

# The Impact of Crowd-Sourced Face Mask Production

A look at the work of Sew Face Masks Philadelphia's volunteers

**SEW FACE MASKS**  
*philadelphia*



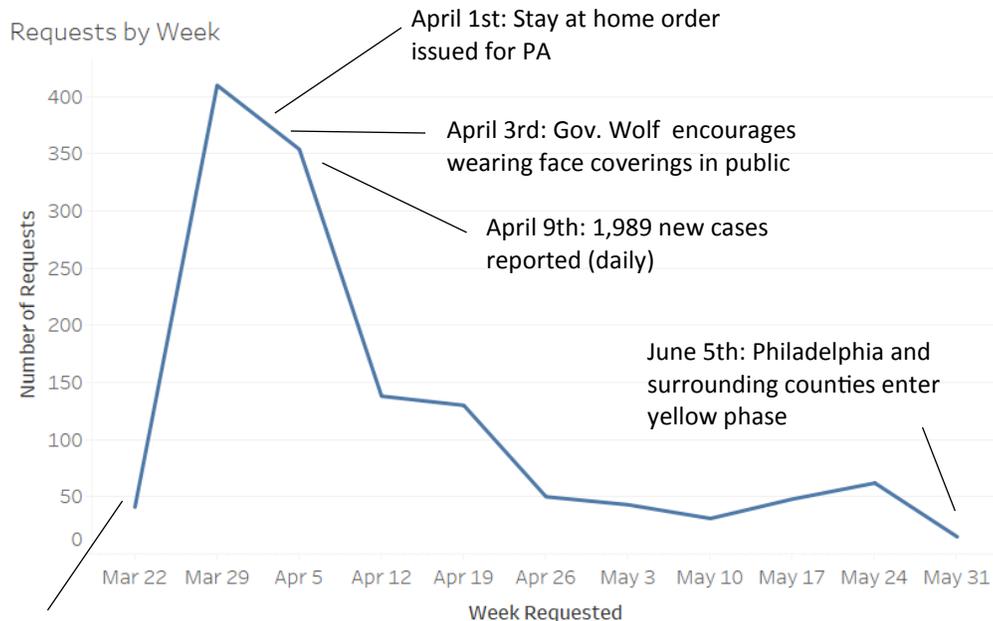
Between March 20th and June 6th, Sew Face Masks Philadelphia Volunteers produced 17,990 homemade cloth face masks. These masks were distributed across the city and its surrounding counties using a just-in-time inventory system with daily dispatch. This report details mask production and the requests received over the roughly two month period during which Sew Face Masks Philadelphia was most active. After phasing out daily dispatches on June 6th, volunteers continued to produce and distribute masks on a smaller scale with in-person deliveries to organizations and under-served areas. Out of respect for privacy, the names of individuals and organizations are not provided.

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# Supply and Demand

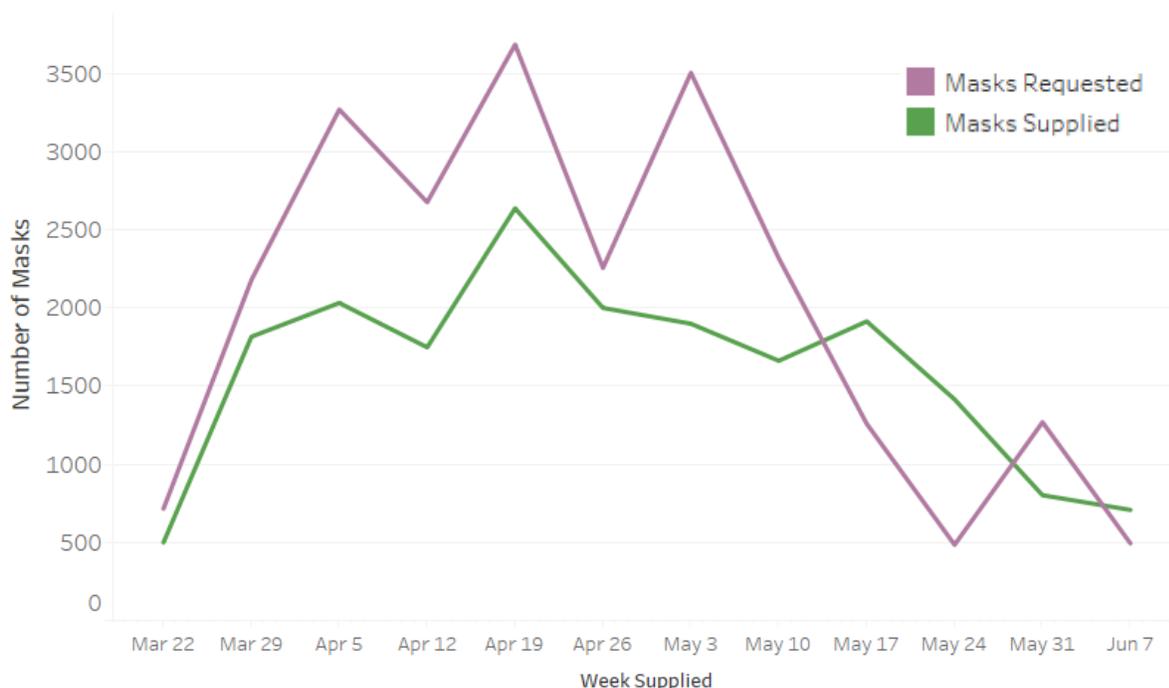
From March 20th through June 5th, Sew Face Mask Philadelphia volunteers produced and distributed cloth face masks within the greater Philadelphia area. The following charts illustrate how the mask supply, demand, and the number of requests changed over this period.



