Bristol County by Town and City: Older Population, Ambulance Counts, EMS Region and Rural Designation
Concrete things your neighborhood, town and city can do right now
to push back on COVID-19's local spread and fatality rate.
07/05/20: Get latest update: WorldForceStrategies.com

FOR QUICK ACTION: PASS IT ON. Because there is minimum testing, continual containment of local COVID-19's spread and readying for imminent surges are imperatives to save lives. Bristol County shares same medical and non-medical resources. The below community needs assessment guide imbedded with local information and population counts can assist places in (a.) incorporating wider-spread testing *and* (b.) in **working together to project AND get** potentially needed resources like: (i.) stronger communication and outreach networks, (ii.) medical and emergency like beds, masks, ambulances, etc., (iii.) food delivery and security, (iv.) disinfectants including for medical transporters, (v.) people power and (vi.) whatever else to fight COVID-19 now *and* its future surges. This guide is for anyone, anywhere.

Fighting a pandemic is a geospatial challenge. Understanding virus's data and factors with a place's population dynamics are critical for effective local response. Location metrics including community virus patterns can assist in quicker fact-based decisions. Below shows how to understand and use local measurements when assessing community needs.

People 60 years and older are a significant portion of hospitalized COVID-19 cases.

Backed by strong data science, research, the discipline of geography and community needs assessment, below presents usable data and information to expedite targeted local action. It lays out seven fundamental action steps with local descriptive data to assess, strengthen and build the kind of local infrastructure needed in each municipality and county to protect the most vulnerable against the virus. It is for making a plan that is backed by data and knowledge.

The most effective way to get the most out of this tool is to share it with many others in the community, like those in faith and non-faith organizations, businesses and elected positions. Its intent is not to re-create but to draw upon local skills and expertise to fortify and expand existing systems and, if necessary, build new ones. It has something for everyone.

Take the lead.   Talk about.   Share expertise.   Centralize.   Make a Plan.   Pass it on.

A **location's attributes** such as age distribution and physical geography show that besides knowing what each town has in place that *sharing* of resource information *and* actual resources among neighborhoods, cities and towns can strengthen the position of the entire county against local virus patterns.

SEVEN ACTION STEPS FOR ANY COMMUNITY: Below **helps to know what the county needs** *and* **who** *and* **what it is preparing for**: **by municipality**. Putting below systems in place right now and *sharing* helps build faster response to control local virus transmission, conserve and leverage resources, protect most vulnerable, and prepare for next surges. Doing these steps now can expedite and support building other local systems like contact tracing, testing and more.

Descriptive data shows each municipality's total population including older and ambulance counts, EMS region and municipality's designated rural level, if applicable. Rural designation is included because COVID-19 brings different transmission, tracking, containment and demographic challenges compared to an urban area. Use World Force Strategies' *other companion reports* with this guide. ACTION #7 is now included as a start for applying local virus data.

Sharing this can help (a.) focus response, (b.) direct and conserve resources and (c.) coordinate efforts between towns and neighborhoods. Look for updates. Other companion reports now show household populations that don't have cell *or* computer connection. Keep checking back for updates and other useable metrics These are guides. They provide a framework for understanding and using local metrics in assessment and planning. They can make a world of difference. Thank you.

This information is for public use - pass it on.

http://worldforcestrategies.com/Reports/MA/Bristol/BristolAgeAmb.pdf
bringing real numbers to real people

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Because COVID-19's patterns in your community change, your action plan needs to be <u>flexible</u> enough to respond to these changes. This is especially true because your population dynamics don't change. Over time, different virus impacts emerge that govern how to respond.

<u>Fast reaction time</u> **against COVID-19's local spread is very critical**. This means if there are things already underway in your community to control transmission like contact tracing by experts, wider testing, door-to-door food delivery and more, then it is time to muster up support to help fortify these efforts.

Bristol County is in one of the state's five EMS Regions (Emergency Medical Services). It is Region 5, Southeastern MA/Cape Cod. A town's region is helpful to know when gathering more information and working among towns. This is because state information indicates what region a town is in *and* may help when learning more about local ambulance needs and capacity for town and a cluster of towns.

<u>January to April 14th and to May 27th town COVID-19 data are baseline for future comparisons.</u> As of April 14th, Bristol had at least 1,435 of the state's cumulative 28,163 confirmed COVID-19 cases. Cumulative is since first day of testing. May 27th it was 6,779 of 94,220. Massachusetts Dept. of Public Health (MDPH) reports as "less than five" if a small town has 1 to 4 cases. Total test state-wide on May 27th was 552,144. The state's population is 6,902,149. Age 60 year and above account for most of the state's virus-related hospitalizations. Age 50-59 account for most cases. (ACTION #7 presents local findings that show virus patterns by town and clusters. The findings are guides for planning, action, messaging and method for plugging in other towns' virus numbers to better understand local patterns.

Bristol County is 691 square miles. Its total population is 558,905. **Thirty-two percent of its total in 60 years and older, meaning 179,158 people.** There are 16 towns and 4 cities in the county. Four are Rural Level One.

There are 129 licensed ambulances in the county as of December 2019.

1. **<u>Eighteen municipalities and two non-profits, one serving Rehoboth and the other Swansea, license 76 ambulances</u>** and primarily through their fire departments. (See all towns' population and ambulance counts on last page of this document.)

2. **<u>Four private ambulance services license the remaining 54 vehicles</u>**. These companies:
    a. Do not necessarily service the town listed as licensee address. Nor, can it be assumed a company's entire fleet is dedicated to a town it contracts with based on number by licensee address. (See Example B.)
    b. may provide services or have contracts with towns outside the county.
    c. like all licensees, on application inform the state of their coverage area.

See below ACTION #1 about other information that can be learned about an ambulance service which is not in this report but can assist in needs assessment. (See last page of document with each town's population and ambulance numbers.)

Other helpful information:
1. Local fire departments and rescue squads rely heavily on volunteers.
    a. The volunteer particulars by town, although not included in this report, are critical for planning, gauging resources and executing a plan.
2. Through contract, a private ambulance company can fully service a town or supply back-up support to a municipality's own services.

Example A: These types of things can be learned from the county's table, including by looking at town clusters.

About Cities:
1. Fifty-one percent of its total population live in the cities.
2. The 60 years and older age group account for approximately 21%-23% of each cities' total population as the below table shows.
3. Each city's percent of this age group is about the same as the nation's portion of 21% and Massachusetts' 22%.

About Towns: Seventeen of the towns' services are provided by local fire departments, EMS or ambulance corps, including volunteer.

A.) **Seven of the towns'** total combined population is 123,149 and represents 22% of county's total. In each the population is proportionately younger than the state's and based on age distribution it would be a younger community. (When assessing any town need, the Commonwealth's portion and other municipalities' figures are helpful gauges, along with the town's other location attributes.) For example:

    1. The 60 and older group of 23,761 people account for only 16.7% of Mansfield's population. In Berkley it is 18.9%, or 1,259, of total 6,679.
        a. In Mansfield 83% of the town is younger than 60.
        b. Proportionately, it has 5% less than the state has of this age group, and
        c. licenses three ambulances.

