

SAFETIME:

Standardizing inpatient pediatric care with a daily rounding checklist

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Background

- Standardization reduces variability and patient harm¹⁻³
- A checklist is one approach to standardizing care
- Checklists are used in a variety of hospital settings³⁻¹¹
- Variability appreciated in the rounding process
- No current rounding checklist for the general pediatric floor




Methods

- 354 bed, free-standing tertiary care children's hospital
- A rounding checklist was developed by consensus of teaching faculty
- Scope- Inpatient status patients admitted to and discharged from a designated nursing unit on two general pediatric teaching services
- Timeline:
 - Baseline- 12 months
 - Implementation- 12 months
 - Sustainability- 6 months



SAFETIME Daily Rounding Checklist		
S Skin Assessment	Any pressure ulcers?	Yes No
	Other skin/device concerns?	Yes No
A Alarm Settings	Need for monitors?	Yes No
	Change in interval of vitals?	Yes No
F IV Fluids	Continued need for IV fluids?	Yes No
E Expected Discharge Date & Needs	Follow-up with PCP scheduled?	Yes No
	Subspecialist follow-up?	Yes No
	Home medical equipment needs?	Yes No
T Tubes & Lines	Peripheral IV/Central line?	Yes No
	Can we limit central line access?	Yes No
	Foley?	Yes No
	Drain/Wound Vac/Chest tube?	Yes No
I Isolation	Need for isolation and type?	Yes No
	IV medications can be transitioned to PO/PG?	Yes No
M Medication Conversion		
E Expected Problems Over Next 24 Hours	Items to be passed on during checkout?	



Aims

- Primary: To reduce mean length of stay (LOS) by 10% (72.2 to 65.0 hours) in 12 months
- Secondary: To reduce mean cardiorespiratory monitor (CRM) duration by 25% (61.5 to 46.1 hours) in 12 months

Methods

Measures:

- Outcome
 - LOS, CRM duration
- Process
 - Checklist utilization for each patient on daily rounds
- Balancing
 - Time to first readmission within 30 days, rapid response team activations, code blue activations



Methods

Interventions:

- Quick reference badge cards
- Formal checklist education
- In-time weekly email feedback system
- Inclusion into PHM monthly goals
- Mid-year residency program update
- Incorporation into monthly teaching service resident orientation



