COVID 19 Impact: Clinical Trends, Advances, and Healthcare Disparities

This meeting will be recorded and will be available at www.fmda.org/journalclub.php
Agenda

• COVID-19 State of the State
• Clinical Trends & Updates
• Clinical Advances & Research
• Insight into Healthcare Disparities
• Open Discussion
Total Cases
451,423

Cumulative Data for Florida Residents:
Positive Residents
446,251

Resident Hospitalizations
25,499

Florida Resident Deaths
6,333

Non-Resident Deaths
123

“Comparison of counties is not possible because case data are not adjusted by population.”

Data is updated every day at approximately 11 A.M. E.T.
COVID in LTC

Last Updated: 7/27/2020 6:01:32 PM

5,773 of 140,877 Total Residents
Positive as of July 28 (4.10%)

COVID Positive Residents (SNF & ALF)

6,594 of 196,524 Total Staff
Positive as of July 28 (3.36%)

COVID Positive Staff (SNF & ALF)

Data from AHCA ESS (Emergency Status System)

COVID positive residents and staff in Intermediate Care Facilities are not included in the bar chart totals. The data presented are reported by individual facilities and reporting errors may occur.
Coronavirus Disease 2019 (COVID-19)

Recommendations

1. **Duration of isolation and precautions**
   - For most persons with COVID-19 illness, isolation and precautions can generally be discontinued 10 days after symptom onset and resolution of fever for at least 24 hours, without the use of fever-reducing medications, and with improvement of other symptoms.
     - A limited number of persons with severe illness may produce replication-competent virus beyond 10 days that may warrant extending duration of isolation and precautions for up to 20 days after symptom onset; consider consultation with infection control experts.
   - For persons who never develop symptoms, isolation and other precautions can be discontinued 10 days after the date of their first positive RT-PCR test for SARS-CoV-2 RNA.
Shedding of infectious virus in hospitalized patients with coronavirus disease-2019 (COVID-19): duration and key determinants

Jeroen J.A. van Kampen M.D., Ph.D.¹, David A.M.C. van de Vijver Ph.D.¹, Pieter L.A. Fraaij M.D., Ph.D.¹, Bart L. Haagmans Ph.D.¹, Mart M. Lamers M.Sc.¹, Nisreen Okba Ph.D.¹, Johannes P.C. van den Akker M.D.², Henrik Endeman M.D., Ph.D.², Diederik A.M.P.J. Gommers M.D., Ph.D.², Jan J. Cornelissen M.D., Ph.D.³, Rogier A.S. Hoek M.D.⁴, Menno M. van der Eerden M.D., Ph.D.⁴, Dennis A. Hesselink M.D., Ph.D.⁵, Herold J. Metselaar M.D., Ph.D.⁶, Annelies Verbon M.D., Ph.D.⁷, Jurriaan E.M. de Steenwinkel M.D., Ph.D.⁷, Georgina I. Aron M.Sc.¹, Eric C.M. van Gorp M.D., Ph.D.¹, Sander van Boheemen Ph.D.¹, Jolanda C. Voermans Ph.D.¹, Charles A.B. Boucher M.D., Ph.D.¹, Richard Molenkamp Ph.D.¹, Marion P.G. Koopmans DVM, Ph.D.¹*, Corine Geurtsvankessel M.D., Ph.D.¹*, and Annemiek A. van der Eijk M.D., Ph.D.¹*
CMS Updates 7/22/2020

- Funding
- Weekly data
- Assistance & Support
- Testing Strategy
<table>
<thead>
<tr>
<th>State</th>
<th>Florida</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Cases</td>
<td></td>
</tr>
<tr>
<td>New daily cases</td>
<td>Weekly trend</td>
</tr>
<tr>
<td>+8,892 new</td>
<td>THIS WEEK</td>
</tr>
<tr>
<td>Tests per 1,000 people</td>
<td>Weekly trend</td>
</tr>
<tr>
<td>Daily Tests</td>
<td>THIS WEEK</td>
</tr>
<tr>
<td>2.5 tests per 1,000</td>
<td>LAST WEEK</td>
</tr>
<tr>
<td>Percent Positive</td>
<td>Daily % positive</td>
</tr>
<tr>
<td>19.1% positive</td>
<td>Above threshold?</td>
</tr>
<tr>
<td></td>
<td>THIS WEEK</td>
</tr>
<tr>
<td></td>
<td>LAST WEEK</td>
</tr>
</tbody>
</table>
It’s time to begin a national wastewater testing program for Covid-19

