The background features abstract, overlapping green geometric shapes in various shades, creating a modern and professional aesthetic. The shapes are primarily triangles and polygons, some with gradients, set against a white background.

# Implementation of Pediatric Simulation for Emergency Department and Pediatric nurses in a Northern Ontario Regional Hospital

Lynn Smith, PhD, RN

Mireille Walsh, MScN, RN

Alyson Foster, BScN, RN

# Disclosure of Affiliations, Financial Support, and Mitigating Bias

Lynn Smith

## Affiliations:

- ▶ Employee of Northern College
- ▶ Consultant for Timmins and District Hospital

## Financial Support

- ▶ This session/program has received in-kind support from Northern College in the form of release time and travel expenses

# Objectives

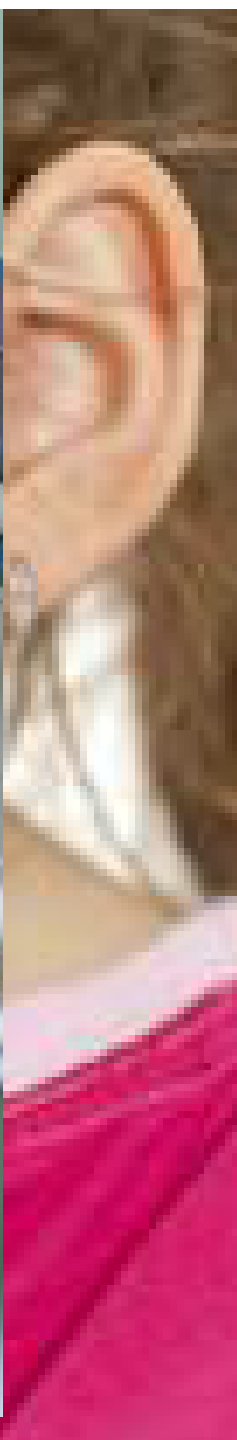
- ❑ Outline a process for creating sustainable learner driven education
- ❑ Review three simulated pediatric cases that were validated and piloted by ED and pediatric nurses.
- ❑ List three useful tips to planning a simulation exercise at their own facility.

# The Pediatric Unit

- ▶ five bed unit
- ▶ 1 RN per shift
- ▶ 45.9% occupancy rate in 2015-2016
- ▶ 183 admissions
- ▶ Mean LOS: 1.8 days



# Rationale for Project



## CJON BOOK EXCERPT SERIES

# Creating an Educational Plan That Meets the Learning Needs of Nursing Staff

Joan Such Lockhart, PhD, RN, CORLN, AOCN®, FAAN

This excerpt, chapter 6 from the book *Unit-Based Staff Development for Clinical Nurses*, by Joan Such Lockhart, PhD, RN, CORLN, AOCN®, FAAN, is part of a series of clinically relevant reprints that appear periodically in the *Clinical Journal of Oncology Nursing*.

**A**s mentioned in Chapters 1 and 3, many healthcare organizations have responded to recent healthcare trends by shifting the responsibility for staff education from nurse educators based in centralized nursing staff development departments to unit-based nursing staff (Leslie & Churilla, 1998; Lockhart & Bryce, 1996). As a result, some of the responsibility for staff development has been assumed by clinical staff nurses, who also provide direct care to patients, or nurses who coordinate patient care activities.

As mentioned in Chapter 2, staff development is defined as the “systematic process of assessment, development, and evaluation

ited. Although most RNs received formal instruction in and experience with the teaching-learning process in their initial preparation as an RN, this educational content often focused on learners such as patients and groups of lay people in the community. It is likely that clinical nurses, therefore, will need additional instruction and guidance to effectively assume the role of a unit-based staff educator.

As with any new endeavor, it is advantageous to seek the assistance of an experienced educator who can serve as a mentor. Because of their credentials, experience, and job responsibilities, nurses such as staff development educators, advanced prac-

# INACSL Standards



# Pediatric Staff Interviews: Needs assessment 1

- ▶ Staff feel unsupported re: learning and working conditions
  - “You are it”
  - “No one gets peds”
  - “Educator has no peds experience”
- ▶ Concerns regarding new standard order sets
- ▶ Need for education on basic assessment and hands on skills