Seen here are the number of requests received per week by SFMP. The peak in requests from the end of March through early April coincides with the statewide stay at home order as well as the Governor's request that face coverings be worn in public. On April 9th PA recorded its highest number of new cases, 1,981.

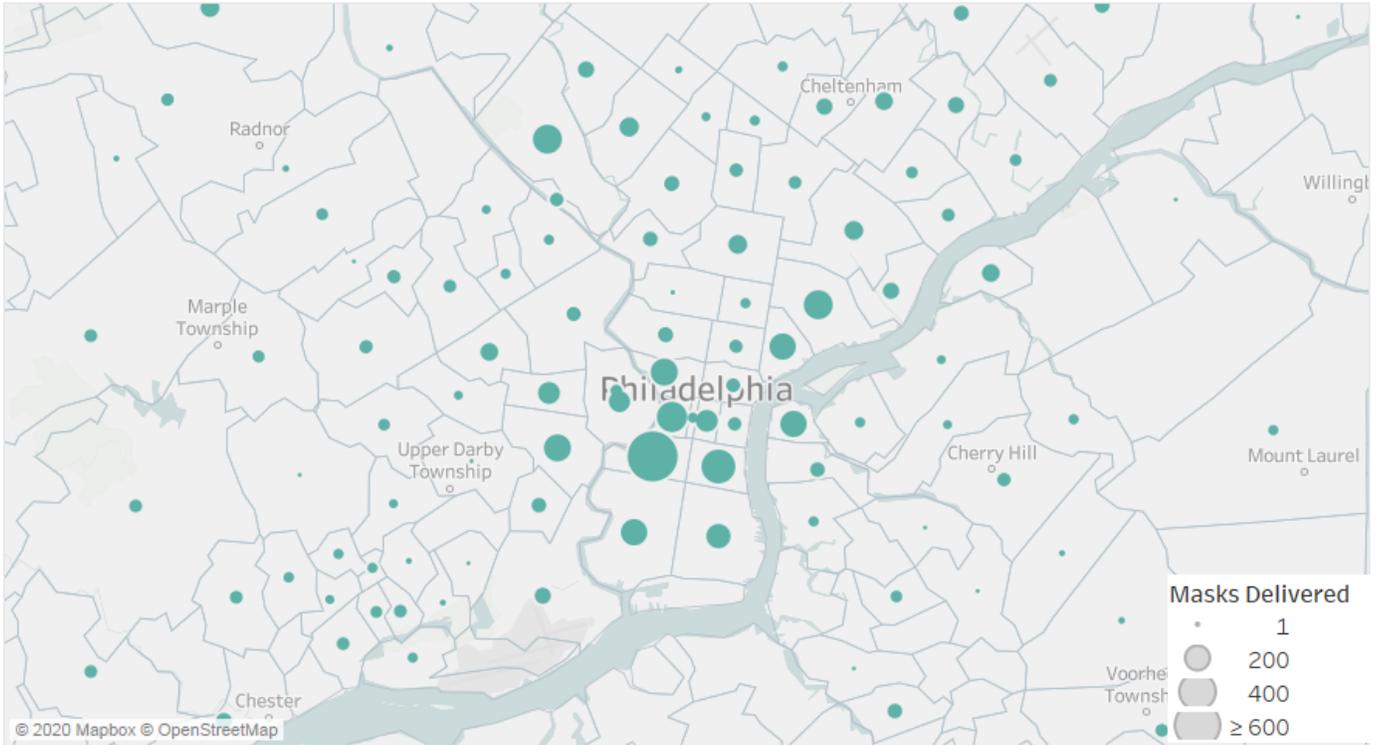
March 21st: Non life sustaining business forced to close

Masks Supply and Demand

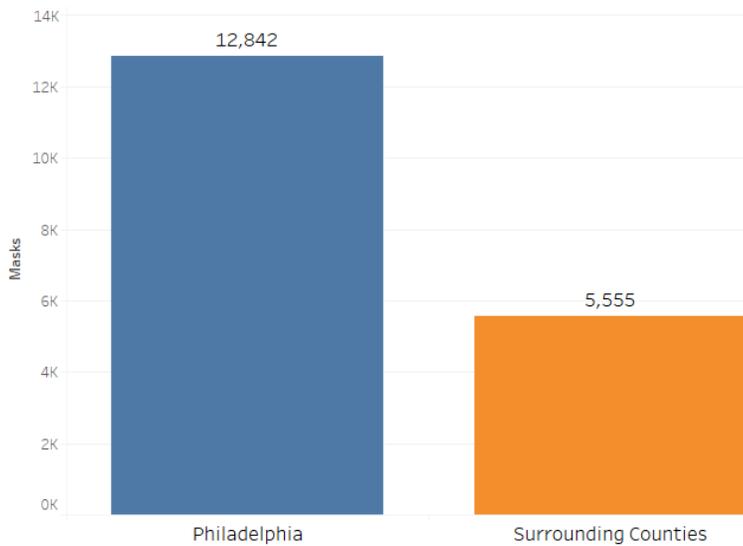


The quantity of masks produced (green) and requested (purple) from March 20th through June 6th. More masks were requested than it was possible to supply. During the week of April 19th, 3,683 masks were requested and 2,636 were produced, both records.

