

Access the recorded webinar here: <https://attendee.gotowebinar.com/recording/8135789420711565825>

Access speaker bios here: <https://files.asprtracie.hhs.gov/documents/aspr-tracie-child-health-and-wellness-webinar-speaker-bios.pdf>

Access the transcript here: <https://files.asprtracie.hhs.gov/documents/aspr-tracie-hidden-consequences-child-health-and-wellness-webinar-transcript.pdf>

T R A C I E

HEALTHCARE EMERGENCY PREPAREDNESS
INFORMATION GATEWAY

Hidden Consequences: How the COVID Pandemic is Impacting Children (Webinar Series)

Webinar 1: Child Health and Wellness

September 30, 2020

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- Subject-specific, SME-reviewed “Topic Collections”
- Unpublished and SME peer-reviewed materials highlighting real-life tools and experiences



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- Area for password-protected discussion among vetted users in near real-time
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Resources

- [ASPR TRACIE COVID-19 Page](#)
 - [COVID-19 At-Risk Individuals Resources](#)
- [ASPR COVID-19 Page](#)
- [CDC COVID-19 Page](#)
- [Coronavirus.gov](#)
- [ASPR Pediatric Centers of Excellence](#)
 - [University Hospitals Rainbow Babies and Children's Hospital](#)
 - [Regents of the University of California, San Francisco](#)



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Robert Kadlec, MD

Assistant Secretary for Preparedness and Response, HHS ASPR

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Moderator- John Hick, MD
Hennepin Healthcare

Resumption of Routine Care

Matthew Denenberg, MD

Vice President, Medical Affairs, Spectrum Health Helen
DeVos Children's Hospital

Improve Health Inspire Hope Save Lives



**Spectrum
Health**

Improve health, inspire hope and save lives™



31,000
Employees



**\$6.9
Billion**
Enterprise*



**\$585
Million**
Community Benefit*



**\$30
Million**
Philanthropy*



3,300
Volunteers*



4,500
Physicians
and Advanced
Practice Providers
(employed and independent)



14 Hospitals



150
Ambulatory Sites



40,000
Telehealth Visits*
24/7



415,000
Lives Touched
Through Healthier
Communities
(most recent fiscal
year data available)



**Priority
Health**
A Health Plan
with 1 Million
Members Served*



7,000+
Employers
Contracted by
Priority Health



97%
Michigan Primary
Care Doctors
in Network












**Venture
Capital**
\$100 Million
Fund

*Fiscal year 2019 - 5/19/2020

COVID-19 SHWM Dashboard

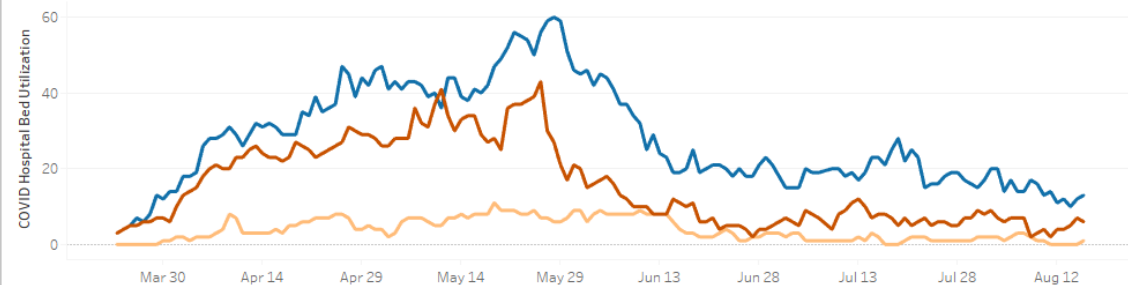
Command Center Status is Blue

Hospital - Facility Cases (ED, Obs, IP)  4/24/2020 4:02:00 AM					Recoveries**(IP&Obs) 		COVID-19 Deaths		Virtual 4/23/2020 11:45:00 PM	
	Non-ICU Pending	Non-ICU Positive	ICU Pending	ICU Positive	Prev. Day:		Positive COVID-19 Hospitalized Patients			Previous 24 hours Cumulative
	7	21		19	Cumulative: 74		19			
Hospital - Adult Patients 4/24/2020 5:15:00 AM					Ventilators		Chatbot - Users 157 15,005 Screening Calls 1,130 49,296			
	Non-ICU Patients	Non-ICU Utilization	ICU Patients	ICU Utilization	Ventilators In Use					
	518	49.2%	81	57.4%	72		17%			
COVID-19 SHWM Lab Testing 4/23/2020 12:10:00 PM					Pharmacy		Additional Metrics			
	Total	Pending	Positive	Resulted % Positive	Negative		Medication Supply Status		Morgue Capacity	
	Prev. Day: 655*		68*	10.49%*	587*					
	Cumulative: 9,521*		961*	10.29%*	8,419*					
Team Members 4/23/2020 8:40:37 PM		4/23/2020 12:10:00 PM		Lab Capacity 4/24/2020 8:00:00 AM						
	Surveys Taken	Surveys Screened "Not OK"	Employees Positive		Test Supply	Collection Supply	Test Capacity Per Day	Avg. Test Per Day (prev. 7 days)	Blood Supply Status	
	Prev. Day: 16,171	60	1		Current QTY: 20,706	38,185		532	Spectrum	Versiti
	Cumulative: 500,095	2,375	57		MaxCap. Days on Hand: 13	23	1,630		Green	Green
					Avg. Days on Hand: 39	72				
Supply Chain 4/24/2020 6:02:18 AM				References						
	N95 Masks	Surgical/Isolation Masks	Face Shield / Goggles / Glasses	Gloves	Gowns	* Indicates metric is currently manually entered into this dashboard ** Recoveries are COVID-19 confirmed hospitalized patients who have been discharged				
	Current QTY: 138,800	4,027,519	55,836	17,340,350	15,619					
	Days On Hand: 116	201	237	113	61					
	Ave.Daily Demand: 1,200	20,057	236	153,943	254					
	Non Tier 1 QTY: 146,900	437,047	9,404	1,099,018	76,622					