B.) **The other nine towns'** combined population of 149,789 accounts for 27% of county's populous.
   1. Each has a comparatively a larger number of 60 and older living there.
        a. Seekonk has 25.5% its total, or 15,210 people. It licenses four ambulances.
        b. Westport has the largest portion of 32.6%, or 5,167, of total 15,854 and licenses three.
            ▪ It exceeds the state's portion by 11%.
        c. 60 and older, meaning15,854, represent 32.6%
        d. **Other clustering can show <u>location attribute</u> patterns, such as, by geographic proximity when:**

Comparing Four Neighboring Towns				
Licensee by Municipality or Private Entity	Total Population	Number 60 Years and Older	Percent 60 Years and Older	Total Ambulances (Vehicles) Licensed
Dighton	7,571	1,577	20.8	2
Rehoboth	12,082	2,559	21.2	3
Rehoboth Amb. Committee				3
Somerset	18,207	5,676	31.1	4
Swansea	16,462	4,744	28.7	
Swansea Amb. Corps				4

For public use through Creative Commons, for example, this map is a quick reference for showing abutting towns.

Clustering is a key concept in many areas like geography, disease control, economics and more. It is part of <u>analysis</u> *and* <u>field work</u>. This guide is for both.

Everyone has a bit of a geographer inside themselves. For examples, delivering food or assessing ambulance capacity are field work. In summary: this is a "how-to-local guide" backed by supporting information that can accelerate and fortify a town's position against local virus spread.
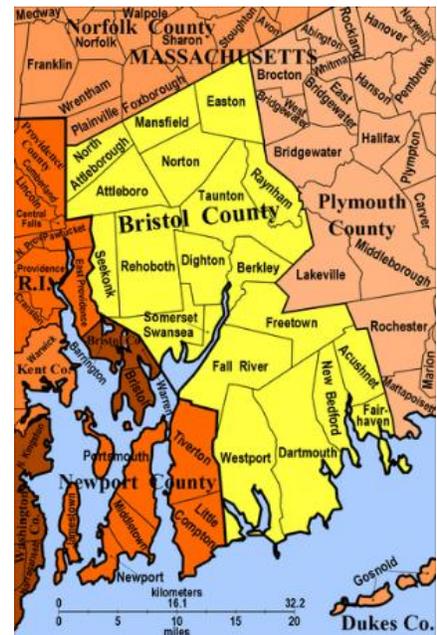
Example B: Here is other information about towns and private ambulance services. Company's licensing information and vehicle counts are from state's information. The rest is from the Internet. There are 24 privately licensed ambulances in North Dartmouth with Southcoast EMS, Inc. licensing 19 vehicles and Stat Ambulance Service, Inc. licensing four.

Cities' ambulance services:
1. The City of Attleboro's fire department licenses 7 ambulances. Its total population is 44,548.
2. Fall River's fire department licenses 9 vehicles and has 89,339 people.
3. New Bedford has population of 95,117 and own EMS.
4. Taunton's population is 56,963 and contracts with Brewster Ambulance Service. Not shown on table, Brewster, headquartered in Weymouth licenses 182 and contracts with other several others.

SEE Action 1 to learn how to determine the number of vehicles an ambulance service dedicates to a municipality through contract. Above examples can assist when reviewing table, gathering more local information and assessing community needs.

Other Information: These population numbers do not include others who are also at risk of COVID-19 including hospitalization and fatality. Send any updates about local ambulance services to WorldForceStrategies.com.
Data Sources: US Census Bureau 2018; Commonwealth of Massachusetts: Office of Emergency Medical Services, Office of Rural Health, Ambulance Services and Dept. of Public Health; and ambulance licensees' websites.

SEVEN ACTION STEPS FOR ANY TOWN, NEIGHBORHOOD AND ORGANIZATION

Use the portion of older people in the community as a guide. The numbers foster ideas on what is needed and more readily can focus local decisions to get ahead of local COVID-19 spread.

Below action steps will expedite the building of other local out-reach systems like contact tracing, testing and more.

A systemic community needs assessment relies on a variety of different skills and expertise that already exist locally. An assessment starting point are questions like: **What is already available? What is needed? How to get? How soon?**

TODAY, concrete answers to these kinds of questions are needed _per town_ based on its specific local population dynamics. What are other ideas? For starters:

ACTION #1: Look at Town's Older Population and Ambulances Counts: Learning more about local ambulance counts, service areas and actual availability will help each municipality put below things in place based on population.
1. Compare number of ambulance rides to and from the hospital in previous years against how many more rides could be needed. The ride projections would be determined on a municipality's **specific factors** such as: (a.) wide-spread transmission, (b.) population figures, (c.) if city, neighborhood or town and (d.) drive-time to medical beds. What else?

2. Assess if the specifics of contracted ambulance services, for example, _number dedicated,_ coverage time and **operation, garage location** and **service area** are in alignment with population dynamics.

3. How to get more ambulances? Where would they come from? Can local providers handle the surge given a town's below counts? Can the licensee? (See Action #6 about pact between neighboring 2 cities and 4 towns in Essex County.)

4. _Based on your population figure_s are there enough breathing machines, ICU beds, ambulance supplies, etc.?

5. **Other Information:** Ambulance licensing information is provided by private and public licensees to the state. A private licensee, for examples, can be a university, hospital, amusement park or whatever. If the number of ambulances appear be high in a community this can mean a company has service contracts with others in the area.

ACTION #2: Grow Hands-On People Power

1. What outreach methods can be used to increase volunteers? Especially because of your local age dynamics?
2. What local <u>people power</u> and <u>skills</u> are needed? Are people on board who like numbers? (See ACTION #7)
   a. What would happen when people get quarantined or sick? Will substitutes be needed?
3. For examples, do road maintenance crews have be increased because of springtime problems like mud or in anticipation of hurricane season or other things that can impede ambulance access? What else can impede?
   a. What other teams have to be bolstered? Fire department volunteers?
4. How can college students help? With technology support, food delivery or what else?
5. Have second home owners, who are now living more permanently in town, been reached out to as a new source of support?
6. Are more public health nurses needed?
7. What organizations already need more assistance in bolstering local hands-on support
8. What else?

ACTION #3: Increase Out-Reach: <u>Strengthen and expand of communication that:</u> (1.) inform what is happening with local COVID-19, (2.) learn the health status of residents, (3.) reduce impacts of prolonged isolation and (4.) inform about testing and fully integrate into daily life in every community. (See report by town <u>number who don't have cell, computer</u> or Internet including seniors: WorldForceStrategies.com)

What is being done right now to bring in your community to bring wide-spread testing which means: (i.) non-restrictive, (ii.) easy and (iii.) ensuring that everyone is getting tested even with the mildest of symptoms?
   a. By profession, organization and workplace?
      i. See Harvard Global Health Institute. "We want to be at a point where everybody who has mild symptoms is tested. (5/17/20, Washington Post)
2. What regular communications methods are in place to learn the health status of residents.
   a. For example: is there a daily land line telephone outreach system with people, not robots, that do outreach? And, for getting longer-term gauge on what is happening in your elderly community?
   b. Is it possible to assure all residents who need medial alerts have them? How can new users be educated on how to use them?
3. Is research already in place to identify, locate and monitor isolated and restricted due to heath and age?
4. Are there enough ways that towns and neighborhoods can engage that help address longer-term social isolation and physical restrictions due to age and health? Do more networks have to be built?
   a. For examples, can a relationship be established for local newspaper to deliver directly <u>to the doorstep</u> and at reduced rates? Is it time to start local news letter?
   b. Is it time to (a.) learn more about the status of existing communication networks and, (b.) if they need to be expanded or strengthen to (c.) reach more people and/or (d.) address prolonged isolation?
      i. For example, social and spiritual networks like senior citizen organizations, clubs such as Lions, Rotary or playing bridge, faith-based organizations, social clubs like playing bridge or pitch, neighborhood associations and others social networks? Who are they are and what are they doing? Or, can do? For example:
      ii. What newsletters are already circulating in your community and who and how many do they reach?
5. Is your town, organizations and volunteer network already on board about introducing and sustaining new, different and creative ways to communicate that will sustain over a longer time, like 18 months or more?
6. Is your town updating different network methods specifically to protect elderly in preparation for that attempt to (a.) lessen the impacts of isolation *and* be ready (b.) for next virus surges?

