

**UCI** University of California, Irvine

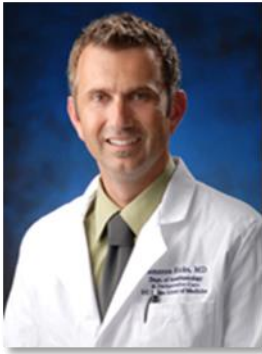
Medical Education  
Simulation Center



# ANNUAL REPORT

FY 2017-2018

# Director Summary



## OPERATING HIGHLIGHTS

As operations for the 2017-2018 academic year come to a close, **the simulation center accomplished 2,067 hours of simulation activities and 26,000 hours of total participant hours to a total of 7,600 participants.**

School of Medicine medical student simulation activities represented 60% of the total time, residency activities represented 17%, UCIMC code training activities represented 3%, School of Nursing represented 6.2%, and outside activities, such as AHA BLS and ACLS and MOCA represented 15.5%.

Overall **simulation center average utilization was 55%**. This matched our center target utilization. Our **staffing average utilization was 94%**.

The School of Nursing increased their overall utilization of simulation from 0.7% up to 6.2%. We projected 128 hours for SON this year and in actuality their total time utilization (including necessary prep and admin time) totaled 213.5.

Dr. Kimberly Sokol finished up her Emergency Medicine Simulation Fellowship and was offered a job in mid-California as a simulation director. This is a testament that UCI simulation is strong and our simulation instructors are being sought out.

We had a great showing at IMSH this year. Our simulation specialists presented a low-cost task trainer at the 4th annual Spectrum of Ideas and we had one abstract that was presented during the rapid fire sessions.

Additionally at IMSH, The Emergency Medicine Dept. won SimWars and Dr. McCoy had five presentations.

## CURRICULUM HIGHLIGHTS

Simulation curriculum remained relatively the same as last year with minor tweaks within the scenarios themselves. We deleted the MS 1 Musculoskeletal session but added an MS GI session. We also added a MS 3 Intersession week

## FINANCIAL HIGHLIGHTS

We continue to operate within our established operating budget.

## LOOKING AHEAD

As we look ahead into next this next academic year, we have been asked to re-arrange some of the curriculum to better align with the SOM modular curriculum.

We are looking to continue to represent UCI at international conferences for simulation. Our Director of Operations has been asked to be on 2 panel presentations at the next International Meeting for Simulation in Healthcare.

A handwritten signature in black ink, appearing to read "C. Ricks".

Cameron Ricks, MD  
Director

# Highlights

## Medical Student Simulation Curriculum Change

- Added MS 2 GI Simulation Session
- Added MS 3 Intersession Skills workshop

## American Society of Anesthesia (ASA) Conference

- Ricks, C; Brammier, J; De Los Santos, Joseph; Beaulieu, K; Field, R; Nelson, C; Rogacion, D; Rinehart, J. **Computer-based Training and Simulation for Ventriculostomy Management Training.** Presented at ASA 2017.

## Representative in International Simulation Organization

- Accreditation Council (Society for Simulation in Healthcare)
  - Keith Beaulieu is a voting member of the Society for Simulation in Healthcare (SSH) Accreditation Council
  - Keith Beaulieu given the role of “Team Lead” Site Reviewer
  - Keith Beaulieu has represented UC Irvine on six (9) accreditation site reviews.
  - Keith Beaulieu has been chosen to be on two (2) 60 min presentation panels at next International Meeting on Simulation in Healthcare (IMSH), “Day in the life of a Director,” and “Exemplars in Accreditation.”

## First Healthcare Simulation Week

- The Simulation Center participated in the first Healthcare Simulation Week by opening its doors to SOM and MedEd staff to learn what simulation is and what we do.

## Strategic plan

- We have gone through the process of developing and publishing a new strategic plan for 2018-2023.

# Staffing and Operational Model

## Center Operations

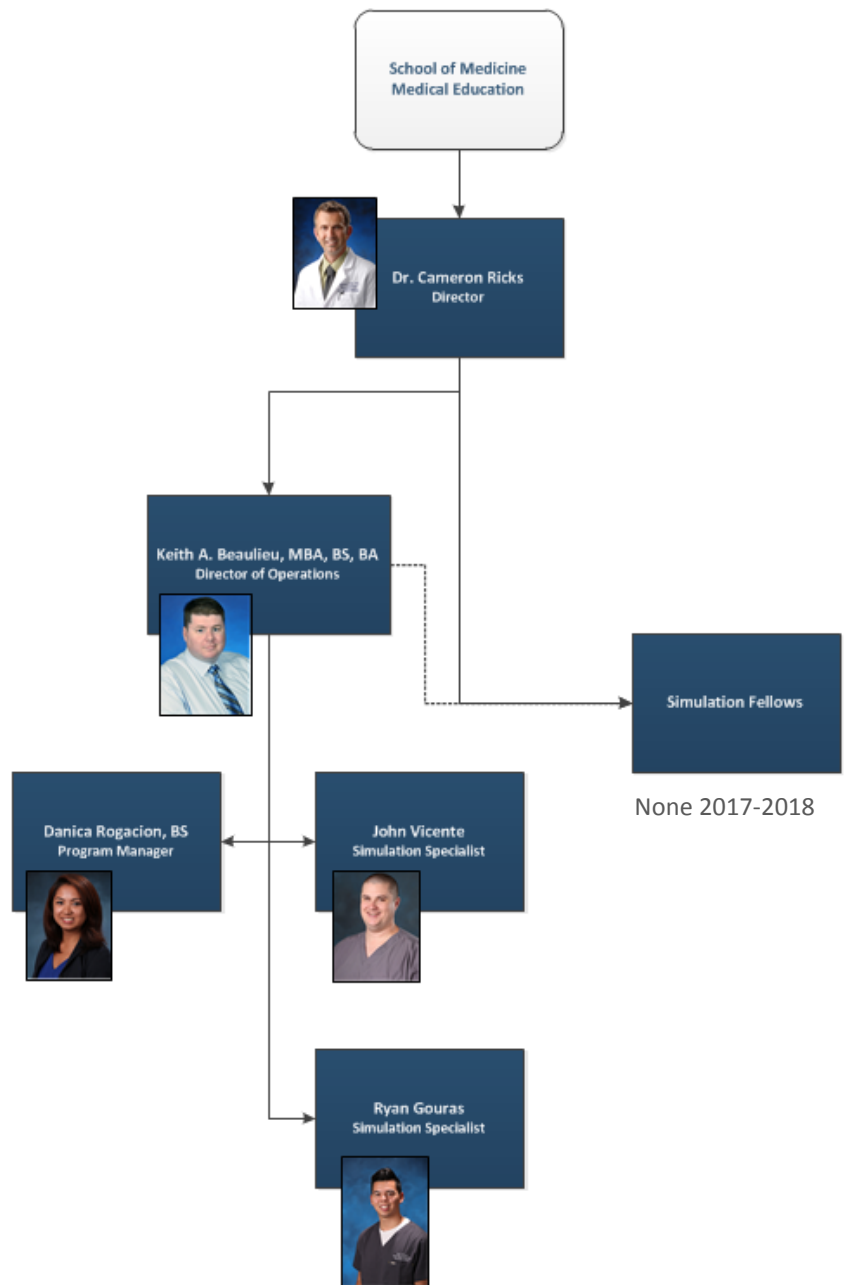
The Medical Education Simulation Center has 4.0 FTE assigned for staffing and operations.

An additional 0.4 FTE is assigned to Dr. Ricks to provide program oversight and instruction to the medical students.

## Simulation Fellows

The Medical Education Simulation Center seeks to attract simulation fellows on a yearly basis. This provides additional physician availability in scheduling instructors for core MS simulation sessions.

This year we did not have an international simulation fellow; however we did utilize the EM simulation fellow for about 14% of the simulation activities.



### Medical Student Instructors (2017-2018)

40% is supplied from the Anesthesiology Department through a stipend.

*Note: This stipend is terminated for 2018-2019*

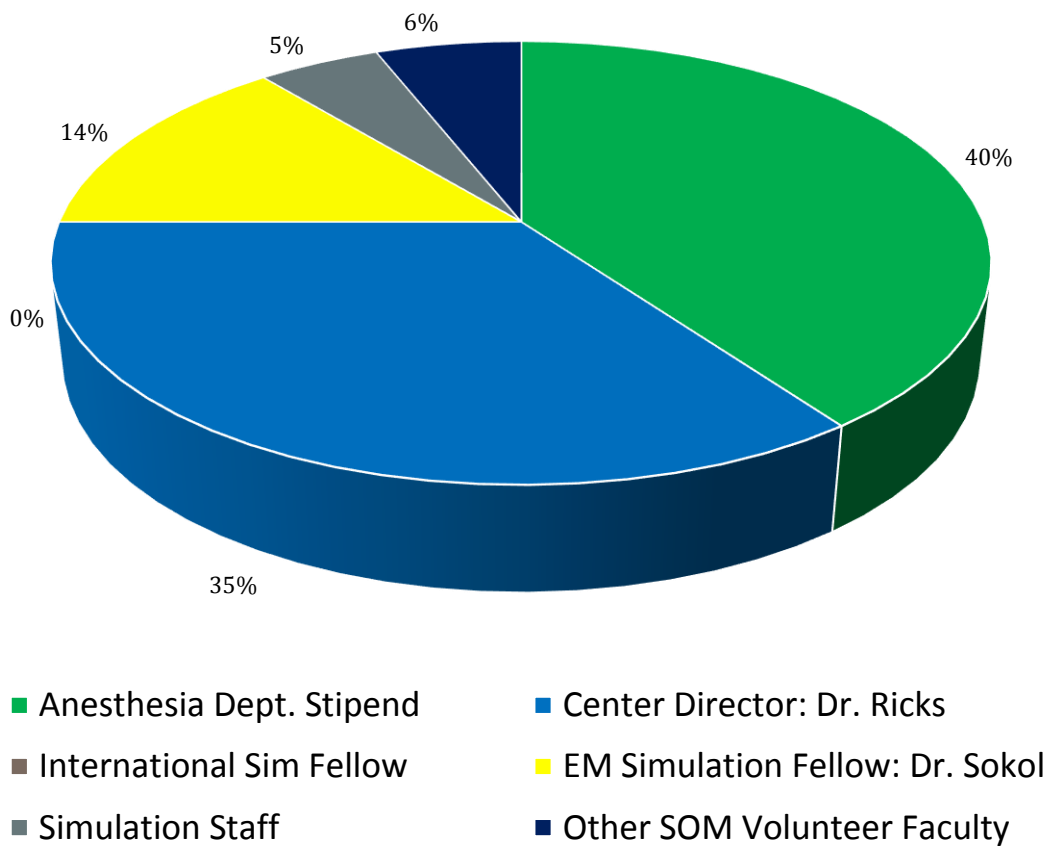
35% is supplied by Dr. Ricks. This percentage fluctuates based on instructor availability year to year.

14% is supplied from the Emergency Department, through the EM fellows.

5% is supplied from the Simulation Staff (Simulation Specialists and/or Director of Operations).