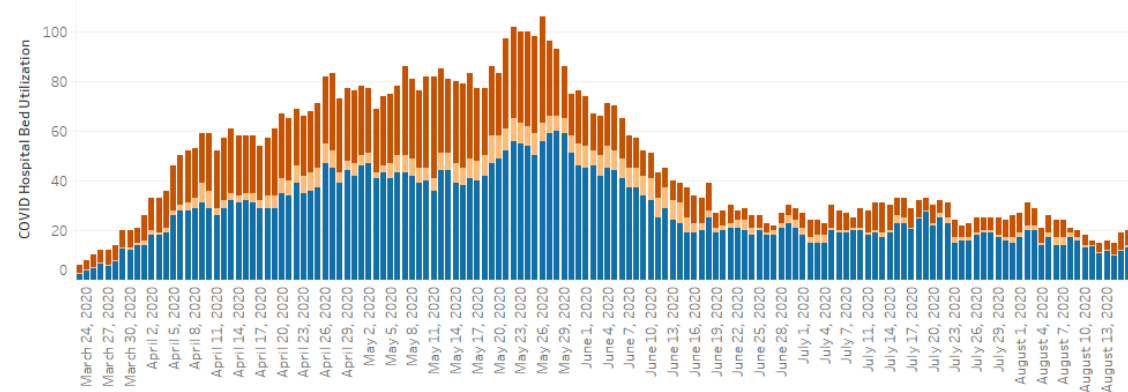
Collaborative COVID Census – Mercy, Metro, SH

- Mercy Health Saint Marys Grand Rapids
- Metro Health - University of Michigan Health
- Spectrum Health Kent County

COVID Hospital Bed Utilization - Kent County



COVID Hospital Bed Utilization Combined - Kent County



Pediatric Data

Count of Test Type	Column Labels				
Row Labels	Blood	Nares, Bilateral	Nasopharynx	(blank)	Grand Total
COVID-19 IGG ANTIBODY	27				27
COVID-19 PCR		169	547		716
Positive Outside Hospital				1	1
Grand Total	27	169	547	1	744

Among those who test positive, ~3% are admitted

Row Labels	Count of Status
Admitted	23
ED only	115
Outpatient	606
Grand Total	744