Other information: Rural and older people still rely US Postal Service, landlines, neighborhood associations and local newspapers. See companion report where 40.1% of age 65 and over in Acushnet's households have no cell or Internet.

*Data Note: To make its data more easily accessible and usable, the US Census Bureau compiles it in pre-determined age groups such as 65 years and older. Most reports on COVID-19 now use the 65 years and older group to align with the agency's demographic compilations. This community assessment guide with analytics began in early March 2020 before the CDC's report that supported China's findings that 'hospitalization due to COVID-19 increases at age 60 years and older. This is now confirmed by Massachusetts. This guide will continue to report on both age groups depending on data availability and accessibility. For example, World Force Strategies' companion report of those in households without cell, computer or Internet is by age 65 and above.

ACTION #4: Building Strong Food Security and Delivery: Is it time to deliver now, because some have been isolating longer than others. Leaving home to shop can quickly offset positive local steps already taken to reduce transmission. From running out of money to differing periods of prolonged isolation requires constant reassessment of food needs with or without delivery. See other report of those, including seniors, who are not reachable by cell phone or Internet.
1. Having parts of Actions #2 and #3 already in place can help make local decisions about food including delivery.
2. Drawing on existing expertise and resources, like Meal-on-Wheels and others, can help expand reach and more.
3. See Action #6 for what other places are doing.

ACTION #5: Pro-Active Preparedness
1. Is regularly testing being fully integrated into the community? Are professional taking advantage of it? Grocery, hardware, convenient, home improve, and delivery workers? In-home builders and contractors? Who else?
2. Practice: under the direction of the emergency preparedness leaders are basic hands-on disaster response techniques and life-saving skills being taught in the community?
   a. For example, with safe distancing are tutorials happening in driveways or cul-de-sacs?
3. Is it time to set up virtual first aid training on zoom, skype, etc.?
4. What else?

ACTION #6: Learn from Others, for examples:
1. Share best practices, information, expertise and other resource across neighborhoods, towns and cities:
   a. KIRKLAND, WA best practices: Hospital Protocol and City, Fire and EMS depts.' considerations.
   b. Six area fire departments create a pact. Newburyport, Salisbury, Amesbury, West Newbury, Merrimac and Newbury make sure each had enough equipment and resources to fully confront the COVID-19 pandemic. See 4/23 release details.
   c. City of Framingham MA's instituted an emergency phone number for people with extreme food need who can't access food through existing network of local providers.
   d. Town of New Salem's Board of Health called every resident age 72 and older to let them know they are not alone and that groceries and other staples are just a phone call away. This Hampden County town reached out after compiling a list of residents willing to shop for others.
   e. Barnstable County Incident Command COVID-19 response through its Critical Delivery Service is providing a free grocery delivery to older and at risk in all 15 towns with help from 40 volunteers.
2. Another helpful tool for assessing, planning and executing is free radius coverage mapping on Internet.
3. What are other municipalities and local workplaces doing to incorporate regular non-stop wide spread testing?
4. <mark>Forward this report to accelerate shared learning</mark>.

ACTION #7: Use municipality's COVID-19 data and information and neighboring towns' when assessing, planning, acting and informing. The purpose is to study the numbers to *determine COVID's local changes in a place, town and neighboring towns.*

1. <mark>**Share** this document and below others who like numbers and can help.</mark>
2. **Track, analyze, use and talk about the state's numbers** so as to make concerns and testing part of the daily fabric of your community. Use others' best practices to make it happen fast. Like for example, a good model is how Lyme Disease chat is now part of daily lives.
3. **Testing:** know all information about how local testing is being conducted
    a. Follow, talk about, broadcast and publicize: (i.) what is happening with locally with testing *and* contact tracing including, (ii.) results and (iii.) changes. Make the information an integral part of the community's daily vernacular. For example,
        i. In own examples explain what "exponential growth". (Easy explanations are on Internet.)
    b. why and, if so, testing is not being accessed by people even when available. (See May 17th, Wash. Post)
    c. **Weekly,** at least, look at state's new data, updates, methods including increased testing and other information.
        i. Different virus geodata are released on different days. Wednesday's close is good marker because it includes town updates that can then be compared to county and state's numbers.
5. **Follow national and state trends. Learn from think tanks** including about **rural vs urban** virus transmission and control and apply in local assessment and plan based on municipalities' designation. (See below table.)
6. **Know what state's COVID-19 numbers are really measuring and telling.** What do they mean?
    a. The number of confirmed cases, right now, are based solely on the number of tests administered.
    b. There are three places on state's website to get COVID-19 geodata data: archive excel files, dashboard and municipalities' case and fatality numbers. **For examples:**
    c. On May 6th Freetown had 68 of county's 4,380 confirmed cases. On May 13th, it had 5 more cases with a total of 73 of county's confirmed 5,249
        i. 26% of the town is 60 and older. It is rural level 1.
        ii. Twenty-two percent of 65 years and older that live in households do not have cell or Internet. (See other reports for this data.)
    d. New Bedford with population of 95,117 and 21% of age sixty and older, had 881 confirmed cases on May 6th and 1,241 on May 13th, confirming 360 more in the city. (Currently, the number tested there is unknown.)
    e. Are there any emerging "best practices" in the county that other towns should try? Or elsewhere in the state in urban or rural places? Or, what things have not worked to control local virus spread in the town? What to share? And how to share? Especially before season change or next coming major surge? Or, even because more local testing is supposedly coming?

More can be learned about geographic patterns of COVID-19 by grouping towns into clusters and looking at case and test numbers against other local demographic patterns. By doing so local virus patterns can be noticed that can help guide outreach. This guide uses the same widely used data. Below shows number of confirmed cases as a result of testing. Massachusetts provided its first report on April 14th that shows cumulative town cases from January 1, 2020.

Each week the report is updated to again show the cumulative total. Below helps build familiarity with the numbers so they can be applied in the action steps. Sharing saves time. It can focus conserving resource and virus containment strategies.

The below presentation is intended to foster ideas. Besides findings presented other patterns may emerge when local COVID-19 data are looked at through the eyes of local people who know the location attributes, in combination with demographics and below. Because COVID-19 is new and much is unknown so getting on board early to look at any accessible data and plugging in the findings can help guide, including when other data become more accessible. For these reasons and others, like limited testing, projections of coming surges *including with weather changes*, back to school and limited resources make a real good case for (a.) regularly reviewing data, (b.) attempting to determine what patterns might be suggesting and, of course, (c.) applying the findings to various actions steps by town or group of towns and <u>*with early intervention to*</u>:

1. inform,
2. contain, and
3. prevent local virus spread.

