



1

Once upon a time...

- There was a wonderful place called University of Iowa Stead Family Children's Hospital

Stead Family Children's Hospital
2

2

Who are we?

[The Hawkeye Wave](#)

Stead Family Children's Hospital
3

3

Who are we?



IOWA'S TOP CHILDREN'S HOSPITAL

NATIONALLY RANKED IN:

- Behavioral Health
- Pediatric Cancer
- Pediatric Cardiology
- Heart and Vascular Surgery
- Pediatric Diabetes and Endocrinology
- Pediatric Neonatology
- Pediatric Nephrology
- Pediatric Neurology and Neurosurgery
- Pediatric Orthopedics
- Pediatric Urology




Changing Medicine.
Changing Kids' Lives.™

IOWA HEALTH CARE Stead Family Children's Hospital 4

4

Introduction



PEDIATRIC SPECIALTY CLINIC

- Pediatric Specialty Clinic (PSC)
- 22 Pediatric Specialties
- 75,000 Patient Visits Annually
- Interdisciplinary Roles:
 - Nurses, Medical Assistants, Paramedics, Patient Care Technicians, Phlebotomists, Respiratory Therapists, Sonographers, Providers, Pharmacists, Clinical Technicians

IOWA HEALTH CARE Stead Family Children's Hospital 5

5

Once upon a time...

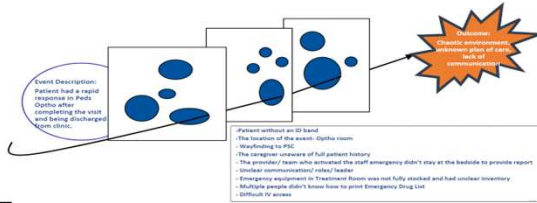
- There was a wonderful place called University of Iowa Stead Family Children's Hospital
- **One day, an emergency event happened in this magical place, and the people in the place were very lost and confused after**

IOWA HEALTH CARE Stead Family Children's Hospital 6

6

How it started...

- Chaos as Catalyst
- Rapid Response: July 2022
 - Premature, trach/vent dependent, apneic/ bradycardic

IOWA
HEALTH CARE

Stead Family Children's Hospital

7

7

Rapid Response Event Review

- ❌ Staff discomfort with emergencies
- ❌ Poor communication & role delegation
- ❌ Unfamiliar with emergency equipment
- ❌ Wayfinding issues
- ❌ Patient ID issues
- ❌ Unclear handoff to Rapid Response Team
- ❌ Inadequate documentation
- ✅ Patient stabilized in PICU

IOWA
HEALTH CARE

Stead Family Children's Hospital

8

8

Once upon a time...

- There was a wonderful place called University of Iowa Stead Family Children's Hospital
- One day, an emergency event happened in this magical place, and the people in the place were very lost and confused after
- **So, they went on a quest for answers on how to make emergencies go more smoothly**
- **They had to talk to people... LOTS of people... and come up with new ideas**

IOWA
HEALTH CARE

Stead Family Children's Hospital

9

9

Timeline

Multiple approaches to address these educational/ training gaps were implemented:



July 2022:

Rapid Response
event review with
nursing team

Gaps identified



August 2022:

Standardized
emergency
equipment
throughout PSC



September 2022:

Staff meeting
presentation

Hands-on
demonstration -
emergency equipment



Stead Family Children's Hospital

10

10

Timeline



September 2022:

Met with PSC
Interdisciplinary
Leadership Team to
discuss simulation
initiative



October 2022:

Met with CWS
Simulation Committee



November 2022:

Met with College of
Nursing / NCEC to
review "First 5 Minutes"
simulation strategy



December 2022:

Developed simulation
scenario, reserved
equipment, met with
Peds Faculty



January 2023:

Began in
situ simulation with
PSC staff



Stead Family Children's Hospital

11

11

Why Simulation?

- Ambulatory emergencies are high-risk, low frequency events
- Simulation= effective team training
- Evidence review on best practices for outpatient emergency preparedness



Stead Family Children's Hospital

12

12

Evidence Review

- Pediatric emergency preparedness in outpatient settings has historically been found to be suboptimal (Garrow et al, 2020)
- Simulation is an effective method to train resuscitation teams in the management of crisis scenarios and has the potential to improve team performance in the areas of communication, teamwork, and leadership (Murphy, Curtis, & McCloughen, 2016)
- Simulation is a widely used education strategy, yet not commonly used in the outpatient setting (Carr and Gormley, 2022)



Stead Family Children's Hospital

13

13

Once upon a time...

- There was a great wonderful place called Iowa Health Care Stead Family Children's Hospital
- One day, an emergency event happened in this magical place, and the people in the place were very lost and confused after
- So, they went on a quest for answers on how to make emergencies go more smoothly
- They had to talk to people... LOTS of people... and come up with new ideas
- **And finally! A simulation program was born...**



Stead Family Children's Hospital

14

14

PSC Simulation: First 5 Minutes



- Focus on recognizing emergency, activating appropriate team, and basic care to provide before Code/Rapid Response team arrives: "First 5 Minutes"
- 30 minute in-situ exercise (pre-brief, scenario, de-brief)
 - Partner with Simulation Specialist
 - High fidelity simulator (displays changes in symptoms and vital signs)
 - Provide hands-on practice for patient care / use of equipment
 - Discuss team dynamics/roles/communication strategy
- Documentation and handoff report reviewed at each session
- Overall goal: repeated exposure and practice with emergency simulations will increase staff comfort and efficiency with patient emergencies




Stead Family Children's Hospital

15

15


Additional work...