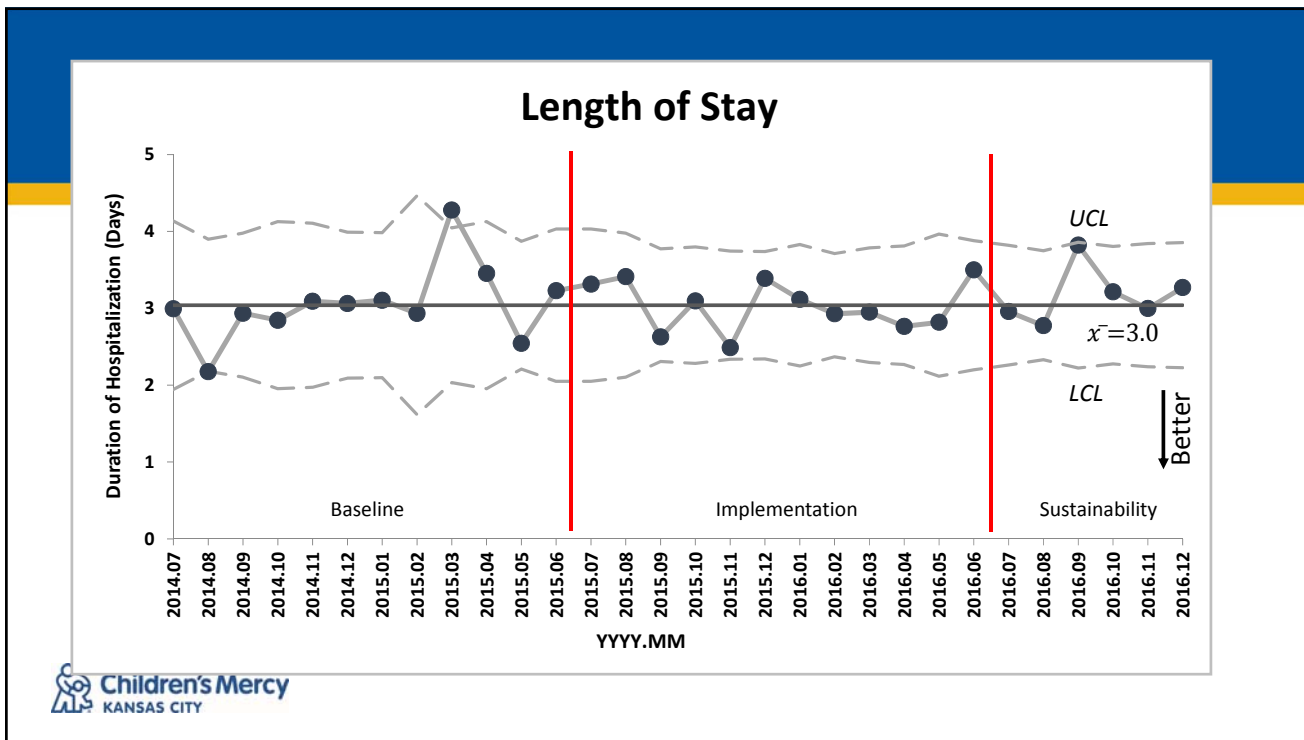
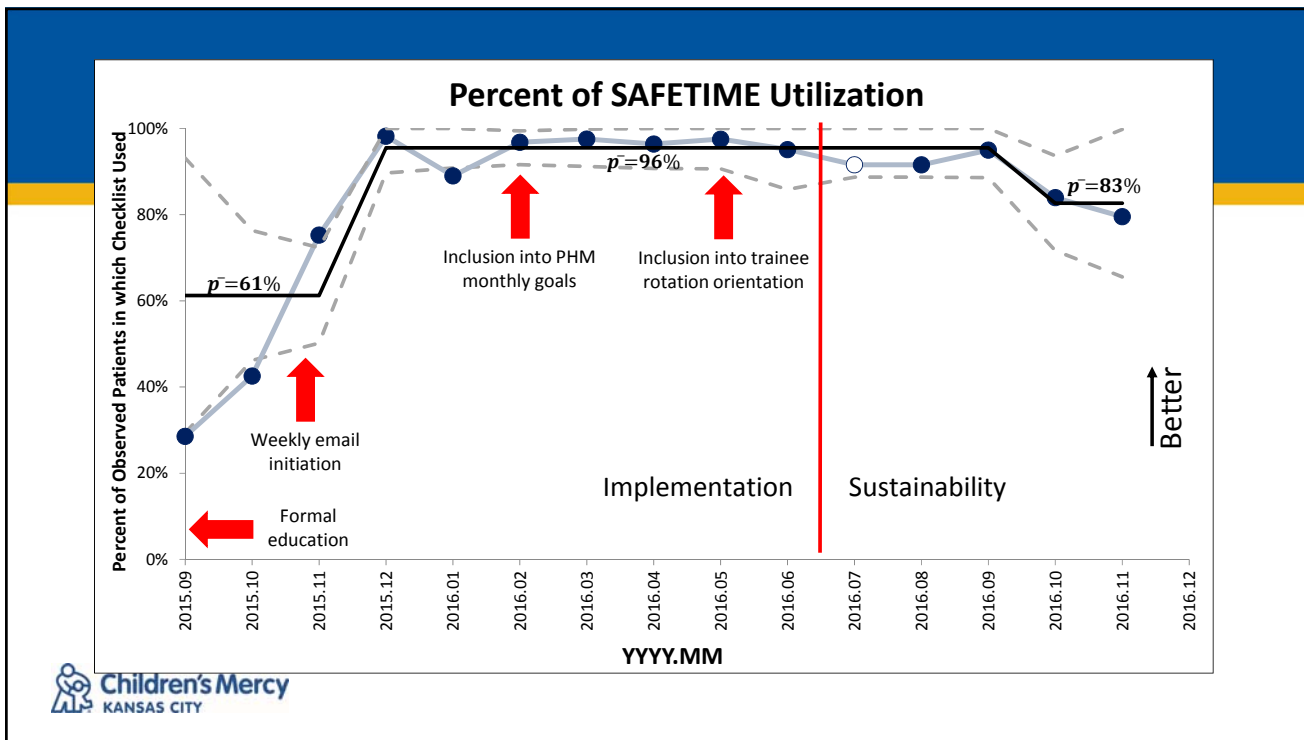
Results

