



Systemness Leads to Success

Clinical Pathways on a
Large Scale



NEMOURS
CHILDREN'S HEALTH

Disclosure

- No financial disclosures
- No conflict of interest

Following this session, learners will be able to:

- **Assess** opportunities to implement a clinical standardization initiative across their organization.
- **Engage** multidisciplinary teams in the development, implementation, and sustainment of clinical pathways.
- **Apply** established quality improvement frameworks in a clinical setting to enhance patient care.



NEMOURS
CHILDREN'S HEALTH

Speaker Introductions

Kamal Chavda

MB; BS, MD; FAAP

**Medical Director, Division of
Emergency Medicine**

Arianna Phillips

DNP, MSN, RN, CPNP-PC

**Director, Clinical Pathways
Operations**

2 hospitals across 2 states

- Orlando, FL
- Wilmington, DE

Key partnerships with:

- Wolfson Children's Hospital, Jacksonville, FL
- Studer Family Children's Hospital, Pensacola, FL

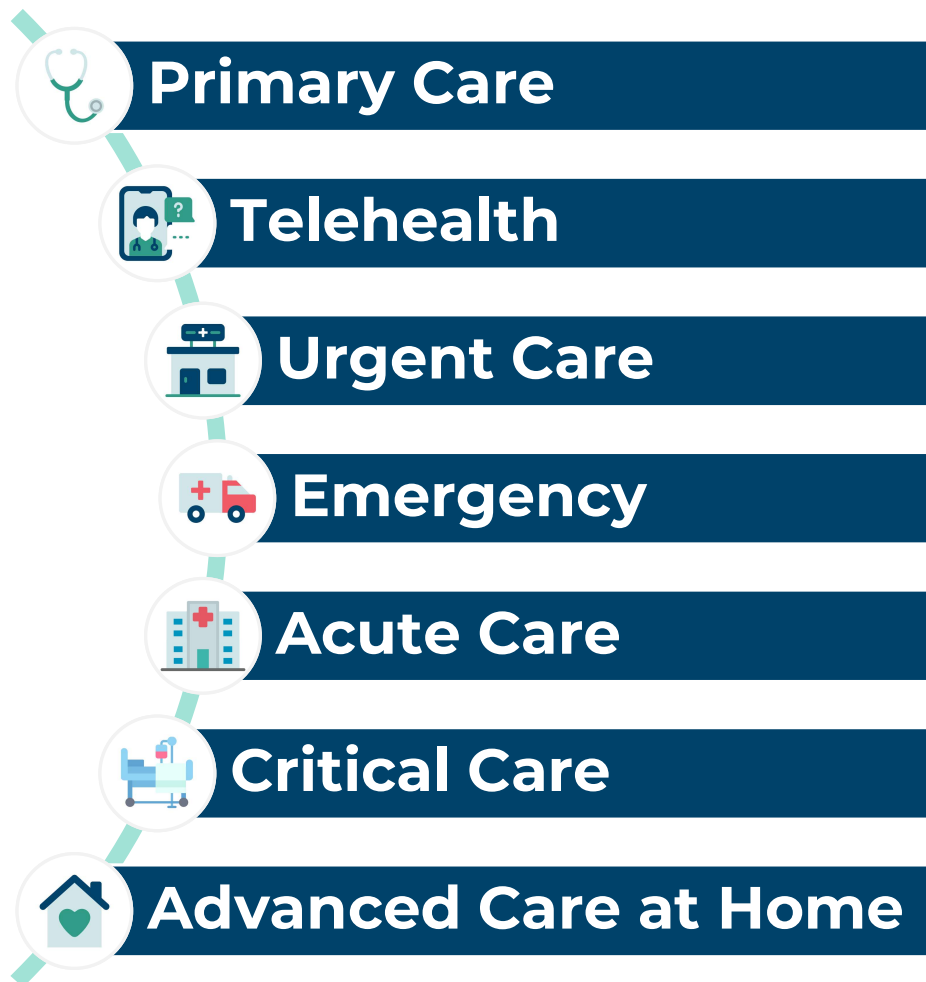
70+ locations across 6 states

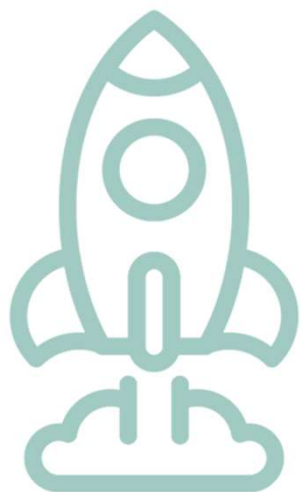
10,400+ associates

15 years of Continuous Improvement foundation



Continuum of Care

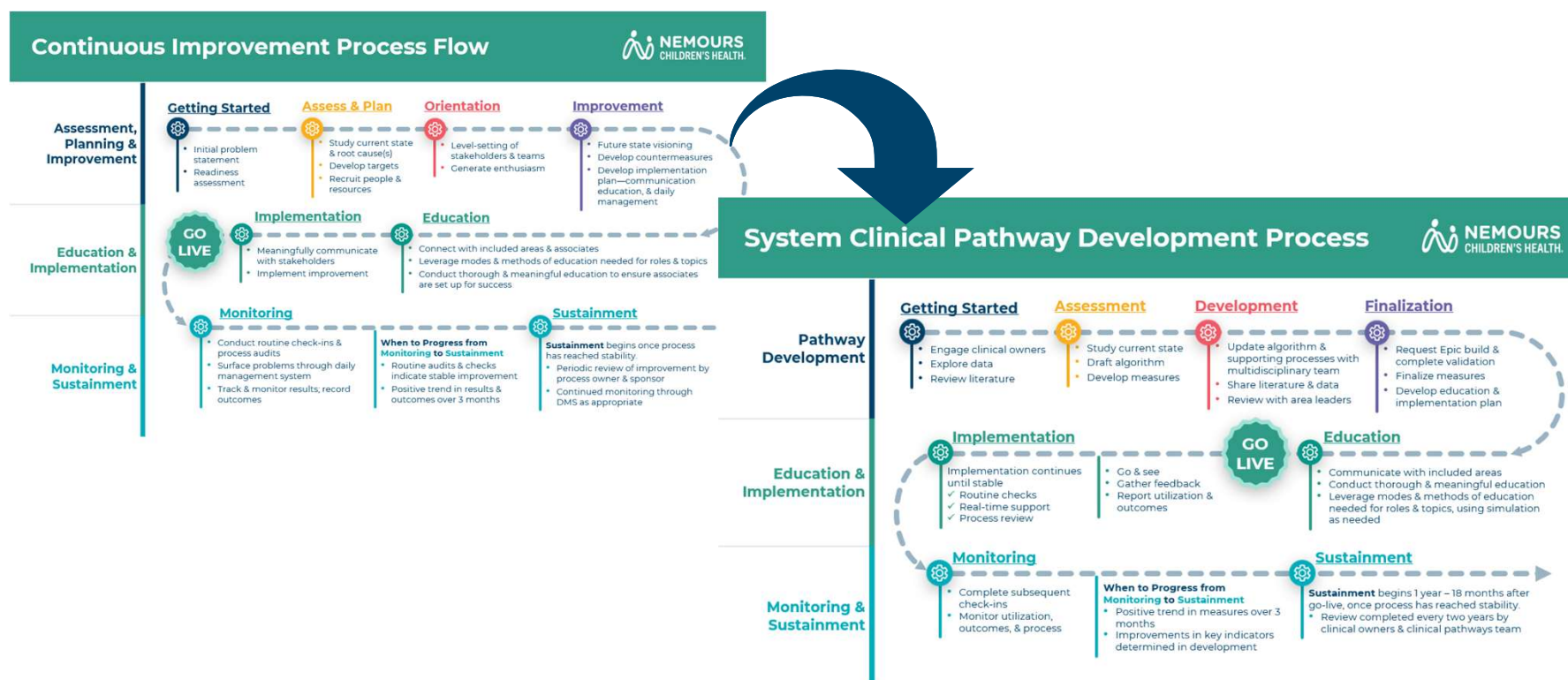




2022:

A **dedicated, system-wide Clinical Pathways department** is established at Nemours Children's Health.