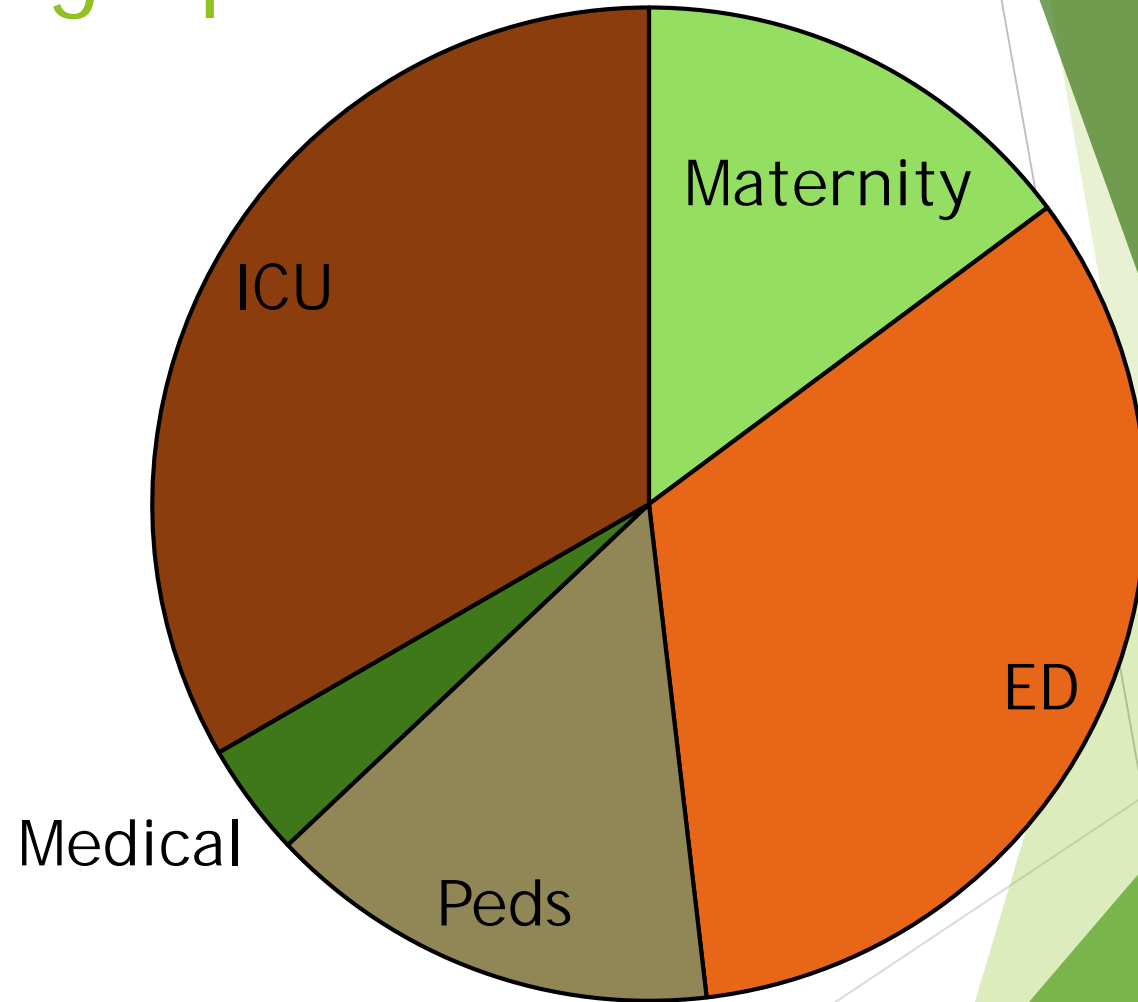


# Needs assessment 2

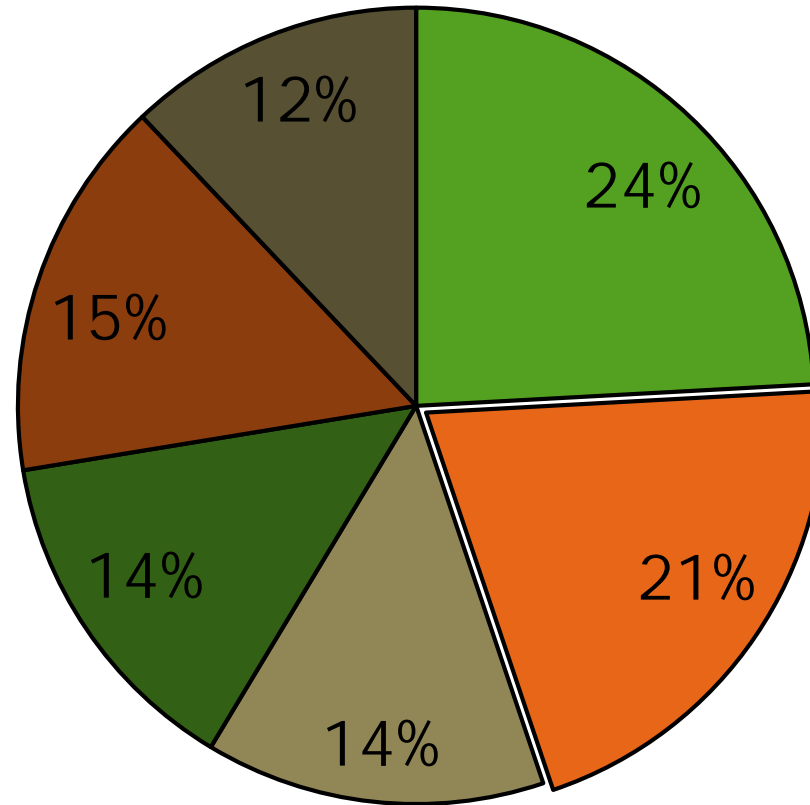
- ▶ Survey of full and part-time Pediatric, Maternity, ICU and ED nursing staff
- ▶ 26 useful surveys