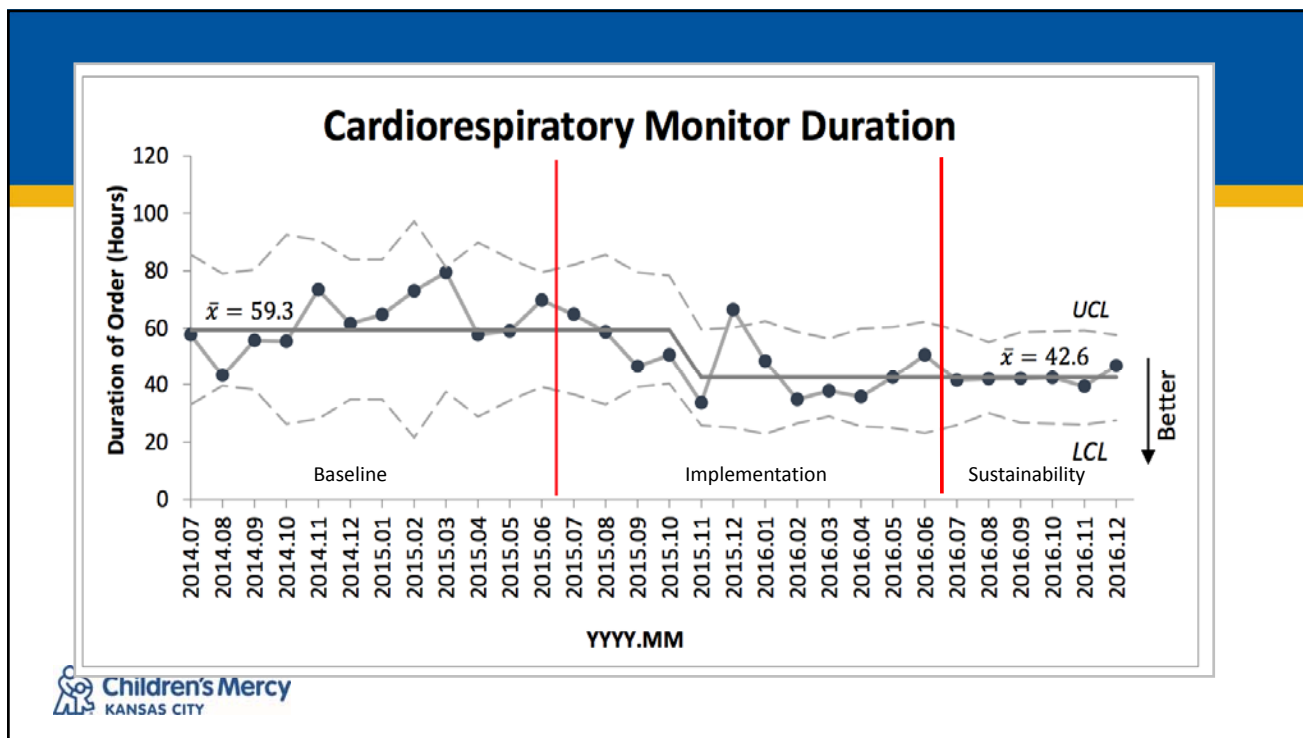
- 2707 patients included (784 baseline; 1923 implementation)
- No clinically significant differences in demographics
- Checklist utilization increased from 61% to 96%
- LOS remained unchanged at 3 days
- CRM duration decreased by 27.5% (61.5 to 44.6 hours) and was sustained
- Balancing measures were not impacted



