

COVID-19 SPECIAL REPORT

Analysis of Demographics and Mobility Across D.C. During COVID-19

Office of the District of Columbia Auditor

January 26, 2021



Project goals and key questions

- Understand what policies have had the impact intended during COVID to inform future response efforts
- Provide targeted policy recommendations as the pandemic continues
 - What policies have worked when, where, for whom, and where have they effected change?

Background and context

- Building on work completed since early October 2020
- Policy data drawn from COVIDAMP.org, a joint effort with the Georgetown University Center for Global Health Science and Security
- Using data drawn from DC, SafeGraph, NYTimes, DC Department of Employment Services, the CDC Social Vulnerability Index, and the academic literature
- Will be incorporated into and inform ongoing analysis into the policy environment and relative impacts of those policies on the COVID-19 pandemic across the National Capital Region (NCR)

Demographic and essential worker analysis:

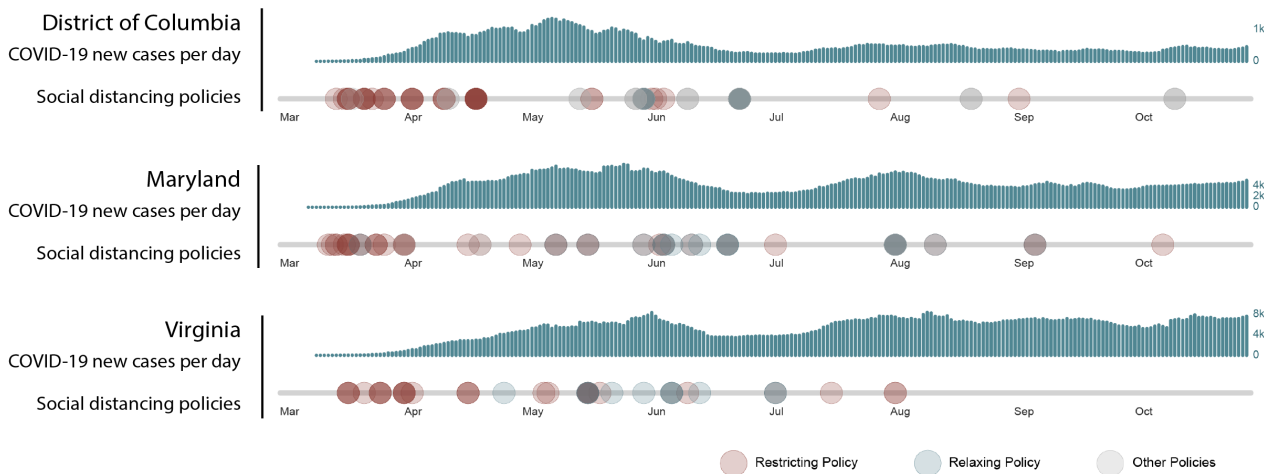
Key questions

- Communities of color and socioeconomically vulnerable (SoVI) communities have been documented as having higher rates of COVID-19 nationally
- But this does not appear to be driven by innate biological differences
 - Higher levels of co-morbidities and reduced access to health care are likely to contribute
- Are those differences reflected in DC and the NCR?
- Are those differences driven by general SoVI or by differences in ability to stay home and/or disproportionate employment in essential worker classes?

Essential work and social distancing policies

- Essential workers were specifically excluded from lockdowns, shutdowns, and stay-at-home policies
- These policies were implemented across the District and the NCR iteratively since March 2020

