

PEDIATRIC REGIONAL RESPONSE

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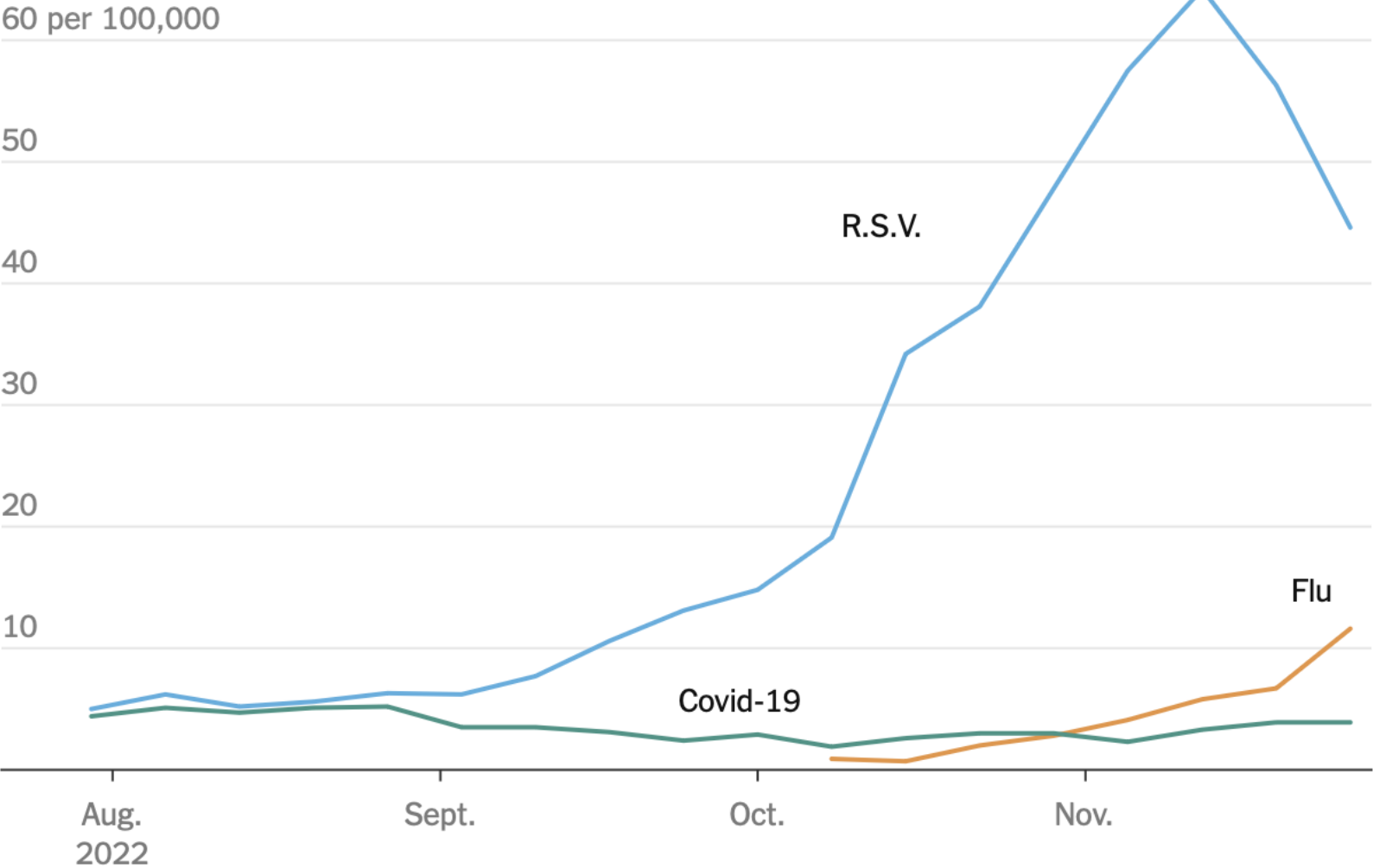


Overview

- Fall of 2022
 - RSV and Influenza A circulating at high levels
 - COVID-19 cases continued to circulate in community
 - Resulted in high volume of pediatric patients seeking care
 - Pediatric ED patient volumes reported elevated across the country
 - ED volume > 400 patients/day @ Children's (usual 200-250/day)
 - Reduced availability of pediatric inpatient beds nationally
 - Closure of pediatric beds in communities across MN
 - Pediatric exposure/comfort level declined at these sites
 - Local level contributing factor
 - Labor shortage: Nurses, RT's and other support staff

