Department of Pediatrics Meeting
January 25, 2021 @ noon

Fellow Scholarship Toolkit
Allison Guerin, EdD, MEd

COVID Update
Bonnie Maldonado, MD
Total COVID+ Patients In-House by Date
Patient Classes: All

Maternity
Pediatrics
Kyong-Jin Lee, MD  
Clinical Professor  
Division of Cardiology

Christine Brady, PhD  
Clinical Assistant Professor  
Division of Endocrinology
Madhura Phadke, MD
Clinical Assistant Professor
Division of Gastroenterology

Orly Klein, MD
Clinical Instructor
Division of Hematology, Oncology, Stem Cell Transplantation and Regenerative Medicine
Higher or Lower Hemoglobin Transfusion Thresholds for Preterm Infants

A Lesson from 2020: Public Health Matters for Both COVID-19 and Diabetes

Social Determinants of Health and Diabetes: A Scientific Review

A Decade of Disparities in Diabetes Technology Use and Hba1c in Pediatric Type 1 Diabetes: A Transatlantic Comparison

Metabolic Syndrome and COVID-19 Mortality Among Adult Black Patients in New Orleans
Claudia Algaze-Yojay, MD
Academic Pediatric Association Quality and Safety Improvement Scholars Program
2021 Stanford PHM Quality Improvement and Leadership Training (QuILT) Program Calendar

4th Wednesday of Month 10am-12:30pm PST

Leadership Topic (10am-11am)
Quality Improvement Topic (11am-12pm)

January 27
Introduction to Leadership
Nancy Spector, MD

Introduction to QI
Nivedita Srinivas, MD
Tandy Aye, MD

Elected as the Director of Pediatric Endocrine Society
Bonnie Halpern-Felsher, PhD
American Academy of Pediatrics Tobacco Consortium
Congratulations!

Grace Lee
Yair Bannett, MD

PEDSnet Scholars Program

PEDSnet
A Pediatric Learning Health System
Bonnie Maldonado, MD
Santa Clara County Supervisor’s Medal for advancing the wellbeing of county residents during the COVID-19 pandemic

Taube Professorship in Global Health and Infectious Diseases
APPPOINTMENTS AND PROMOTIONS COMMITTEE

Cristina Alvira, MD*
Manuel Amieva, MD, PhD
Suzan Carmichael, PhD
Sharon Fei-Hsien Chen, MD*
Michael Cleary, MD

Tim Cornell, MD*
Anne Dubin, MD
Bonnie Halpern-Felsher, PhD
Korey Hood, PhD
Louanne Hudgins, MD, (Chair)

*New Member
APPOINTMENTS AND PROMOTIONS COMMITTEE

Michael Jeng, MD
Joe Kim, MD
Grace Lee, MD
Henry Lee, MD*
Crystal Mackall, MD

John Mark, MD*
Alison Marsden, PhD
Steve Roth, MD*
Julien Sage, PhD
Gary Shaw, PhD

*New Member
APPOINTMENTS AND PROMOTIONS COMMITTEE

*New Member

David A. Stevenson, MD

Elizabeth Talley, MD*
Please complete the SPAARC Take Action Survey!
Navigating School in Uncertain Times
With Denise Pope, PhD
Wednesday, February 3, 2021
10:00 – 11:00 AM

Many families are concerned about the impact of remote and hybrid learning on their child’s academic journey. Join us for Navigating School in Uncertain Times on Wednesday, February 3, from 10:00 – 11:00am with Dr. Denise Pope, Senior Lecturer at the Stanford University Graduate School of Education and expert on parenting, student stress, anxiety, well-being and engagement. Dr. Pope will offer practical tips for how families can best support student well-being and engagement during these uncertain times. This webinar is designed for families with students in grades 6-12. There will be Q&A at the webinar.

To register and attend click here

Dr. Pope is a Senior Lecturer at the Stanford University Graduate School of Education, specializing in student engagement, curriculum studies, qualitative research methods & service learning. She is the author of Doing School: How We are Creating a Generation of Stressed Out, Materialistic and Miseducated Students which was awarded Notable Book in Education by the American School Board Journal, 2001. She lectures nationally on parenting techniques and teaching strategies to increase student health, engagement with learning, and integrity.
Stanford Maternal and Child Health Research Institute