6% was supplied through volunteers from around the School of Medicine

### Percentage of Total MS Simulation Hours



2017-2018

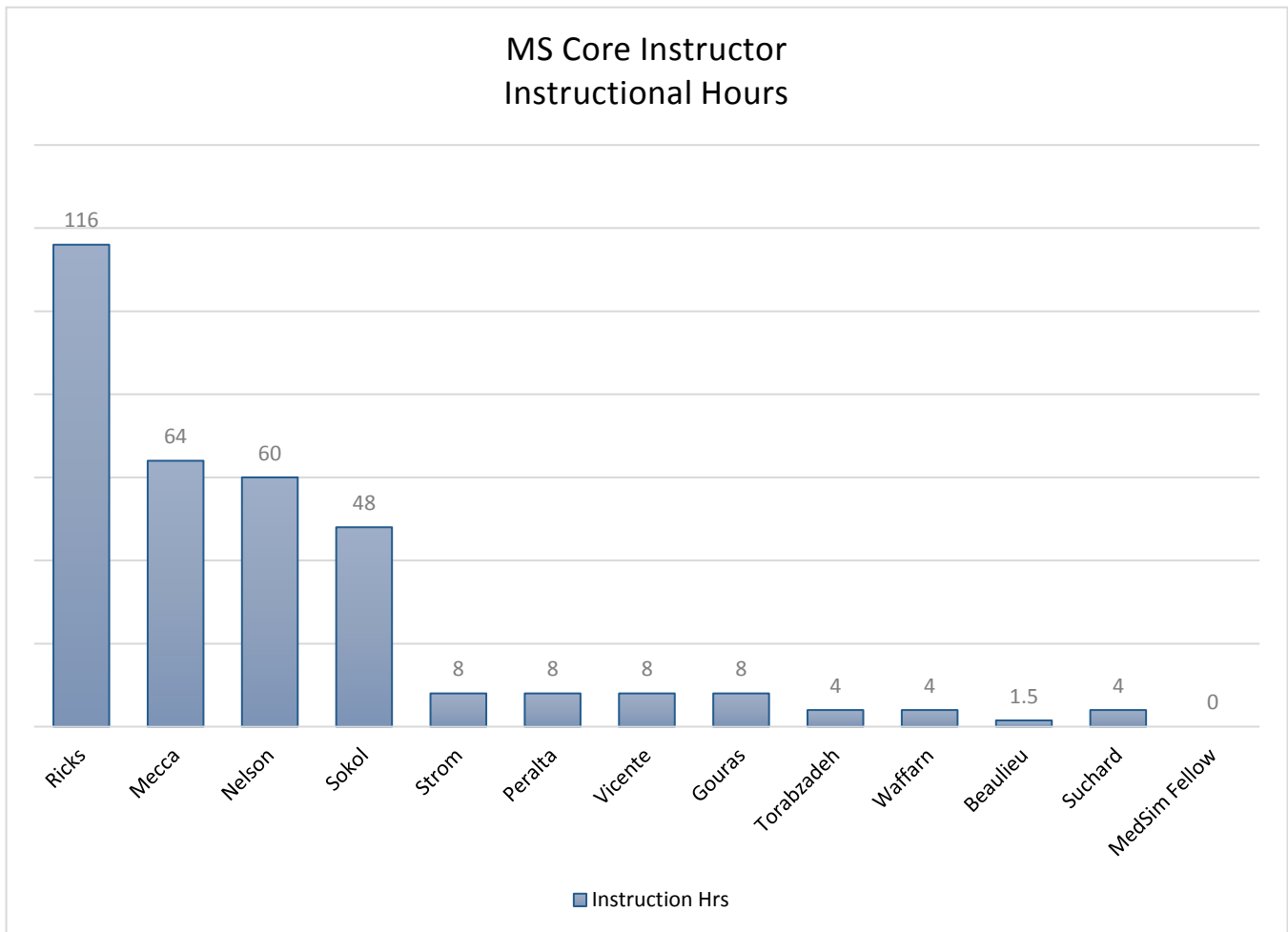
Core Undergraduate Medical Education was taught by...

qryTaught2017_2018				
LastName	FirstName	Credentials	Department	Sessions Taught in 2017-2018
Beaulieu	Keith	MBA, BS, BA	SOM - Medical Education Director of Operations	Intro to Simulation Simulation Instructor Training Course
Gouras	Ryan	BS	SOM - Medical Education Simulation Specialist	Simulation Orientation MEPN Simulation Orientation (Nursing) Simulation Orientation (Junior Nursing) Simulation Orientation (Senior Nursing) Simulation Instructor Training Course
Mecca	Roger	MD	Department of Anesthesiology and Perioperative Care	MS 2 Respiratory MS 2 Respiratory MS 1 HTN MS 1 HTN MS 1 Renal MS 1 Renal MS 2 Cardio MS 2 Cardio MS 1 Respiratory MS 1 Respiratory MS 1 Neuro #1 MS 1 Neuro #1 MS 2 Endocrine MS 2 Endocrine MS 1 Neuro #2 MS 1 Neuro #2
Nelson	Corey	MD	Department of Anesthesiology and Perioperative Care	MS 2 ITCI #1 MS 2 ITCI #1 MS 2 Infection MS 2 Infection MS 1 HTN MS 1 HTN MS 1 ABD MS 1 ABD MS 2 ITCI #2 MS 2 ITCI #2 MS 1 Respiratory MS 1 Respiratory MS 2 ITCI #3 MS 1 ITCI #1 MS 1 ITCI #1  MOCA Course
Peralta	Maria	MD	Medicine	MS 2 Neuro MS 1 Biochemistry
Ricks	Cameron	MD	Department of Anesthesiology and Perioperative Care	MS 2 Infection MS 2 Respiratory MS 2 Respiratory MS 1 ABD MS 1 ABD

**qryTaught2017\_2018**

LastName	FirstName	Credentials	Department	Sessions Taught in 2017-2018
				MS 2 Hematology MS 2 Hematology MS 1 Renal MS 1 Renal MS 2 Cardio MS 2 ITCI #2 MS 2 ITCI #3 MS 1 Neuro #1 MS 1 Neuro #1 MS 2 GI MS 2 GI MS 1 ITCI #1 MS 2 Endocrine MS 2 Endocrine MS 1 Neuro #2 MS 2 Neuro MS 2 Neuro MS 1 ITCI #2 MS 1 ITCI #2 MS 1 Bio #1 MS 1 Bio #1 MS 1 Bio #2 MS 1 Bio #2  Hospital-based Code Training  Simulation Instructor Training Course  Maintenance of Certification in Anesthesia (MOCA)
<b>Sokol</b>	<b>Kimberly</b>	MD	Department of Emergency Medicine	MS 2 ITCI #1 MS 2 ITCI #1 MS 2 Infection MS 2 Hematology MS 2 Cardio MS 2 ITCI #2 MS 2 ITCI #3 MS 2 GI MS 1 ITCI #1 MS 1 Neuro #2 MS 1 ITCI #2 MS 1 Bio #2 MS 1 Bio #2  Simulation Instructor Course  SBTT - Code Training
<b>Strom</b>	<b>Suzanne</b>	MD	Department of Anesthesiology and Perioperative Care	MS 1 ITCI #2 MS 1 Bio #1  MOCA Courses
<b>Suchard</b>	<b>Jeffrey</b>	MD	Department of Emergency Medicine	MS 2 GI (1 Feb 2018) 4 hours

qryTaught2017_2018				
LastName	FirstName	Credentials	Department	Sessions Taught in 2017-2018
Torabzadeh	Simin	MD	Medicine	MS 2 Hematology
Vicente	John		SOM - Medical Education Simulation Specialist	Simulation Orientation MEPN Simulation Orientation (Nursing) Simulation Orientation (Junior Nursing) Simulation Orientation (Senior Nursing) Simulation Instructor Training Course
Waffarn	Feizal	MD	Pediatrics	MS 2 Neuro



### Resident Instructors

Residencies provide their own instructors. Per Medical Education Simulation Center Policy, all instructors must have taken our Simulation Instructor Training Course or provide documentation that they have attended a course at an approved site.



### **MS 3 &4 Instructors**

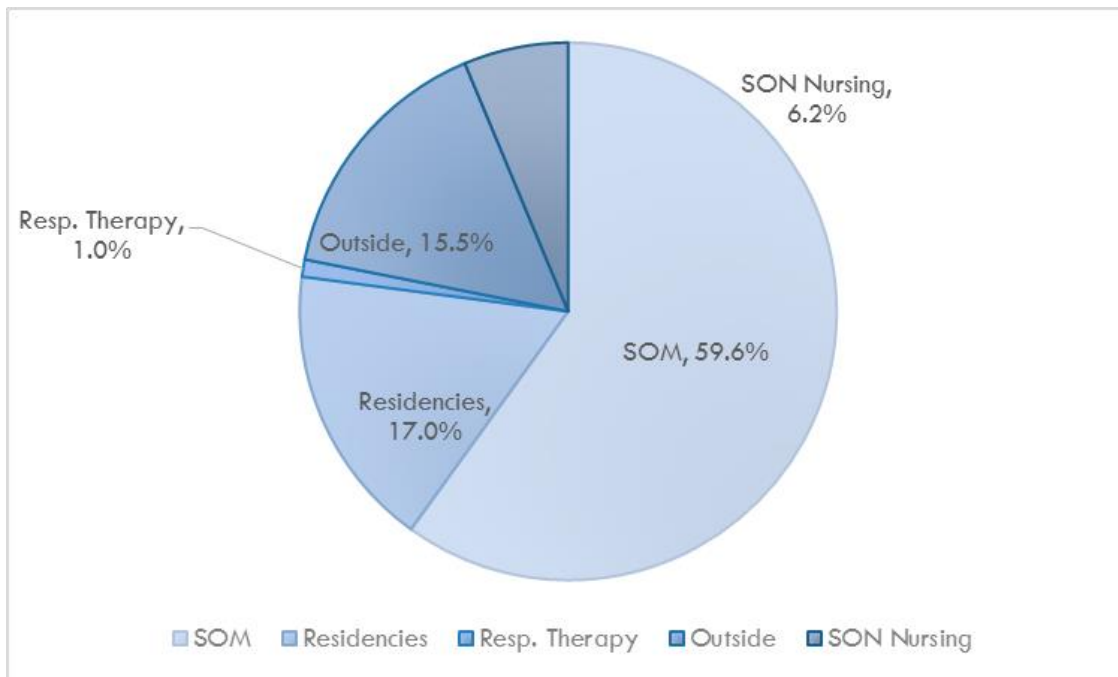
The individual medical departments provide their own instructors. Per Medical Education Simulation Center Policy, all instructors must have taken our Simulation Instructor Training Course or provide documentation that they have attended a course at an approved site.

# Statistics

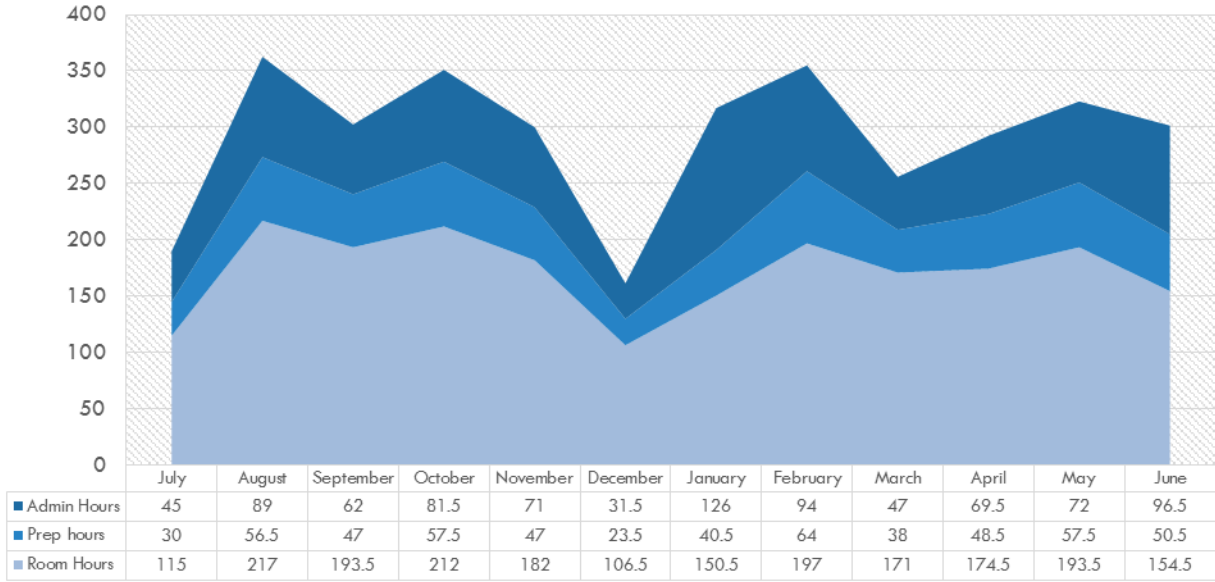
## Attendance number and participation hours

Month	Number of Participants	Participant hours	Total Participant Hours	Avg. Time/Part.
July	275	77	869	3.16
August	1131	147	2219	1.96
September	602	124	2397	3.98
October	820	153	1421	1.73
November	656	176	2587	3.94
December	261	85	939	3.60
January	713	119	2345	3.29
February	962	169	3170	3.30
March	402	93	1699	4.23
April	765	165	4095	5.35
May	740	159	3461	4.68
June	357	107	1612	4.52
<b>7684.00</b>	<b>1571.05</b>	<b>26811.00</b>	<b>43.73</b>	