Social distancing policies



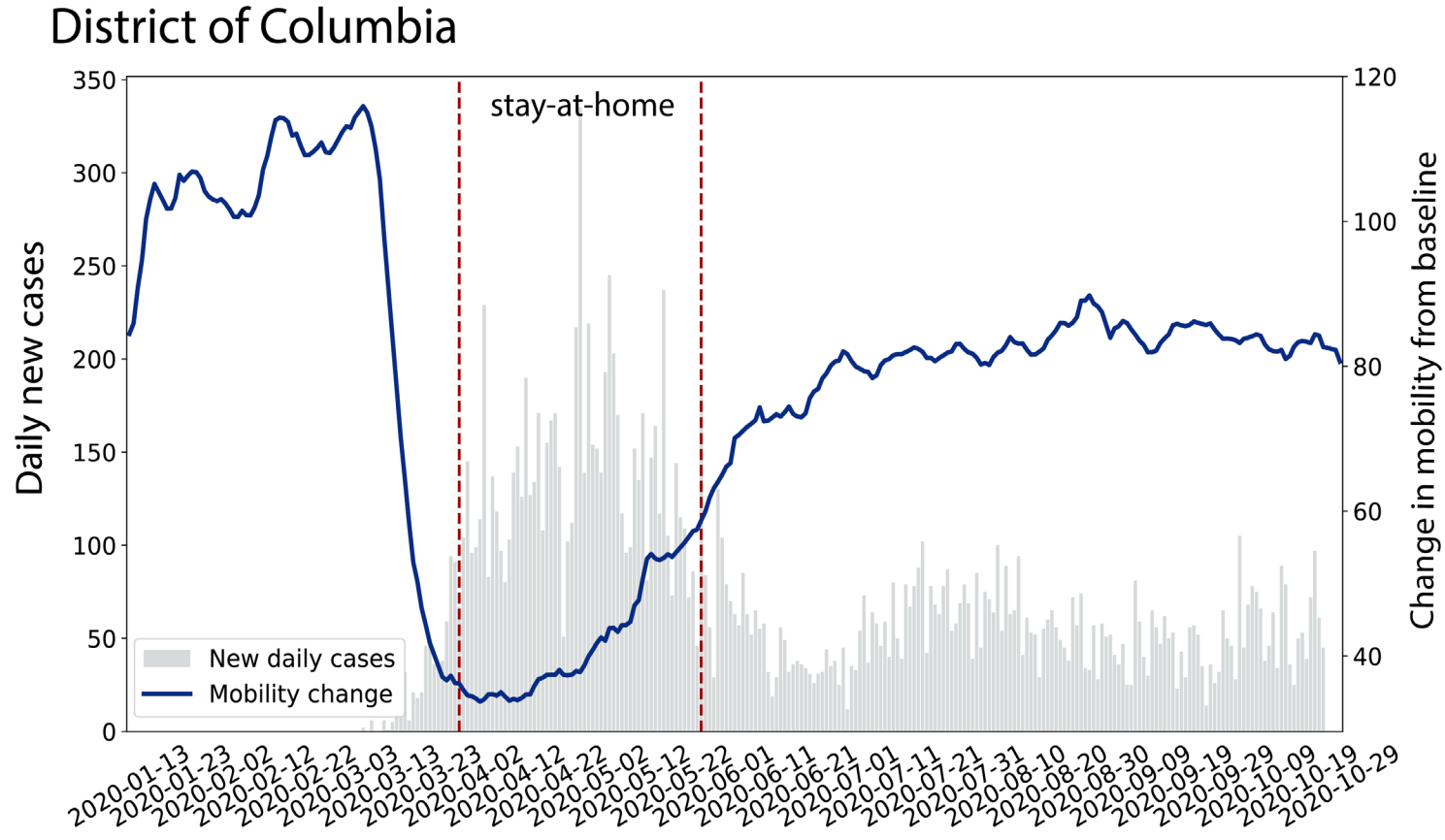
Defining Essential Work

- No nationally consistent set of essential worker designations; most designations align with the US DHS CISA guidelines for critical infrastructure (8 have none)
- Health care, emergency services, food/agriculture, transportation/logistics, and critical manufacturing are among the frequently designated essential sectors
- Most states consider construction essential except WA and NJ (with limitations); construction is not a CISA category
- Key differences across the NCR:
 - DC does not recognize hazardous materials, nuclear management, chemical services/handling, and defense industrial base as essential; MD and VA do
 - VA does not recognize commercial facilities, residential services/shelters, and education/childcare as essential; DC and MD do

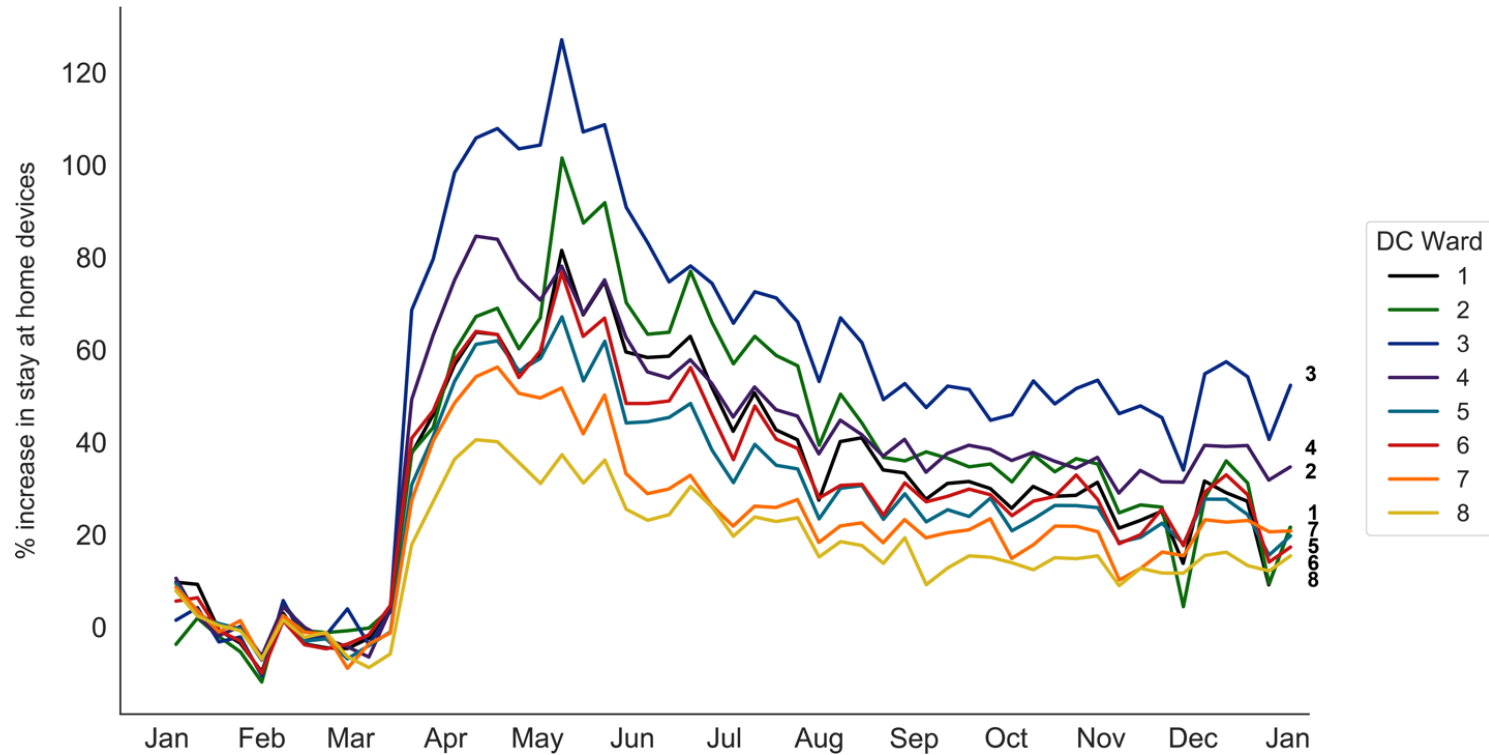
Mobility dropped in March by as much as 20% overall



