Introduction

- **Alex Bohl:**
  - Director of Data Science and Innovation, health practice
  - **Contact:** abohl@mathematica-mpr.com
- **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:
    - https://www.hcup-us.ahrq.gov/tools_software.jsp
- **Identifying hospital and health systems**
  - AHRQ 2018 Compendium:
    - https://www.ahrq.gov/chsp/data-resources/compendium.html
- **County-level COVID-19 data**
  - Johns Hopkins University (JHU)
    - https://github.com/CSSEGISandData/COVID-19/tree/master/csse_covid_19_data
  - Google Cloud Platform curation
    - https://console.cloud.google.com/marketplace/details/johnshopkins/covid19_jhu_global_cases?pli=1
  - AWS
    - https://aws.amazon.com/marketplace/pp/Global-Coronavirus-COVID-19-Data-Johns-Hopkins/prodview-rmk3gahdzo3tg

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**
  - https://mathematica.org/features/covid-19-curated-data-modeling-and-policy-resources
- **Today's survey will inform future collaborative efforts**
  - Use cases
  - Technical support (e.g., how to use GitHub, APIs, or Cloud computing)
- **Contact: abohl@mathematica-mpr.com**