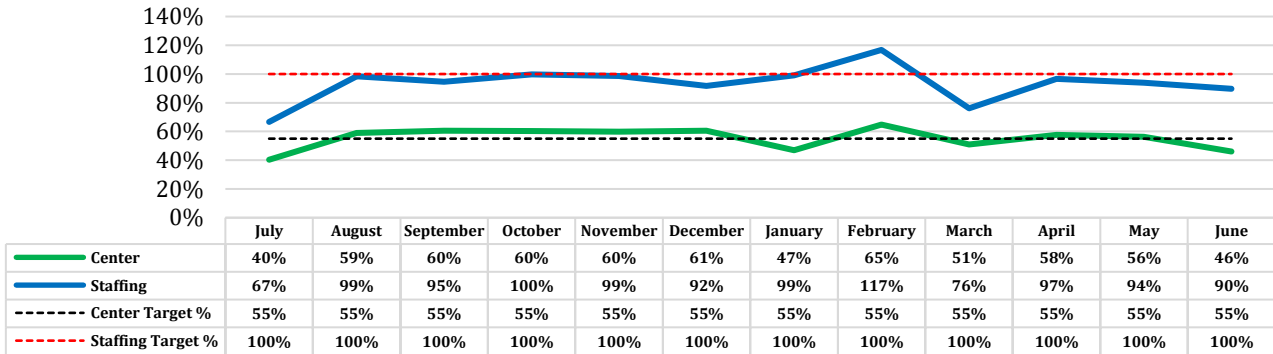
## Utilization between SOM/Residency/Other (AY 2017-2018)



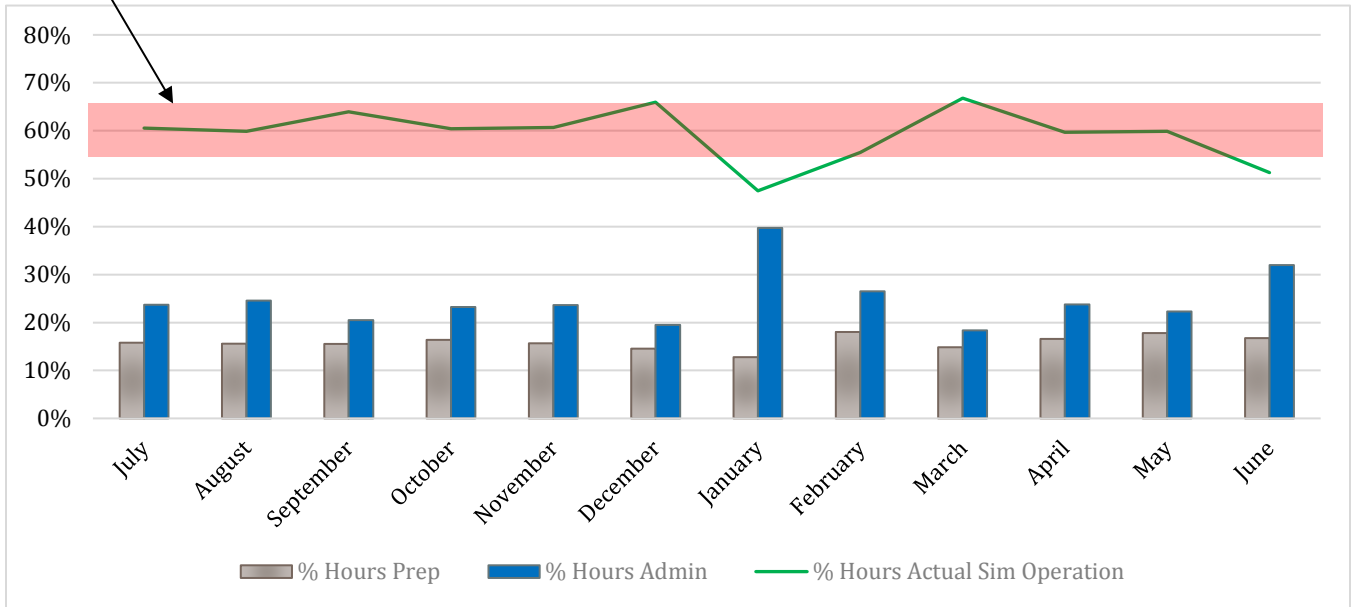
## Medical Education Simulation Center Total Utilization Hours by Month AY 2017-2018



## Medical Education Simulation Center Utilization Comparison AY 2017-2018

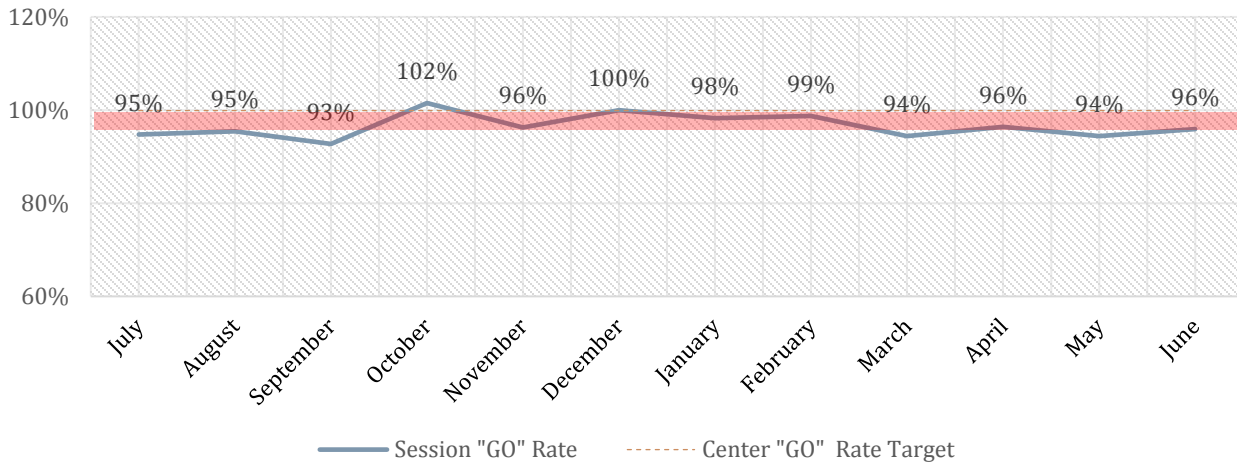


Target Range  
for operational  
simulation



Month2	% Hours		
	Actual Sim Operation	% Hours Prep	% Hours Admin
July	61%	16%	24%
August	60%	16%	25%
September	64%	16%	20%
October	60%	16%	23%
November	61%	16%	24%
December	66%	15%	20%
January	47%	13%	40%
February	55%	18%	26%
March	67%	15%	18%
April	60%	17%	24%
May	60%	18%	22%
June	51%	17%	32%

## Simulation Center "GO" Rate, 2017-2018

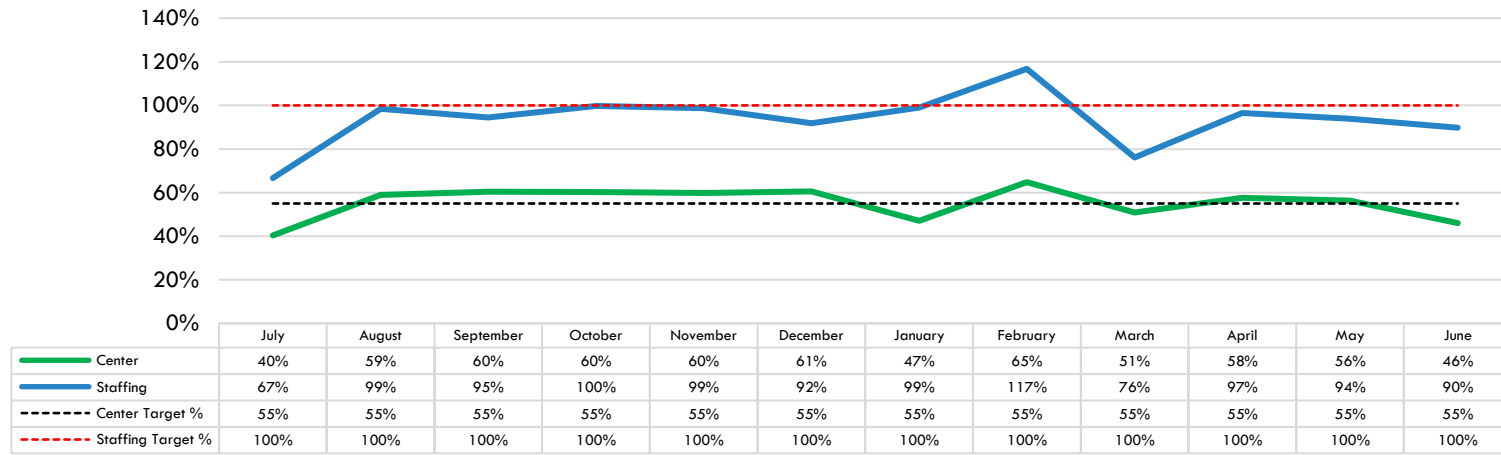


The simulation Center "Go" rate is the difference between the scheduled sessions and the actual sessions that took place. The "go" rate will decrease as a result of cancelled sessions for numerous reasons including, but not limited to: instructor no-show, instructor availability, cancelled tours/outreach, and cancelled simulation sessions.

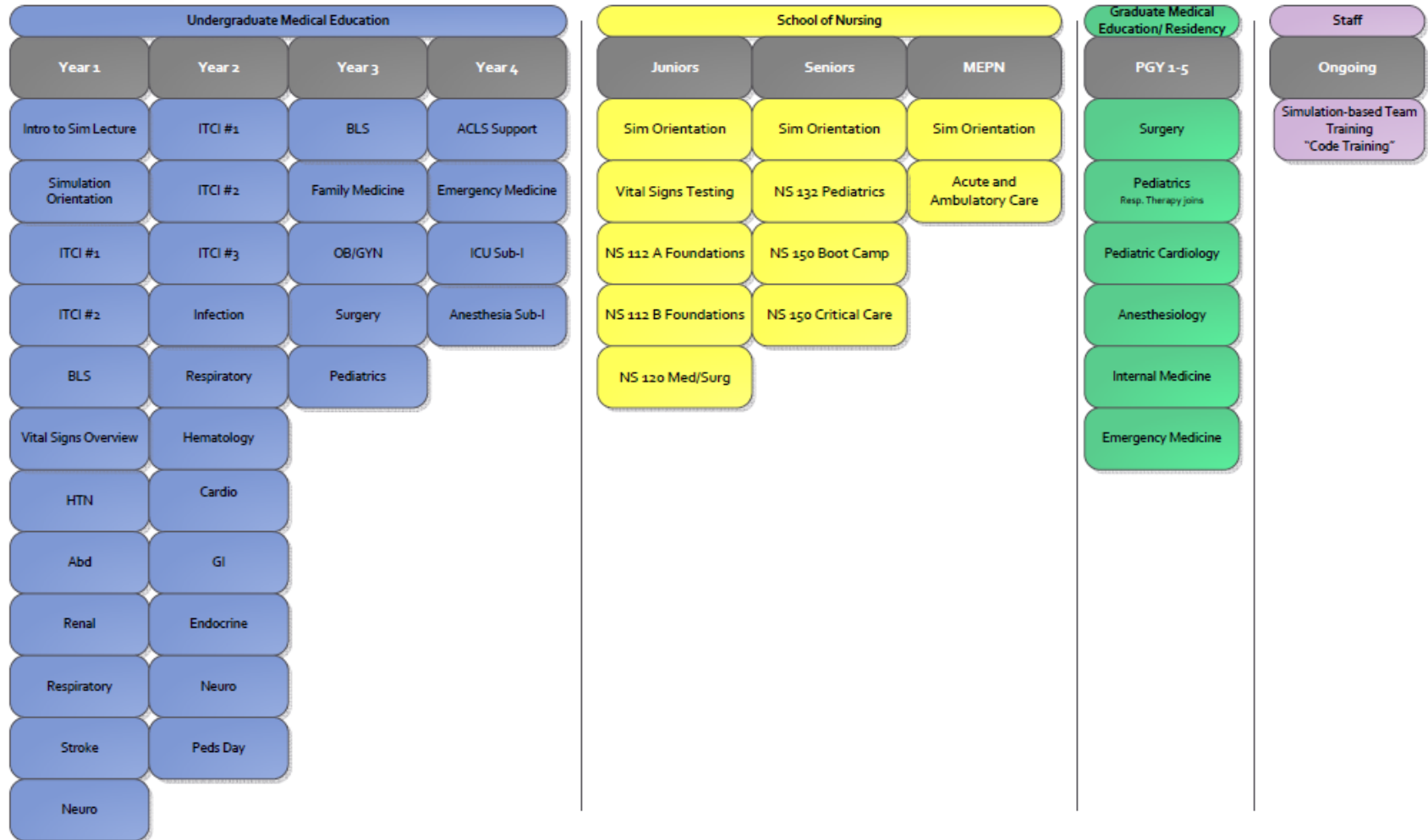
As a center, we strive to be between 95% - 100%. This affords the best possible scheduling solution for students, residents, and other activities.

