Bruce Weinstock Speaker Notes:

Slide 6: Good Morning. Thanks for joining us.
All my speaker notes and references will be available in the resources page after the presentation.
We will spend a fair amount of time on my first two slides, but do not be disheartened. After laying that groundwork, the presentation will move along fairly rapidly after that, leaving plenty of time for other presenters, addressing your initial survey questions, panel discussion, and additional Q and A before we are through. I have also invited my co-physician on this panel, Dr. Jonathan Slutzman to freely interrupt with additions, comments, and perspectives during the presentation itself if he would rather not hold them till the panel discussion section.

What makes our task today so hard?

The evidence was clear we needed to close and when.
So now, when it is not so clear what we should do, we are left with the decision making of when and how we should open. Furthermore, there is insufficient data at this time to guide our decision making.

As a physician, I make decisions all the time with insufficient data, applying the principles I have learned, evaluating the risk of doing something vs doing something else vs doing nothing.
The process of medical decision making is very comparable to our task today.
Be aware of what is known and what is unknown. Regarding the unknowns, be aware of what is suspected based on some but incomplete data and and what is suspected based on prominent theories but almost no data and be aware or make a judgment how likely those ideas are to be right vs how likely they are to be wrong. Know your goals and values and those of your patient. Apply those values, weigh the risks, come up with a plan of action, but make sure that is an action which you can watch closely, and based on the consequences, reassess and reverse or continue forward the path you started. Perhaps with new data, change course and direction entirely.

Many organizations including the Orthodox Union, Reconstructionist Rabbinical assembly, CCAR/Union for Reform Judaism, Conservative Rabbinical Assembly, Agudath Yisroel and others have put out statements which use classic Jewish principles to address the issue of how we decide to open our worship spaces. I suggest you read them all. They will be found in the resource area set up by the Synagogue council at the conclusion of this presentation. They are a wealth of wisdom.

I believe our biggest source of tension is the conflict between these two principles on your screen.
1 – Kavod Haztibur - Respecting the quality of life for the community - We accept that there is no "zero risk" scenario. Risk is inherent in normal living. We are used to bad flu seasons when because of our traditions our clergy walk the aisles, shaking hands with everyone, and we willingly shake hands with them, knowing that this likely spreads flu, but accepting it as the way life works. From an individual health perspective, this may be unwise, perhaps deserves change, but these ingrained traditions, while somewhat unsafe, create a ritual framework which contributes to stabalizing our spiritual life.

Regarding Covid19, although we do not know for sure, we recognize that it is impossible to totally eliminate transmission. Furthermore, it is likely , maybe even probable, that the same number of people will unfortunately fall ill and perhaps die, such that social and economic restrictions only change the timing, not the total impact. Additionally, people suffer by limiting interaction -- through social loss, economic loss, and spiritual loss. Therefore, we serve the most good by enabling more public activity now.

We hold this perspective in tension with -

2) - Pikuach nefesh - The Primacy of protecting human life in the here and now because our belief that every life and moment of life is precious and this mandates we do everything in our power to prevent death and significant illness. We do not return till there is enough data to suggest that a resumption of prior activity is unlikely to cause loss of life. This requires waiting till greater society measures results of relaxation of restrictions and the data comes in from the rest of society's behavior. After that, we will know better how to stay safe and can apply appropriate measures with little guess work. Furthermore, the assumption that the same number of people will die could turn out to be incorrect if research and medical advances go quicker than expected.

There is a middle of the road strategy that blends these two principles. Allow the rest of society to loosen restrictions first. Observe what happens. The obvious large impact successes and failures, because of the time course of the virus, should be visible in 3-4 weeks. Then, based on what is observed at that time, decide what course to take temporarily. After 3-4 more weeks, after observing more of society and results of our communities own changed behavior, make further changes while observing the effects of doing so.
When there is significant risk and when data is insufficient, this strategy of making social change 3-4 weeks behind the rest of society when society is doing so experimentally, this strategy slowly, in increments, with 3-4 weeks of observation before further substantial change, is the course I would recommend. However, if data is known or theories are strong with a high degree of knowledge, one might then act more boldly or cautiously as dictated by the data.

Whatever your guiding values, we suggest your synagogues be transparent and clear in communication which of the competing principles they hold most dear and strive to find the correct approach consistent with your own identity.
Application of this strategy first requires we be clear about what is known securely, what has strong theoretical basis though little real world evidence yet, and what is little more than guesswork. So lets start with the science and what is known.