# Respondents Demographics

- ▶ 92% percent RNS
- ▶ 58% full time

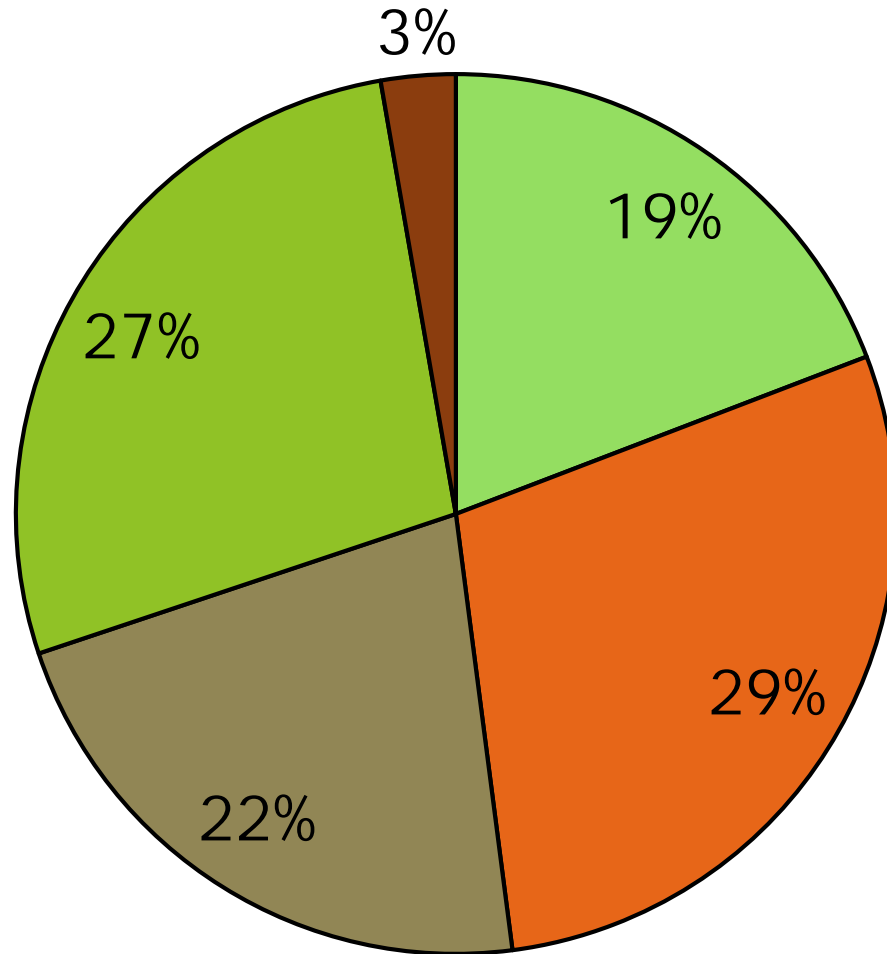


# Resources Used to Access Pediatric Information



- Computers and applications
- Hospital websites
- Pharmacists
- Respiratory Therapists
- Peers
- Other