# Utilization

**Medical Education Simulation Center  
Utilization Comparison  
AY 2017-2018**

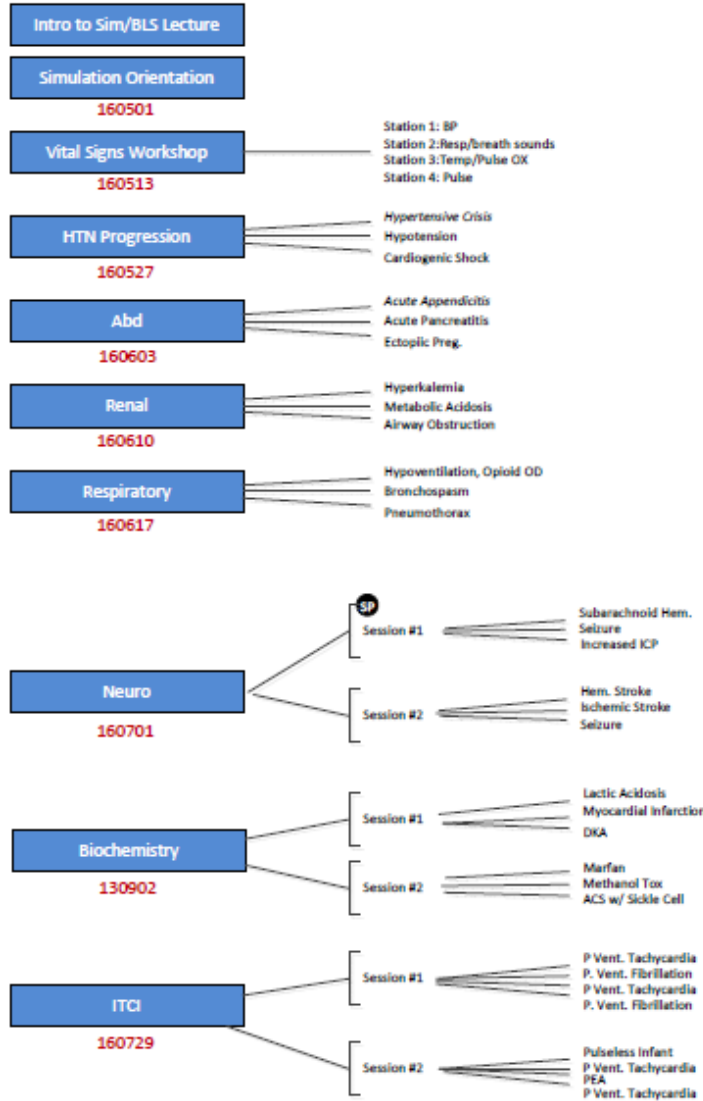


# Where does Simulation Fit into the Curriculum?

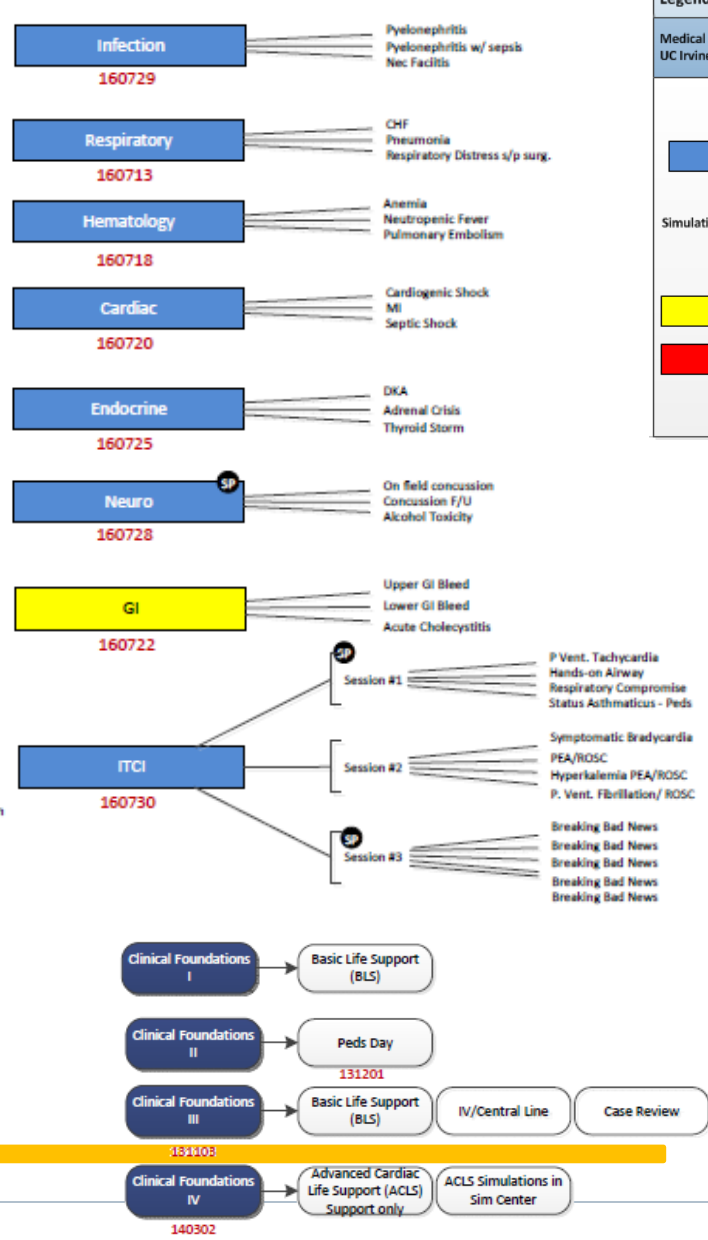


# Curriculum Mapping 2017-2018

## Clinical Foundations 1 / MS 1 Simulation



## Clinical Foundations 2 / MS 2 Simulation



**Legend**

Medical Education Simulation Center  
UC Irvine School of Medicine

Simulation Session  
(Based on CF Module)

Endocrine  
160601

Simulation Course Number

Current Scenarios used

- CV Pham (Yellow) Denotes New Course/session Added
- CV Pham (Red) Denotes Course Deleted or will not occur
- SP (Black circle) Requires standardized patient



# School of Medicine Usage (by Month)

Month	SOM	SOM Other
July	53	18
August	238	18
September	165	27.5
October	202	14
November	152	11
December	32.5	20
January	130.5	74
February	213.5	19
March	108	40
April	166.5	12
May	190.5	31
June	68.5	31.5
<b>TOTALS</b>	<b>1720</b>	<b>316</b>

### SOM

Hours directly attributed to operational simulation.  
 (Examples: MS 1 – MS 4 simulation sessions and CF sessions)

### SOM Other

Hours attributed to operational aspects of the center under the guise of SOM.  
 (Examples include tours, simulation maintenance, meetings)

School of Medicine Usage



# School of Medicine Usage vs. All Other Departments (by Month)

**Total Time by Department**

Month	SON																Total
	SOM	Anes	SOM Other	EM	Hospital	IM	Nursing	Outside	Surgery	Pediatrics	Cardiology	Family Med	Therapy	UCIMC Nursing	OB/GYN		
July	53	0	18	6.5	0	0	0	74.4	0	2.5	0	0	0	0	0	154.4	
August	238	19.5	18	0	0	0	33	16	13	11	6.5	0	7.5	0	0	362.5	
September	165	0	27.5	0	13	0	31	36	0	6.5	6.5	13	4	0	0	302.5	
October	202	19.5	14	0	0	0	24	64	0	13	0	6.5	8	0	0	351	
November	152	0	11	18.5	13	0	36.5	56	0	6.5	6.5	0	0	0	0	300	
December	32.5	0	20	13	13	0	13	44	9	6.5	6.5	0	4	0	0	161.5	
January	130.5	13	74	13	0	0	40	10	0	30	6.5	0	0	0	0	317	
February	213.5	14	19	0	13	0	36	28	0	6.5	6.5	0	4	4	0	344.5	
March	108	6.5	40	0	13	0	0	24	11	0	6.5	13	0	0	0	222	
April	166.5	6.5	12	0	13	0	0	66	9	13	6.5	0	0	0	0	292.5	
May	190.5	18.5	31	0	13	0	0	38	0	13	0	0	6.5	6.5	0	317	
June	68.5	32.5	31.5	0	13	42	0	74	1	6.5	6.5	2.5	6.5	6.5	2.5	293.5	
<b>TOTALS</b>	1720	130	316	51	104	42	213.5	530.4	43	115	58.5	35	40.5	17	2.5	3418.4	

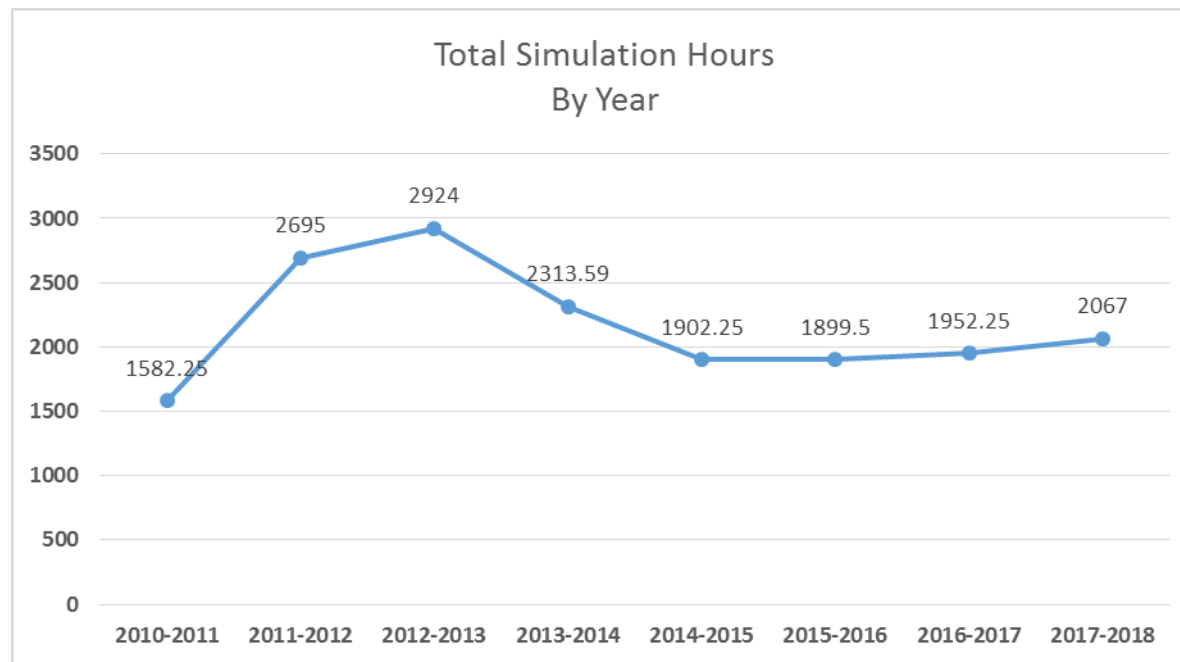
**Percentage by Month**

Month	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
SOM	46.0%	70.6%	63.6%	61.5%	54.3%	32.5%	64.5%	67.5%	66.7%	61.0%	69.9%	34.1%
Residencies	5.8%	13.8%	12.9%	11.1%	14.8%	29.7%	19.7%	11.6%	22.5%	16.4%	14.0%	36.3%
Outside	48.2%	4.4%	11.9%	18.2%	18.7%	27.2%	3.2%	8.1%	10.8%	22.6%	12.0%	25.2%
SON Nursing	0.0%	9.1%	10.2%	6.8%	12.2%	8.0%	12.6%	10.4%	0.0%	0.0%	0.0%	0.0%
Resp. Therapy	0.0%	2.1%	1.3%	2.3%	0.0%	2.5%	0.0%	1.2%	0.0%	0.0%	2.1%	2.2%
UCIMC Nursing	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.0%	0.0%	2.1%	2.2%
<b>TOTALS</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

