COVID Panel Discussion

Moderator
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Children's Wisconsin Urgent Care

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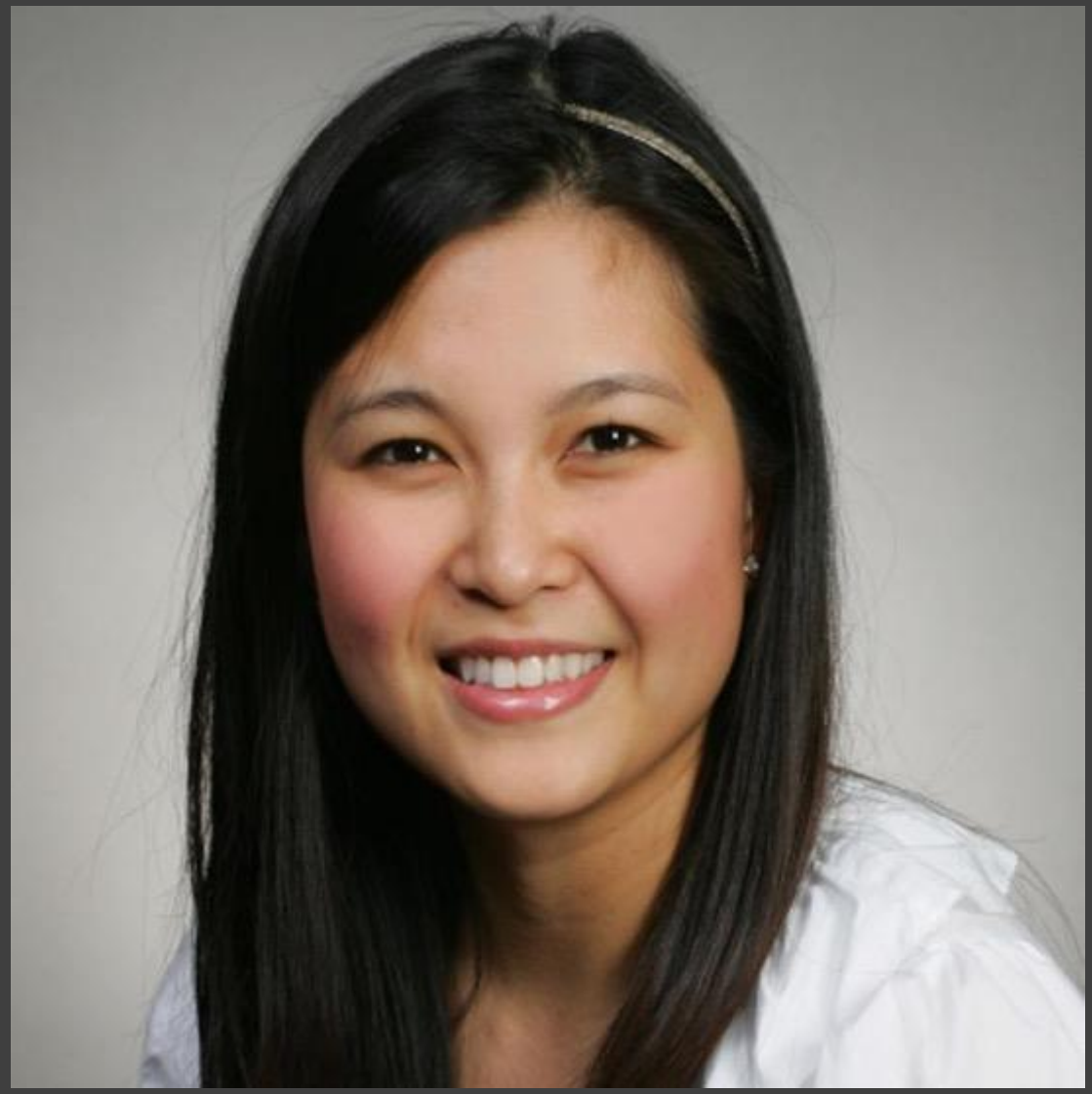
Clinical Assistant Professor

Children's Mercy Hospital



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Objectives

1. Analyze similarities and differences in urgent cares across the nation for following:
    - Operational changes
    - Patient volumes
    - Personal Protective Equipment (PPE)
    - Testing capabilities
2. Review timeline of school closures in various states and government mandated stay at home orders.
3. Understand clinical course, management and treatment of COVID-19 + pediatric patients in urgent care.