# Participation in Continuing Education



■ Reading journals

■ In-service training

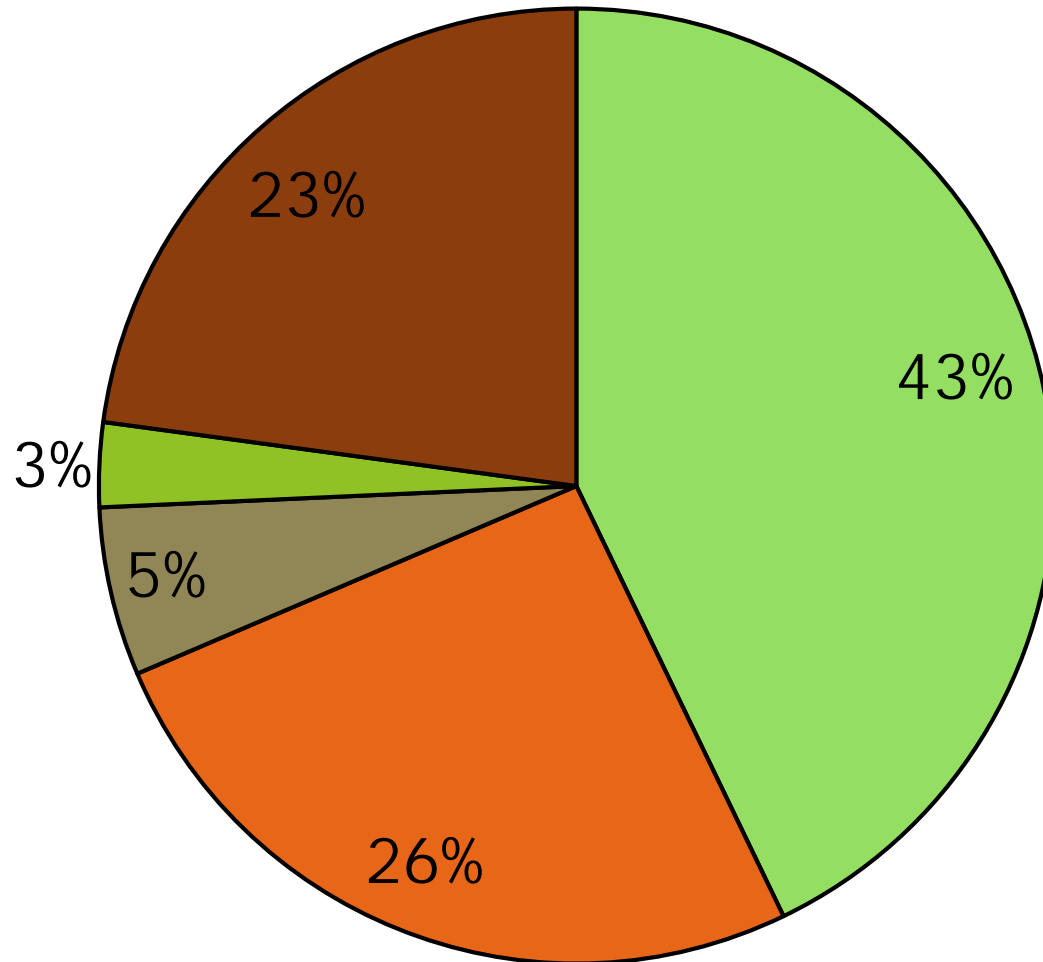
■ Workshops (Eg. Grand rounds, case studies, conferences, etc.)

■ Certification courses (Eg. PALS, ACLS, etc.)

■ Other



# Barriers to Continuing Education



- Inadequate time as a result of your work schedule
- Inadequate time as a result of your personal schedule
- Do not believe that the content covered meets your educational needs
- Believe that the content is redundant
- Other

“a lot of the cases we see are the same...ie. Bronchiolitis. Then when we have something different or a complex care child, the newer staff rely heavily on their cross shift staff”

“We had a cardiac baby that needed to be started on prostaglandins. We recognized a cardiac issue on day 7 of life. Wish we would have detected this issue sooner.”

“ Difficulties with other departments...no one wants to touch kids, therefore they are sent to peds unit quickly... Emerge gets upset when we cannot accommodate an admission right away...there is push back when we need time to set up our room.”

# Scenario Choices

- ▶ Bronchiolitis
- ▶ DKA
- ▶ Meningitis
- ▶ Seizures
- ▶ Sepsis
- ▶ Closed Head Injuries

# Pilot

- ▶ Three ED nurses
  - ▶ Two are also experienced BScN Clinical Educators
  - ▶ One with Peds floor and ED experience



