



COVID-19: The Pediatric Experience

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University of Wisconsin-Madison



**Project Echo for Pediatric Care 2018-2020
 COVID-19: The Pediatric Experience
 April 16, 2020
 Emma Mohr, MD, PhD**

Provided by the University of Wisconsin–Madison Interprofessional Continuing Education Partnership (ICEP)

Intended Audience:

Pediatric emergency care professionals

Objectives:

As a result of this educational regularly scheduled series, learners will be able to:

1. Utilize new skills and guidelines determined to be safe for children when accessing pediatric trauma.
2. Identify proper tools and standardized practices in order to improve the diagnosis and treatment of pediatric patients.
3. Define roles and responsibilities of team members who triage pediatric emergencies in order to identify communication strategies that result in effective patient care.

Policy on Disclosure

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| Name/Role | Financial Relationship Disclosures | Discussion of Unlabeled/Unapproved uses of drugs/devices in presentation? |
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| Benjamin Eithun, MSN, RN, Coordinator | No relevant financial relationships to disclose | No |
| Kim Sprecker, OCPD Staff | No relevant financial relationships to disclose | No |
| Emma Mohr, MD, PhD, Presenter | No relevant financial relationships to disclose | No |

Accreditation Statement

In support of improving patient care, the University of Wisconsin–Madison ICEP is jointly accredited by the Accreditation Council for Continuing Medical Education (ACCME), the Accreditation Council for Pharmacy Education (ACPE), and the American Nurses Credentialing Center (ANCC) to provide continuing education for the healthcare team.

Credit Designation Statements

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Continuing Education Units (CEUs)

The University of Wisconsin–Madison ICEP, as a member of the University Professional & Continuing Education Association (UPCEA), authorizes this program for 0.1 CEUs or 1 hour.

Disclaimer: All photos and/or videos included in the following presentation are permitted by subjects or are not subject to privacy laws due to lack of patient information or identifying factors



Claiming credit

Follow the instructions below, and contact us at projectecho@surgery.wisc.edu with any questions.

1. Create account with the UW Interprofessional Continuing Education Partnership

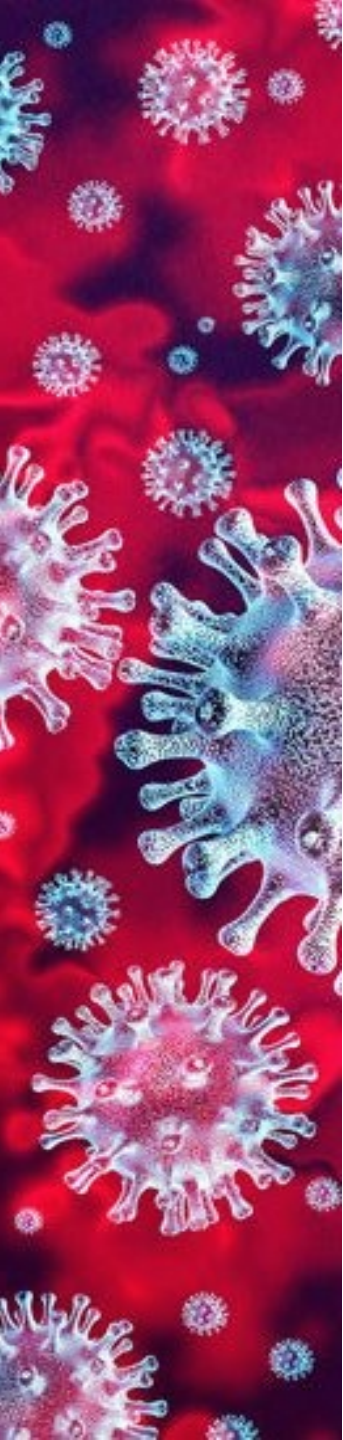
<https://ce.icep.wisc.edu>

2. During the live presentation, and in the follow-up email, you will be provided a code. Text that code to a number we provide you, using a cell phone associated with your account.