Our first Pole:

Slide 8:
The physics of respiratory droplet spread is quite complex.
There is not sufficient time in this forum to go through it all.

However, we know the risk of significant spread by a person is primarily affected by activity of the spreader, distance, time, and number of people in a confined space.
There is mounting (but not conclussive) evidence that the number of virus particles one is exposed to not only effects the likelihood of disease but also the severity of disease.
As with other viruses, at short distances, the high risk is large droplets loaded with lots of virus, primarily coughs, sneezes, and unavoidable spitting while talking or eating. Because they are heavy, these particles settle to the ground and other surfaces quickly as long as air movement is not too strong. In a strong breeze or wind, they may travel further. Risk decreases at the cube of distance. Whatever your risk is at 4 feet, it is 87.5% less at 6 feet. Whatever your risk is at 6 feet, it is 70% less than that at 8 feet. Distance helps a huge amount, but the risk never falls to zero. If worn properly masks can markedly filter out spread of large droplets. It prevents spreading virus to others much better than protecting the wearer, but both are significant. This is known. A poor fitting mask protects substantially less well. A mask worn over the mouth but not the nose accomplishes close to nothing.

All of this is known due to years of experience with other similar viruses. The bottom of the slide however shows that COVID19 differs from other viruses in an important characteristic. It is smaller. It can therefore be carried more easily on small particles which can remain suspended in air for longer and travel further. This important difference was not recognized at first. Together with other information, we initially came to a conclusion that if people got infected and were not close together at the moment, the infection must have come from surface touch. We are now beginning to appreciate that small droplet distance spread may play a more important role and surface touch may play a less important role than we initially thought. Certainly both play a role, but what deserves the most attention and concern is still somewhat unclear.

Small droplets are created in large numbers during shouting, heavy exercise breathing and especially singing.
Wind and ventilation can markedly affect distance. Efficacy of masks is uncertain for small droplet spread. Small droplets can accumulate in the air over time because they do not settle quickly. The longer one is in a small droplet environment, the more one's risks increase. The quantity of risk caused by small droplet spread is less well understood. However, there are enough reports of extremely prolific spread and those receiving the virus having statistically more severe diseases is situations in which singing occurred in closed spaces despite social distancing that it is PROBABLY dangerous to be in a room with singing for any more than an extremely short period of time if that room contains anyone with Covid19 who is singing. At the current time, no one knows how short a short time is. For these activities, where particle movement is controlled by variable slight small airflow patterns, plexiglass barriers probably offer little protection.

Theoretically, flushing a toilet can create small droplet virus spread, but there is no solid evidence either way, for or against, that this is a significant source of spread.
So to summarize small droplets, much is still unknown except they travel further, hang around longer, and masks protect less well. Calculating exact risks regarding time is not well known but believed to be important.

There is no distance or time or minimum number in a room that is absolutely safe, but if not singing then being >6 feet, and spending less than 15 minutes with someone with COVID19 reduces risk to a level which CDC considers acceptable. That means, if you are wearing a mask, are greater than 6 feet, spent less than 15 minutes together with the covid19 contact, and no singing was involved, even if the person next to you was found to have covid19, it is highly unlikely the health department would ask you to quarantine yourself. There is no accepted formula available to help calculate the risk contributions of activity/ distance/time/numbers and the inevitable air movement that occurs just because we are occupying the space.

With high confidence we know that absorption of virus through the skin is almost non-existent. One could touch any surface safely without skin protection if you knew 100% that you would not transfer that touch to your face or someone else's face. Unfortunately, we touch our faces all the time. We touch our faces more if we adjust our masks. Viruses need moisture to survive. Once evaporation is complete, surfaces are fairly safe. Accordingly, you add safety somewhat by not sharing ritual objects which could retain moisture for a short period of time, but distance, numbers, and time are far more important. Regarding Covid 19, allowing adequate time for moisture to disappear from objects is probably as good as actually disinfecting them. Doing both is even better. Bathroom sink knobs and door handles and metal objects and smooth plastic tends to allow moisture to remain for longer periods and in theory are higher risk objects for spread. In practice, there is very little evidence to confirm or refute this theory. The risk of a group of people getting virus also largely depends on the risk that any one of them has it. The evidence is strong that the highest risk of spread is 1 day before a person knows they are sick and they usually do NOT have a fever at that time. Once they know they are sick, they usually stay home. You see report after report in the news regarding large outbreaks due to one person and some quote like…"But he had no evidence he was sick at the time" . That is NOT an exception. That is the most likely circumstance for spread.