B I O R I S Q U E

DÉPARTEMENTAL  
LABORATOIRE  
INS  
SAC

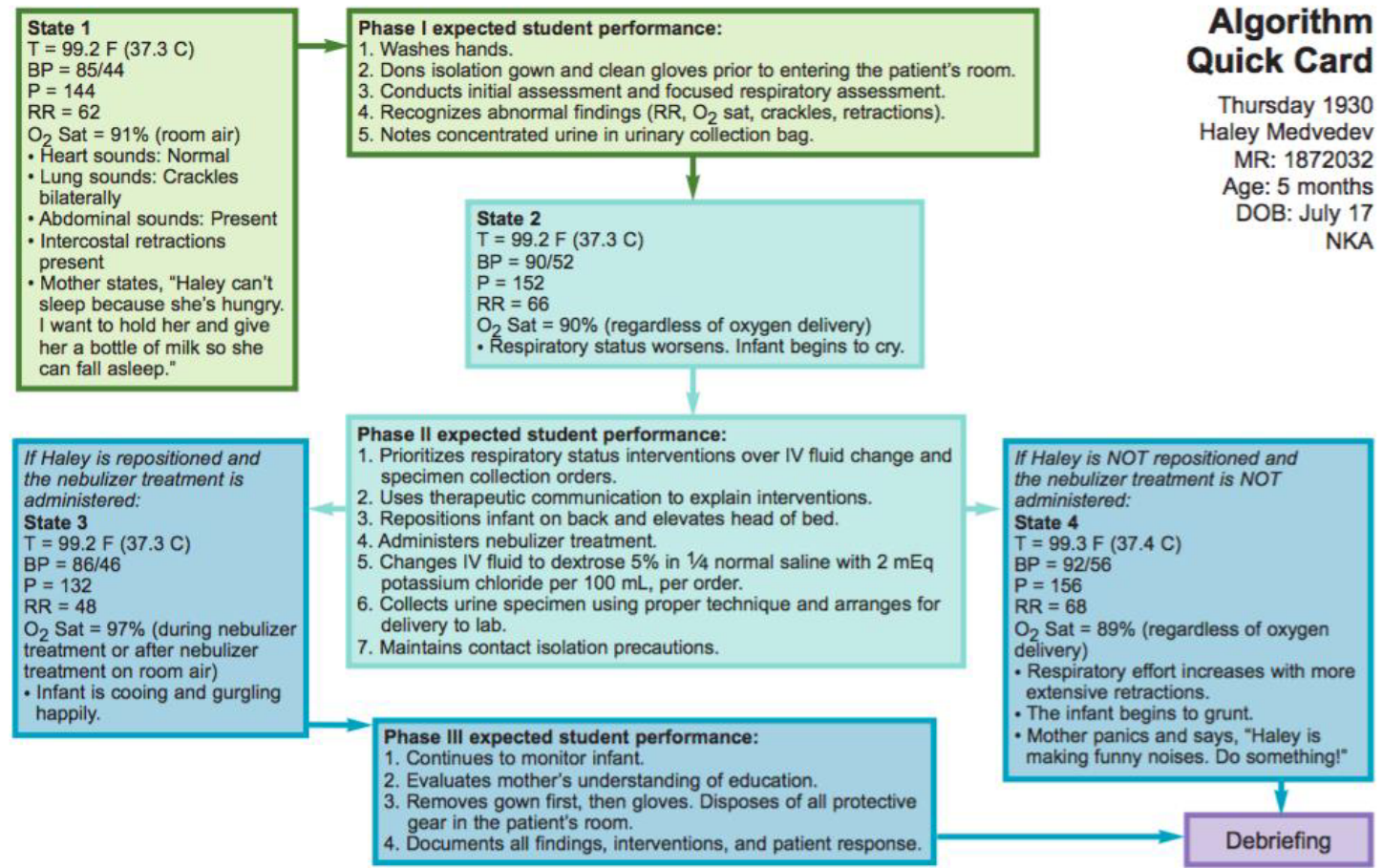
Halley











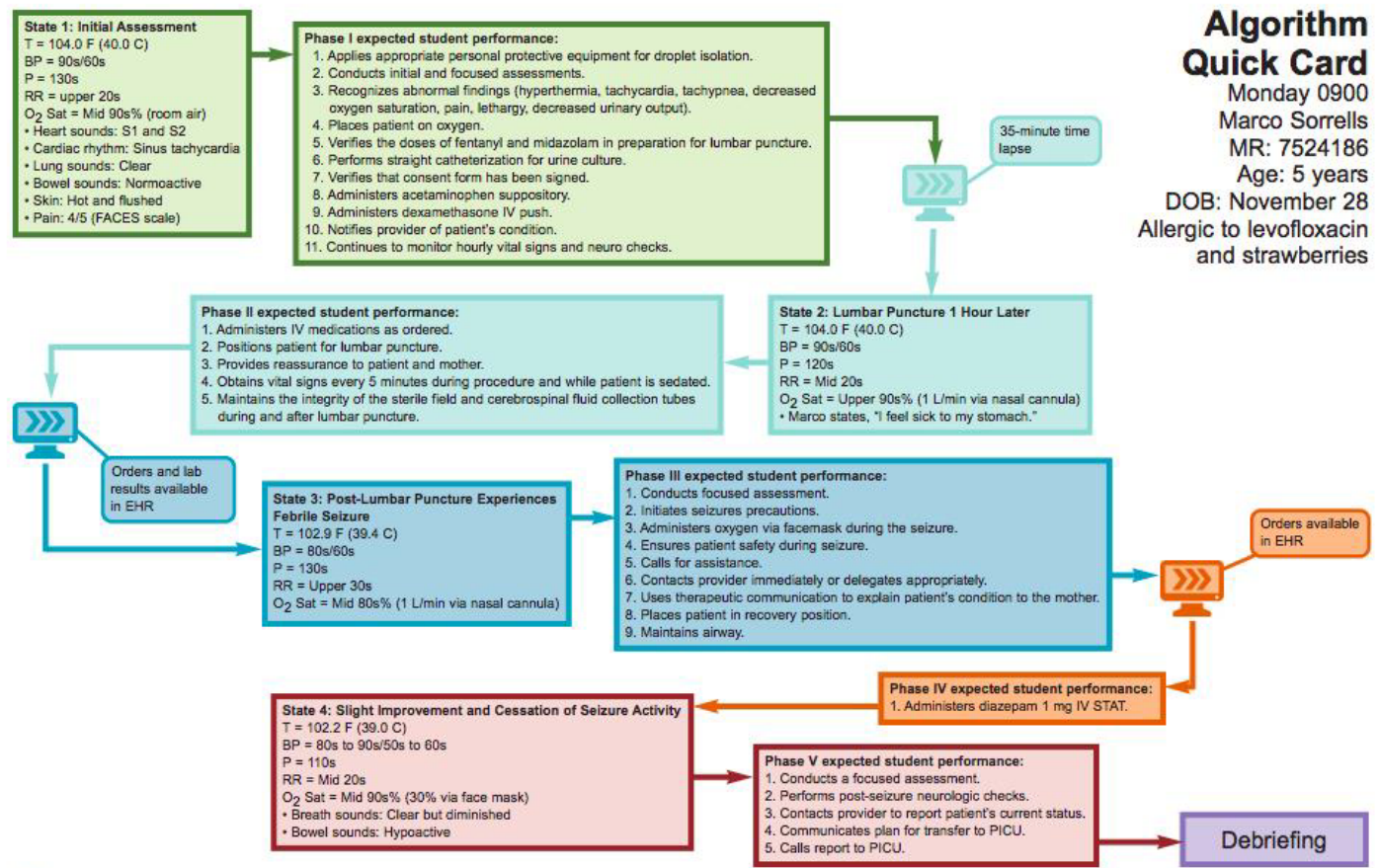