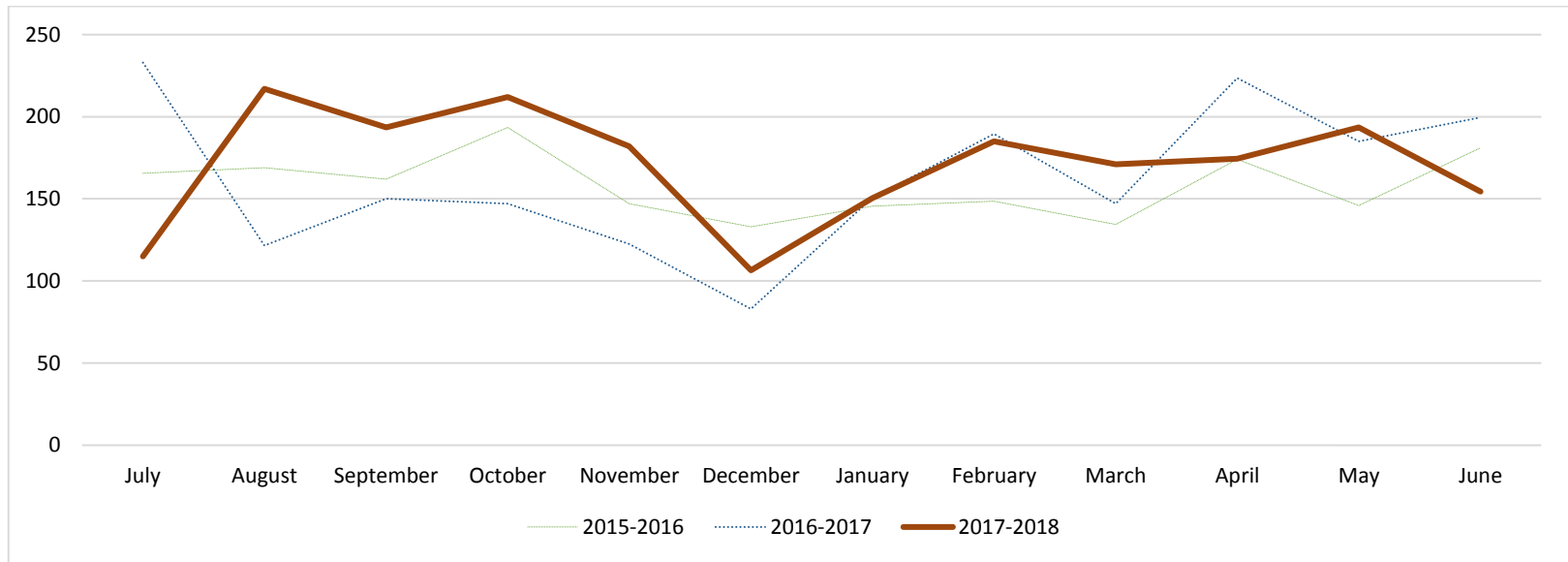
# Historical Simulation Hours (by Year)

**SIMULATION HOURS (DOES NOT INCLUDE ADMINISTRATIVE AND PREP HOURS)**

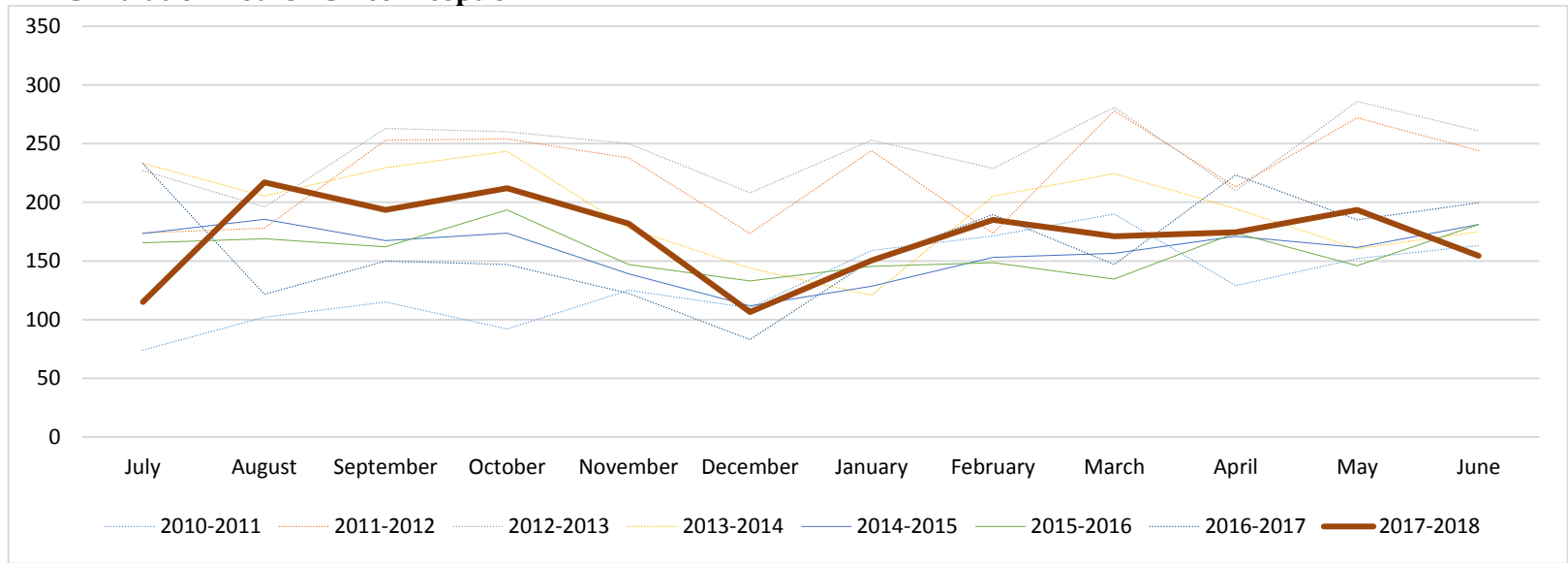
	July	August	September	October	November	December	January	February	March	April	May	June	Totals	Var Total
2010-2011	74	102	115	92	125	110	159	171.25	190	129	152	163	<b>1582.25</b>	0
2011-2012	174	178	253	254	238	173.5	244	173.5	278	213	272	244	<b>2695</b>	1112.75
2012-2013	227	196	263	260	250	208	253	229	281	210	286	261	<b>2924</b>	229
2013-2014	233.1	205.4	229.4	243.49	178	143.9	120.79	205.01	224.5	194.5	160.5	175	<b>2313.59</b>	-610.41
2014-2015	173.5	185.5	167.25	173.75	139	111.75	128.5	153	156.5	171	161.5	181	<b>1902.25</b>	-411.34
2015-2016	165.5	169	162	193.5	147	133	145.5	148.5	134.5	174	146	181	<b>1899.5</b>	-2.75
2016-2017	233	121.5	150	147	122.5	83	150.75	189.5	147	223.5	185	199.5	<b>1952.25</b>	52.75
2017-2018	115	217	193.5	212	182	106.5	150.5	197	171	174.5	193.5	154.5	<b>2067</b>	114.75



### Simulation Hours - 3 Year Trend



### Simulation Hours - Since Inception



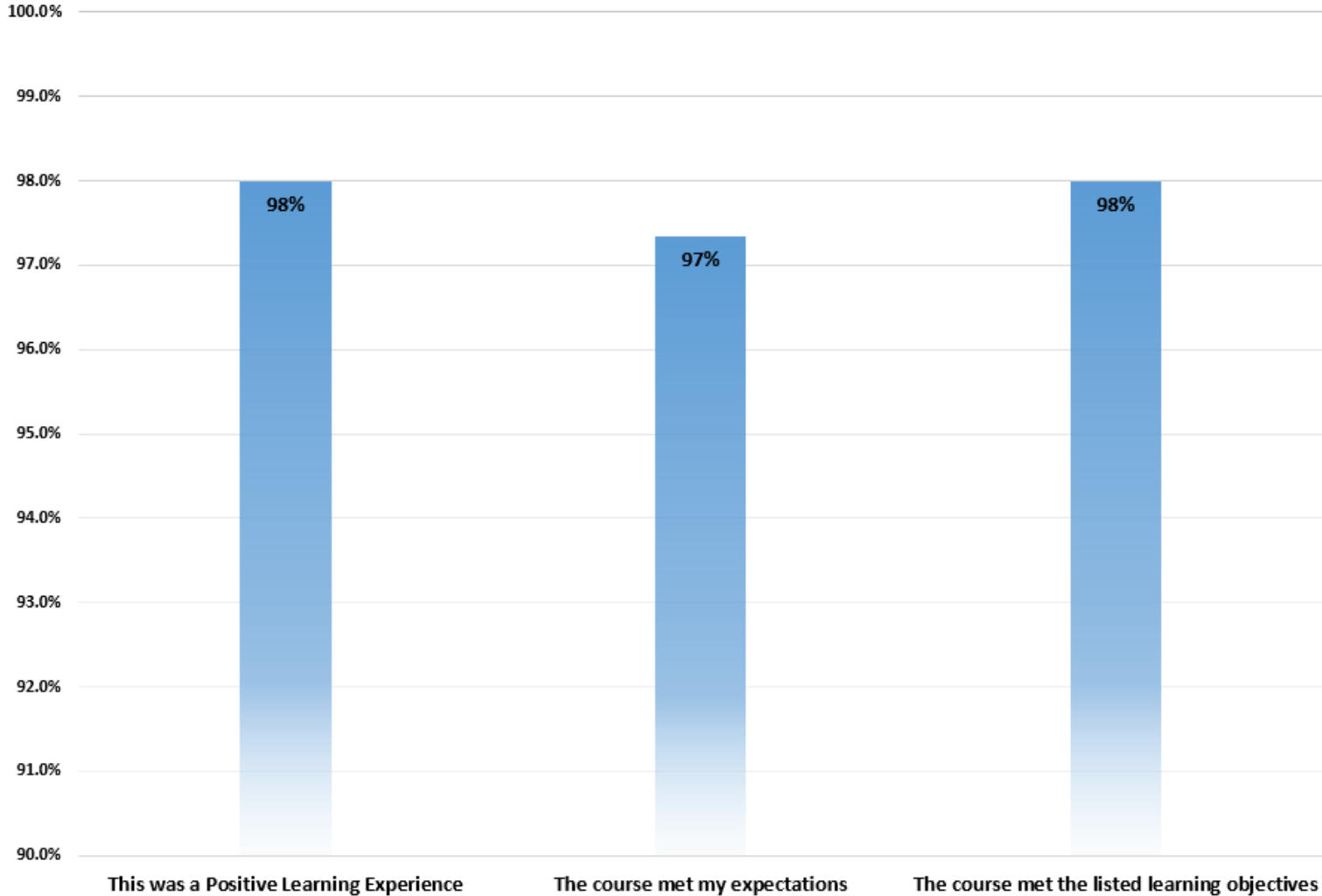
# Simulation Survey Statistics

MEDICAL STUDENT YEAR 1	Sim Orientation	Vital Signs	Hyper/Hypotension	ABD	Renal	Respiratory	Neuro #1	Neuro #2	Bio #1 Bio #2	Average
This was a Positive Learning Experience	100.0%	95.0%	97.7%	100.0%	98.9%	97.2%	98.0%	96.2%	98.9%	98%
The course met my expectations	99.0%	95.0%	97.6%	98.8%	96.7%	97.2%	97.1%	97.1%	97.7%	97%
The course met the listed learning objectives	100.0%	95.0%	97.6%	100.0%	96.7%	100.0%	98.0%	97.1%	98.9%	98%
I have a better understanding of the subject matter	97.0%	95.1%	96.5%	100.0%	95.6%	94.4%	97.0%	97.1%	97.7%	97%
This was an effective use of my time	98.0%	93.0%	95.2%	95.1%	92.3%	93.0%	94.1%	96.2%	96.0%	95%
I felt this was a safe learning environment	100.0%	95.1%	96.5%	98.8%	97.8%	97.2%	98.0%	97.1%	98.9%	98%
The simulation center staff and instructors were helpful and responsive	100.0%	95.1%	98.8%	100.0%	98.9%	100.0%	99.1%	97.1%	98.9%	99%
The simulation center was clean/neat/organized	100.0%	95.0%	98.8%	100.0%	98.9%	100.0%	99.0%	98.1%	98.9%	99%
The simulation equipment was in good working order	100.0%	95.0%	97.7%	96.3%	98.9%	100.0%	99.0%	96.2%	98.9%	98%
The resources found on Canvas for this session were helpful	95.0%	--	--	--	--	--	--	--	--	95%
I found that it was valuable to have this orientation	98.0%	--	--	--	--	--	--	--	--	98%