We are now also seeing emerge reports of "Superspreader" events.

Why numbers seem to matter is not well understood. Large numbers seem to create "superspreader events" where number infected and severity of disease seems to be out of proportion to what would otherwise be expected due to distance and time. One can theorize why..but it really is not well understood. This suggests paying strong attention to total numbers in a confined space NO MATTER HOW BIG THE SPACE, may turn out to be more important than just using a measure like the state guidelines of "40%" capacity .

The point is, you can be more restrictive than the minimum state guidelines and we are giving you the scientific support to justify that.

Slide 9 – the slide has the key points

Slide 10

Young People--Are believed to have the highest risk of transmission, but lowest risk of Illness, death
Older members- have the highest risk of severe illness and death

This may suggest, there is good reason to consider segregating children from the rest of the community when in the building.
At this point, state requirements do not permit child care.

While risk of severe illness increases with age across all ages, when this started, based on the original reports, we thought that risk markedly rose with age above 60. In the US, this seems to not be true and age 65 seems to be when there is a noteworthy increase in risk of severe illness. At around age 80, the risks then rise steeply.

At ALL ages, Ad Meah v'Esrim, until 120, you are more likely to recover than to die.

- those with underlying conditions (immunocompromised, diabetes, asthma, COPD, other) are vulnerable to severe disease
- No vaccine
- No treatment
- No known immunity

Antibody testing not yet reliable

Slide 11 –
In this presentation we are stressing that risk is unavoidable and knowledge is rapidly changing.
Some people are worried about different kinds of risk. This suggests that better decision making for any particular social group depends on input from many different people who are clear about what risks they specifically are most concerned about. Accordingly, synagogues with advisory committees are more likely to manage the decisions in a way that addresses the concerns of it's contituents.
The different kinds of risk that are commonly discussed and ahve differing impacts on planning include:

- **Exposure to the virus**
- Getting infected with virus
- Getting sick with virus
- Spreading virus to others in our synagogues
- Spreading virus to the larger community
- Spreading virus to vulnerable people
- Prolonged severe illness
- Death

Synagogue legal liability

Regarding liability – I do not wish to overemphasize or underemphasize this. While someone can attempt to sue for anything, you create a substantial defense to a successful case against you if you follow carefully the state guidelines as published and consult with your local board of health regarding any questions or clarifications. If local responses are not be clear, then consider consulting with your synagogue attorney. Also do not claim something regarding safety that you cannot claim.

If you do not follow the state guidelines, you additionally run the risk of the health department shutting you down for endangering the community. Traditionally, health departments have been reluctant to treat houses of worship strictly, but there is little precedent for a virus that impacts the community so substantially.

Slide 12 –

Bottom line……the more we are together, the more we risk exposure.
All Models show increasing risk of exposure over time without social constrains.
With the help of Paul Bleicher, a physician researcher in Newton and based on the well accepted YouYang Gu model which predicts what happens with social constraints and I ran some numbers.
Most likely, between 0.6 and 2.7 % of the population in Massachusetts is infected and capable of spread at the current moment.
Probably 25-50% of them do not know it yet.
This is high enough that it is prudent to assume that every congregant is capable of spreading virus
In addition, our communities are not random. Risk for urban communities will be higher. If a larger number of congregants interact with many people, risks for that congregation will be higher. This helps us understand the relative magnitude of the risk, but not really that useful for confident decision making. This can change at any moment

Since there is a up to a 2.7% risk that any random congregant is capable of spreading virus, and that in many synagogues, the demographics are such that the risk may be even higher, many people would consider the risk of spread in a single short minyan too high right now and the more frequently the congregation holds events, the more likely spread will occur.

However, the YouYang Gu model suggests that if there are social constraints, risk will be decreasing in the future by about 1.5% per month over the next number of months. As time goes on, with better information, our models will become more accurate. This is ONLY ONE factor that MIGHT enable us to have enough information by mid August to DECIDE IF MEETING for High holidays in large numbers is TOO GREAT a risk or not. RIGHT NOW, we do not have enough information to advise regarding the safety of this. We will address High Holidays later. It might be wise now to create multiple contingency plans for a wide range of possibilities for High Holidays and these plans should include the possibility of another shut down.
All this can of course change significantly at any moment.