

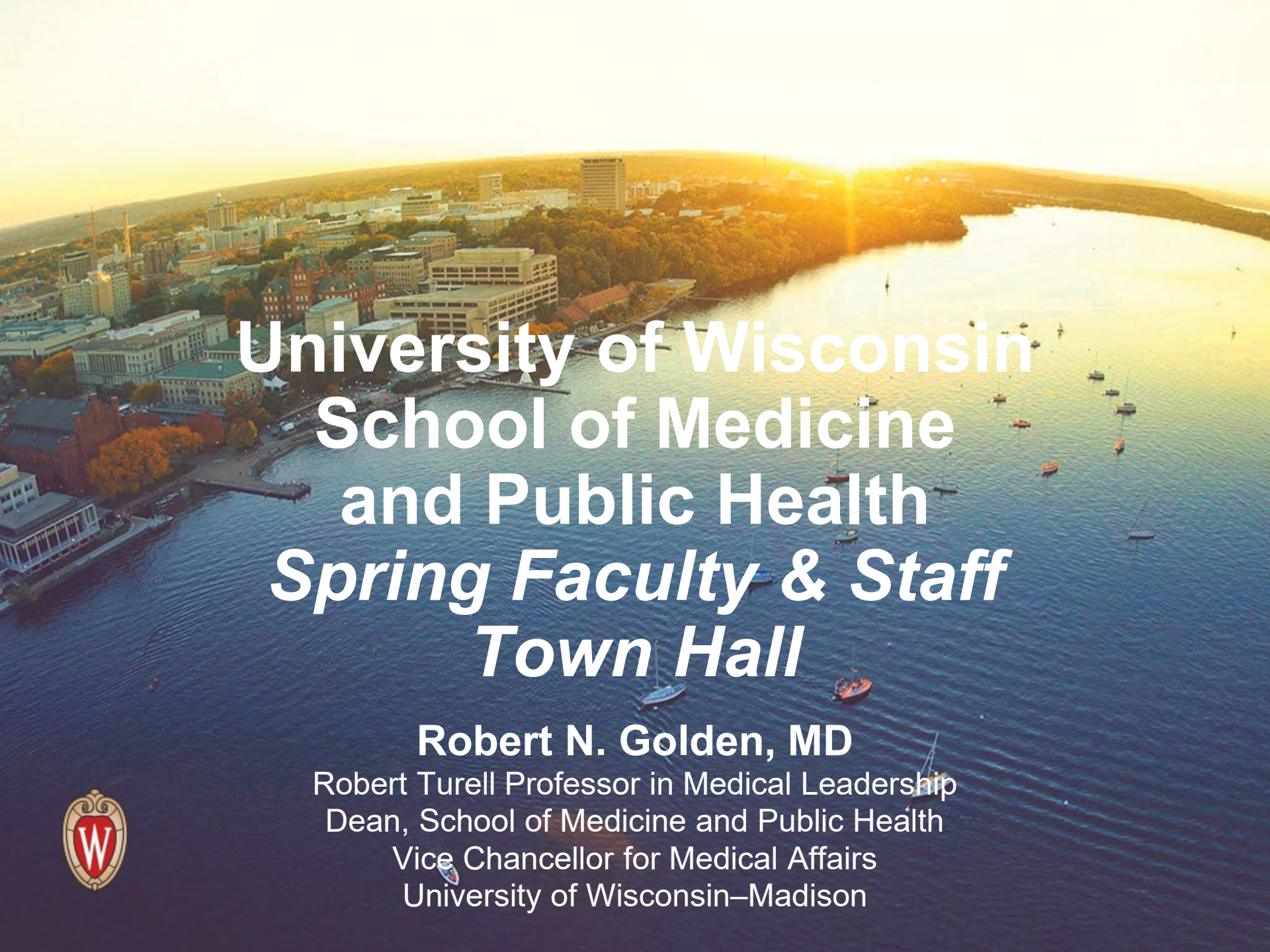
Welcome, attendees!

- Your microphone is muted on entry into the event to avoid background noise/feedback. You won't be able to unmute yourself.
- To reduce video bandwidth, your camera will remain off.
- The chat feature is turned off for this event.
- The event will begin at 4:30 pm.
- Use the Q&A feature to send your questions to Robyn Perrin.
- This meeting is being recorded, and your Q&A submissions will also be saved for follow-up as needed.



Building Community
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Every person.
Every action.
Every time.



University of Wisconsin School of Medicine and Public Health *Spring Faculty & Staff Town Hall*

Robert N. Golden, MD

Robert Turell Professor in Medical Leadership
Dean, School of Medicine and Public Health
Vice Chancellor for Medical Affairs
University of Wisconsin–Madison



Agenda

- Welcome
- Faculty Vote to Award Degrees to Graduates
- Match Outcomes and Clinical Education
- COVID-19 Response Update: Global and Local Efforts
- Town Hall
- Adjournment



Education Updates

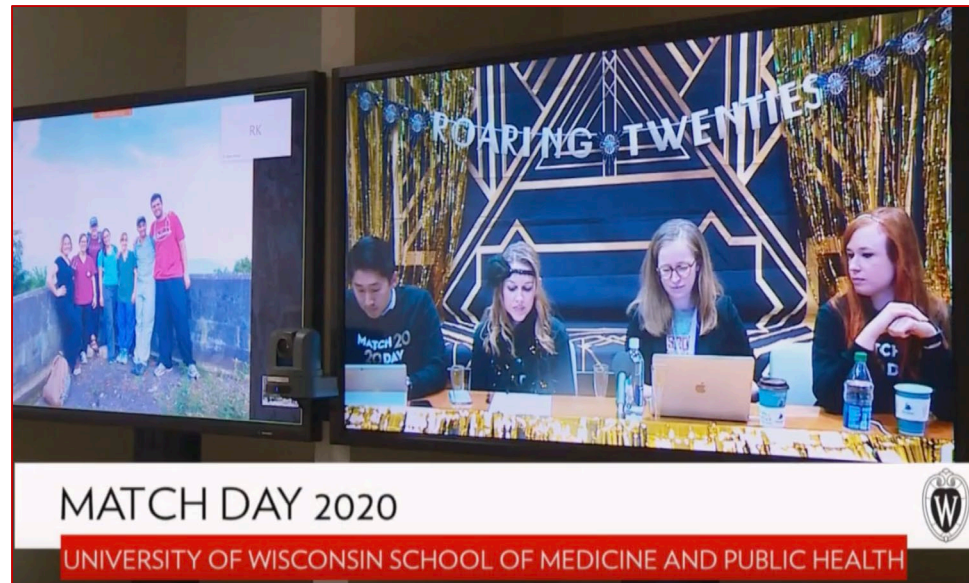
Elizabeth M. Petty, MD _ Senior Associate Dean for Academic Affairs

1. Faculty Vote to Award Degrees to Graduates - Motion:

"The Faculty recommends to the Regents for their respective degrees those students certified whose names are submitted by the Dean as having completed the requirements for their respective degrees."

2. Match Outcomes 2020

2. Clinical Education Updates



2020 Match - New NRMP Records

- Total MD and DO Match participants
- PGY-1 positions (6.4% increase) with DO program positions
- More US MD seniors matched

NRMP Data	2020	Increase from 2019	Filled by US MD grads
Total PGY-1 Positions	34,266	+2,072	52.8% (2019 - 54%)
Total US MD Senior Applicants	19,326	+401	
Total Active PGY-1 Applicants	60,856	+4,763	

SMPH Students Match Well

Applicant Type	Match Rate 2020 (2019)
Active Seniors MD Schools	94% (94%)
Seniors US DO Schools	91% (85%)
US Citizens Seniors & Previous Grads of International Schools	61% (59%)
Non US Citizen Seniors & Previous Grads of International Schools	61% (59%)
Previous Graduates MD Schools	45% (45%)

Year	UWSMPH Match %	National Match %
2020	99%	94%
2019	99%	94%
2018	98%	94%
2017	98%	94%
2016	97%	94%

Pre-SOAP 96%, Post-SOAP 99%

SMPH MD Graduates Entering Match	161
Students fully matched	153
Matched to advanced position, no PGY-1 position	1
Matched to PGY-1 position, no advanced position	1
No match/GME	6
Initial Pre-SOAP Match Rate	96%

SMPH MD Graduating Students in SOAP	8
Accepted categorical position	2
Accepted advanced position	1
Accepted PGY-1 position	3
Stayed fully unmatched	2
Final Post-SOAP Match Rate	99%

2020 Specialty Competitiveness

Most Competitive (>80% USMG)

- Neurological Surgery
- Orthopedic Surgery
- Otolaryngology
- Plastic Surgery
- Thoracic Surgery
- Vascular Surgery
- Med-Peds*

Less Competitive (<45% USMG)