# Mask Deliveries by Zip Code

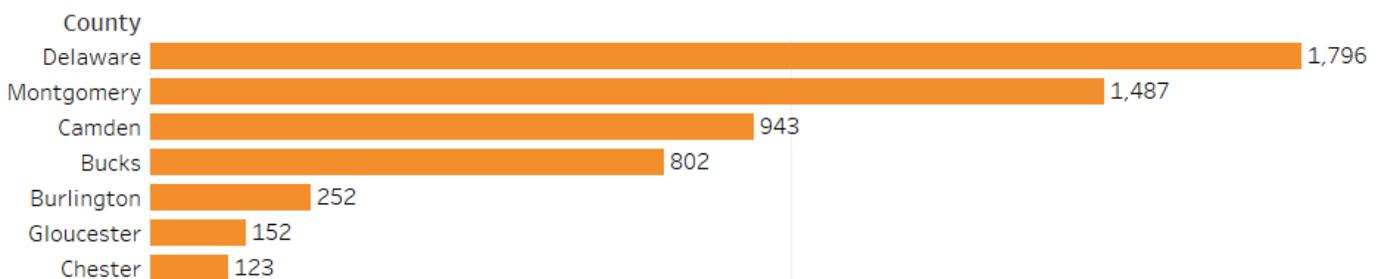


Masks Requested

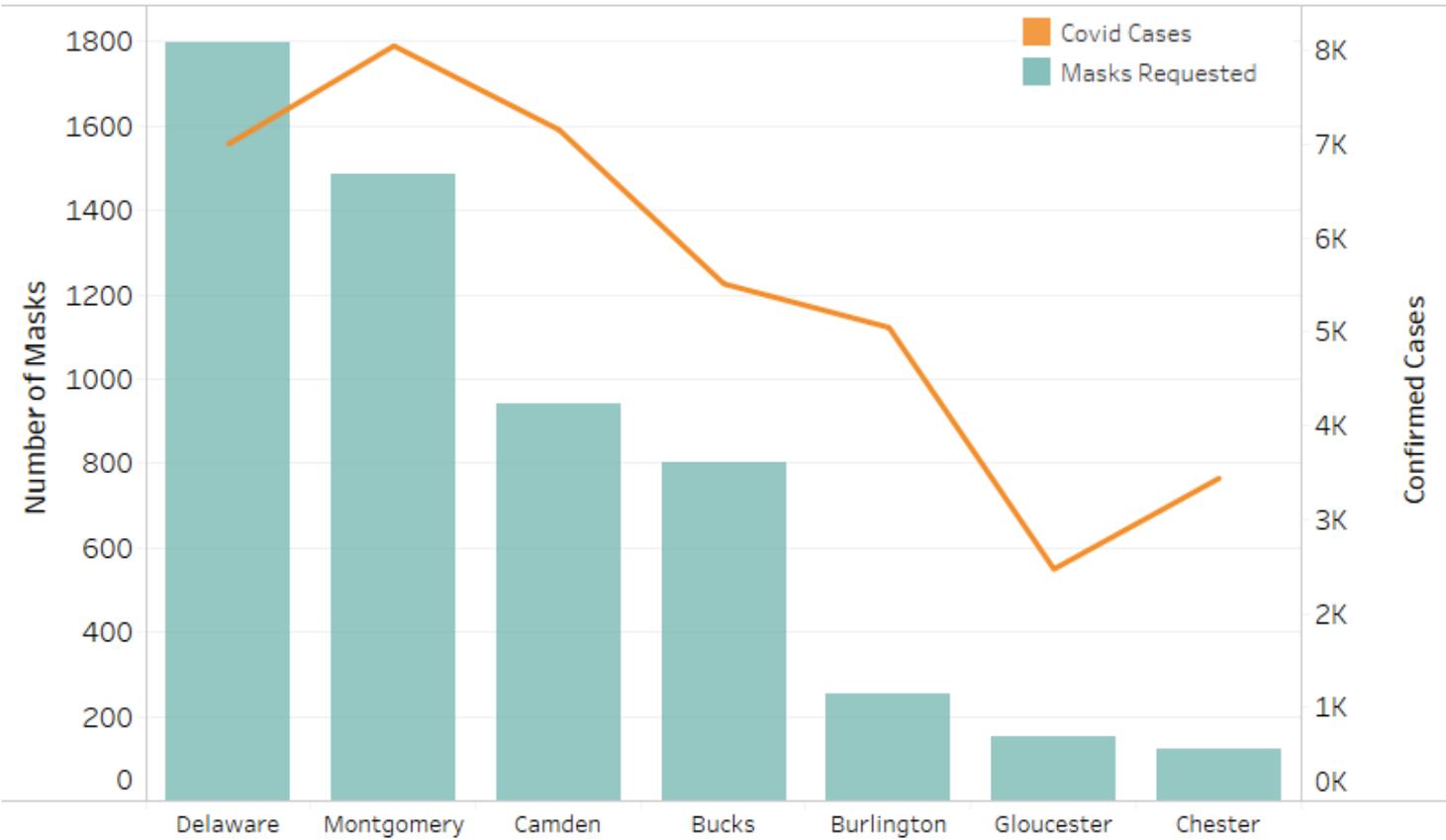


Above are mask deliveries broken down by zip code. An interactive version of this map will be available on the SFMP website in the coming weeks. To the left and below, mask requests are broken down by county. Over 13,000 masks were distributed within the city of Philadelphia, more than in all the surrounding counties combined. These deliveries were clustered around downtown zip codes, as seen in the coverage map. Delaware and Montgomery Counties, which lead surrounding counties in requests, were both hotspots of the outbreak. As of June 8th, Delaware and Montgomery counties had 7,003 and 8,046 reported cases respectively.