- Consistent learning from every event
 - October 2022 – enhanced Rapid Response/ Code Blue event review process led by SFCH Quality and Patient Safety leaders
- Improved wayfinding for emergency response teams
 - Enhanced signage on main hallway staff entrances to PSC installed in June 2023


 Stead Family Children's Hospital 16

16


PDSA Cycles




Phase 1:
Seizure
7 Simulations
32 Participants
Jan '23- May '23
3 Staff Physicians




Phase 2:
Anaphylaxis
6 Simulations
32 Participants
July '23- Sept '23
1 Nurse Practitioner




Phase 3:
Respiratory Distress
6 Simulations
31 Participants
Dec '23- Feb '24



Phase 4:
Hypoglycemia
8 Simulations
41 Participants
April '24- May '24




Phase 5:
Hypovolemia
7 Simulations
45 Participants
Aug '24- Jan '25
7 Pediatric Fellows


 Stead Family Children's Hospital 17

17

PDSA Cycles




Phase 6 (currently underway):
SVT
6 simulations scheduled (5 have been completed)
30 participants have completed (7 more scheduled in last session)
January 2025- May 2025
6 Pediatric Fellows

 Stead Family Children's Hospital 18

18

Simulation Pre/ Post Survey

- Simulation participants sent an electronic survey before and after participation in simulation
- Topics evaluated on a Likert scale:
 - Teamwork
 - Communication
 - Collaboration
 - Role delegation
 - Staff comfort
- Subjective comments for strengths and opportunities for improvement in the program

IOWA
HEALTH CARE


Stead Family Children's Hospital

19

19

Once upon a time...

- There was a great wonderful place called Iowa Health Care Stead Family Children's Hospital
- One day, an emergency event happened in this magical place, and the people in the place were very lost and confused after
- So, they went on a quest for answers on how to make emergencies go more smoothly
- They had to talk to people... LOTS of people... and come up with new ideas
- And finally! A simulation program was born
- **The team learned and practiced together, building on their skills and communication with each simulation and each Rapid Response event**

IOWA
HEALTH CARE

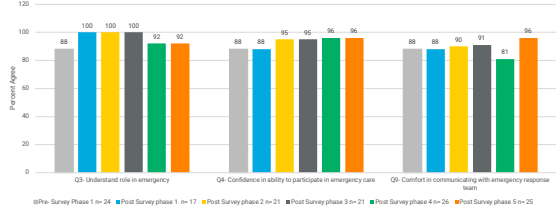
Stead Family Children's Hospital

20


20

Results

Improvements in knowledge, confidence, and comfort around emergency events in PSC



Survey Phase	Q3: Understand roles in emergency	Q4: Confidence in ability to participate in emergency care	Q5: Comfort in communicating with emergency response team
Pre-Survey Phase 1 n=24	88	88	88
Post-Survey phase 1 n=17	100	89	89
Post-Survey phase 2 n=21	100	95	90
Post-Survey phase 3 n=21	92	95	91
Post-Survey phase 4 n=26	92	96	81
Post-Survey phase 5 n=25	96	96	96

IOWA
HEALTH CARE

Stead Family Children's Hospital


21

21

Staff Feedback:

What part of this program did you find valuable?

- Discussion / learning after the simulation (debriefing)
- Hands on practice with simulator and emergency equipment
- Interdisciplinary communication
- Team roles and scope of practice
- *Everything about the program was very valuable. **The most recent simulation helped me out tremendously during an actual rapid response event. I was more confident in the roles that I needed to be apart of and was able to help delegate others to assist. I was very confident in knowing how a rapid response should be handled because of the simulation I had done a week prior.** Before this most recent rapid response I was not confident at all because I did not have the visualization and tools that I needed to understand my roles in a rapid response or how a rapid response should be handled.*


Stead Family Children's Hospital
22

22

Feedback

"Interdisciplinary work, it helps for all healthcare providers to learn what they can do in an emergency"

-Registered Nurse Participant

"Simulating the chaos of a true emergency. I had a plan laid out in my head but once you get into the chaos of the situation, you get practice thinking on your feet."

-Physician Participant

"I have never been in a pediatric emergency prior to this, so having the experience of simulating a real emergency was very beneficial to my understanding of emergencies."

-Nursing Assistant Participant



Stead Family Children's Hospital
23


23

Physician Feedback

"I would strongly encourage everyone who routinely practices in the PSC to take part in the PSC simulation events. I can attest that it was a very positive experience, and it was clear how much learning took place for everyone involved."

- Dr. Jason Misurac, Medical Director
Pediatric Specialty Clinic




Stead Family Children's Hospital
24

24

From chaos to coordination...

