CDC/IDSA COVID-19 Clinician Call

April 24, 2021

Welcome & Introduction

Dana Wollins, DrPH, MGC
Vice President, Clinical Affairs & Guidelines
IDSA

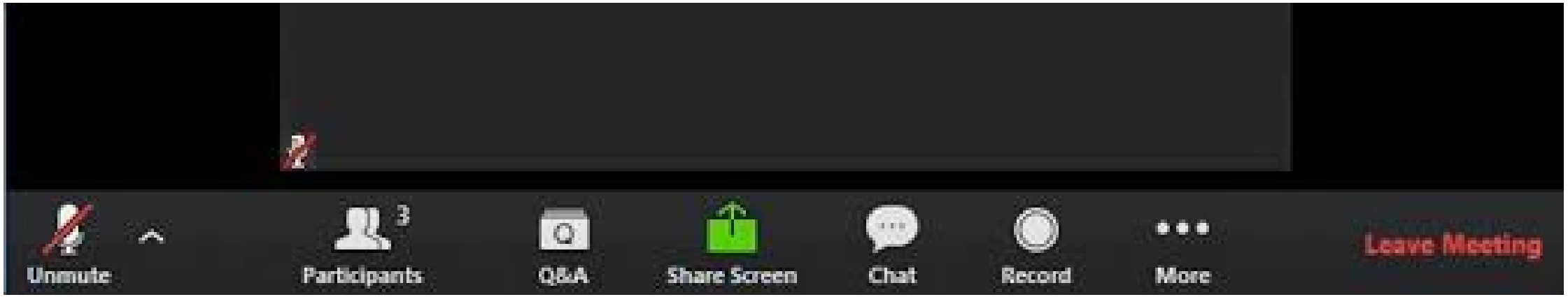
- 63rd in a series of weekly calls, initiated by CDC as a forum for information sharing among frontline clinicians caring for patients with COVID-19
- The views and opinions expressed here are those of the presenters and do not necessarily reflect the official policy or position of the CDC or IDSA. Involvement of CDC and IDSA should not be viewed as endorsement of any entity or individual involved.
- This webinar is being recorded and can be found online at www.idsociety.org/cliniciancalls.

TODAY'S TOPICS

- Multisystem Inflammatory Syndrome in Adults (MIS-A)
- April 23rd ACIP Meeting Update: Janssen (Johnson & Johnson) COVID-19 Vaccine

Question?
Use the “Q&A” Button

Comment?
Use the “Chat” Button



Multisystem Inflammatory Syndrome in Adults (MIS-A)

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COVID-19 Response
Centers for Disease Control and Prevention

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Health Systems and Worker Safety Task Force
CAPT, U.S. Public Health Service
Centers for Disease Control & Prevention

Multisystem Inflammatory Syndrome in Adults (MIS-A) Associated with SARS-CoV-2 Infection

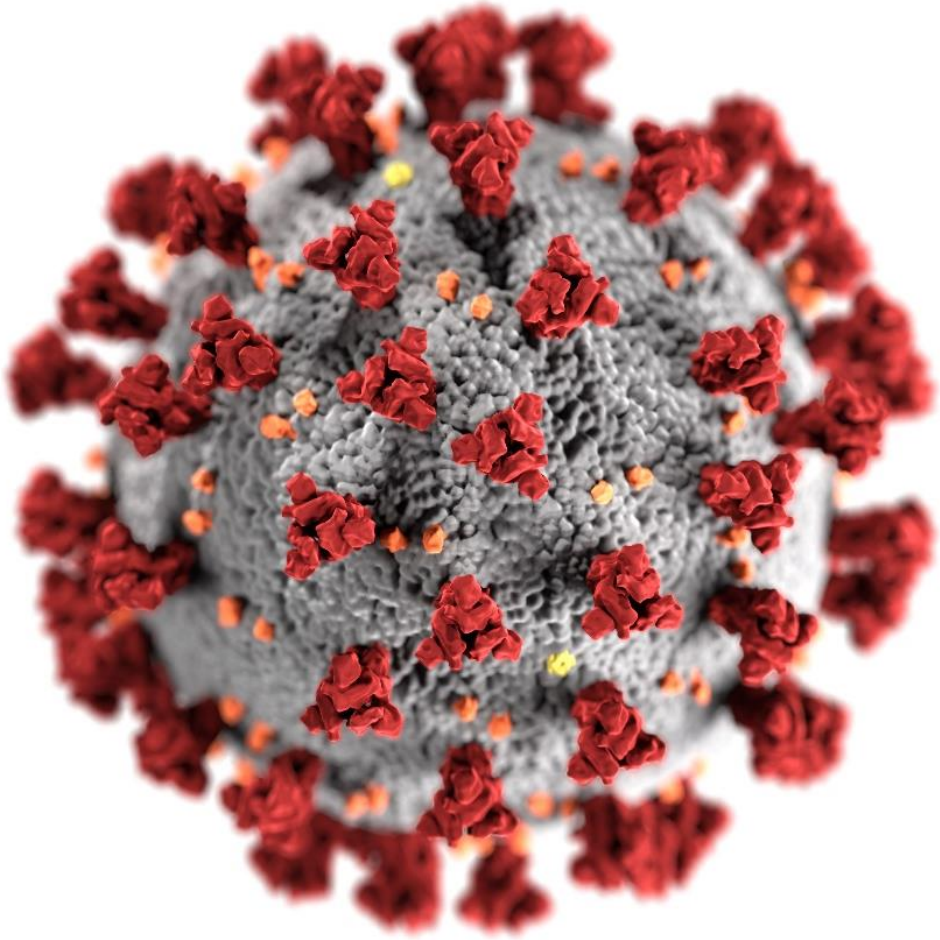
Ermias Belay, MD

Lead, MIS Unit

COVID-19 Response

Centers for Disease Control and Prevention

April 24, 2021



cdc.gov/coronavirus

Multisystem Inflammatory Syndrome

- Initially described in children (MIS-C) in April 2020
- Characterized by shock, cardiac dysfunction, GI symptoms, and elevated inflammatory markers
- As of mid-April 2021, 3185 MIS-C cases reported to CDC
- Similar syndrome described in adults in June 2020 (MIS-A)

Morbidity and Mortality Weekly Report

Case Series of Multisystem Inflammatory Syndrome in Adults Associated with SARS-CoV-2 Infection — United Kingdom and United States, March–August 2020

Sapna Bamrah Morris, MD[1]; Noah G. Schwartz, MD[1,2]; Pragna Patel, MD[1]; Lilian Abbo, MD[3]; Laura Beauchamps, MD[3]; Shuba Balan, MD[3]; Ellen H. Lee, MD[4]; Rachel Paneth-Pollak, MD[4]; Anita Geevarughese, MD[4]; Maura K. Lash, MPH[4]; Marie S. Dorsinville, MPH[4]; Vennus Ballen, MD[4]; Daniel P. Eiras, MD[4]; Christopher Newton-Cheh, MD[5,6]; Emer Smith, MPH[7,8]; Sara Robinson, MPH[7]; Patricia Stogsdill, MD[9]; Sarah Lim, MBBCh[10]; Sharon E. Fox, MD, PhD[11,12]; Gillian Richardson, MPH[13]; Julie Hand, MSPH[13]; Nora T. Oliver, MD[14]; Aaron Kofman, MD[15]; Bobbi Bryant, MPH[1,16]; Zachary Ende, PhD[1,16]; Deblina Datta, MD[1]; Ermias Belay, MD[1]; Shana Godfred-Cato, DO[1]

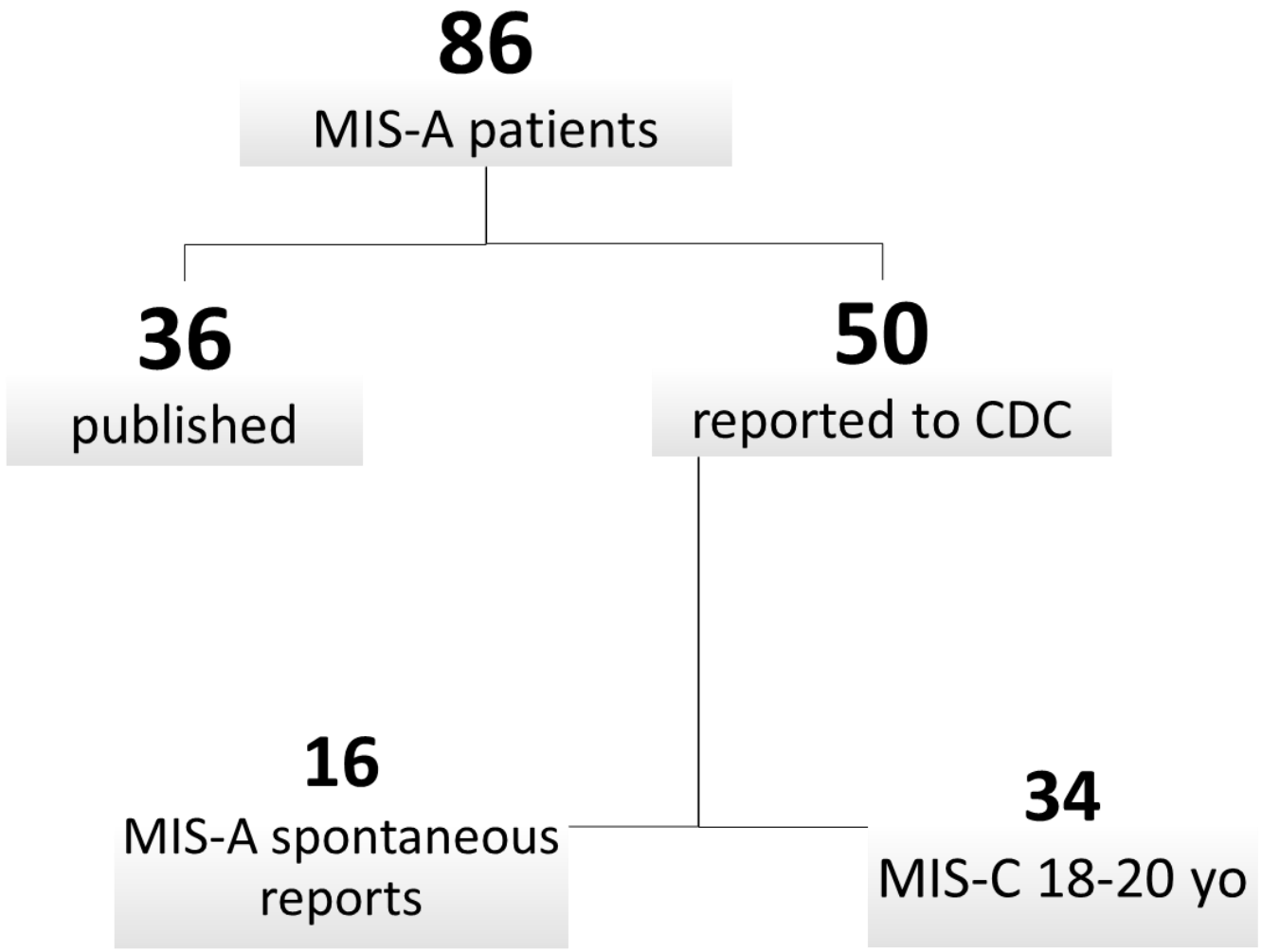
On October 2, 2020, this report was posted as an MMWR *Early Release on the* MMWR *website (https://www.cdc.gov/mmwr).*