- Family Medicine
- Internal Medicine
- Pathology
- Pediatrics*

* First time on list in past 10 years



School of Medicine
and Public Health

UNIVERSITY OF WISCONSIN-MADISON

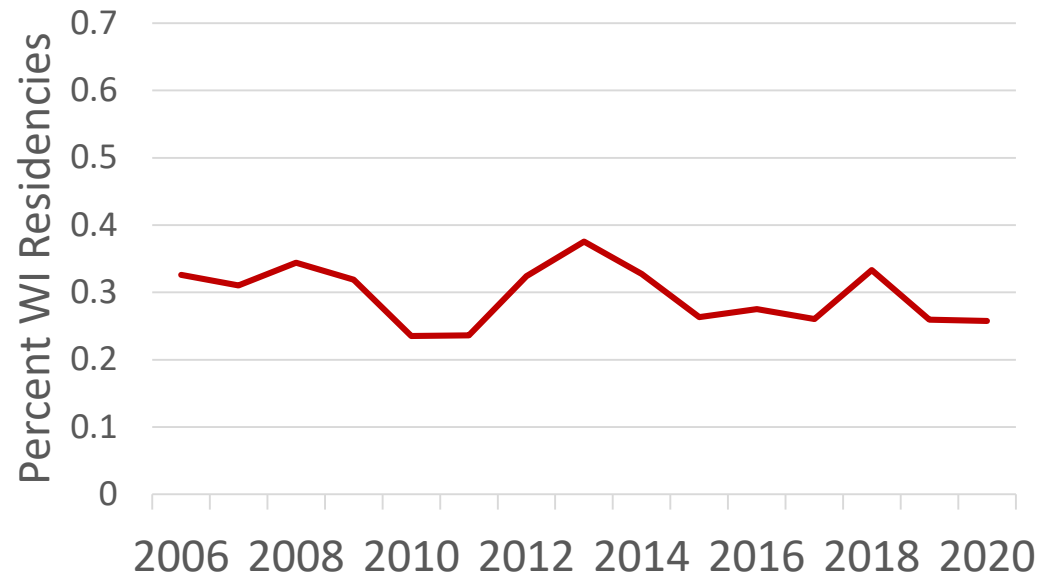
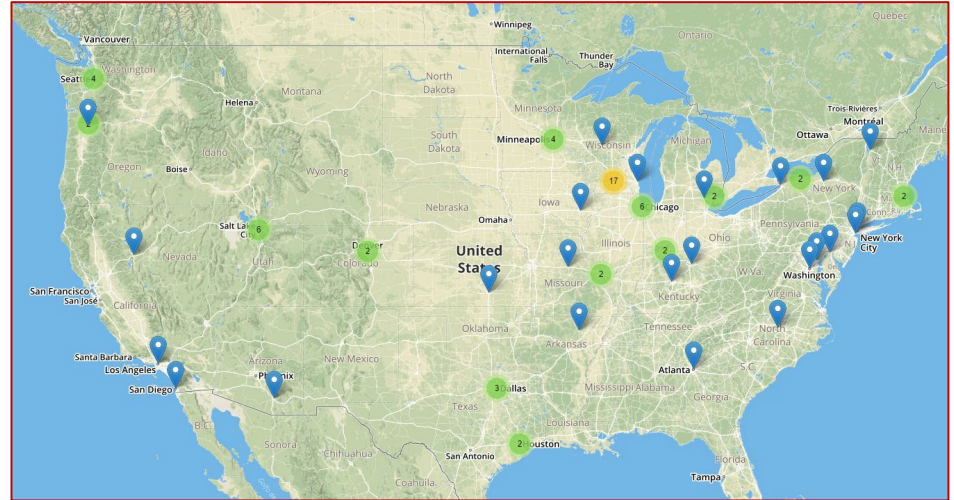
Where are graduates going?

Students matched to very competitive specialties & programs across the country

Popular cities

- Madison (27)
- Chicago (9)
- Salt Lake City (9)
- Seattle (6)
- Minneapolis (6)
- Milwaukee (5)

26% in Wisconsin



What fields are graduates going into?

- Internal Medicine (20%)
- Emergency Medicine (15%)
- Family Medicine (11%)
- Anesthesiology (7%)
- Pediatrics (6%)
- Surgical Specialties 16%
 - General Surgery (6.5%)
 - Orthopedics (3%)
 - ENT (2.5%)
 - Plastics (1%)
 - Neurosurgery (1%)
 - Urology (1%)
 - Ophthalmology (1%)

Primary care down slightly to 38% (previous 3 year avg 43%)

UW Health and Statewide Matches

• UW Hospitals and Clinics	27
• MCW Programs	5
• Gundersen Health System	4
• Advocate - Aurora Health System	1
• Marshfield Clinic Health System	1

Special Programs Meeting Goals

- **TRIUMPH n=18**
 - 3 WI (EM, Med-Peds & OB/Gyn)
 - 15 other (3 IM; 3 Psych, 2 Ob/Gyn; 2 Gen Surg, and 1 each in EM, Fam Med, Peds, Derm, Anest)
- **WARM n=25**
 - 15 WI (5 Fam Med, 3 IM, 3 Anest, and 1 each in Ob/Gyn, Ortho, ENT)
 - 10 other (3 Fam Med, 2 EM, and 1 each in Ob/Gyn, Peds, Anest, IM, Psych)
- **MSTP n=3**
 - 3 other (IM, Neuro, Dx Rad)

It was a GREAT Match for the 1st ForWard Class!

- UWSMPH students did extremely well nationally
- Excellent contribution to primary care fields
- Over 25% remain in WI (and others will return)
- All UW Health and statewide campus positions filled except for UW Baraboo Fam Med and Prelim Surgery

**Thanks to the great work of awesome
departmental and academic affairs
faculty and staff as well as the wonderful efforts
of talented, well-prepared students!**

Clinical Education: COVID-19 Caveats and Challenges

- All SMPH health professional degree programs - DPT, MGCS, MD, MPAS, MPH – (as well as grad students and residents) greatly impacted
- All moved exclusively to online remote learning per UW Campus guidelines for current curriculum to keep all cohorts on track for their graduations
- All UW Health, Statewide campus, and most national clinical sites have been completely closed to student learners since mid-March
- All national accreditation bodies (i.e. LCME) and national organizations (i.e. AAMC) have been calibrating the course and providing guidelines for navigating curriculum and services during the COVID-19 crisis
- All non-clinical summer education and non-credit activities will be virtual per UW Campus guidelines

MD ForWard Curriculum

- **Graduating Seniors:** Changes and exceptions made to facilitate on-time virtual graduation (May 7, 10 AM streaming MD grad recognition ceremony)
- **Phase 1:** Online courses with remote clinical skill learning and exams; virtual summer research and learning activities; no global health travel
- **Phase 2:** Restructured learning activities with all online didactic learning through 6/19; remote NBME exams starting this week; 8-week blocks of hands-on clinical learning beginning July 6; student safety and clinical teaching capacity across specialties and sites are key to success
- **Phase 3:** Multiple online courses developed and delivered; now beginning 2 courses (Clinical Therapeutics and Preparedness), more online courses as well as clinical rotation pilots beginning 5/26; full clinical experiences planned to begin 7/6 ; close partnerships with sites and departments essential for new "Pre-ERAS" scheduling process
- **No visiting students** through at least 9/1/2020

Major Challenges for Phase 3 Students

- Cancellation of many spring clinical courses including key acting and sub-internships
- Loss of clinical experiences impacts specialty & career decision making options
- Cancellation of away rotations with very little likelihood of rescheduling may impact residency options
- Postponement of USMLE Step 2CK and 2CS creates uncertainty in schedules and may impact match opportunities

Significant uncertainty remains about what clinical experiences we can offer and where and when we can offer them amid ongoing LCME requirements for sufficient and equitable clinical learning experiences at all sites

Current National Questions Being Asked and Discussed

- Should away rotations and visiting student rotations be suspended or altered?
- Should residency application, MSPE , interview, and/or Match dates be changed?
- Should restrictions on the numbers of applications, letters, and/or interviews be imposed?
- Should in-person residency interviews take place?
- Will future COVID-19 surges drive additional changes to clinical opportunities?

and many others...



Key Goals for Phase 3 Students:

1. Meaningful specialty exposure and clinical experiences for career preparation
2. Sufficient opportunities to obtain key letters and build a strong residency application
3. Successful match for M4s in May 2021 with grads well trained for launch into residency!

What Are We Doing To Help Rising M4 Students?

- Working with student services, department & division champions, ACAPT mentors, statewide site champions
- Creating specialty “homes” for rising M4 students and connecting students with their “champions”
- Building individual M4 summer/early fall schedules between now and June 8
- Piloting clinical rotations with *some* M4 students, in *some* specialties, at *some* sites starting May 26
- Allowing *all* M4 students to start clinical rotations July 6

Think, Teach, and Test Differently....