Patient Characteristics	Pre-Implementation	Post-Implementation	P-Value
N, Discharges	784	1923	
Age in Years, Median (IQR)	2 (0,8)	2 (0,9)	0.454
Age, N(%)			0.693
0-1 years	341 (43.6)	819 (43.0)	
2-5 years	182 (23.3)	413 (21.7)	
6-12 years	153 (19.6)	390 (20.5)	
13-17 years	99 (12.7)	258 (13.5)	
18+ years	7 (0.9)	26 (1.4)	
Male, N(%)	382 (48.8)	988 (51.8)	0.159
Race, N(%)			0.358
Non-Hispanic White	435 (55.5)	1,136 (59.1)	
Non-Hispanic Black	172 (21.9)	373 (19.4)	
Hispanic	85 (10.8)	194 (10.1)	
Multiracial	50 (6.4)	106 (5.5)	
Other	42 (5.4)	114 (5.9)	
Government Insurance, N(%)	454 (58.1)	1,075 (56.4)	0.078
Any CCC, N (%)	186 (23.7)	473 (24.6)	0.631
Discharge Diagnosis, N(%)	316 (40.4)	742 (38.9)	0.376
Asthma	109 (13.9)	182 (9.5)	<0.001
Bronchiolitis	85 (10.9)	267 (14.0)	0.029
Bacterial Pneumonia	52 (6.6)	169 (8.9)	0.057
Cellulitis	63 (8.1)	120 (6.3)	0.100
Acute Urinary Tract Infection	23 (2.9)	62 (3.3)	0.675



