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WAR Podcast
Hosted by Alfredo Morabia, MD, PhD

AM Hello and welcome to this new podcast of the American Journal of Public Health for the 2023 annual meeting of the American Public Health Association; and I'm here with my co-moderator, co-host of the podcast, my dear colleague, Vickie Mays. And today, we are going to talk about war in public health; and we have two absolutely great experts on this issue: Dr. Barry Levy and Dr. Bob Gould. So, Barry and Bob, please introduce yourselves because we have also a strictly audio version and they may think you are me because we have the same accents!

BL So, I'm pleased to be with you today. My name's Barry Levy; I'm a physician and epidemiologist. I'm a past president of the American Public Health Association; I'm affiliated with Tufts University School of Medicine; I'm a member of the Peace Caucus; and I'm the author of a relatively recent book entitled *From Horror to Hope: Recognizing and Preventing the Health Impacts of War.*

AM Thank you. Bob?

BG And I'm Bob Gould. I worked for 30 years as a pathologist in Kaiser, and after retiring for that for the last decade I've been professor at UCSF in San Francisco where I work within the program on reproductive health in the environment. I also am president of San Francisco Bay Physicians for Social Responsibility and as well regional vice president for North America the International Physicians for the Prevention of Nuclear War, and for many years I've been chairperson of the Peace Caucus in APHA.

AM Great! So, let's go straight into the core problem, and I think when we think of war and health, we first think in terms of medicine. You know, the doctors, the wounded, the deaths, et cetera.

So, we'd like to understand what is the specific role and aspects and issues that are public health different from medicine.

BL Yes, well to start with, one only needs to look at what actually happens in terms of the health consequences of war. What gets headlines and so much of the attention are explosive weapons—bomb blasts, bullets, missiles, and so forth—which indeed kill and injure a large number of people. But even greater numbers of people are affected—killed, injured, otherwise affected—by the indirect health effects of war, many of which are very tied in with public health. These include malnutrition, communicable diseases, exacerbation of underlying non-communicable diseases like heart disease and lung disease, chronic lung disease, maternal and infant disorders, and mental and behavioral disorders. And largely as a result of forced displacement which occurs frequently, typically during war, sometimes of course millions of people forcibly displaced as we're seeing in some of the current wars but also due to direct attacks on civilian infrastructure. What do I mean by infrastructure? Food supply, water supply, healthcare facilities, and health workers, and shelter, communication, transportation… But these indirect impacts of war, many of which are very much intertwined with public health, don't get the headlines, don't get the attention that is so necessary. And so, from a preventive point of view, there are lots of things that could be done to minimize and maybe ultimately eliminate all these effects of war but particularly I'm focusing right now on the indirect effects which get so little attention. Bob, do you want to--

VM Let me, I want to follow up on that a little bit because I want to make sure people understand like cardiovascular disease comes, you know, from, you know, individuals who have been in the war—and childhood diseases. Can you talk a little bit more about that?

BL So, let me talk about first chronic disease and then the childhood diseases. So, first example, I'll give you three examples: coronary artery disease, chronic lung disease like asthma or chronic obstructive pulmonary disease or diabetes, okay? So, these are all chronic conditions. In our country and in

peaceful times, for most people not all of them but most people who have these diseases are getting adequate medicines to manage those diseases. They got chronic diseases, they may ultimately disable or kill them, but we're able to manage them in our healthcare system. That management depends on ongoing medical care but also access to medications, and so during wartime—and this has been shown in Russia's war in Ukraine, for example, the World Health Organization did a survey last year. They found that half the people had a barrier to getting ongoing primary care. Almost a quarter of the people and higher in regions where Russia was occupying, that a quarter or more of the population couldn't get access for hypertension. Without those drugs, people get stroke and heart attack or at least they're at increased risk for that—chronic lung disease, people who have asthma are dependent on ongoing medications. Without those medications, they get asthma attacks and they even die. People who are dependent on insulin, for example, diabetics, without that insulin on a daily basis they could lapse into diabetic coma or develop other complications. So, these things are, in a sense, below the radar at least of the public media and even the social media of the problems that are occurring, and no one's—during war, surveillance systems break down, you know, so much of the public health infrastructure breaks down, that we don't have good data on these, sometimes even after the war is over. And with regards to childhood, you know, one of the things that breaks down of course is immunizations. And, um, take again Ukraine as an example. They had a large outbreak of measles about five years ago, lots and lots of cases. They improved their immunization rates, but their immunization rates are now starting to decline, measles immunization. Highly contagious disease in a population affected by war, many children malnourished, not effectively immunized—we're going to see unfortunately measles outbreak which is a killer disease for young children who are not immunized.

VM Very helpful to get those [explanations], thank you.