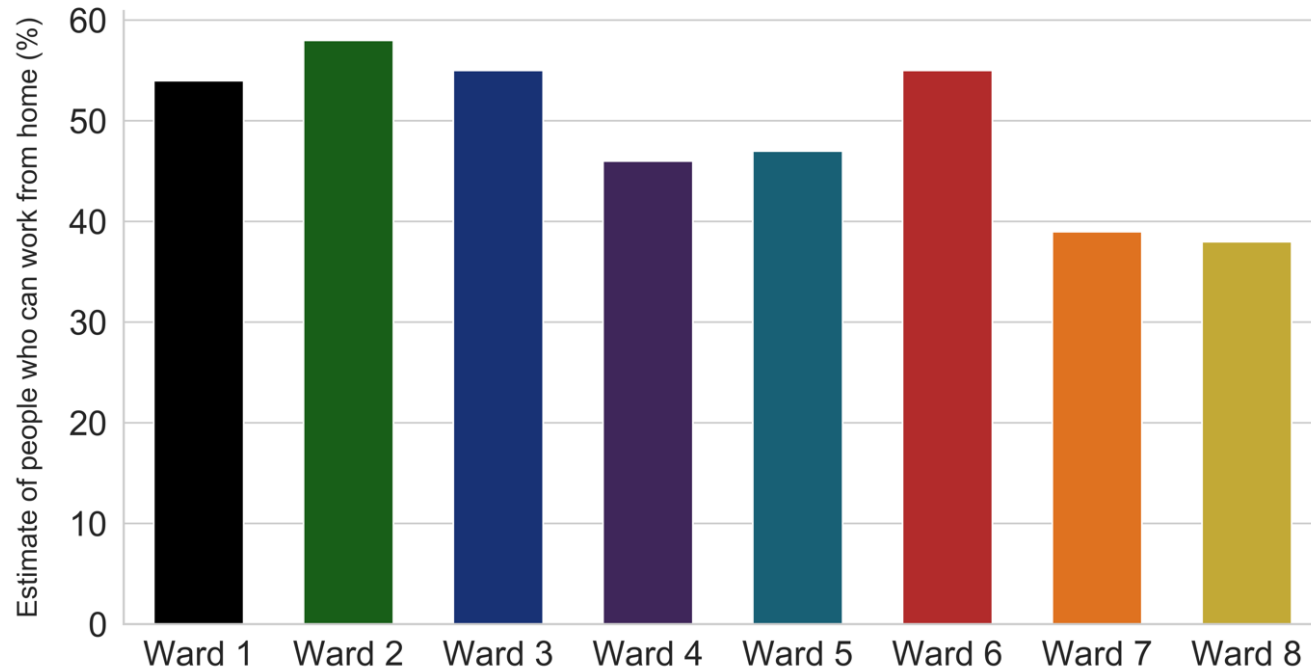
Timing aligned to the stay-at-home policy