### Algorithm Quick Card

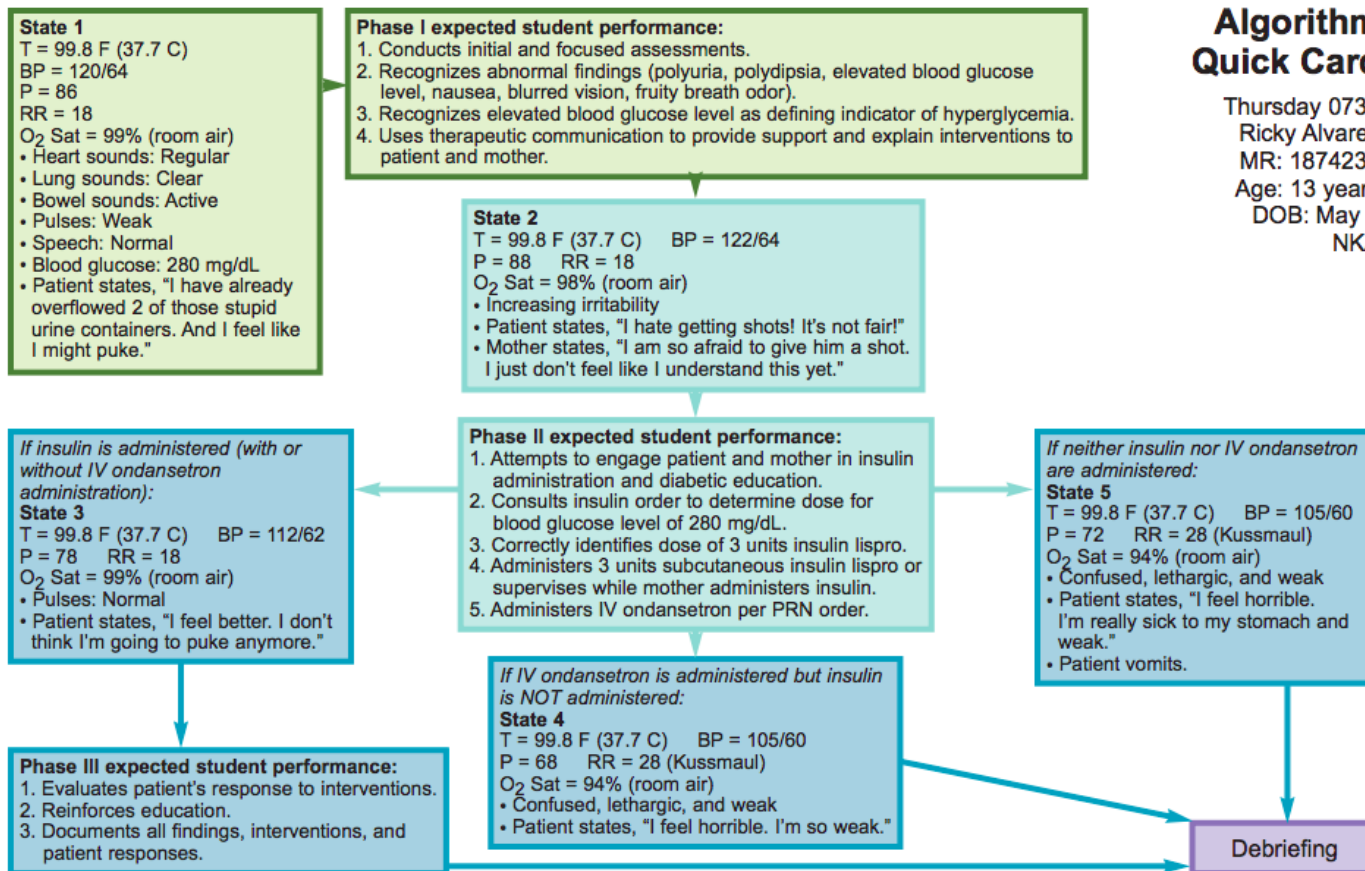
Thursday 1930  
Haley Medvedev  
MR: 1872032  
Age: 5 months  
DOB: July 17  
NKA