**Text WURQUC
to 608-260-7097**

(save this number as ECHO Credit, it will never change)

3. All done!! Log onto ICEP to view or print your credit letter.

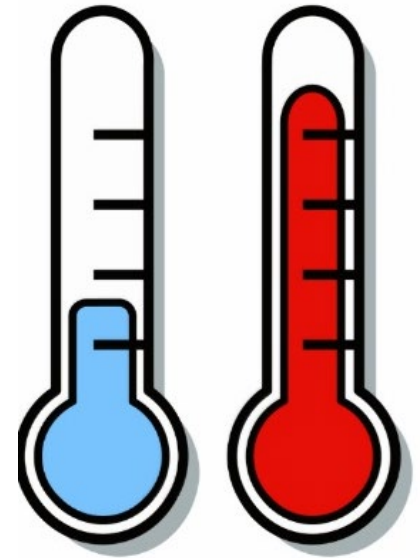


Outline and Goals

- Understand the clinical presentation and course of pediatric COVID-19 cases
- Understand who we test and why
- Learn how to manage infection in pediatric patients
- Learn what we are doing as a health care community and citizens to decrease the impact of the COVID-19 pandemic

Case presentation: Initial Presentation

- <2 month old infant, presents to ED with temperature of 100.5°F
- 2 week history of congestion
- Increased fussiness that day
- Called nurse line earlier with 100.3°F rectal temperature, instructed to go to ED if temperature >100.4°F
- Exam: Active with normal appearance, comfortable work of breathing, normal breath sounds, TMs normal, no rhinorrhea
- Labs: WBC 4.6, 31% PMNs, 40% lymphs
 UA: negative LE and nitrites, 0-2 WBC
 CSF: glucose 56, protein 37, nucleated cells 7, RBC 18
- Given ceftriaxone dose and admitted to hospitalist service



What would you do next?

1. Respiratory viral panel
2. Watch and wait for culture growth while on ceftriaxone
3. SARS-CoV-2 PCR
4. All of the above

Audience response requested

Case presentation: Clinical course

- Coronavirus 2019 PCR test positive
- Blood, CSF and urine cultures with no growth
- Stable respiratory status, some increased stool output
- Breastfeeding well
- Discharged home the next day
- Isolation recommendations for all household members for 14 days

CORONAVIRUS 2019 (COVID-19), PCR
(UWH)

Detected !!