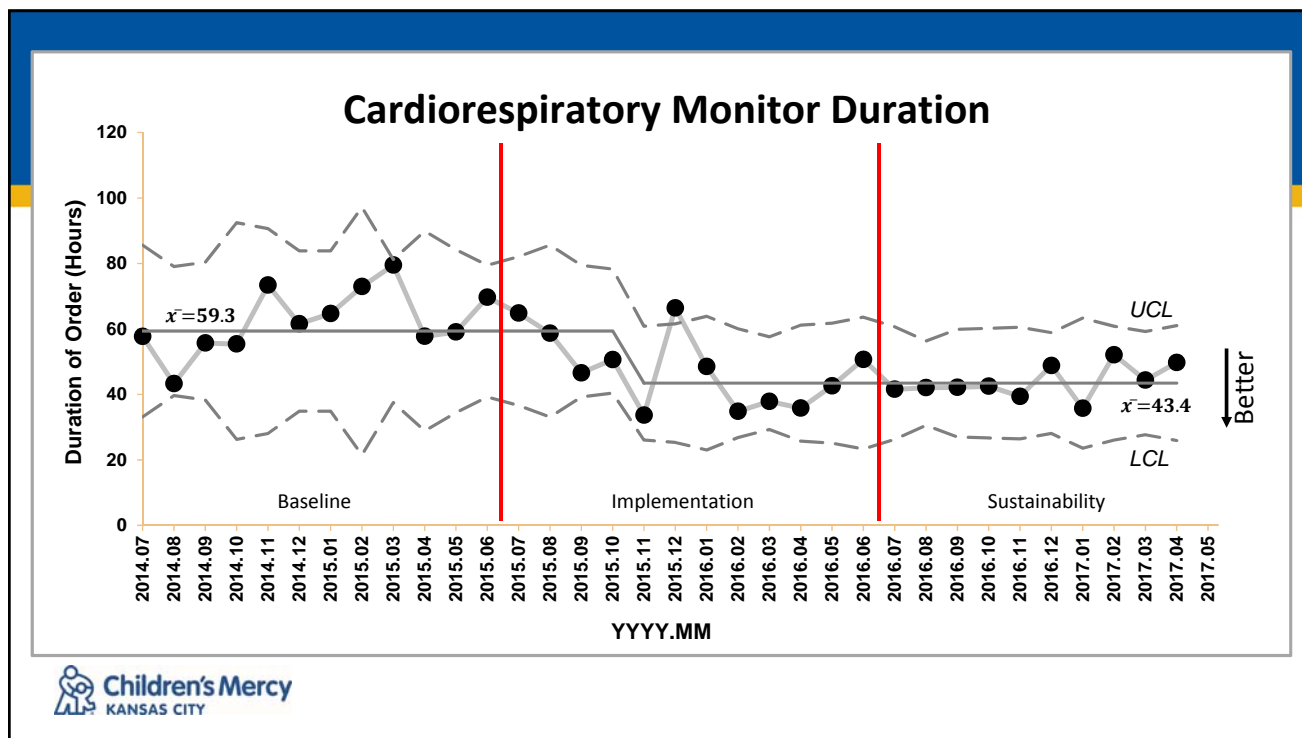




Balancing Measure	Pre-Implementation	Post-Implementation	P-Value
Rapid Response Team activations*	7.6 (3.4, 17.0)	9.4 (5.9, 14.9)	0.669
Code Blue activations, N(%)	0 (0.0)	2 (0.10)	1.000
Days to first readmission (within 30 days), N(%)	51 (6.5)	143 (7.4)	0.394

*Rate per 1,000 discharges (95% confidence interval)

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Limitations

- Single center
- Isolated to one nursing unit
- Only two general pediatric teams monitored

Discussion/Next Steps

- Reducing LOS is a complex problem
- Results align with adult data showing promise for daily review of CRM necessity
- In-time feedback is an effective means to behavioral change
- Medically complex patients may not need continuous CRM for an entire hospitalization
- Development of a hospital-wide rounding checklist



Conclusions

- Achieved sustained reduction of CRM duration in both routine and medically complex patients
- SAFETIME had no impact on LOS or our balancing measures
- Rounding checklists can serve as effective decision-making aids
- Judicious discontinuation of CRMs can be safe
 - Even in the medically complex patient



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 - Unit nursing staff
 - Unit Nurse Managers- Codi Cutburth and Lena Rodriguez