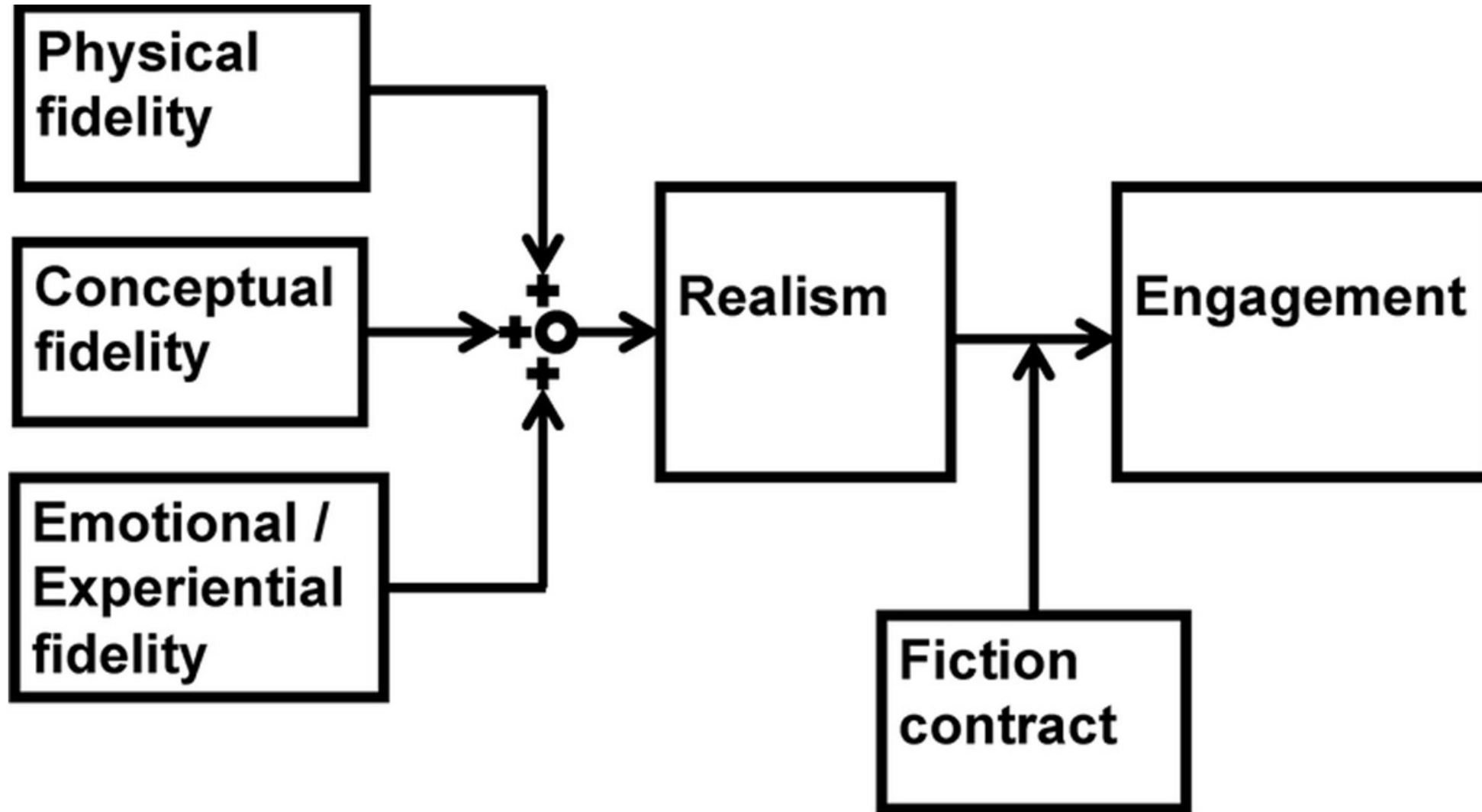




**Algorithm Quick Card**  
 Monday 0900  
 Marco Sorrells  
 MR: 7524186  
 Age: 5 years  
 DOB: November 28  
 Allergic to levofloxacin and strawberries







A model of fidelity, realism, and educational engagement in simulation.56

Rudolph, Raemer & Simon(2014)