- Include more non-face to face experiences as patient care learning activities
- Develop key longitudinal relationships between faculty and students
- Realign limited clinical time with prioritized learning objectives and outcomes
- Evaluate many important clinical skills without direct patient contact
- Collaborate and brainstorm across units, departments, programs, sites
- Be flexible, nimble, and learner focused while patient/population centric

Monitor
student
health and
wellness

Maximize
clinical
learning
resources

Maintain
high quality
education

Minimize
PPE use,
maximize
social
distancing

Make sure
students
have great
career
options

Thank **YOU** for your
time, talent, tenacity, and thoughts!



COVID-19 Response Update: Global and Local Efforts

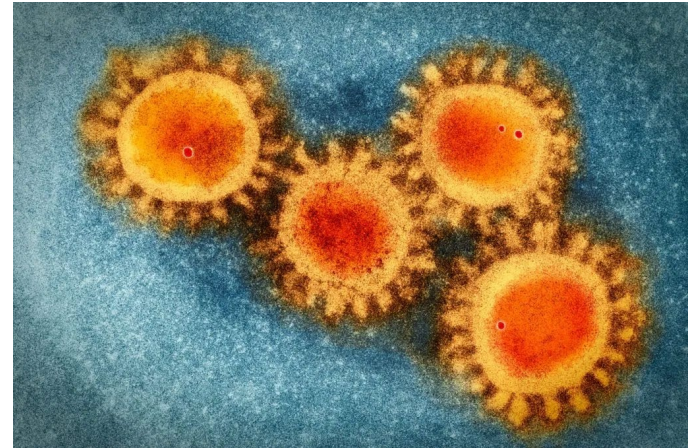
David Andes, Professor and Chief of Infectious Disease,
Department of Medicine



School of Medicine
and Public Health
UNIVERSITY OF WISCONSIN-MADISON

Outline

- ❑ COVID Summary
- ❑ Testing
- ❑ Epidemiology
- ❑ Treatment
- ❑ Prevention
- ❑ UW Research Innovation



COVID US Update ~ 4 months in

Location	Cases	Deaths/Rate
World	2.7 million	192,982 (7%)
US	871,285	48,257 (6%)
Wisconsin	5,052 (1 st Mar 4)	257 (5%)
Dane County	399	21 (5%)

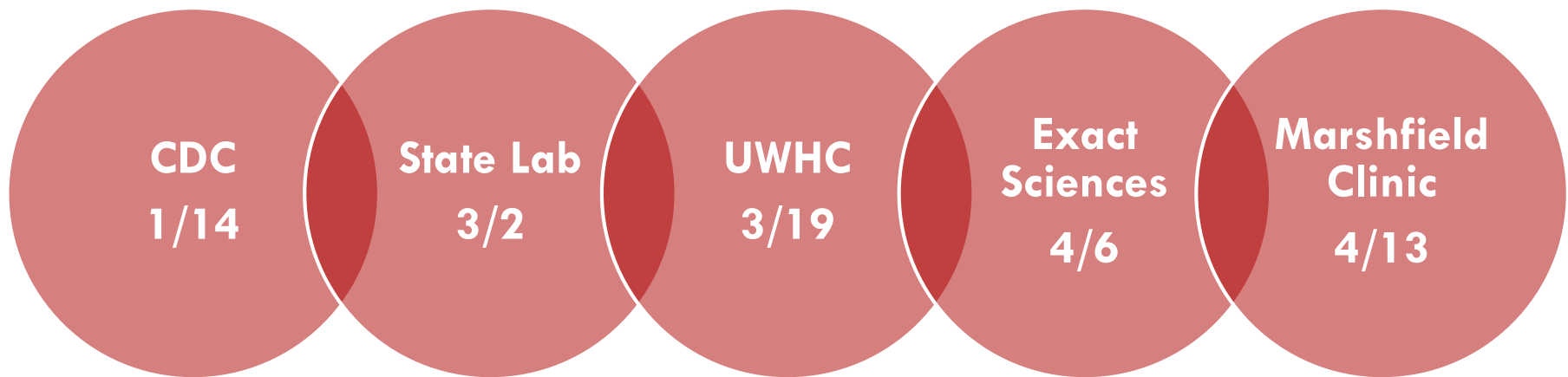
- Pandemic (~ 200 countries)
- US heterogeneity (epicenters: Washington State, NY, New Jersey, New Orleans, Detroit)
- Up to 50% asymptomatic, 15% ill enough to seek medical attention
- 50% hospitalized become critically ill, 80% mortality in ventilated patients
- Wide mortality range (0.2% S Korea to 12.7% Italy) – age and comorbidities
- No studies have affirmed efficacy of any therapeutic
- Stressed healthcare infrastructure (testing, beds, ventilators, PPE, staff)
- Social distancing has flattened the curve
- Inadequate testing assays and supplies



Testing

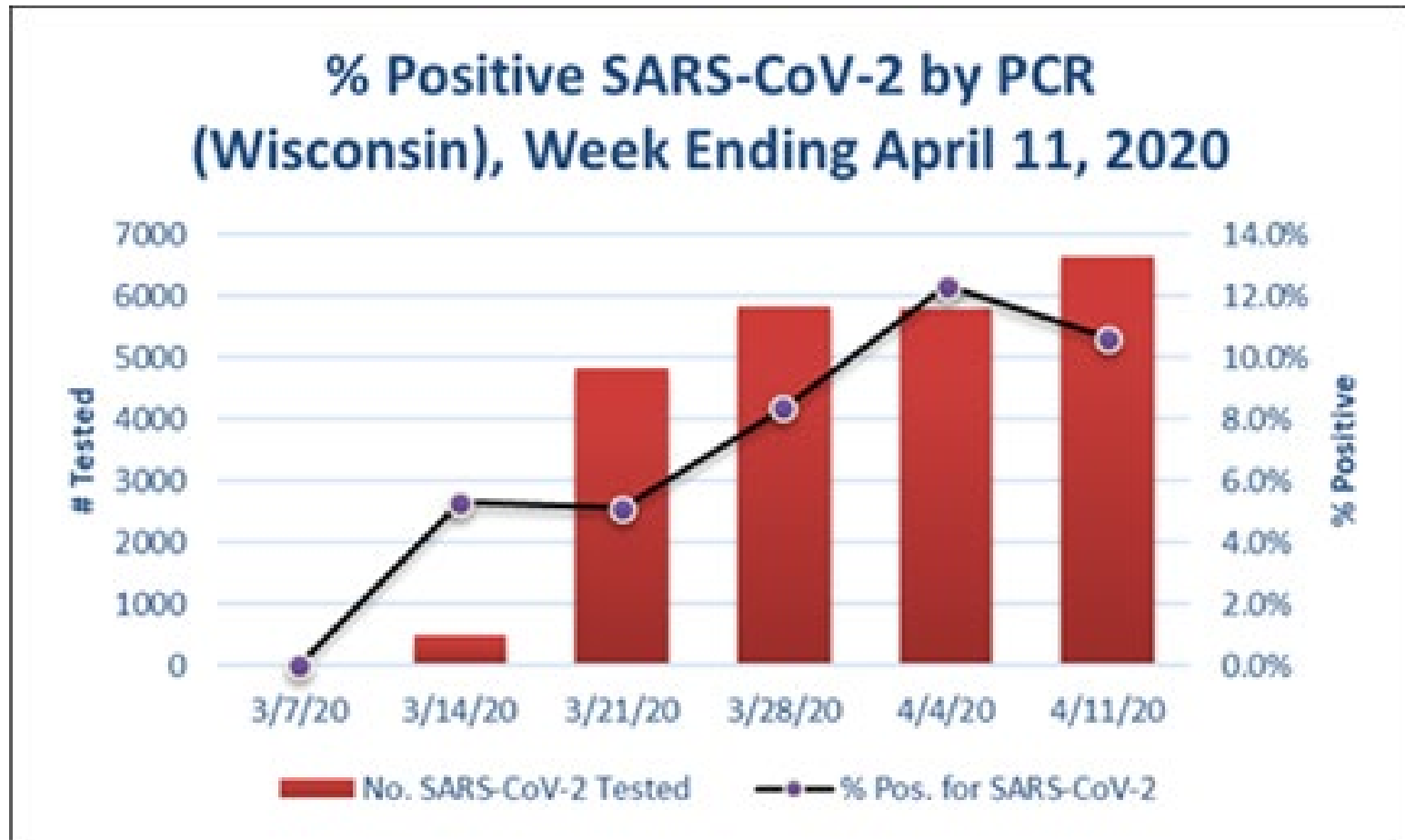
COVID Detection

- FDA Emergency Use Authorization
 - ▣ COVID RT PCR tests 43 (4/14/20)



- Total Global tests 4/23 >20 million
- Total US tests 4/23 4,692,235
- Total WI tests 4/24 56,709