Assessment Questions:

1. Where and how can clustering and its findings be effectively used?
2. What other clusters might emerge so action steps, resources and defenses can effectively cross-town lines?
3. Are there best practices that can be applied and shared including in multiple towns' strategies based on cluster findings?

<u>SUMMARY OF FINDINGS</u> **per Town and Clusters of Town include April 14ᵗʰ and May 27ᵗʰ because are baseline for comparisons.** The number of confirmed cases, right now, are based solely on the number of tests administered. There are three places on Massachusetts Dept. of Public Health's (MDPH) website to get COVID-19 geodata data: <u>archive excel files</u>, <u>dashboard</u> and <u>municipalities' case numbers</u>. See the last page of FINDINGS below see alphabetical listing of the county's municipalities' COVID-19 numbers and demographics.

**ABOUT Positivity: On May 12, 2020 the World Health Organization (WHO) advised governments that before reopening, <u>rates of positivity test results,</u> meaning out of all tests conducted how many came back positive for COVID-19, should remain at 5% or lower for at least 14 days. According to John Hopkin University's COVID-19 resource center positivity gives insight into whether a community is conducting enough testing to find cases. High positivity suggests that a community may largely be testing the sickest patients and possibly missing milder or asymptomatic cases. A lower rate may indicate a community is testing more patients with milder or no symptoms.

ABOUT POSITIVITY NUMBERS: **On May 27th for the first time Massachusetts provide town testing data. One indicator is positivity. The numbers and rates on its weekly report show number of persons tested by municipality. This column means number of persons tested, not total tests performed. Test "positivity" is calculated by the cumulative number of confirmed cases, meaning "Count" column, divided by number of "Total Persons Tested" which equals the percent, or rate, in "Positivity" column. (See below about rate.) <u>May 27ᵗʰ is a benchmark.</u>

Note: Positivity rate is a useful indicator and good to understand and follow in the state's weekly report. Here is just one example of many as to why it valuable: date of tourist influx. It is important to look at these five indicators and understand how they relate to one another: Count, Rate, Total Persons Tested, Tested Rate and Percent Positivity.

More about Positivity

- Massachusetts provided positivity rates for towns with confirmed cases. But, don't include positivity rates for small towns that are reported as "less than 5" cases.
- The median positivity means 1/2 of towns are above it that percent and ½ are below.

The Percent of Positivity tells about testing patterns. It is a <u>benchmark</u> that can be used when trying to achieve wider testing goals. As a local gauge, it is useful when <u>talking</u> and <u>informing</u> about any town's metrics. (See Action #3 above.)

NOTE: <mark>The most effective way to use this community assessment guide relies on local citizens' interest and knowledge about their communities.</mark>

Needs Assessment Questions: Are there any emerging "best practices" in the county that others should try? Or elsewhere in the state? Or, what things have not worked to control local transmission elsewhere? What to share? And, how to share? Especially before season change or next coming major surge? Or, because more local testing is coming?

Other Information: When looking at place's numbers it very often means comparing with neighbors' figures, including in abutting counties and states. A pandemic is a problem of place. Its geo-spatial and without geo-political boundaries.

ABOUT RATE: Rate is figured on two things. It is the number of cases divided by total population multiplied by 100,000. Rates make for easier comparison when multiplied by 100,000 in consideration of the differing sizes of big cities and small towns' populations. Per Capita is used when discussing rates. It is used because in Latin it means "for each head." It helps describe and compare values among populations of different sizes.

To better understand the measurements and how they are calculated look at two towns' data, side-by-side, that have about the same size population. **Note:** Because this guide uses population data directly from the US Census Bureau and also presents Massachusetts' COVID-19 data prepared by University of Massachusetts Donahue Institute, when calculating the rate using the total population a small difference will be seen from the rate on the table. However, the rate patterns remain the same.

ABOUT TESTING: See what Harvard Global Health Institute says in above Action #3 about testing. For a memory refresher about rate, per capita and how it is based on a town's population size see the beginning of Action Step #7 above.

The key question when reading below is how can findings be used in Action Steps #1 thru #6, including by season, and how to regularly inform people as to what the numbers are saying about local virus trends and transmission, so individuals can see their part.

See abutting towns COVID-19 patterns in neighboring counties:

https://worldforcestrategies.com/Reports/MA/Essex/EssexAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Worcester/WorcesterAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Norfolk/NorfolkAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Plymouth/PlymouthAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Bristol/BristolAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Barnstable/BarnstableAgeAmb.pdf

<mark>**July 2, 2020 Findings Date: Below uses five helpful <u>gauges for understanding and comparing local COVID-19 numbers</u> within the county or state.**</mark>

The following can assist when reading the county's <u>May 27th to June 24th</u> findings: The challenge remains the same: how to look at specific patterns by community or town including using data in an attempt to keep the most susceptible safe from COVID-19. Without a vaccine self-isolation will likely be the safest protection. Because older people are susceptible *and* critical to the social and economic fiber of all families from all walks of lives and communities, this reporting of a county's findings is guided by some of the knowns and unknowns about COVID-19 and epidemics and with the understanding and presenting of geo-data in a way that makes more easily understood and usable. The purpose is to make the data more meaningful and applicable.

Some of the knowns and unknowns as related to the virus has given a helpful context and guide for thinking when first studying a county's town data. They are useful when reporting the localized findings. Hence, they may also *be useful to the reader when thinking about how to locally apply the findings*. They are:

1. Demographics are regularly used by marketers and others in segment marketing for reaching targeted audiences. Therefore, the same can be done with these findings and with other demographics to create more effective COVID-19 messaging. This may help when informing tourists.
2. Effective messaging means knowing where and who the target population is and reaching it by effectively using the findings. Marketing is based on life styles, like for example those living on the Cape or vacationing there.
3. The virus will resurge in colder weather,
4. Surges can be expected after gatherings and holidays: Memorial Day, Father's Day, Fourth of July, etc.
5. Local data patterns already indicate that before back to school time or the onset of cold weather different types of messages should be targeted to various population segments by location. (A local assessment question: is it time to bring on board some marketing expertise to fine tune local message and outreach?)
   a. Massachusetts Dept. of Public Health (MDPH) data show: (a.) average age for COVID-19 cases is in the low 50's, (b.) ages 20-59 account for most of the confirmed COVID-19 cases, and (c.) hospitalization increases for ages 60 years and above.
6. Already population groups have emerged, like the: "susceptible" and "spreaders".
7. There are rural and urban differences in epidemics (which lead to pandemics), including transmission factors.
8. The economies of rural communities rely on essential workers.
9. Essential workers in small or rural towns often commute to jobs elsewhere.
10. Contagion correlations have been made to essential industries and workplaces, for examples, where people in rural places all travel to, like healthcare centers, convenience and liquor stores, shopping hubs, ice cream stands and the other frequented place.
11. Geographic datasets are often very large. There are many steps and phases requiring certain skills, expertise and technology to bring a geo-data to the end user in a usable fashion like data collection, entry, cleansing, standardizing, normalizing, reporting, presenting and more. Much requires early conceptualization. It is common to have dataset updates and versions. Making COVID-19 data usable are works in progress. However, it is important to work with the data-at-hand, particularly in a time of pandemic.
12. **The purpose of this community assessment guide is to present and work to make data more <u>usable for today</u> to control COVID-19 spread in any community.**

<u>Location attributes</u> like transportation arteries, commutation patterns, shopping meccas, essential industries and occupations, tourist influx, age and other population demographics, and more effect COVID-19 numbers.