Research on Structural Racism, Social Injustice and Health Disparities in Maternal and Child Health Pilot Grants

mchri.stanford.edu
Review Committee

Program Co-Chairs

Anisha Patel
Lisa Chamberlain

Iram Ahmad
Donald Barr
MyMy Buu
Matias Bruzoni

Jonathan Glazer Shaw
Ewen Wang
Reena Thomas
Megan Mahoney
Fall 2020 Awardees

Natali Aziz, MD, MS  
Clinical Associate Professor of Obstetrics & Gynecology (Maternal-Fetal Medicine)  
COVID-19 Household Transmission and Social Determinants of Health in Pregnancy

Erica Pasciullo Cahill, MD, MS  
Clinical Assistant Professor of Obstetrics & Gynecology (Gynecology & Family Planning)  
Patient Evaluation of an Anti-Racism Perinatal Tool

R. Sharon Chinthrajah, MD  
Clinical Associate Professor of Pulmonary, Allergy and Critical Care Medicine  
Improving Racial Diversity in our Food Allergy Programs

Michael Frank, PhD  
Associate Professor of Psychology  
Measuring Children’s Early Vocabulary Using Large Scale Data from Diverse Families

Priya Prahalad, MD, PhD  
Clinical Assistant Professor of Pediatrics (Endocrinology and Diabetes)  
Telehealth Delivery to Change the Paradigm of Care Delivery in Children with Type 1 Diabetes
Fellowship Leadership Team

Hayley Gans, MD
Director of Fellowship Education

Charlene Larson Rotandi, AB, C-TAGME
Department Fellowship Manager

Bonnie Halpern-Felsher, PhD
Director of Fellowship Scholarship

Erica Okamura, MA
Department Fellowship Coordinator

Becky Blankenburg, MD, MPH
Associate Chair of Education

Allison Guerin, EdD, MEd
Director of Education Administration
Core Curriculum

**Education**
- Fellows’ College (Years 1 – 3)

**Scholarship**
- Scholarship Round Robin (Year 1)
- Scholarship Academy (Year 1)
- Grant Writing Club (Year 1)
- Scholarship Club (Year 2 -3)

**Well-Being**
- Fellows’ College (Years 1 – 3)
Core Curriculum Descriptions

**FELLOWS’ COLLEGE**
48 hours of curriculum delivered as 4-hour sessions, 4 times per year. Topics include leadership, diversity & inclusion, teaching, well-being, & more.

**SCHOLARSHIP ROUND ROBIN**
Introduce fellows to the diverse array of scholarship areas and enhance their understanding of possible scholarship projects within each area.

**SCHOLARSHIP ACADEMY**
Week-long immersive experience that introduces first-year fellows to the resources and skills needed to begin their scholarly projects.

**GRANT WRITING CLUB**
Teaches the fundamentals of grant writing, including learning about all the components of the grant submission.

**SCHOLARSHIP CLUB**
Interactive sessions focused on the real-time research interests and needs, and works in progress of our fellows.
Fellow Scholarship Toolkit

https://medwiki.stanford.edu/pedtoolkit

- Launched in September 2020
- Developed based on feedback from fellows, faculty, program leadership
- Includes information on types of scholarship at Stanford, resources, courses, grant opportunities, development opportunities, information on training grants and pre-award support for fellows
- Goal is to provide information on all types of scholarship and offer fellows/mentors resources to support scholarly projects
- This is an iterative resource – please send us your feedback!
Update on COVID-19

January 25, 2021
# Phase 1a

## CURRENT TIER

<table>
<thead>
<tr>
<th>1A - Tier 1</th>
<th>1A - Tier 2</th>
<th>1A - Tier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Acute care, psychiatric, and correctional facility hospital staff</td>
<td>- Intermediate care facilities for persons who need non-continuous nursing supervision and supportive care</td>
<td>Other health care workers including:</td>
</tr>
<tr>
<td>- Residents and staff at skilled nursing facilities, assisted living facilities and similar settings for older or medically vulnerable individuals</td>
<td>- Home health care and in-home supportive services</td>
<td>- Specialty clinics</td>
</tr>
<tr>
<td>- Paramedics, EMTs, and others providing emergency medical services</td>
<td>- Community health workers, including promotoras</td>
<td>- Laboratory workers</td>
</tr>
<tr>
<td>- Dialysis centers</td>
<td>- Public health field staff</td>
<td>- Dental and other oral health clinics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Pharmacy staff not working in settings at higher tiers</td>
</tr>
</tbody>
</table>