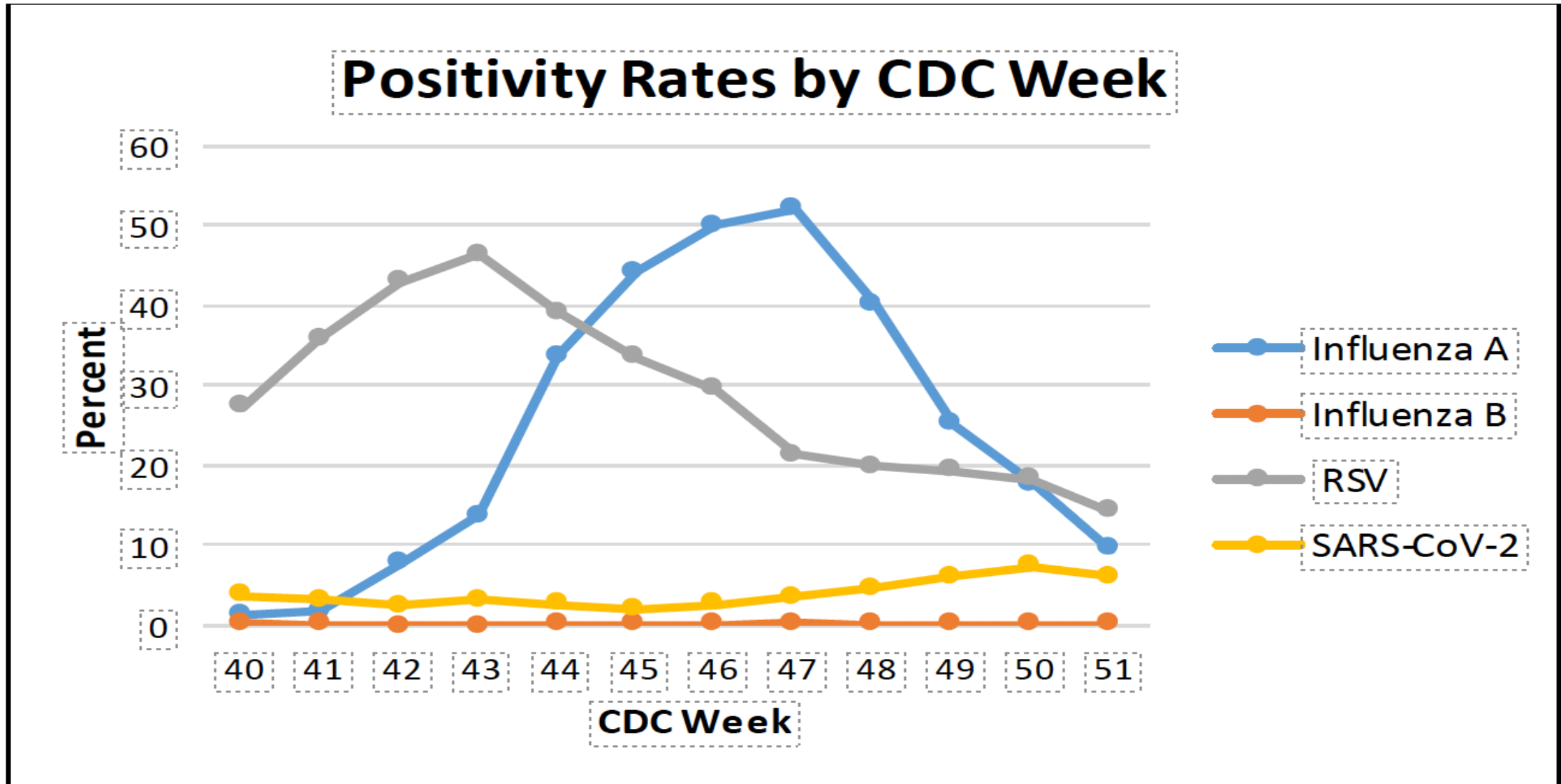
National Viral Pathogen Surveillance

Weekly hospitalizations among children 4 and under



Source: Centers for Disease Control and Prevention

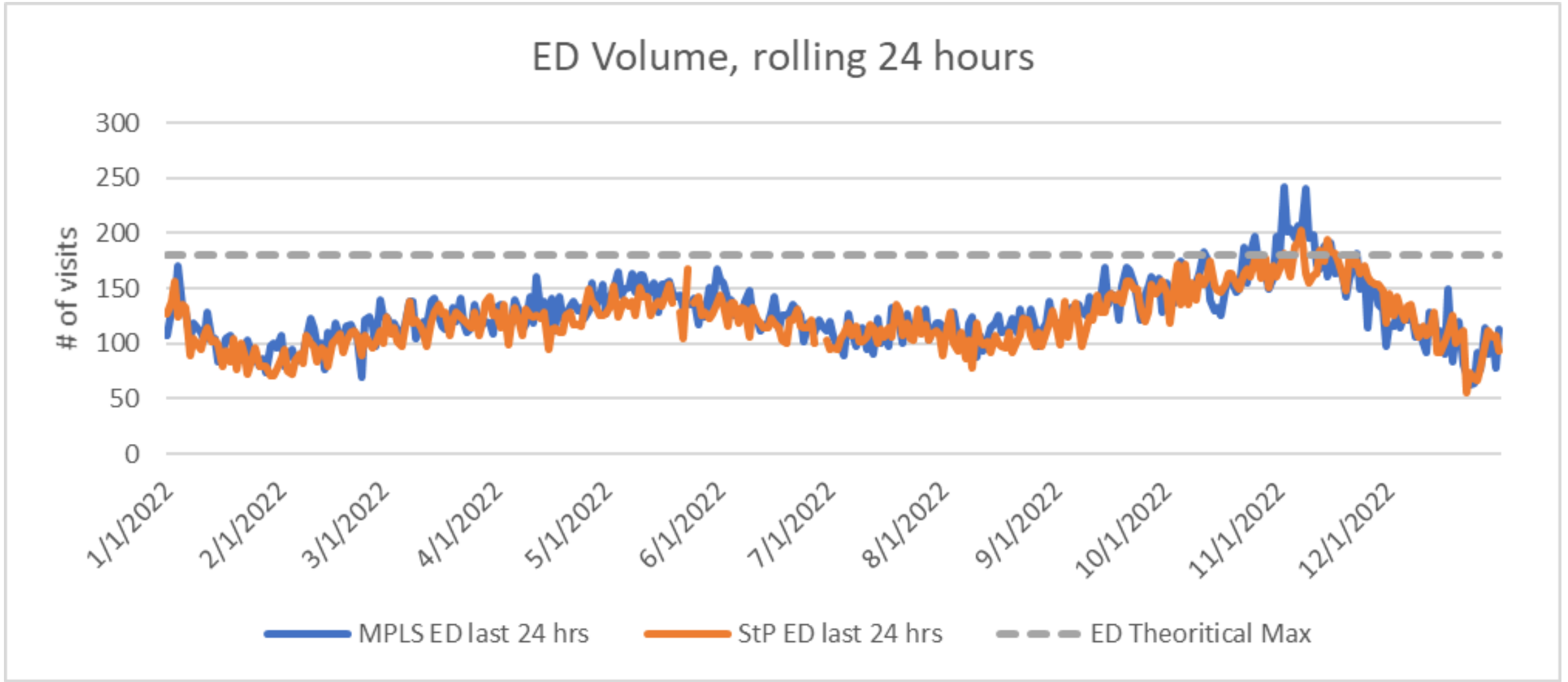
Viral Pathogen Surveillance: Children's Minnesota



Impact on Children's Minnesota

- Children's Minnesota
 - Two campuses
 - 85,000 Pediatric ED visits (typical year)
 - 42 PICU beds, 25 CVICU beds, 172 Neonatal beds
 - 120 med-surg beds: (85-90% occupied)
 - Level 1 Trauma Center
- Beginning in September 2022
 - Referral phone calls began to increase dramatically
 - From 10-20/day to 100+ calls/day
 - ED volumes accelerated
 - ED boarding – 20-26 patients boarding per campus
 - ED wait times increases – 12+ hrs
 - Delayed transport – 8+ hrs for ambulance

