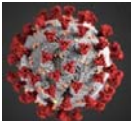


April 7, 2020  
By Joseph Watson  
Axis Point, BuffaloJoe Productions



## A FOUR STEP STRATEGY TO ACHIEVE HERD IMMUNITY, PRE-VACCINE *Risk-Stratified Interdiction*

1. *Mitigate To Buy Time To Prepare The Health Care System And Develop Mass Infection And Antibody Testing Capability.*
2. *Protect The High-Risk Older And Ill With Comorbidities Until The “All Clear” Signal Is Sounded.*
3. *Reintroduce The Extremely Low-Risk Young And Healthy Into Society To Build Herd Immunity.*
4. *Sound The “All Clear” And The Older And Ill Return To Society.*

*This strategy is designed to protect those truly at risk, return the low-risk young and well to society and save our economic and social way of life while avoiding a global economic catastrophe.*

**WHAT IS AT RISK?** *We all know.* It is our health, our lives, and our way of life.

**SOME THINGS ARE BECOMING CLEAR.** Hoping for a miracle vaccine or therapy in the short-term is not a reliable option. We do not know when or if they may come. Hope is not a plan. How long did it take for science to stop HIV/AIDS while more than 25 million died?

**MITIGATION IS HELPFUL.** *But, not a solution.*

Mitigating by flattening the curve through social distancing, stay-at-home orders, and shutting down the economy will buy some time and save some lives short-term. But, if it goes on too long, it will also destroy our personal, business, and national economies and perhaps kill more people in the long run. A protracted shutdown, likely followed by a second prolonged shut-down next winter, is not a solution.

**THE PROBLEM IS LARGER THAN THE GOVERNMENT.** It is also clear that the US government subsidizing the economic losses of shuttered business and 120M (M=million) unemployed Americans even for four months would cost more than 30% of GDP and is not sustainable. Worse yet, it is equally unsustainable

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for government to do “too little too late” and plunge from growth straight down past a recession directly into a depression with a deflationary spiral to follow--a decade long problem. Even in the face of a deadly pandemic, allowing a structurally debilitated economy is not an acceptable solution.

Then what?

**LEARN FROM HISTORY.** First, we must look at the history of pandemics for perspective. Virus pandemics have existed for millennia, perhaps from first agrarian times. Numerous outbreaks killing scores of thousands of people are recorded. To name a few of the larger pandemics, Justinian’s Plague killed 30-50M people in 541-542 CE which likely ended the Roman Empire; the Black Death killed 200M in 1347-1351 CE; a series of plagues which morphed and returned again and again ravaged Europe, Arabia, and Southwest Asia killing 200M over 300 years up to the 15<sup>th</sup> century; smallpox killed 56M in 1520 and 95% of indigenous people in the Americas and continued until eradicated by vaccine in recent times. The big killers in modern times are HIV/AIDS with 25-35M deaths and the infamous 1918 Spanish Flu which killed 40-50M in three waves over less than 18 months.

**IT IS ABOUT THE HERD.** How did these plagues on society which sometimes mutated and lingered finally end prior to vaccine? For the most part, a large enough portion of the population, the herd, developed antibodies from infection which ultimately, through infection inoculation, defeated the disease’s ability to mutate and spread. Herd immunity is the historic answer.

What is herd immunity? Herd immunity occurs when sufficient populations acquire the disease and develop immunizing antibodies to cause a disease decline potentially to a point where it tends to die out. In current parlance, herd immunity may or may not also include vaccination. As to mutation, the virus in the USA has mutated somewhat from China, but at this moment the level of mutation is likely approximately similar to the common flu; there is no guarantee that will remain true. We will shortly be able to confirm with certainty the extent to which this virus will result in sufficient antibodies to immunize and how long that immunization will last. Looking at history, it is our best bet that mutation and immunity will resemble the pathogens of the past. If not, only the level of success of a future vaccine will help.

Today’s coronavirus, COVID-19, appears in the USA to currently have a contact infection rate of about 2.5 ( $R_{2.5}$ ) meaning every infected person will infect 2.5 others. Epidemiologists predict when roughly 60% of the herd has been infected, that will be sufficient for  $R_{2.5}$  to control or wipe out the virus assuming no significant mutation, even without a hoped-for vaccine which might come later.