Please continue to vaccinate people in **ALL TIERS** of Phase 1a
### Phase 1b

<table>
<thead>
<tr>
<th>Tier 1</th>
<th>Tier 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Individuals 65 and older (some health systems in Santa Clara County are now vaccinating those 75 and older)</td>
<td>- Those at risk of exposure at work in the following sectors: transportation and logistics; industrial, commercial, residential, and sheltering facilities and services; critical manufacturing</td>
</tr>
<tr>
<td>- Those at risk of exposure at work in the following sectors: education, childcare, emergency services, and food and agriculture</td>
<td>- Congregate settings with outbreak risk: incarcerated and homeless</td>
</tr>
</tbody>
</table>

**Move toward an age-based approach**
- Age will become the biggest prioritization factor in CA guidance
- More information to come
Phase 1c

Phase 1C*

- Individuals 50-64 years of age
- People 16-49 years of age and have an underlying health condition or disability which increases their risk of severe COVID-19

Those at risk of exposure at work in the following sectors: water and wastewater; defense; energy; chemical and hazardous materials; communications and IT; financial services; government operations / community-based essential functions

*Subject to change. Not yet finalized by CDPH
Pause of Moderna Lot 41L20A as of January 17, 2021

- 6 reactions at one site
  - No other similar reactions reported from other sites in CA or the country

- **Affected: 21,800 doses**
  - 4,000 Stanford
  - 3,000 ECH
  - 14,800 CSCHS

- As of today, CDPH has released this lot of Vaccine for immediate use in California.
CDPH’s Allocation Methods

- Denominator has included Phase IA population (Health care Personnel and LTCF residents)
  - Last week, 75+ population was added to denominator
    - Approximately 120,000 in SCC
  - This week, 65+ population (approximately 150,000 in SCC) was added to denominator and overall allocation of vaccine was split into two pools: one for LHJs and one for MCEs
NOT Enough Vaccine Across Nation

- Last week, under impression that no distinction between 1\textsuperscript{st} and 2\textsuperscript{nd} dose of vaccine, however, that has not yet happened
  - CA continues to receive first/second dose allotments

- Updates to be provided as we learn more from new Administration’s plans
Santa Clara County Vaccine Utilization

• Since distribution began and through 1/20/21 99,216 vaccinations administered

• SCC accounts for 46,184
SARS-CoV-2

Virus and mRNA Platform
• There are seven human coronaviruses
• Four of them cause seasonal colds
• Three have mutated to produce more severe disease: SARS, MERS and now SARS-CoV-2
• The Spike protein allows the virus to attach to human cells
• A spike mutation, which may have occurred in 2019, likely triggered SARS-CoV-2 spillover into humans

https://www.ncbi.nlm.nih.gov/books/NBK554776/
## Coronavirus Vaccine Tracker

**By Carl Zimmer, Jonathan Lerum and Sui Lee Wee**  
**Updated Dec. 14, 2020**

### Leading vaccines

<table>
<thead>
<tr>
<th>Developer</th>
<th>Type</th>
<th>Phase</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pfizer-BioNTech</td>
<td>mRNA</td>
<td>2, 3</td>
<td>Approved in Canada and other countries, Emergency use in U.S. and other countries.</td>
</tr>
<tr>
<td>Moderna</td>
<td>mRNA</td>
<td>3</td>
<td>Under F.D.A. review.</td>
</tr>
<tr>
<td>CanSino</td>
<td>Adenovirus</td>
<td>3</td>
<td>Limited use in China.</td>
</tr>
<tr>
<td>Gamaleya</td>
<td>Adenovirus</td>
<td>3</td>
<td>Early use in Russia.</td>
</tr>
<tr>
<td>Johnson &amp; Johnson</td>
<td>Adenovirus</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Oxford-AstraZeneca</td>
<td>Adenovirus</td>
<td>2, 3</td>
<td></td>
</tr>
<tr>
<td>Novavax</td>
<td>Protein</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Vector Institute</td>
<td>Protein</td>
<td>1, 2</td>
<td>Early use in Russia.</td>
</tr>
<tr>
<td>Sinopharm-Wuhan</td>
<td>Inactivated</td>
<td>3</td>
<td>Limited use in China, U.A.E.</td>
</tr>
<tr>
<td>Sinovac</td>
<td>Inactivated</td>
<td>3</td>
<td>Limited use in China.</td>
</tr>
</tbody>
</table>
mRNA-1273 is Based on Well-Understood mRNA Biology