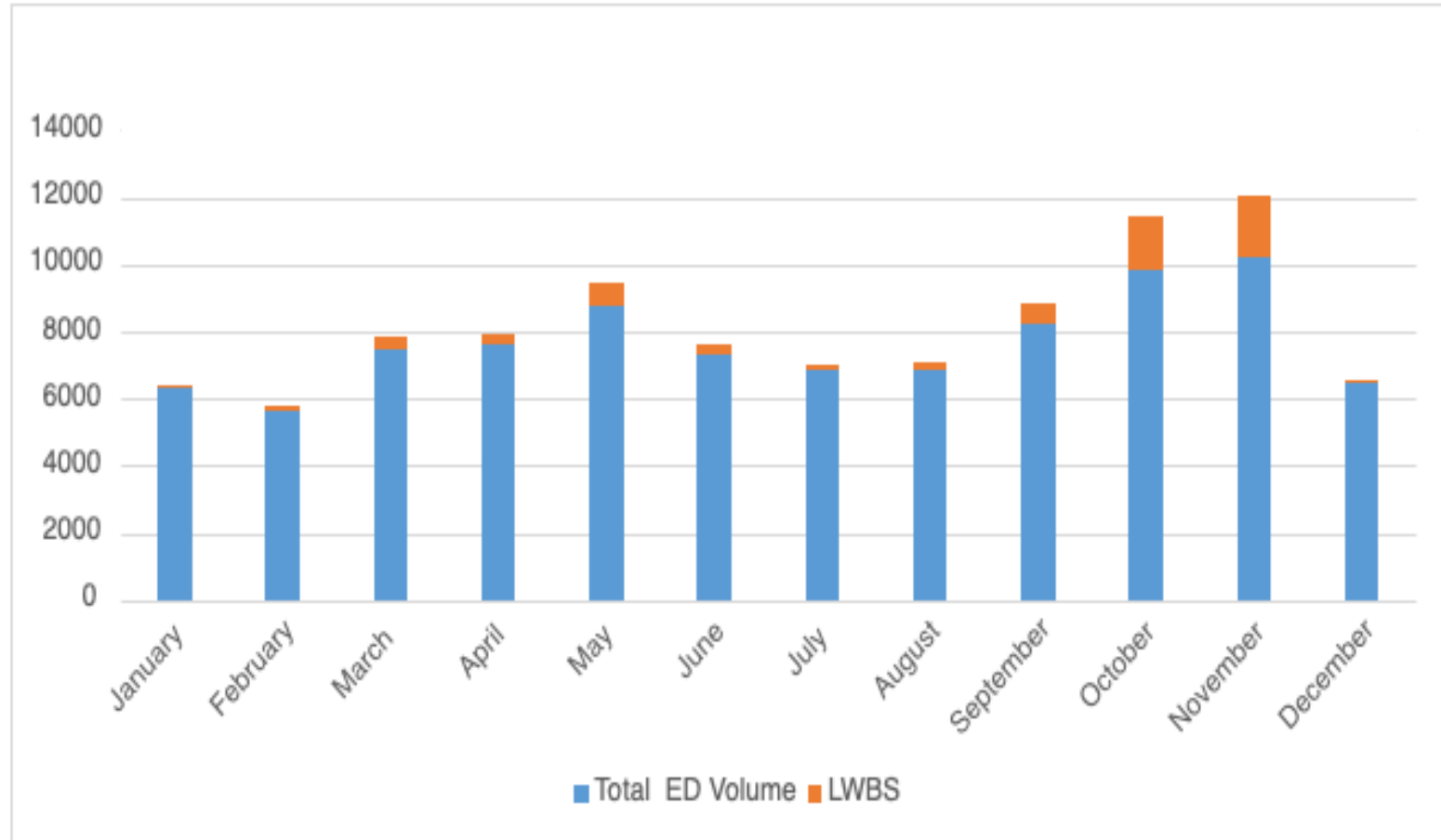
Children's MN ED Volumes



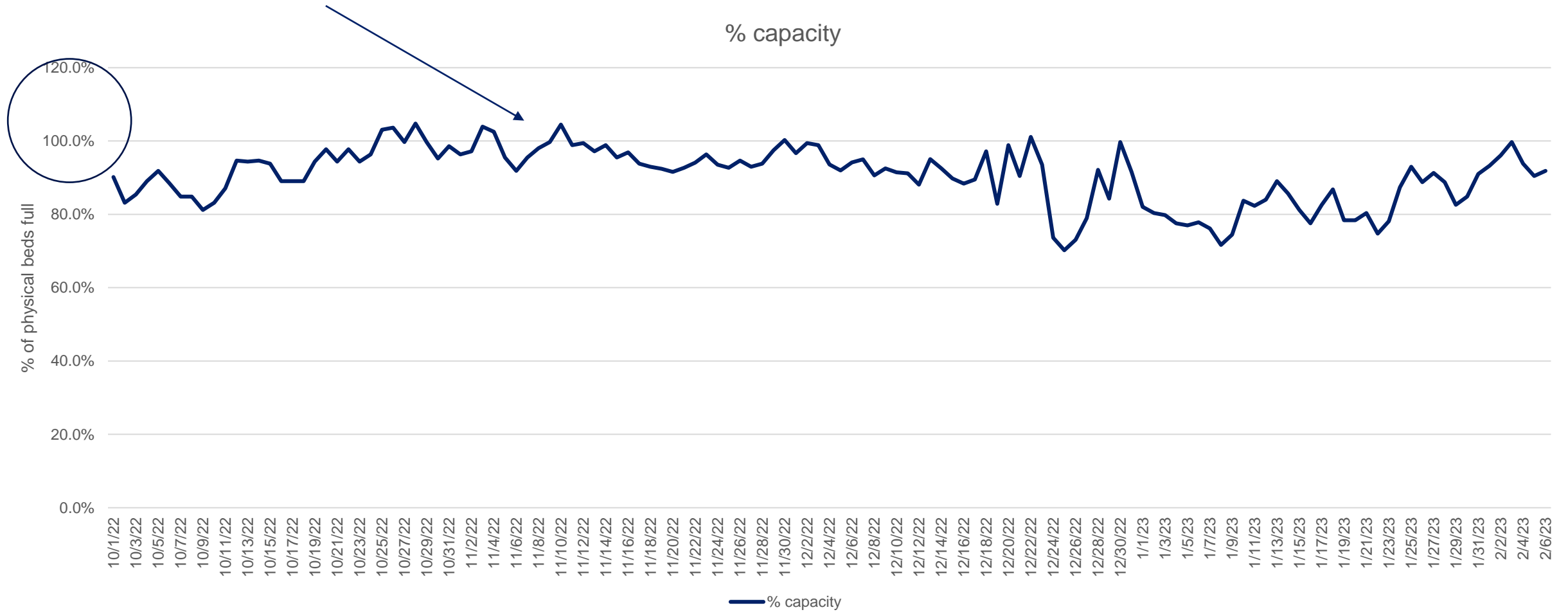
Children's MN ED Volumes

ED volume for Aug - Dec:

- **August: 6830, 4.7% LWBS**
- **September: 8220, 7.7%**
- **October: 9864, 16.2%**
- **November: 10,181, 18.3%**
- **December: 6479, 1.4%**



Inpatient Capacity



Pediatric Regional Response

- Hospital internal work
 - Critical to address all aspects of patient flow (external/internal)
 - Activated hospital response team: Rapid process improvement team (met daily)
 - Labor
 - Added additional physician and NP's to low acuity zone
 - Explored alternative staffing options for RT, EMTs
 - Added volunteer shifts to assist in all units
 - Space
 - Opened ED fast-track in OR space (staffed with EMT's)
 - Developed plans to utilize our ambulance bay for low acuity patients
 - Modified work-flow to allow infants to 3 months to admit to NICU
 - Expanded ambulatory Ready-care model in primary care
 - Other
 - Age restrictions implemented (i.e. Age > 16yo not accepted)
 - Surgical cases (delayed/cancelled)
 - Reviewed admit protocols – revised O₂ requirements for admit/discharge
 - Marketing and outreach activities to educate and divert patients

Pediatric Regional Response

- Hospital internal work:
 - Developed Admit Manager role
 - Began 10/30/22, staffed 10a-10p by physician (Monday-Sunday)
 - Call received into physician access line
 - Admit manager brought into conversation