**THE ANSWER IS IN THE DATA.** At this moment, the USA has 25% of the COVID-19 cases in the world and 4% of the population and double the number of cases of any other country. Looking at mortality rates alone is frightening, making, it unthinkable to expose the herd to the pandemic. The case death

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rate in Italy is over 13%, in several other countries is commonly well over 5%, and in the USA today is roughly 4.5%. Recently Washington announced we will have up to 240,000 deaths with our current strategy. That will be another underestimate of reality.

Our data understanding of our experience in the USA is limited; we are flying blind in the dark with a hood over our heads. Because we lost a full month with a failed CDC test and today have ridiculously minimal testing ability to identify those who are infected, the only information we have is the number of people who were apparently ill and got a confirmation test and those who got tested because they had a risk such as foreign travel or proximity exposure. We do not have a serology test for antibodies. We have no idea who was infected with minimal or no symptoms but, in fact, today has antibodies and therefore could go back to work.

*Widespread case testing and antibody testing are essential to obtain broad data in the USA and proceed with the most successful strategy.*

**Infection Is Common Among All Adults:** Mercifully, infections among infants and children, though possible, are very low. While infection can occur at any age including youth, it appears from ages about 20 to 50 that infection susceptibility is significant, and from ages 50 to 80 infection risk is somewhat greater (we don't know how much), then possibly declining over 80. So, *the level of susceptibility to infection by age is not a key consideration among adults because, other than the very young, all are highly susceptible*, even the millennials who self-identify as bulletproof.

**Older Are At Higher Risk Of Mortality:** Age as a mortality risk seems to begin to increase over 50 and becomes more significant at 60 to 69 with a large jump 70 to 79 and even more 80 to 89, then after 90 a large drop because the sample size is small.

What we learn from data shared from Italy about age is:

- Mean age of all dying is 78
- 1.2% of deaths are under 50 (stated otherwise, 98.8% of deaths occur over 50)

**Comorbidity Is the Highest Mortality Risk At Any Age:** While all adults are susceptible to contracting coronavirus, we must look more closely at health as it relates to age. *The level of comorbidity (illness) is far more significant.* From the Italian data source, it is clear that those who are infirmed with serious diseases such as chronic lung disease, diabetes, asthma, heart conditions, immunocompromise, body mass index of >40, and other serious illnesses are at *dramatically higher risk of debilitating illness or death.*

*Only 2.1% of those who died had no preexisting morbidity and most had more than one prior illness.* Stated differently, 97.9% of all who died had health issues, regardless of age. The data from Italy is

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confirmed by the Chinese experience. Confirmation in the USA is being done now by reported data and random sampling which will almost certainly be the same.

Viewing the case death rate in the USA, the *risk of severe illness or death with one or more comorbidity is 2.3% under age 60 and is 12.1% over age 60*. This tells the story we must understand. The *current morbidity rate in the USA is roughly 4.5% and undoubtedly 98% or more of those have at least one major illness contributing*.

Here is the big take away.

**The Young And Healthy Are At Extremely Low Risk Of Death:** *We know that if you are under 50 and healthy, while your chance of getting infected may be higher than the common flu, your chance of dying from it is about the same, an acceptable risk.*

**The Old and Ill Are At High Risk of Death:** *Who is at high risk of death from this novel coronavirus? The old and ill, by a very wide margin.*

The young and healthy are at very, very low risk and therefore available to build herd immunity. Spring breakers in Florida did not pose a mortal risk to themselves, but they did to their parents and grandparents they went home to. Probably, they should have been sent back to school to infect each other, get well, and continue the party.

**Bottom line!** *Comorbidities at all ages are the primary risk, and age is a secondary risk. Specifically, young do better than old. Healthy do better than those with comorbidities. And, those with antibodies skate free.*

**THE CURRENT WORLDWIDE INTERDICTION POLICY IS UNACCEPTABLE.** In a couple of places, South Korea and Singapore, their more scientific approach was to test early (within 10 days from the first case), contact-trace, isolate, and social distance, which seemed to work to bend the curve. We do not know yet if herd immunity took hold, but initially, the signs are favorable.

But the ship has sailed for the USA on this more scientific, sophisticated methodology of mitigation, contact tracing and testing early.