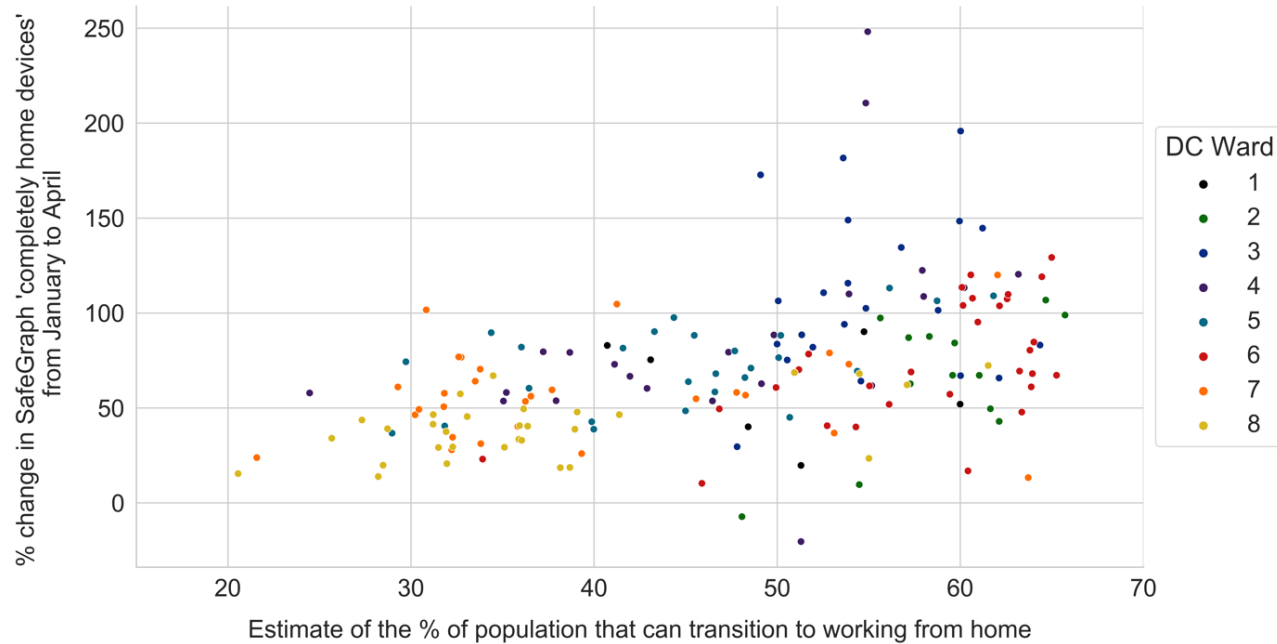
But not evenly across the District: Wards 7 and 8 reduced mobility the least



Reductions in mobility aligned with ability to work from home



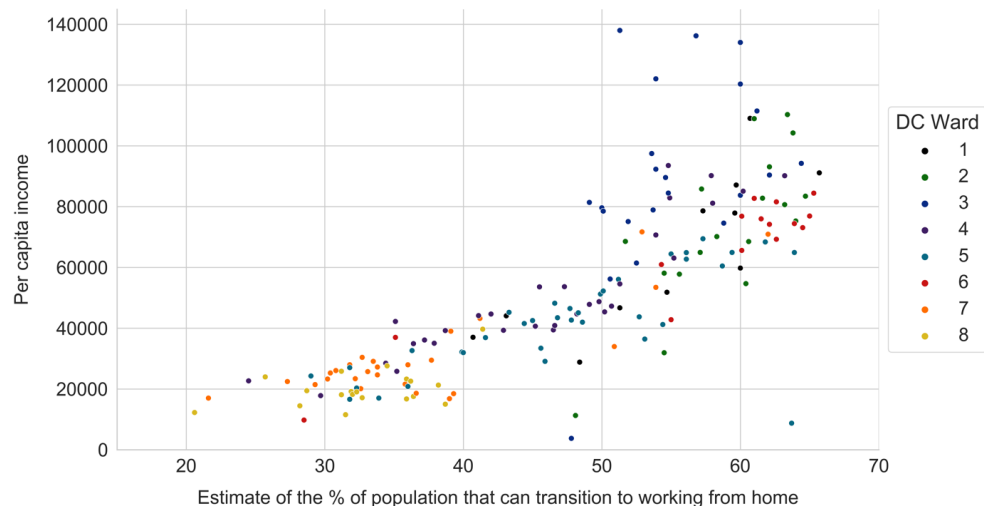
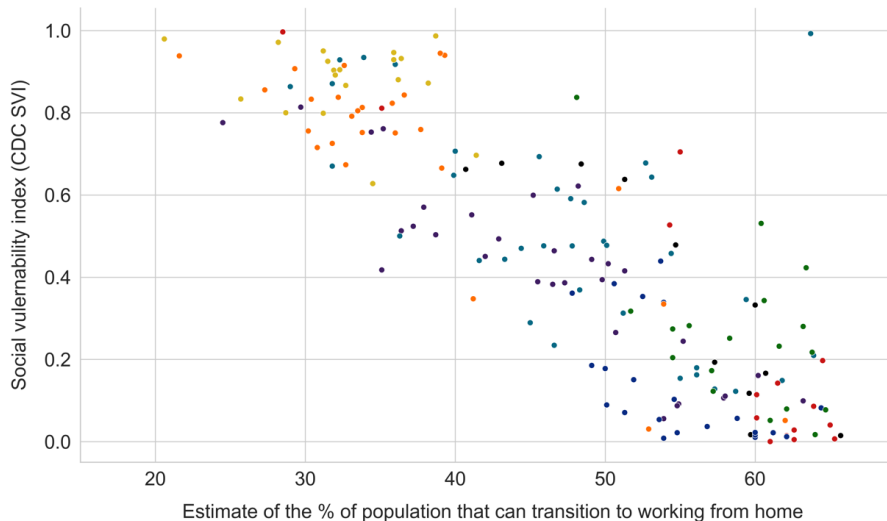
Where people could work from home, they were more likely to stay home