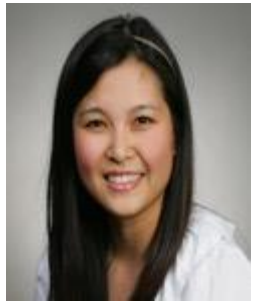
Urgent Care Locations

Seattle Children's
HOSPITAL · RESEARCH · FOUNDATION

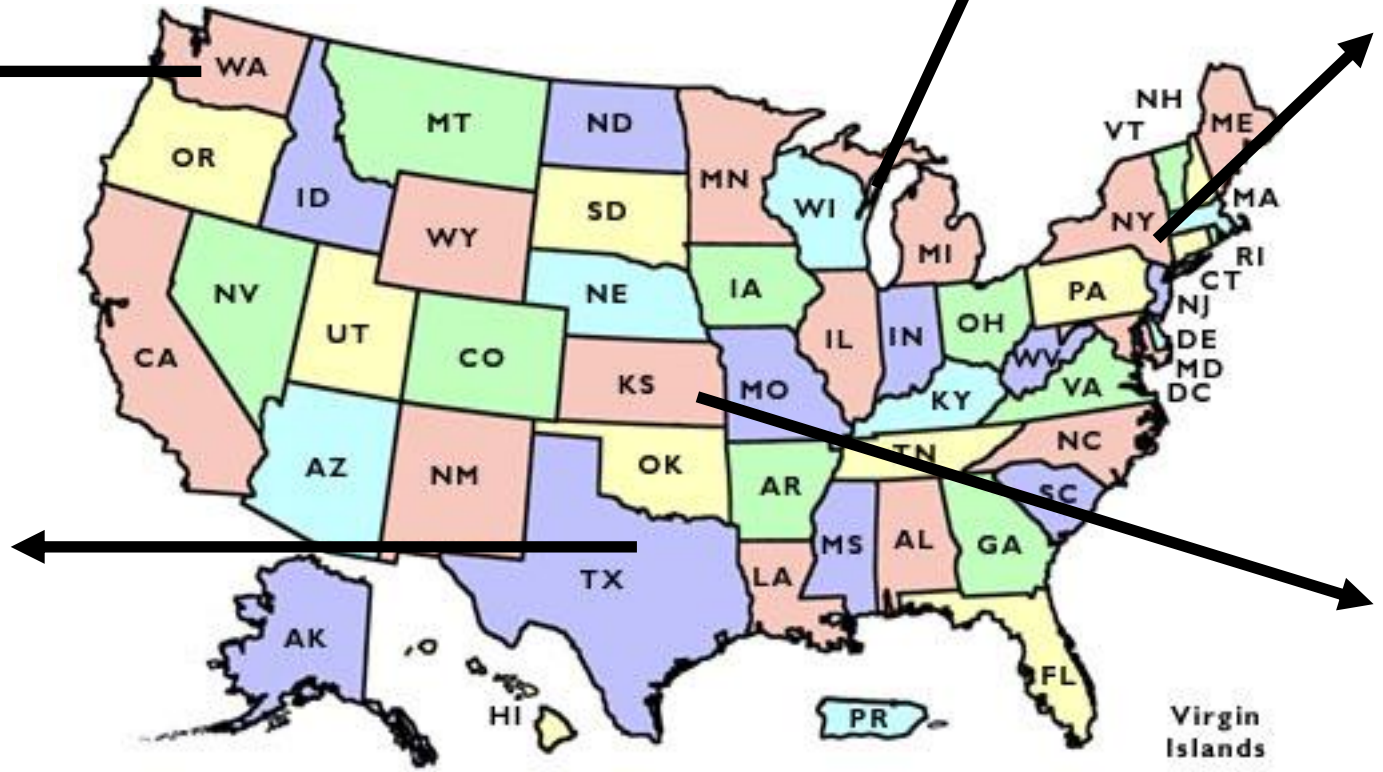
CookChildren's

Children's Wisconsin

Pediatrics URGENT CARE



Children's Mercy HOSPITALS & CLINICS Kansas City



Time-line : Effects of COVID
When it all started?

Seattle Children's:

January 20th:

First US Case (Adult)

February 26th:

First local transmission

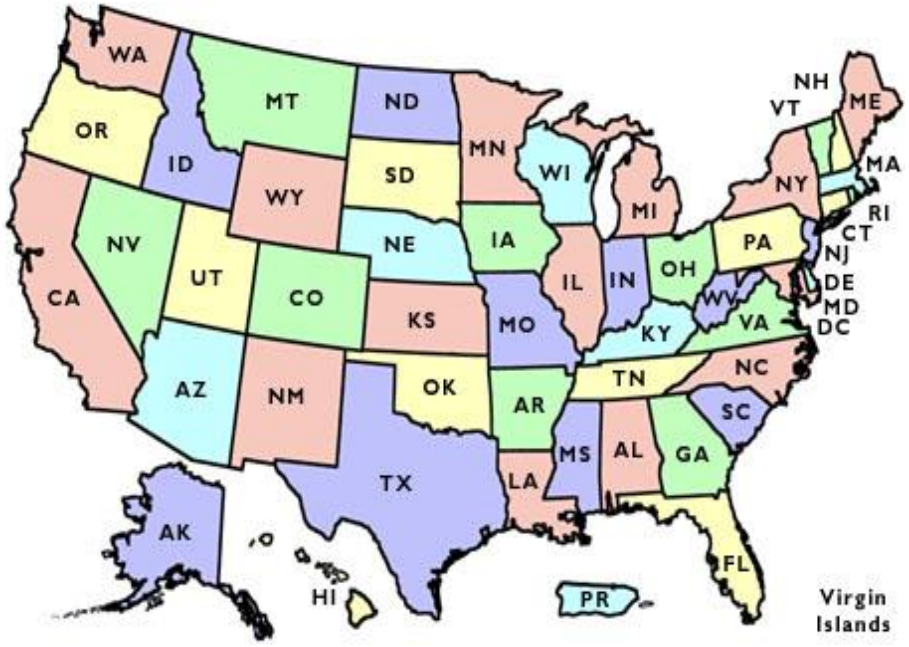
Kansas City Mercy

March 7th:

First case in Metro Area

March 14th:

First local transmission



Cook Children's

March 11th : First confirmed case

Children's Wisconsin:

February 5th:

First COVID-19 + (adult)