COVID RT-PCR Detection – State Lab



UW Health Clinical Laboratories COVID-19

NUCLEIC ACID EXTRACTION



3 Roche MagNA Pure Extractors



AMPLIFICATION AND DETECTION



3 Roche Light Cycler 480s



THROUGHPUT (TIME to RESULT)

350 results/day

Supply Chain Dependability

UNPREDICTABLE



1 Promega MaxPrep Liquid Handler
2 Promega Maxwell Extractors



3 Roche Light Cycler 480s



500 results/day
BATCH Mode

(In LAB TAT: 10 hours)

**HIGH
(PROMEGA)**

**(>5,000 tests as of
04/20/20)**



2 Hologic Panther Fusions
(Integrated extraction and amplification/detection)



1700 results/day
Semi-Random Access

(In LAB TAT: 4-5 hours)

UNPREDICTABLE/IMPROVING

**(>5,000 tests as of
04/20/20)**

High

**(UW Health allotted
60,000 tests on 5/29)**



Cepheid Xpert Express
(Integrated extraction and amplification/detection)



100 results/day
Random Access

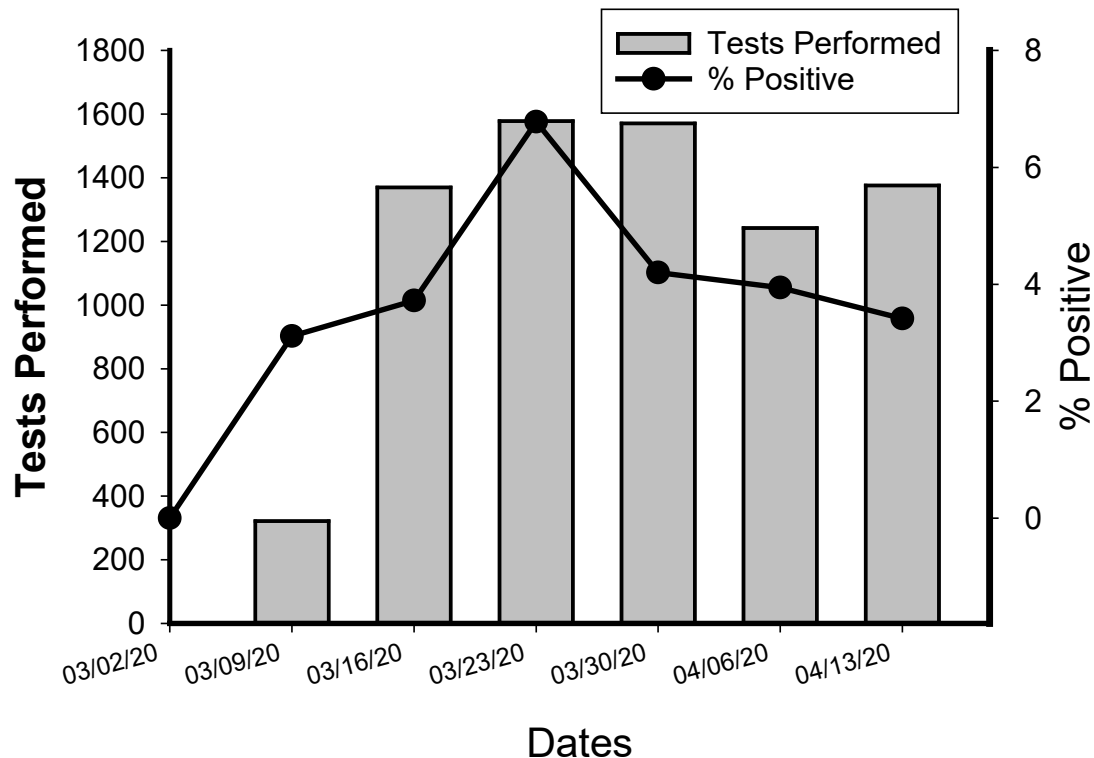
(In LAB TAT: 1-2 hours)

LOW/UNKNOWN

**(~500 tests as of
04/20/20)**



COVID RT-PCR Detection - UWHC

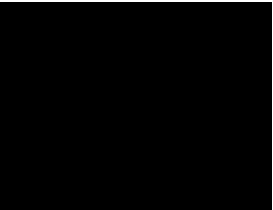


- 100s/day, >6000 total
- TAT 5-10 h
- All positives called to provider real time (please don't call lab)
- Sensitivity ~ high 90s
- Repeat inpatient tests at UW=65, all negative
- UW all 236 repeat tests (97% neg)

UW Campus Testing Innovations



- LAMP (Loop-mediated isothermal amplification)
 - ▣ No need for nucleic acid extraction (supply chain)
 - ▣ Low tech/cost (lower resource settings)
 - ▣ Rapid (1h) and large capacity
 - ▣ Initial testing – good sensitivity/specificity
- RT-PCR Optimized Saliva
 - ▣ No need for swabs (supply chain)
 - ▣ Reduced HWC risk
- Virus sequencing
 - ▣ Population health epidemiology



Epidemiology

COVID Epidemiology – The Crystal Ball



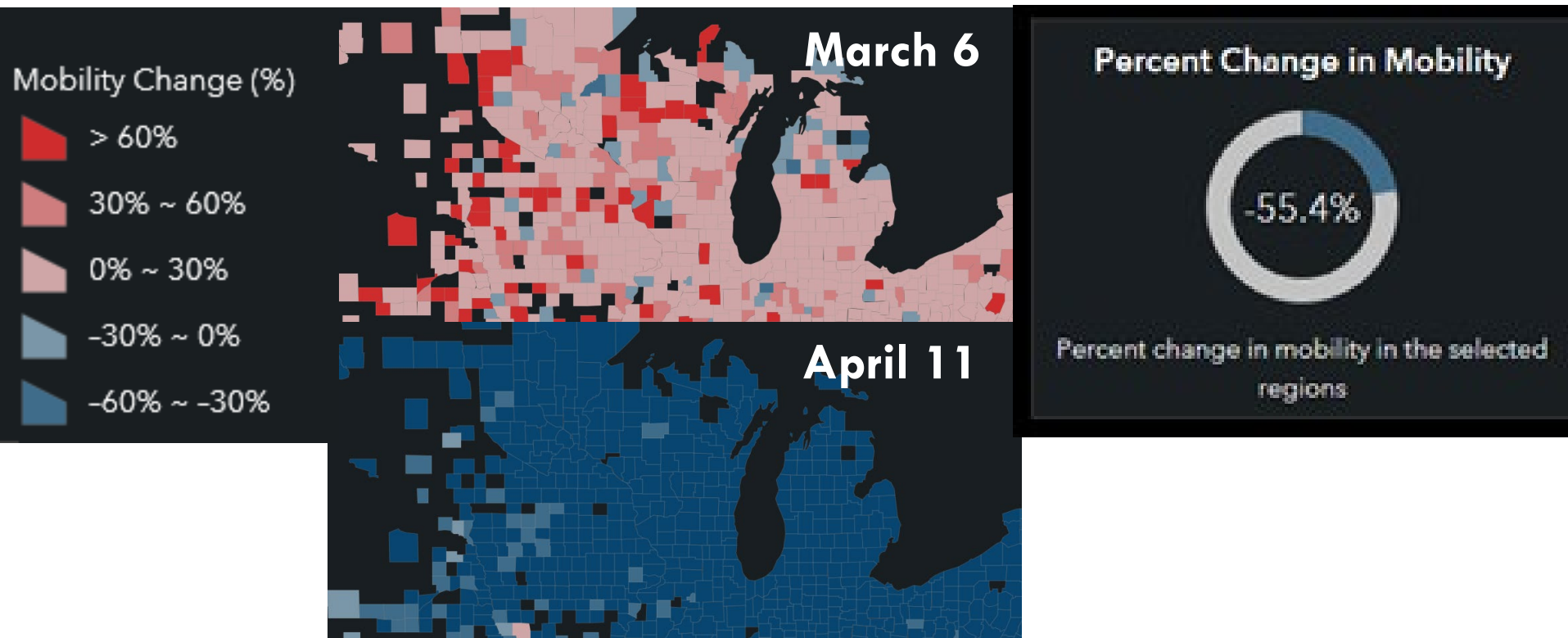
Model	Peak Date
IHME (Univ Washington)	Mid-April
ACT-NOW (Georgetown)	July
AFI DSI (Univ Wisconsin)	Late summer/Early fall

- Variables that impact predictions
 - ▣ Doubling time (incubation period/infectious phase)
 - ▣ Mitigation strategies



George Box, UW Prof of Statistics
“All models are wrong; some models are useful.”