 - Reviewed patient criteria for transfer, appropriate for which unit
 - Standardized process via:
 - Developed standard work document
 - Created schedule for staffing (MD's and NP)
 - Developed excel log of all patient calls
 - Documented follow-up interval to referring sites
 - Created scoring criteria to standardize when transport should occur
 - Admission – which unit
 - Decline – reason, stay in community, transfer to other institution

Contingency Admission Process
11/29/22 1300

CPA
Admission manager

Outside call to CPA
Patient needs
inpatient admission
or ED Evaluation

Decline transfer

Is the patient
older than 16?

yes

No

Does the patient
need inpatient
care?

No

Yes

Does the condition
require a service/
provider unique to
Children's?

No

Yes

- Find admission at another facility
- Record Divert

- Crisis admission Criteria:**
All other admits, case by case, triaged as follows:
- Sub-specialty patient - Oncology, Endo/Diabetes, Neurosurgery, Cards
 - PICU or NICU care required
 - ECMO/CRRT possibility
 - Acute pediatric surgical condition - ie appendectomy
 - Need for EMU (status)
 - CTED with cardiac/electrolyte abnormalities
 - Current therapeutic relationship
 - Significant underlying complexity

- Call initiated by CPA with:
- Admission manager
 - HNS for any Admit
 - +/- accepting ED/Neo/ICU

- Admission manager:
- 12-10pm
 - AM/PM shift change at 5p
 - See Schedule from Anupam

