



maryland
health services
cost review commission



CRISP

Leveraging Hospital Data for Population Health Interventions

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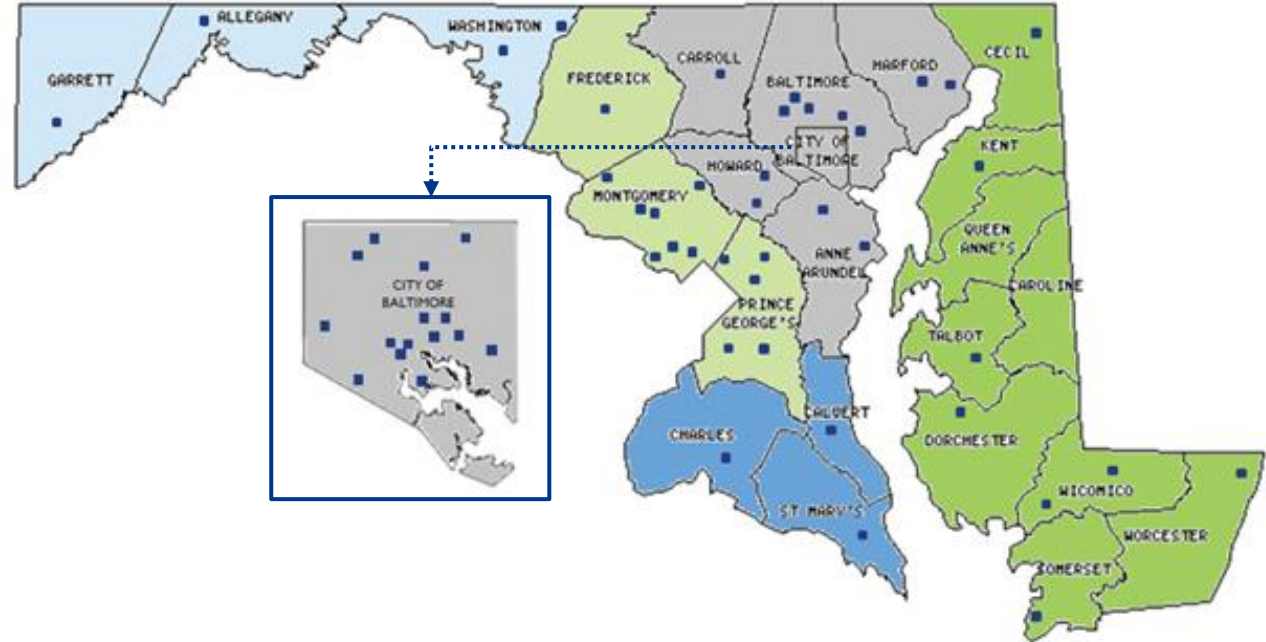


Background on the HSCRC

Who We Are and What We Do

State of Maryland Healthcare Landscape

- 6.05 Million people
- 15.4% of population > age 64 (increasing)
- 4th highest income per capita state
- 49 acute care hospitals
 - All are not-for-profit
 - 2 academic medical centers
- \$18.73 billion in FY20 hospital revenue



HSCRC - Who We Are



The Maryland Health Services Cost Review Commission (HSCRC) is an independent state agency responsible for regulating the quality and cost of hospital services to ensure all Marylanders have access to high quality healthcare.

Vision: Enhance the quality of health care and patient experience, improve population health and health outcomes, and reduce the total cost of care for Marylanders

The HSCRC establishes rates for all hospital services and helps develop the State's innovative efforts to transform the delivery system and achieve goals under the Maryland Health Model.

Commission layout:

- 7 Commissioners appointed by the Governor
- Approximately 50 staff

HSCRC Mandate in Statute



Equitable financing

Public and private payers must contribute equally and hospitals with different payer mixes should have the same financial security



Sustainable spending

Any hospital rate determination system should secure the financial viability of Maryland's private acute care and specialty hospitals.



Cost control

Focus on limiting the hospital spending growth rate in a way that saves costs for consumers long-term

- Strategies have evolved as healthcare needs, the hospital landscape, and agreements with the federal government have changed. For example, quality is now a part of cost control strategies.