33% Hispanic

Ethnicity	Count
Hispanic	230
Non-Hispanic	369
Unknown	105
Total	704

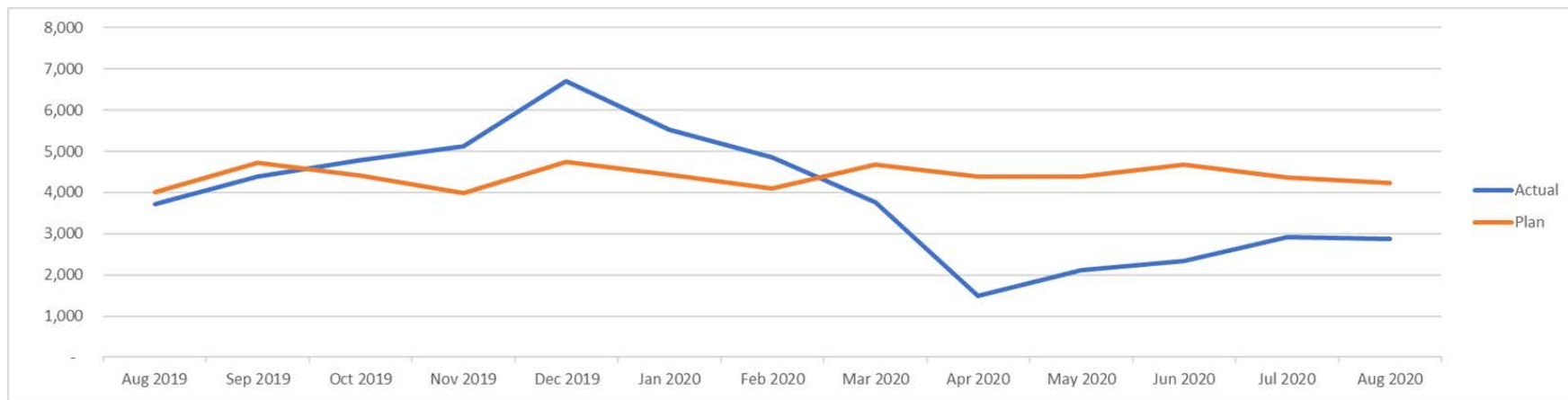
52% Male

Row Labels	Count of Gender
Female	355
Male	389
Grand Total	744

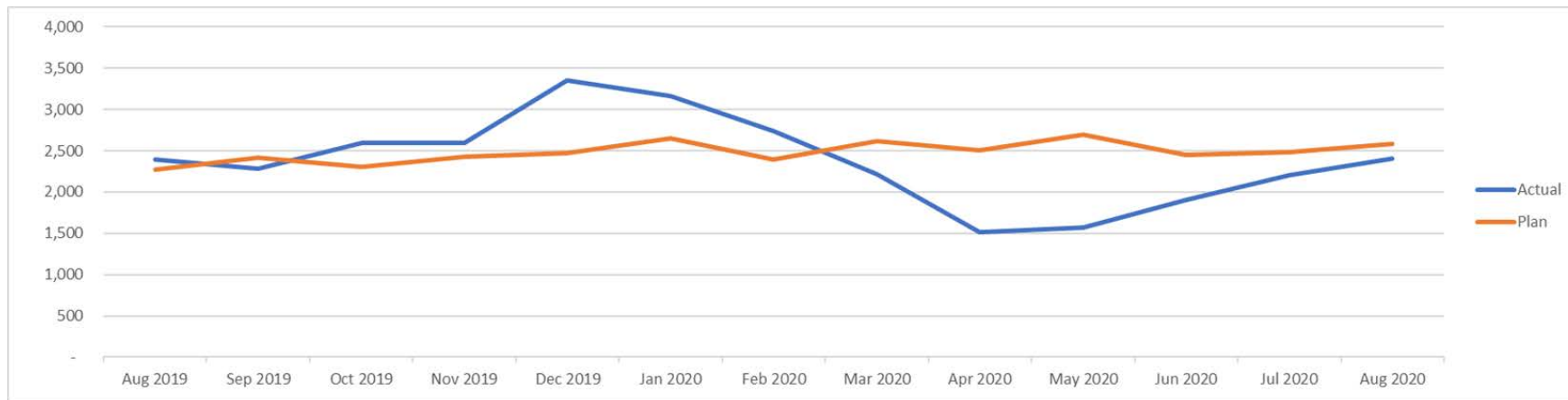
57% are ≥ 10 years

Row Labels	Count of AgeCat
≥ 10 y.o.	424
< 10 y.o.	320
Grand Total	744

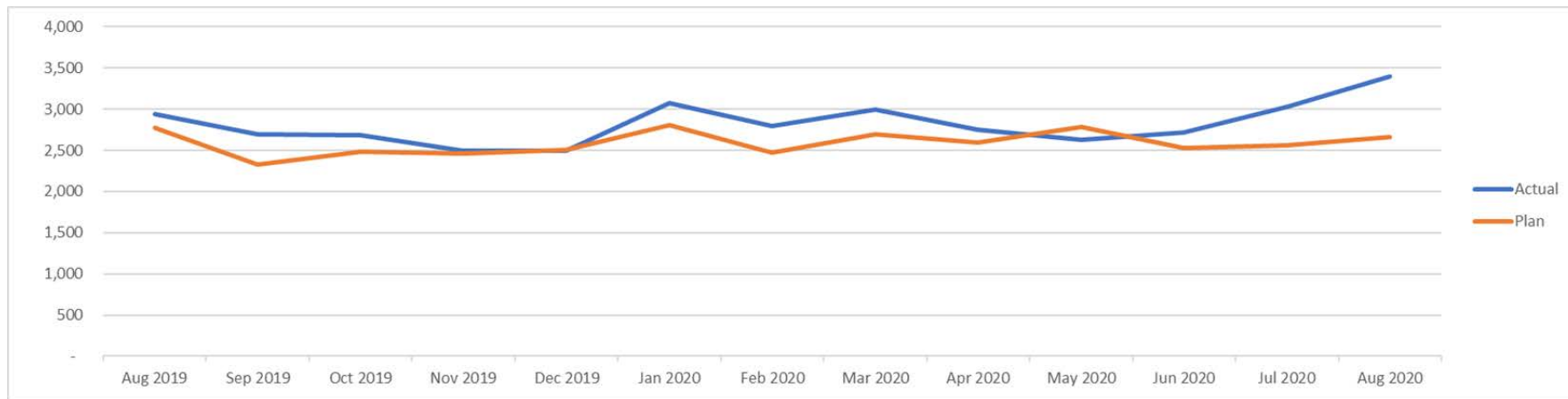
ED Visits



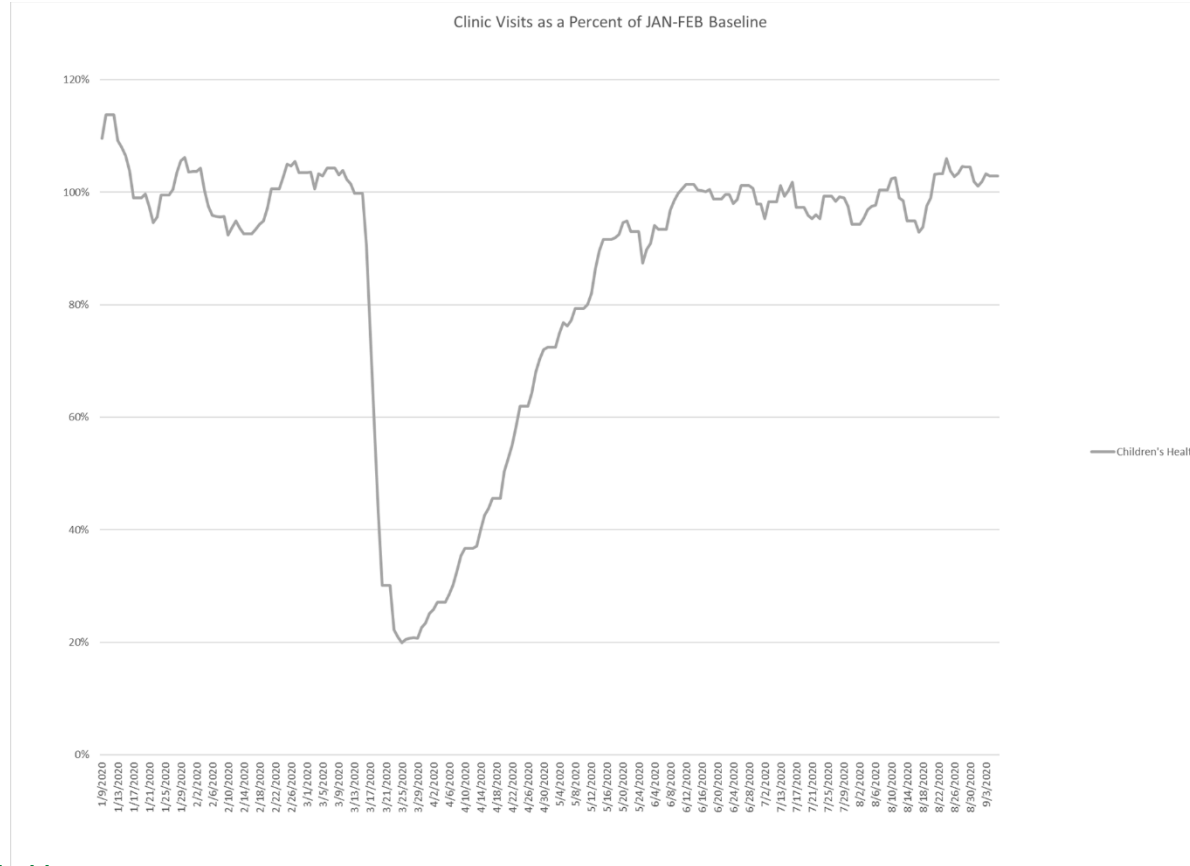
IP Days without NICU



