advocacy-inquiry), and providing information or direct feedback/teaching.

The PEARLS Healthcare Debriefing Tool			
	Objective	Task	Sample Phrases
1	<b>Setting the Scene</b>	Create a safe context for learning	State the goal of debriefing; articulate the basic assumption "Let's spend X minutes debriefing. Our goal is to improve how we work together and care for our patients." "Everyone here is intelligent and wants to improve."
2	<b>Reactions</b>	Explore feelings	Solicit initial reactions & emotions "Any initial reactions?" "How are you feeling?"
3	<b>Description</b>	Clarify facts	Develop shared understanding of case "Can you please share a short summary of the case?" "What was the working diagnosis? Does everyone agree?"
4	<b>Analysis</b>	Explore variety of performance domains	<b>Preview Statement</b> (Use to introduce new topic) "At this point, I'd like to spend some time talking about [insert topic here] because [insert rationale here]"
			<b>Mini Summary</b> (Use to summarize discussion of one topic) "That was great discussion. Are there any additional comments related to [insert performance gap here]?"
<b>Any Outstanding Issues/Concerns?</b>			
5	<b>Application/Summary</b>	Identify take-aways	Learner centered Instructor centered "What are some take-aways from this discussion for our clinical practice?" "The key learning points for the case were [insert learning points here]."

\*Basic assumption, Copyright © Center for Medical Simulation. Used with permission. Reproduced with permission from *Academic Medicine*. Originally published as Bajaj K, Meguerdichian M, Thoma B, Huang S, Eppich W, Cheng A. The PEARLS Healthcare Debriefing Tool. *Acad Med*. 2017. [Post Author Corrections] <http://journals.lww.com/academicmedicine/oc/publishahead>.



# NETEC COURSE

The Simulation Center is proud to support the National Ebola Training and Education Center (NETEC), which delivered two simulation-based courses at Bellevue for the second year in a row. These two-day Special Pathogen-focused courses help to train clinicians from around the country on techniques to properly care for

highly-infectious patients while donning full personal protective equipment (PPE) themselves. These fully immersive, simulation-based courses provide realistic environments for these clinicians to safely train, become comfortable working in their PPE, and share insights, tips and techniques with colleagues from around the country.

*Patient transfer using ISOPOD™*



*Clinicians performing procedural skills in PPE*



*Clinicians practicing donning and doffing of PPE.*

# VISITING PROFESSOR PROGRAM

This is a vibrant program that provides professional development for all Simulation Center staff and faculty, without the need to travel.

There were four Visiting Professors in 2017. Dr. Walter Eppich started the year with training our faculty for the debriefing for Behavioral Health Teams course. Dr. Eppich was followed by Dr. Dan Raemer,

who led us through difficult debriefing practice and inspired us with a talk on simulation for the future of medicine.

Dr. Jack Boulet gave us new insights into assessment in simulation, and the year ended with Dr. Mary Patterson leading a great discussion to help us think more about Safety II and human factors in simulation development.



*Dr. Walter Eppich*



*The Simulation Center Team and Fellows with Dr. Jack Boulet.*



*Dr. Dan Raemer*



*Dr. Jack Boulet*



*Dr. Mary Patterson*

# INAUGURAL HEALTHCARE SIMULATION WEEK

NYC Health + Hospitals Simulation Center celebrated the inaugural Healthcare Simulation Week, holding simulation fairs in five facilities, where all staff could come and experience hands-on simulation.

**NYC HEALTH + HOSPITALS SIMULATION CENTER**

**MAKE PLANS TODAY TO CELEBRATE HEALTHCARE SIMULATION WEEK!**

This September, we're celebrating the professionals who work in healthcare simulation, people like you and your team who improve the safety, effectiveness and efficiency of healthcare services every day.

The inaugural Healthcare Simulation Week takes place September 11-15, 2017. We're planning open access to Simulation in Healthcare, Twitter Journal Chats, and so much more!

For more information on NYC Health + Hospitals Simulation Center Events, contact the Simulation Center at 718.975.6500 or #HealthSimNYC.

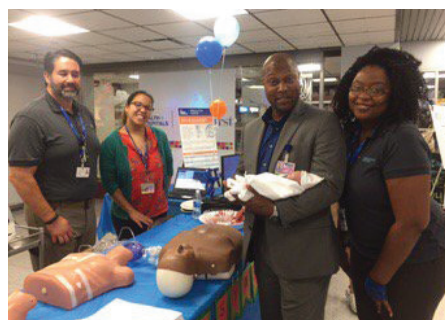
EVENT SCHEDULE		
9/12/17	Coney Island	Lobby, 11am - 2pm
9/13/17	Harlem	Mural Pavilion, 9am - 12pm
9/14/17	Jacobi	Atrium, 10am - 4pm
9/15/17	Elmhurst Anniversary Celebration	Lobby & Sim Center, 10am - 1pm
9/18/17	Lincoln	Sim Center, 11am - 2pm



Coney Island SimWeek



Harlem SimWeek



Elmhurst SimWeek



Jacobi SimWeek



Jacobi SimWeek



Lincoln SimWeek

# IN-SITU SIMULATION ANNUAL CELEBRATION

The NYC Health + Hospitals/Jacobi Women and Children In-situ Simulation Program was first implemented in 2015, and is still active to date. Our ongoing goal has been to utilize in-situ simulation and debriefing to enhance everyday unit processes, system escalation, and team response to obstetric and neonatal emergencies on Labor and Delivery, Mother-Baby, and the NICU at Jacobi.

For the year 2017, we have successfully completed 12 simulation/debriefing events, averaging one per month.

We also experienced 33 OBSTAT events (actual clinical system escalations) with a 100% debriefing rate.

Other key achievements for the year have included a sustained culture-based practice of debriefing, a refined system for the identification of areas of improvement, implementation of the quantitative blood loss process (post-vaginal delivery), and an interprofessional Simulation Fair focusing on various obstetrical and neonatal topics, which encompassed more than sixty participants.



Using part-task trainers in the Jacobi In-situ Simulation Program.



Sim babies



Postpartum hemorrhage practice



Reviewing equipment