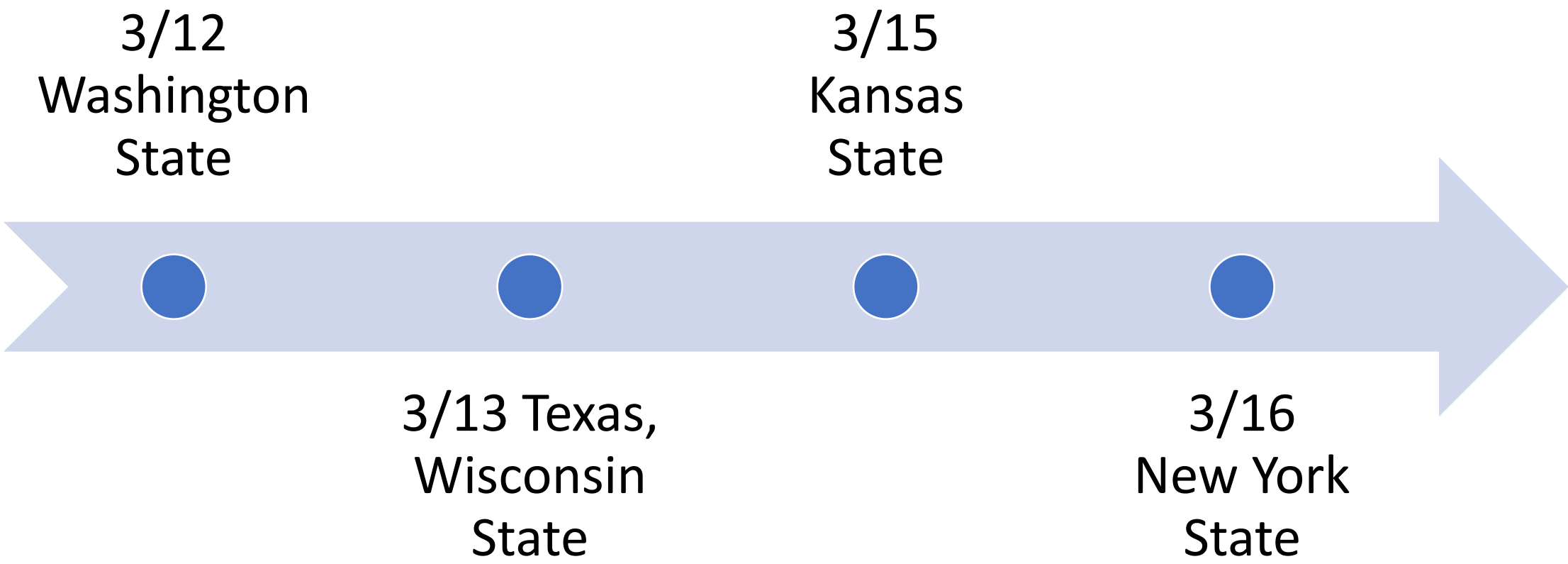
March 9th:

Second Confirmed Case

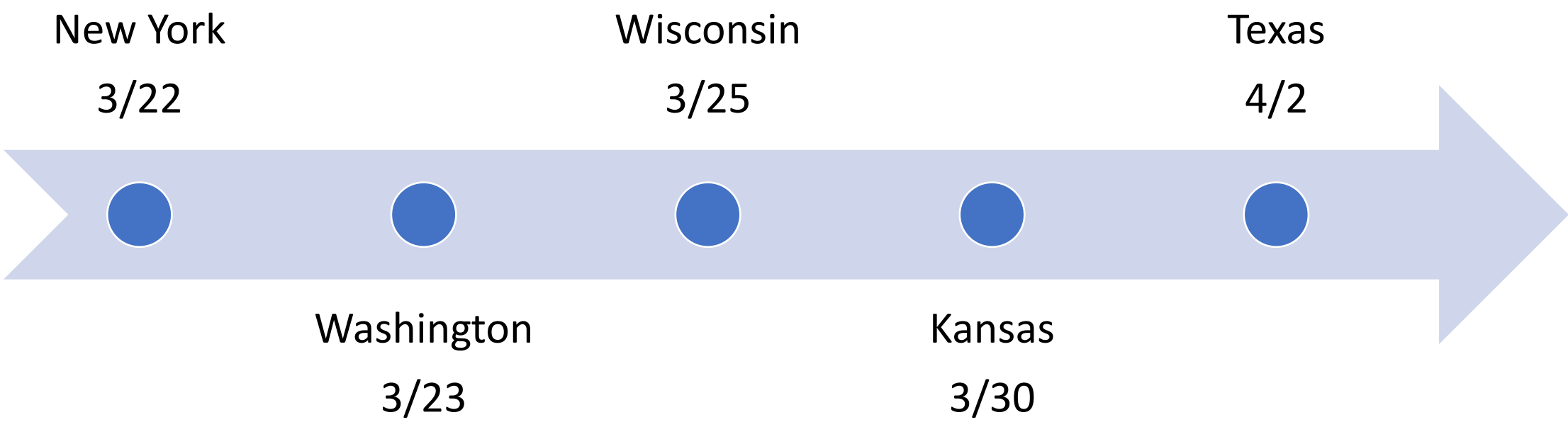
PM Pediatrics:

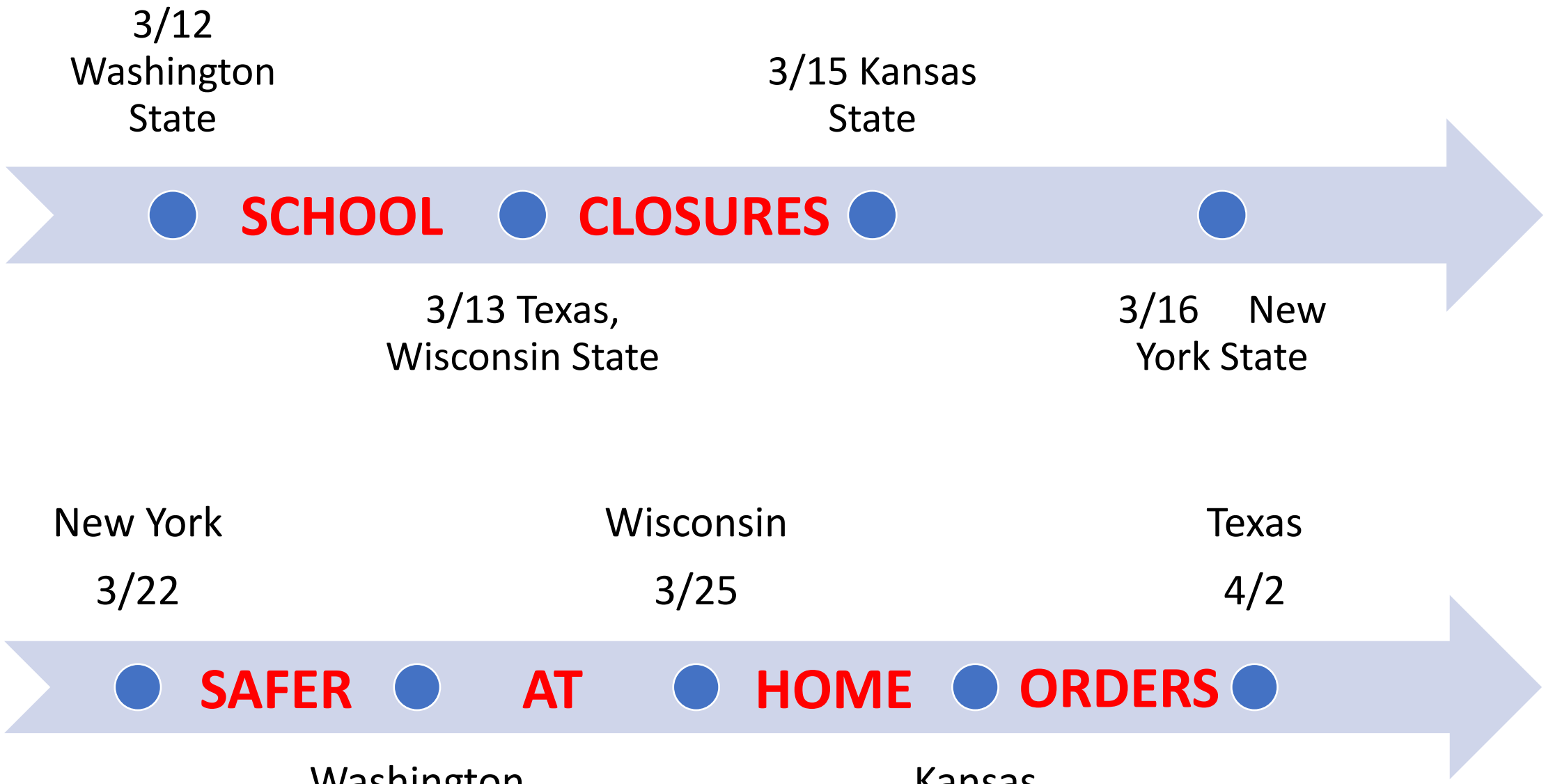
Late February/Early March

School Closures



Government Regulations: Safer at Home orders




3/12
Washington
State
3/15 Kansas
State
SCHOOL CLOSURES
3/13 Texas,
Wisconsin State
3/16 New
York State
New York
3/22
Wisconsin
3/25
Texas
4/2
SAFER AT HOME ORDERS
Washington
3/24
Kansas
3/30

Patient Volumes

Children's Mercy:

Compared to 2019:

March: 31% down

April: 80% down

May: 71% down

June 53% down

Children's Wisconsin:

Compared to 2019:

March: 28% down

April: 74% down

May: 64% down

June: 49% down

Seattle Children's:

Compared to 2019:

March: 36% down

April: 62% down

May: 58% down

June: 22% down

PM Pediatrics:

Compared to 2019:

March: 28%

April: 80%

May: 72%

June: 53%

Cook Children's:

Compared to 2019:

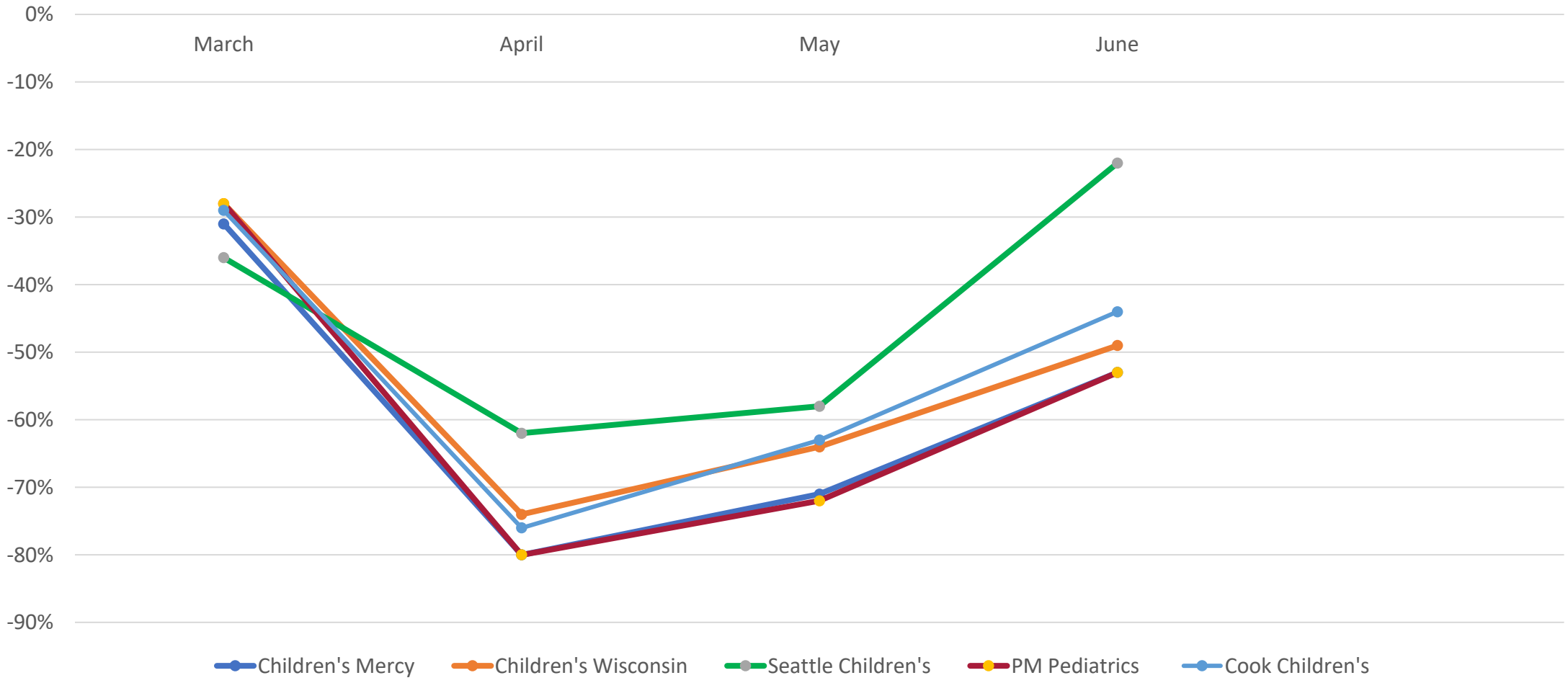
March: 29% down

April: 76% down

May: 63% down

June: 44% down

Compared to 2019: Decreased Percentage of Patient Volumes in Urgent Care



Operational Changes	Children's Wisconsin	Children's Mercy	Seattle Children's	Cook Children's	PM Pediatrics
Urgent Care Site Closures	Yes, temporarily 3/7 sites, 2 have reopened	No	No	No	Yes, temporarily shifted 5/50 sites into testing centers
Hours of clinics changed	No	Yes	No	No	Yes from 12 hours to 10 hours
Tele-medicine	Started Sept 2019, 10-fold increase in March, 2020	Started May 2020	Still in planning phase	Already had it active, increased volume	Launched PMP Anywhere App
Increased Upper Age Limit? Which age?	Yes - 26	Yes - 22	No	No	Screening of adults offered
Drive-Through/Out-door Testing	No	No	Outpatient screen started in May	Yes, began in June	Yes 1-2 offices in each region
Front Desk/Access Reps	Plastic Tarp Barriers on 3/12	Plastic screens introduced	Screen prior to entering building, Plexi-glass bariers	Front Door screeners –pts waits in car if +screen	Plexi-glass introduced
Encouraging families to stay home via Patient Portal	Utilizing tele-medicine	No	No	+screen calls front desk from car, offered Telemedicine encounter first	Offices are open but tele-medicine option if you want to stay home

Personal Protective Equipment

	Children's Wisconsin	Children's Mercy	Seattle Children's	Cook Children's	PM Pediatrics
PPE shortages	Yes – early on	Yes	Yes	Yes	Yes early on
Initial PPE	Surgical masks, N-95s reserved for aerosolizing procedures	PAPRs	CAPRs. N-95s reserved for code situations	Surgical Masks, Gown, Gloves, Eye Protection. N-95s reserved for aerosol generating procedures for + screens	Surgical Masks, N-95s Reserved for aerosolizing procedures
Later on PPE	Switched to N-95 for all providers with direct patient contact at peak (April), recently added CAPRs for those who failed fit testing		CAPRs for symptomatic pts and aerosolizing procedures, surgical masks and goggles for asymptomatic pts	Surgical Masks, Gown, Gloves, Eye Protection. N-95s reserved for aerosol generating procedures for + screen. Mask and eye protection for all patient encounters	Same as above

COVID Testing (PCR & Antibody Testing)

	Children's Wisconsin	Children's Mercy	Seattle Children's	Cook Children's	PM Pediatrics
PCR Testing	Yes	Yes	Yes	Yes	Yes
Limited Testing	1 week of testing and then March 17th limited to only admitted patients	Discontinued March 20th Started Again June	MP swabs and viral testing media supplies ran out	We have had extremely limited testing until June, still limiting to symptomatic pts	Yes initially
Antibody testing	No		Yes, started May 7th	No	Yes
Current PCR/Antibody Testing	Exact Sciences testing in May 2020/ In House testing	In house testing	In-house for PCR and antibody	-Drive through testing - NP Swab for PCR -In-house ID Now PCR as of 7/20	Labcorp Quest Northwell Pilot in-house testing Texas