During the course of the coronavirus disease 2019 (COVID-19) pandemic, reports of a new multisystem inflammatory syndrome in children (MIS-C) have been increasing in Europe and the United States (*1–3*). Clinical features in children have varied but predominantly include shock, cardiac dysfunction, cases. The case report form included information on patient demographics, underlying medical conditions, clinical findings, complications, laboratory test results including those from SARS-CoV-2 testing, imaging findings, treatments, and outcomes. Two clinician reviewers selected patients who fulfilled the working MIS-A case definition used in this report, which included the following five criteria: 1) a severe illness

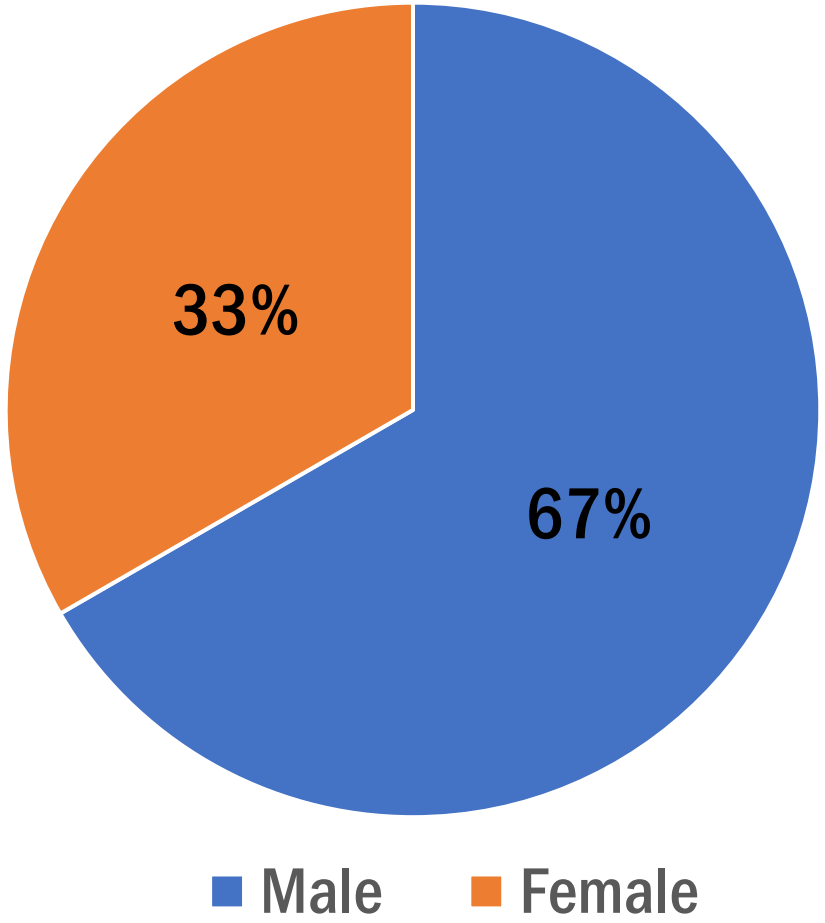
MMWR *Weekly* / October 9, 2020 / 69(40);1450–1456

Summary of Known MIS-A Patients

Draft manuscript



Epidemiology of MIS-A (N=86)



Age

Median: 21 years

IQ range: 19-33 years

Signs and symptoms in patients with MIS-A (N=86)* and MIS-C (1733)**

Sign/Symptom	PERCENT	
	MIS-A	MIS-C
GI (Abd pain, vomiting, diarrhea)	84	--
Hypotension	63	51
Shortness of Breath	56	27
Shock	53	37
Chest pain	41	--
Rash	37	57
Cough	35	--
Conjunctival Injection	27	53

*Unpublished manuscript

**JAMA Pediatrics, April 6, 2021

Clinical Findings in patients with MIS-A (N=86)* and MIS-C (1733)**

Clinical finding	PERCENT	
	MIS-A	MIS-C
Cardiac dysfunction	55	31
Myocarditis	40	17
Pericardial effusion	28	23
Acute Kidney Injury	32	--
Pneumonia	22	19

*Unpublished manuscript

**JAMA Pediatrics, April 6, 2021

Treatment approaches in patients with MIS-A (n=86)* and MIS-C (1733)**

Treatment	PERCENT	
	MIS-A	MIS-C
Steroids	62	71
Vasoactive med.	59	40
Intravenous immune globulin	44	81
Mech. ventilation	32	12

*Unpublished manuscript

**JAMA Pediatrics, April 6, 2021

Preceding COVID-19 and outcomes in patients with MIS-A (N=86) and MIS-C (1733)**

	PERCENT	
	MIS-A	MIS-C
Preceding COVID-19	63	25
ICU admission	75	58
Death	12	1.4

*Unpublished manuscript

**JAMA Pediatrics, April 6, 2021

Georgia MIS-A Case Finding Project

Objective

To identify MIS-A cases among patients hospitalized with COVID-19 in metro Atlanta

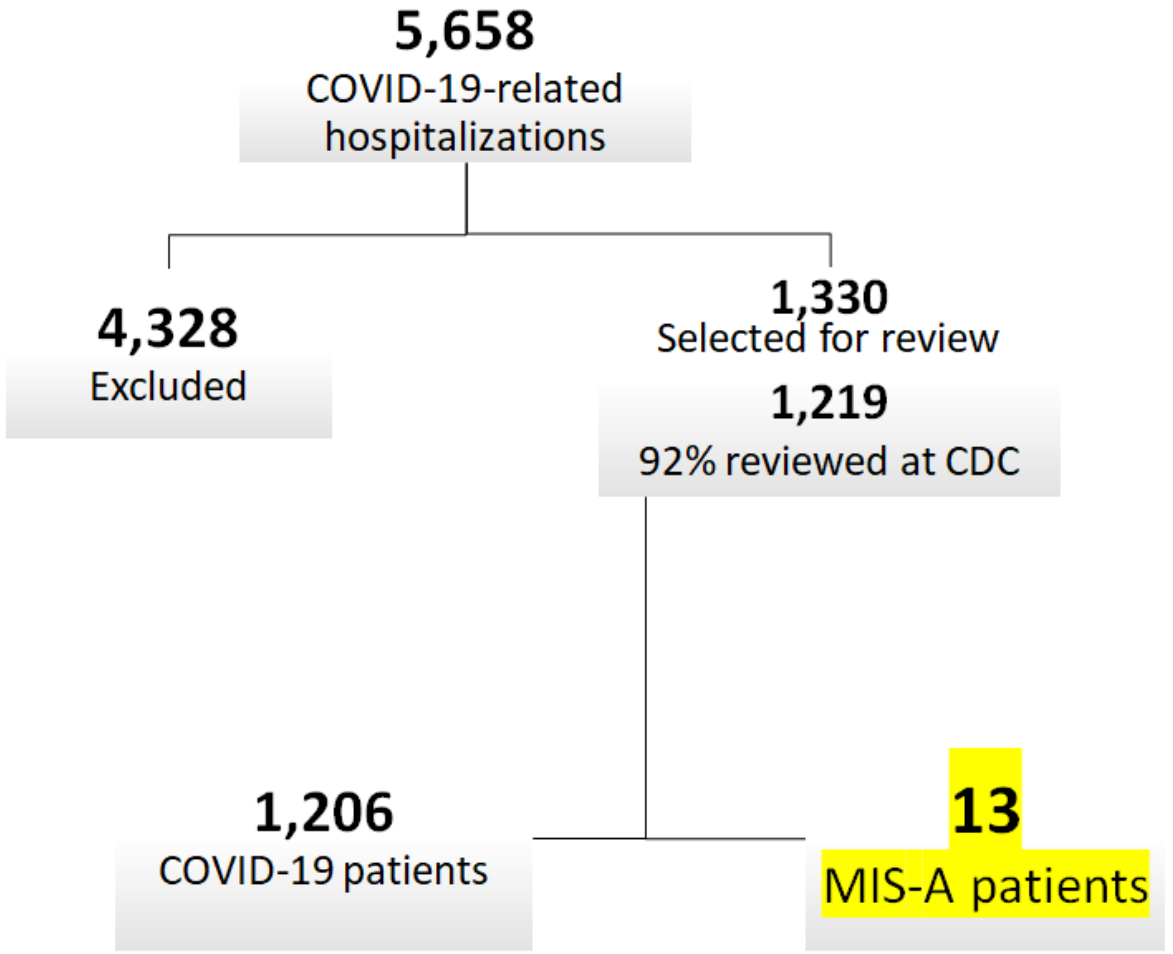
Compare clinical manifestation of MIS-A with COVID-19 to help develop a more specific case definition