- An event in March 2024 highlighted how simulation and structured debriefing offered a real- life example of our shift from a reactive to proactive response...

IOWA
HEALTH CARE

Stead Family Children's Hospital

25

25

Patient
Feedback

Comment

While my son's allergy appointment was routine and went well, my niece had a medical emergency and went into anaphylaxis immediately after. The team there jump into action and saved her life. My sister was visiting from CA & was not an existing UI patient, but she has never felt more supported in a medical setting. The response was quick, everyone jumped into action to support, and my niece was able to get life-saving treatment and care. I cannot express my gratitude enough for this incredible team, led by Dr. Bayer & Dr. Hines.

IOWA
HEALTH CARE

Stead Family Children's Hospital

26

26

What we've learned in PSC...

- Frequency of emergency activations has increased
 - January 2023-March 2025: 25 Rapid Response or Code Blue events
- There are adult and pediatric emergencies in PSC
 - 5 Adult Events, 20 Pediatric Events
- Improvement as noted in pre/post survey
 - Teamwork
 - Communication
 - Collaboration
 - Role delegation
 - Staff comfort
- **The reliable, standardized interdisciplinary event reviews have been instrumental in identifying and addressing opportunities and successes**

IOWA
HEALTH CARE

Stead Family Children's Hospital

27

27

Once upon a time...

- There was a great wonderful place called Iowa Health Care Stead Family Children's Hospital
- One day, an emergency event happened in this magical place, and the people in the place were very lost and confused after
- So, they went on a quest for answers on how to make emergencies go more smoothly
- They had to talk to people... LOTS of people... and come up with new ideas
- And finally! A simulation program was born
- The team learned and practiced together, building on their skills and communication with each simulation and each Rapid Response event
- **And they lived happily ever after, supporting patients and saving lives...**



Stead Family Children's Hospital

28

28

References

Abulebda, K., Yuknis, M. L., Whitfill, T., Montgomery, E. E., Pearson, K. J., Rousseau, R., Diaz, M. C. G., Brown, L. L., Wing, R., Tay, K. Y., Good, G. L., Malik, R. N., Garrow, A. L., Zaveri, P. P., Thomas, E., Makharashvili, A., Burns, R. A., Lavoie, M., Auerbach, M. A., & Improving Pediatric Acute Care Through Simulation (IMPACTS) (2021). Preparedness for Pediatric Office Emergencies: A Multicenter, Simulation-Based Study. *Pediatrics*, 148(3), e2020038463. <https://doi.org/10.1542/peds.2020-038463>

Carr, D., & Gormley, G. J. (2022). 'Visiting uncertainty': an immersive primary care simulation to explore decision-making when there is clinical uncertainty. *Education for primary care: an official publication of the Association of Course Organisers, National Association of GP Tutors, World Organisation of Family Doctors*, 35(4), 237-243. <https://doi.org/10.1080/14739879.2022.2070867>

Garrow, A. L., Zaveri, P., Yuknis, M., Abulebda, K., Auerbach, M., & Thomas, E. M. (2020). Using Simulation to Measure and Improve Pediatric Primary Care Offices Emergency Readiness. *Simulation in healthcare: journal of the Society for Simulation in Healthcare*, 15(3), 172-192. <https://doi.org/10.1097/SIH.0000000000000472>

Murphy, M., Curtis, K., & McCloughen, A. (2016). What is the impact of multidisciplinary team simulation training on team performance and efficiency of patient care? An integrative review. *Australasian Emergency Nursing Journal* 19(1), 44-53. <https://doi.org/10.1016/j.aenj.2015.10.001>

YouTube. (2025, April 14). Shorts [Video]. YouTube. <https://www.youtube.com/shorts/zKh3rphiSS0>



Stead Family Children's Hospital

29

29

Questions?



Stead Family Children's Hospital

Renee McGinnis, MD, RN, CPN
Clinical Practice Leader
Pediatric Specialty Clinic
Renee-mcginnis@uiowa.edu

CHANGING MEDICINE.
CHANGING KIDS' LIVES.™

30

A large yellow graphic with a black border. On the left, the text "Thank you" is written in a large, bold, black sans-serif font. Above it is a short horizontal black line. Below the text, there is a black rectangular button with a white right-pointing arrow and the text "uihc.org" in white. To the right of the button is a row of five white social media icons (Facebook, Instagram, Twitter, YouTube, LinkedIn) on a black background. On the right side of the yellow area, the Iowa Health Care logo is displayed, consisting of the word "IOWA" in large, bold, black letters above "HEALTH CARE" in smaller, bold, black letters, with a vertical line to the right. To the right of this line, the text "Stead Family Children's Hospital" is written in a smaller, black sans-serif font. Below the logo, the text "Renee McGinnis, MD, RN, CPN" is written in bold, followed by "Clinical Practice Leader" and "Pediatric Specialty Clinic" in regular weight. At the bottom right, the email address "Renee-e-mcginnis@uiowa.edu" is listed. At the very bottom of the yellow area, the text "CHANGING MEDICINE. CHANGING KIDS' LIVES.™" is written in a small, black sans-serif font.

[illegible]