When looking at the below findings it becomes much easier to understand why it is important for more people to get tested, meaning testing is just not the very sick. This is because it is a way to protect the most vulnerable. Local testing numbers and simply getting tested can also help to help better inform carriers of their role in a town's local transmission.

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Five Helpful Gauges for Comparing Local COVID-19 Numbers within the County or State.

Gauges:
1. **Range of COVID-19 numbers:**
2. **Median** indicate ½ are above and ½ are below:
3. **Rank** (See Finding #3.)
4. **Percent or share of COVID-19 cases in a geographical area**, such as by town in a county. (See Finding #4.)
5. **Percent of total population is useful when looking at portions of other shares.** For example, among many, if a town accounts for a larger portion of the county's population it is helpful to know if it is also accounting for larger of shares of testing, particularly as testing becomes more widespread. This kind of comparison can help set local goals on how to push back on COVID-19.

Data Note 1: All COVID-19 data in this community assessment guide and tables are provisional. Data anomalies from source have not been altered. Source: Massachusetts Dept. of Public Health Weekly COVID-19 report by city and town. MDPH confirmed cases and positivity are a result of testing. Confirmed case and test rates are per 100,000. Positivity data was first made available as of May 27th .

When reviewing first findings for comparisons, reader is introduced to what is included for every town on following tables.

FINDING #1: <u>May 27th to June 24th</u>:

Table #1: Cumulative Case Numbers and Rates and Testing: January 1, 2020 to May 27, June 10th and June 24th.

1. Confirmed cases increased by 1,078 from May 27th's, 6,779 cases to June 24th's 7,857, with
   a. 282 were new ones in last two weeks toJune 24th

County	May 27 Number of Cases	June 10 Number of Cases	June 24 Number of Cases	New Cases from May 27th to June 10th	New Cases from June 10 to June 24th
Bristol	6,779	7,575	7,857	796	282

   b. All municipalities had new **cases** in the 4 weeks, of which,
      i. Fall River's 348 accounted for 32.28% of **new cases** and New Bedford's 339, 31.45%
         - Fall River represents represent 15.98% of county's population, and
         - New Bedford 17.02%
      ii. Dartmouth's 74 accounted for 6.86% of new cases and Taunton's, 70, 6.49%, Acushnet's, 7, 0.65% and Mansfield's, 7, 0.56%
         - Dartmouth accounted for 6.13% of county population, meaning **share of county's total population,** Taunton, 10.19%, Acushnet, 1.88% and Mansfield, 4.25%.
      iii. Numbers are based on MDPH's weekly report of COVID-19 numbers by city and town.

<u>June 10 to June 24th</u>:

1. June 10th there were 7,575 cumulative confirmed cases since January in the county-based testing per municipality, and accounted for
   a. 282 new cases in two weeks to **June 24th**
   b. June's 24th case number by all municipalities was 7,857

2. **Of the 282 <u>new confirmed cases</u> in the county during this two-week period:**
   a. <u>Somerset</u> had no new cases
   b. <u>Easton</u> and <u>Freetown</u> each had more new cases in this period than previous 2 weeks.
      i. Freetown is rural level one.
         - 22.2% of its age 65 years and older in its households don't have cellphone, computer or Internet.
   c. <u>New Bedford</u> accounted for 104, meaning 36.88% of them,
      i. 22.3% of those in households don't have cellphones, computer or Internet, of which
         - 44.3% of those who are 65 years and older don't have this technology. (Get companion report for by town for use in Action Step #3 above.)
   d. <u>Fall River's</u> 94, accounted for 33.33%,
   e. <u>Dartmouth's</u> 13 were 4.61% of county's additional cases.
   f. <u>Seekonk</u>, <u>Acushnet</u> and <u>Mansfield</u> each had 2, and
      - accounted for .71% of the county's new cases.

May 27th to June 24th:

FINDING #2: By Municipality: Number of cumulative cases and **cases rates** from January 1, 2020 to three dates. Shows **number of new cases** and **case rate rank** in Massachusetts with one being the highest on June 24th.
Table #2:

FINDING: Municipality's Cumulative COVID-19 case numbers and rates from January 1, 2020 to three dates. Includes new cases in two different two week periods from May 27th to June 24th and rank by highest case rate in state on June 24th. Sorted Alphabetically.											
Municipality	**Total Population**	**Percent of County Population**	**May 27 Number of Cases**	**June 10 Number of Cases**	**June 24 Number of Cases**	**May 27 Case Rate**	**June 10 Case Rate**	**June 24 Case Rate**	**New Cases from May 27th to June 10th**	**New Cases from June 10 to June 24th**	**June 24th Rank by Highest Case Rate in State**
Acushnet	10,483	1.88%	81	87	88	774.87	832.26	841.83	6	1	135
Attleboro	44,548	7.97%	609	646	654	1316.25	1396.22	1413.51	37	8	61
Berkley (R1)	6,679	1.20%	58	68	70	855.44	1002.93	1032.42	10	2	106
Dartmouth	34,286	6.13%	312	373	386	847.38	1013.05	1048.36	61	13	103
Dighton (R1)	7,571	1.35%	54	63	67	688.27	802.98	853.96	9	4	132
Easton	24,306	4.35%	260	263	269	1097.13	1109.79	1135.1	3	6	88
Fairhaven	16,026	2.87%	211	236	240	1316.24	1472.19	1497.14	25	4	55
Fall River	89,339	15.98%	1,218	1,472	1566	1361.7	1645.66	1750.75	254	94	33
Freetown (R1)*	9,251	1.66%	83	89	97	917.3	983.61	1072.03	6	8	99
Mansfield	23,761	4.25%	157	161	163	664.24	681.16	689.62	4	2	163
New Bedford	95,117	17.02%	1,756	1,991	2095	1763.85	1999.9	2104.36	235	104	16
North Attleborough	29,116	5.21%	239	248	252	791	820.78	834.02	9	4	140
Norton	19,634	3.51%	121	130	133	609.18	654.49	669.59	9	3	165
Raynham	14,010	2.51%	223	232	238	1492.93	1553.19	1593.35	9	6	48
Rehoboth (R1)	12,082	2.16%	54	60	62	428.03	475.59	491.44	6	2	219
Seekonk	15,210	2.72%	74	80	82	528.48	571.33	585.62	6	2	189
Somerset	18,207	3.26%	187	201	201	1010.4	1086.04	1086.04	14	0	97
Swansea	16,462	2.95%	113	129	133	707.6	807.79	832.84	16	4	141
Taunton	56,963	10.19%	894	951	964	1560.79	1660.3	1683	57	13	41
Westport	15,854	2.84%	75	95	97	450.62	570.78	582.8	20	2	191

Data Notes 1: All COVID-19 data in this community assessment guide and above table are provisional. No anomalies in source data have been altered. **Table Date: 6/30/20**

Data Notes 2: MDPH confirmed cases and positivity are a result of testing. Confirmed case and test rates are per 100,000. Positivity data available as of May 27th.