Key Advantages to the Maryland Health Model

Stability under the Total Cost of Care Model

- The Total Cost of Care Model provides essential protections and assurance to Maryland hospitals that is not available in other states where hospitals work on a FFS basis
 - Maryland’s “Global Budget Revenue” (GBR) system is based on population, rather than volume and provides hospitals additional financial stability, especially during times of volume volatility
 - A proactive, State-based response is not dependent on federal action
 - State granted additional limited “corridor capacity” to address volume trough and preparations for COVID-19 treatment (balancing hospital pricing vs. consumer affordability)

Hospital Data Submissions and Reports

Hospital data submissions allow the HSCRC to validate Commission policies and ensure hospital compliance, as well as monitor broader industry trends.

- The HSCRC can also provide this data to members of the public or external experts if necessary.

HSCRC's data is one of the most robust data sources in the country in terms of scope and accuracy

- HSCRC staffers ensure that this data is cleaned and validated regularly

What is Case Mix and How is it Used?

Demographic:

- Unique patient identifiers
- Physician identifiers
- Date of Birth
- Sex
- Race and ethnicity
- Country of birth and preferred spoken language
- Residency (county & zip code)
- Marital status

Financial:

- Payer source (i.e., Medicare) and health plan payer (i.e., CareFirst)
- Charges and units by rate center
- UB04 billing information

Clinical:

- Admission & discharge dates
- Principle and secondary diagnosis and procedure codes (and dates of procedures)
- Source and nature of admission
- Discharge status of patient
- Types of services provided
- Flag for diagnosis present on admission (POA)

Use Cases:

- Monitoring hospital quality indicators (readmission, complications and PQIs)
- Trending hospital utilization and patient mix
- Research
- Public health

Support of State Infrastructure

- HSCRC can assess fees on hospitals that help fund Maryland's healthcare infrastructure that advances the entire healthcare system
- These fees currently support the following entities, in addition to the HSCRC and other programs/organizations:

Chesapeake Regional Information System for our Patients (CRISP)

- Maryland's state-designated health information exchange

Maryland Patient Safety Center

- Brings together health care providers to study the causes of unsafe practices and put practical improvements in place to prevent errors

Maryland Health Care Commission (MHCC) User Fee

- An independent regulatory agency whose mission is to plan for health system needs, promote informed decision-making, increase accountability, and improve access in a rapidly changing health care environment

Nurse Support Programs

- Statewide initiatives to increase the number of nurses and support continued education throughout Maryland's healthcare system

Designation of the State Health Information Exchange

- In 2009, Maryland legislation charged HSCRC and its sister agency Maryland Health Care Commission (MHCC) with the designation of a statewide HIE.
- The Chesapeake Regional Information System for our Patients (CRISP) was competitively selected to build and maintain the technical infrastructure to support secure electronic information exchange statewide. State-Designation occurs every three years.
- CRISP provides a variety of tools and services such as direct messaging, patient encounter notifications, data analytics and reporting, and the Prescription Drug Monitoring Program.

Connecting Maryland Hospitals Through CRISP

- In 2011, HSCRC began employing several methodologies to address unacceptably high rates of unnecessary hospital readmissions
- Initial efforts highlighted the need for a patient identifier to link patients across hospitals, and eventually, across care settings
- HSCRC leveraged the already established infrastructure of CRISP, a structure explicitly established and mandated to electronically connect all healthcare providers in the State.
- All hospitals are required to submit certain information for the creation of a unique state-wide patient identifier number



CRISP

Background on CRISP

Who We Are and What We Do

Thanks to our many partners!



1

Robert R. Neall, Secretary



And...

- Maryland Hospitals
- Maryland Post Acute Facilities
- Vital Statistics Administration
- Local Health Departments



CRISP





About CRISP

Regional Health Information Exchange (HIE) serving Maryland, West Virginia, and the District of Columbia.