\* Data represents percentage of responses that were overall positive

Min	95.0%	93.0%	95.2%	95.1%	92.3%	93.0%	94.1%	96.2%	96.0%
Max	100.0%	95.1%	98.8%	100.0%	98.9%	100.0%	99.1%	98.1%	98.9%
Mean	98.8%	94.8%	97.4%	98.8%	97.2%	97.7%	97.7%	96.9%	98.3%
Var	0.0003	0.0000	0.0001	0.0003	0.0005	0.0007	0.0002	0.0000	0.0001
Std. Dev.	0.0166	0.0067	0.0115	0.0183	0.0221	0.0262	0.0157	0.0063	0.0100

### MS 1 AVERAGES ACROSS ALL SIMULATION COURSES

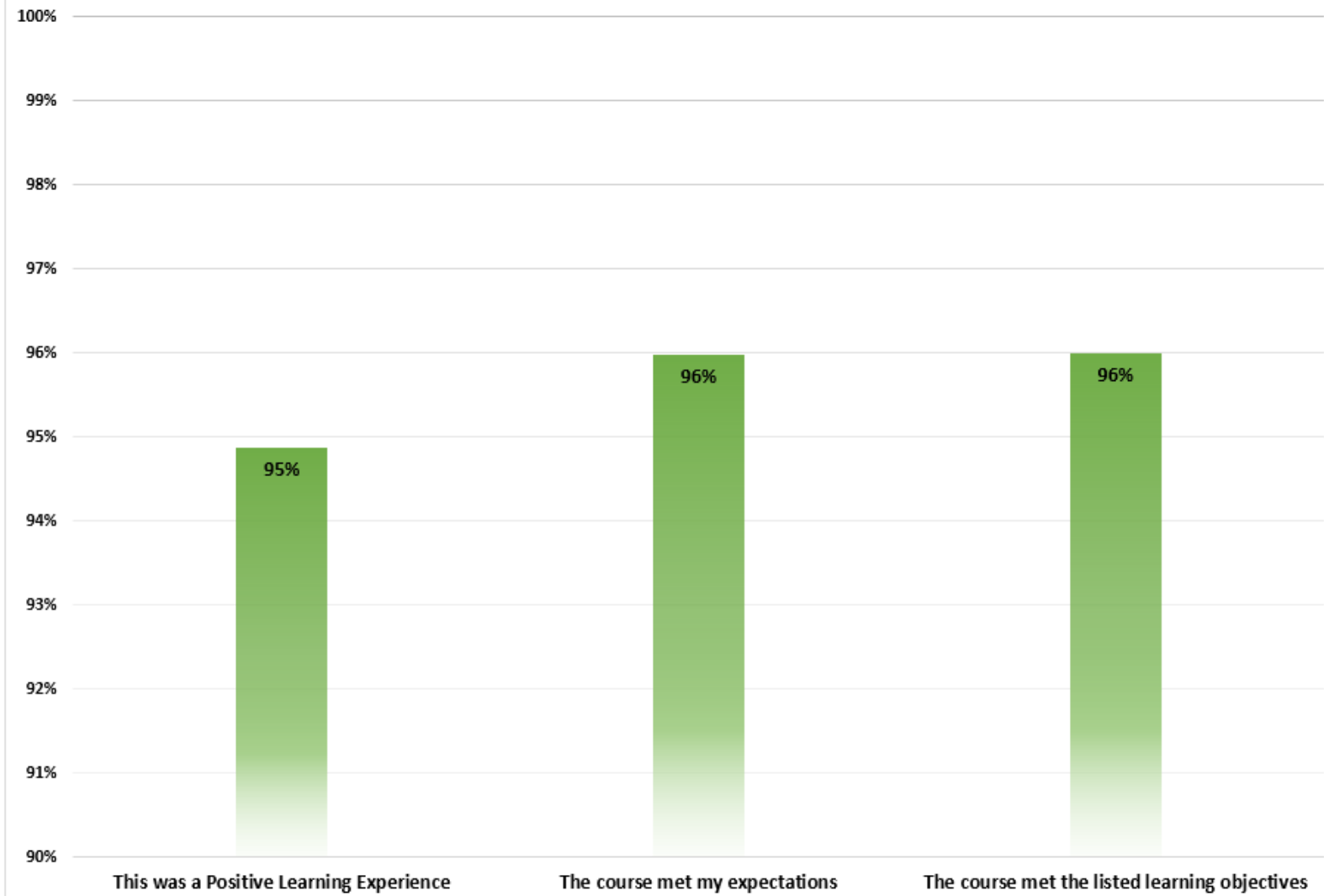


MEDICAL STUDENT YEAR 2	Infection	Respiratory	Hematology	Cardio	GI	Endocrine	Neuro	Average
This was a Positive Learning Experience	98.1%	88.4%	98.9%	94.1%	97.9%	90.0%	96.7%	94.9%
The course met my expectations	98.1%	95.7%	98.9%	92.4%	97.9%	93.3%	95.6%	96.0%
The course met the listed learning objectives	99.0%	94.3%	98.9%	95.0%	96.8%	93.3%	94.6%	96.0%
I have a better understanding of the subject matter	97.1%	95.7%	98.9%	95.0%	97.9%	93.3%	98.9%	96.7%
This was an effective use of my time	95.2%	88.6%	97.9%	91.0%	96.8%	89.9%	94.6%	93.4%
I felt this was a safe learning environment	99.0%	91.4%	98.9%	95.8%	97.9%	94.4%	95.7%	96.2%
The simulation center staff and instructors were helpful and responsive	99.1%	95.7%	100.0%	97.5%	97.8%	95.6%	98.9%	97.8%
The simulation center was clean/neat/organized	99.1%	97.1%	100.0%	97.4%	97.8%	97.8%	100.0%	98.5%
The simulation equipment was in good working order	98.1%	100.0%	100.0%	96.6%	97.9%	96.7%	98.8%	98.3%

*\* Data represents percentage of responses that were overall positive*

Min	95.2%	88.4%	97.9%	91.0%	96.8%	89.9%	94.6%
Max	99.1%	100.0%	100.0%	97.5%	97.9%	97.8%	100.0%
Mean	98.1%	94.1%	99.2%	95.0%	97.6%	93.8%	97.1%
Var	0.0002	0.0015	0.0001	0.0005	0.0000	0.0007	0.0004
Std. Dev.	0.0126	0.0390	0.0071	0.0220	0.0047	0.0269	0.0210

## MS 2 AVERAGES ACROSS ALL SIMULATION COURSES





**MS 1 Inter-professional Team Critical Incident  
(ITCI) Training**

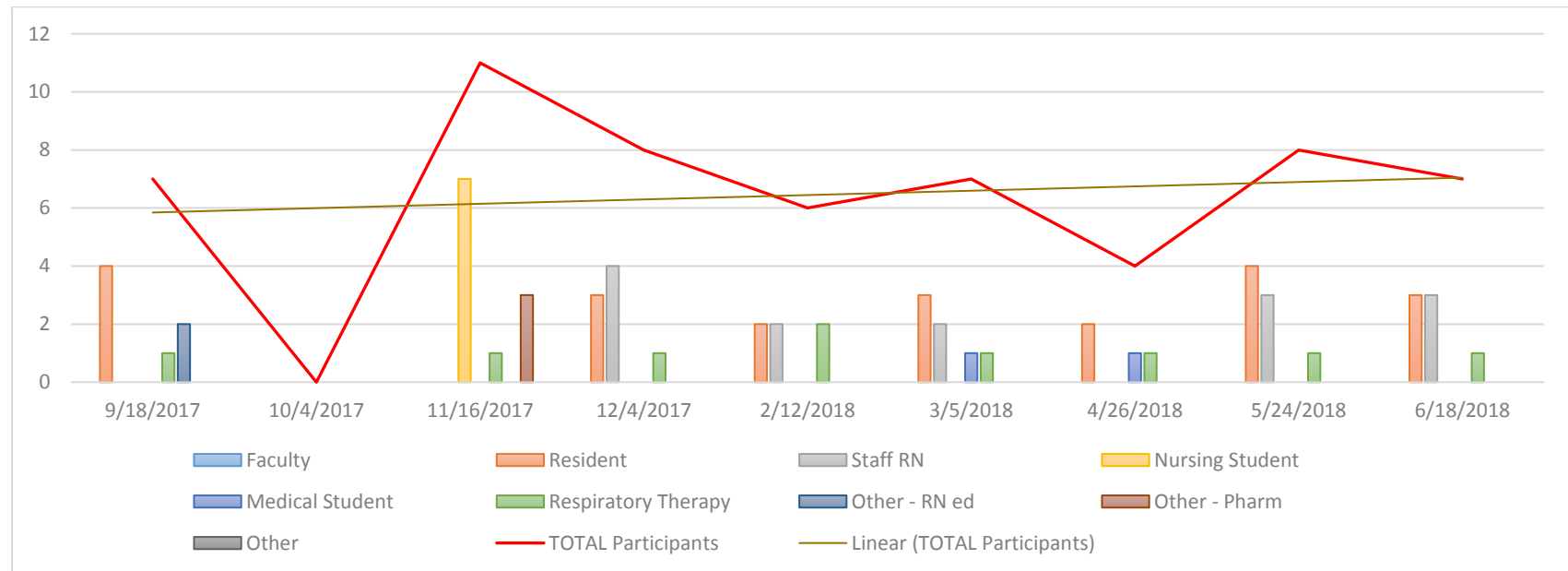
	Mean Overall Positive	Mean Overall Negative	Mean overall No Opinion
<b>MS 1 ITCI STATISTICS 2017-2018</b>			
This was a Positive Learning Experience	98%	1%	1%
The course met my expectations	97%	3%	0%
The course met the listed learning objectives	97%	2%	1%
I have a better understanding of the subject matter	99%	1%	0%
This was an effective use of my time	98%	2%	0%
I felt this was a safe learning Environment	99%	1%	0%
The simulation center staff and instructors were helpful and responsive	99%	1%	0%
The simulation center was clean/neat/organized	99%	1%	0%
The simulation equipmet was in good working order	98%	2%	0%
I feel I am better/more prepared to assist someone in BLS/ACLS	98%	2%	0%
I feel that this type of training helps me understand the concepts of BLS/ACLS over the traditional or Heartcode versions of the course	98%	1%	1%
I found that it was valuable to have this training with nursing students	90%	5%	4%
I found that I better understand the role of a nurse in emergency situations	87%	9%	2%

**MS 2 Inter-professional Team Critical Incident  
(ITCI) Training**

	Mean Overall Positive	Mean Overall Negative	Mean Overall No Opinion
<b>MS 2 ITCI STATISTICS 2017-2018</b>			
This was a Positive Learning Experience	98.3%	1.0%	0.7%
The course met my expectations	98.0%	1.0%	1.0%
The course met the listed learning objectives	98.0%	1.0%	1.0%
I have a better understanding of the subject matter	98.0%	1.0%	1.0%
This was an effective use of my time	98.0%	1.7%	0.3%
The simulation center staff and instructors were helpful and responsive	98.7%	1.0%	0.3%
The Simulation center was clean/neat/organized	99.0%	1.0%	0.0%
The simulation equipment was in good working order	98.6%	1.4%	0.0%
I feel I am better/more prepared to assist someone in BLS/ACLS	98.7%	1.0%	0.0%
I found that it was valuable to have this training with nursing students	78.9%	1.7%	2.4%
I found that I better understand the role of a nurse in emergency situations	73.4%	5.4%	23.7%

# Hospital Acute Response Training (Code Training)

	AY 2013-2014	AY 2014-2015	AY 2015-2016	AY 2016-2017	AY 2017-2018	Total Since Inception
Total Participants	62	58	48	64	58	290
Avg Participants/session	6.9	5.8	4.8	9.1	6.4	40
Min Participants	3	3	0	0	0	100
Max Participants	12	12	9	17	11	725
Total Number of Sessions	9	10	7	6	8	
Total Number of Cancellations	0	0	3	1	1	



# Current Research

No Current Simulation Research

**UCI** University of California, Irvine  
Medical Education Simulation Center

## Current Research Report

Report Printed:  
Tuesday, June 19, 2018  
9:19:31 AM

Dr. Cameron Ricks, Director

[Close Report](#)

IRBNumber	LastName	FirstName	Co-Investigators	Subject	Description	Notes

Tuesday, June 19, 2018

Page 1 of 1

\\END\\

# Quality Improvement/Quality Assurance

## Internal (within department/Medical Education)

### Policy and Procedures

Internally we have updated the department's policies and procedures to reflect current policies and procedure

### Strategic Planning

Strategic planning leading to 3-5 year strategic plan

### Student post-simulation Surveys

We review the student surveys and make changes to the curriculum and scenarios. We provide the instructors copies of the surveys as well.