- Explore alternative care options:
- Home care (Maija C.)
 - Clinic appointments
 - External facilities

Patient Placed

Score	Time Frame for Evaluation	Action for Call Center Staff	Example Conditions
1	< 2 hrs	Connect with Children's PICU Physician	Cold water drowning ECMO Cardiac arrest
2	4-6 hrs	Connect with Children's MN Physician Access 612-343-2121	DKA r/o Torsion r/o bowel obstruction Intubated/BiPap MVA/Trauma, stabilized Appy (r/o or dx < 12 yo)
3	6-12 hrs	Put on list and pursue placement	Hi Flow > 4 liters Ortho/Fracture reduction Fever eval (no pressors) Asthma (continuous nebs) r/o Appendicitis >13 yo
4	12-24 hrs	Put on list. Request monitor in place and call back if they escalate/change	Hi-Flow < 4 Liters New onset IDDM
5	24 hrs	Put on list. Request monitor in place and call back if they escalate/change	Dehydration - IV fluids Observation (concussion)

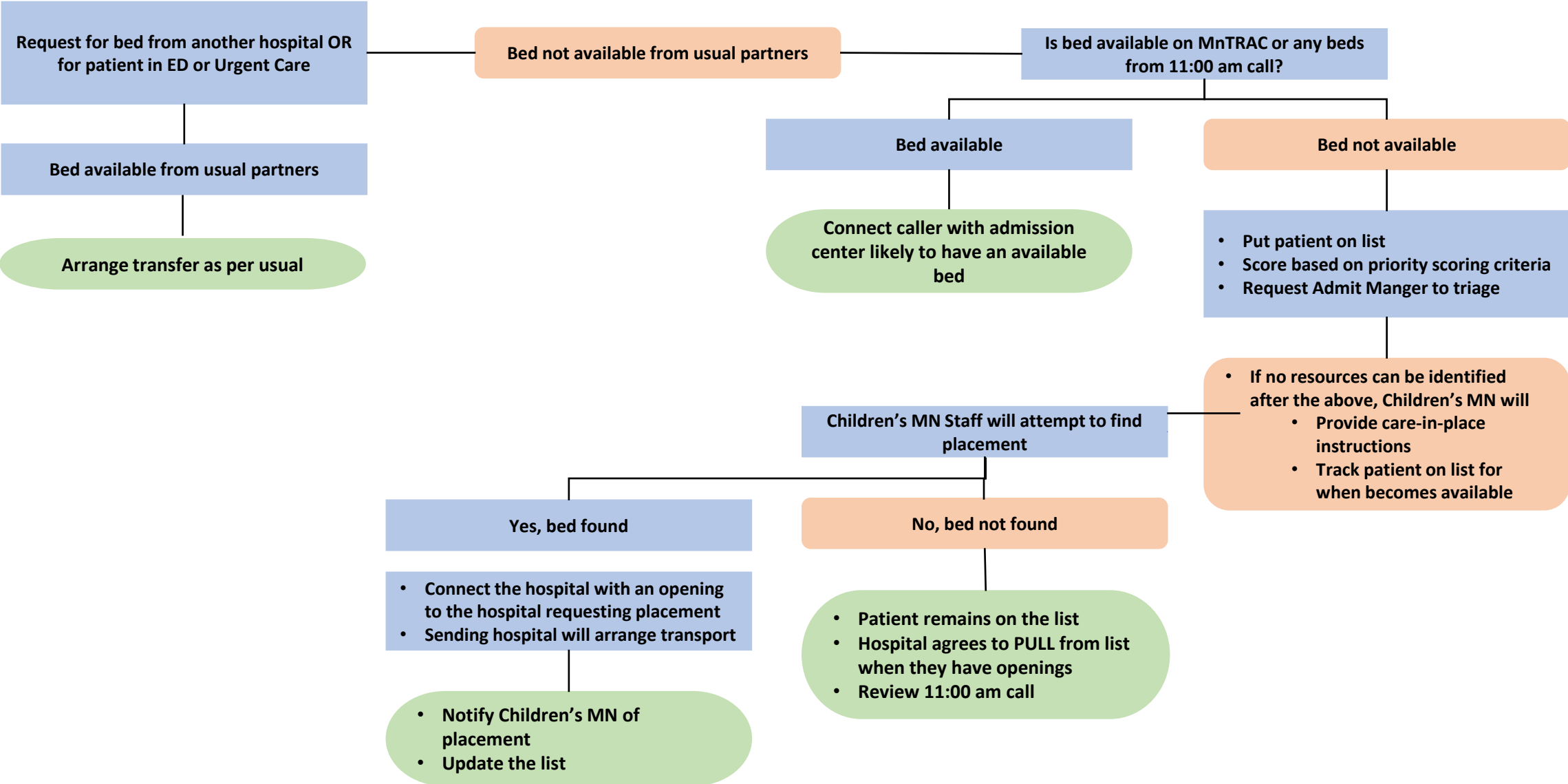
Pediatric Regional Response

- External facing changes
 - Contacted Regional Response Center at HCMC
 - To activate pediatric consortium call (began 11/4)
 - Began to meet daily to review potential patients that needed admission (ICU bed)
 - Activated MinTrac system
 - For tracking of patients, reporting of data
 - Reviewed transport options with Lifelink
 - Deployed helicopter to Mpls campus
 - Modified role of Children's Physician Access
 - Took on role to track/place all pediatric admissions that could not be managed at home institution. Developed "pull list".
 - Staffed 24/7, pediatric trained nurse
 - Developed list of capacities of all referring hospitals (# of beds, surgical capacity, trauma level, pediatric sub-specialists)

Children's Physician Access – Daily task list