The Framework Was Already There



System Clinical Pathway Development Process



Pathway Development

Getting Started



- Engage clinical owners
- Explore data
- Review literature



System Clinical Pathway Development Process



Pathway Development

Getting Started

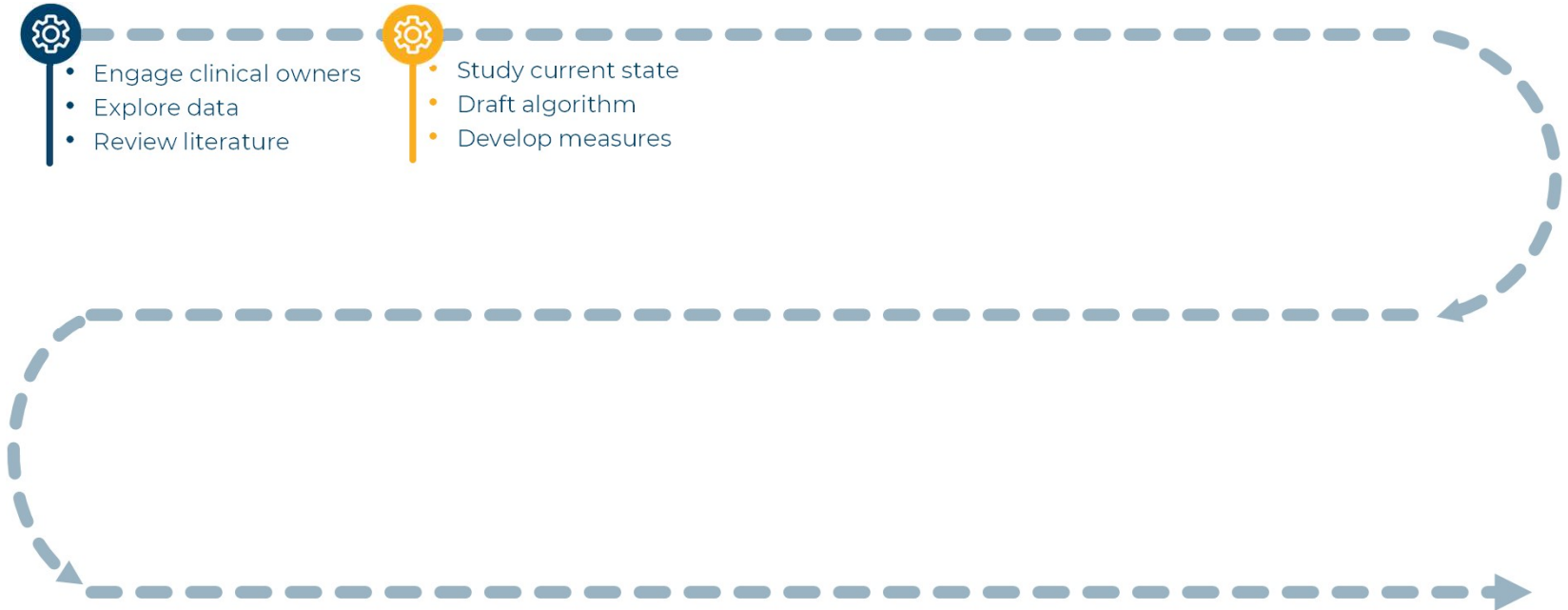


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- Explore data
- Review literature

Assessment



- Study current state
- Draft algorithm
- Develop measures



System Clinical Pathway Development Process



Pathway Development

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Assessment

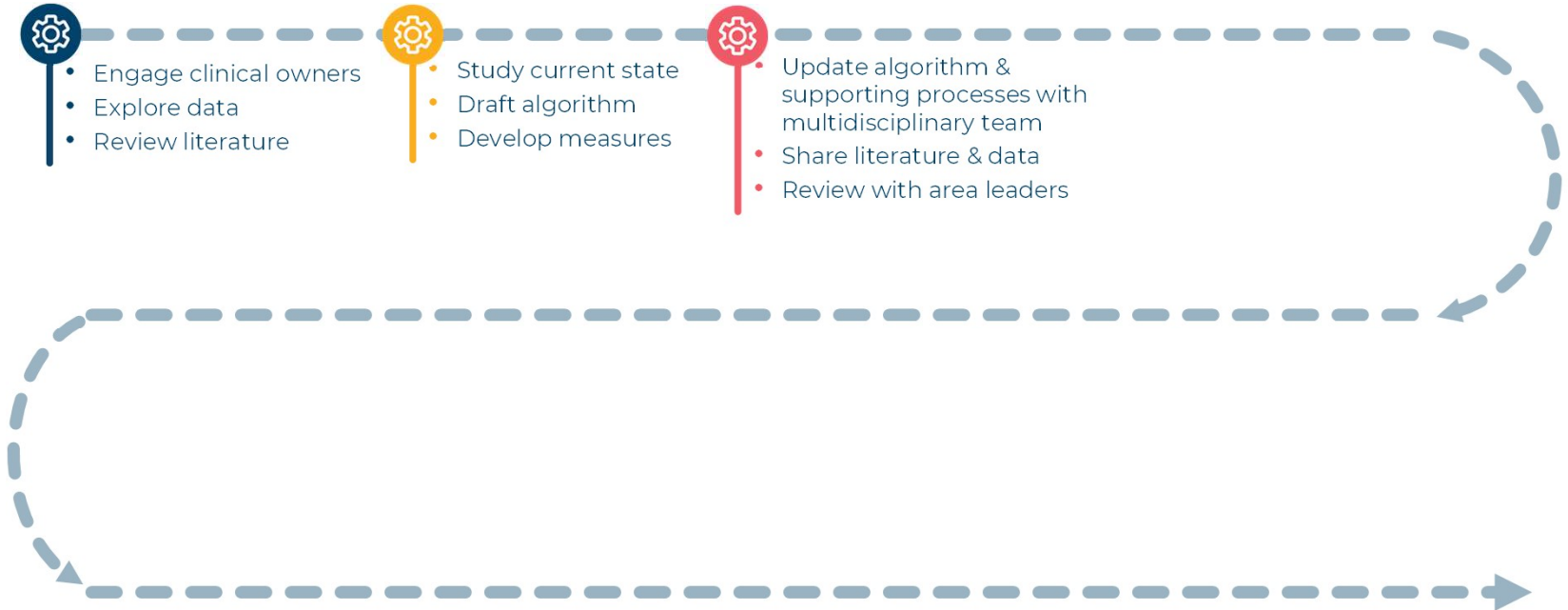


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Development



- Update algorithm & supporting processes with multidisciplinary team
- Share literature & data
- Review with area leaders