Tele-Medicine

Children’s Wisconsin

Seattle Children’s

Children’s Mercy

PM Pediatrics

Cook Children’s

Morbidity and Mortality

	Children's Wisconsin	Children's Mercy	Seattle Children's	Cook Children's	PM Pediatrics
Urgent Care Patients Positivity Rate	5.3% 14 Urgent care cases		1.5% for UC (1.2% for hospital)		8% current, peaked at 20% early in pandemic
Severity of illness	Asymptomatic (known exposure) to mild	Mild illness	Asymptomatic (known exposure) to mild	Mild illness	Mild illness
Multi-system Inflammatory syndrome in Children (MIS-C)	1 case: requiring ICU level care System has seen 11 suspected MIS-C cases	None sent from urgent care but system has seen 1 case	9 confirmed cases in system None via UC	6 cases, all required PICU care, none originated from UC	9 cases: many requiring ICU level care

Urgent Care and Institutional Data

	Children's Wisconsin	Children's Mercy	Seattle Children's	Cook Children's	PM Pediatrics
Urgent Care Staff/Provider Specific Data	4-5% positive rate Community/Primary Care	1 UC staff member tested positive	3-4% positive rate in workforce No UC providers known to have tested positive	No positive staff members as a result of work exposure. Several staff were positive but quarantined prior to exposing staff	3% positive, of which 75% occurred in Westchester area during the 1st wave before universal masking
Institutional Data	317 staff/providers tested 268 negative 49 positive No known work exposures in positives	Pts tested: 6,553 Positive: 159 (2 admitted) Pending: 56 Employees screened: 1,715 Employees tested: 1,113 Confirmed +ve: 71 (48 back) Pending: 28	0.5% positive rate in pre-procedure pts Employees screened: approximately 1,800	Pts tested: 9,233 (includes pre-op and symptomatic patients) Positive: 617 % positive: 6.7%	

Children's Mercy

3 w M with fever and jaundice

Jaundice since birth but did not require bili lights per mother

Discharged home on dol #2

Follow up at 2 weeks with PCP was un-concerning

Mom noted worsening jaundice in past 5 days with scleral icterus

Fever x 1 day pta of 100.9 axillary – mom gave ibuprofen

No fevers on day of presentation

Alert and active per mother

Breastfeeding 20 minutes q3-4 hours and cluster feeds at night

Children's Mercy HOSPITALS & CLINICS Kansas City

Continued HPI

6-10 wet diapers per day

6-7 stools per day

Denies vomiting, diarrhea, cough or URI symptoms

No ill contacts

Birth History: 39 weeks BW 7 pounds 10 oz

Prenatal testing negative per mother

Children's Mercy HOSPITALS & CLINICS Kansas City

Objective

VS: Wt 4.5 kg T 37.3C HR 140 RR 48

General Appearance: healthy-appearing, vigorous infant

Head: sutures mobile; anterior fontanel is open, soft & flat

Eyes: sclerae icterus, pupils equal and reactive, red reflex normal bilaterally

Ears: well-positioned, well-formed pinnae; no pits or tags

Nose: nares appear patent, normal mucosa

Oropharynx: palate intact, moist mucus membranes, normal tongue

Neck: no deformities, clavicles without crepitus, no masses appreciated

Chest: clear and equal breath sounds bilaterally, no retractions, no nasal flaring, no tachypnea

Cardiac: quiet precordium, regular rate and rhythm, normal S1 and physiologically-split S2, no murmur; brachial and femoral pulses present and equal bilaterally

Abdomen: soft, non-tender, mildly distended,, no hepatosplenomegaly, no masses, bowel sounds present, small, soft umbilical hernia easily reduced

Musculoskeletal: moves all extremities well, age-appropriate muscle bulk and tone

Back: no lesions, tufts or dimples noted

Genitalia: Tanner Stage 1, normal external male

Skin: warm and dry, brisk capillary refill

Rectal: anus appears normally placed and patent

Neurologic: Easily aroused, good symmetric tone and strength, positive root and suck

Children's Mercy HOSPITALS & CLINICS Kansas City

Urgent Care Evaluation

WBC	**11.99**
Hemoglobin	11.6
Hct	33.4
Plt	341

Total Protein	**6.4**
Alb	3.7
Bili	15.4
Direct bili	1.1
Indirect	14.3
AST	29
ALT	15
Alk Phos	203

Na	**134**
K	5.2
Cl	102
CO2	28
Ca	10.1
Gluc	76
BUN	4
Cr	0.22
CRP	2.4

Children's Mercy HOSPITALS & CLINICS Kansas City

Urgent Care Evaluation

Urine color	**yellow**
Clarity	Clear
Spec Gravity	1.010
pH	6.5
Glucose	neg
Ketones	Neg
Blood	Trace
Bili	neg
Urobili	<2.0
Nitrite	Neg

Leuk Est	**1+**
WBC	5-15/hpf
RBC	1-4/hpf
Bacterial	Few/hpf
Sq. Epi. Cells	Few
Casts	None
Crystals	None