Vision: To advance health and wellness by deploying health information technology solutions adopted through cooperation and collaboration



Guiding Principles

1. Begin with a manageable scope and remain incremental.
2. Create opportunities to cooperate even while participating healthcare organizations still compete in other ways.
3. Affirm that competition and market-mechanisms spur innovation and improvement.
4. Promote and enable consumers' control over their own health information.
5. Use best practices and standards.
6. Serve our region's entire healthcare community.



CRISP Services

1. POINT OF CARE: Clinical Query Portal & In-Context Information

- Search for your patients' prior hospital records (e.g. labs, radiology reports, etc.)
- Monitor the prescribing and dispensing of PDMP drugs
- Determine other members of your patient's care team
- Be alerted to important conditions or treatment information

2. CARE COORDINATION: Encounter Notification Service (ENS)

- Be notified when your patient is hospitalized in any regional hospital
- Receive special notification about ED visits that are potential readmissions
- Know when your MCO member is in the ED

3. POPULATION HEALTH: CRISP Reporting Services (CRS)

- Use Case Mix data and Medicare claims data to:
 - Identify patients who could benefit from services
 - Measure performance of initiatives for QI and program reporting
 - Coordinate with peers on behalf of patients who see multiple providers

4. PUBLIC HEALTH SUPPORT:

- Deploying services in partnership with Maryland Department of Health, DC Department of health, and West Virginia Bureau of Public health
- Enabling researchers to appropriately access aggregated data and manage cohort studies
- Housing the Prescription Drug Monitoring Program (PDMP) for Maryland

5. PROGRAM ADMINISTRATION:

- Making policy discussions more transparent and informed
- Supporting Care Redesign Programs

Many of the innovations within the HIE were funded through federal and state grants. CRISP is eager to reuse this technology both within Maryland and beyond.



Linking Data Sources to Support Maryland's COVID Response



CRISP Reporting Services

- Partners with HSCRC to develop reports for hospitals based on multi-payer claims, encounter and case mix data
 - Monitor all-payer and Medicare population
 - Focus on quality improvement and reducing cost of care
- Host a web-based portal to access reports
 - Large user base of hospital users and primary care users
- During COVID, leveraged infrastructure to report on new data sources and expand reports to public health users including state and local health departments, EMS jurisdictions, and post acute facilities



Public Health Reporting

Confirmed COVID-19 Cases

Please note: Numbers are of cases reported to MDH (Maryland residents only). For all reports, do not distribute this information publicly.

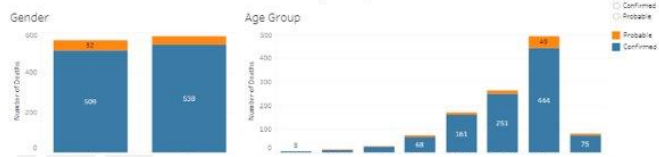
Total Cases Statewide: 21,742
New Cases in Last 24 Hours: 902
Cases in Selected Area: 21,578



COVID-19 Fatalities

Please note: Numbers are of deaths reported by the Maryland Vital Statistics Administration (Maryland residents only). For all reports, do not distribute this information publicly.

Total Deaths in Maryland: 1,140



Fatalities

Confirmed Cases with Census Track

MIEMSS Facility Resources Emergency Database (FRED)

Data as of 4/30/2020

Statewide Capacity Overview

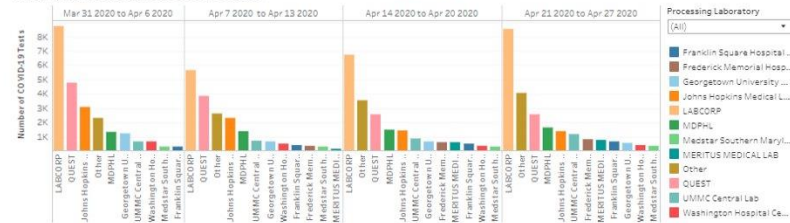
Available Acute Care and ICU Staffed Beds (Adult):	Ventilators Available:	Patients in the Emergency Department:
1,671	1,430	676
(1671/7694) = 22%	(1430/2136) = 67%	(676/2021) = 33%
Change from day before: -32 beds	Change from day before: +40 vents	Change from day before: -44 patients

MIEMSS Hospital Census

Hospitalized Confirmed COVID-19 Patients

Staffed Acute Care Beds Occupied by COVID-19 Patients; Volume of Lab Results by Week of Reporting Date - COVID-19

Based on Reporting Date between 3/31/2020 and 4/27/2020.