**Flatten The Curve With Social Distancing:** Currently, the world is using a horizontal mitigation approach of social distancing as a blunt instrument to cudgel the virus in hopes of flattening the curve to allow the medical community to get prepared for the inevitable overwhelming tsunami of sick.

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Realistically, the blunt instrument approach will take many months, not weeks, with probable 1918 Spanish Flu style new waves of death until therapies and a vaccine can be created and implemented, if ever. Meanwhile, 60 to 70% or more of the world workforce will be idle without creating effective herd immunity. On the other hand, if you only get the medical community ready and release the uninoculated masses of all ages and illness levels back into the community after the stay-at-home, *major death will occur worldwide including millions in this country until herd immunity begins to take hold, at great loss of life and economic destruction.*

Recognize that with a protracted stay-at-home cudgel, many who need critical healthcare for non-COVID-19 reasons will not be able to get it and will stay home to die. Starvation, depression and social unrest will take a major toll. A deep and elongated recession, perhaps followed by a deflationary spiral and economic depression, seems likely in addition to the loss of millions of lives.

*Given the risks and costs, there is no acceptable answer there in a unilateral stay-at-home and social distance!*

With this knowledge we have options.

#### **A RISK-STRATIFIED INTERDICTION IS A WORKABLE SOLUTION TO ACHIEVE HERD IMMUNITY.**

We can employ a risk-stratified interdiction solution as follows.

First, we need an interim period of *full lock-down, segregating all strata* of populations ideally at the same time to buy as much time as possible to:

1. Prepare the medical community for much higher demand.
2. Create mass testing ability to *test both for infection* of the novel virus and *for antibody tests* of those who have developed immunity (the latter being announced April 3, 2020). Many labs are working on both types of tests at this moment.

Then we divide the population into two strata.

**Protect the High-Risk Old and Sick:** *We fully isolate the high-risk old and ill who have serious morbidities and would otherwise be at high risk of serious illness or death from infection.* We will define this stratum as over 60 or anyone with at least one comorbidity who will be fully protected. We provide them with complete and total sustaining services both physically and fiscally. Of course, they can work from home and Facetime, but have NO VISITS AND NO CONTACTS. They must stay safe until the “all clear” sign is signaled. However, any high-risk individuals who have been infected and recovered and those who were asymptomatic but tested with antibodies could return to normal life.

**Low-Risk Young and Healthy Return to Society:** When the high-risk stratum is safely isolated, the low-risk stratum under 60 without pre-existing comorbidities is free to go back to work re-entering society as well as those tested with antibodies. Why can they resume normal life? Even though more of them

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may become infected, the severity of illness from the virus will be much less and the fatality rate will be in near-normal range for their age group and condition. They may get sick but almost certainly will not succumb. With testing, those who have antibodies from infection can assist the high-risk and move about society freely. At the moment, all of the low-risk young and all those with antibodies are sequestered at home and not productive.

Relatively quickly, this risk-stratified solution will build herd immunity which will tend to minimize and eliminate a second wave of infection and illness in the fall of 2020-21. Oddly, the more of the low-risk individuals who are infected and remain asymptomatic or have symptoms and recover before next winter, the stronger the herd will be to get society through winter and on to a possible vaccine. Parenthetically, while we hear and suppose a vaccine will be here in 18 months, it could take 10 years or never be available in which case with the risk-stratified solution society is greatly protected by herd immunity. Herd immunity will be greatly enhanced when a vaccine is available. Then, maybe, the virus may be 100% eradicated through this collective approach assuming it does not become a fast mutator. If it does mutate, likely the vaccine can be adjusted to fight it.

**DO WE DARE EXPOSE THE HERD TO THIS VIRUS?** *With risk-stratified interdiction? Yes.* This risk-stratified solution holds up in light of the history of pandemics prior to modern science with the benefits that:

- serious illness and death will be dramatically reduced,
- it will be vastly less costly and without the need for more and more \$2.2 trillion recovery programs from which we may not recover and which will not work anyway, and
- we will grasp again our beloved way of life.

*While there is much not yet known about this particular novel pathogen, history and what data we have tell us our most probable chance for a humane solution which will not destroy our economic and social way of life is herd immunity by:*

- *first preparing with social distancing mitigation,*
- *next sequestering the vulnerable old and ill,*
- *then releasing the young and well into society, and*
- *finally the old and ill will resume normal life.*

Faster! Safer!