Collaborators

Georgia Department of Public Health

Major health care system – 4 hospitals

MIS-A patients identified from 4 hospitals, Georgia, Apr 2020 – Jan 2021



Georgia MIS-A Case Finding Project

MIS-A vs COVID-19 hospitalizations

The 13 MIS-A patients represented 0.2% of COVID-19-related hospitalizations in the 4 Georgia hospitals

In contrast

In one major children's hospital system serving metro Atlanta, about 36% of COVID-19-related hospitalizations were for MIS-C

Primary MIS-A Manifestations

Cardiovascular

Includes shock/hypotension, decreased cardiac function, myocarditis, pericardial effusion

Mucocutaneous

Includes rash, non-purulent conjunctivitis

CDC's MIS-A Case Definition

1. Age ≥ 21 yrs with subjective or documented fever (≥38.0 C) for 24 hrs prior to or within THREE days of hospitalization; AND
2. A positive SARS-CoV-2 test during current illness (by RT-PCR, serology, or antigen detection); AND
3. Laboratory evidence of severe inflammation*; AND
4. Illness requiring hospitalization for ≥24 hrs; AND
5. **At least THREE of the following occurring within THREE days of hospitalization; at least ONE must be a primary criterion:**
   - Primary clinical criteria:
     - Severe cardiac illness§;
     - Rash AND non-purulent conjunctivitis
   - Secondary clinical criteria:
     - New-onset neurologic signs and symptoms¶
     - Shock or hypotension not attributable to medical therapy (e.g., sedation, renal replacement therapy);
     - Abdominal pain, vomiting, or diarrhea
     - Thrombocytopenia (platelets <150,000/mL)
6. No other apparent diagnosis (e.g., bacterial sepsis, exacerbation of a chronic medical condition)

*Elevated levels of at least TWO of the following: C-reactive protein, ferritin, IL-6, erythrocyte sedimentation rate, procalcitonin

§Myocarditis, pericarditis, coronary artery dilatation/aneurysm, or new onset: ventricular dysfunction (LVEF<50%), 2nd/3rd degree A-V block, or ventricular tachycardia. Cardiac arrest alone does not meet this criterion.

¶Encephalopathy in a patient without prior cognitive impairment, seizures, meningeal signs, or peripheral neuropathy (including Guillain-Barré syndrome)

5. At least three of the following occurring within three days of hospitalization – at least one must be a primary criterion

a. Primary clinical criteria

- **Severe cardiac illness**
- Rash and non-purulent conjunctivitis

b. Secondary clinical criteria

- **New-onset neurologic signs and symptoms**
- Shock or hypotension not attributable to medical therapy (e.g., sedation, renal replacement therapy)
- Abdominal pain, vomiting, or diarrhea
- Thrombocytopenia (platelets <150,000/mL)

Severe cardiac illness (any one of the following)

- Myocarditis
- Pericarditis
- Coronary artery dilatation/aneurysm
- New-onset right or left ventricular dysfunction (LVEF <50%)
- New-onset arrhythmia: 2nd/3rd degree A-V block or ventricular tachycardia
- Note: Cardiac arrest alone does not meet this criterion

New-onset neurologic signs and symptoms (any one of the following)

- Encephalopathy in a patient without prior cognitive impairment
- Seizures
- Meningeal signs
- Peripheral neuropathy, including Guillain-Barré syndrome

Summary

- Overlapping clinical manifestations with MIS-C
- MIS-A can be complicated by other underlying illnesses
- Distinguishing MIS-A from severe COVID-19 with multi-organ failure may not be easy with high COVID-19 incidence
- Although MIS-A might be under-diagnosed, it occurs at a much lower frequency than MIS-C

Acknowledgements

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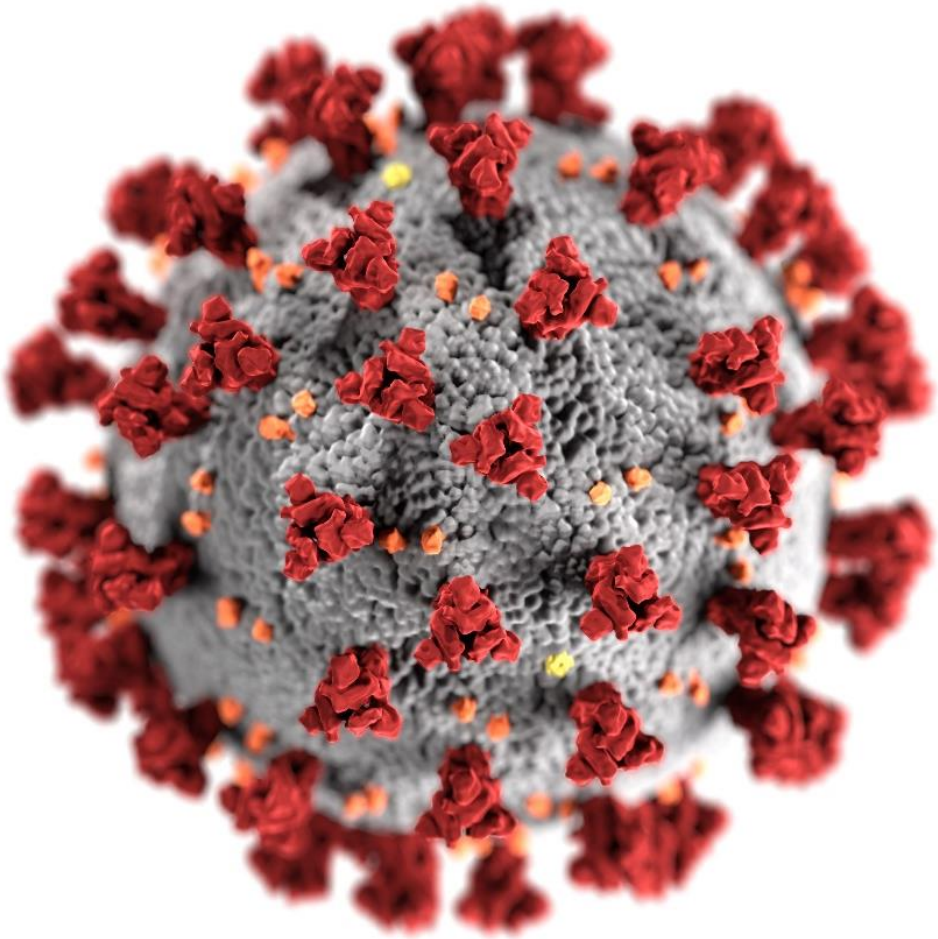


For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

MIS-A

Michael and Stephen Threlkeld, MDs

4/24/21

Case Presentation

- 36 yo male physician with 4 day ho high fevers. Recorded to 40. 5 deg C
- No major past medical history. ? of Gilbert's
- Approximately 3 weeks post second dose of Pfizer covid-19 vaccination. No prior covid diagnosis and no severe reactions to vaccine.
- Needle stick exposure one week prior but source neg for usual tested viruses
- Has a farm with a barn and possible rodent exposure but > 2 weeks ago
- ? brief nonspecific febrile illness 6 weeks pta

Case Presentation - complaints

- Sore throat and some swallowing pain
- Some palpable cervical nodes
- Loose stools and mild abdominal pain
- Generalized body aches
- Conjunctivitis
- Asymmetrical areas of skin erythema/rash - esp left groin and thigh

Case Presentation - exam findings

- Awake and alert
- Febrile
- Tachycardic
- Reddened conjunctiva; pharynx slightly red; palpable nodes in neck
- Chest clear
- No murmurs
- Abd soft and mildly tender
- Erythematous skin areas on thighs and groin > on left

Case Presentation - Labs / imaging

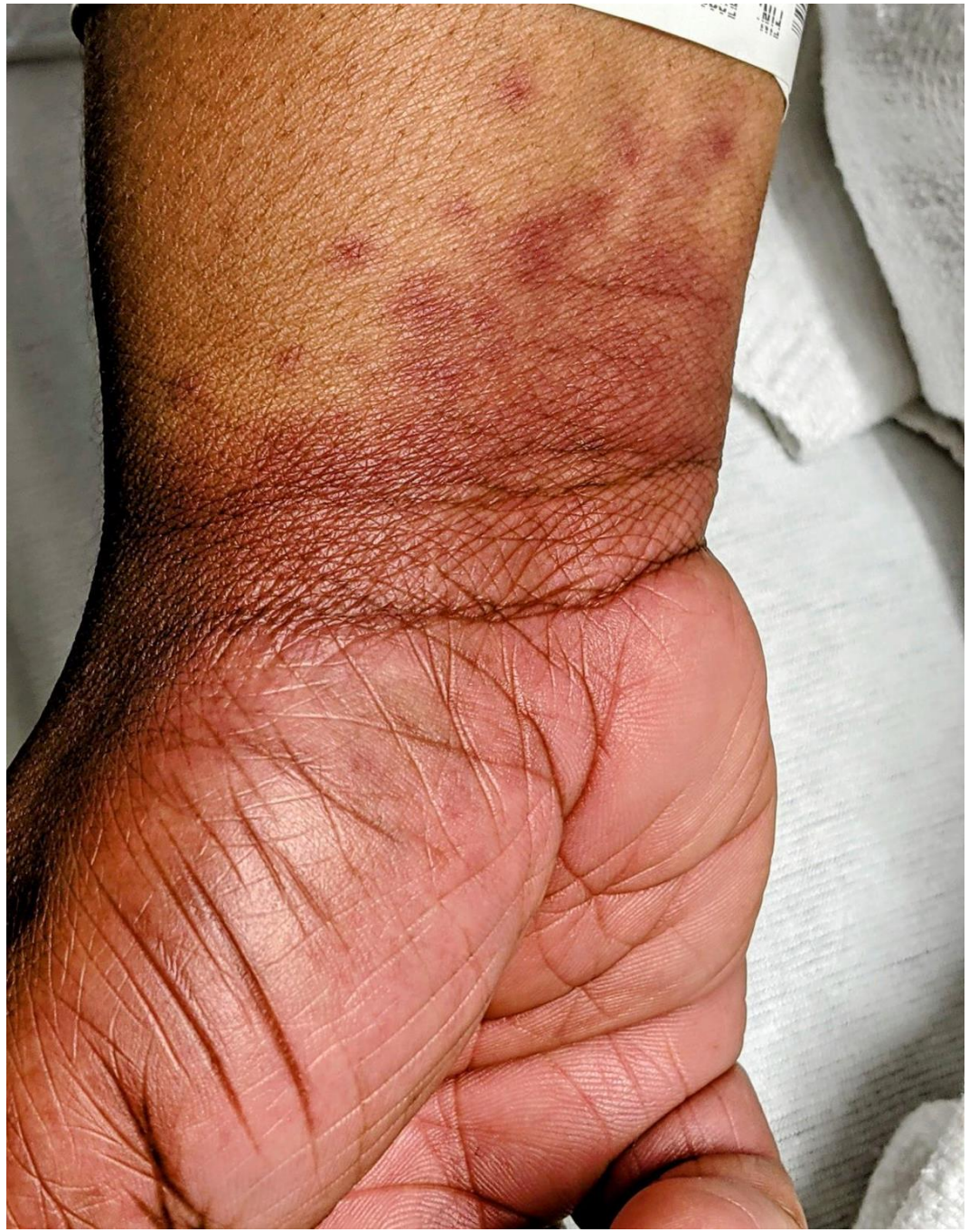
- Blood cultures negative
- Wbc 11,000 95% polys
- Plt 110,000
- Esr 40
- D dimer 5.2
- Hiv serol neg
- Monospot neg
- Total bili 1.9
- C dif neg
- Molecular stool panel neg
- ANA neg
- Ehrlichia pcr neg
- Leptospira pcr neg
- Francisella serol neg