System Clinical Pathway Development Process



Pathway Development

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Development

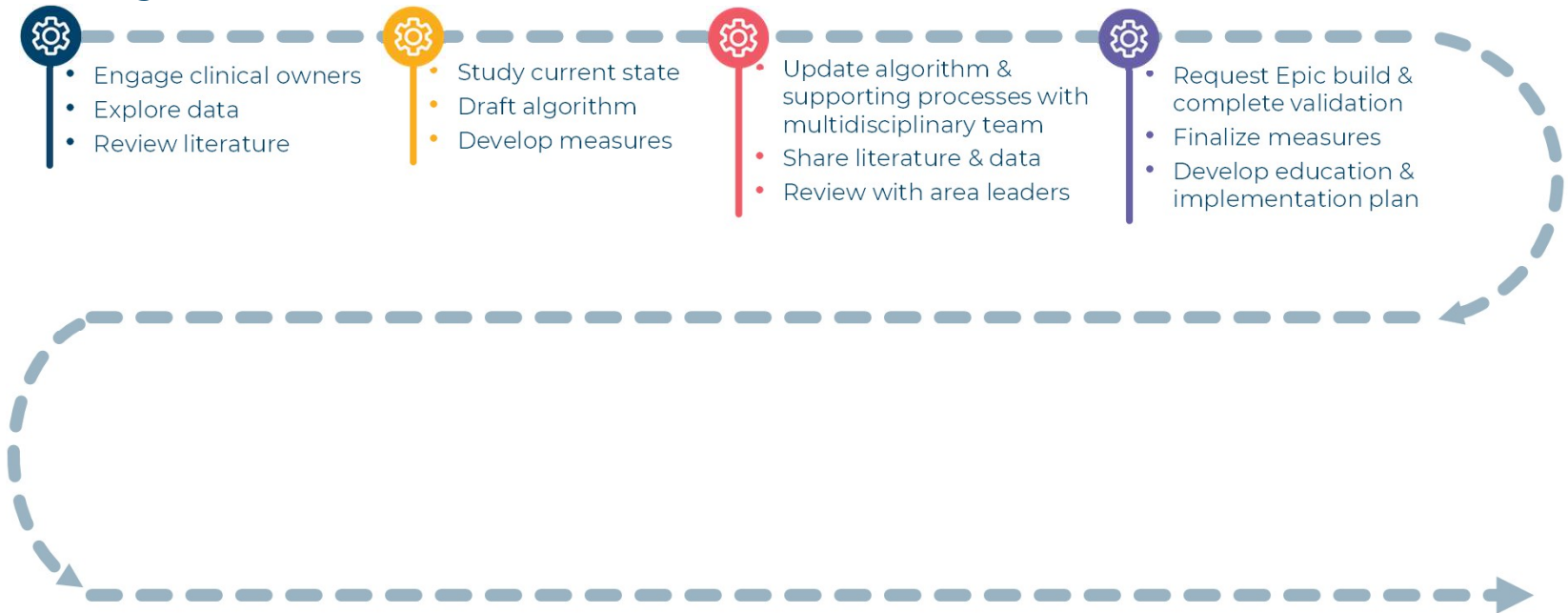


- Update algorithm & supporting processes with multidisciplinary team
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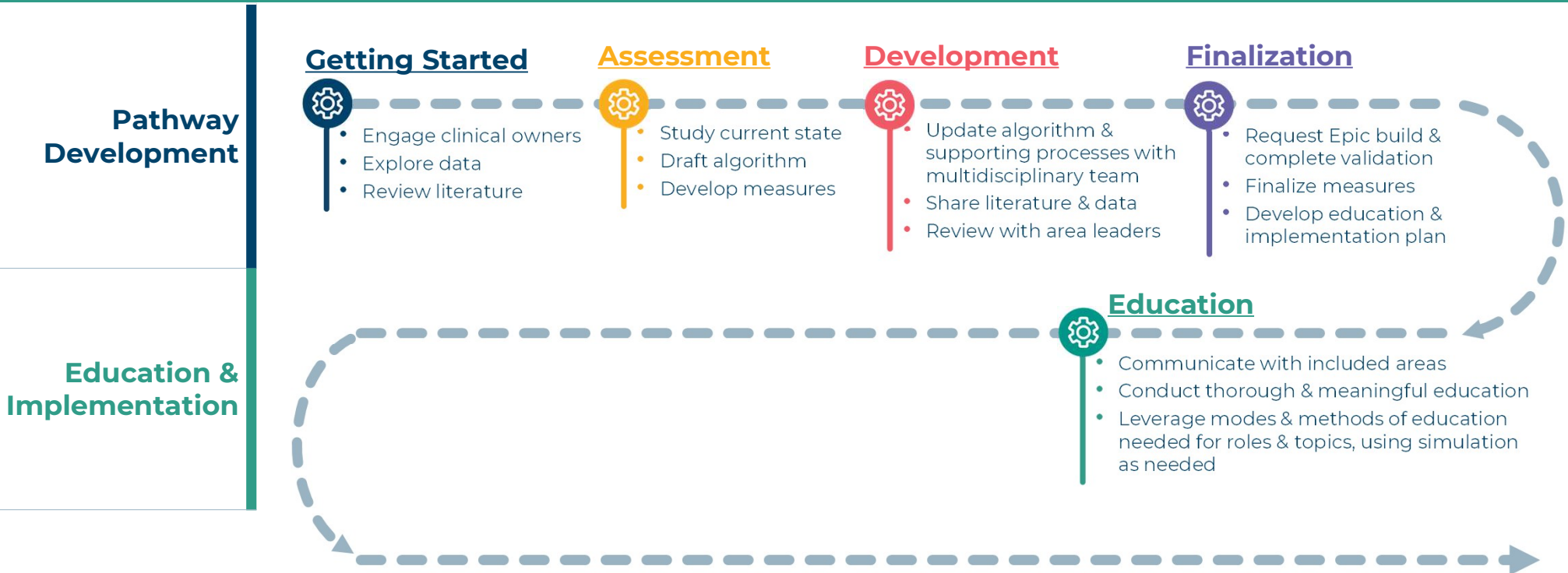
Finalization



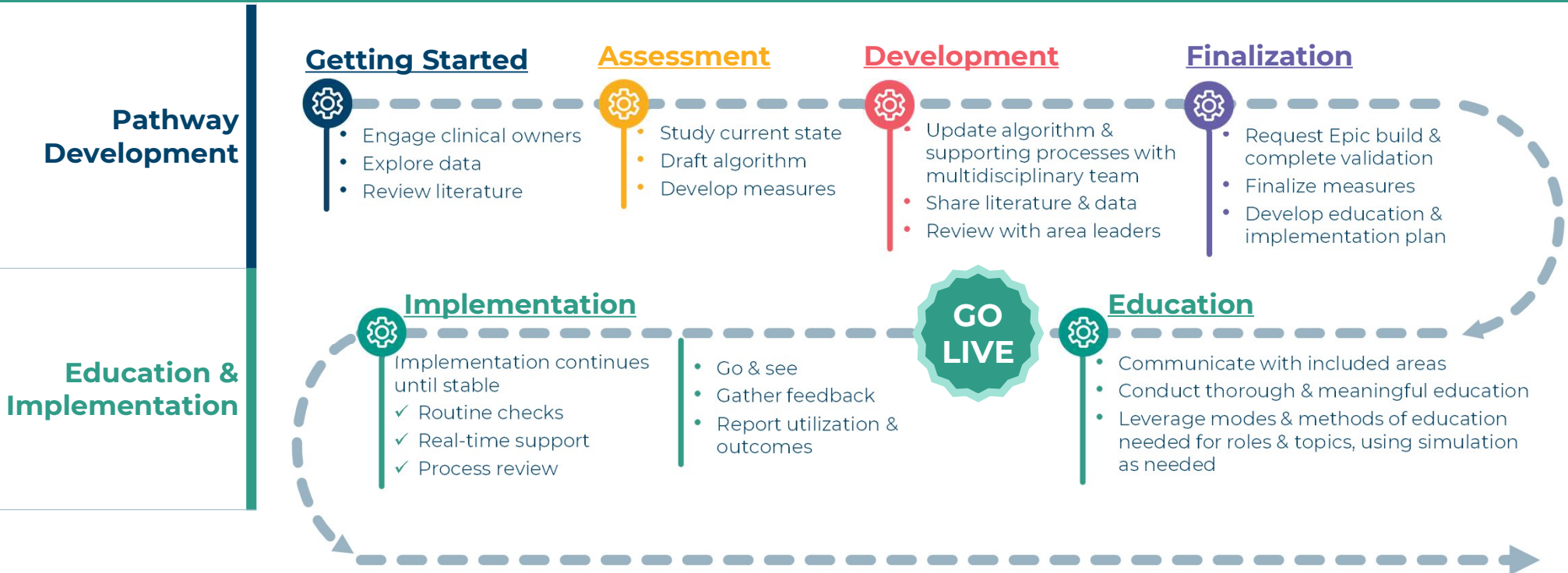
- Request Epic build & complete validation
- Finalize measures
- Develop education & implementation plan



System Clinical Pathway Development Process



System Clinical Pathway Development Process



System Clinical Pathway Development Process



System Clinical Pathway Development Process



The Five Rs of

Sustainment

Rounding

Review

Reflect (& Evaluate)

Refine

Reconnect

Clinical Pathways
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Gastroenteritis

CLINICAL PATHWAY UPDATE | October 2025

A comprehensive review of the **Gastroenteritis Clinical Pathway**, originally launched in November 2022, has been completed to ensure alignment with current evidence, clinical practices, and published literature.

Reminders

Medication:
Administer Zofran **within 60 minutes** of patient arrival to ED care.

Document the Clinical Dehydration Scale (CDS):
Documentation of the CDS is essential for accurately assessing severity and guiding treatment decisions.

Oral Rehydration Therapy (ORT):
For appropriate patients based on the established volume guidelines.

Fluid Holiday:
No fluid holiday every 4hrs when meets criteria (e.g. x 2hrs, well appearing, awake); reserve IV for severe dehydration only.

Antibiotics and Oral Rehydration Remain the Cornerstone of Treatment:
Evidence does not support the routine use of Antibiotics, or Stool Cultures in the management of Gastroenteritis.