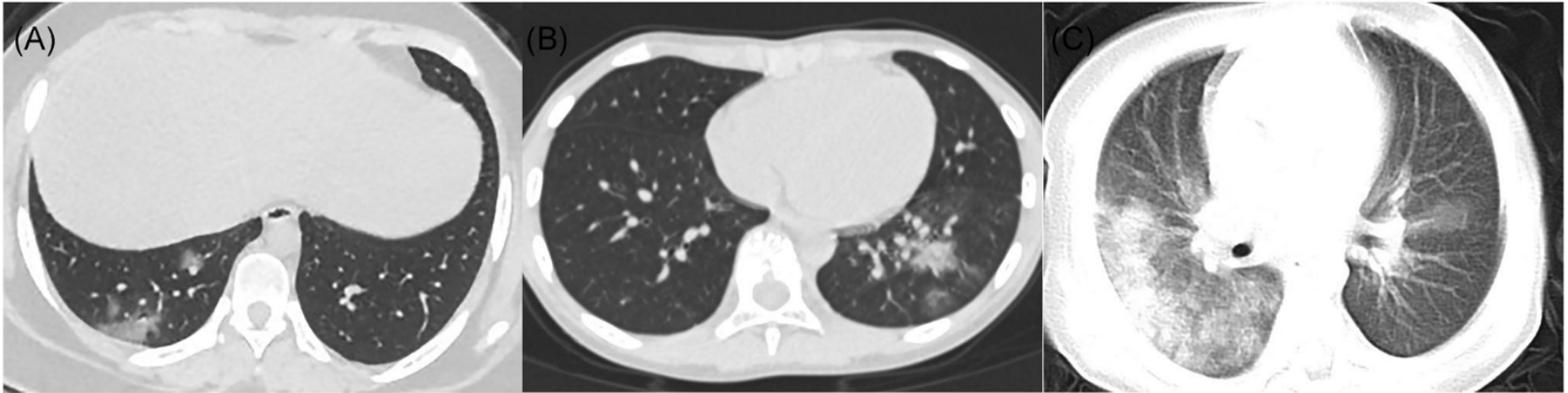
Symptoms

- Milder symptoms than adults
- Fever (33-100%)
- Cough (28-100%)
- Rhinorrhea/sneezing (6-20%)
- Sore throat (5-40%)
- Headache/dizziness (10%)
- Diarrhea (10-15%)
- Dyspnea/tachypnea (0-17%)
- Skin manifestations (?)



Clinical Course

- Asymptomatic (0-13%)
- Acute URI (20-65%)
- Mild pneumonia (27-80%)
- Severe pneumonia (0-16%)
- Critical case (0-1.5%)
- Co-infection with other respiratory viruses common (up to 40%)



Clinical Outcomes

- Fever 1-2 days, range up to 8 days
- Complete blood counts mostly normal
- CRP normal or temporarily increased
- Symptoms mostly resolve in a week

- Critically ill patients typically have underlying medical condition: congenital heart disease, chronic lung disease, immunosuppression
- Pediatric deaths in US: 3

Fever



Cough



Shortness of breath



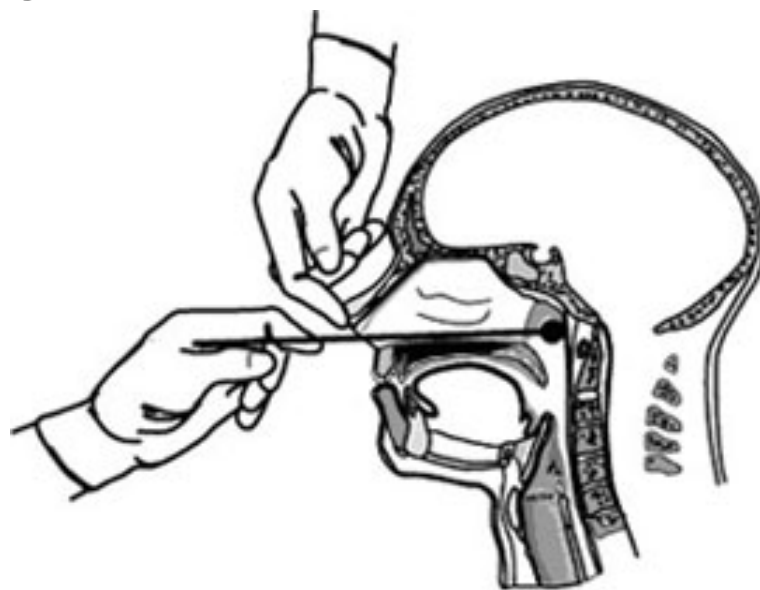
Transmission

- Person to person by respiratory droplets
- Incubation period: 2-14 days
- RNA detected from nasopharyngeal/throat swabs 4-48 hours after symptom onset
- RNA is undetectable after 6-22 days (mean 12 days)
- RNA present in stool from 3 to >30 days after illness onset



When should COVID-19 testing be done?

1. If it will change your clinical management
2. If it will help conserve PPE
3. Public health implications



Audience response requested

Current Testing Recommendations

- Goals are to protect healthcare workers and patients, and conserve PPE
- Inpatients: any patient with symptoms or undergoing aerosolizing procedures
 - Patients screened prior to surgery, entering ICU
- Outpatients: only with moderate symptoms, or if mild symptoms with an underlying medical condition



Uconnect. Note, testing recommendations change frequently!