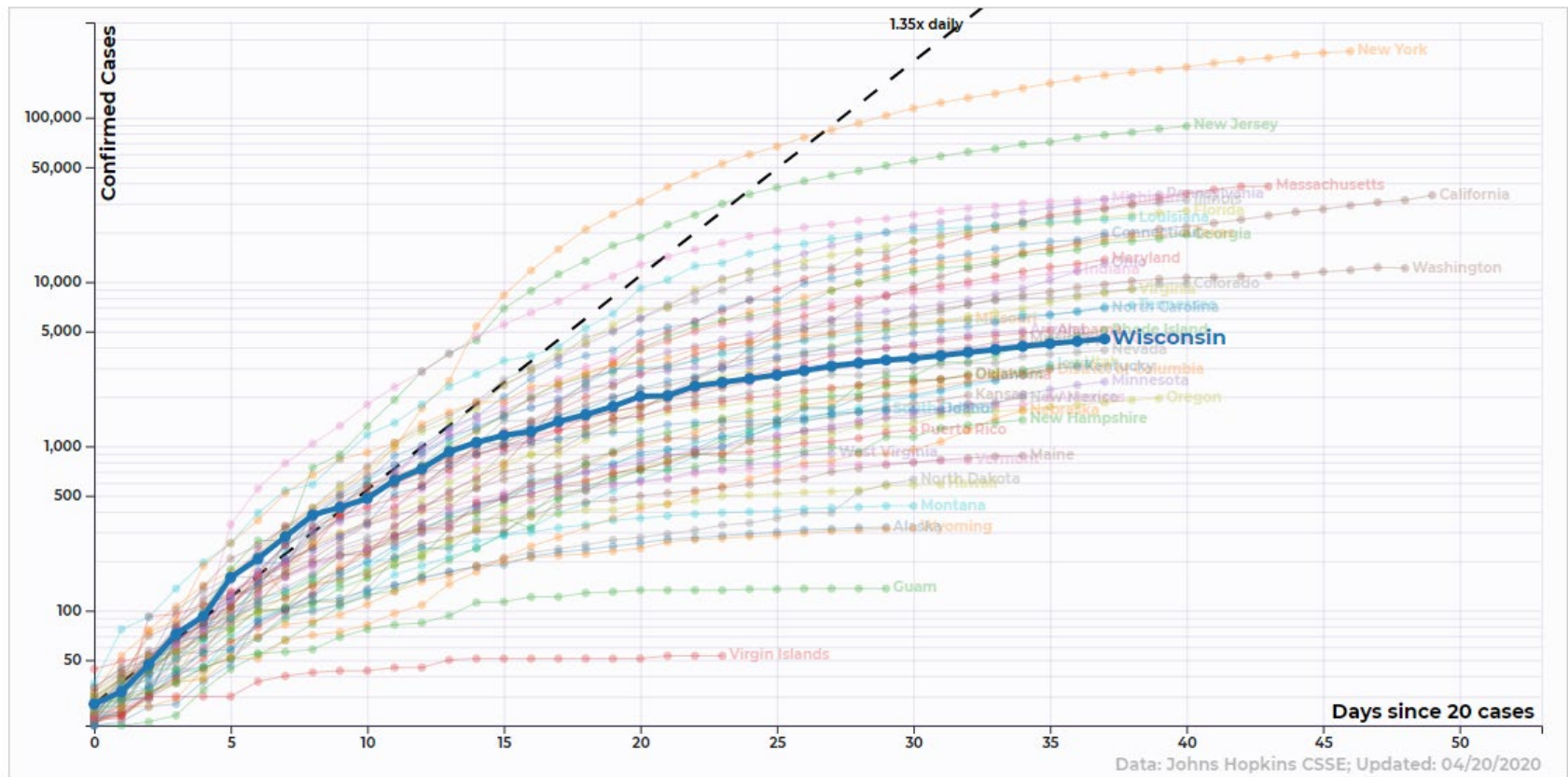
COVID Social Distancing



- Anonymized cell phone data
- Distance traveled as measure of adherence to social distancing
- WI Stay at home order March 25
- R_0 (reproductive number) change from 2-3 to <1
- Doubling time change from 3d to 3 weeks

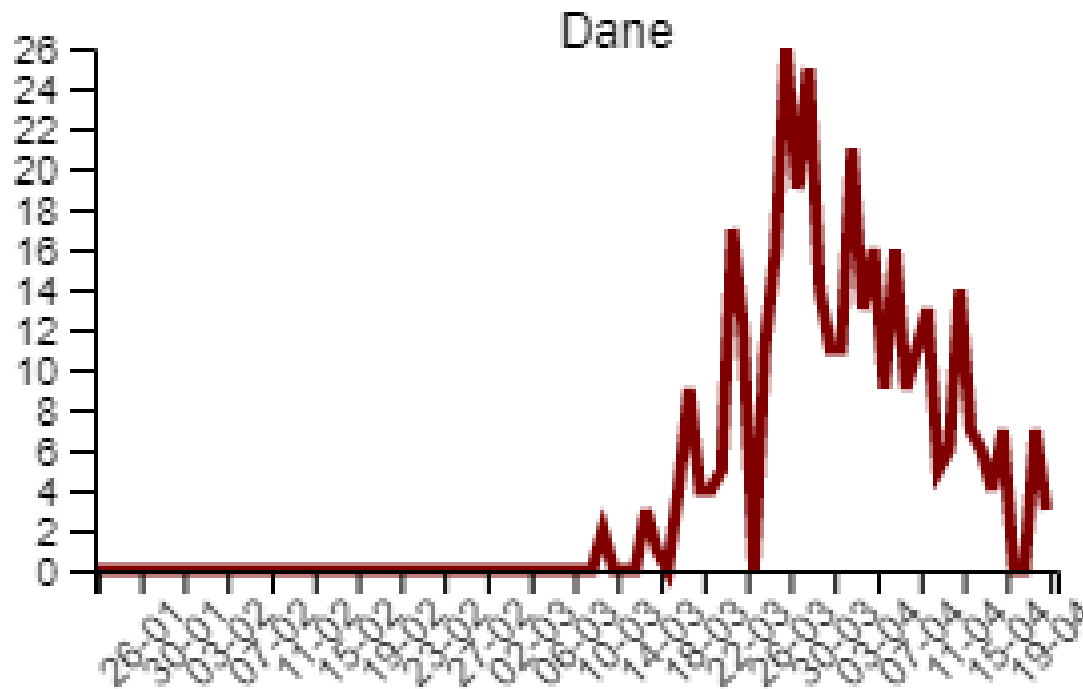
Wisconsin COVID Cases Over Time

COVID-19 Cases by US States/Territories



Dane County COVID Cases Over Time

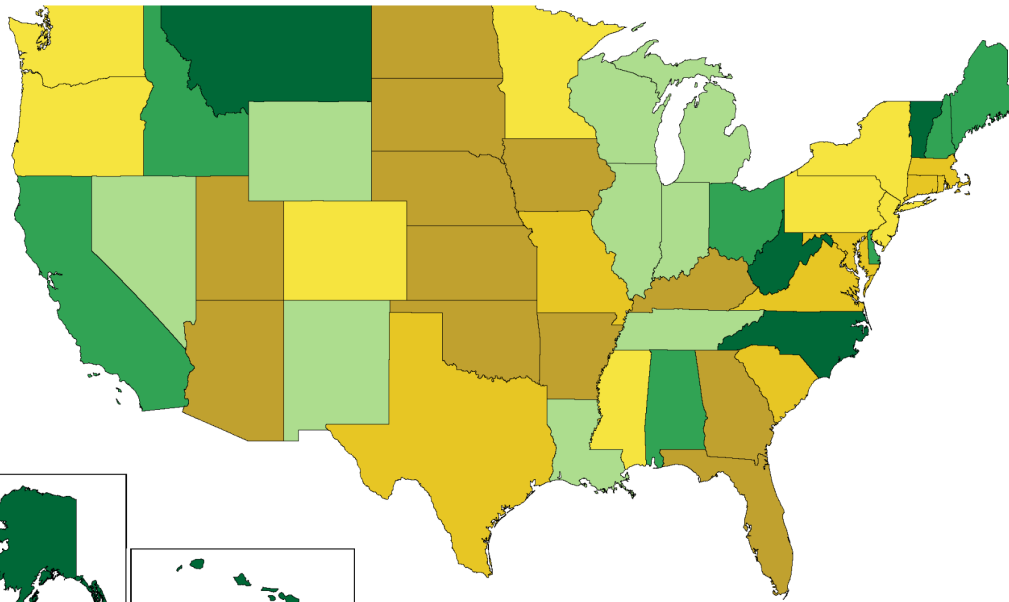
New cases:



<https://geodacenter.github.io/covid/map.html>

Return to “Normal” Modeling and Badger Bounce Back

Threshold date:  May 04 to May 10  May 11 to May 17  May 18 to May 24  May 25 to May 31  June 01 to June 07  June 8 or later