Clinical Pathways
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Bronchiolitis

CLINICAL PATHWAY UPDATE | October 2025

A comprehensive review of the **Bronchiolitis Clinical Pathway**, originally launched in October 2022, has been completed to ensure its alignment with current evidence, clinical practices, and published literature.

Reminders

Respiratory Viral Panels (RVPs):
Routine RVP ordering **NOT recommended** for patients with Bronchiolitis.
(Oppenlander KE et al., Am Fam Physician, 2023; Dalziel SR et al., Lancet, 2022).

Document the Respiratory Score:
Consistent and timely documentation of the Respiratory Score is essential.
Emergency Department: Document **initial score, suction, then re-score after 30 minutes**.
Acute Care: Document **every 4hrs or as needed with clinical change**.

High-Flow Nasal Cannula (HFNC):
Recommended only in **Severe** Bronchiolitis, with a **Respiratory Score ≥ 9** .

High Flow Holiday:
Consider High Flow Holiday after **≥ 4 hours on HFNC** and when the **Respiratory Score is < 9** and **SpO₂ $\geq 90\%$** .

Supportive Care Remains the Cornerstone of Treatment:
Current evidence does not support the routine use of **Bronchodilators, Steroids, or Chest X-rays** in the management of bronchiolitis.

Standard Roles & Responsibilities

“The Secret Sauce”



**Physician
Pathway
Ownership**

**Subject-Matter Experts
Multidisciplinary
Team Support**



**Clinical Pathways
Department
Facilitation,
Education & Data**

When we think about
clinical pathways...

An algorithm is
just one piece.



**Pathway
Algorithm**

**Metrics & Data
Monitoring**

**Electronic Medical
Record (EMR)
Integration**

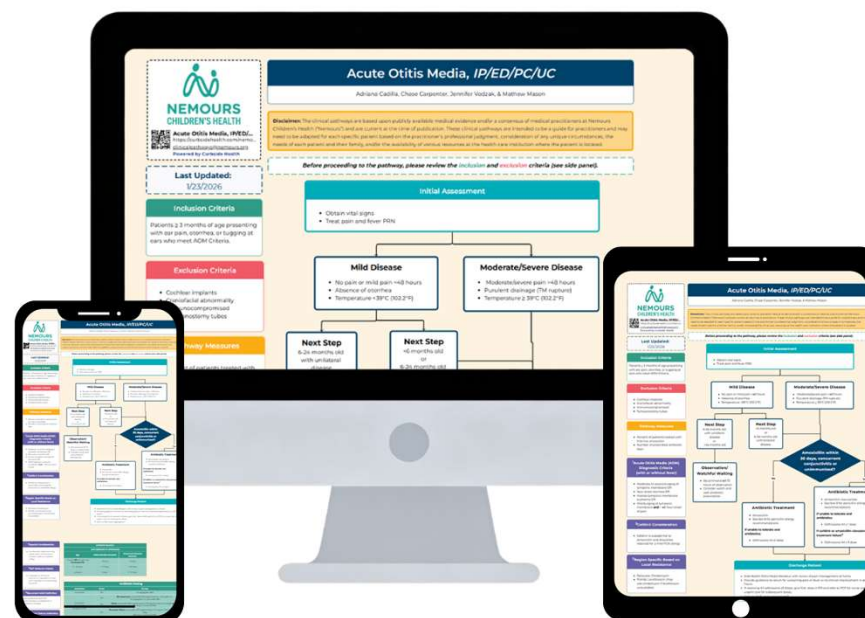
**Unit-Specific
Process Changes**

Measure of Success

*Improve outcomes as measured by **80% of patients receiving care through established clinical pathways** (**25** common diagnoses) by **2027**.*

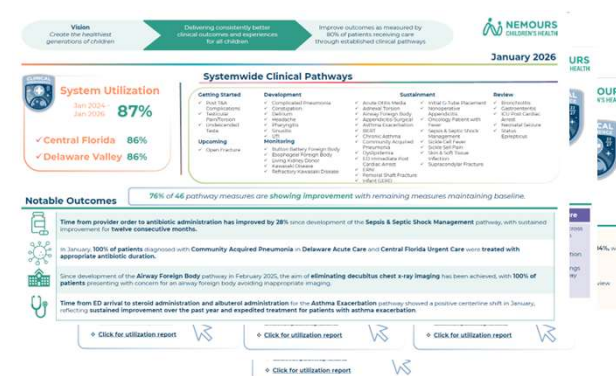
Algorithm

- **Evidence-based** decisioning tool
- **Centralized** location
- **Standard across system**, adapted across care settings



Metrics & Data Monitoring

- **Data scorecards** distributed monthly
- Accessible to **all associates**
- Captures **utilization & pathway-specific measures**, such as:
 - *Length of stay / visit*
 - *Antibiotic duration*
 - *Appropriate first-line medication use*
 - *Returns / Readmissions*
 - *Time from arrival to medication administration*



Monthly Metrics

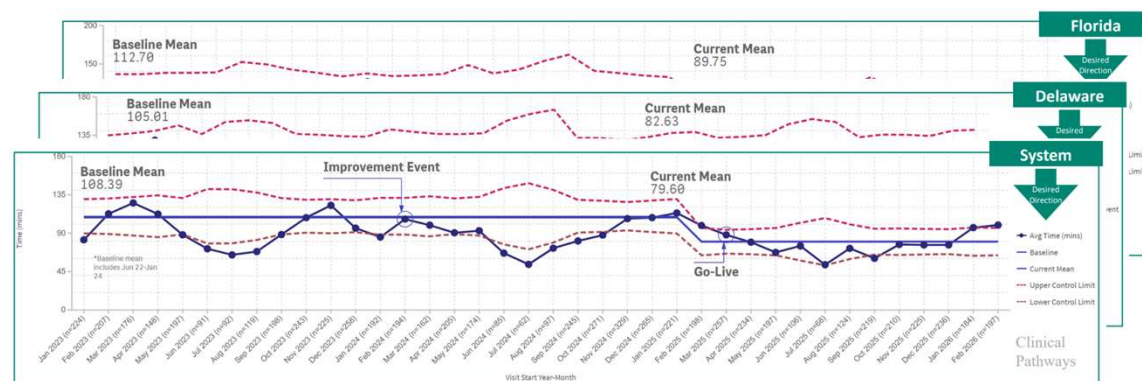
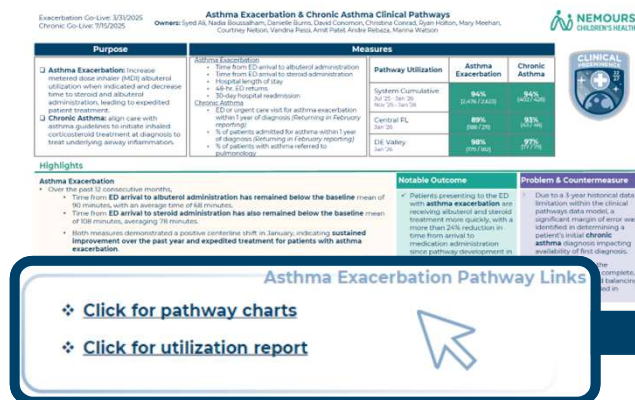
Wins & Highlights

