
Access this webinar recording here: https://attendee.gotowebinar.com/recording/8534472339464849168
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Access Dr. Fales’s bio here: https://med.wmich.edu/node/996
Disclosures and Conflicts

• Disclosures
  – Western Michigan University Homer Stryker MD School of Medicine
    • Professor of Emergency Medicine
    • Chief, Division of EMS and Disaster Medicine
  – Kalamazoo County Medical Control Authority
    • EMS Medical Director

• Conflicts
  – No known conflicts
Methods for Monoclonal Antibody (mAb) Therapy

- mAb authorized by FDA and allocated by HHS to the states (and others)
- mAb therapy is allocated from the states to healthcare facilities
- Michigan initially supplied exclusively hospitals as community “depot”
  - Supply intended for hospital use but also for broad community
  - Since, expanded direct allocation to others (LTC pharmacies, infusion clinics)
- State’s concerns: Equity, Safety, and Efficacy
- Electronic Patient Profile Form submitted for each patient treated
- Electronic Follow-up Form for admissions/deaths within 14 days of mAb
- Follow-up brief phone interviews to evaluate post-mAb course
mAb in Michigan – Supply >>> Demand

mAb Therapy Allocated to Michigan (19,002 Total) vs. Patients Reported to be Treated with mAb Therapy (N=1,501) 11/9/2020 to 1/5/2021

*Partial week  **Source: HHS/ASPR www.phe.gov

~8% mAb Allocated has Reportedly Been Used

*Partial week  **Source: HHS/ASPR www.phe.gov
Hospital Use (or Lack Th

- Use reported by 50 of 138 (36%) hospitals
- 221 (15%) patients at one hospital
- 10 hospitals treated ~60% of patients
  - 12 hospitals treated 1% of patients
- Detroit (91) vs. Upper Peninsula (157)
- Smaller vs. larger hospitals
  - Level 1/2 trauma centers: 20
  - Non-level 1/2 trauma centers: 30
- Medication used
  - Bamlanivimab: 97%
  - Casirivimab/Imdevimab: 3%
mAb and Michigan Hospitals

Top 10 Hospitals

- Michigan Medicine: 196
- McLaren Flint: 123
- MidMichigan Health: 117
- Spectrum Health Lakeland: 74
- Holland Hospital: 66
- Hurley Medical Center: 65
- Spectrum Health Hospitals: 64
- St. Joseph Mercy Oakland: 63
- Ascension St John Hospital: 61
- Memorial Healthcare: 41
Demographics

- 50.6% Female
- 10.0% Healthcare Workers

**mAb by Age Group - N=1,501**

- Mean Age: 63.8
- Median Age: 65
- Range: 15 to 104
- IQ Range: 55 to 74

**mAb by Race - N=1,501**

- White: 80%
- Black or African American: 138, 9%
- Asian: 1%
- Hispanic or Latino: 3%
- Native Hawaiian or Other Pacific Islander: 0%
- Unknown: 6%
Qualifying Signs and Symptoms (N=1,506)

- Dyspnea: 48.1%
- Tachypnea/Tachycardia: 10.0%
- Other Symptoms: 96.7%
mAb Infusion Location and post-mAb Destination

![Pie chart showing mAb Therapy by Location Type of Infusion - N=1,500]

- Emergency Department: 37.5%
- Infusion Center (COVID-19 specific): 40.2%
- Home Care Setting: 1.1%
- Inpatient (non-COVID): 5.6%
- Long Term Care Facility: 6.0%
- Infusion Center (general): 2.9%
- Home care setting: 0.1%
- Other: 1.0%
- Outpatient Clinic: 5.7%

![Pie chart showing Post-mAb Infusion Destination N=1,487]

- Home: 89.1%
- LTC, SNF: 6.6%
- ED, Not Admitted: 0.2%
- Hospital Admission: 2.6%
- Homeless: 0.3%
- Prison: 0.1%
- LTC, Other: 1.2%
Safety: mAb Infusion Related Problems

94.6% report no problems
No severe adverse events
No reported anaphylaxis
### Efficacy: Post mAb Admission Rate and Outcome

<table>
<thead>
<tr>
<th>Total</th>
<th>Age &gt;64 YO</th>
<th>Age 55-64 w/RF</th>
<th>BMI &gt;34</th>
<th>CKD</th>
<th>DM</th>
<th>Immuno-Suppress Disease</th>
<th>Immuno-Suppress Treatment</th>
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<td>457</td>
<td>110</td>
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<tr>
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<td>4.8%</td>
<td>1.8%</td>
<td>3.6%</td>
<td>7.7%</td>
<td>5.9%</td>
<td>0.0%</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

**Reported Hospitalization Rates in Untreated High-Risk Patients from Clinical Trials**
9 to 15%

**Phone Interviews N=152**
- Admit: 5.9%
- 2-Day Improved: 66.4%
- Now improved: 96.6%
Operation Holiday Delivery

- Rapid Response to LTCs with 6 outbreaks
  - 6 counties, 5 SNFs, 1 Assisted Living
- Resources: State Mobile Nursing Crisis Teams + Local EMS/Paramedics
- Outcomes: 101 patients, 3 admits, 1 death
Access to LTC Patients

Awareness
• Facility Medical Director/Clinicians
• Local Public Health
• Healthcare Coalitions

Delivery Options
• Transport to infusion center or ED
• SNFs - Internal Staff
• Home care/infusion
• EMS (per protocol)
• Special Team
Summary

- mAb therapy is underutilized in Michigan
- mAb supply far exceeds current demand
- Bamlanivimab has been found to be safe
- Treatment in LTC settings of large numbers of patients can be safe and efficient using multi-disciplinary teams
- Ability of mAb to reduce hospitalizations remains to be determined but preliminary experience is encouraging
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