Introduction

• **Alex Bohl:**
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• **Mathematica:**
  - Mission-driven organization of 1,200 seasoned experts and data scientists

• **Mathematica COVID-19-relevant work**
  - **Federal/CMS:**
    - Medicaid T-MSIS analytics
    - Medicare quality measure, taxonomy, and value-based payment support
  - **State:** payment reform and APCD support
  - **Public health:** COVID-19 transmission simulation model
COVID-19: Data Helpers and Linkages

• **Hospital discharge data tools**
  - HCUP tools:
    o [https://www.hcup-us.ahrq.gov/tools_software.jsp](https://www.hcup-us.ahrq.gov/tools_software.jsp)

• **Identifying hospital and health systems**
  - AHRQ 2018 Compendium:
    o [https://www.ahrq.gov/chsp/data-resources/compendium.html](https://www.ahrq.gov/chsp/data-resources/compendium.html)

• **County-level COVID-19 data**
  - Johns Hopkins University (JHU)
    o [https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data](https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data)
  - Google Cloud Platform curation
  - AWS
Historical discharge data for COVID-19

- **Counts and amounts**
  - ICU stays and ventilator volume
    - Note: Can approximate with MS-DRGs
  - Elective surgery volume reduction
  - Admission source/discharge destination
  - Transfers/rural hospitals
  - Hospital-acquired conditions
  - Review payer and SDoH data

- **Analytics**
  - Link to county-level JHU data to predict “demand”
  - Model LOS for ICU/Vent patients with related conditions
  - Build risk models for comorbidities for patients with similar conditions
  - Model “Repurposable” beds
  - Model necessary care pathways
Impact on Claims-Based Quality Measures

• **AHRQ hospital Quality Indicators and other claims-based measures**
  - Volume will decrease overall
  - Surgical volume will decrease substantially

• **AHRQ area-based Quality Indicators**
  - Potentially avoidable hospitalization volume might decline
  - Ambulatory care sensitive conditions may be treated in other settings
Follow-up resources

• **Curated list of reviewed data, dashboards, and resources**
  - Categorizes use (e.g., case surveillance, guidance, state policy/action)
  - PDF will come from Norm and Charles after the webinar

• **Updated and expanded set of resources on Mathematica’s website**

• **Today’s survey will inform future collaborative efforts**
  - Use cases
  - Technical support (e.g., how to use GitHub, APIs, or Cloud computing)

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