Notable Outcomes

Problems & Countermeasures

Links to Pathway Dashboards

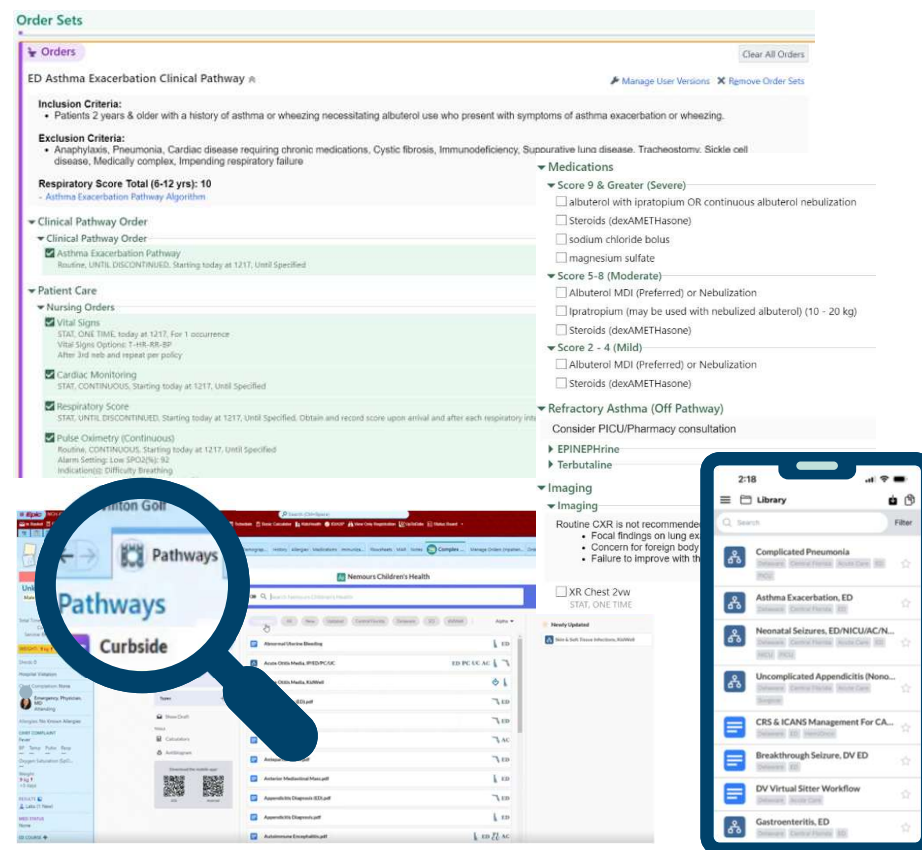
Metrics & Data Monitoring



- Visibility of control charts across system
- System-wide & region-specific breakdowns

EMR Integration

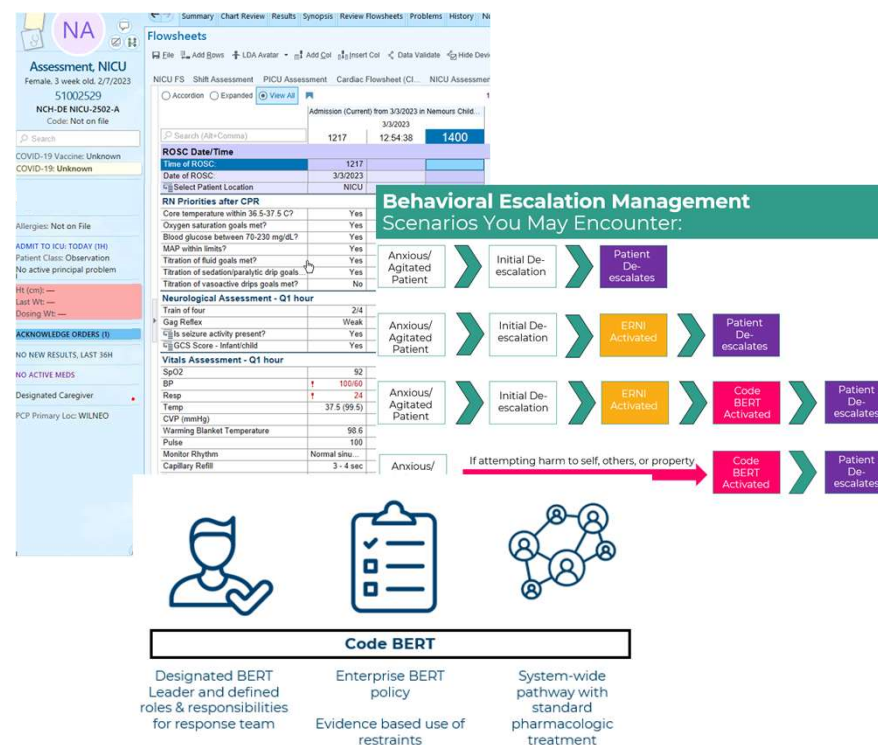
- **Epic builds & order sets** to promote utilization
- Applicable **pathway suggestions & integrated links**
- Optimized for **mobile app**



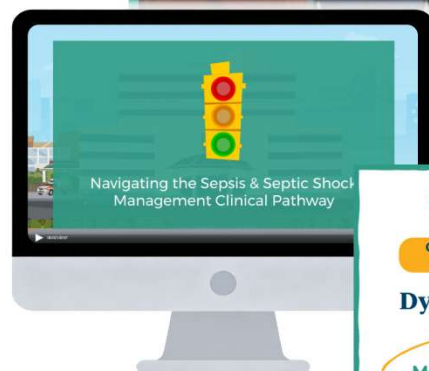
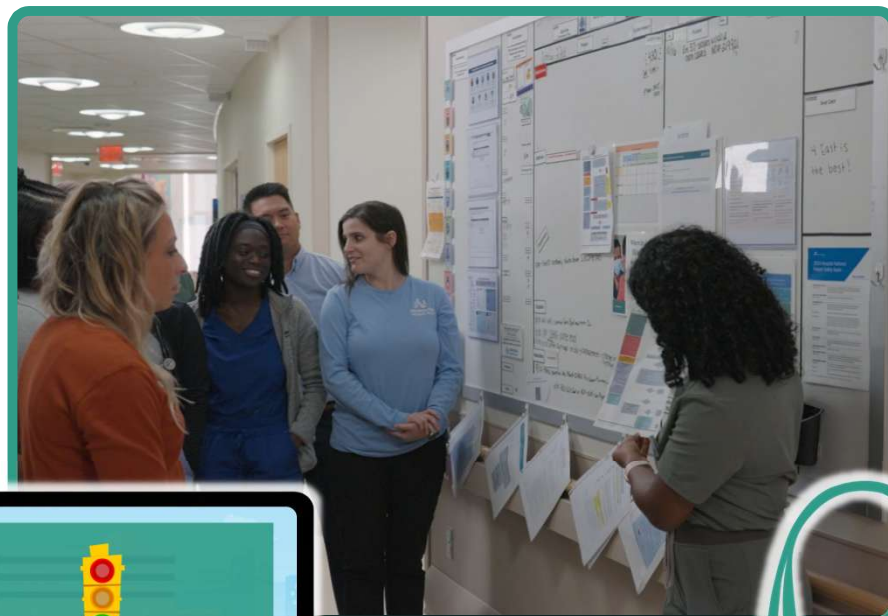
Unit-Specific Process Changes

- Processes established to **support high utilization**, such as:

- Decision trees
- Checklists
- Protocols



Education is Key





Clinical Pathway
COMING SOON

Dyslipidemia

GO LIVE
March 31, 2025

Areas Engaged:
Primary Care

Education begins in March.
EDs

Providers
In-person & virtual trainings

Epic Enhancements
Metric Monitoring

Acute Care/ED Albuterol Acute Treatment			
Weight	Albuterol MDI	Albuterol Nebulized	Albuterol Continuous
< 10 kg	4 Inhalations	2.5 mg	5 mg/hr.
10-20 kg	10-8 Inhalations	5 mg	10 mg/hr.
> 20 kg	8 Inhalations		15 mg/hr.
Albuterol Discharge (Low Dose)			
Weight	Albuterol MDI	Albuterol Nebulized	See the back of "Budge Buddy" for the Phase Advancement Tool.
< 10 kg	3 Inhalations	2.5 mg	
10-20 kg	4 Inhalations		
> 20 kg			

Family Education

System Clinical Pathways ensure families **know what to expect & empower them to take an active role** in their child's care.

Family input is gathered through:

- ✓ Family Advisory Council
- ✓ In-Person Rounding



April 2025: 25th System Clinical Pathway Launched

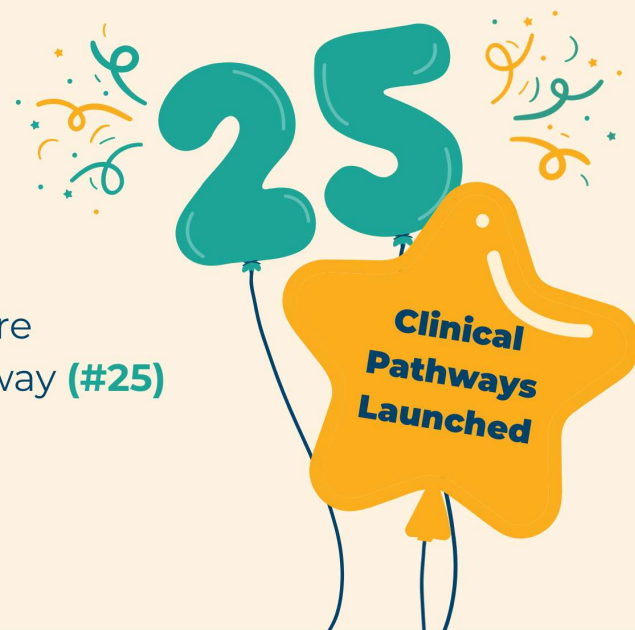
5-year goal **achieved** in
2 years & 4 months