Laboratory reporting

Summary | Survey Response | Facilities without Responses

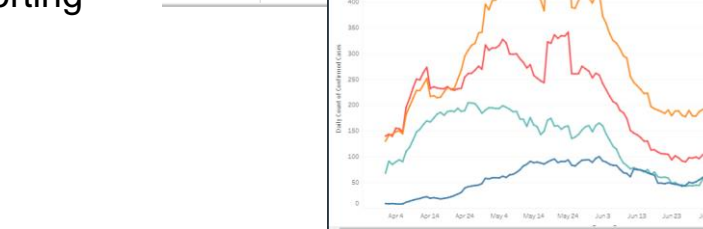
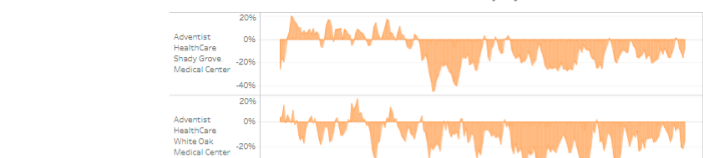
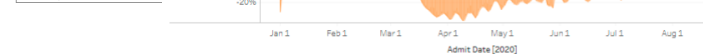
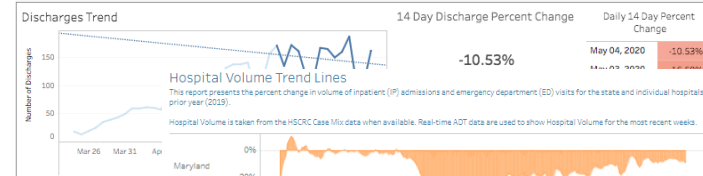
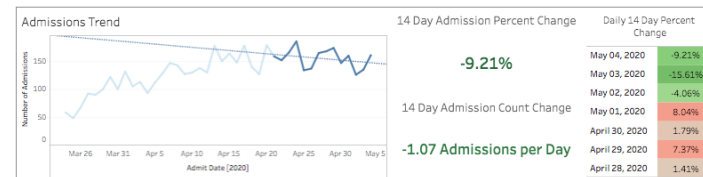
Post Acute Capacity Survey Report
Data as of 5/8/2020

The data in this report is self-reported daily by post acute facilities to MDH via CRISP. The data in this report reflect point in time counts. Please note data is presented as reported and is not edited or validated by CRISP.

Number of Facilities Reporting Survey Results and Reporting Rate



Admission and Discharge Trends for COVID-19 Positive Patients



Post Acute Census

Admission and Discharge Trends

Hospital volumes

Trends for key measures and populations



Data to Inform Policy

- Hospital census data used to monitor hospital capacity and inform surge planning efforts on local and state levels. Shared access to data enables collaboration between local health departments and hospitals.
- COVID testing data used to monitor weekly testing volume and lab resulting time to inform progression on CDC re-opening recommendations.
- Summary dashboard trends key measures over time to understand shifting trends in the pandemic and identify regions and populations experiencing highest burden at a given point in time.



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Demo



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Questions?