NICU Days



Clinic Visits



Missed Immunizations and Lead Poisoning Screening



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Teresa Holtrop, MD, FAAP

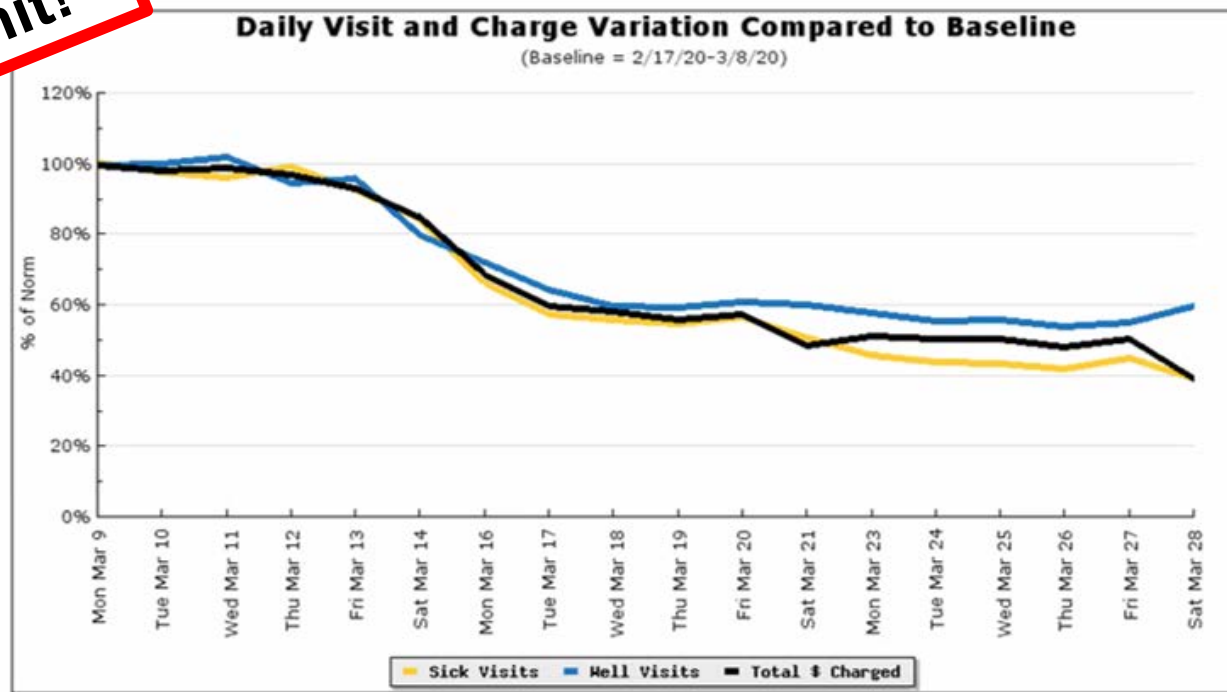
Executive Director and Medical Director, Kids' Health Connections and
Immediate Past President, Michigan Chapter American Academy of
Pediatrics



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In-Person Visits Dropped (4/2/2020)

COVID hit!