Masks by County



# Mask Requests and Confirmed Cases

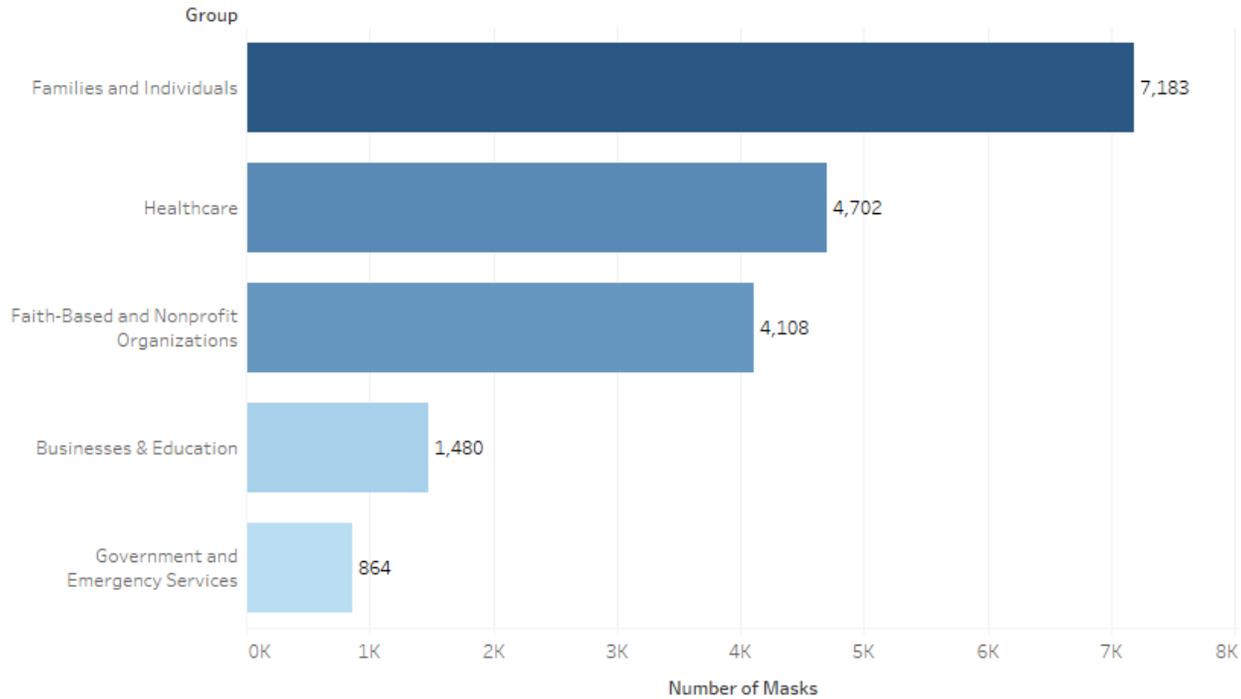


There appears to be some correlation between mask requests and the number of confirmed cases. However, additional factors such as distance from Philadelphia and therefore ease of delivery may have influenced how many requests were confirmed. The city of Philadelphia was not included as its totals are significantly higher than the other counties. With 20,404 confirmed cases, about 13,000 masks were delivered in Philadelphia. Case totals are from The New York Times and were last updated on July 8th.

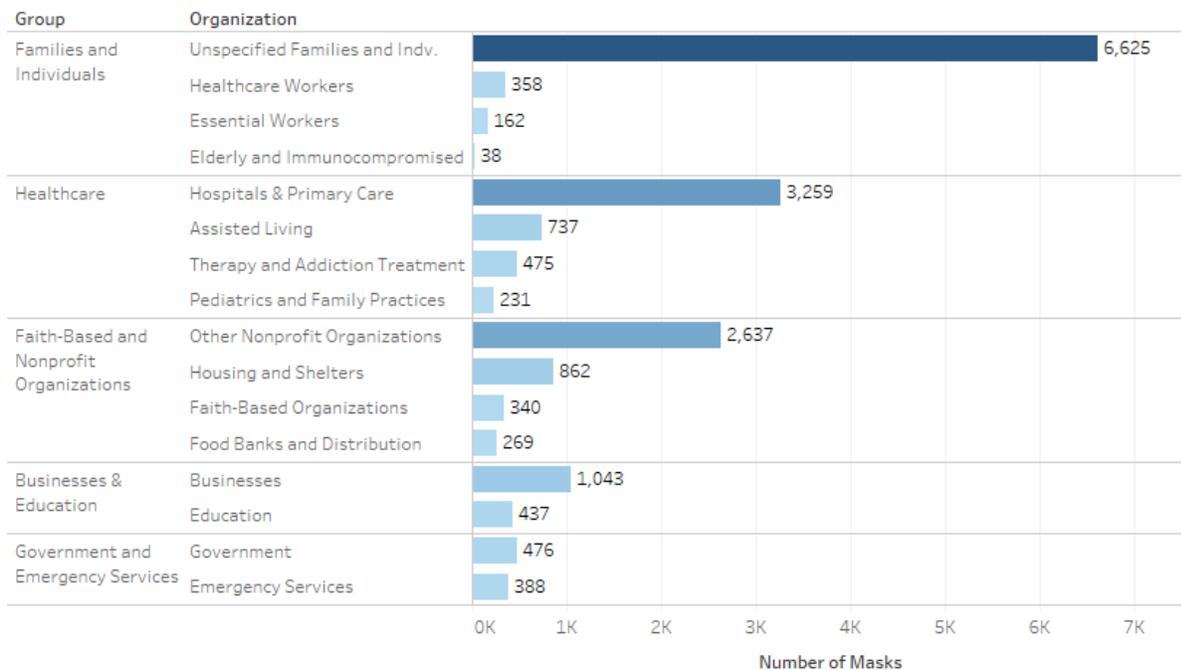
# Masks Requested by Organization Groups

Between March 20th and June 6th, 111,114,297 masks were requested through the SFMP website. Many requests were too large or too far away to be fulfilled. Confirmed requests totaled 18,337 masks, of which 17,990 had been delivered by June 6th. The charts below detail the masks from confirmed requests for which the organization was provided.