Above 80%
utilization maintained
since January 2024
(26 months)

April 29th, 2025

Go-Live:

Femoral Shaft Fracture
System Clinical Pathway (#25)

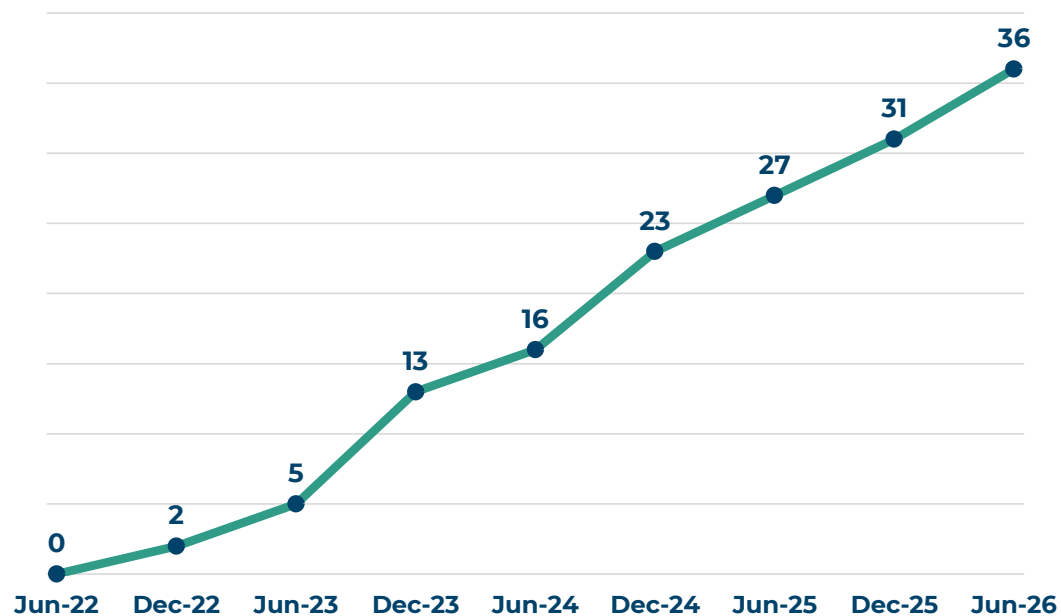


Today

36 System
Clinical
Pathways

87% System-Wide
Utilization

System Clinical Pathway Growth Over Time

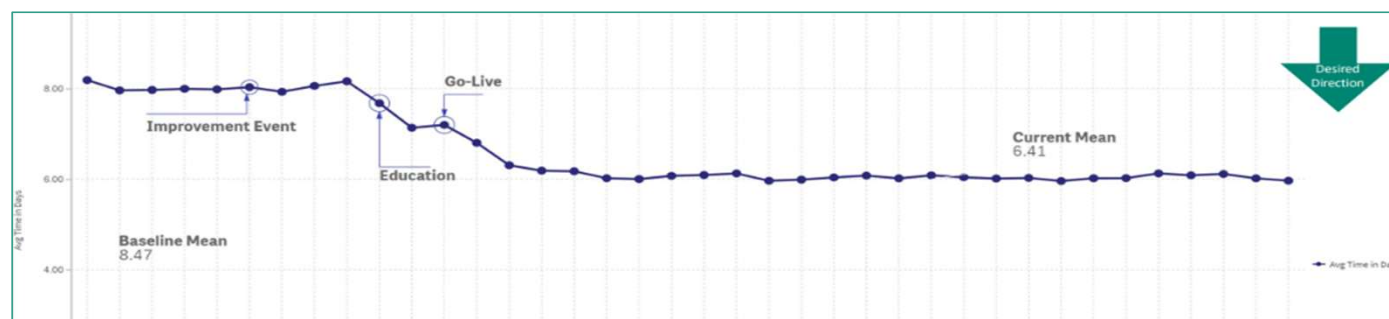


Notable Outcomes

Antimicrobial Stewardship Outcomes

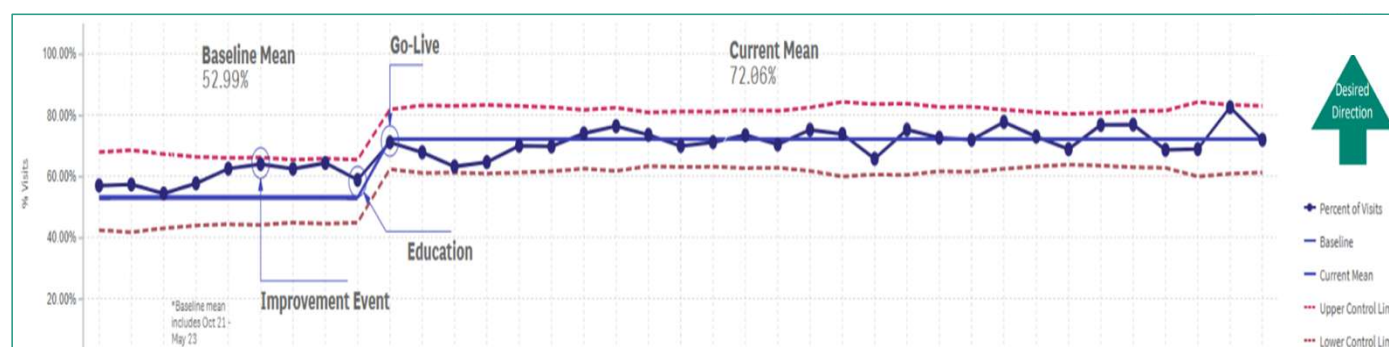
Acute Otitis Media (Go-Live: December 2023)

Antibiotic duration decreased by 2.06 DAYS (8.47 → 6.41)

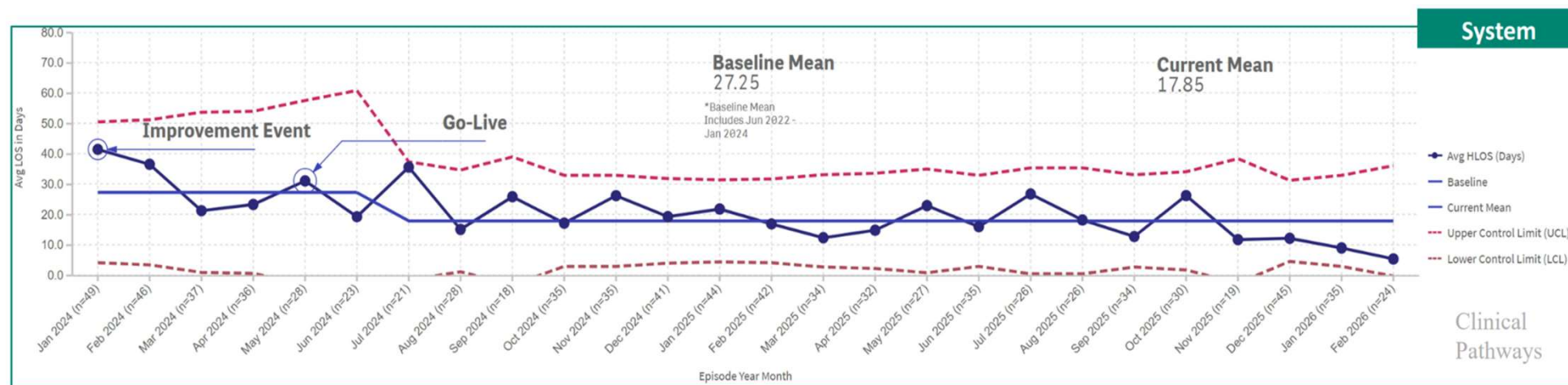


Skin & Soft Tissue Infection (Go-Live: October 2023)

36% INCREASE in patients treated with first-line cephalexin (53% → 73%)



Sepsis & Septic Shock (Go-Live: May 2024)



Hospital length-of-stay **decreased by 9.4 DAYS** (27.25 → 17.85)
with **decreased mortality rate** (7.74% → 6.49%)

Lessons Learned: “More Isn’t Always Better”

Then:

**8-10 Measures
per Pathway**

Complex scorecards

Difficult to scale as more
pathways are added

Doesn’t tell the story of
pathway’s overall impact

Now:

**2-3 Meaningful Measures
per Pathway**

Optimized scorecards

Sustainable alongside a high
volume of pathways

Communicates the impact
on our patients & families

Going Forward: Strategic Shift

Then:

Pathway development is driven by **requests**

Now:

Pathway development is driven by both **requests** and **system strategy**

- ➔ **Proactively assess** system needs & priorities
- ➔ Focus on system-wide impact & **strategic alignment**
- ➔ Launch pathway initiatives that **address high-value gaps**

Conclusion

- Entire approach is **rooted in collaboration** across regions, areas, roles.
- This collaboration **drives** system-wide...
 - ❖ Alignment
 - ❖ Engagement
 - ❖ Enthusiasm
 - ❖ Commitment
 - ❖ **Utilization**



References

Acute Otitis Media Pathway:

- Antibiotics for acute middle ear infection (acute otitis media) in children. doi:10.1002/14651858.CD000219.pub4
- Venekamp RP, Burton MJ, Dongen TM van, Heijden GJ van der, Zon A van, Schilder AG. Antibiotics for otitis media with effusion in children. Cochrane Database of Systematic Reviews. 2016;(6). doi:10.1002/14651858.CD009163.pub3
- Leibovitz E, Piglansky L, Raiz S, Press J, Leiberman A, Dagan R. Bacteriologic and clinical efficacy of one day vs. three day intramuscular ceftriaxone for treatment of nonresponsive acute otitis media in children. *Pediatr Infect Dis J*. 2000;19(11):1040-1045. doi:10.1097/00006454-200011000-00003
- Rosenfeld RM, Tunkel DE, Schwartz SR, et al. Clinical Practice Guideline: Tympanostomy Tubes in Children (Update). *Otolaryngology-head and neck surgery*. 2022;166(1_suppl):S1-S55. doi:10.1177/01945998211065662
- Suzuki HG, Dewez JE, Nijman RG, Yeung S. Clinical practice guidelines for acute otitis media in children: a systematic review and appraisal of European national guidelines. *BMJ open*. 2020;10(5):e035343-e035343. doi:10.1136/bmjopen-2019-035343
- Rettig E, Tunkel DE. Contemporary concepts in management of acute otitis media in children. *Otolaryngol ClinNorth Am*. 2014;47(5):651-672. doi:10.1016/j.otc.2014.06.006
- Dawit G, Mequanent S, Makonnen E. Efficacy and safety of azithromycin and amoxicillin/clavulanate for otitis media in children: a systematic review and meta-analysis of randomized controlled trials. *Annals of clinical microbiology and antimicrobials*. 2021;20(1):28-28. doi:10.1186/s12941-021-00434-x
- Grommets for children with recurring acute middle ear infections. doi:10.1002/14651858.CD012017.pub2
- Kozyrskyj AL, Klassen TP, Moffatt M, Harvey K, Klassen TP. Short-course antibiotics for acute otitis media. *COCHRANE DB SYST REV*. 2010;2012(8):CD001095. doi:10.1002/14651858.CD001095.pub2
- Hoberman A, Paradise JL, Rockette HE, et al. Shortened Antimicrobial Treatment for Acute Otitis Media in Young Children. *NEW ENGL J MED*. 2016;375(25):2446-2456. doi:10.1056/NEJMoa1606043
- The Diagnosis and Management of Acute Otitis Media | Pediatrics | American Academy of Pediatrics. Accessed July 17, 2023. <https://publications.aap.org/pediatrics/article/131/3/e964/30912/The-Diagnosis-and-Managementof-Acute-Otitis-Media>
- Wright D, Safranek S. Treatment of otitis media with perforated tympanic membrane. *AM FAM PHYSICIAN*. 2009;79(8):650-652.
- Marchisio P, Galli L, Bortone B, et al. Updated Guidelines for the Management of Acute Otitis Media in Children by the Italian Society of Pediatrics: Treatment. *Pediatr Infect Dis J*. 2019;38(12S Suppl):S10-S21. doi:10.1097/INF.0000000000002452

Skin & Soft Tissue Infection Pathway:

- Lee GC, Hall RG, Boyd NK, et al. A prospective observational cohort study in primary care practices to identify factors associated with treatment failure in *Staphylococcus aureus* skin and soft tissue infections. *ANN CLIN MICROB ANTI*. 2016;15(1):58-58. doi:10.1186/s12941-016-0175-8
- Vermandere M, Aertgeerts B, Agoritsas T, et al. Antibiotics after incision and drainage for uncomplicated skin abscesses: a clinical practice guideline. *BMJ-BRIT MED J*. 2018;360:k243-k243. doi:10.1136/bmj.k243
- Wang W, Chen W, Liu Y, et al. Antibiotics for uncomplicated skin abscesses: systematic review and network metaanalysis. *BMJ OPEN*. 2018;8(2):e020991-e020991. doi:10.1136/bmjopen-2017-020991
- Sutter DE, Milburn E, Chukwuma U, Dzialowy N, Maranich AM, Hospenthal DR. Changing Susceptibility of *Staphylococcus aureus* in a US Pediatric Population. *Pediatrics*. 2016;137(4):e20153099. doi:10.1542/peds.2015-3099
- Galli L, Venturini E, Bassi A, et al. Common Community-acquired Bacterial Skin and Soft-tissue Infections in Children: an Intersociety Consensus on Impetigo, Abscess, and Cellulitis Treatment. *Clin Ther*. 2019;41(3):532-551.e17. doi:10.1016/j.clinthera.2019.01.010
- Williams DJ, Cooper WO, Kaltenbach LA, et al. Comparative effectiveness of antibiotic treatment strategies for pediatric skin and soft-tissue infections. *Pediatrics*. 2011;128(3):e479-487. doi:10.1542/peds.2010-3681
- Lam SHF, Sivitz A, Alade K, et al. Comparison of Ultrasound Guidance vs. Clinical Assessment Alone for Management of Pediatric Skin and Soft Tissue Infections. *J Emerg Med*. 2018;55(5):693-701. doi:10.1016/j.jemermed.2018.07.010
- Schuler CL, Courter JD, Conneely SE, et al. Decreasing Duration of Antibiotic Prescribing for Uncomplicated Skin and Soft Tissue Infections. *Pediatrics*. 2016;137(2):e20151223. doi:10.1542/peds.2015-1223
- Nelson CE, Chen A, McAndrew L, Tay KY, Balamuth F. Management of Skin and Soft-Tissue Infections Before and After Clinical Pathway Implementation. *CLIN PEDIATR*. 2018;57(6):660-666. doi:10.1177/0009922817738329
- Gottlieb M, Avila J, Chottiner M, Peksa GD. Point-of-Care Ultrasonography for the Diagnosis of Skin and Soft Tissue Abscesses: A Systematic Review and Meta-analysis. *Ann Emerg Med*. 2020;76(1):67-77. doi:10.1016/j.annemergmed.2020.01.004
- Stevens DL, Bisno AL, Chambers HF, et al. Practice Guidelines for the Diagnosis and Management of Skin and Soft Tissue Infections: 2014 Update by the Infectious Diseases Society of America. *Clinical infectious diseases*. 2014;59(2):147-159. doi:10.1093/cid/ciu296
- Glenn IC, Bruns NE, Soldes OS, Ponsky TA. Prospective observational study to assess the need for postoperative antibiotics following surgical incision and drainage of skin and soft tissue abscess in pediatric patients. *J Pediatr Surg*. 2018;53(8):1469-1471. doi:10.1016/j.jpedsurg.2017.08.004
- Gottlieb M, DeMott JM, Hallock M, Peksa GD. Systemic Antibiotics for the Treatment of Skin and Soft Tissue Abscesses: A Systematic Review and Meta-Analysis. *Ann Emerg Med*. 2019;73(1):8-16. doi:10.1016/j.annemergmed.2018.02.011
- David MZ, Daum RS. Treatment of *Staphylococcus aureus* Infections. In: Bagnoli F, Rappuoli R, Grandi G, eds. *Staphylococcus Aureus: Microbiology, Pathology, Immunology, Therapy and Prophylaxis*. Current Topics in Microbiology and Immunology. Springer International Publishing; 2017:325-383. doi:10.1007/82_2017_42.