Management: clinical

- Supportive care recommended
- No approved antiviral medications
 - UW Health treatment guidelines exist for adult patients at clinician discretion
- Plasma therapy trial for adults initiated
- Pediatric guidelines are being developed
 - Supportive care is the recommended first line therapy

Plasma from recovered COVID-19 patients tested as therapy at UW Health

April 13, 2020 | By Emily Kumlien | For news media 

A COVID-19 patient at UW Hospital has received the first transfusion of plasma from a local patient who donated it since recovering from the disease.

The UW School of Medicine and Public Health (SMPH) and UW Health are part of a [nationwide effort to study](#) whether plasma from people who have recovered from COVID-19 given to patients who are seriously ill with the disease can help shorten the duration or severity of their illness.

We need better pediatric data!

USA PEDIATRIC COVID-19 REGISTRY

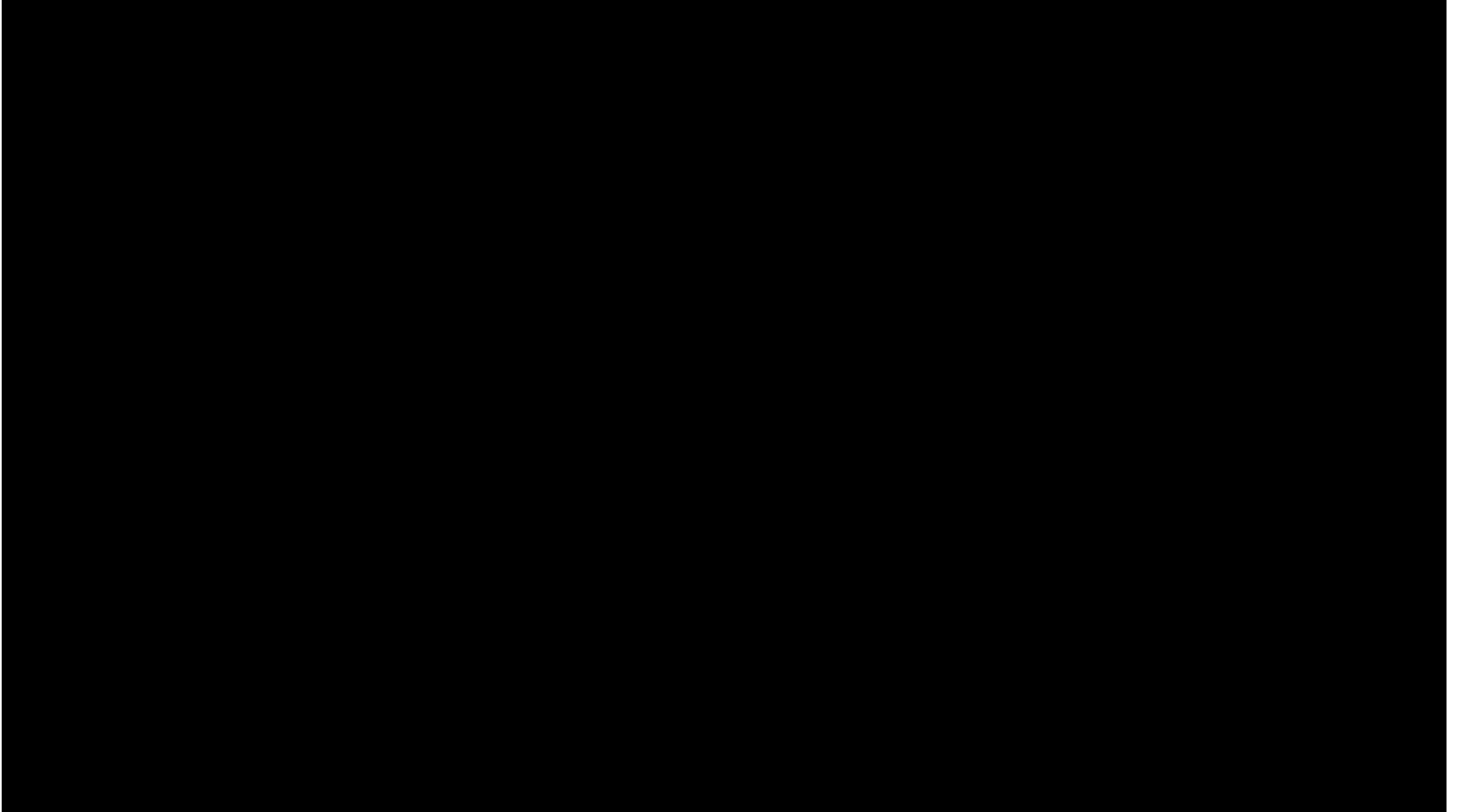
We now have a survey to register ALL pediatric COVID-19 patients in the USA!