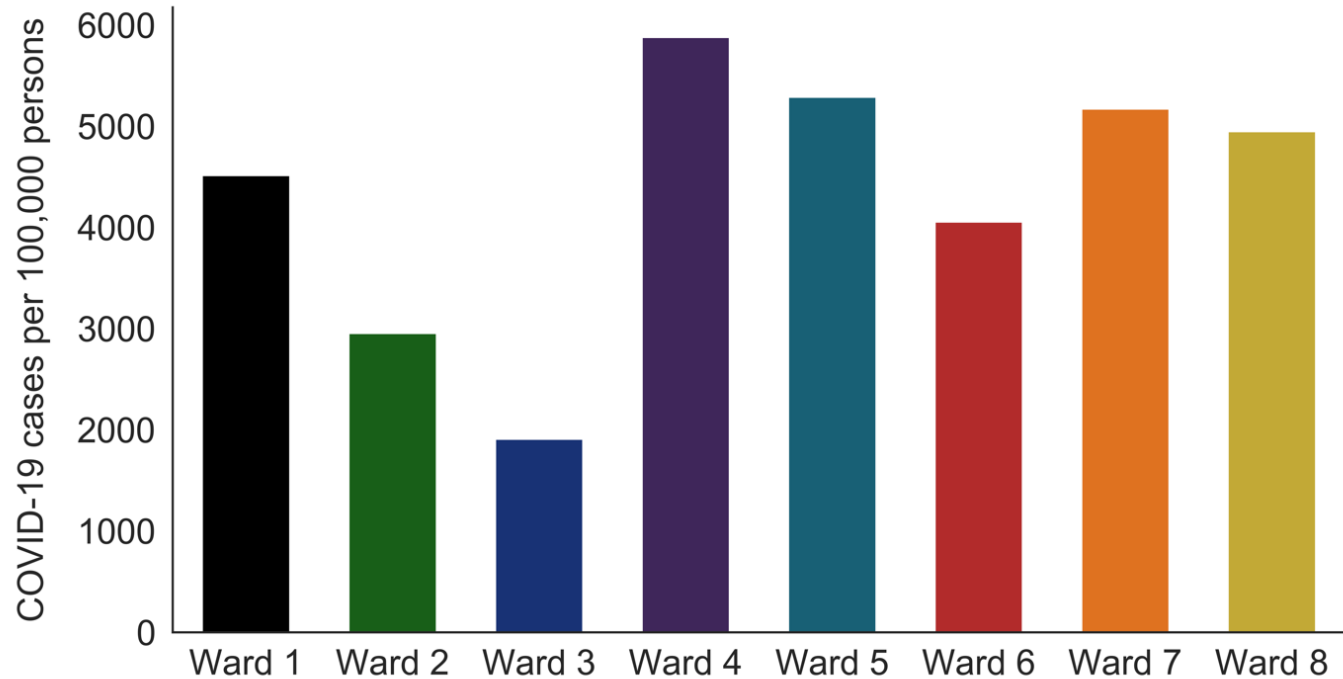
Using occupations defined by O*NET data, derived an estimate of who works in occupations that can be done from home

Those who could work from home strongly correlated with devices that stayed 'fully at home' in the DC area