### Simulation Operations Database

Director of Operations maintains an operational database to store and track key operational and historical data.

### Course reviews yearly

We review each course through the request and preparation of the simulation session

### Evaluation of Simulation Instructors

The Director or designee evaluates all active simulation instructor yearly

## External (Hospital/CME)

### Inter-professional, multi-disciplinary Critical Events Training on behalf of the Acute Response Committee

Provided 58 learners the opportunity to practice their crisis resource management principles

### Maintenance of Certification in Anesthesia (MOCA)

Held 6 MOCA courses; trained 48 Anesthesiologists

### American Society of Anesthesiologists (ASA)

Maintain Simulation Education Network (SEN) endorsement

### American College of Surgeons Accredited Education Institute

Maintain accreditation through record keeping

Submitted for re-accreditation



# Outreach

COSMOS

Pre-Med Camp

Summer Surgery

El Sol Academy (Future Health Champions)

TVT Biomedical Immersion Program

UCI Post-Bacc Program

World of Medicine

Ultrafest

EMIG Activities

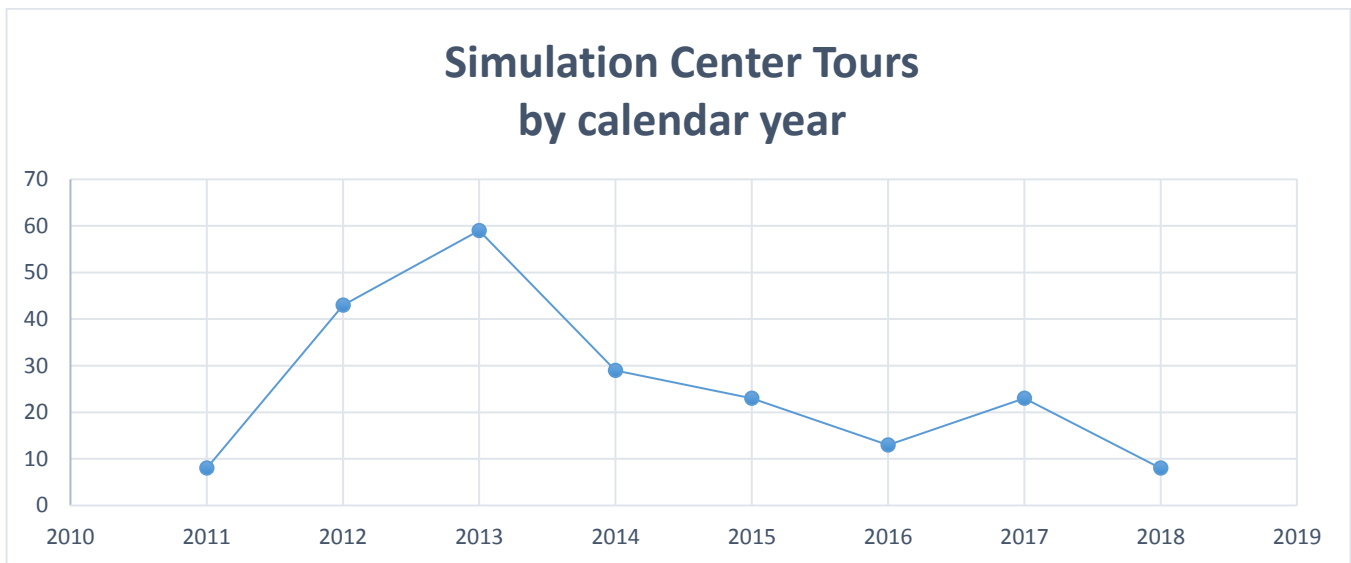
ASIG Activities

Simulation Interest Group Activities

# Tours

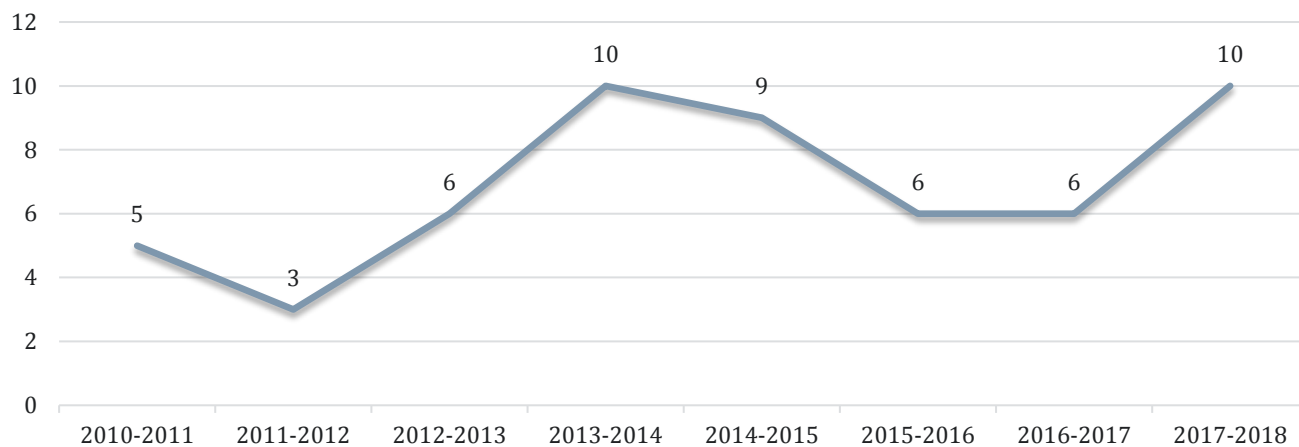
CY	Tour
2011	8
2012	43
2013	59
2014	29
2015	23
2016	13
2017	23
2018	8

Through June 2018



## Weekend/After Hours Events

**Simulation Center Weekend/after hours Staffing  
Number of Weekend Events**





# Medical Education Simulation Center Publication and Presentations

## Manuscript Publications

1. Anne Beissel, Christian Bauer, Marc Lilot, Keith Beaulieu, Baptiste Balanc, Thomas Rimmelé, Cameron Ricks. **A Trans-Atlantic High-Fidelity Mannequin Based Telesimulation Experience.** *Anaesthesia Critical Care & Pain Medicine* [Ahead of Print]
2. Raphael D, Lin S, Canales C, Beaulieu K, Ricks C. **Obstructive Mucus Plug in the Prone Position.** *MedEdPORTAL Publications*; 2015. Available from: <https://www.mededportal.org/publication/10016>  
[http://dx.doi.org/10.15766/mep\\_2374-8265.10016](http://dx.doi.org/10.15766/mep_2374-8265.10016)
3. Abdelshehid, C, Quach, S, Nelson, C, Graversen, J, Lusch, A, Zarraga, J, Alipanah, R, Landman, J, McDougall, E. **High-Fidelity Simulation-Based Team Training in Urology: Evaluation of Technical and Nontechnical Skills of Urology Residents During Laproscopic Partial Nephrectomy.** *Journal of Surgical Education*, September/October 2013, Volume 70/Number 5.
4. Shbeeb, A, Nelson, C, Strom, S, Mecca, R. Postanesthesia **Care Unit Simulation: Acute Upper Airway Obstruction Secondary to Laryngospasm.** Case Report. *Simulation in Healthcare*, Vol. 8, Number 2, April 2013
5. Gavazza, P, Rosenbaum, A, Canales, C, Kudrick, N, Lin, S. **Intraoperative Rhabdomyolysis: Simulation Case Scenario.** *Simulation in Healthcare*, Oct 2011; 6(5): 304-9. PMID: 21979829
6. Chun D, Gavazza P, Hollister C, Canales C, Lin S. Simulation Scenario- **Myocardial Ischemia in a Patient with a Cardiac Transplant after Subarachnoid Block** . *MedEdPORTAL*; 2011. Available from: [www.mededportal.org/publication/9029](http://www.mededportal.org/publication/9029).
7. Cannesson, M., Pestal G., Ricks, C., Hoeft, A., Perel, A. **"Hemodynamic Monitoring and Management in Patients Undergoing High Risk Surgery: A Survey among North American and European Anesthesiologists."** *Crit Care*. 2011 Aug 15: 15(4)

## Book/Chapter Publication

1. Ricks, C. "Addison's Disease," Chapter 6, *Essence of Anesthesia Practice*, 3e, 2010.

## Abstract Publications

1. Ricks, C; Brammier, J; De Los Santos, Joseph; Beaulieu, K; Field, R; Nelson, C; Rogacion, D; Rinehart, J. **Computer-based Training and Simulation for Ventriculostomy Management Training.** Presented at ASA 2017.

2. Beaulieu, Keith; Rogacion, Danica; Vicente, John; Ricks, Cameron. **Integration of Simulation in Undergraduate Medical Education as an Elective Course.** Presented at IMSH 2017. Published in *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, December 2016 (11:6), Pg. 452.
3. Anne Beissel, Christian Bauer, Marc Lilot, Keith Beaulieu, Baptiste Balanc, Thomas Rimmelé, Cameron Ricks. **Pitfalls of International Telesimulation.** Presented at IMSH 2016. Published in *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, December 2015 (10:6), Pg. 399.
4. Keith Beaulieu, Cris Hanacek, John Vicente, Anne Beissel, Charlene Beaulieu, Cameron Ricks. **Foley Skills Competency for 2<sup>nd</sup> Year Medical Students.** Presented at IMSH 2016. Published in *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, December 2015 (10:6), Pg. 447.
5. Keith Beaulieu, Cris Hanacek, John Vicente, Cameron Ricks. **Emesis During Simulation: A Low Cost Apparatus.** Presented at IMSH 2016. Published in *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, December 2015 (10:6), Pg. 461.
6. Rola Abdulrahman Alrabah; Anne Beissel; Cris Hanacek; Cecelia Canales; Keith A. Beaulieu; John Vicente; Julie Sayegh; Christopher McCoy; Cameron Ricks. **Residents as Teachers: A Randomized Controlled Non-inferiority Trial.** Presented at IMSH 2016.
7. Ricks, C., Beaulieu, K., Gohil, S., Rahman, A. **High Fidelity Medical Student Microbiology Simulation.** Presented at IMSH 2015. Published in *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, December 2014 (9:6), Pg. 464.
8. Ricks, C., Lin, S., Canales, C., Nelson, C., Strom, S. **Evaluation of Simulation Education using Anesthesia Information System.** Presented at IMSH 2014. Published in *Simulation in Healthcare: The Journal of the Society for Simulation in Healthcare*, December 2013, Pg. 581.
9. Charlotte Lee, Bernie Milbury, Maureen Movius, Cameron Ricks, Ryan Lombardi, Kenneth Seiff. **Interprofessional Communication and Teamwork for Improving Clinical Outcomes.** Presented at the “Magic in Teaching” Conference, Irvine, California. November 13, 2013.
10. Suzanne Strom, Luanna Yang, Cecilia Canales, Ryan Abrego, Jamie Gould, Mark Langdorf. **Resuscitation Reality Check: Using High-Fidelity Simulation to Evaluate Graduating 4th Year Medical Students’ Resuscitation Skills for Curricular Assessment.** Presented at IMSH 2012.
11. Jason Y. Lee\*, Phillip Mucksavage, Neil Shah, Cecilia Canales, Elspeth M McDougall, Sharon Lin. **High Fidelity Team-based Simulation Training: Laparoscopic Renal Vein Injury Scenario.** Presented at the 29<sup>th</sup> World Congress of Endourology and SWL (WCE2011) in Kyoto, Japan December 2011.
12. Cameron J. Ricks, M.D., Neil S. Shah, M.D., Cecilia Canales, M.P.H., Jason Lee, M.D., Sharon L. Lin, M.D. **Assessment of Anesthesiology Resident Non-Technical Skills Using a High-Fidelity Simulated Renal**