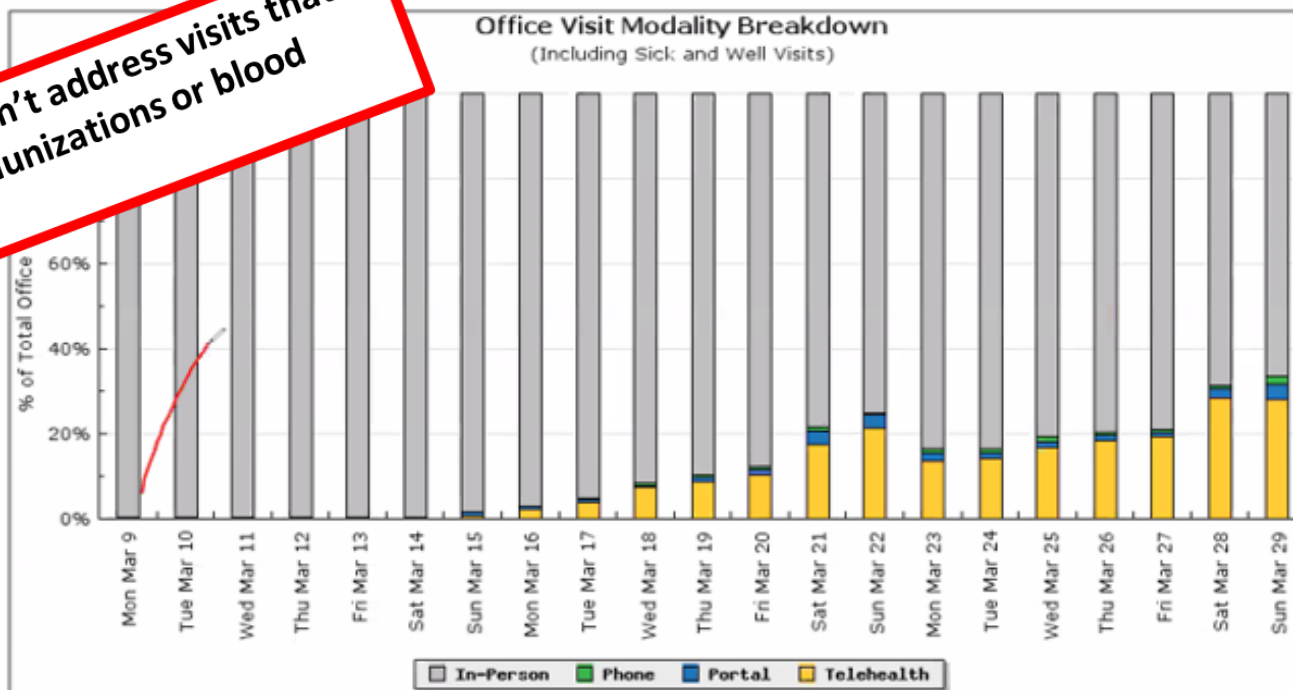


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Data from the Pediatric Management Institute's webinar series "The Business Impact of COVID-19 on Pediatric Practices"

Telehealth Visits Rose (data as of 4/2/2020)

But this doesn't address visits that require immunizations or blood draws



Early Release

NEWS

Child vaccinations plummet during COVID-19 pandemic, worrying Michigan health officials

Sarah Lehr Lansing State Journal

Published 11:20 a.m. ET Jul. 30, 2020 | Updated 1:31 p.m. ET Jul. 30, 2020

FIGURE. Weekly changes in Vaccines for Children Program (VFC) provider orders* and Vaccine Safety Datalink (VSD) doses administered† for routine pediatric vaccines — United States, January 6–April 19, 2020

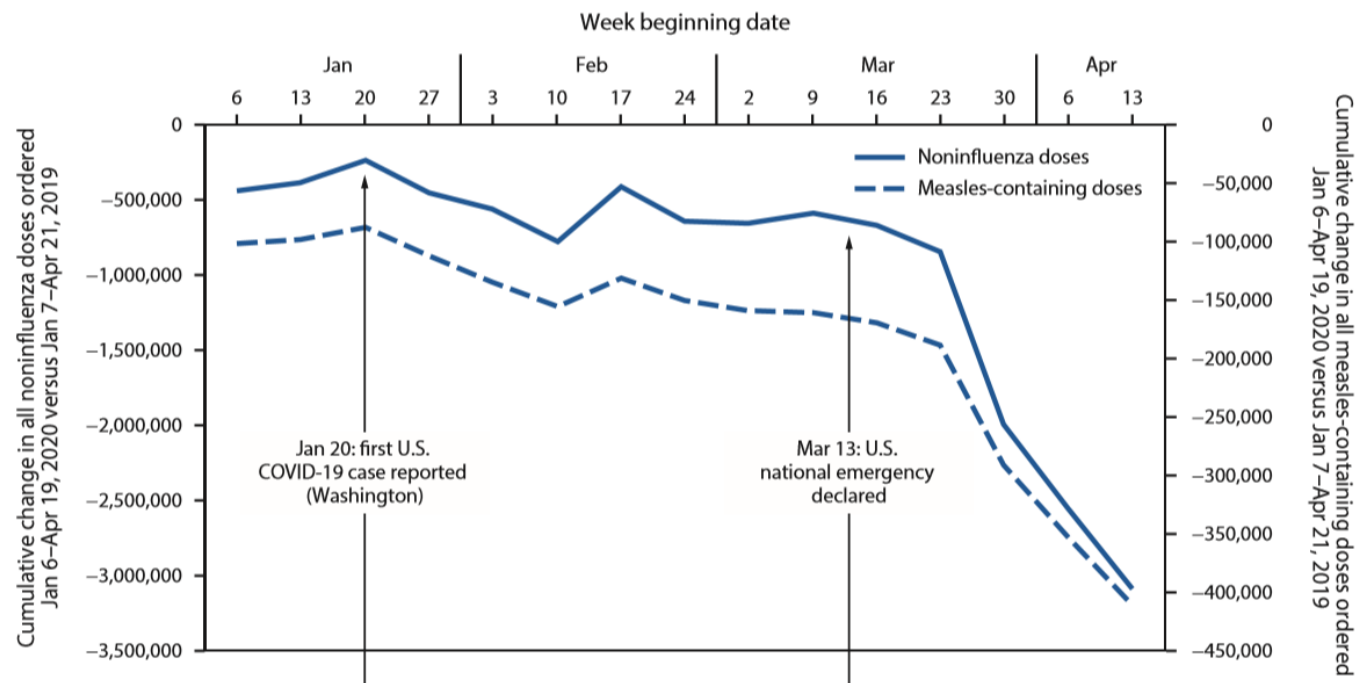
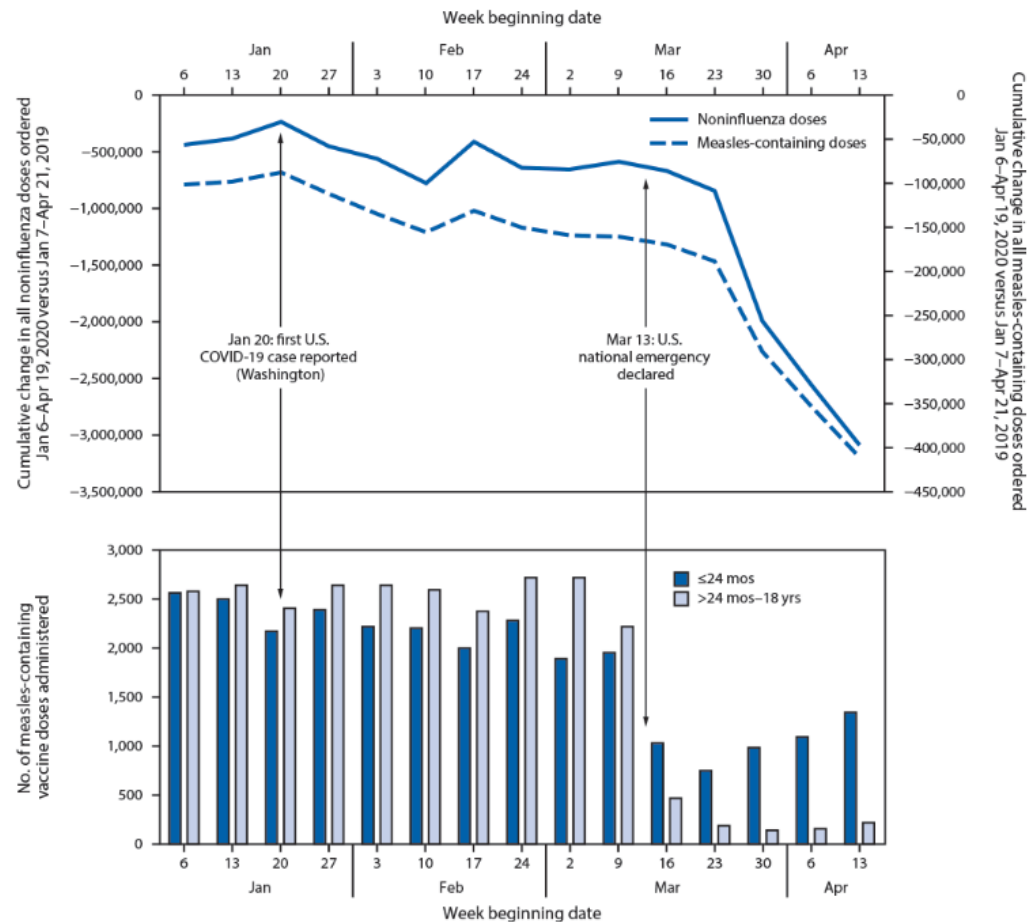