This survey is for ALL pediatric patients less than 21 years of age in the USA, including:

- General Pediatric patients, with or without other co-morbidities
- Immunocompromised pediatric patients
- Transplant and cellular therapy recipients

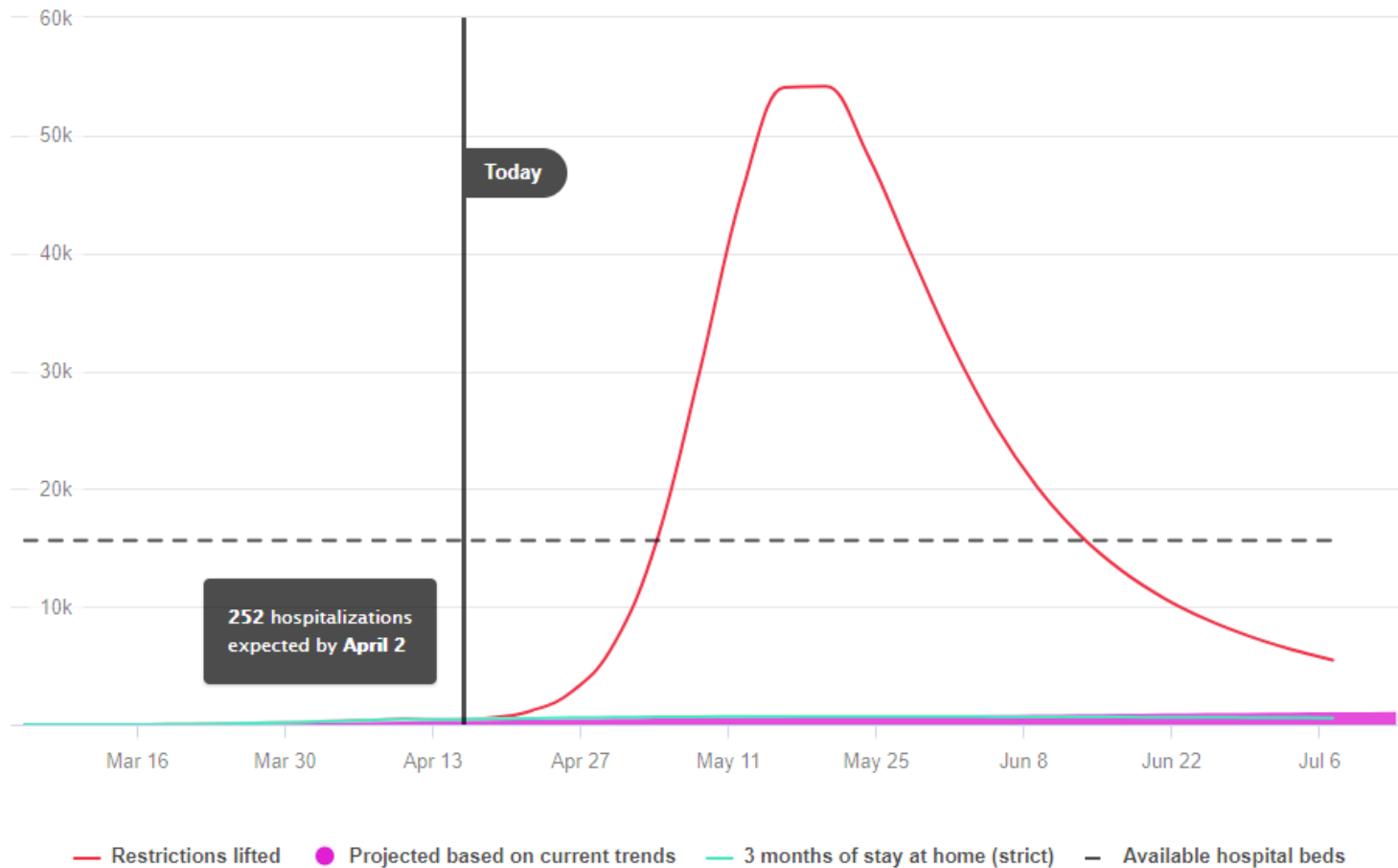
Please contact **Emma Mohr by Epic Inbasket** if you know of a COVID19 positive pediatric patient within UW Health