Data Sources: US Census Bureau, 2018; Massachusetts Dept. of Public Health, 2020; *Massachusetts Office of Rural Health's designation of Rural Level One (R1) or Rural Level Two (R2).

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1. **Six municipalities are in group of 61 municipalities out of 351 with highest case rate in state on June 24th .**
   Table #3:

Municipality	Case Rate June 24th	RANK: Case Rate by Highest in the State
New Bedford	2104.36	16
Fall River	1750.75	33
Taunton	1683	41
Raynham	1593.35	48
Fairhaven	1497.14	55
Attleboro	1413.51	61
Easton	1135.1	88
Somerset	1086.04	97
Freetown	1072.03	99
Dartmouth	1048.36	103
Berkley	1032.42	106

FINDING #3: <u>May 27th and June 24th</u>

High and Low Ranges - County and State's **<u>High and Low Ranges</u>** of COVID-19 **Cumulative Case Numbers** from January 1, 2020 to May 27th and to June 24th with **Case Rates** and **Testing Positivity**

In the State

1. Chelsea's Suffolk County case rates and positivity were ranked highest
2. There were several municipalities in the state that had no cases and had 0% rates.

In the County

3. <u>New Bedford</u> had the highest **case rate and positivity** in the county and
   b. <u>Fall River</u>, the second highest.
4. <u>Rehoboth</u> had the lowest case rate and positivity
5. <u>New Bedford</u> had the 16th highest **case rate** in the state (See Table #2 above.)
6. <u>Berkley</u> had the 106th highest, compared to

DATA NOTE: Table is a *good reference to save for future comparisons* against these initial COVID-19 stages.

Table #4:

Gauges highest and lowest case numbers and case and positivity rates in Massachusetts on two days for comparison to municipalities with highest and lowest in the county on each day. (May 27th is first day city and town figures were made available to the public.)

Range	Administrative Area	May 27, 2020				June 24, 2020			
		Municipality	Cumulative Number of Cases	Case Rate	Positivity Percent	Municipality	Cumulative Number of Cases	Case Rate	Positivity Percent
Lowest	County	Rehoboth	54	428.03	0.0980	Rehoboth	62	491.44	7.69%
Highest	County	New Bedford	1756	1763.85	0.1930	New Bedford	2095	2104.36	15.33%
Lowest	State	Towns With No Cases	0	0%	0%	Towns With No Cases	0	0%	0%
Highest	State	Chelsea, Suffolk County	2,713	7203.05	40.20%	Chelsea, Suffolk County	2,907	7718.12	35.88%

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FINDING #4: <u>Medians</u> are useful gauges like case rates, population size and more.

Comparison to State

1. All but <u>Mansfield,</u> <u>Norton,</u> <u>Seekonk,</u> <u>Westport</u> and <u>Rehoboth</u> confirmed **case rates** were higher than Massachusetts" June 24th median of 733.165, (See Table below.) of which,

Comparison of Towns Using County Median

2. **Bristol County's median case rate** was 1040.39 on June 24th, see Finding #3, and
   a. <u>Berkley</u>, <u>Dighton</u>, <u>Acushnet</u>, <u>North Attleborough</u>, <u>Swansea</u>, <u>Mansfield</u>, <u>Norton</u>, <u>Seekonk</u>, <u>Westport</u> and <u>Rehoboth</u> case rates were below
   b. All but <u>Berkeley</u> were below the county's June 10th median case rate of 993.27

Table #5:

NOTE: This is *a good reference to save for future comparisons* against these initial stages of COVID-19.

Median Case Rates and Positivity for Massachusetts and County for Four Dates

Date	Massachusetts' Confirmed Case Rate Median	Bristol County's Confirmed Case Rate Median	Massachusetts' Positivity Median	Bristol County's Positivity Median
April 14th	225.13	208.245		
May 27th	666.5	851.41	11.80%	12.95%
June 10th	700.44	993.27	10%	11.54%
June 24th	733.165	1040.39	8.31%	10.17%

Medians: Massachusetts and Bristol County's Case and Positivity Rates: April 14th, May 27th, June 10th and June 24th

April 14th, fifty-nine municipalities had less than 5 cases. MDPH first cumulative confirmed cases data release.

May 27th, thirty-four municipalities had less than five cases. Seventeen towns had no confirmed cases. MDPH first testing data release.

June 10th, thirty-two municipalities had less than five. Fifteen towns had no confirmed cases.

June 24th, thirty-five municipalities had less than five cases. Fourteen towns had no confirmed cases.

Data Notes 1: All COVID-19 data in this community assessment guide are provisional due to MDPH's unknown cases and cleansing requirements, as well as cleansing, standardizing and normalizing by Theresa Clary. No anomalies in source data have been altered. Table Date: 6/28/20

Data Notes 2: MDPH confirmed cases and positivity are a result of testing. Confirmed case rates are per 100,000. Positivity data available as of May 27th.

Data Source: Massachusetts Dept of Public Health, 2020

Compiled by Theresa Clary: WorldForceStrategies.com   **Table Date: 7/01/20**

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FINDING #5: Cumulative <u>People Tested</u> and <u>Testing Rates</u> and <u>Case Numbers</u> and <u>Case Rates</u> as of Jan. 1, 2020 for three dates to June 24th. Municipalities' population size is included. (**See Tables #6 and #7's** *positivity rank.*)

1. **Number of cumulative cases and number of people tested as of Jan. 1, 2020 to June 24th**
   a. <u>Berkley</u> had 70 cumulative cases from January 1, 2020 to June 24, 2020, and
      i. fewest people tested of 635
      ii. It has the smallest population in the county of 6,679
         1. 18.90% of it is age 60 and over,
            a. It has the 2nd small portion of this group, next <u>to Mansfield</u>
         • 26.8% of 65 and older in its households do not have cellphone, computer, or Internet.
      iii. its test rate was 9365.55
   b. <u>Dighton</u> had 65 cases and
      i. the second fewest people test of 687.
      ii. it is the second smallest town in the county of 7,571 people.
         1. 20.80% is age 60 and over.
      iii. Its test rate was 8756.31
   c. <u>New Bedford</u> had 2,095 <u>cumulative cases</u> as of June 24th, and
      i. had the highest <u>number of people tested</u> of 13,668.
      ii. It has the largest <u>population size</u> in the county of 95,117
         1. 21% is age 60 and over
         2. 22.3% of <u>all ages</u> its households do not have cellphone, computer or Internet, of which,
            a. 44.3% of age 65 and over in its households do not have cellphone, computer, or Internet (See <u>per town in county number in households not technologically connected</u>. This is useful knowledge for ACTION Steps #1-#6 above.)
      iii. It had the third to highest <u>test rate</u> of 13729.08
   d. <u>Fairhaven</u> had 240 cumulative confirmed <u>case numbers</u> as of June 24th, and,
      i. had the second highest <u>number of people tested</u> of 12,348
      ii. had the first highest <u>test rate</u> 14147.99
      iii. has the 12th largest <u>population size</u> in the county of 16,026
         1. It has the third largest portion of age 60 and older at 29.9%.
         2. 36.2% of its age 65 and older in its households do not have cellphone, Internet, or computer. <u>Get companion report of number in towns' households not technologically connected</u>.
   e. <u>Attleboro's</u> 4,385 cumulative <u>number tested</u> was the 4th highest number in the county as of June 24th.
      i. Its <u>testing rate</u> of 9477.43 was 11th highest. (See Finding #5.)
      ii. It has the 4th largest <u>population size</u> in the county of 44,548
      iii. Its <u>positivity rate</u> of 14.91% was the second highest in the county as of June 24th
   f. <u>Attleboro's</u> number of confirmed cases in the county of 654 based on its population of 44,548 gave it the 6th highest **case rate** in the county and <u>ranked</u> it 61st highest in the state as of June 24th