FIGURE. Weekly changes in Vaccines for Children Program (VFC) provider orders* and Vaccine Safety Datalink (VSD) doses administered[†] for routine pediatric vaccines — United States, January 6–April 19, 2020

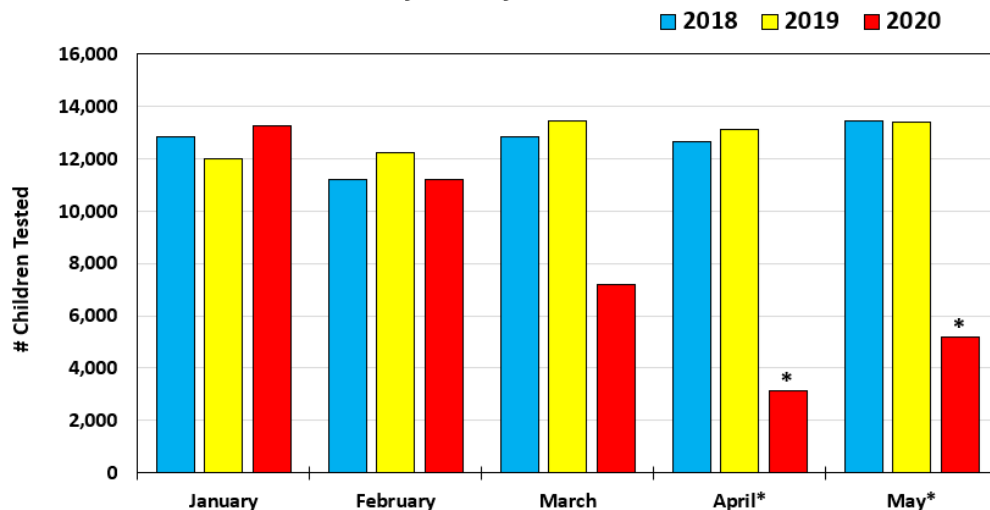


* VFC data represent the difference in cumulative doses of VFC-funded noninfluenza and measles-containing vaccines ordered by health care providers at weekly intervals between Jan 7–Apr 21, 2019, and Jan 6–Apr 19, 2020.

Lead Testing Rates

(Data provided by the MI Childhood Lead Poisoning Prevention Program)

Number of Children < 6 Tested for Blood Lead in Michigan
January to May 2018 to 2020



Data source: MDHHS Data Warehouse,
Data current as of 07/06/2020

* Data for April 2020 and May 2020 may be
incomplete and are considered provisional.

TABLE 2. NUMBERS OF CHILDREN^A UNDER AGE 6 TESTED FOR BLOOD LEAD BY MONTH FROM JANUARY TO MAY 2018 - 2020

Month	# Tested: 2018	# Tested: 2019	# Tested: 2020	% Change: ^B 2018 to 2019	% Change: ^B 2019 to 2020	X ² for Difference ^C between Years	X ² P-value
January	12,819	12,007	13,271	-6.33%	10.53%	64.61	< 0.0001
February	11,205	12,242	11,226	9.25%	-8.30%	60.80	< 0.0001
March	12,824	13,421	7,212	4.66%	-46.26%	2,104.27	0.00
April*	12,659	13,093	3,129	3.43%	-76.10%	6,588.78	0.00
May*	13,448	13,400	5,188	-0.36%	-61.28%	4,234.82	0.00

Data source: MDHHS Data Warehouse, Data current as of 07/06/2020

Implications

- Increased risk for outbreaks of vaccine-preventable diseases
- Children at risk for lead poisoning due to decayed housing situations spending more time in contaminated living conditions; greater likelihood of significant lead poisoning – long-term impact on developmental outcomes

Lead and Test Scores

Students whose blood had a higher lead level scored lower on MEAP tests based on a study of 21,281 Detroit Public School students.