Management: public health



Management: public health

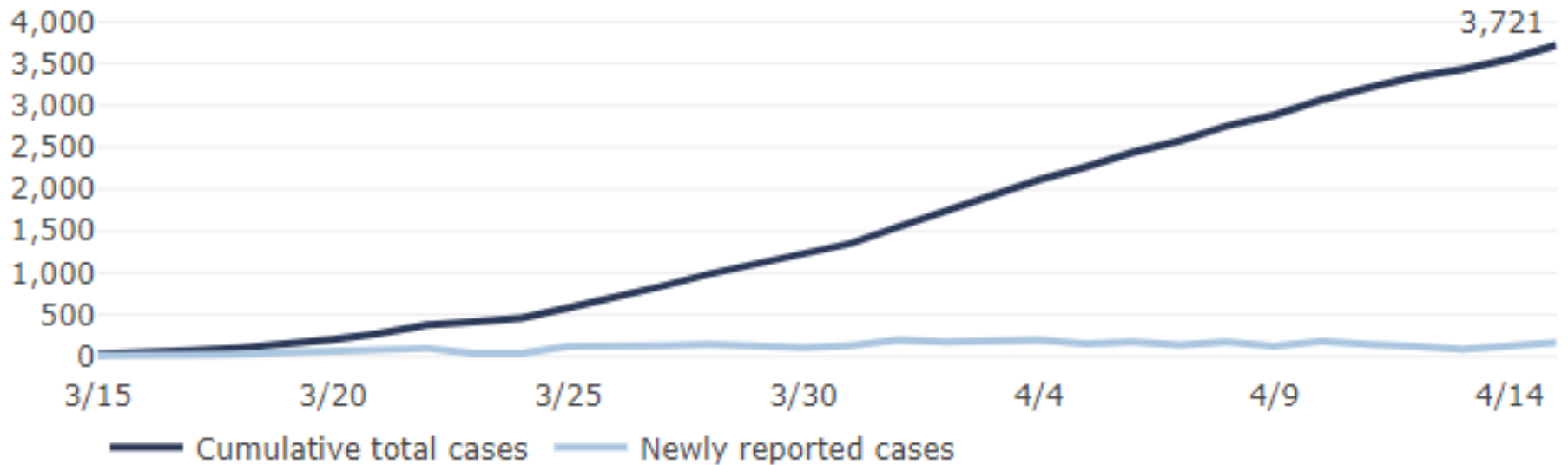
Projected hospitalizations
Wisconsin



Wisconsin COVID-19 cases

Cumulative total and newly reported COVID-19 cases by date confirmed

Updated: 4/15/2020





Conclusions

- Pediatric symptoms are milder than adults
- Patients with underlying medical conditions are at higher risk
- Supportive care is recommended
- Notify pediatric ID of all COVID positive pediatric patients for national registry
- Social distancing works. Keep it up.