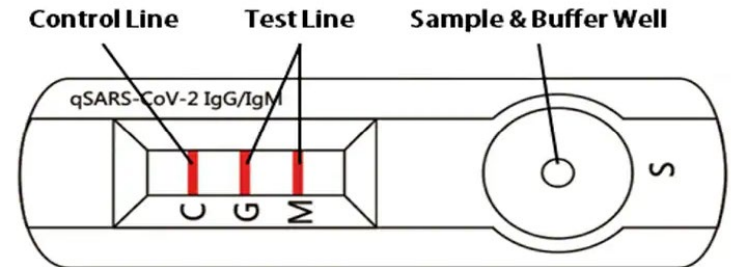
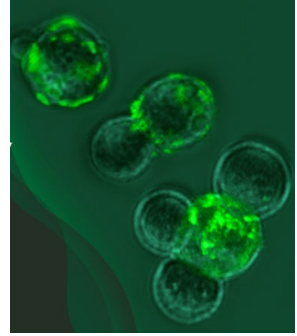
IHME Model (4/21)

Wisconsin Plan

- ❑ Three phase based upon gating criteria
- ❑ Box in the Virus – Testing, Tracing, Tracking
- ❑ Testing 85,000/week, Tracing (1,000 additional staff) and Tracking

COVID Serologic Testing

- 70 entities listed (FDA) as developing assays
- Two primary commercial approaches
 - ▣ Rapid lateral flow assay (POC 10-30 min – yes/no)
 - ▣ ELISA (1-5 h, can be qualitative or quantitative)
- SLH under consideration
- UWHC – 1-2 weeks away
- Promega under development
- CAVEATS
 - ▣ Cross reactivity (Non-COVID-19)
 - ▣ Protective (neutralizing) Ab?





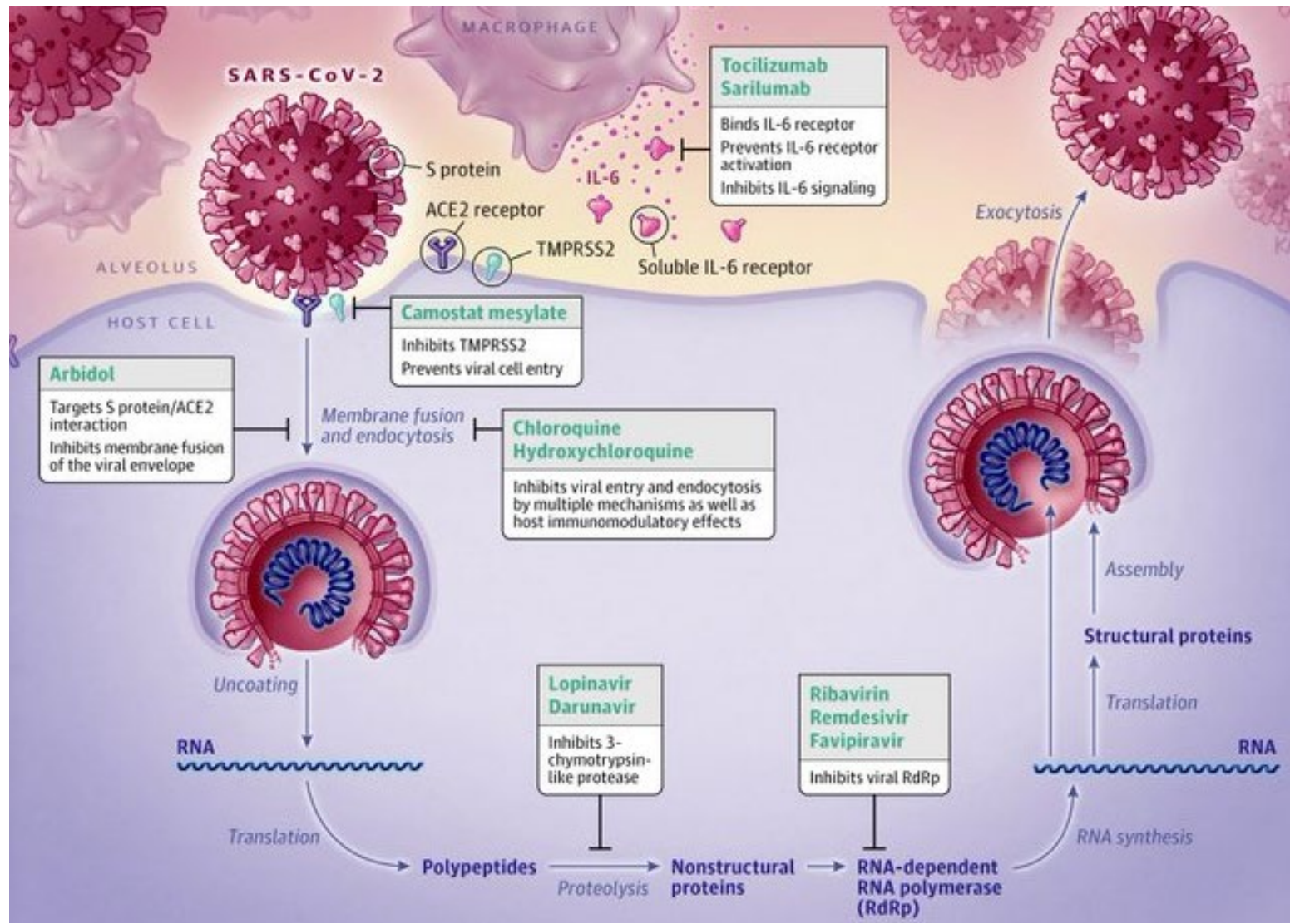
Treatment

COVID Treatment – Sift and Winnow

- No studies have affirmed efficacy of any therapeutic
- ClinicalTrials.gov
 - 692 COVID trials
 - 442 treatment (179 active recruitment)
 - 24 Phase 1 – 78 Phase 2 – 61 phase 3
- WHO trial database
 - 1135 COVID trials
- Treatment group (Misch/Schulz)
 - >33,000 documents
 - Poor quality data