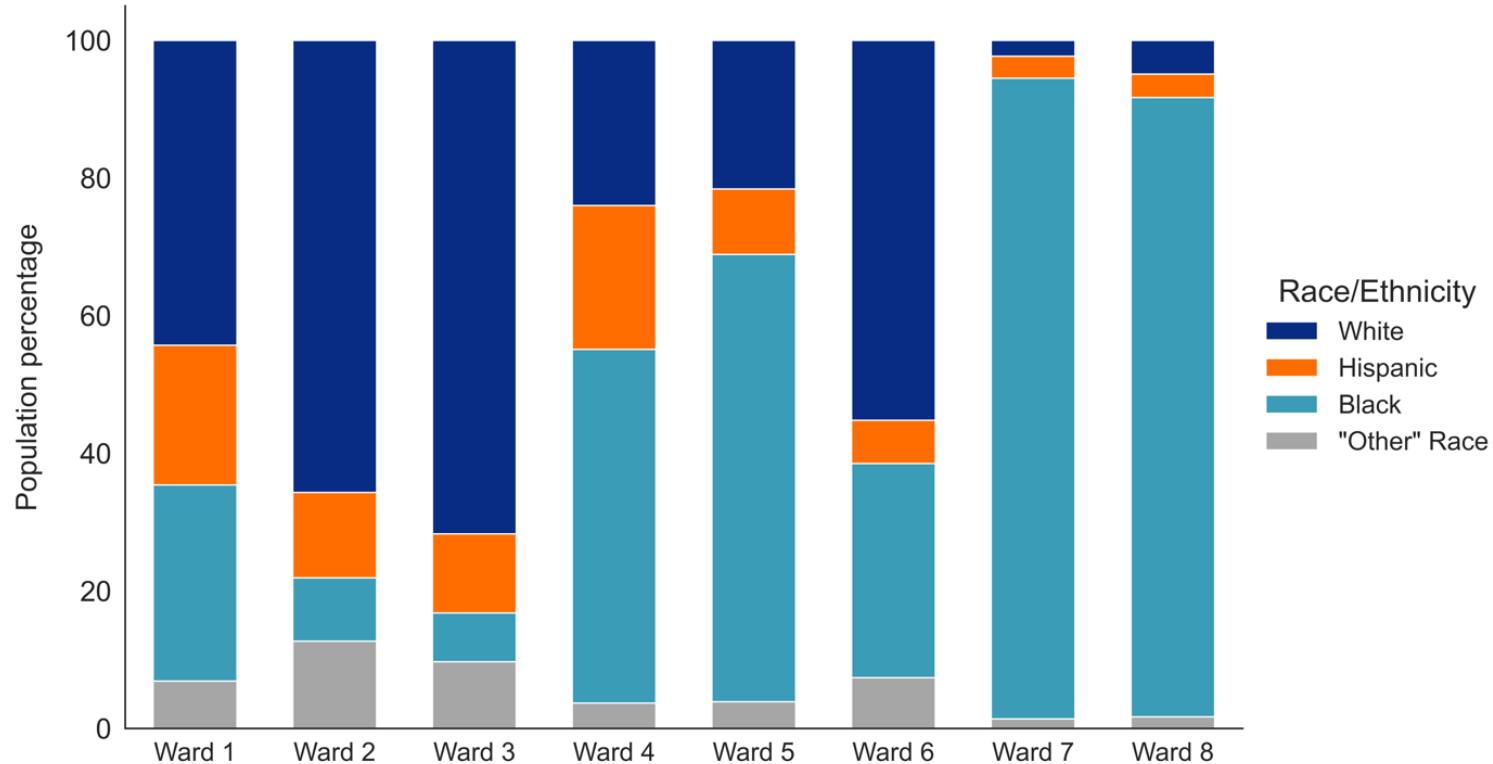
Higher income is positively correlated with the ability to work from home; socioeconomic vulnerability is negatively correlated



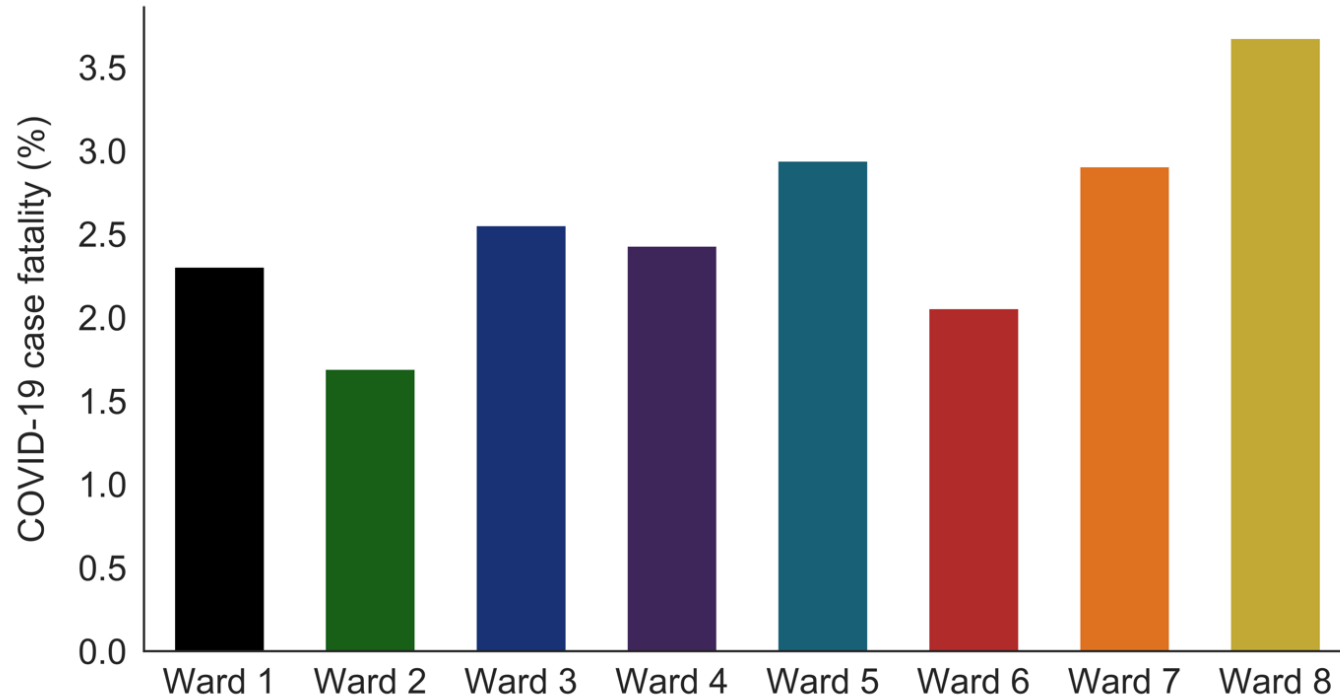
COVID-19 highest in Wards 4, 5, 7, and 8