Requests by Organization



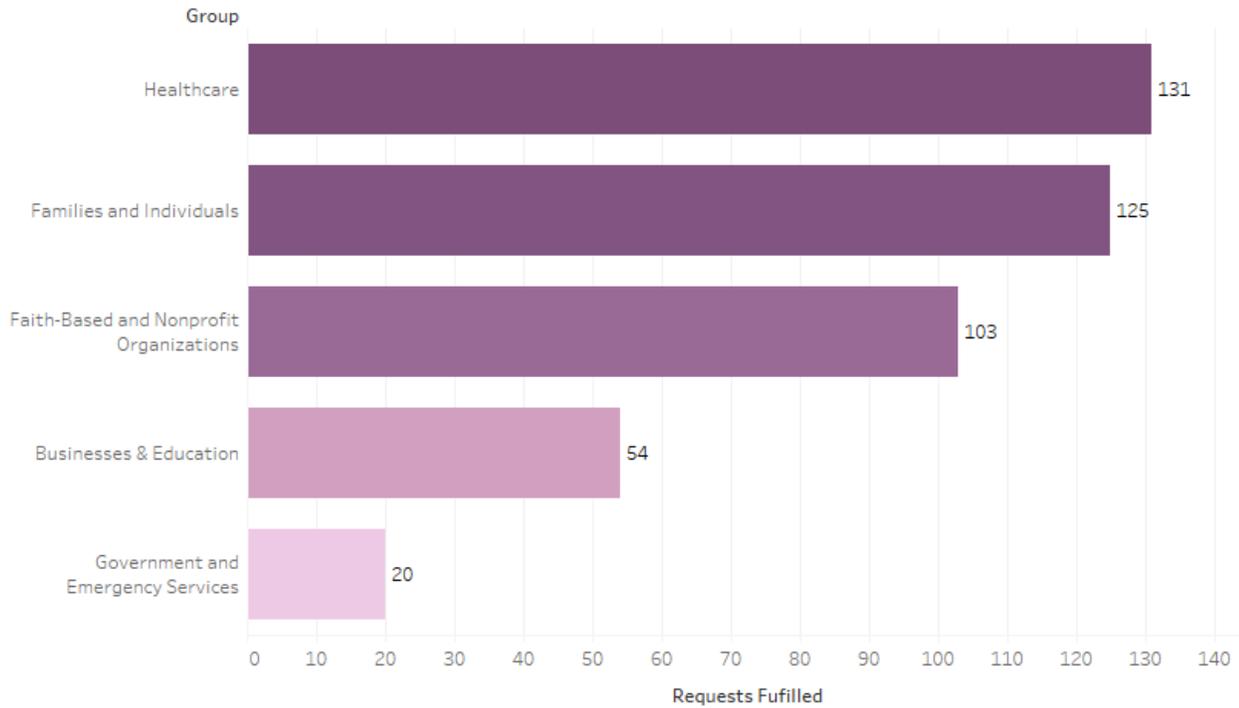
Requests by Organization



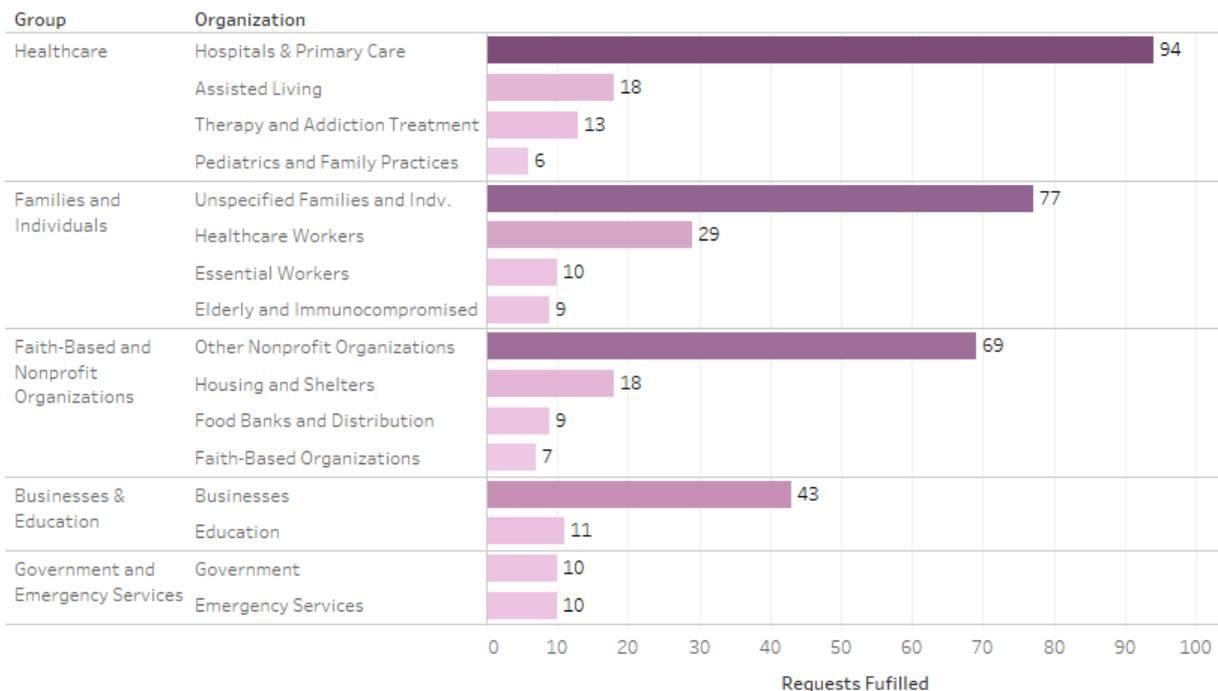
# Requests Fulfilled by Organization Groups