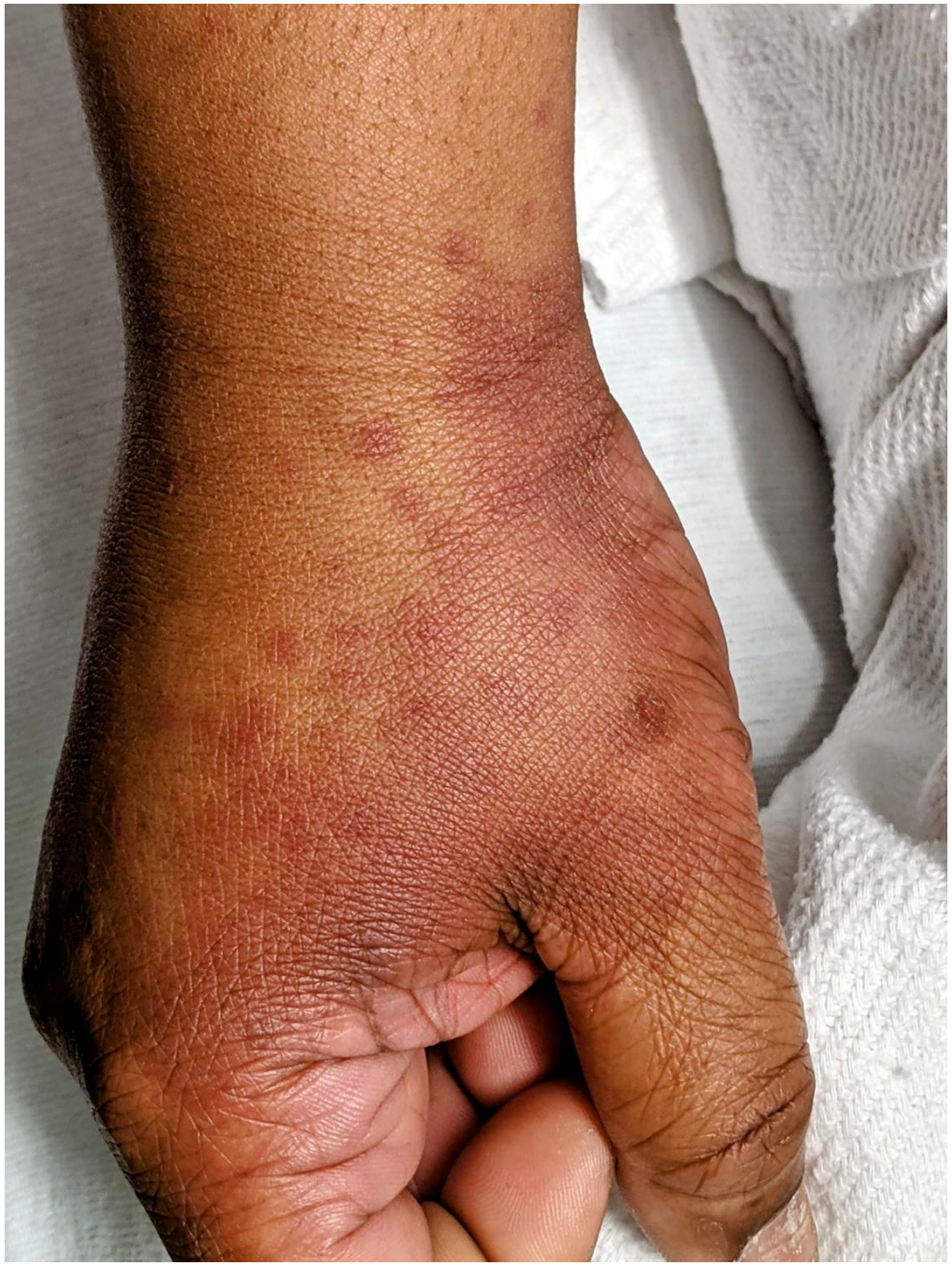
- Covid 19 IgG serol positive
- Covid 19 nasal pcr neg
- CRP 284
- Ferritin 1435
- Troponin 18
- Echocardiogram - global hypokinesis, lv ef 25%
- Chest initially clear - subsequently with cardiac enlargement and pl effusions

Treatments Administered

- Empiric abx: Ceftriaxone and doxycycline
- 2 g / kg ivig in 2 divided doses
- Steroids solumedrol 125 mg
- Vent support
- ecmo

age	sex	fever	rash	sore throat	crp	ferritin	troponin	EF	covid hx	covid igG ab +
25	F	40.5	yes	no	308	1302	1	55%	yes	not done
36	M	40.5	yes	yes	284	1434	18	25%	no	yes
18	M	39.5	yes	no	265	1243	nrl	45%	yes	yes
29	F	39.5	yes	yes	354	537	0.112	31%	no	yes



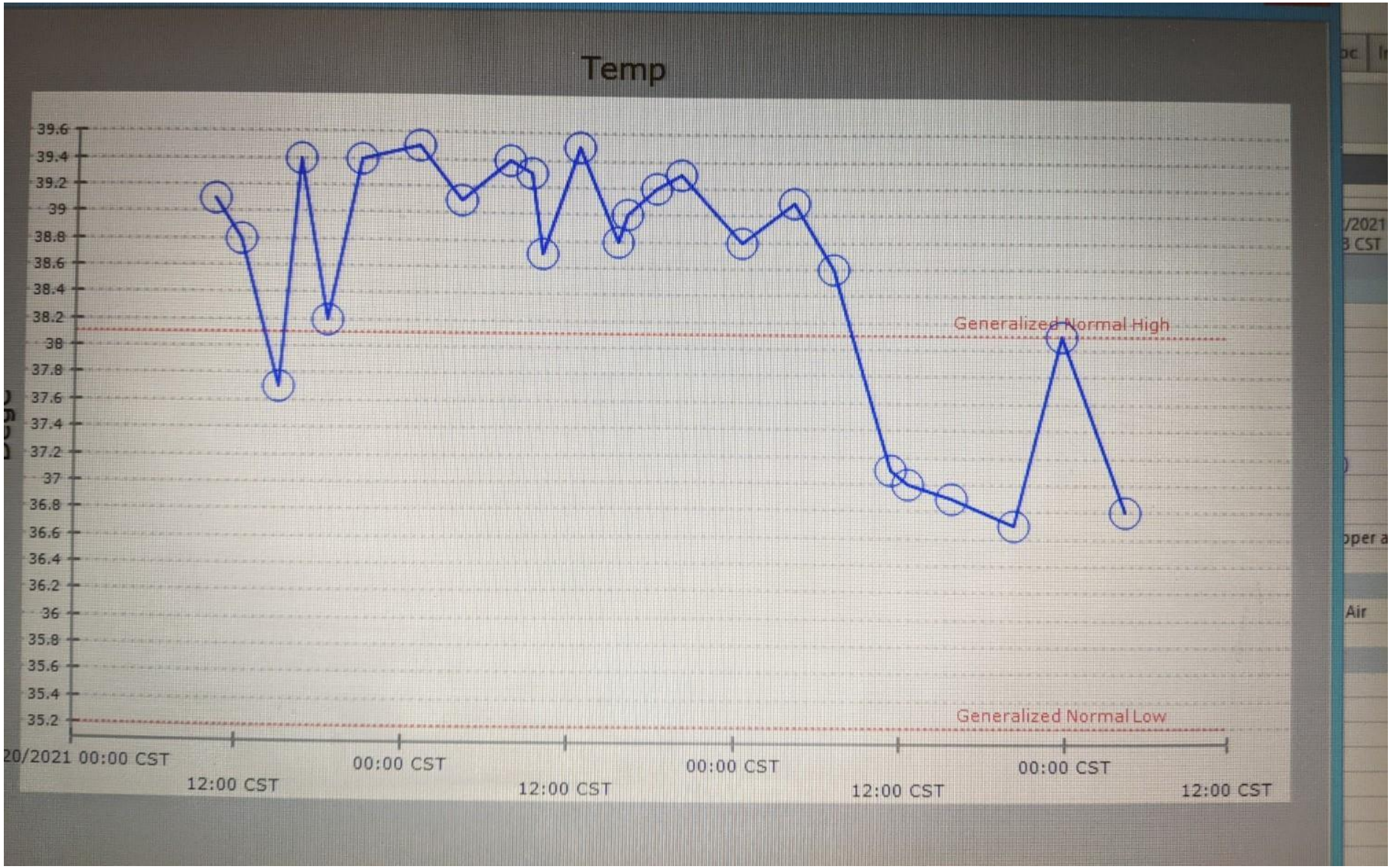


Clinical Summary

- All with high fever 39+
- All with rash but not always symmetrical - 2/4 on palms
- Various combinations of sore throat, diarrhea , and other gi symptoms
- All with some cardiac abnormalities. ¾ with significantly elevated serum troponin
- Only ½ gave clear history of prior covid infection
- All who were tested had pos covid IgG
- All had significantly elevated CRP and serum ferritin as well as other inflam markers

Treatment Options

- No definitive guidelines for adults
- Supportive care
- Most of our regimens are extrapolations from MIS-C data and Kawasaki's
- IVIG 2 g / kg in 1 or 2 divided doses
- Steroids ? dose ? timing ? duration
- Other anti-inflammatory agents : asa, IL-1 or IL-6 blockers


Temp
39.6
39.4
39.2
39
38.8
38.6
38.4
38.2
38
37.8
37.6
37.4
37.2
37
36.8
36.6
36.4
36.2
36
35.8
35.6
35.4
35.2
Generalized Normal High
Generalized Normal Low
20/2021 00:00 CST
12:00 CST
00:00 CST
12:00 CST
00:00 CST
12:00 CST
00:00 CST
12:00 CST

Dif Dx

Unfortunately differential diagnosis is wide as findings and labs are individually nonspecific. Variety of other entities such as rmsf, meningococcemia, Leptospirosis, SLE, and even primary covid infection with cytokine storm would need to be excluded.