By ANNA MEHROTRA, DAVID A. LARSEN, and ASHISH K. JHA / JULY 9, 2020
Rapid Scaling Up of Covid-19 Diagnostic Testing in the United States — The NIH RADx Initiative

Bruce J. Tromberg, Ph.D., Tara A. Schwetz, Ph.D., Eliseo J. Pérez-Stable, M.D., Richard J. Hodes, M.D., Richard P. Woychik, Ph.D., Rick A. Bright, Ph.D., Rachael L. Fleurence, Ph.D., and Francis S. Collins, M.D., Ph.D.
RADx-tech Innovation Funnel to Evaluate Testing Technologies for Covid-19

National Call for Innovative Technologies
Rolling submissions and selections begin April 29, 2020

Phase 0
“Shark tank”-like rapid-selection process

Phase 1
Validation and risk review

Phase 2
Clinical tests, regulatory approval, and scaling up

End of Summer or Fall 2020

Fast Track for Advanced Technologies: the RADx-ATP Program

Deploy Millions of Tests per Week
Sample Types in RADx-tech and RADx-ATP Proposals.
Hydroxychloroquine with or without Azithromycin in Mild-to-Moderate Covid-19

Dexamethasone in Hospitalized Patients with Covid-19 — Preliminary Report

The RECOVERY Collaborative Group*
A  All Participants (N=6425)

Rate ratio, 0.83 (95% CI, 0.75–0.93)
P<0.001

B  Invasive Mechanical Ventilation (N=1007)

Rate ratio, 0.64 (95% CI, 0.51–0.81)

C  Oxygen Only (N=3883)

Rate ratio, 0.82 (95% CI, 0.72–0.94)

D  No Oxygen Received (N=1535)

Rate ratio, 1.19 (95% CI, 0.91–1.55)
An mRNA Vaccine against SARS-CoV-2 — Preliminary Report

Rapid Decay of Anti–SARS-CoV-2 Antibodies in Persons with Mild Covid-19

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-0.0083</td>
<td>0.0016</td>
<td>-0.0115 to -0.0050</td>
</tr>
<tr>
<td>Age (per 10-yr change)</td>
<td>0.0026</td>
<td>0.0012</td>
<td>-0.0001 to 0.0051</td>
</tr>
<tr>
<td>Sex (female reference)</td>
<td>0.0010</td>
<td>0.0034</td>
<td>-0.0059 to 0.0079</td>
</tr>
<tr>
<td>First antibody level (log₁₀ ng/ml)</td>
<td>-0.0049</td>
<td>0.0032</td>
<td>-0.0114 to 0.0016</td>
</tr>
<tr>
<td>Per 10 days since symptom onset</td>
<td>0.0016</td>
<td>0.0012</td>
<td>-0.0010 to 0.0041</td>
</tr>
</tbody>
</table>
Immune T Cells May Offer Lasting Protection Against COVID-19

Posted on July 28th, 2020 by Dr. Francis Collins
SARS-CoV-2-specific T cell immunity in cases of COVID-19 and SARS, and uninfected controls
Insights into Healthcare Disparities
Assessment of Community-Level Disparities in Coronavirus Disease 2019 (COVID-19) Infections and Deaths in Large US Metropolitan Areas