Children's Mercy HOSPITALS & CLINICS Kansas City

Further Evaluation

Transferred from UC to ED for full septic work up

- ED: preformed LP and admitted to Gen Peds; COVID testing sent
- LP results: bloody, yellow, 5 RBC, 2 WBC, 46 Glucose, 42 protein

Admission Course: Amp/Gent started

- After admission, COVID test came back positive
- CSF and blood cultures negative
- Urine culture: 3000 cfu GBS
- Remained afebrile and discharged home with PCP follow up

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Since Then

ED visit at 5 weeks for constipation & thrush

- HPI noted both parents tested negative for COVID when pt was positive

ED visit at 2 months for constipation and abnormal movements that looks like “startling”. Admitted to Neurology for 24 hour EEG monitoring

- EEG was reassuring. Movements were captured but no epileptic activity seen
- Discharged home

Children's Mercy HOSPITALS & CLINICS Kansas City

Children's Wisconsin

16 y F with mild intermittent asthma presents with chest/back pain X4 days

Tested COVID + 1 week prior (exposure through friends)

Sore throat/dry non-productive cough x7 days ago, cough progressively worsening. No wheeze. Albuterol (no spacer) 4 puffs used twice- no improvement. Started nebulizer 2 days ago. Helps with SOB but not chest pain

Chest pain: 6-8/10 intensity, sharp, localized to center of chest, sub-costal and middle of back, associated with intermittent nausea, no vomiting, intermittent frontal headache, slight improvement with rest

Medications: Tylenol 1000 mg no improvement. Avoided using ibuprofen due to "some bad outcome with COVID".

PMH: Migraine, Generalized anxiety disorder, cochlear implant

Children's Wisconsin

Objective

P: 88, R: 36, T: 37.1^{0}C (oral), SpO2: 98% Wt: 66.1 kg

Physical Exam:

Gen: Alert, awake, mildly uncomfortable

Resp: tachypnea, no retractions, no wheezing, shallow breaths, decreased aeration in all lung fields

Musculoskeletal: no bruises, mild tenderness to deep palpation over center of sternum, non tender elsewhere

Treatments:

Albuterol Sulfate 5 mg + Ipratropium 0.02% 500 mcg Nebulization

Ibuprofen 600 mg Oral

Dexamethasone 16 mg oral

CXR

Children's Wisconsin

Chest X Ray AP/PA Lateral

Children's Wisconsin

Reassessment:

Albuterol Sulfate 5 mg + Ipratropium 0.02% 500 mcg Nebulization x2

She stated that her shortness of breath - improved. But continued to have chest/back pain – slight improvement.

P: 91, R: 36, SpO2: 98%

Gen: appears more comfortable

Resp: Improved aeration in all lung fields

Children's Wisconsin

Discharge and Follow up

Diagnosis: Mild Asthma Exacerbation with costochondritis

Discharged home with following:

Spacer

Albuterol 4-6 puffs q4h x24 hours and then as needed

Ibuprofen 600 mg q6h x 24 hours and then as needed
Dexamethasone 16 mg oral x1 To be taken 36-48 hours

5 days later – telephone call to family: Resolved SOB, chest pain/back pain/cough. Continuing with isolation for patient and quarantine of family members

Children's Wisconsin

Seattle Children's Hospital

- CC: Chest Pain
- HPI: 16 yo F with no significant PMH presents with chest pain
  - Chest pain started 1 day PTA and described as tightness and pressure 'like something sitting on my chest'.
    - Nothing seems to make pain better or worse
    - No medications tried at home
  - Has had wet cough for about 1 week that is slightly improving
  - Subjective fever for the first few days of illness
- ROS: Positive for 2 episodes of diarrhea 1 day PTA, but otherwise negative

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Seattle Children's Hospital

- PE:
  - Vitals – Temp 37.5, HR 98, BP 142/80, RR 22, Sat 99%
  - Gen – WDWN in NAD
  - HEENT – MMM, OP clear
  - CV – RRR, no M/R/G, CR <2sec
  - Resp – No increased WOB, lungs CTA bilaterally, good aeration and no wheeze, rales or ronchi
  - Chest – No TTP
  - Abd – Soft NDNT
  - Skin – Warm, dry, pink, no rash

Seattle Children's
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Seattle Children's Hospital

- UC Course
  - Ibuprofen given for chest pain with good improvement
  - Repeat vitals with improved BP to 125/80
  - EKG done and interpreted as normal
  - CXR done with clear lung fields and no pleural effusion or pneumothorax
  - COVID PCR sent and instructions to self isolate until results return
- COVID PCR positive the next day and pt care team contacted family with results, quarantine instructions and return precautions.

Seattle Children's
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Cook Children's

HPI:

14 year old male with PMHx of ADHD, Mild intermittent asthma presented to the clinic for chief complaint of moderate to severe headache x 4 days, non-bloody, non-bilious vomiting x 2 days but able to keep down clears, and mild sore throat

PE:

Normal exam aside from mild pharyngeal erythema, 2+ tonsils and mild generalized abdominal pain without rebound or guarding

Lab:

Molecular strep test negative

A/P:

Zofran 4mg ODT given

IV unable to be placed, 30 mg ketorolac and 50 mg diphenhydramine given IM

Passed PO challenge, patient reported headache was completely resolved. Patient discharged home with Zofran ODT and strict ER precautions

Cook Children's

Day 2

HPI:

Patient arrived at urgent care again, with chief complaint of altered mental status and rapid breathing, found to have fever in the urgent care

PE:

Patient with altered mental status, tachypnea with Kussmaul respirations and ketotic breath. Acanthosis nigricans noted on neck.