NOTE: It is useful to notice if a town's share of the county's COVID-19 increases or decrease over time. For example, and among other things, while a share increase may appear small it is mindful to notice shares and changes in terms of the size of a town's population. See table below for county portions of cumulative cases beginning January 1, 2020 to three dates.

Positivity is a key indicator, which means few people have positive test results. (See Table #7.)

Finding #6: Municipality's <u>share</u>, or <u>percent, of cumulative COVID-19 cases in county</u> for three dates from January 1, 2020. June 24th includes test number, rate and rank by number tested on June 24th. Table sorted by town's cumulative share: June 24th.

Table #6:

FINDING: Municipality's of County's Percent of Cumulative COVID-19 Cases from January 1, 2020 to three dates. June 24th includes Rank by Highest NumberTested in County. Sorted by June 24th share.															
Municipality	**Total Population**	**May 27 Number of Cases**	**May 27 Percent (Share) of County Cases**	**May 27 Number of Persons Tested**	**May 27 Testing Rate**	**June 10 Number of Cases**	**June 10 Percent (Share) of County Cases**	**June 10 Number of Persons Tested**	**June 10 Testing Rate**	**June 24 Number of Cases**	**June 24 Percent (Share) of County Cases**	**June 24 Number of Persons Tested**	**June 24 Testing Rate**	**June 24 Positivity Percent**	**June 24 Rank by Number Tested in the County**
New Bedford	95,117	1,756	25.90%	9,121	9162.00	1,991	26.28%	11,972	12025.5	2095	26.66%	13,668	13729.1	15.33%	48
Fall River	89,339	1,218	17.97%	8,741	9772.00	1,472	19.43%	10,870	12152.43	1,566	19.93%	12,348	13804.8	12.68%	49
Taunton	56,963	894	13.19%	5,356	9351.00	951	12.55%	6,267	10941.23	964	12.27%	6,945	12124.9	13.88%	50
Attleboro	44,548	609	8.98%	3,354	7249.00	646	8.53%	3,903	8435.67	654	8.32%	4,385	9477.43	14.91%	51
Dartmouth	34,286	312	4.60%	2,341	6358.00	373	4.92%	3,475	9437.96	386	4.91%	4,084	11092	9.45%	52
Easton	24,306	260	3.84%	1,718	7249.00	263	3.47%	2,022	8532.27	269	3.42%	2,309	9743.33	11.65%	54
North Attleborough	29,116	239	3.53%	1,632	5401.00	248	3.27%	1,916	6341.22	252	3.21%	2,223	7357.27	11.34%	56
Fairhaven	16,026	211	3.11%	1,648	10280.00	236	3.12%	1,912	11927.23	240	3.05%	2,268	14148	10.58%	55
Raynham	14,010	223	3.29%	1,308	8757.00	232	3.06%	1,500	10042.15	238	3.03%	1,638	10966	14.53%	59
Somerset	18,207	187	2.76%	1,839	9936.00	201	2.65%	2,190	11832.99	201	2.56%	2,428	13119	8.28%	53
Mansfield	23,761	157	2.32%	1,434	6067.00	161	2.13%	1,729	7315.07	163	2.07%	1,988	8410.85	8.20%	57
Norton	19,634	121	1.78%	1,257	6328.00	130	1.72%	1,453	7315.14	133	1.69%	1,613	8120.66	8.25%	60
Swansea	16,462	113	1.67%	1,184	7414.00	129	1.70%	1,517	9499.36	133	1.69%	1,732	10845.7	7.68%	58
Freetown (R1)	9,251	83	1.22%	567	6266.00	89	1.17%	701	7747.33	97	1.23%	820	9062.49	11.83%	64
Westport	15,854	75	1.11%	949	5702.00	95	1.25%	1,236	7426.16	97	1.23%	1,482	8904.18	6.55%	61
Acushnet	10,483	81	1.19%	666	6371.00	87	1.15%	830	7940	88	1.12%	997	9537.56	8.83%	62
Seekonk	15,210	74	1.09%	642	4585.00	80	1.06%	797	5691.92	82	1.04%	944	6741.74	8.69%	63
Berkley (R1)	6,679	58	0.86%	444	6549.00	68	0.90%	549	8097.15	70	0.89%	635	9365.55	11.02%	67
Dighton (R1)	7,571	54	0.80%	497	6335.00	63	0.83%	621	7915.09	67	0.85%	687	8756.31	9.75%	66
Rehoboth (R1)	12,082	54	0.80%	550	4360.00	60	0.79%	696	5516.85	62	0.79%	806	6388.77	7.69%	65
Data Notes 1: COVID-19 data in this community assessment guide and above table are based on MDPH weekly town and city COVID-19 figures. Data are provisional. No anomalies in source data have been altered. **Table Up Date: 7/05/20**															
Data Notes 2: MDPH confirmed cases and positivity are a result of testing. Rates are per 100,000. Positivity data available as of May 27th.															
Data Sources: US Census Bureau, 2018; Massachusetts Dept of Public Health, 2020; *Massachusetts Office of Rural Health's designation of Rural Level One (R1) or Rural Level Two															
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NOTE: Kindly send any corrections to assessment guide and tables or send comments to Theresa Clary

See abutting towns' COVID-19 numbers in neighboring county's report:

https://worldforcestrategies.com/Reports/MA/Essex/EssexAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Worcester/WorcesterAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Norfolk/NorfolkAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Plymouth/PlymouthAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Bristol/BristolAgeAmb.pdf
https://worldforcestrategies.com/Reports/MA/Barnstable/BarnstableAgeAmb.pdf

FINDING #7: Positivity to Testing: Three dates of cumulative COVID-19 <u>case numbers</u> and <u>rates</u> since January 1st with <u>testing positivity</u>. June 24th. Shows <u>testing number and rate</u> and <u>positivity rank</u>. Sorted by highest case rate:

1. On June 24th all municipalities had **positivity** <u>above the World Health Organization's (WHO) recommendation of less than 5%.</u> (As a memory refresher, see more about positivity in first part of Action #7 above.)
   a. <u>New Bedford's</u> had the highest of 15.33% and <u>Westport's</u> the lowest at 6.55%.

Table #7:

FINDING: Municipalty's COVID-19 Cumulative case and testing numbers as of January 1, 2020 to three dates with case and positivity rates. June 24th includes number of people tested, testing rate and positivity rank by county. (Sorted by Highest Case Rate: June 24th.)