So, forward to herd immunity, baseball at the park, and line dancing.

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## Risk & Vulnerability-based Interdiction Responses to SARS-CoV-2 (RaVIRS)

Stratified sets of personal and public policy interdiction policies and practices for coronavirus (SARS-CoV-2) predicated on levels of vulnerability to severe infection and risk for death from infection.

	<b>Risk Tier*</b>	<b>Public Policies*</b>
<ul style="list-style-type: none"> <li>Shelter-in-place; strict social distancing including from family members; strict personal sanitation routine</li> </ul>	<p style="text-align: center;"><b>High Risk:</b> &gt;= age 75</p> <p style="text-align: center;">Treated heart disease, diabetes- any age</p> <p style="text-align: center;">Medically treated or induced immunocompromise, any age</p> <p style="text-align: center;">Chronic lung disease, any age</p> <p style="text-align: center;">Other</p>	<ul style="list-style-type: none"> <li>Restricted from worksites/schools</li> <li>Restricted from social gatherings</li> <li>Routine, mobile testing</li> <li>Digital health monitoring</li> <li>Home service support (food delivery, other)</li> <li>Home care as needed</li> <li>Institutional shelter (e.g., idled hotel space) as needed</li> <li>Early anti-viral treatment as needed</li> </ul>
<ul style="list-style-type: none"> <li>Strict social distancing; strict personal sanitation routine</li> </ul>	<p style="text-align: center;"><b>Service Providers to High Risk:</b> Health professionals First responders Home service</p>	<ul style="list-style-type: none"> <li>Routine testing, clearance/approval</li> <li>Personal protective equipment</li> </ul>
<ul style="list-style-type: none"> <li>Routine social distancing; personal sanitation</li> </ul>	<p style="text-align: center;"><b>Intermediate Risk:</b> Age 60-74 Well controlled medical condition Mild/moderate asthma</p>	<ul style="list-style-type: none"> <li>Work, social gathering precautions/warnings</li> <li>Restricted from interaction with High Risk individuals</li> </ul>
<ul style="list-style-type: none"> <li>Routine social distancing; personal sanitation</li> </ul>	<p style="text-align: center;"><b>Low/Average Risk:</b> &lt;age 60 Good health</p>	<ul style="list-style-type: none"> <li>Restricted from interaction with High Risk individuals</li> </ul>

### RESOURCES:

NY Times Map Page: <https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html?action=click&module=Spotlight&pctype=Homepage#map>

Johns Hopkins Coronavirus map: <https://systems.jhu.edu/research/public-health/ncov/>

Houston Chronicle Houston and Texas Charts: <https://www.houstonchronicle.com/coronavirus/article/covid-interactive-map-houston-texas-us-case-virus-15142609.php>

NY Times Map and Charts: <https://www.nytimes.com/interactive/2020/us/coronavirus-us-cases.html#states>

CDC Charts: <https://www.cdc.gov/coronavirus/2019-ncov/cases-updates/cases-in-us.html>

Wolters Kluwer - UpToDate:

[https://www.uptodate.com/contents/coronavirus-disease-2019-covid-19?topicRef=8350&source=related\\_link#H943884075](https://www.uptodate.com/contents/coronavirus-disease-2019-covid-19?topicRef=8350&source=related_link#H943884075)

Medical Xpress – New study identifies characteristics of patients with fatal COVID-19 April 4, 2020

<https://medicalxpress.com/news/2020-04-characteristics-patients-fatal-covid-.html>

### DR. DAVID KATZ: ARGUMENT FOR RISK SEGMENTATION:

DavidKatzMD.com

<https://davidkatzmd.com/coronavirus-mortality-data-from-italy-hard-earned-messages-of-opportunity-hope/>

Dr. David Katz – NY Times March 20, 2020 Is Fight Worse Than Cure?

<https://www.nytimes.com/2020/03/20/opinion/coronavirus-pandemic-social-distancing.html>

Thomas Friedman – NY Times, March 20, 2020, Aplan to Get America Back to Work

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Dr. David L. Katz MD, MPH, FACPM

Video defense of New York Times op-ed

<https://ktla.com/morning-news/dr-david-katz-discusses-his-new-york-times-op-ed-is-our-fight-against-coronavirus-worse-than-the-disease/>

Dr. Katz on LI – Coronavirus Con Tempo: Interdiction Choreography in the Crashing Surf

<https://www.linkedin.com/pulse/coronavirus-con-tempo-interdiction-choreography-surf-david/>

PBS Interview with Dr. Katz

<https://www.pbs.org/newshour/show/2-views-on-balancing-medical-risk-and-economic-pain>

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# Characteristics of deceased positive patients COVID-19 in Italy

As at March 26, 2020

## 1. Sample

The analysis is based on a sample of 6801 patients who died and a positive COVID-19 in Italy.