For admissions with unexplained high fever (especially with rash) we now routinely check troponin, crp, ferritin and Covid IgG as minimal initial screens.

Questions:

- Does vaccine cause syndrome wo prior infection ?
- Does vaccine cause syndrome after remote previous infection ?
- Does vaccine modify for better or worse the presentation and severity of MIS-A ?
- Will variant reinfections trigger MIS-A in the previously infected or vaccinated ?
- Will this syndrome disappear entirely once population fully immunized?

Q&A and Discussion

ACIP MEETING UPDATE

John T. Brooks, MD
Chief Medical Officer
COVID-19 Response
Centers for Disease Control and Prevention

Thrombosis with thrombocytopenia syndrome (TTS) following Janssen COVID-19 vaccine

Advisory Committee on Immunization Practices (ACIP)
April 23, 2021

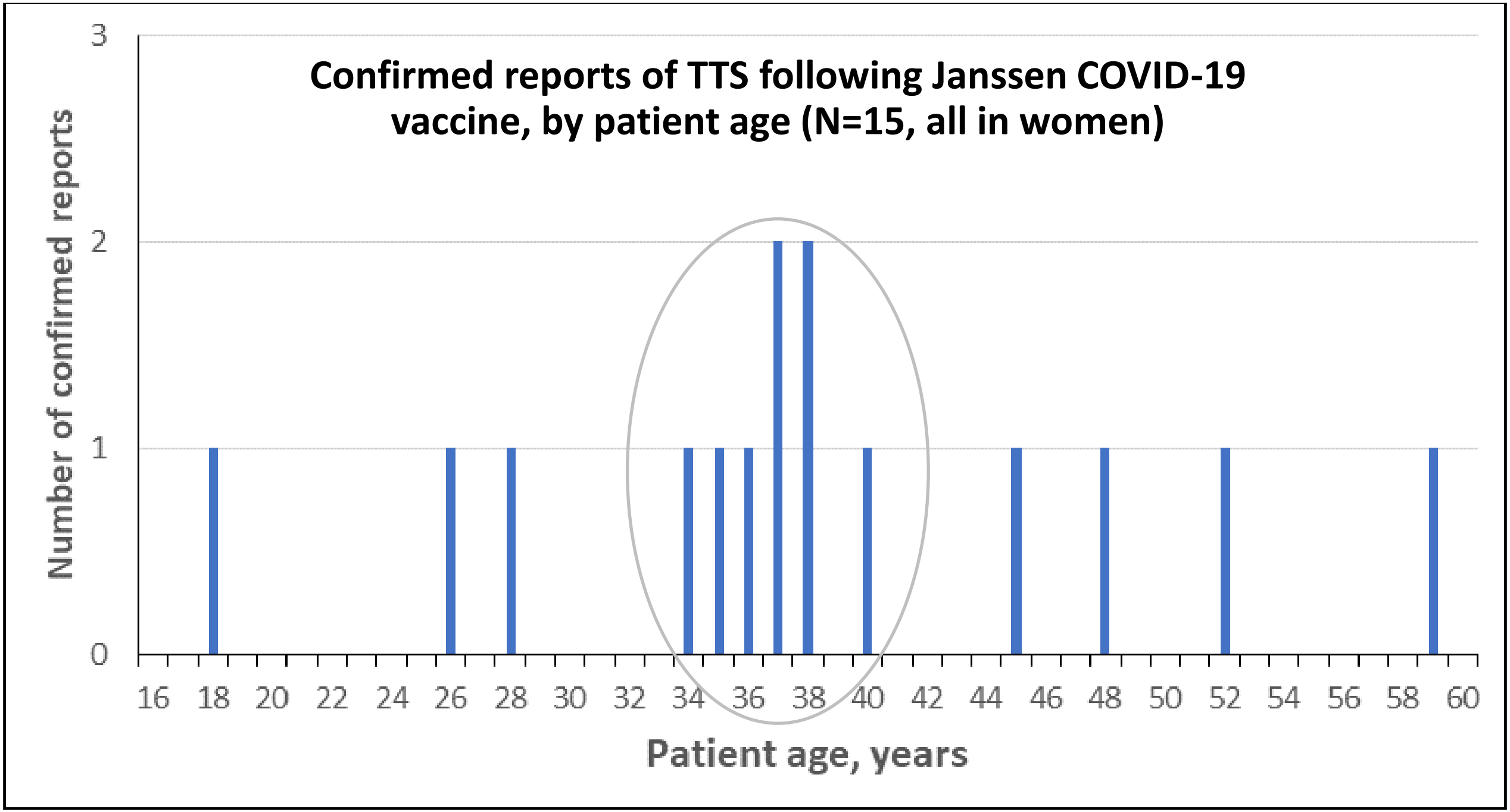
Tom Shimabukuro, MD, MPH, MBA
CDC COVID-19 Vaccine Task Force
Vaccine Safety Team

Reporting rates of TTS after Janssen COVID-19 vaccine

- 7.98 million vaccine doses administered[*] and 15 confirmed TTS cases[†] as of April 21, 2021
  - Some age- and sex-specific doses administered data were imputed
  - Additional potential TTS cases under review, including potential male cases

	Females			Males		
Age group	TTS cases	Doses admin	Reporting rate[‡]	TTS cases	Doses admin	Reporting rate[‡]
18-49 years old	**13**	1,866,294	7.0 per million	**0**	1,977,330	0 per million
50+ years old	**2**	2,125,239	0.9 per million	**0**	2,010,144	0 per million

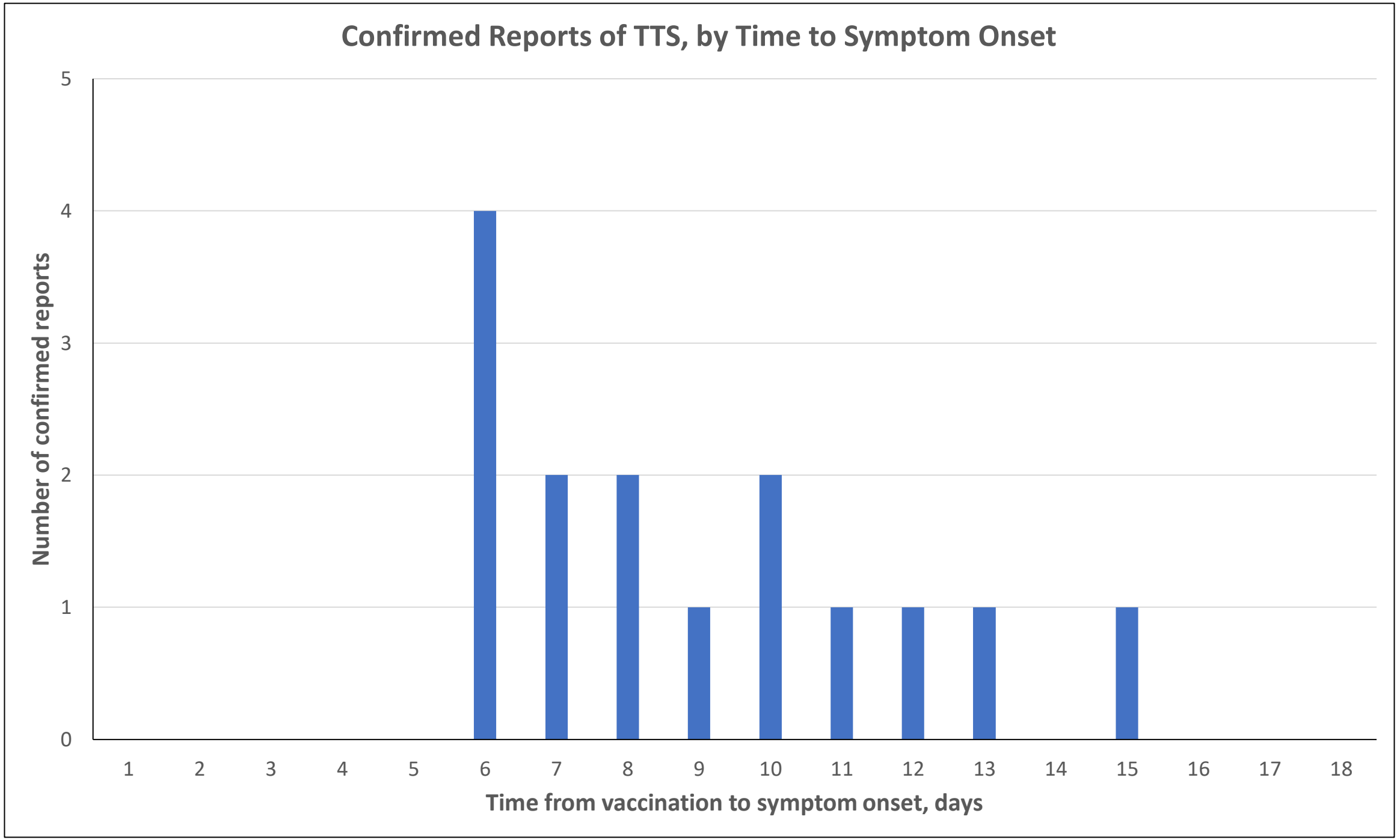
[*] Source of doses administered: https://covid.cdc.gov/covid-data-tracker/#vaccinations; [†] One case was excluded from the final analysis: a female aged <50 years who had concurrent diagnosis of COVID-19 and TTS following receipt of Janssen vaccine; [‡] Reporting rate = TTS cases per 1 million Janssen COVID-19 vaccine doses administered