Municipality	Total Population	May 27 Number of Cases	May 27 Case Rate	May 27 Positivity Percent	June 10 Number of Cases	June 10 Case Rate	June 10 Positivity Percent	June 24 Number of Cases	June 24 Case Rate	June 24 Number of Persons Tested	June 24 Testing Rate	June 24 Positivity Percent	June 24 Rank by Highest Positivity in the County
New Bedford	95,117	1,756	1763.9	0.1930	1,991	1999.9	16.63%	2095	2104.36	13,668	13729.1	15.33%	1
Fall River	89,339	1,218	1361.7	0.1390	1,472	1645.66	13.54%	1566	1750.75	12,348	13804.8	12.68%	5
Taunton	56,963	894	1560.8	0.1670	951	1660.3	15.17%	964	1683	6,945	12124.9	13.88%	4
Raynham	14,010	223	1492.9	0.1700	232	1553.19	15.47%	238	1593.35	1,638	10966	14.53%	3
Fairhaven	16,026	211	1316.2	0.1280	236	1472.19	12.34%	240	1497.14	2,268	14148	10.58%	10
Attleboro	44,548	609	1316.3	0.1820	646	1396.22	16.55%	654	1413.51	4,385	9477.43	14.91%	2
Easton	24,306	260	1097.1	0.1510	263	1109.79	13.01%	269	1135.1	2,309	9743.33	11.65%	7
Somerset	18,207	187	1010.4	0.1020	201	1086.04	9.18%	201	1086.04	2,428	13119	8.28%	15
Freetown (R1)	9,251	83	917.3	0.1460	89	983.61	12.70%	97	1072.03	820	9062.49	11.83%	6
Dartmouth	34,286	312	847.38	0.1330	373	1013.05	10.73%	386	1048.36	4,084	11092	9.45%	12
Berkley (R1)	6,679	58	855.44	0.1310	68	1002.93	12.39%	70	1032.42	635	9365.55	11.02%	9
Dighton (R1)	7,571	54	688.27	0.1090	63	802.98	10.14%	67	853.96	687	8756.31	9.75%	11
Acushnet	10,483	81	774.87	0.1220	87	832.26	10.48%	88	841.83	997	9537.56	8.83%	13
North Attleborough	29,116	239	791	0.1460	248	820.78	12.94%	252	834.02	2,223	7357.27	11.34%	8
Swansea	16,462	113	707.6	0.0950	129	807.79	8.50%	133	832.84	1,732	10845.7	7.68%	19
Mansfield	23,761	157	664.24	0.1090	161	681.16	9.31%	163	689.62	1,988	8410.85	8.20%	17
Norton	19,634	121	609.18	0.0960	130	654.49	8.95%	133	669.59	1,613	8120.66	8.25%	16
Seekonk	15,210	74	528.48	0.1150	80	571.33	10.04%	82	585.62	944	6741.74	8.69%	14
Westport	15,854	75	450.62	0.0790	95	570.78	7.69%	97	582.8	1,482	8904.18	6.55%	20
Rehoboth (R1)	12,082	54	428.03	0.0980	60	475.59	8.62%	62	491.44	806	6388.77	7.69%	18

Data Notes 1: COVID-19 data in this community assessment guide and above table are provisional. No anomalies in source data have been altered. **Table Update: 6/30/20**

Data Notes 2: MDPH confirmed cases and positivity are a result of testing. Confirmed case rates are per 100,000. Positivity data available as of May 27th.
Data Sources: Massachusetts Dept of Public Health, 2020; *Massachusetts Office of Rural Health's designation of Rural Level One (R1) or Rural Level Two (R2).
Compiled by Theresa Clary: **WorldForceStrategies.com**
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Other Information: Look for patterns in the geo-data. Two good tools for assessing *and* doing field work like, for example, food delivery are <u>radius mapping</u> and a <u>drive-time analysis</u> mapping. These can be found free on the Internet (Of note, a drive-time analysis map is different than written driving instructions like MapQuest's.)

Also use these other reports: Number of People in <u>Households Who Don't Have Mobile Phone, Computer</u> or Internet, including Age 65 Years and Over and the coming Towns' Local Virus Density. <u>WorldForceStrategies.com</u>

Thank you and good luck. Theresa Clary

Theresa Clary is a data scientist, researcher, geographer and founder of World Force Strategies. Her work is about places, people and targeted knowledge-based actions. She contributes tools and data for anyone, anywhere, in any community to fight local COVID-19 spread.

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http://worldforcestrategies.com/Reports/MA/Bristol/BristolAgeAmb.pdf
bringing real numbers to real people

WORLD FORCE STRATEGIES
action based geo-data and reports

Bristol County by Town and City: Older Population and Ambulance Counts and Rural Designation

Licensee by Municipality or Private Entity	Total Population	Number 60 Years and Older	Percent 60 Years and Older	Total Ambulances (Vehicles) Licensed	Licensee by Municipality or Private Entity	Total Population	Number 60 Years and Older	Percent 60 Years and Older	Total Ambulances (Vehicles) Licensed
Acushnet	10,483	2,940	28.0%	2	New Bedford	95,117	20,016	21.0%	10
Attleboro	44,548	9,453	21.3%	7	Stat Amb. Svc. of New England, Inc.				7
Berkley (R1)	6,679	1,259	18.9%	2	North Attleborough	29,116	5,440	18.7%	4
Dartmouth	34,286	8,838	25.8%	2	Norton	19,634	3,908	20.0%	3
Southcoast EMS, Inc.				19	Raynham	14,010	3,325	23.7%	3
Stat Amb. Serv.., Inc.				5	Rehoboth (R1)	12,082	2,559	21.2%	3
Dighton (R1)	7,571	1,577	20.8%	2	Rehoboth Amb. Committee				3
Easton	24,306	4,764	19.5%	3	Seekonk	15,210	3,875	25.5%	4
Fairhaven	16,026	4,772	29.9%	3	Somerset	18,207	5,676	31.1%	4
Fall River	89,339	20,054	22.5%	9	Swansea	16,462	4,744	28.7%	
Alert Amb. Serv. Inc.				22	Swansea Amb. Corps				4
Freetown (R1)	9,251	2,372	25.6%	2	Taunton	56,963	13,016	22.8%	
Mansfield	23,761	3,936	16.7%	3	Westport	15,854	5,167	32.6%	3

Compiled by Theresa Clary, founder of World Force Strategies, for local response to COVID-19. See her other local companion tools. (Last table update: 5/19/20)

Sources: US Census Bureau 2018; Commonwealth of Massachusetts: Office of Emergency Medical Services, Office of Rural Health, Ambulance Services,

Data Notes: EMS region per ambulance services is shown if included by data source. R1 or R2 denotes rural level. The state of Massachusetts' definition and designation of rural levels are purposefully created "for use in assessment and planning". Both levels are rural but are to different degrees. Level two is less densely population and more remote and isolated from urban core areas. If town does not have a designation it is considered urban.

WorldForceStrategies.com: See by Town: household population, including older, who is not reachable by cell phone, computer or Internet.

Use these other reports with above table: County's: (1.) Community Assessment Action Steps, (2.) Number of People in Households Not Connected by Mobile Phone, Computer or Internet, including Age 65 Years and Over.

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