Sepsis & Septic Shock Management Pathway:

- Akcan Arikan A, Williams EA, Graf JM, Kennedy CE, Patel B, Cruz AT. Resuscitation Bundle in Pediatric Shock Decreases Acute Kidney Injury and Improves Outcomes. *J Pediatr*. 2015;167(6):1301-5.e1. doi:10.1016/j.jpeds.2015.08.044
- Balamuth F, Alpern ER, Abbadessa MK, et al. Improving Recognition of Pediatric Severe Sepsis in the Emergency Department: Contributions of a Vital Sign-Based Electronic Alert and Bedside Clinician Identification. *Ann Emerg Med*. 2017;70(6):759-768.e2. doi:10.1016/j.annemergmed.2017.03.019
- Balamuth F, Weiss SL, Fitzgerald JC, et al. Protocolized Treatment Is Associated With Decreased Organ Dysfunction in Pediatric Severe Sepsis. *Pediatr Crit Care Med*. 2016;17(9):817-822. doi:10.1097/PCC.0000000000000858
- Burgunder L, Heyrend C, Olson J, et al. Medication and Fluid Management of Pediatric Sepsis and Septic Shock. *Paediatr Drugs*. 2022;24(3):193-205. doi:10.1007/s40272-022-00497-z □ Chiotos K, Weiss SL, Gerber JS. A Stitch in Time: Optimizing Antibiotic Use From the Start. *Crit Care Med*. 2021;49(11):1993-1996. doi:10.1097/CCM.0000000000005148
- Cox MI, Voss H. Improving sepsis recognition and management. *Curr Probl Pediatr Adolesc Health Care*. 2021;51(4):101001. doi:10.1016/j.cppeds.2021.101001
- Downes KJ, Fitzgerald JC, Weiss SL. Utility of Procalcitonin as a Biomarker for Sepsis in Children. *J Clin Microbiol*. 2020;58(7):e01851-19. doi:10.1128/JCM.01851-19
- Downes KJ, Weiss SL, Gerber JS, et al. A Pragmatic Biomarker-Driven Algorithm to Guide Antibiotic Use in the Pediatric Intensive Care Unit: The Optimizing Antibiotic Strategies in Sepsis (OASIS) Study. *J Pediatric Infect Dis Soc*. 2017;6(2):134-141. doi:10.1093/jpids/piw023
- Emrath ET, Fortenberry JD, Travers C, McCracken CE, Hebbar KB. Resuscitation With Balanced Fluids Is Associated With Improved Survival in Pediatric Severe Sepsis. *Crit Care Med*. 2017;45(7):1177-1183. doi:10.1097/CCM.0000000000002365
- Lane RD, Funai T, Reeder R, Larsen GY. High Reliability Pediatric Septic Shock Quality Improvement Initiative and Decreasing Mortality. *Pediatrics*. 2016;138(4):e20154153. doi:10.1542/peds.2015-4153
- Lane RD, Olson J, Reeder R, et al. Antibiotic Timing in Pediatric Septic Shock. *Hosp Pediatr*. 2020;10(4):311-317. doi:10.1542/hpeds.2019-0250
- Lindell RB, Nishisaki A, Weiss SL, Traynor DM, Fitzgerald JC. Risk of Mortality in Immunocompromised Children With Severe Sepsis and Septic Shock. *Crit Care Med*. 2020;48(7):1026-1033. doi:10.1097/CCM.0000000000000439
- Melnikov G, Grabowski S, Broman LM. Extracorporeal Membrane Oxygenation for Septic Shock in Children. *ASAIO J*. 2022;68(2):262-267. doi:10.1097/MAT.0000000000001464
- Menon K, Schlapbach LJ, Akech S, et al. Criteria for Pediatric Sepsis-A Systematic Review and Meta-Analysis by the Pediatric Sepsis Definition Taskforce. *Crit Care Med*. 2022;50(1):21-36. doi:10.1097/CCM.0000000000005294
- Messacar K, Hurst AL, Child J, et al. Clinical Impact and Provider Acceptability of Real-Time Antimicrobial Stewardship Decision Support for Rapid Diagnostics in Children With Positive Blood Culture Results. *J Pediatric Infect Dis Soc*. 2017;6(3):267-274. doi:10.1093/jpids/piw047
- Miller H, Tseng A, Lowerre T, et al. Improving Time to Stat Intravenous Antibiotic Administration: An 8-Year Quality Initiative. *Hosp Pediatr*. 2023;13(1):88-94. doi:10.1542/hpeds.2021-006422
- Miranda M, Nadel S. Pediatric Sepsis: a Summary of Current Definitions and Management Recommendations. *Curr Pediatr Rep*. 2023;11(2):29-39. doi:10.1007/s40124-023-00286-3
- Morin L, Ray S, Wilson C, et al. Refractory septic shock in children: a European Society of Paediatric and Neonatal Intensive Care definition. *Intensive Care Med*. 2016;42(12):1948-1957. doi:10.1007/s00134-016-4574-2
- Patel K, McElvania E. Diagnostic Challenges and Laboratory Considerations for Pediatric Sepsis. *J Appl Lab Med*. 2019;3(4):587-600. doi:10.1373/jalm.2017.025908
- Paul R, Niedner M, Riggs R, et al. Bundled Care to Reduce Sepsis Mortality: The Improving Pediatric Sepsis Outcomes (IPSO) Collaborative. *Pediatrics*. 2023;152(2):e2022059938. doi:10.1542/peds.2022-059938
- Scott HF, Brou L, Deakyn SJ, Fairclough DL, Kempe A, Bajaj L. Lactate Clearance and Normalization and Prolonged Organ Dysfunction in Pediatric Sepsis. *J Pediatr*. 2016;170:149-55.e554. doi:10.1016/j.jpeds.2015.11.071
- Stenson EK, Cvijanovich NZ, Anas N, et al. Hyperchloremia Is Associated With Complicated Course and Mortality in Pediatric Patients With Septic Shock. *Pediatr Crit Care Med*. 2018;19(2):155-160. doi:10.1097/PCC.0000000000001401
- van Paridon BM, Sheppard C, GG, Joffe AR; Alberta Sepsis Network. Timing of antibiotics, volume, and vasoactive infusions in children with sepsis admitted to intensive care. *Crit Care*. 2015;19(1):293. doi:10.1186/s13054-015-1010-x
- Weiss SL, Balamuth F, Hensley J, et al. The Epidemiology of Hospital Death Following Pediatric Severe Sepsis: When, Why, and How Children With Sepsis Die. *Pediatr Crit Care Med*. 2017;18(9):823-830. doi:10.1097/PCC.0000000000001222
- Weiss SL, Balamuth F. Let Us Not Forget Early Mortality in Pediatric Sepsis. *Pediatr Crit Care Med*. 2021;22(4):434-436. doi:10.1097/PCC.0000000000002689
- Weiss SL, Fitzgerald JC, Balamuth F, et al. Delayed antimicrobial therapy increases mortality and organ dysfunction duration in pediatric sepsis. *Crit Care Med*. 2014;42(11):2409-2417. doi:10.1097/CCM.0000000000000509
- Weiss SL, Fitzgerald JC, Balamuth F, et al. Pediatric Sepsis Diagnosis, Management, and Sub-phenotypes. *Pediatrics*. Published online December 12, 2023. doi:10.1542/peds.2023-062967 □ Weiss SL, Fitzgerald JC, Pappachan J, et al. Global epidemiology of pediatric severe sepsis: the sepsis prevalence, outcomes, and therapies study [published correction appears in *Am J Respir Crit Care Med*. 2016 Jan 15;193(2):223-4]. *Am J Respir Crit Care Med*. 2015;191(10):1147-1157. doi:10.1164/rccm.201412-2323OC
- Weiss SL, Peters MJ, Alhazzani W, et al. Surviving Sepsis Campaign International Guidelines for the Management of Septic Shock and Sepsis-Associated Organ Dysfunction in Children. *Pediatr Crit Care Med*. 2020;21(2):e52-e106. doi:10.1097/PCC.0000000000002198
- Wong HR, Atkinson SJ, Cvijanovich NZ, et al. Combining Prognostic and Predictive Enrichment Strategies to Identify Children With Septic Shock Responsive to Corticosteroids. *Crit Care Med*. 2016;44(10):e1000-e1003. doi:10.1097/CCM.0000000000001833
- Zhao C, Yin Y, Zhang T, et al. Dexmedetomidine improves the outcomes for pediatric severe sepsis with mechanical ventilation. *BMC Pediatr*. 2023;23(1):406. doi:10.1186/s12887-023-04232-6

Thank You!

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