**Vein Injury Model.** Presented in Chicago Oct 2011 to be published at Anesthesiology October 2011. A170

13. Darren R. Raphael, M.D.,M.B.A., Cecilia Canales, M.P.H., Zeev N. Kain, M.D.,M.B.A., Suzanne L. Strom, M.D., Sharon Lin, M.D. **Simulation-Based Interviews Identify Outlier Anesthesiology Residency Candidates.** Presented in Chicago. Oct 2011 to be published at Anesthesiology October 2011. A170
14. Cecilia Canales, Sharon Lin, Suzanne Strom, Jason Lee, Zeev Kain. **Surgical Simulation Training Enhances Anesthesiology Resident Communication in the Operating Room.** Presented at 2011 ACGME Annual Educational Conference, Nashville Tennessee.
15. Lin, S, Raphael, D, Canales, C, Strom, S, Kain, Z. **Simulation-Based Interviews for Selection of Anesthesiology Residency Candidates.** Anesthesia & Anesthesiology. 2011 S-146. Presented at IARS 2011 in Vancouver.

### Workshop Presentations

1. McCoy C., Alrabah R., Beaulieu, K., Sayegh, J., Vicente, J., Ricks, C. **Telesimulation: Blazing a New Trail in Medical Education.** Podium Presentation, International Meeting for Simulation in Healthcare, January 2016.
2. Ricks, C., Ahearn, S., Beaulieu, K., Abrego, R., Strom, S. **Integrating High-Fidelity Simulation into your OSCEs.** Podium Presentation 2014 International Meeting for Simulation in Healthcare, January 2014.
3. Park C, Strom S. **Milestones: Patient Care 1.** Workshop presented at the Society for Education in Anesthesia (SEA) Meeting, SEA Simulation Committee, June 2013, Salt Lake City, UT.
4. Park C, Pardo M, Littlewood K, Navedo A, Strom S. **Simulation Instructors Course: Preparation for MOCA. Preconference workshop** presented at the Society for Education in Anesthesia (SEA) Meeting, SEA Simulation Committee, May 2013, Salt Lake City, UT.
5. Kacmar R, Theilken L, Jasper L, Park C, Strom S. **Simulation Design and Debriefing for Dummies.** Workshop presented at the International Meeting for Simulation in Healthcare, January 2013, Orlando, FL.
6. Arciaga P, Banerjee A, Blevins A, Campbell C, Dean L, Hatch D, Hwang J, Kacmar R, Levy R, Lighthall D, Lipman S, Liu L, McIvor W, Pardo M, Park C, Ross V, Shimabukuro D, Steigler M, Strom S, Thomas J, Torsher L, Wald S, Weigner M. **Simulation LIVE! Workshop** presented at the 2012 annual meeting for the American Society of Anesthesiologists, October 2012, Washington,D.C.
7. Park, CS, Strom, SL, Littlewood, KE, Pardo, MC. **Incorporating Simulation to Meet the ACGME Simulation Requirement.** Workshop presented at Society for Education in Anesthesia (SEA) Meeting, June 2012, Milwaukee, WI.

8. Cecilia Canales, MPH, Corey Nelson, MD; Ryan Abrego; Jamie Gould, BS; Cameron Ricks, MD; Suzanne Strom, MD. ***Simulation Beyond the Manikin***. Workshop presented at the American Association of Medical Colleges, Western Group on Educational Affairs Meeting, Monterrey, CA, April 2012.
9. Suzanne Strom, Cecilia Canales. ***How to integrate medical simulation into all four years of the medical school curriculum in six months or less***. Presented at WGEA for AAMC in Stanford, CA on May 2011.
10. Cecilia Canales, Jamie Gould, Ryan Abrego, Cameron Ricks. ***Contingency Planning for Confederates***. Presented at the First Regional meeting on Simulation at Loma Linda, CA on April 2011
11. Sharon Lin, MD; Suzanne Strom, MD; Cecilia Canales, MPH; Ela Cudilo, MD; Levina Tran, MD; Shelby Walters, MD; Elena Paik Chung, MD; Stephanie Cha, MD; Ryan Abrego. ***“An Evening of Simulation.”*** Presented at the American Association of Clinical Directors (AACD) Perioperative Leadership Summit. March 2011.
12. Sharon Lin, MD; Suzanne Strom, MD; Cecilia Canales, MPH; Jason Lee, MD and Zeev Kain, MD, MBA. ***Impact of Cross-Training on Perspectives in the Operating Room: Surgical Simulation for Anesthesiology Residents***. Presented at International Meeting on Simulation in Healthcare (IMSH) January 2011
13. Suzanne Strom, MD; Cecilia Canales, MPH; Sharon Lin, MD. ***MOCA Preparation: Simulation Based Training in Critical Incident Management and Teamwork***. Presented at the American Society of Anesthesiologists Annual Meeting, October 16, 2010

#### Grants Submitted

Ricks C, Beaulieu K. (2013) *Inter-professional Team Critical Incident (ITCI) Training*. **Josiah Macy Jr. Board Grant**

**Ricks C, Beaulieu K (2014) *Inter-professional Team Critical Incident (ITCI) Training*. UniHealth Foundation**

Ricks C, et al. (2014) **UC Simulation Consortium**. University of California Office of the President.

# Maintenance of Certification in Anesthesia (MOCA)

Profit and Loss Statement  
 Maintenance of Certification in Anesthesia  
 UC Irvine Medical Education Simulation Center  
 2017-2018

**UCI** University of California, Irvine  
 Medical Education Simulation Center

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Totals
#Courses				2	2					2			
<b>Sales Revenue</b>	No Intended for Public												
Course Revenue													
<b>Total Sales Revenue</b>													
<b>Operating Expenses</b>													
Anes. Dept Fee													
Honorarium													
SP													
Food													
Administrative													
ASA Re-endorsement													
Tech Upgrade													
ASA Fees													
CME Fees													
<b>Total Operating Expenses</b>													
<b>Course Profit</b>													
Less Anes Distribution													
<b>Net Profit/Loss</b>													
Face Value P/M													
Realized P/M													
Total Anes Trxfr													

# UC Irvine Simulation Center History

## MEDICAL DIRECTOR

2010-2011	Dr. Sharon Lin
2011-2013	Dr. Elizabeth McDougal
2013-Present	Dr. Cameron Ricks

## DIRECTOR OF OPERATIONS

2010-2013	Cecilia Canales, MPH
2013-present	Keith Beaulieu, MBA, BS, BA

## SIMULATION SPECIALISTS

2010-2014	Ryan Abrego (Lombardi)
2010-2014	Jamie Gould (Martin), BS
2013-2015	Cris Hanacek, BS
2013-present	John Vicente
2015-2016	Eilene Tellez
2017-present	Ryan Gouras, BS

## ADMINISTRATIVE ASSISTANT/PROGRAM MANAGER

2012-2013	Geneva Rangel
2013-2015	Catarina De Carvalho
2015-present	Danica Rogacion, BS

## FIRST SIMULATION

2 September 2010

# UC Irvine Simulation Curriculum History

## ACADEMIC YEAR 2010-2013

Academic year 2010-2013 saw the creation of an increase of the use of simulation in the basic science courses from 0 courses/session to 18 courses that were tied to the basic science course for the first and second year medical students.

## ACADEMIC YEAR 2013-2014

Academic Year 2013-2014 saw no change in the curriculum

Core MS 1 & 2 Courses/Sessions Added	

Core MS 1 & 2 Courses/Sessions Dropped	

Total Instructor Blocks Needed: 36  
 Total number of scenarios developed: unknown

## ACADEMIC YEAR 2014-2015

Academic Year 2014-2015 saw the addition of Inter professional Team Critical Incident (ITCI) training in the first 2 years of medical school. This a rapid-cycle deliberate practice simulation modality. It included 4 sessions in the MS 1 year that focused on BLS and team dynamics. MS 2 year had a total of 4 sessions focused on BLS, elements of ACLS, and breaking bad news.

Core MS 1 & 2 Courses/Sessions Added	
MS 1 ITCI #1	MS 2 ITCI #1
MS 1 ITCI #2	MS 2 ITCI #2
MS 1 ITCI #3	MS 2 ITCI #3
MS 1 ITCI #4	MS 2 ITCI #4

Core MS 1 & 2 Courses/Sessions Dropped	

Total Instructor Blocks Needed: 70  
 Total number of scenarios developed: 36

## ACADEMIC YEAR 2015-2016

Academic Year 2015-2016 saw the addition of an extra biochemistry and Neuroscience session respectively. This year also saw the reduction of MS 1 ITCI from 4 sessions down to 2.

Core MS 1 & 2 Courses/Sessions Added	
MS 1 Biochemistry #2	
MS 1 Neuroscience #2	

Core MS 1 & 2 Courses/Sessions Dropped	
MS 1 ITCI #3	
MS 1 ITCI #4	

Total Instructor Blocks Needed: 72  
 Total number of scenarios developed: 6

## ACADEMIC YEAR 2016-2017

Academic year 2016-2017 saw a dramatic shift in the simulation curriculum away from the basic science module footprint of the past. The simulation sessions were derived largely from a clinical foundation module standpoint. New course titles and course numbers were derived.

Core MS 1 & 2 Courses/Sessions Added	
MS 1 Simulation Orientation	MS 2 Respiratory
MS 1 Vital Signs Workshop	MS 2 Hematology
MS 1 Hyper/Hypotension	MS 2 Cardio
MS 1 Abdominal	MS 2 Endocrine
MS 1 Renal	MS 2 Infection
MS 1 Respiratory	MS 2 Neuro/Psych
MS 1 Musculoskeletal	
MS 1 Neuro #1	
MS 1 Neuro #2	

Core MS 1 & 2 Courses/Sessions Dropped	
MS 1 CV Physiology	MS 2 Microbiology
MS 1 Renal Acid-Base Physiology	MS 2 Cardiovascular Physiology
MS 1 Respiratory Physiology	MS 2 Inhaled & IV Anesthetics
MS 1 Neuroscience	MS 2 Sedatives and Narcotics

Total Instructor Blocks Needed: 90  
 Total number of scenarios developed: 22



## ACADEMIC YEAR 2017-2018

Academic year 2017-2018 remained relatively the same. There was some movement in the courses: MS 2 GI was added, MS 1 Musculoskeletal was dropped, and MS 2 Neuro/psych was converted to just neuro by taking out the psych curriculum.

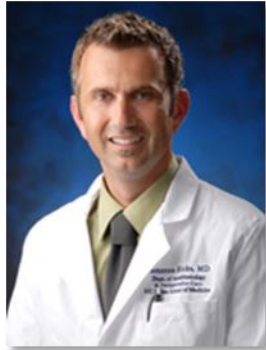
Note: This year is the first year that School of Nursing will be a utilizer

<b>Core MS 1 &amp;2 Courses/Sessions Added</b>	
	MS 2 GI

<b>Core MS 1 &amp;2 Courses/Sessions Dropped</b>	
MS 1 Musculoskeletal	

Total Instructor Blocks Needed: 90  
Total number of scenarios developed: 5

## Contact Information



**CAMERON RICKS, MD**  
DIRECTOR



**KEITH A. BEAULIEU, MBA, BS, BA**  
DIRECTOR OF OPERATIONS



**DANICA ROGACION, BS**  
PROGRAM MANAGER

## Company Information

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**Tel** 949-824-8835  
[www.medsim.uci.edu](http://www.medsim.uci.edu)