Confirmed reports of TTS following Janssen COVID-19 vaccine, by patient age (N=15, all in women)
Number of confirmed reports
0
1
2
3
16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60
Patient age, years

Characteristics of patients with TTS after Janssen COVID-19 vaccine, N=15

- Median age 37 years (range 18–59)
- Median time to symptom onset 8 days (range 6–15 days)
- All cases occurred in females
- 12 cases were cerebral venous sinus thrombosis (CVST)
- Pregnant or post-partum* (n=0)
- COVID-19 disease (n=2); both by history, no documentation of serology testing
- Risk factors for thrombosis†
  - Oral contraceptive use (n=2)
  - Obesity (n=7)
  - Hypothyroidism (n=2)
  - Hypertension (n=2)
  - Diabetes (n=0)
  - Coagulation disorders (n=0)

* Within 12 weeks of delivery; † Reference source: https://www.hopkinsmedicine.org/health/conditions-and-diseases/thrombosis


Confirmed Reports of TTS, by Time to Symptom Onset
Number of confirmed reports
0
1
2
3
4
5
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
Time from vaccination to symptom onset, days

Locations of thromboses in TTP patients, N=15
(not mutually exclusive)

- **Cerebral venous sinus locations (n=12)***
  - Transverse sinuses
  - Sigmoid sinuses
  - Confluence of sinuses
  - Straight sinus
  - Superior sagittal sinus
  - Inferior sagittal sinus
  - Cortical veins

- **Other locations (n=11)**
  - Portal vein†
  - Hepatic vein
  - Superior mesenteric artery†
  - Splenic artery†
  - Pulmonary artery†
  - Lower extremity vein†
  - Internal jugular vein
  - Carotid artery†
  - Brachial vein†
  - Femoral vein and artery†
  - Iliac artery†

* 7 patients with cerebral venous sinus thrombosis experienced an intracerebral hemorrhage: temporo-parietal junction, temporal lobe, frontal lobe, occipital lobe, cerebellum, intraventricular, subarachnoid

† Patients without CVST had thrombosis in these locations

Selected laboratory findings in TTS patients, N=15

- **Platelet levels (normal levels: 150,000–450,000 per mm^3)***
  - <50,000..... (n=10)
  - 50–<100,000..... (n=3)
  - 100,000–149,000...(n=2)

- **PF4 HIT† ELISA antibody results**
  - Positive (+)..... (n=11)
  - Negative (-)..... (n=0)
  - Not available..... (n=4)

* Platelet nadir range: 9,000-127,000; † Platelet factor 4 heparin-induced thrombocytopenia

Baseline characteristics reported in European VITT patients, All Astra-Zeneca ChAdOx1 nCOV-19 vaccine

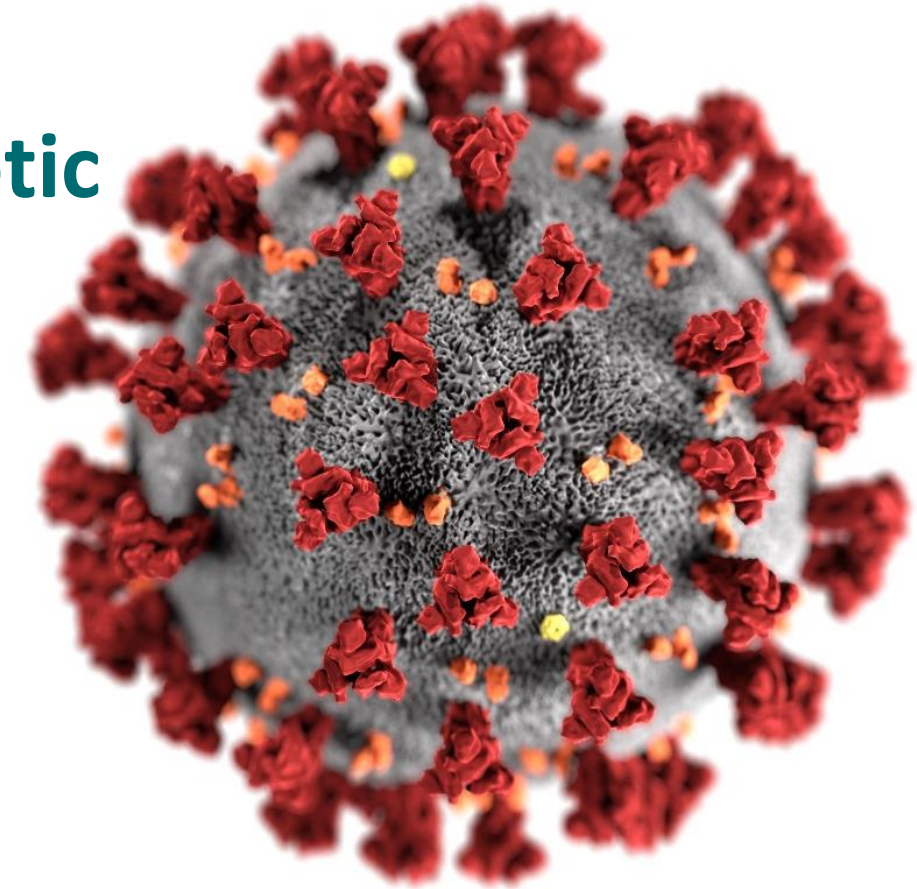
	Austria/Germany	Norway	UK
Number of patients	11	5	23
Onset post vaccine, days	5-16	7-10	6-24
Age, years	22-49	32-54	21-77
Sex: male	2	1	9
female	9	4	14
Platelets x 10^9/L	13-37	10-70	7-113
PF4 assay positive	all	all	22/23

Norway: ChAdOx1 nCoV-19 vaccine administered to health care professionals <65 years of age not working with Covid-19 patients

Greinacher NEJM, 2021; Schultz NEJM, 2021; Scully NEJM, 2021.

Risk/Benefit assessment of thrombotic thrombocytopenic events after Janssen COVID-19 vaccines:

Applying Evidence to Recommendation Framework



Sara Oliver MD, MSPH

ACIP Meeting

April 23, 2021

Public Health Problem:

COVID-19

Hospitalization:
200 per million population

Death:
30 per million population

HIT

23–45 per million population

CVST

14.5–28.5 per million population

CVST + Thrombocytopenia

0.7–1.6 per million population

CVST after COVID-19

5-6 per million SARS-COV-2 infections

TTS after AZ vaccine

EU:
10 per million vaccinated population

UK:
7.9 per million vaccinated population

Acronyms: Cerebral Venous Sinus Thrombosis (CVST), Heparin-Induced Thrombocytopenia (HIT), Thrombosis with Thrombocytopenia Syndrome (TTS)

Summary of population-level risks and benefits by recommendation, all scenarios

Recommendation for all persons aged 18+

- **Risks:** Expect **26–45 TTS** cases, depending on uptake
- **Benefits:** Depend on uptake, amount of transmission
  - **800–3,500 fewer ICU** admissions
  - **600–1,400 fewer deaths**

Recommendation for all persons aged 50+

- **Risks:** Expect 2–3 TTS cases, depending on uptake
- **Benefits:** Depend on uptake, amount of transmission
  - **300–1000 fewer ICU** admissions
  - **40–250 fewer deaths**

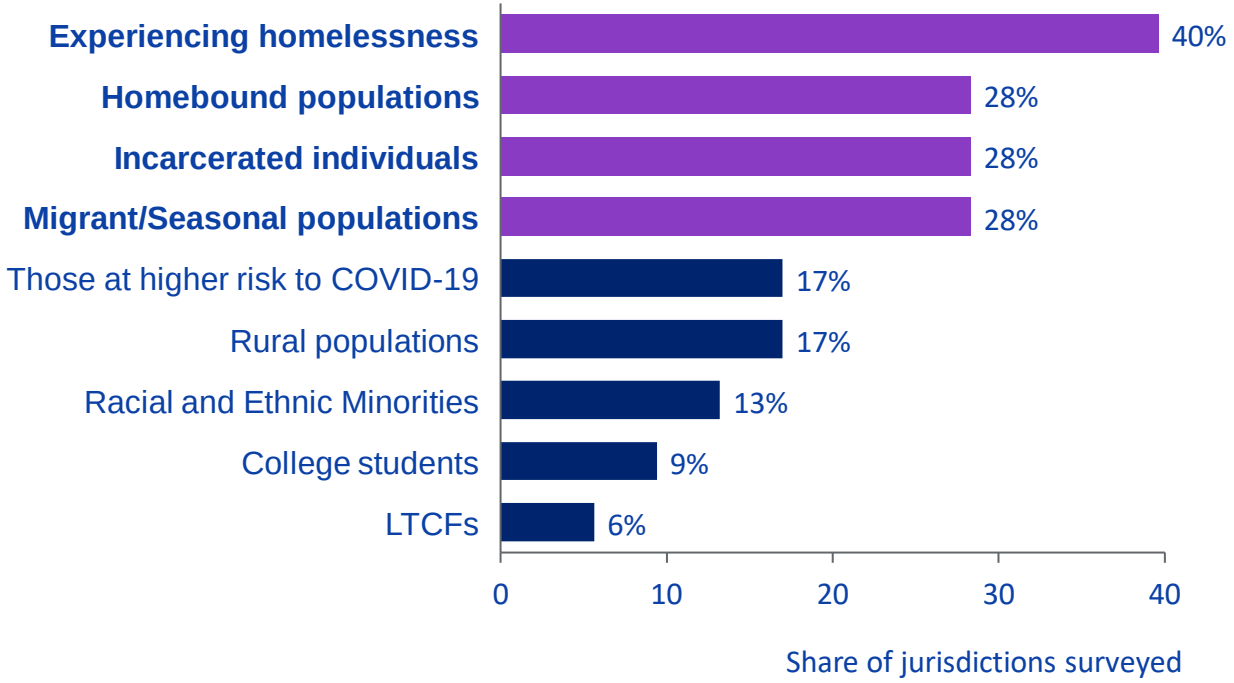
Note: Benefits of vaccination apply to the whole population over a 6-month period, and result from direct and indirect effects