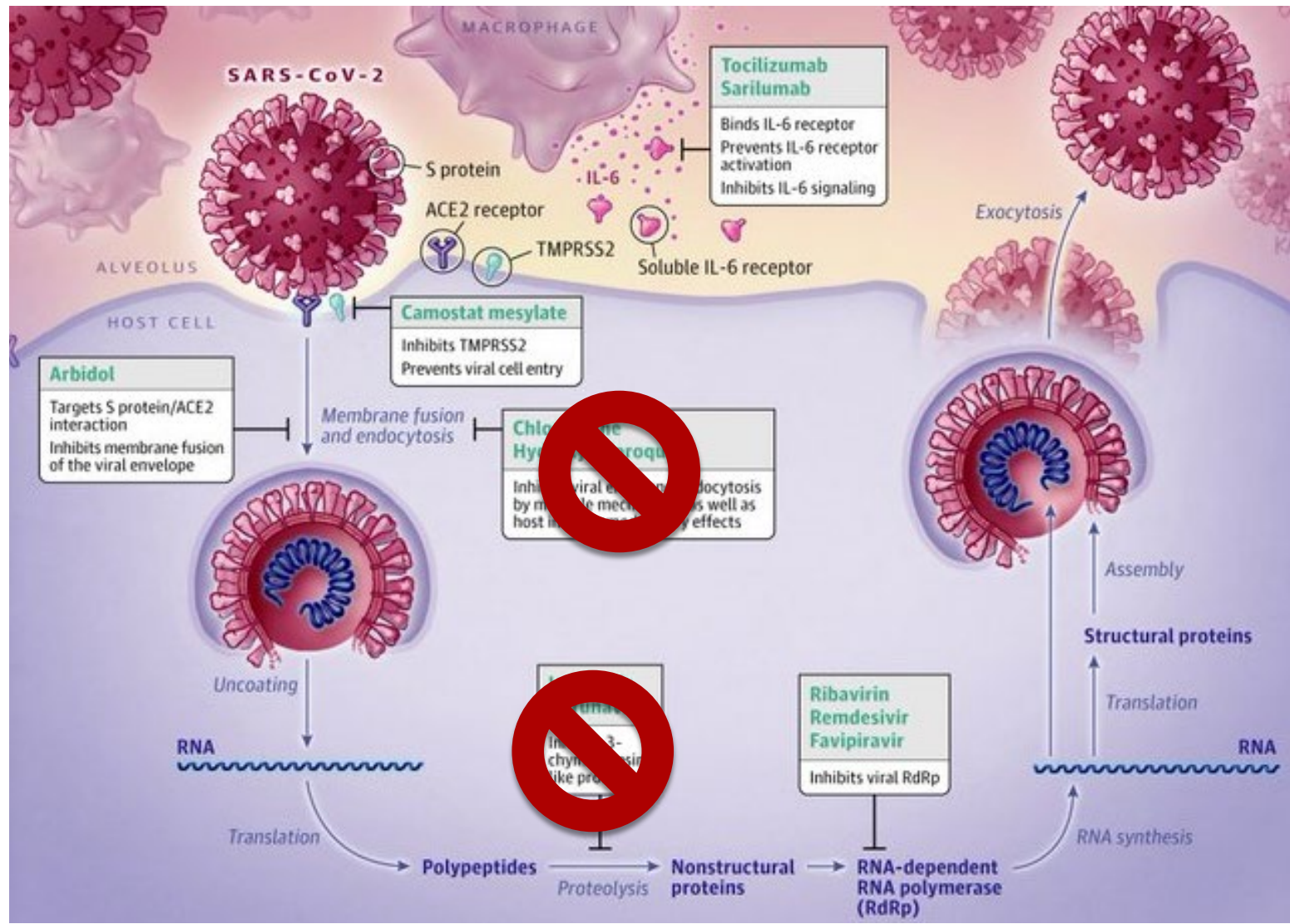


COVID Treatment – Sift and Winnow



Sanders et al
JAMA Apr 13
2020

COVID Treatment – Sift and Winnow

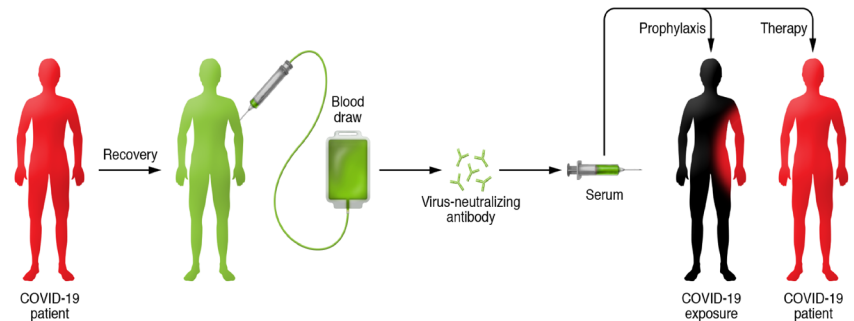


Sanders et al
JAMA Apr 13
2020

COVID Treatment

□ Convalescent Serum from recovered COVID-19 patients

- FDA authorized 3/25/20
- Theory – passive antibodies for viral neutralization and/or Ab dependent cytotoxicity or phagocytosis
- History – 1890s pneumococcal pneumonia, polio, measles, mumps, HBV, Rabies, RSV, Influenza (including 1918 H1N1), Ebola, SARS1 '02 and MERS '12, China COVID-19
- Effect can last weeks to months
- Risk - TRALI, ADE, Blunt host Ab



COVID Treatment



- Convalescent Serum from recovered COVID-19 patients
 - ▣ 40 University Consortium (compassionate use)
 - ▣ COVID infected (symptom free 14d and RT-PCR negative at collection (Exact Sciences)
 - ▣ American Red Cross plasma collection (other viral/other screen negative)
 - ▣ Severe or Life-threatening patients eligible
 - ▣ 1-2 units 0, 2, 4, 6, and 8 days

- ▣ UW Nearly 100 donors, plasma ready from 43, 1st patient 4/12 and 12 treated so far (>600 nationally)!

- ▣ Until 8 pm - pager 0795, 608-262-8300 or uwcovid19project@hslc.wisc.edu



UWHC COVID Outcome



- Aggregate UWHC N=46 (as of 4/21)
 - ▣ Average age 62, range 36-93
 - ▣ Risk groups
 - DM 26%, Obesity 30%, Hypertension 50%, immunosuppressive medication 13%
 - ▣ ICU 40%, IMC 14%, General care 46%
 - ▣ Days from symptom to ICU 9.5d
 - ▣ Ventilator 32% (47% extubated so far)
 - ▣ ARF 9%
 - ▣ Chloroquine or HCQ 70%, Convalescent plasma 16%
 - ▣ Mortality 9.3%
 - ▣ Discharged 47%

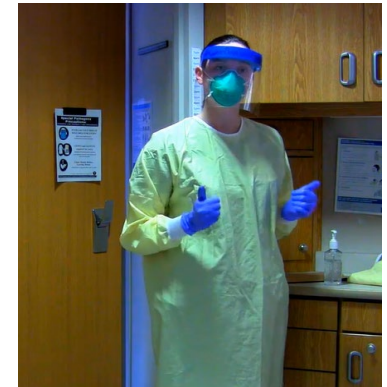


Prevention

COVID PPE Importance



- HCW risk of COVID is considerable
- HCW infection: >3000 China - 10,000 in Italy
- US Data similar
 - ▣ 9,282 cases (3% of cohort)
 - 55% with only health care setting contact
 - ▣ Sloan-Kettering 27% HCW infection rate
 - ▣ UW 46 cases (0.3% rate), tested >17% population, no hospitalizations (none linked to care of COVID patient care)
- UWHC Simulation Center
 - ▣ In person donning/doffing training for >2,200 HCW



COVID Prevention - PPE



- N-95 supply chain challenges
- N-95 Reuse - Sterilization



Method	Sterilization	Fit/Filtration	Comment
H2O2 vapor	+	+	In house (~200/d) 10X 3M tested
UV light	+/-	-	Fit change
Ozone	-	+	Not sterilizing
Steam autoclave	-	+/-	Fit change
C2H4O	+	+	Off-gassing

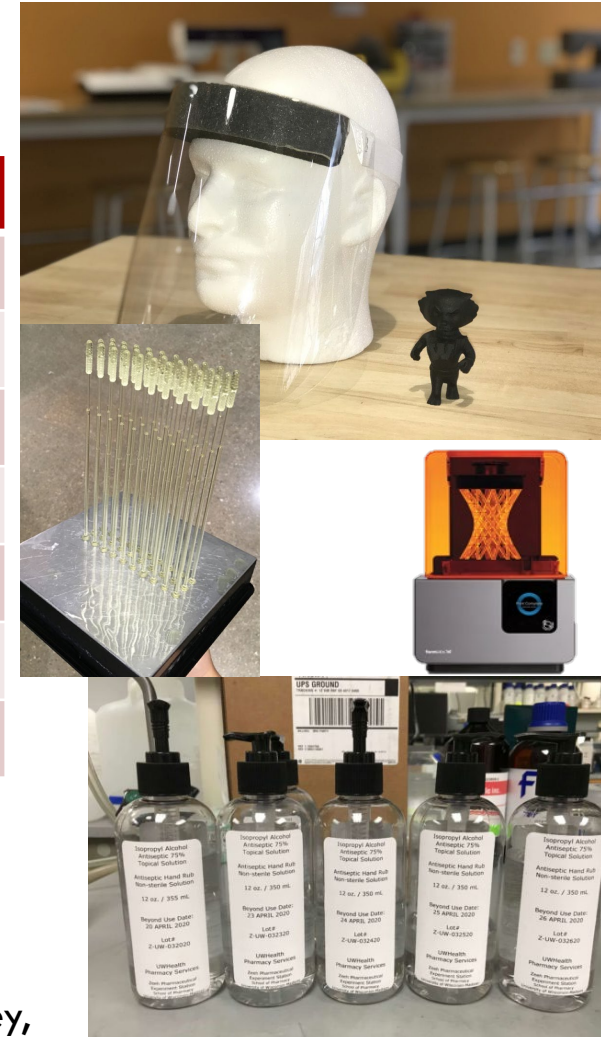


Supply Chain -Research Innovation

COVID – Campus Supply Chain Innovation



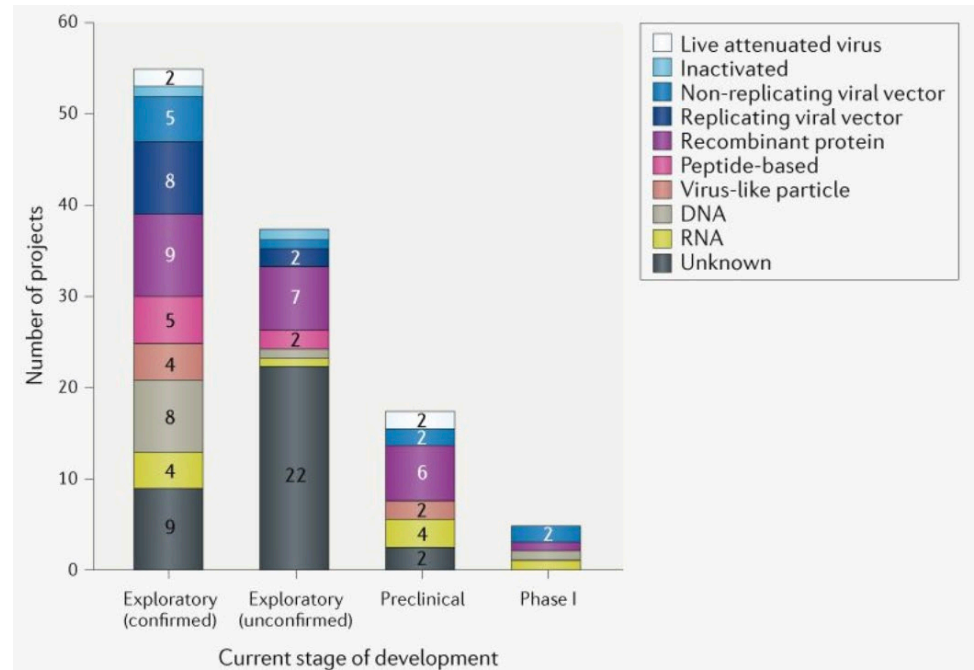
Supply Chain	Source	Quantity
Face Shields	UW Engineering	1000s/day (1.8M)
PAPRs	UW Engineering	100s
Intubation box	UW Engineering	10
Test swabs	UW Engineering	100s/day
Surgical masks	UW Engineering	?
Viral media	Wi Vet Diag Lab	10,000/week
ETOH hand gel	Sch of Pharmacy	>100 gallons