Average Lead Levels

(Lead levels are measured in micrograms of lead per deciliter of blood)

	Advanced	Proficient	Partially Proficient	Not Proficient
Math	5.8	6.5	8.3	9.1
Reading	5.4	7.0	8.1	8.8
Science	6.0	7.5	8.7	9.3

Summarized from Zhang, N. et al. (2013). [Early Childhood Lead Exposure and Academic Achievement: Evidence from Detroit Public Schools, 2008-2010](#). American Journal of Public Health, Vol 103, No. 3.



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Carolyn levers-Landis, PhD, DBSM

Clinical Psychologist, Professor of Pediatrics, Division of
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Children's Hospital, UH Cleveland Medical Center

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Member of the Society of Behavioral Sleep Medicine (SBSM) COVID-19 Task Force

Some content summarized from “Objectives and Summary Recommendations for Managing Sleep during a Pandemic” in the journal *Behavioral Sleep Medicine*

Authors:

- Earl Charles Crew
- Kelly Glazer Baron
- Michael A. Grandner

- Carolyn E. levers-Landis
- Christina S. McCrae
- Michael R. Nadorff
- Sara Nowakowski
- Skye Ochsner Margolies
- Kathryn Hansen

Importance of Sleep During a Pandemic

Healthy sleep is necessary for the following:

- Immune defense
 - Especially important during a pandemic
- Emotion regulation
 - Also vital during a high-stress event
- Cognition/memory
- Metabolism (weight management)
 - May help mitigate weight gain

The COVID-19 Pandemic is a Source of Stress for Many Children and Adolescents

Potential stressors:

- Changing routines
- Family or friend illness/death
- Financial hardships due to job losses
 - Food insecurity
 - Having to move in with friends/relatives or into a shelter, possible homelessness
- *These are magnified for children from lower socioeconomic groups & those with special healthcare needs or psychological disorders (e.g., anxiety/depression)*

School Type/Schedule Effects on Sleep:

In-School Instruction

- Some schools are continuing with early start times (e.g., 7:40 a.m.)
- Research has shown that a start time of 8:30 a.m. or later is better for older children and adolescents
 - Better mood, higher grades, fewer car accidents
- Challenging for those with later circadian rhythms
- With the added stress from the pandemic, early start times are even more of a health concern

Bin-Hasan S, Kapur K, Rakesh K, Owens J. School start time change and motor vehicle crashes in adolescent drivers. *J Clin Sleep Med*. 2020;16(3):371–376

School Type/Schedule Effects on Sleep:

In-School Instruction

- Added stress of being around peers but having limited social interactions
- Students are spread out, even at lunch time
 - Difficult to talk
 - May not be with close friends
- Lunch times are varied to have fewer students in the cafeteria
 - Students might eat as early as 10:30 a.m. or as late as 1:30 p.m., disrupting circadian rhythms

School Type/Schedule Effects on Sleep:

In-School Instruction

Benefits of in-school instruction for sleep are the following:

- Need for a regular wake time on weekdays
 - Entrain circadian rhythm
- More activity (physical and social)
 - Builds up the need for sleep
- For some children/adolescents, psychological benefits from the return to some semblance of “normal life” (reduced stress)

School Type/Schedule Effects on Sleep:

Hybrid Instruction

- Some students are attending school 2-3 days/week and are home on the other days
- Others might attend for half days
- Challenge when in-school start times differ substantially from virtual/on-line class schedule
- Some students might also be working part-time jobs around these varied schedules, disrupting their routines and sleep even more

School Type/Schedule Effects on Sleep:

Hybrid Instruction

- Irregular sleep can occur not just between weekdays and weekends (with sleeping in on Saturday/Sunday)
- During the week, wake times can also vary
- Irregular sleep has been shown to have negative effects on:
 - mood
 - weight regulation (e.g., preference for sugar-sweetened beverages)
 - and other health parameters

School Type/Schedule Effects on Sleep:

Hybrid Instruction

- Benefits of hybrid school instruction for sleep might be as follows:
 - Psychological benefits due to a “break” from wearing a mask and maintaining physical distancing
 - More flexibility in the day that allows for regular breaks to go outside and be physically active

School Type/Schedule Effects on Sleep:

Virtual/On-line Instruction

- Depends upon the school and the age of the child regarding its structure
- Some students are at home watching their teachers and other students in the regular classroom, requiring a regular wake-up time
- Some school districts might assign work or have some videos that can be watched at students' discretion, allowing for a variety of sleep/wake schedules
 - This is even more challenging when parents are working outside of the home during the day

School Type/Schedule Effects on Sleep:

Virtual/On-line Instruction

- Those with more flexible virtual instruction are most at risk for delayed or irregular sleep schedules
- May stay up very late at night (or into the next morning)
- May nap during the day
- Some adolescents are adopting very irregular schedules (not just flip-flopped ones)

School Type/Schedule Effects on Sleep:

Virtual/On-line Instruction

- Benefits of virtual instruction:
 - Students who have a more delayed circadian rhythm (particularly older adolescents) can plan a schedule allowing for synchrony
 - Synchrony has been shown to be associated with many psychological and physical health benefits

Behavioral Strategies for Healthy Sleep for Children/Adolescents during a Pandemic

1. Establish a regular sleep/wake schedule
 - Try to keep the wake-up time within a 2-hr window
2. Encourage exposure to natural sunlight in the a.m.
 - Could be from sitting by a window with sun exposure
3. Keep a routine – sleeping, eating, physical activity, and socialization
4. Get plenty of physical activity daily (1-hour minimum)
5. Plan regular fun activities – could be a new hobby/skill

Behavioral Strategies for Healthy Sleep for Children/Adolescents during a Pandemic

6. Eat healthy foods and limit any caffeinated beverages/foods in the afternoons/evenings
7. Set limits in the evenings on electronics (particularly any news content about the pandemic)
8. Exposure to light (including from electronics) should be limited approximately one hour prior to bedtime
9. Get into bed only when sleepy – the bedroom should be cool and quiet
10. If not sleepy at bedtime, get up and do an activity outside of the bed until feeling sleepy – then return

SBSM COVID-19 Task Force Reference

Crew EC, Baron KG, Grandner MA, et al. **The Society of Behavioral Sleep Medicine (SBSM) COVID-19 Task Force: Objectives and Summary Recommendations for Managing Sleep during a Pandemic** [published online ahead of print, 2020 Jun 13].