Samrachana Adhikari, PhD; Nicholas P. Pantaleo, MPH; Justin M. Feldman, ScD; Olugbenga Ogedegbe, MD; Lorna Thorpe, PhD; Andrea B. Troxel, ScD
<table>
<thead>
<tr>
<th>CSA (No. of counties)</th>
<th>Population below poverty, %</th>
<th>County-level income, $</th>
<th>Population belonging to minority racial/ethnic group, %</th>
<th>Cumulative COVID-19 incident infections per 100 000 residents</th>
<th>Cumulative COVID-19 deaths per 100 000 residents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atlanta (28)</td>
<td>12.4 (5.0-24.4)</td>
<td>62 554 (38 886-105 921)</td>
<td>34.1 (6.3-89.6)</td>
<td>259.4 (101.3-984.1)</td>
<td>7.6 (2.7-68.2)</td>
</tr>
<tr>
<td>Boston (19)</td>
<td>8.0 (5.3-17.5)</td>
<td>76 373 (56 141-100 374)</td>
<td>16.3 (7.7-55.3)</td>
<td>491.3 (147.0-1900.6)</td>
<td>31.8 (1.2-92.0)</td>
</tr>
<tr>
<td>Chicago (17)</td>
<td>9.4 (4.2-16.2)</td>
<td>66 720 (53 060-93 540)</td>
<td>24.4 (3.0-58.3)</td>
<td>457.7 (52.9-1022.4)</td>
<td>16.7 (1.9-62.4)</td>
</tr>
<tr>
<td>Detroit (10)</td>
<td>10.7 (5.0-21.7)</td>
<td>62 356 (46 440-84 048)</td>
<td>17.4 (5.8-50.7)</td>
<td>290.0 (129.0-1033.2)</td>
<td>27.6 (2.0-119.9)</td>
</tr>
<tr>
<td>Los Angeles (5)</td>
<td>12.7 (9.1-14.9)</td>
<td>67 986 (63 310-89 373)</td>
<td>64.8 (55.4-74.4)</td>
<td>136.0 (78.7-315.5)</td>
<td>5.2 (2.2-15.2)</td>
</tr>
<tr>
<td>Miami (6)</td>
<td>12.1 (10.7-16.0)</td>
<td>57 714 (52 043-61 735)</td>
<td>44.0 (22.0-88.4)</td>
<td>208.5 (62.5-515.5)</td>
<td>10.4 (3.7-17.9)</td>
</tr>
<tr>
<td>New Orleans (11)</td>
<td>17.9 (11.8-24.6)</td>
<td>50 830 (36 850-67 585)</td>
<td>37.3 (18.3-69.4)</td>
<td>1085.9 (340.3-1869.9)</td>
<td>73.3 (20.8-177.4)</td>
</tr>
<tr>
<td>New York City (36)</td>
<td>10.6 (4.4-27.3)</td>
<td>79 662 (38 566-119 731)</td>
<td>36.7 (5.9-91.8)</td>
<td>1317.8 (43.6-3821.8)</td>
<td>93.5 (1.4-271.3)</td>
</tr>
<tr>
<td>Philadelphia (18)</td>
<td>10.8 (5.7-24.3)</td>
<td>68 348 (46 149-99 224)</td>
<td>27.6 (14.7-65.7)</td>
<td>606.5 (171.3-961.6)</td>
<td>34.9 (12.6-69.7)</td>
</tr>
<tr>
<td>Seattle (8)</td>
<td>8.9 (7.5-13.7)</td>
<td>73 711 (58 239-94 822)</td>
<td>25.4 (19.6-40.8)</td>
<td>188.5 (41.6-326.1)</td>
<td>8.4 (0.3-22.2)</td>
</tr>
</tbody>
</table>

Abbreviation: COVID-19, coronavirus disease 2019; CSA, combined statistical area.
COVID-19 Infections and Deaths among Connecticut Nursing Home Residents: Facility Correlates

Yue Li, PhD, * Helena Temkin-Greener, PhD, * Gao Shan, MS, † and Xueya Cai, PhD †
“Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.”

—World Health Organization
Obesity

Severe Outcomes from Covid-19

Chronic Diseases
- Diabetes
- Hypertension
- Cardiovascular disease
- Pulmonary dysfunction

Social Determinants of Health
- Racial and ethnic discrimination
- Access to healthy food
- Access to health care
- Location and physical environment
- Socioeconomic status
- Education
- Social and community context
The 360° View
SOUNDING BOARD

Covid-19 — Implications for the Health Care System

David Blumenthal, M.D., M.P.P., Elizabeth J. Fowler, Ph.D., J.D., Melinda Abrams, M.S., and Sara R. Collins, Ph.D.
Open Discussion