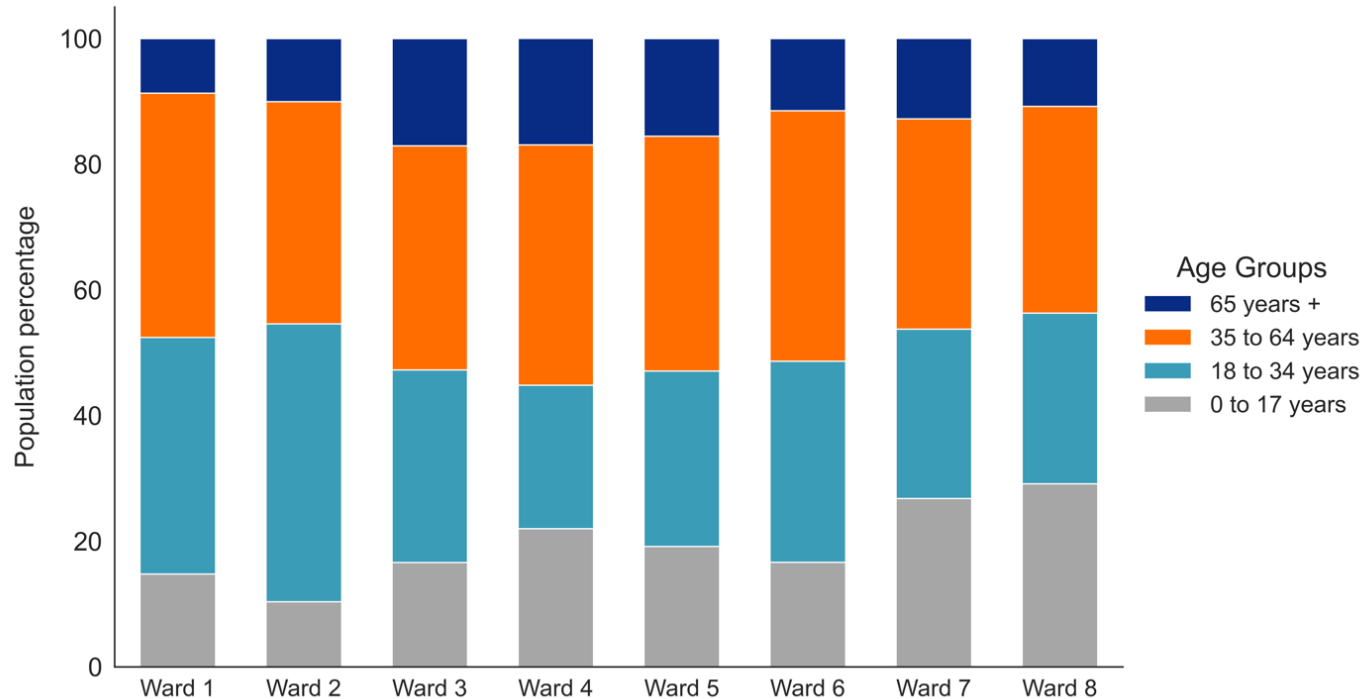
COVID-19 highest in Wards 4, 5, 7, and 8 – which aligns with Wards with highest non-white populations