Acronyms: Thrombosis with Thrombocytopenia Syndrome (TTS)

Equity: Jurisdictions concerned revised recommendations would disproportionately affect several populations

Jurisdictions frequently raised four populations at risk of disproportionate impact

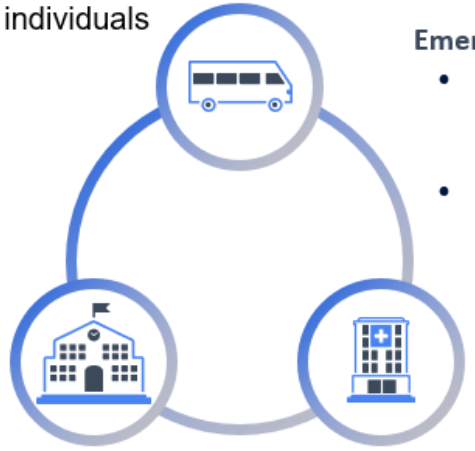
Q: Which, if any, populations would be disproportionally impacted if Janssen vaccine was no longer recommended or recommended for only a subset of the population?



Vaccination settings: Three core settings used by jurisdictions to administer Janssen vaccine

Mobile vaccination

- Temporary PODs and mobile vans able to reach transient, rural and homebound individuals



Emergency departments

- Provided at discharge from urgent care or ER departments
- Particularly for 'safety-net' hospitals reaching transient groups

Student health centers

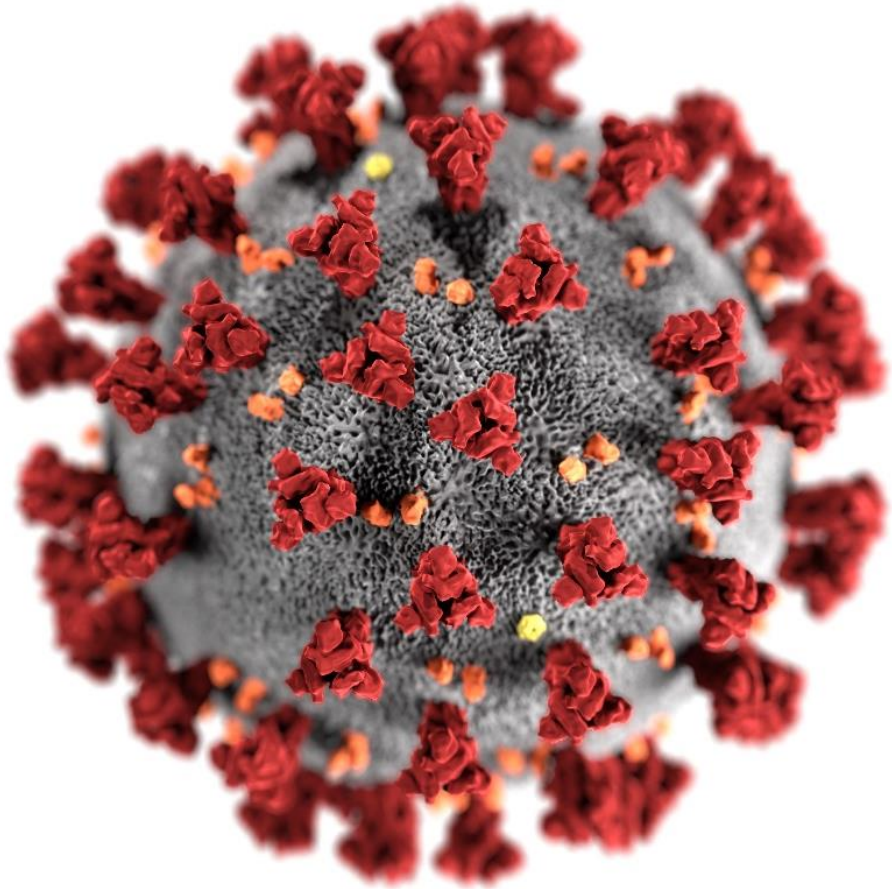
- On-campus vaccination centers with ambition to vaccinate students unable or less likely to return for second dose at end of semester

Jurisdictional survey on impacts of Janssen pause, April 18th- 21st, 2021 (n=53)

Policy Options for Janssen Policy Recommendations

- Recommend **against** use for all persons
- Reaffirm recommendations for **all** age and sex
  - FDA to include warning statement with EUA
- Recommend vaccination only for adults **≥50 years of age**
- Reaffirm recommendations for use; women aged <50 years should **be aware** of the increased risk of TTS, and **may choose** another COVID-19 vaccine (i.e., mRNA vaccines)

Diagnosis and Management of Suspected Vaccine-Induced Immune Thrombotic Thrombocytopenia (VITT) Following Johnson & Johnson (Janssen) COVID-19 Vaccination