- mRNA is the blueprint for all protein synthesis
- Uses cell biology to activate immune system
- Inherent safety features
  - Does not self-replicate
  - Does not enter nucleus or integrate into DNA
  - Manufacturing process is cell free and contains no human or animal products, preservatives, or adjuvants
Pfizer BioNTech Vaccine

Proposed Indication:
Prevention of Coronavirus Disease 2019 (COVID-19) caused by SARS-CoV-2

- Individuals 16 years of age and older

DOSE LEVEL and REGIMEN
- 30 µg
- 2 doses given greater than or equal to 21 days apart

PRESENTATION
- 5 dose multidose vial

STORAGE
- -80°C to -60°C
- 5 days at 2°C-8°C
How COVID-19 mRNA Vaccines Work

• COVID-19 mRNA vaccines make the spike protein found on the surface of SARS-CoV-2.

• After inoculation, the lipid capsule allows mRNA into the muscle cells where it is used to make spike protein.

• mRNA is immediately degraded

• Spike protein is then expressed on the cell surface which is then recognized by the body’s immune cells (T and B cells).

• No live virus is used nor does mRNA enter the nucleus of the human cell where the human genes are stored.
COVID-19 First Primary Endpoint Case Definition

1 or more of these symptoms:

- Fever
- New or increased cough
- New or increased shortness of breath
- Chills
- New or increased muscle pain
- New loss of taste/smell
- Sore throat
- Diarrhea
- Vomiting

Positive validated PCR in central laboratory

CDC definition also includes fatigue, headache, nasal congestion or runny nose, and nausea.

CC-32
## Pfizer and Moderna Overview

<table>
<thead>
<tr>
<th></th>
<th>Pfizer</th>
<th>Moderna</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Number</td>
<td>~44,000</td>
<td>~30,000</td>
</tr>
<tr>
<td>Primary Endpoint</td>
<td>PCR+ COVID-19 Symptoms</td>
<td>PCR+ COVID-19 Symptoms</td>
</tr>
<tr>
<td>Cases -Placebo</td>
<td>162</td>
<td>185</td>
</tr>
<tr>
<td>Cases- Vaccinees</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>TOTAL CASES</td>
<td>170</td>
<td>196</td>
</tr>
<tr>
<td>Vaccine Efficacy</td>
<td>95%</td>
<td>94%</td>
</tr>
<tr>
<td>Efficacy Endpoint</td>
<td>7 days after second dose</td>
<td>14 days after second dose</td>
</tr>
</tbody>
</table>
Pfizer and Moderna Safety

- Overall adverse events:
  - Local site tenderness, flu-like symptoms
  - Generally begin within 24 hours and end within 48 hours after vaccination
  - Cases of angioedema also noted

- Anaphylaxis:
  - Moderna: ~2.5 cases per 1 million doses (n=10 cases; only one with no history of prior allergies to one or more other substances)
  - Pfizer: ~11.1 cases per 1 million doses (n=21 cases)
  - Comparison: 1.3 cases per 1 million doses of influenza vaccine
SARS-CoV-2 Variants

- Overall 195
- California: 72
- Florida: 50
- New York: 22

Multiple COVID-19 variants are circulating globally:

- **B.1.1.7 emerged in the UK** with an unusually large number of mutations
  - Spreads more easily and quickly than other variants
  - Preliminary evidence that it may cause more severe illness or increased risk of death
  - This variant was first detected in September 2020 and is now highly prevalent in London and southeast England
  - It has since been detected in numerous countries around the world, including the United States and Canada.

- Another variant called **1.351 has emerged independently in South Africa**
  - Originally detected in early October, shares some mutations with the variant detected in the UK
  - There have been cases caused by this variant outside of South Africa, but it has not been detected in the US

- A variant called **P.1 emerged and was identified in four travelers from Brazil**, who were tested during routine screening at Haneda airport outside Tokyo, Japan
  - This variant contains a set of additional mutations that may affect its ability to be recognized by antibodies
  - This variant has not been detected in the US
Pattern of SARS-CoV-2 Variants

https://nextstrain.org/ncov/global
What Does the Future Hold?

• Treatment: Combination therapy
  – Antiviral, immunomodulatory, anti-inflammatory, monoclonal
  – Clinical trials approaches must be flexible and adaptive
  – Ideally development of biomarkers or clinical indices to measure outcomes

• Prevention: Vaccines
  – Herd immunity is the ultimate goal but may not happen rapidly
  – Degree and durability of immunity to be determined
  – Vaccine associated immune effects unknown

• Non-pharmacologic interventions (masks, social distancing) to continue for an undefined period