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Thank You



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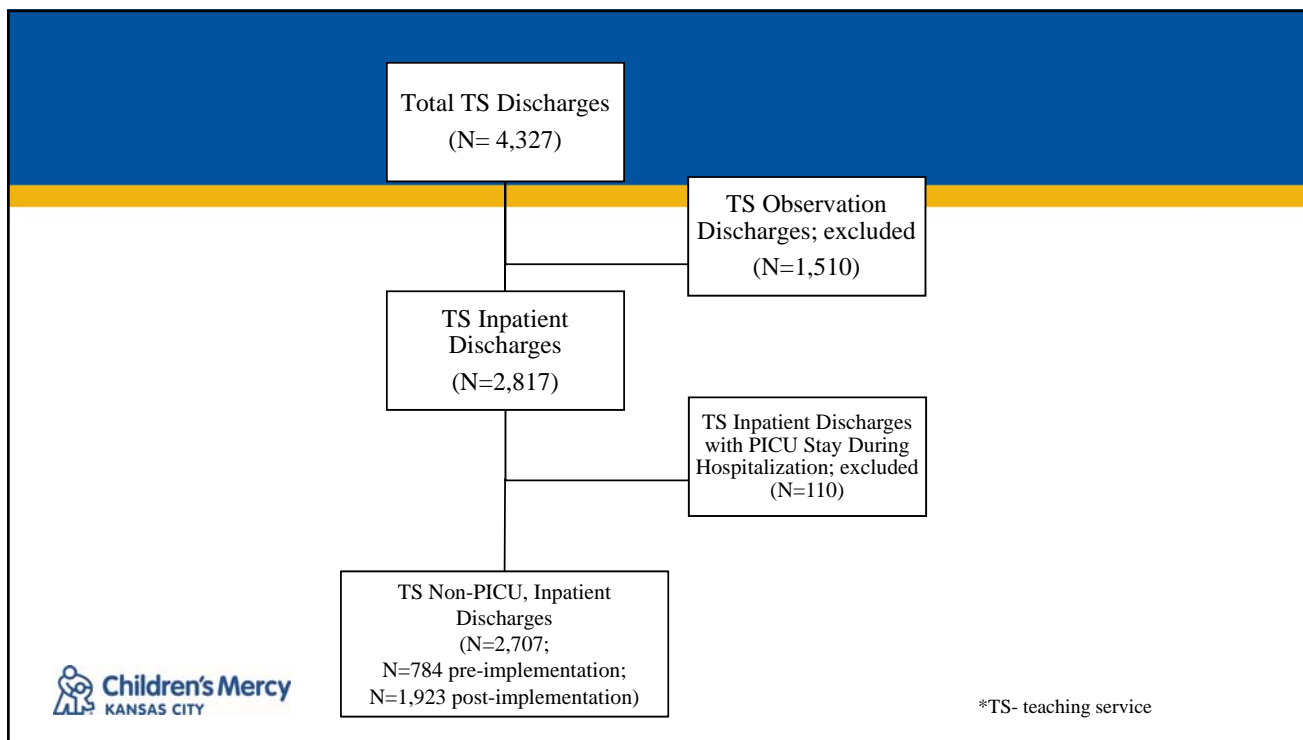
SAFETIME Daily Rounding Checklist

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	Can we limit central line access?	Yes	No
	Foley?	Yes	No
	Drain/Wound Vac/Chest tube?	Yes	No
I Isolation	Can any lines/tubes be removed?	Yes	No
	Need for isolation and type?	Yes	No
M Medication Conversion	IV medications can be transitioned to PO/PG?	Yes	No
E Expected Problems Over Next 24 Hours	Items to be passed on during checkout?		



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Duration Median (IQR)	Pre-Implementation	Post-Implementation	P-Value
Peripheral Intravenous Catheter	36.88 (22.00,53.70)	34.92 (19.58,53.92)	0.028
Intravenous Medication	40.84 (23.78,58.72)	41.47 (23.33,57.37)	0.754
Continuous Intravenous Fluid	30.28 (18.17,50.15)	32.13 (17.28,52.00)	0.845

Utilization Rate per Discharge (95% CI)	Pre-Implementation	Post-Implementation	P-Value
Cardiorespiratory Monitor	0.48 (0.43, 0.53)	0.49 (0.46,0.52)	0.742
Peripheral Intravenous Catheter	1.17 (1.10,1.25)	1.22 (1.18,1.28)	0.260
Intravenous Medication	0.77 (0.71,0.83)	0.77 (0.73,0.81)	0.982
Continuous Intravenous Fluid	0.73 (0.68, 0.80)	0.80 (0.76,0.84)	0.096

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SAFETME Daily Rounding HAC Checklist		
S Skin Assessment	At risk for pressure ulcer?	Yes No
	Device-related skin concerns?	Yes No
A Alarm Settings	Need for monitors?	Yes No
	Change in interval of vitals?	Yes No
F Falls	Is the patient at risk for falls?	Yes No
E Embolism	Does the patient meet DVT prophylaxis criteria?	Yes No
T Tubes & Lines	Peripheral IV/Central line?	Yes No
	Is it necessary? If 'YES,' why?	Yes No
	Is it functioning well?	Yes No
	Is a urinary catheter present?	Yes No
	Can the urinary catheter be removed?	Yes No
M Medication Conversion	Drain/Wound <u>Vac</u> /Chest tube?	Yes No
E Expected Problems Over Next 24 Hours	IV medications can be transitioned to PO/PG?	Yes No
	Contingency plan for checkout?	