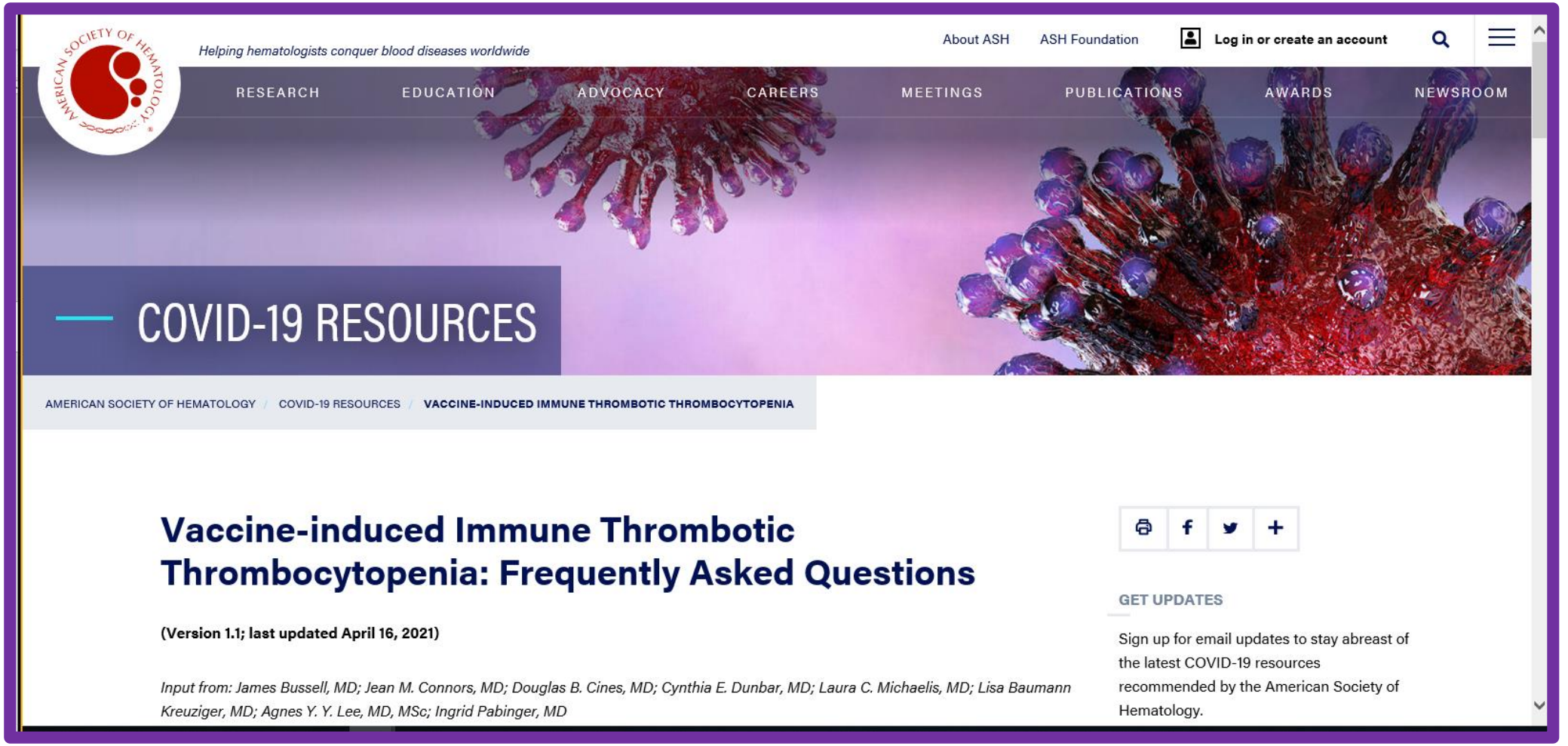


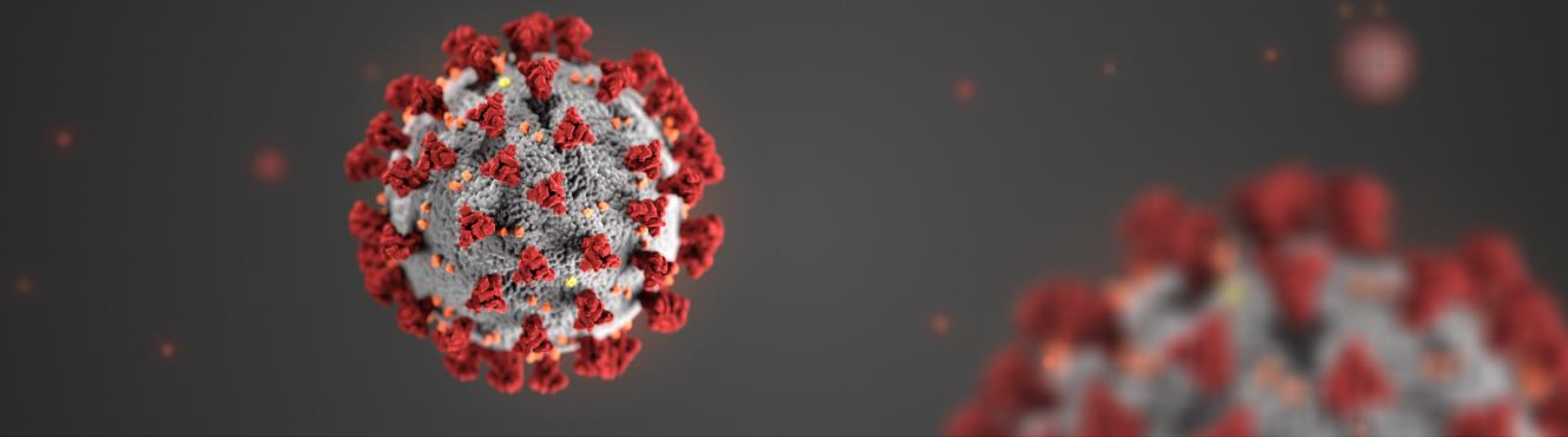
April 20th, 2021

For more information: **www.cdc.gov/COVID19**

American Society of Hematology: Resources

https://www.hematology.org/covid-19/vaccine-induced-immune-thrombotic-thrombocytopenia





For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

How to report an adverse event to VAERS

- Go to vaers.hhs.gov
- Submit a report online
- For help:

  Call 1-800-822-7967

  Email info@VAERS.org

  video instructions https://youtu.be/sbCWhcQADFE

- Please send records to VAERS ASAP if contacted and asked
  - HIPAA permits reporting of protected health information to public health authorities including CDC and FDA


#RealTimeVaccineChat
Join health experts as we address the latest questions and concerns surrounding COVID-19 vaccines.
Wednesday, April 28, 2-3pm ET
Hosted by: @RealTimeCOVID19
COVID-19 Real-Time Learning Network
Brought to you by CDC and IDSA

SPECIAL NOTICE – UPCOMING WEBINAR

COVID-19 Vaccination - Turning Your "Maybe" into a "Yes"

Hosted in partnership with the American Nurses Association

Thursday, April 29 - 5 p.m. ET/ 2 p.m. PT

This webinar requires separate registration from the Saturday CDC/IDSA COVID-19 Clinician Call series.

To Register:
https://societycentral.zoom.us/webinar/register/7316191252991/WN_d61nK36gTkuxdLrUl9Vx8g

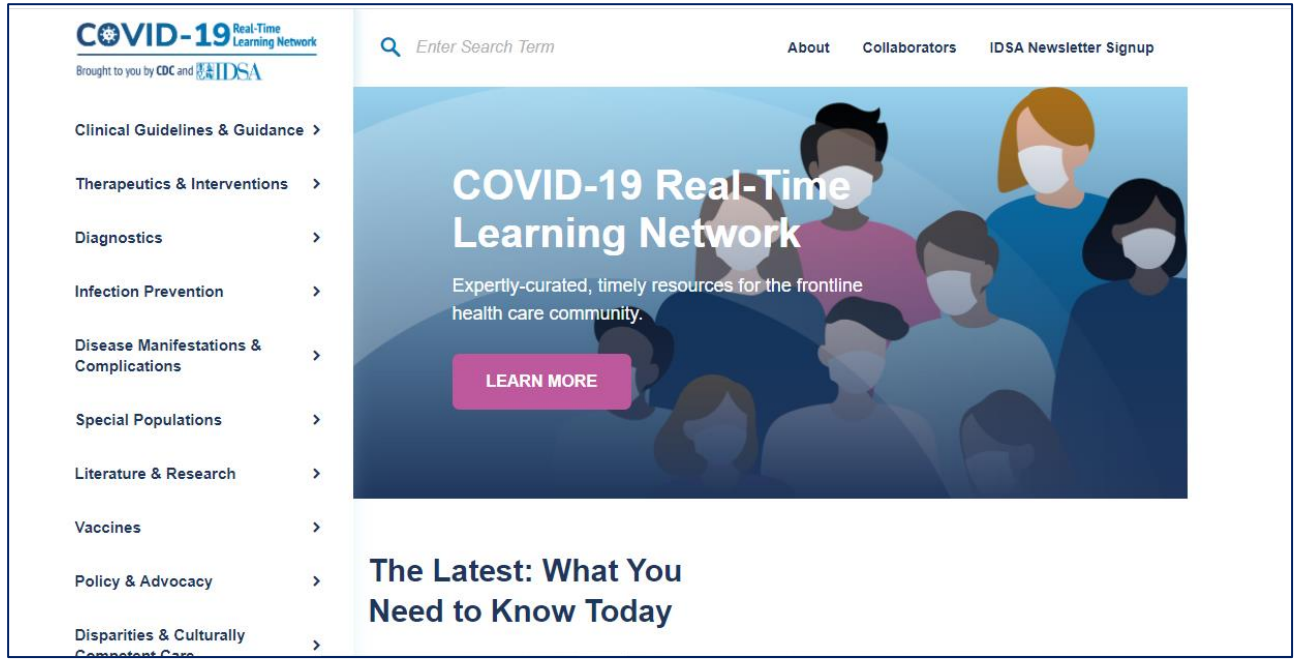
ANA ENTERPRISE

IDSA
Infectious Diseases Society of America

COVID-19 Real-Time Learning Network

Brought to you by CDC and IDSA

An online community bringing together information and opportunities for discussion on latest research, guidelines, tools and resources from a variety of medical subspecialties around the world.



Specialty Society Collaborators

American Academy of Family Physicians
American Academy of Pediatrics
American College of Emergency Physicians
American College of Physicians
American Geriatrics Society
American Thoracic Society
Pediatric Infectious Diseases Society
Society for Critical Care Medicine
Society for Healthcare Epidemiology of America
Society of Hospital Medicine
Society of Infectious Diseases Pharmacists

www.COVID19LearningNetwork.org
@RealTimeCOVID19
#RealTimeCOVID19

CDC-IDSA Partnership: Clinical Management Call Support

FOR WHOM?

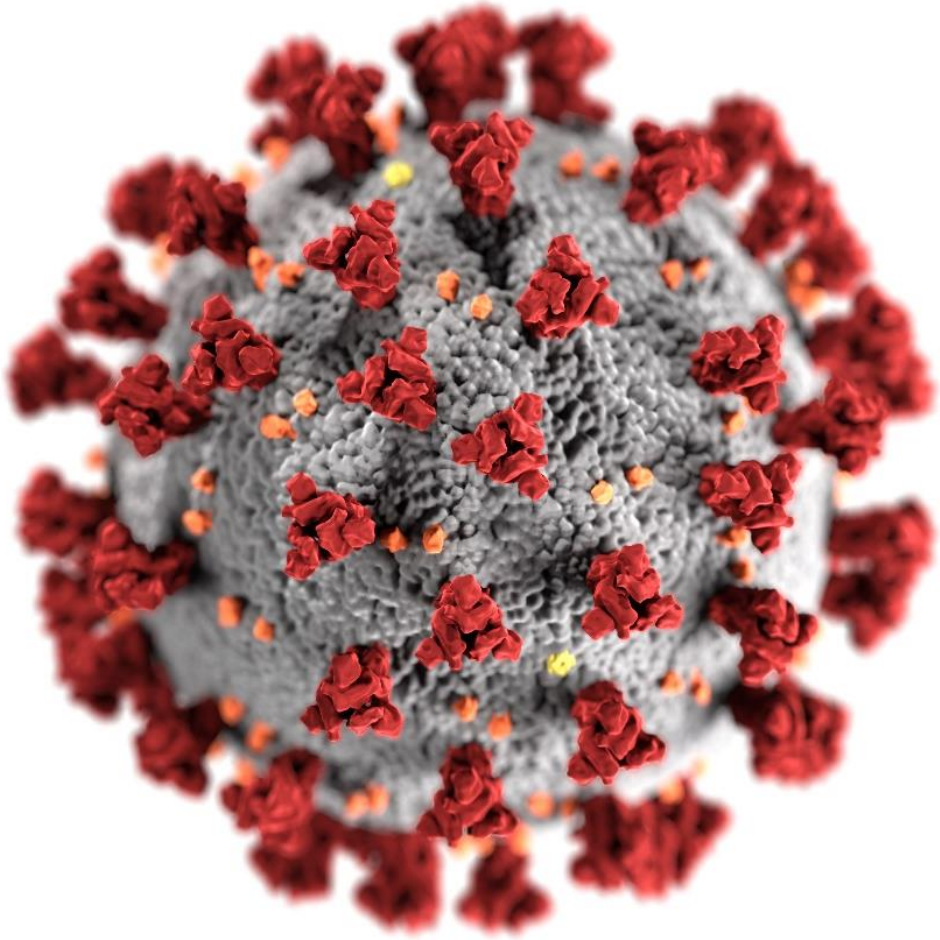
- Clinicians who have questions about the clinical management of COVID-19

WHAT?

- Calls from clinicians will be triaged by CDC to a group of IDSA volunteer clinicians for peer-to-peer support

HOW?

- Clinicians may call the main CDC information line at 800-CDC-INFO (800-232-4636)
- To submit your question in writing, go to www.cdc.gov/cdc-info and click on Contact Form



IDSA
Infectious Diseases Society of America

cdc.gov/coronavirus

Continue the conversation on Twitter

@RealTimeCOVID19
#RealTimeCOVID19

We want to hear from you!

Please complete the post-call survey.

Next Call: **Sat., May 1**

A recording of this call will be posted at **www.idsociety.org/cliniciancalls**

-- library of all past calls now available --

Contact Us:

Dana Wollins (dwollins@idsociety.org)
Deirdre Lewis (dlewis@idsociety.org)