- Monitor PICU and Medical/Surgical bed availability.
- Monitor and update waitlist (pull list)
- Received calls from requesting facility requesting transfer or placement.
- Connect and coordinate between requesting facility and Children's MD (Admission Manager)
 - If no bed was available, patient was added to the waitlist with a priority score.
 - Based on the priority score, Physician Access reps were actively seeking bed placement.
 - Contact other hospitals to identify an accepting facility.
 - Coordinate call between requesting facility and accepting facility for review of the case.
- Follow up with requesting facility to update waitlist

Children's Physician Access Flow



Statewide Capacity

Metro	Faiview Ridges Burnsville, MN	MHealth	612-672-7575 Pediatric Hospitalist Pager: 612-580-4330	yes	0-22 y/o	no	yes	9+	no	Level III	Level IV	no	no	Virtual gi, pulm, infectious disease
Metro	Lakeview Hospital Stillwater, MN	Health Partners	Use Regions Direct: 651-254-2000			yes				yes				
Western WI	Marshfield Hospital Rice Lake, WI	Marshfield	715-221-5510	yes										
Metro	Maple Grove Hosptial Maple Grove, MN	North Memorial Health	763-581-1036 888-455-2229 (Neonatologist direct phone) NICU 763-581-8310 ask for charge nurse	yes - 30 days	16 y/o or older	no	no	12+	no	Level III	Level IV	no	no	

Pediatric Regional Response

- Pediatric Consortium Calls
 - Held daily through 12/18/22
 - Essentially all centers in state that provided care to children participated
- Children's Physician Access
 - 21,244 calls received into call center (Oct – Dec)
 - 1998 resulted in telephone consult with admit manager or PICU
 - 2676 patients admitted to Children's
 - 437 patients deferred to OSH