Examination of the 433 confirmed requests by organization is detailed below. While healthcare organizations requested less masks than families and individuals, they contributed to a greater number of total requests. Hospitals and primary institutions care comprised the majority of requests from healthcare organizations.

## Requests Fulfilled



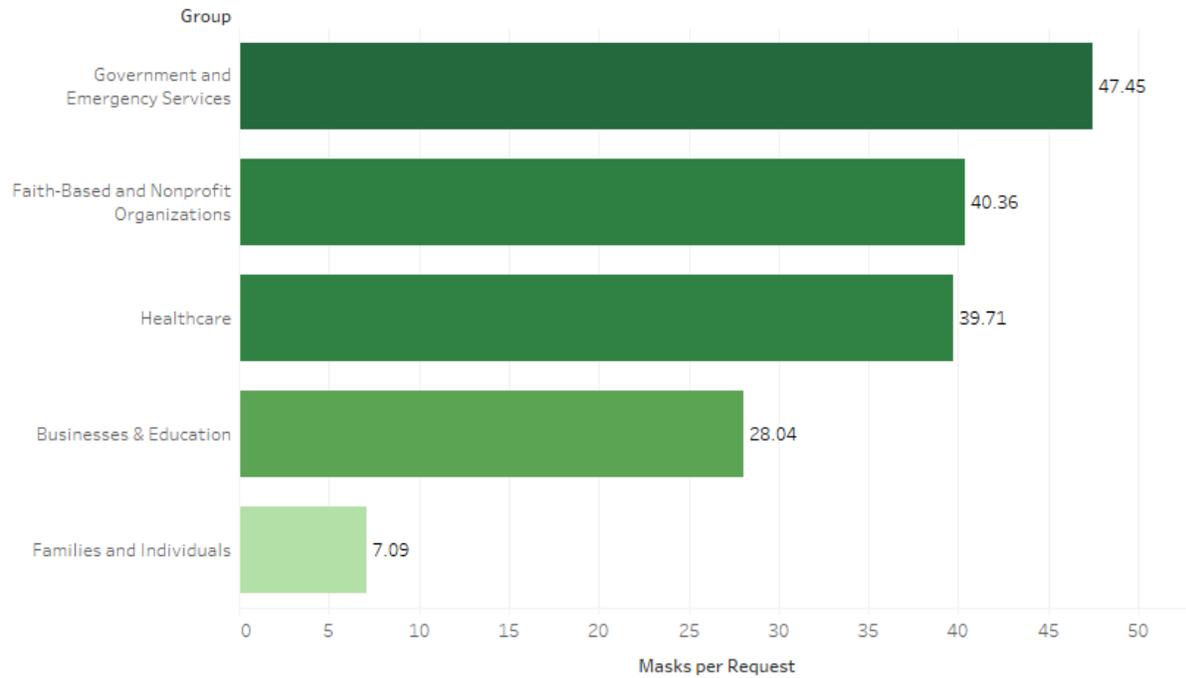
## Requests Fulfilled



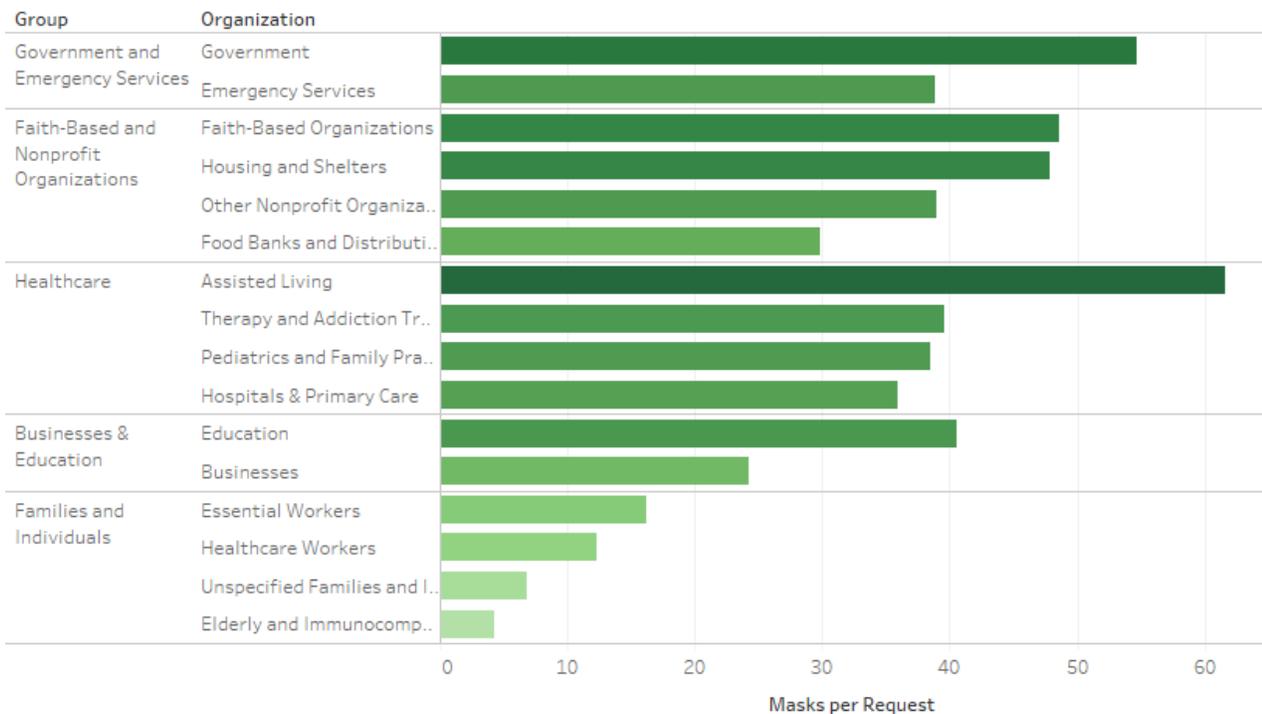
# Number of Masks per Request

Below are the average number of masks per request broken down by organization group. A cap was set at 50 masks per request, but some organizations did ask for more. While accounting for less than 1,000 masks requested, government and emergency services organizations made the largest requests on average. Assisted living institutions also made larger requests with three requesting 100 or more masks