Lab:

Glucose >500

A/P:

IV started, transport team for our hospital was called who came quickly and began fluid resuscitation. Was taken to ED at our hospital.

Cook Children's

ED Course:

Na 127 K 3.7 Cl 101 CO2 <5, BUN 18, Cr 1.94, Glu 1015, Ca 9.5, Pho 2.8 Alb 4.6

Beta Hydroxybutyrate 9.05 (Range 0.02-0.27)

Hemoglobin A1C 11.8

WBC 13.13, Hgb 15.3, Hct 47.5 Platelets 259 %Neut 80.7, %Lymph 9.2, % Mono 7.5, % Eos 0.1, %Baso 0.5

VBG pH 6.97, PCO2 19, PO2 30, HCO3 3.8, Base Excess -30.1, Venous O2 sat 21.3

Sars CoV-2 NP and OP swab Positive

Blood and urine cultures sent, started on Rocephin while sepsis was ruled out

Head CT Normal

Cook Children's

Transferred to PICU - stayed in PICU x 5 days

Meds: Insulin infusion transitioned to subq and Lantus q 24, Metformin, IVFs, Lovenox, Rocephin (d/c'd once cultures were negative)

PICU Course, began having asthma exacerbation while in the PICU, managed with Albuterol; renal function normalized, electrolyte management

Transferred to the floor x 4 days, then discharged home to isolation for 10 more days.

Cook Children's

Ultimate diagnoses:

Hyperosmolarity secondary to glucose >1000

Hypernatremia secondary to insensible losses (Kussmaul respirations)

Resistant to insulin therapy

Electrolyte abnormalities

Covid-19

Discharged home with Lispro, Lantus, metformin and PRN glucagon

PM Pediatrics

15 y M presents with fever and body aches x 4-5 days

Throat pain and right sided neck swelling/pain

Telemedicine encounter with PMD – prescribed amoxicillin and Decadron empirically a few days prior

Developed rash on his hands and feet while on amoxicillin

Pediatrician referred him to evaluated for potential mononucleosis

Reports transient chest pain and SOB the night before but none during time of visit.

No cough/congestion

No known COVID-19 exposure

PMD: anxiety

PM Pediatrics URGENT CARE

Objective

T 37.3^{0}C, HR 132 bpm (repeated at 100 bpm), RR 24bpm (repeated 16 bpm), BP 117/73 mmHg, O2 99% on room air, Wt 59.7kg

General: Active, alert, well appearing in no acute distress, well hydrated

Head: Normocephalic/Atraumatic, large right sided lymph node with overlying erythema without streaking, no tenderness to palpation, full range of motion of neck

Eyes: Conjunctiva no erythema or discharge, lids normal

ENT: Oropharyngeal erythema without exudate, no petechia, uvula midline, moist mucous membranes, Tympanic membranes wnl, no mastoid ttp/swelling/redness

CV: Regular rate and rhythm, warm and well perfused, capillary refill < 2sec

Resp: Clear to auscultation, no wheezing, no retractions

Abd: Soft, non-tender, non-distended, no hepatosplenomegaly

Ext: Full range of motion, no swelling, mild blanching erythematous macular papular rash on dorsum of bilateral hands and feet

Neuro: Alert, oriented, normal strength, tone and gait.

Pediatrics URGENT CARE

Assessment/Plan:

15 y M with persistent fever, aches, lymphadenitis, rash and transient chest pain/shortness of breath in the setting of empirically prescribed amoxicillin and Decadron.

Patient is stable and well appearing in the office. Bloodwork was drawn for Monospot (resulted negative) and sent out for EBV Profile, Complete Blood Count, Comprehensive Metabolic Panel, Anti-Streptolysin O, Erythrocyte Sedimentation Rate, C-Reactive Protein and Blood Culture. Patient was scheduled to return for COVID-19 Nasopharyngeal testing. Case was discussed with patient's pediatrician and collective decision to discontinue Amoxicillin and initiate Clindamycin (for lymphadenitis). Patient was advised to follow up with pediatrician the next day and to seek emergent care for fever persisting more than 12-24 hours, worsening swelling, redness, pain or streaking, shortness of breath or chest pain

Pediatrics URGENT CARE

Follow up:

Labs

- CBC/Diff wnl
- **CRP 20.88**
- **ESR 87**
- ASO wnl
- EBV Profile c/w previous exposure
- CMP significant for Chloride 91, AG 23, otherwise wnl
- COVID–19 PCR Negative
- Blood Cx NGTD

Pediatrics URGENT CARE

Progression

Patient continued to have fever and developed dizziness 2-3 days later which led to parents checking a home blood pressure that was 76/40. They presented to the emergency room where there received fluids, started on Dopamine vasopressor support and initiated broad spectrum antibiotics. UC labs resulted same day as ER admission, notified patient who was already in ED. During ED visit he was found to be COVID-19 positive, with elevated D-dimer, procalcitonin, inflammatory markers and cardiac enzymes. He was admitted to the PICU for vasopressor supper (Epi and Dopamine) in treatment of suspected COVID-19 associated inflammatory reaction/carditis.

Pediatrics URGENT CARE

Discharge

At the end of the course, he was discharged home with full recovery.

Pediatrics URGENT CARE

Personal Experience Related to COVID-19 as an Administrator & Provider

Q & A Session