Behav Sleep Med. 2020;1-3.doi:10.1080/15402002.2020.1776288

Accident or Abuse: Recognizing Concerns for Providers

Lolita McDavid, MD, MPA
Medical Director
Child Advocacy and Protection
Rainbow Babies and Children's Hospital

Mandated Reporters

- In most jurisdictions, every type of professional who works with children are mandated reporters
- Mandated reporters are held harmless, i.e., have immunity from prosecution as long as the report was made in good faith and on a reasonable basis

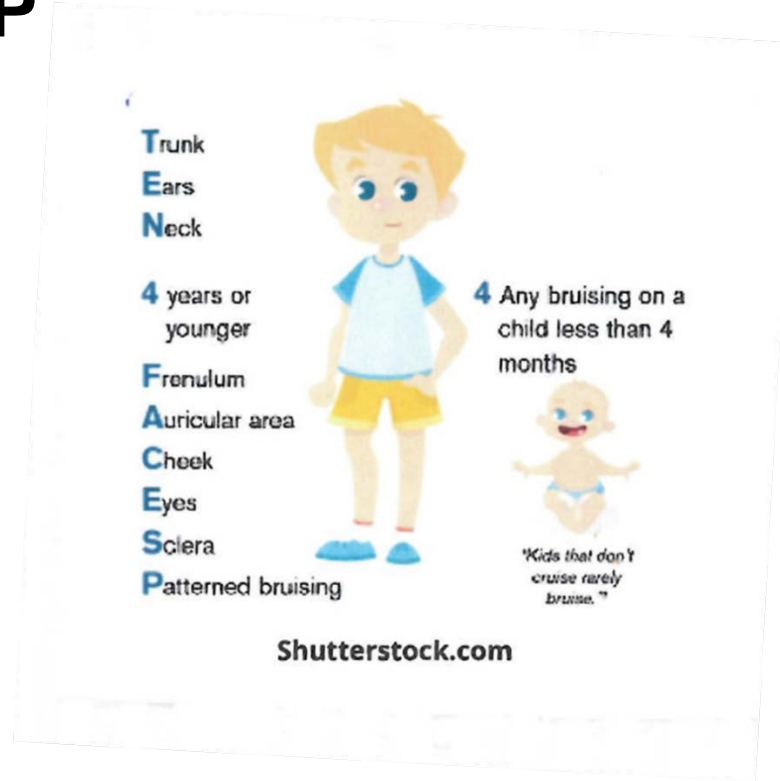
Child Abuse and Neglect in the Time of COVID-19

- 20% of reports of abuse and neglect are made by educational personnel, making them the primary reporters (1)
- Double digit percentage decreases in report to child maltreatment hotlines are a reflection of decreased contact between child and mandated reporters such as teachers, community youth programs and health care providers (1)
- Telehealth limits the ability to assess children or parents in a space where they have privacy from an abuser (2)

1- Thomas EY, Anurudran A, Robb K, Burke TF. Spotlight on child abuse and neglect response in the time of COVID-19. Lancet Public Health. 2020;5:e371.

2- Humphreys KL, Myint MT, Zeanah CH. Increased risk for family violence during the COVID-19 Pandemic. Pediatrics. 2020;146 (1) e20200982

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The History

- Who witnessed the injury?
- Is the history consistent with the extent of the injury?
- Is the injury consistent with the developmental stage of the child?
- Does the history change?

In the Field

- Who was there?
- What's the history?
- Describe and document bruising, patterns, lacerations – where, color, appearance, size
- Suggest that suspicious injuries are photographed at the accepting facility

Question & Answer



Contact Us



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askasprtracie@hhs.gov

Additional Slides- Dr. levers-Landis

Effect of the COVID-19 Pandemic on the Sleep of Children and Adolescents

Disruption of regular, healthy sleep-wake patterns:

- Greater time spent in the home
- Reduced activity (social and physical)
- Decreased opportunity for natural light exposure

Sleep Consequences Related to the Pandemic for Children and Adolescents

Sleep issues:

- Insomnia
 - Psychophysiological arousal
- Delayed or irregular sleep patterns
 - Staying up late on electronics
 - Daytime napping due to boredom or as a mood disorder symptom
- Nightmares

Potential Sleep Benefits of the Current Circumstances for Children and Adolescents

Sleep benefits of alterations in society due to the pandemic:

- More flexible sleep schedules
 - Might align better with the child's natural circadian rhythms
 - Particularly positive for adolescents who have a more delayed sleep pattern
- Closer attention to children's sleep due to adults being in the home more (for some families)

With school having started, children's and adolescents' sleep is being influenced differently depending upon the mode of school instruction:

In-school, hybrid, or virtual/on-line

Nightmares in Children during a Pandemic

- Stressful or traumatic events can cause bad dreams/nightmares
- While these are developmentally normal, they can be stressful
- Review the child's situation (e.g., what has changed and how the child is reacting)
- Address any worries/fears by speaking about these calmly with the child in developmentally appropriate terms
- Encourage relaxation activities
 - Deep breathing and progressive muscle relaxation
 - Imagery rehearsal therapy is also available through behavioral sleep medicine experts