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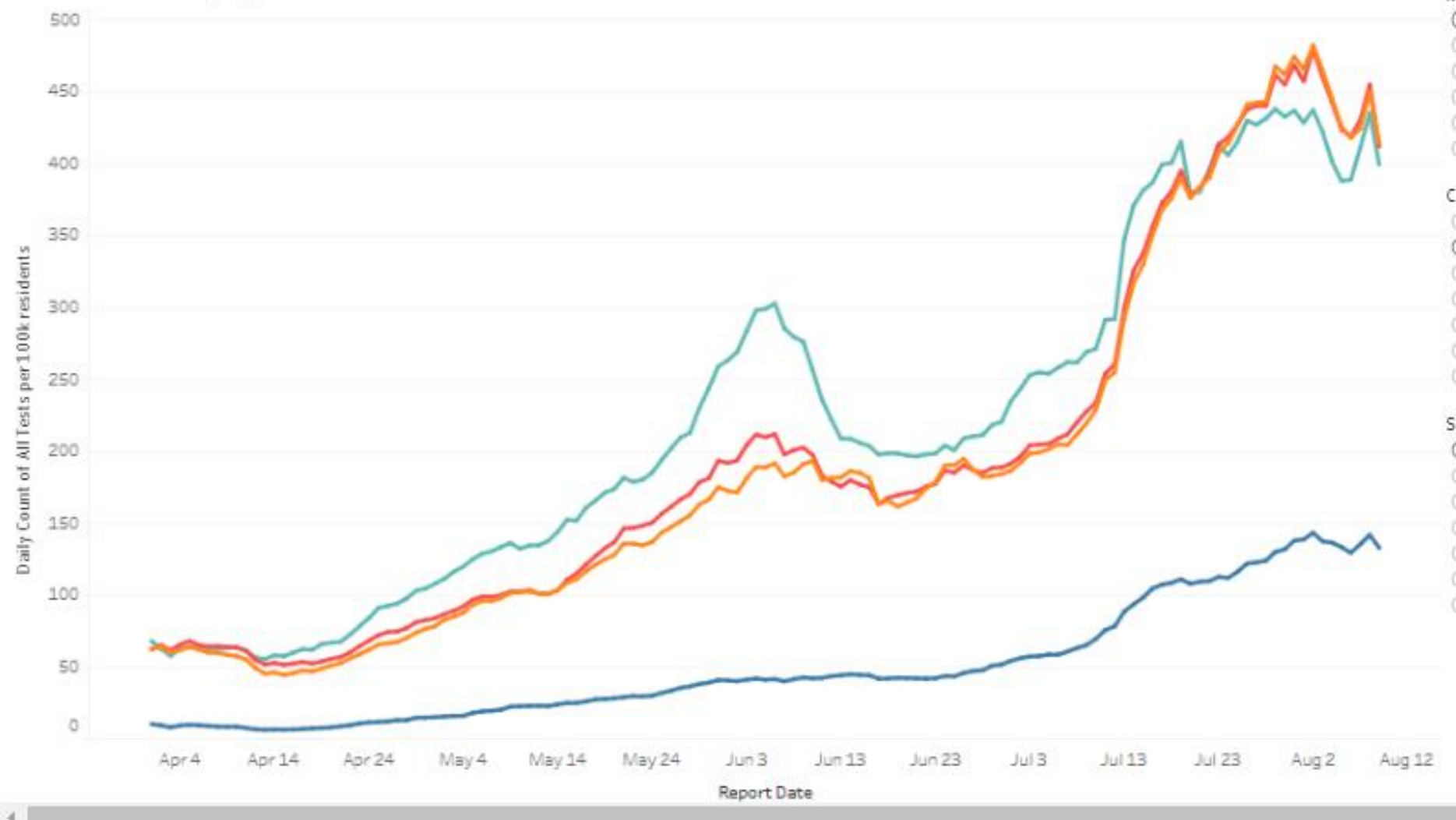


Appendix



Population Adjusted, Total Tests by Age

Data Source: Maryland National Electronic Disease Surveillance System (NEDSS);
Data Available Through: 8/9/2020