Average Masks per Request

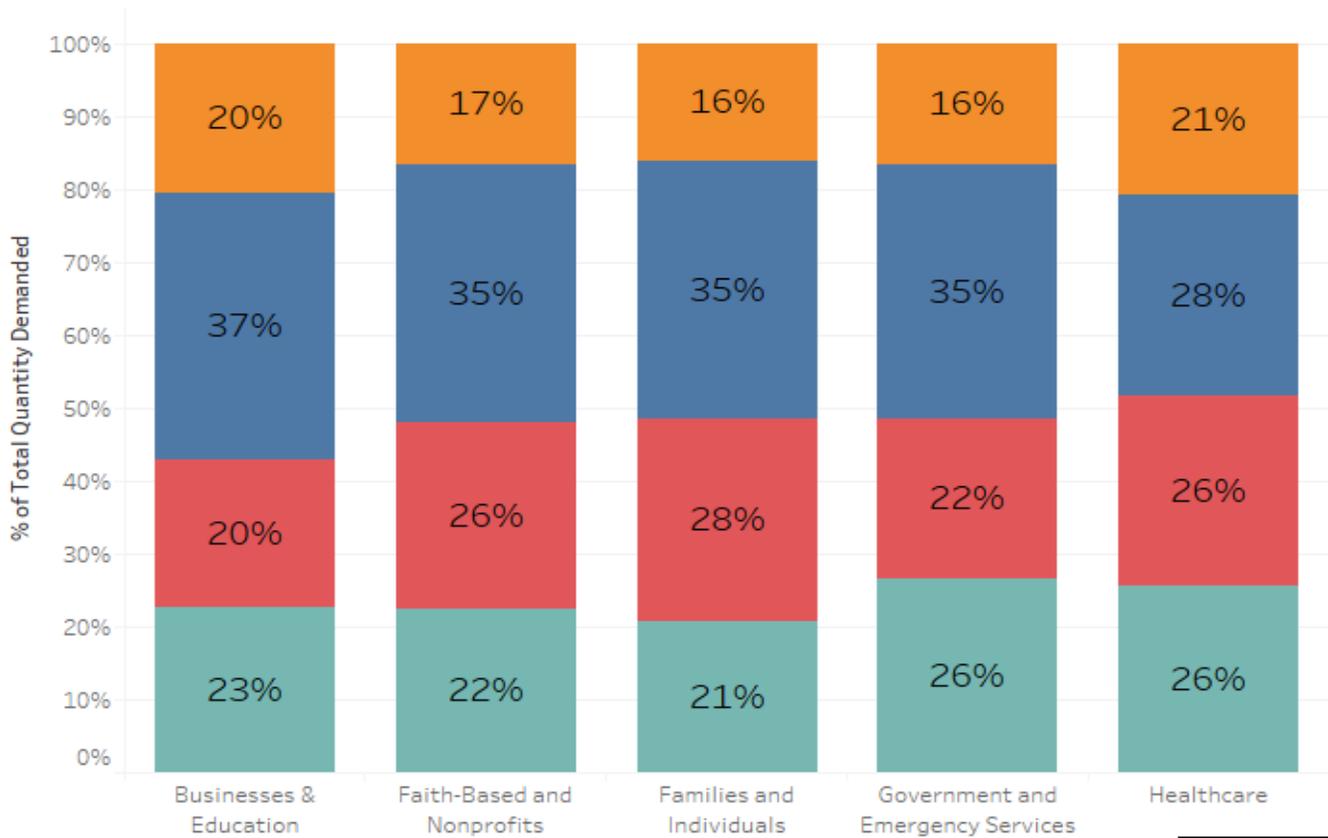


Average Masks per Request

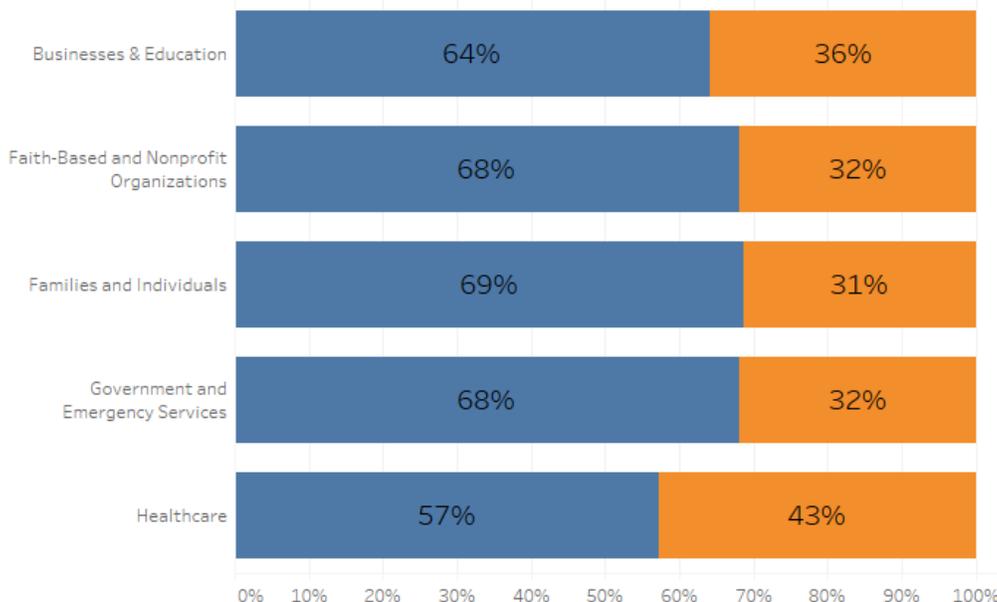
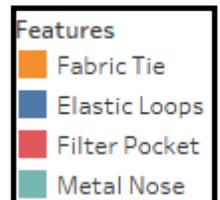


# Mask Features

Requests for masks often included specific features, of which the four most common were fabric ties, elastic loops, filter pockets, and metal nose bands. The following charts display how often each feature was requested as a percentage of the total features requested.



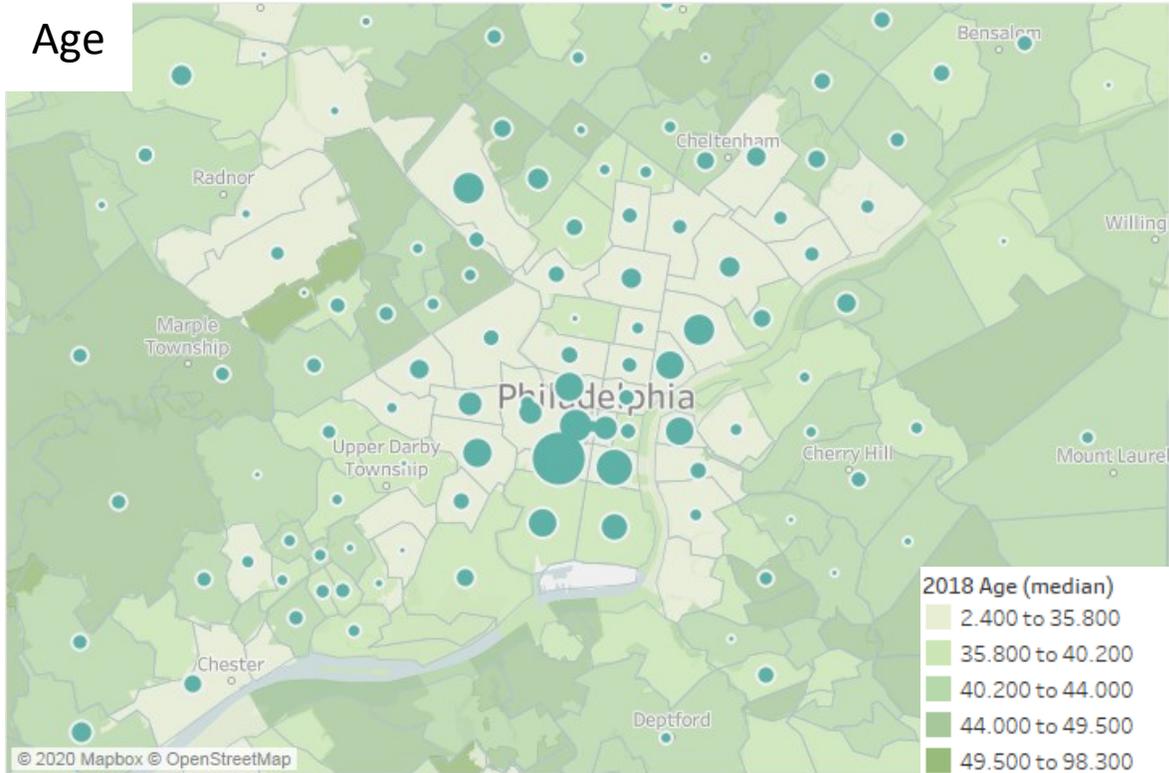
Elastic Straps were the most popular feature overall followed by filter pockets, metal nose bands, and fabric ties. However in business and education as well as government and emergency services groups, metal nose bands were more popular than filter pockets.



Organizations that requested specific features could choose between fabric ties and elastic loops. The latter were the more popular option across all types of organizations. Healthcare organizations requested a higher proportion of fabric ties compared to the other groups.

# Deliveries and Demographics

## Age



Mask deliveries are plotted with median age (above) and population (below). While the largest volume is observed in the younger zip codes within Philadelphia, the greater concentrations of business and services may have contributed to additional requests. When considering the affect of population on mask requests, it is important to acknowledge that the 7,183 masks requested by families and individuals accounted for less than half of the total masks requested. Institutions such as hospitals, non-profit organizations, and businesses made up the remainder of requests.

## Population