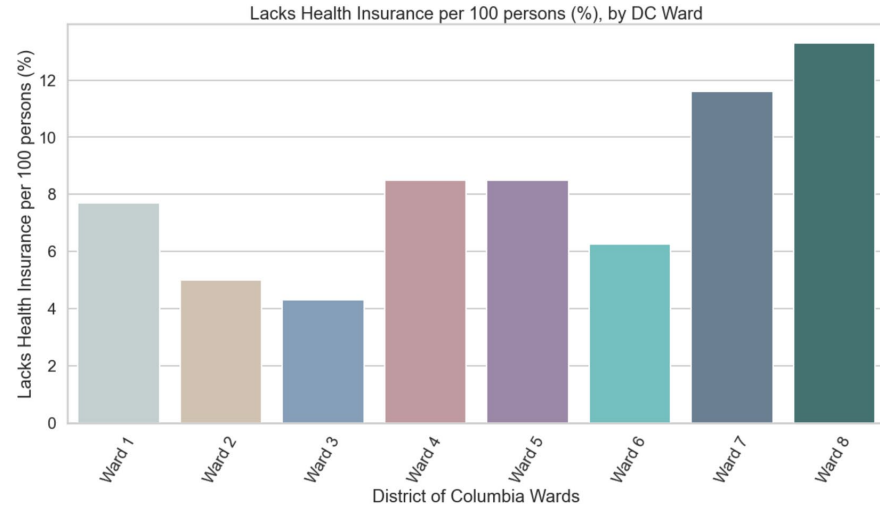
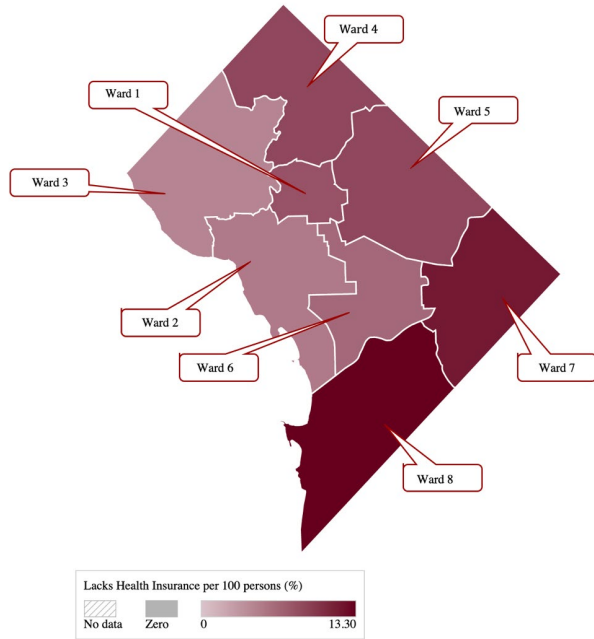
Case fatality rate was highest in Ward 8



Case fatality rate differences do not appear to be driven by age



Wards with higher caseload – and higher case fatality rates – match those lacking health insurance

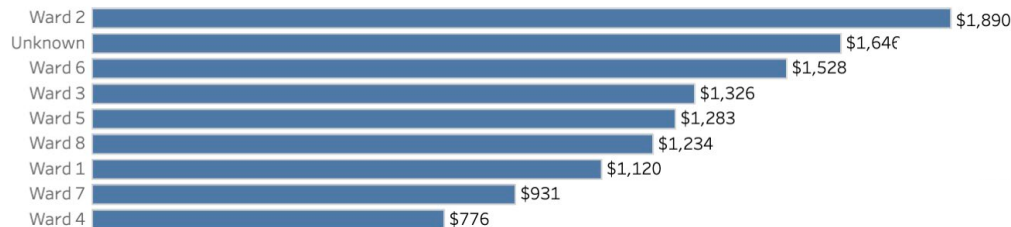


Preliminary: What is going on in Ward 4 & 5?

Lower wages and greater numbers of workers in health care services (based on location of employer, not worker)

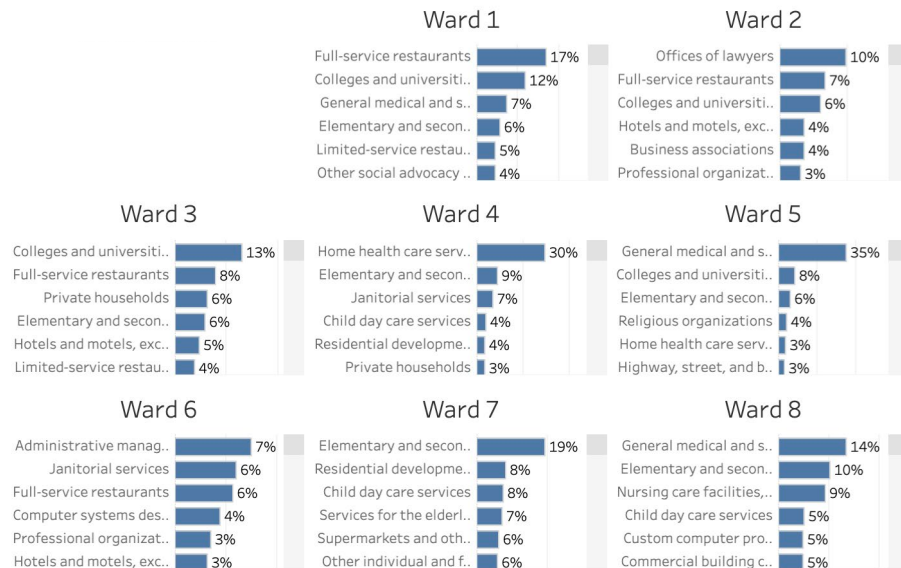
Current Average Weekly Wages

Click on a ward for more details



Share of Employment by Industry and Ward

Data last updated: 2018 Q3



From Economic Insights Dashboard:

<https://does.dc.gov/page/labor-statistics>

Conclusions

- Impact of social distancing policies on mobility was linked to ability to work from home
- Those more mobile within the district appear to be essential and frontline workers, concentrated in Wards 7 and 8 and Wards 4 and 5, to a lesser degree
- These wards are the same as those impacted most by COVID and with the largest Black and Hispanic populations
- At the neighborhood scale, inability to work from home is also aligned with other social and economic risk factors
- Future policy aimed at protecting frontline and essential workers help to protect those most vulnerable for social and economic reasons