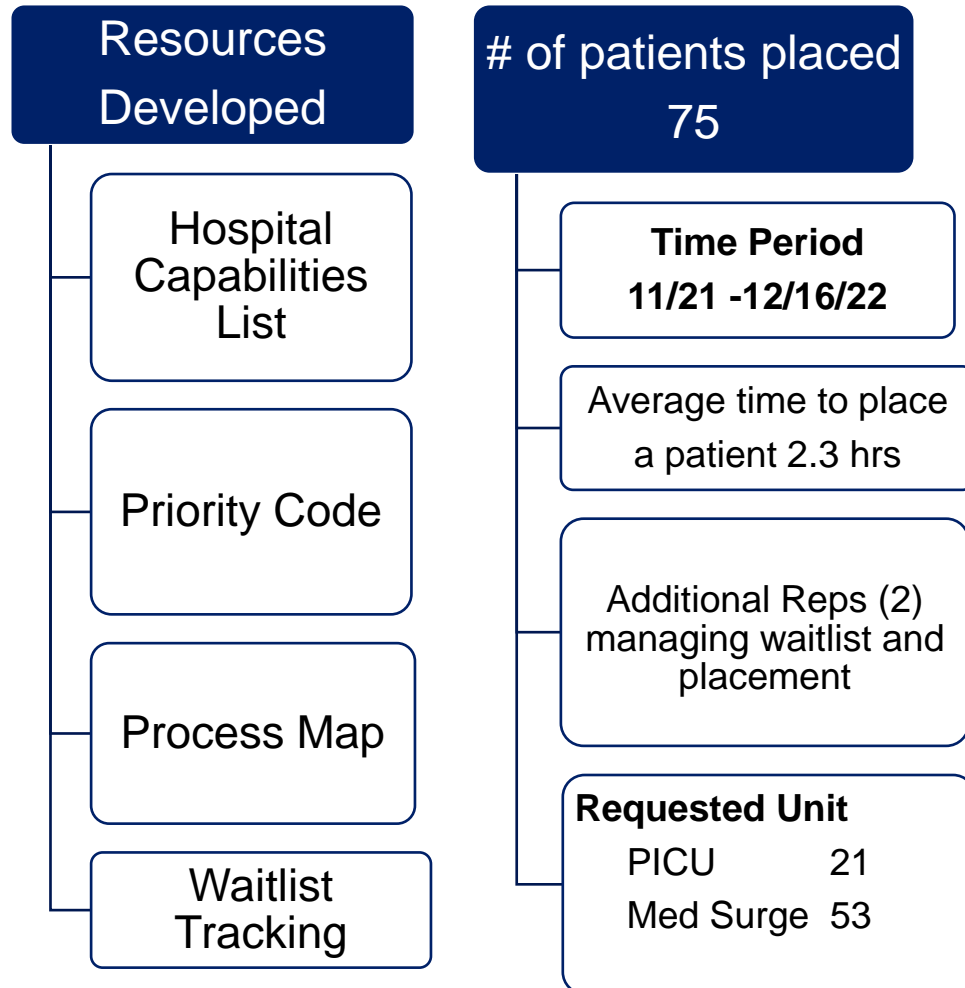
Daily Consortium Call – Tracking

Site/System	# of avail beds <12 hrs	# of ICU beds avail < 12 hrs	# of NICU beds avail < 12 hrs	# of patients in ED waiting 4+ hours f	Surge Strategies	Comments about Peds Capacity
CentraCare-Peds (St. Cloud)		Please call		0	Our NICU will take babies under 3 months of age that are not infectious. OP infusions moved to adult department. OP sedations paused until February 1st.	
Children's Minnesota MPS	case by case	case by case-closed	case by case	13 EDIP		
Children's Minnesota STP	0	closed	0	12 EDIP		

Admit Manager – Patient tracking log

Date	Time	"Originating Facility"	"Outside Provider"	Pt	Age	dob	MRN	Dx	Notes	Final dispo	"1=D 2=A"	"Scoring Criteria (See tab below)"	"Admissions Manager"
11/26/22	1800	212	xxx	xx	x	x	x	x	x	x	1	3	ss
11/26/22	1815	Maple Grove	xxx	xx	x	x	x	x	x	x	2	2	ss
11/26/22	19:20	tc ortho	xxx	xx	x	x	x	x	x	x	1	4	Joe
11/26/22	20:12	urgency ctr woodbuary	xxx	xx	x	x	x	x	x	x	2	2	joe
11/26/22	21:30	west field	xxx	xx	x	x	x	x	x	x	2	4	joe
11/27/22	1344	Maple Grove	xxx	xx	x	x	x	x	x	x	2	3	joe
11/27/22	137	lakewood	xxx	xx	x	x	x	x	x	x	2	2	joe

Summary of “Pull List” Performance



Accepted at Facility	# of Pts
Care In Place	8
M Health Fariview-Masonic	15
Hennepin Health Care	12
Mayo Rochers-Peds	11
Children's MN	8
Centracare St Cloud	6
Fairview Ridges	3
Essentia St Mary's Peds	2
Gillette Children's	2
Marshfield Medical Center	2
Mercy Hospital	2
Allina Health-United	1
M Health Fairview Lakes	1
Regions Hospital	1
Sanford Fargo	1

Summary

- High volume of pediatric cases driven by viral surge
- All ICU beds in state occupied for period of 4 weeks
- Minnesota hospitals collaborated to level-load pediatric ICU and med-surg beds
- Model for future collaborative efforts

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MINNESOTA

The Kid Experts[™]



Coalition Coordination

Chris Chell, Regional Healthcare Preparedness
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Metro Health & Medical Preparedness Coalition

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Coalition Coordination



Current State

- SharePoint
- Spreadsheets
- Update prior to phone call
- Bed Updates 2x daily in MNTrac
- Teams Meeting
- Facilitate phone call
- Real time Brokering
- Call Center with staff

Future State

- Real time bed availability visible to stakeholders
- An agreed upon mechanism to transfer a patient when needed
- Medical Operations Coordination Center model developed (policy, process, authority, staff, leadership group)
- Full support from CEOs and Senior Leadership in all 130 hospitals or Metro and Healthcare Coalitions

Thank you!