Table 1. Geographical distribution of deaths

Region	N.	%
Lombardy	4484	65.9
Emilia Romagna	1068	15.7
Veneto	301	4.4
Piedmont	194	2.9
Liguria	180	2.6
Marche	97	1.4
Lazio	88	1.3
Friuli Venezia Giulia	66	1.0
Puglia	61	0.9
Tuscany	59	0.9
Bolzano	46	0.7
Trento	46	0.7
Campania	40	0.6
Sicily	15	0.2
Sardinia	13	0.2
Abruzzo	12	0.2
Umbria	11	0.2
Molise	8	0.1
Calabria	6	0.1
Valle d'Aosta	6	0.1

## 2. Demographics

The average age of patients who died and a positive COVID-19 is 78 years (median 79, range 30-100, interquartile range - IQR 73-85). Women are 2012 (29.6%). The median age of patients who died in positive COVID-19 is higher than 15 years compared to patients who contracted the infection (median age: patients who died 79 years - infected patients 63 years). There *Figure 1* shows the number of deaths by age group. The women died after contracting infection COVID-19 have higher age than men (median age: 82 women - 78 men).

Figure 1. Number of deaths by age group



## 3. Pre-existing conditions

Table 2 presents the most common pre-existing chronic conditions (diagnosed before contracting the infection by SARS-CoV-2) in the patients who died. This data is available for 710 deaths. The average number of pathologies is 2.7 (median 3, Standard Deviation 1.6). Altogether, 15 patients (2.1% of the sample) showed 0 pathologies, 151 (21.3%) had pathology 1, 184 2 showed pathologies (25.9%) and 360 (50.7%) had 3 or more pathologies. Before admission to the hospital, 30% of patients who died COVID-19 positive followed a therapy with ACE-inhibitors and 17% with a therapy Sartani (blockers of angiotensin receptor).

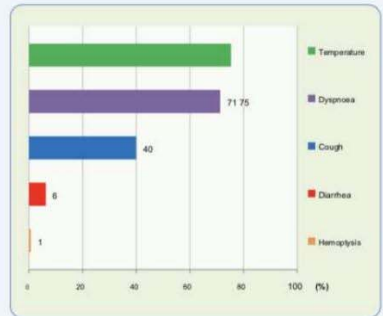
Table 2. Pre-existing conditions most frequently observed

diseases	N.	N. %
ischemic heart disease	249	27.8
Atrial fibrillation	213	23.7
Heart failure	153	17.1
Stroke	101	11.3
Hypertension	655	73.0
Diabetes mellitus	281	31.3
Dementia	130	14.5
COPD	150	16.7
Cancer active over the past five years	155	17.3
chronic liver disease	37	4.1
Chronic renal failure	199	22.2
<b>Number of diseases</b>	<b>15</b>	<b>2.1</b>
0 diseases	15	2.1
1 disease	151	21.3
2 diseases	184	25.9
3 or more diseases	360	50.7

## 4. Symptoms

Figure 2 shows the symptoms most observed before hospitalization. Fever and wheezing are more common. Less frequent are coughing, diarrhea and hemoptysis. The 6.4% of people had no AF symptoms at admission.

Figure 2. Symptoms more common in patients who died



## 5. Complications

Respiratory failure was the most common complication observed in this sample (96.4% of cases), followed by acute kidney injury (24.7%), superinfection (10.4%) and acute myocardial damage (10.1%).

## 6. therapies

During hospitalization antibiotic therapy has been the most widely used (86% of cases), less than that used antiviral (54%), more rare steroid therapy (35%). The common use of antibiotic therapy can be explained by the presence of superinfection, or is compatible with the beginning of an empirical therapy in patients with pneumonia, waiting for laboratoristica of COVID-19 confirms. In 42 cases (8.1%) were used all three therapies.

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