Legend

- 0 to 19
- 20 to 44
- 45 to 64
- 65+

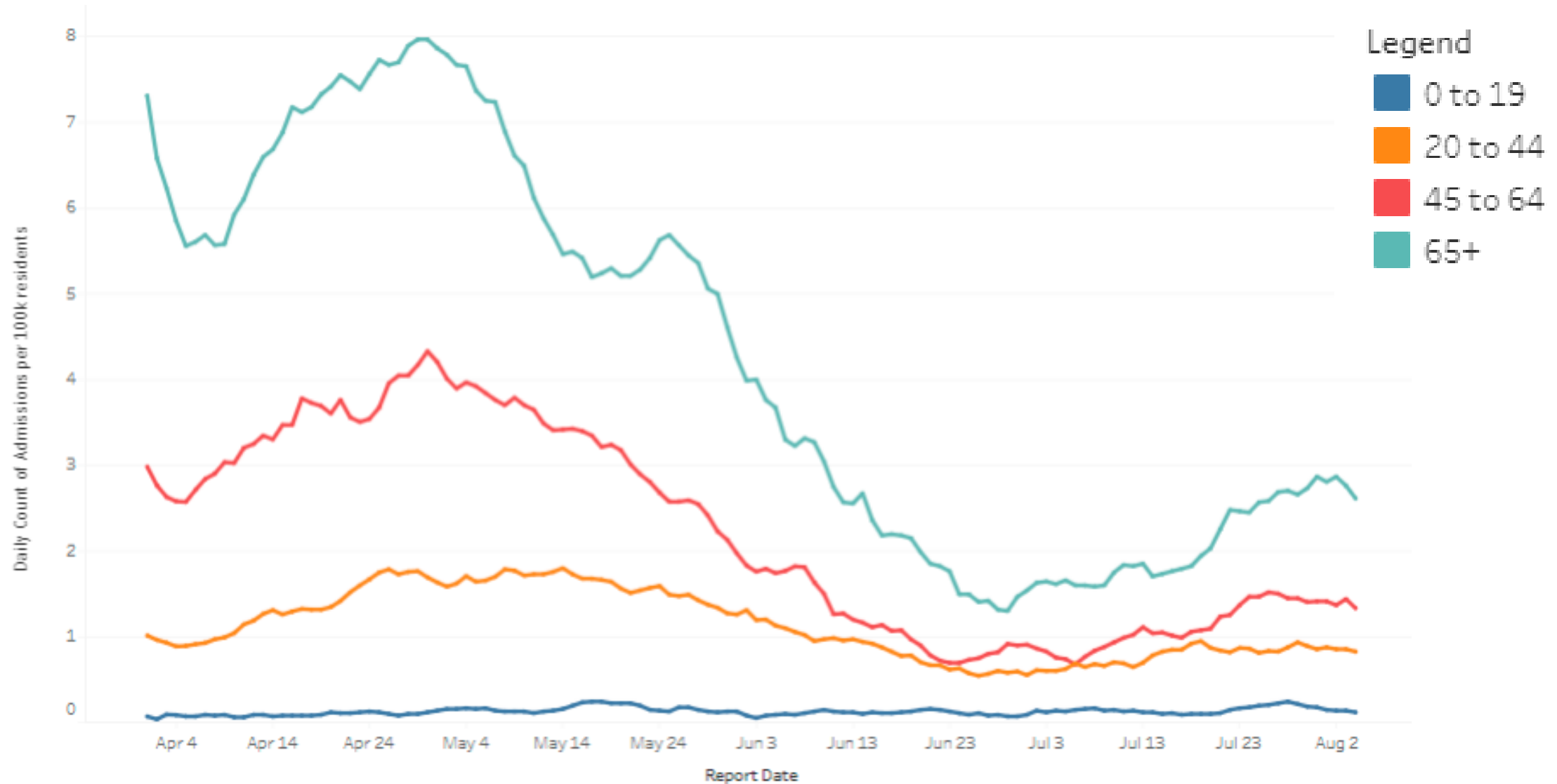


Confirmed Cases by Age, Population Adjusted



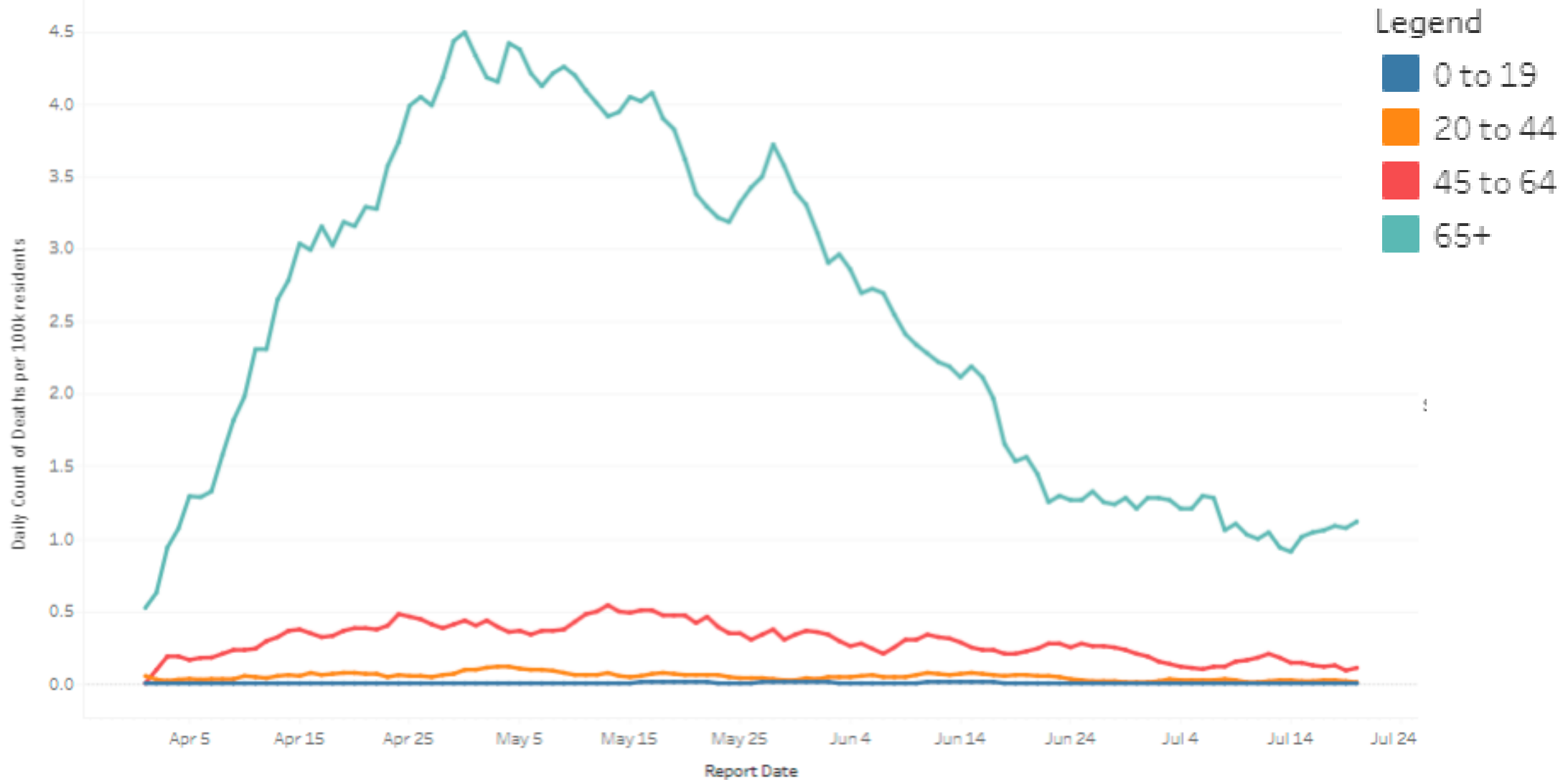


Admissions by Age, Population Adjusted





Fatalities by Age, Population Adjusted





Flexible Report Structure

Chart Type

- Count
- Percent of Total
- Population Adjusted

Measure

- All Tests
- Positive Tests
- Positive Test Percent
- Confirmed Cases
- Admissions
- Deaths

Chart Lines

- None
- Age Group
- Gender
- Race
- Ethnicity
- Region
- County

Separate Charts

- None
- Age Group
- Gender
- Race
- Ethnicity
- Region
- County



Used HIE Infrastructure to Link Multiple Datasets

New Data Sources Include:

- List of confirmed COVID cases from Maryland Department of Health (MDH)
 - Linked with real time admit, discharge, transfer feeds to look at COVID+ admissions in real time
- COVID testing data from MDH syndromic surveillance feed
- COVID related deaths from Vital Statistics Administration
- Hospital daily census data from MD EMS survey