## Paediatric Bronchiolitis Admission Order Set

PATIENT INFORMATION

Allergies: _____	SIGNATURES
<b>Admit</b>	
<input checked="" type="checkbox"/> Paediatrics	
<input checked="" type="checkbox"/> Screen for Isolation Precautions per Infection Control and Prevention guidelines	
<input checked="" type="checkbox"/> Respiratory secretion precautions	
Diagnosis: Bronchiolitis	
MRP: _____	Notified <input type="checkbox"/> Yes <input type="checkbox"/> No
Family MD: _____	Notified <input type="checkbox"/> Yes <input type="checkbox"/> No
Consult: _____	Notified <input type="checkbox"/> Yes <input type="checkbox"/> No
Allergies: <input type="checkbox"/> NKDA <input type="checkbox"/> Latex <input type="checkbox"/> Food (specify) _____	
<input type="checkbox"/> Other (specify): _____	
<input type="checkbox"/> Drugs (specify): _____	
<b>Diet</b>	
<input type="checkbox"/> DAT <input type="checkbox"/> NPO (if moderate to severe respiratory distress <b>OR</b> RR greater than 60)	
<b>Nasogastric Fluids</b> (Can be an alternate to IV fluids)	
<input type="checkbox"/> Pedialyte/Enfalyte at _____ mL/h	
<b>Activity</b>	
<input type="checkbox"/> AAT	
<input type="checkbox"/> Other: _____	
<b>Vitals/Monitoring</b>	
<input checked="" type="checkbox"/> Weight on admission _____ kg <input type="checkbox"/> Height on admission _____ cm	
<input type="checkbox"/> Weight daily	

# Emergency Room Management Guidelines for the Child with Type 1 Diabetes

## Diabetic Ketoacidosis (DKA)

### History (some or all of)

- Polyuria
- Polydipsia
- Weight loss
- Abdominal pain
- Tiredness
- Vomiting
- Confusion
- Difficulty breathing

### Clinical Signs generally include

- Deep sighing respirations – (Kussmaul breathing) with no wheeze or rhonchi
- Smell of ketones on breath
- Lethargy/drowsiness
- Dehydration – mild to severe

- Urine ketones/glucose
- Capillary glucose STAT in ER
- Venous blood – glucose, gases, electrolytes, urea, creatinine
- Other as indicated

### Confirm DKA

- Ketonuria
- Glucose >11 mmol/L
- pH <7.3
- Serum Bicarbonate <18 mmol/L
- Consult Pediatrician immediately

### Hypotension (PALS Values)

Age	Systolic BP (mm/Hg)
<1 month	< or = 60
1 month to 1 year	< or = 70
1 to 10 years	< or = 70 + (2 x age in years)
>10 years	< or = 90

### Vascular Decompensation

- (with or without coma)
- Hypotension (see box)
  - Decreased level of consciousness

### No Vascular Decompensation

Scenario Validation Checklist - Word

	(1 = not met, 2 = partially met, 3 = met)	
<b>Prebrief</b>		
Orientation provided re: lab/mannequin, ground rules, expectations/roles		
'safe container' was established		
Learning objectives clear and concise		
Prebrief contained appropriate preparation for participant		
Assigned readings enhanced learning		
<b>Scenario</b>		
Client profile gave sufficient medical record data		
Access to appropriate medications for the case		
Scenario challenged critical thinking		
Case was plausible		
Participants had access to necessary equipment, and essential props		



# Next steps



# Key References

Estabrooks CA, Rutakumwa W, O'Leary KA, Profetto-McGrath J, Milner M, Levers MJ, & Scott-Findlay S. (2005). Sources of practice knowledge among nurses. *Qualitative Health Research*, 15(4), 460-476.

Hudson, A., Ellis-Cohen, E., Davies, S., Horn, D., Dale, A., Malyon, L., ... Jauncey-Cooke, J. (2018). The value of a learning needs analysis to establish educational priorities in a new clinical workforce. *Nurse Education in Practice*, 29, 82-88. <https://doi.org/10.1016/j.nepr.2017.11.016>

Meakim, C. H., Fey, M. K., Chmil, J. V., Mariani, B., & Alinier, G. (2015). Standards of Best Practice: Simulation Standard IX: Simulation Design. *Clinical Simulation in Nursing*, 11(6), 309-315. <https://doi.org/10.1016/j.ecns.2015.03.005>

Rudolph, J. W., Raemer, D. B., & Simon, R. (2014). Establishing a Safe Container for Learning in Simulation: The Role of the Presimulation Briefing. *Simulation in Healthcare*, 9(6), 339. <https://doi.org/10.1097/SIH.0000000000000047>

Rutherford-Hemming, T., Lioce, L., & Durham, C. F. (2015). Implementing the Standards of Best Practice for Simulation. *Nurse Educator*, 40(2), 96-100. <https://doi.org/10.1097/NNE.0000000000000115>

# Simulation Scenario Resources

Canadian Pediatric Society, (n.d.-a). Bronchiolitis: Recommendations for diagnosis, monitoring and management of children one to 24 months of age Retrieved September 13, 2018, from <https://www.cps.ca/en/documents/position/bronchiolitis>

Canadian Pediatric Society, (n.d.-b). Guidelines for the management of suspected and confirmed bacterial meningitis in Canadian children older than one month of age. Retrieved September 13, 2018, from <https://www.cps.ca/en/documents/position/management-of-bacterial-meningitis>

Ontario Government (n.d). Emergency Room Management of the Child with Type 1 Diabetes. retrieved from [http://www.health.gov.on.ca/english/providers/pub/diabetes/child\\_pocketcard.pdf](http://www.health.gov.on.ca/english/providers/pub/diabetes/child_pocketcard.pdf)

Original Scenarios from Elsevier Canada Simulation Learning System