Lennon Rodgers, Gordon Novak, Greg Nellis, Peter Adamczyk, Jesse Darley, Corin Frost, Brian Ellison, Ryan Anton, Josh Roth, Jim Rasmusson, Ed Elder, Karl Williamson

COVID Immunity - Vaccines

- 115 vaccine candidates
- 73 preclinical
- 5 clinical trials
- Unknowns
 - Best target
 - Route
 - Duration of immunity



Technique	Sponsor	Status
LMP-encapsulated mRNA	Moderna	Phase 1 (NCT04283461)
NR Adenovirus vector	CanSino Biologicals	Phase 2 (NCT04313127)
DNA plasmid	Inovio Pharma	Phase 1 (NCT04336410)
Lentivirus vector	Shenzhen Geno-IMI	Phase 1 (NCT04276896)
Lentivirus vector	Shenzhen Geno-IMI	Phase 1 (NCT04299724)

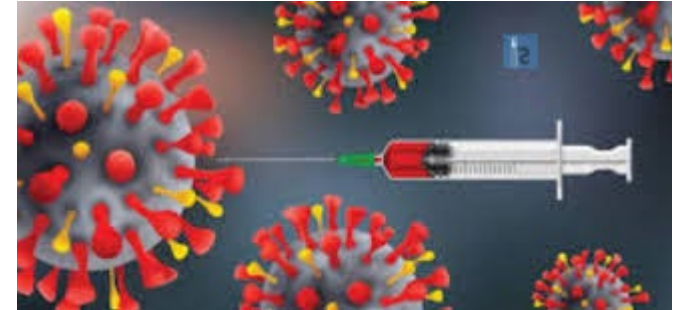
COVID Vaccine UW



□ UW/FluGen/Bharat Biotech

■ CoroFlu

- Incorporates SARS-CoV-2 spike protein sequence into existing intranasal M2SR Influenza vaccine
- Lacks gene M2 needed for continued replication (i.e. self-limited/replicates only once in cell and stimulates immune response)
- Currently in preclinical – animal model phase

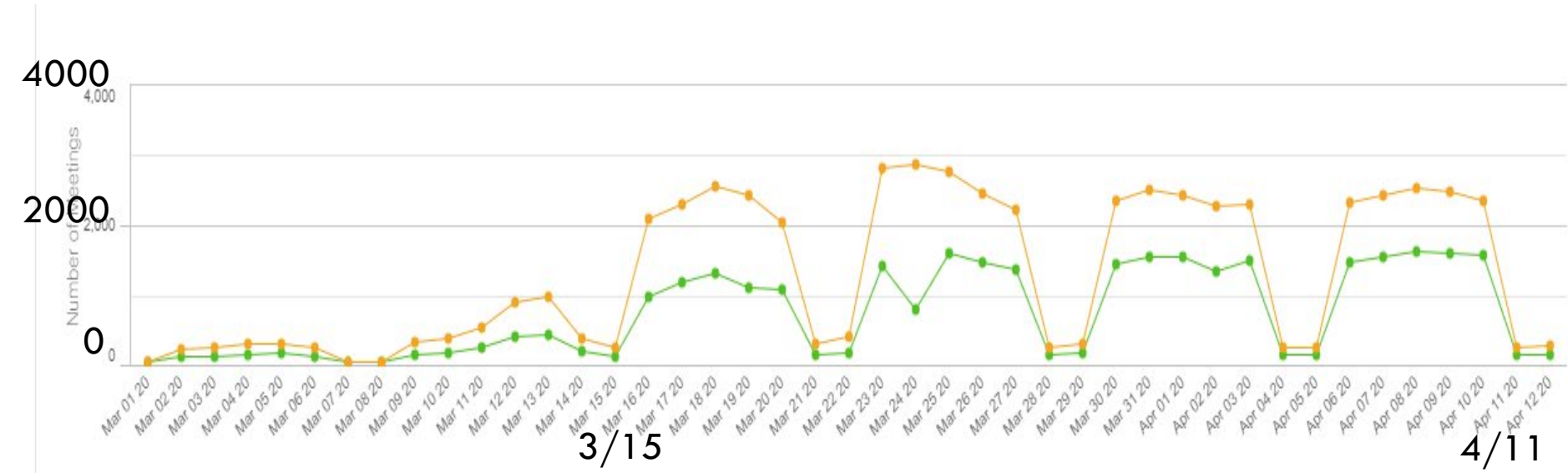


COVID – UW Research Innovations

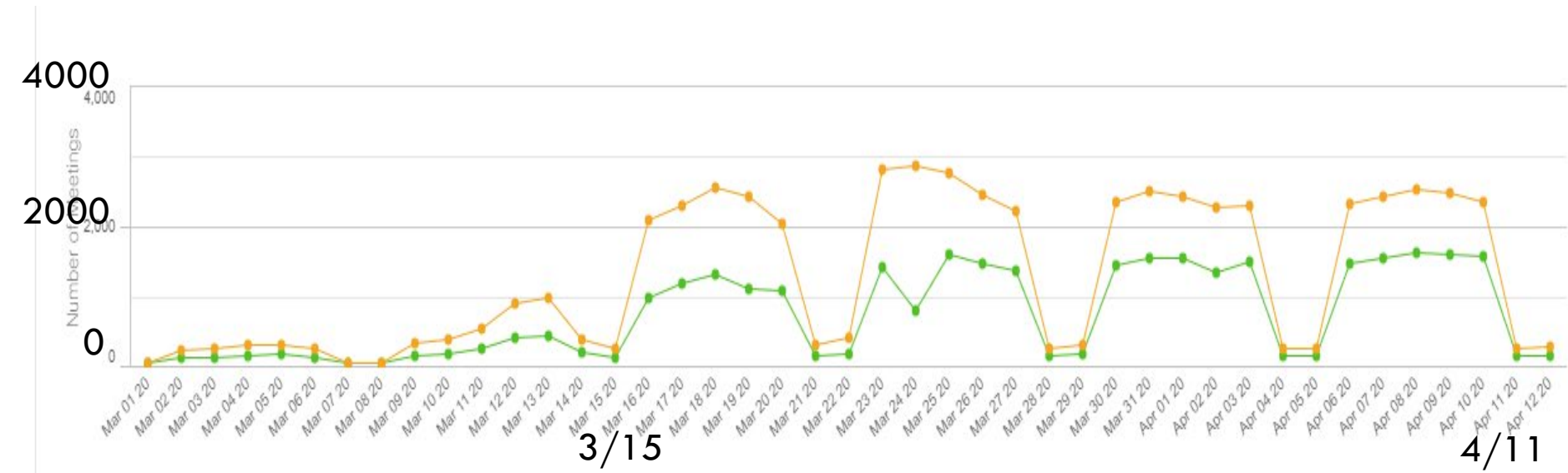


- Nearly 50 COVID biosafety protocols and IRB applications in April
- Nearly 200 COVID Wisconsin Partnership Program applications
- EHR database (Mathew/Safdar)
- Acute infection biobank (Matkowskyj)
- Convalescent biobank (Shelef)

COVID Surge



COVID Surge



WEBEX MEETINGS Mar 15 – Apr 11

54,414 meetings

↑ 800%

1,975,688 minutes

↑ 618%

248,782 participants

↑ 1216%

Acknowledgments



- Peter Adamczyk
- Jennifer Bonifas
- Jim Conway
- Derrick Chen
- Tom Friedrich
- William Hartman
- Andrea Ladd
- John Marx
- Betsy Nugent
- David O'Connor
- Jennifer Parnell
- William Rehrauer
- Lennon Rodgers
- Nasia Safdar
- Theresa Teske

Questions?

What types of jokes are allowed during quarantine?

- Inside jokes!



□ <https://www.fatherly.com/play/best-coronavirus-jokes/>



Theresa Teske and UW Coordinators

Town Hall

Open for Questions,
Comments, and Discussion



School of Medicine
and Public Health
UNIVERSITY OF WISCONSIN-MADISON