BG You know, also just to add to what Barry was saying is that we're beginning to see, obviously we're focusing a lot on the casualties that are occurring now in Gaza where over 10,000 people have been

killed, many women and children, but this can really be the tip of the iceberg with all the systems breaking down from not getting power, not having clean water, so many of the diseases that Barry was talking about that are already manifesting themselves, the breakdown of systems in Ukraine equally apply in what's unfolding in Gaza now which is why that's of great concern to us as well.

BL No, I was just going to pick up on what Bob's saying and what you were asking about earlier. You know, what is the role of public health? But, in some ways, the potential roles of public health with regard to war are similar to the roles that we in public health play in so many other situations: education, research and documentation of problems, public awareness raising, development of policies or supporting existing policies, and public health practice. And given the multiplicity of effects of war, even though we're here in the United States and you know we're separated by two large oceans from much of the rest of the world and most of the wars in the world, but we're still feeling the effects right here in our country—refugees, military personnel, other people who are affected even by wars where they you know survive a war 20 or 30 years ago, they're still feeling the public health effects of those wars.

AM But imagine you are a student in a school of public health here in the United States, you feel motivated… can you give practical examples of what do public health professionals in those war arenas?

BL Do you want to start, Bob, on that?

BG Well let me even back up from that situation, because what do public health professionals know about war and I would also say what is the role of preventing those things from unfolding that they the real difficulty dealing with. I mean, I was very fortunate when I started medical school, I had one of our giants of public health, [Dr. …] who's co-edited with Barry war in public health, terrorism in public health to really put an emphasis and understand primary prevention in these cases. And a lot of this really stems from the work of Vic and many others who in 1962 dealing with, you know, how do

physicians or public health professions say respond to nuclear war which remains an ever-present danger with Ukraine and other situations around the world, and to confront the fact that no matter how much you could organize or teach physicians to treat the burns or provide the transfusions, really, it would overwhelm healthcare systems. And that's why Vic and Bernard Lown and many others had pioneered in the 1962 New England Journal of Medicine about thermonuclear war, how we were completely unprepared for it, and that propelled a consciousness among physicians and public health people that we need to do everything we could to prevent such conflicts from happening. That approach has certainly been very central to the work of Physicians for Social Responsibility and the International Physicians for the Prevention of Nuclear War to this day that we need to really be able to transmit the need to prevent such conflicts. And unfortunately, more directly to your question is that what we find is that there's really not the inculcation among public health schools. One of our colleagues, Shelly White, over a decade ago had an article in the American Journal of Public Health did a survey of public health curriculum around the country and I think it was, I don't remember if I have the numbers exactly right but it was about surveying 10,000 courses and less than 10 had anything to do about war. We try to make up for that now in voluntary efforts in our own schools like I do at UCSF and Stanford and such, but we really need to bring these concepts to core public health curriculum so people are prepared to prevent these conflicts from happening and to really understand where we need to redirect our budgets to provide for more core public health programs and such.

BL I would agree, and in response to your question, I can think of three things that for example, medical students, nursing students, public health students can do. One is to find a faculty member either in their own school or across the country even across the world. Nowadays it's so easy with Zoom and other modalities to even if there isn't a faculty member at one's institution, you can find one numerous ways, so find somebody who could serve as a mentor or advisor or perhaps include you in a research project or some other ongoing activity. A second is to join up, become a member of, or learn about at least the

work of various organizations. These range from Physicians for Social Responsibility, Physicians for Human Rights, some which have if not chapters active participants in various schools of public health and other health professional schools. So, one is find a faculty member; two is join up with an organization and get engaged, starting with the American Public Health Association. There are many aspects of our own organization, the international health section, the Peace Caucus of which Bob is the director and which I've been a member for a long time. These are avenues in which people can participate not only at the annual meeting but throughout the year. A third way that students, and I know there are a lot of enthusiastic students who are very much engaged in these issues, many students now are beginning to form, you know, interest groups of their own at various educational institutions, sometimes guided by faculty members, sometimes guided by a contact maybe from the Peace Caucus or elsewhere in APHA. But sometimes, student-built initiatives can go a long way towards building more and more interest. In fact, those initiatives may lead to more and more courses as Bob describes in places like schools of public health. Now, they'll sometimes say well you can also volunteer and go over and work in a refugee camp, maybe in Gaza or in somewhere in Europe that's taking Ukrainian refugees and so forth. Theoretically, that's certainly possible, but one of the problems that sometimes occurs is that people without adequate training, without prior experience in those kinds of situations go over and in fact are not prepared and are, you know, may not be really contributing in that kind of role. So, there's a lot of good intentions in people who want to get on the next plane and go help out somewhere, but it really takes somebody with some experience and background, perhaps from courses or other experiences, before you just go over there.

VM Barry, I want to kind of connect up to something you said in the beginning about being an epidemiologist and talk a little bit about research. One of the things that we've learned from, you know, 9/11 is the extent to which being in that disaster, people had these chronic diseases later. And we only learned it because we got some people to be, um, cohort studies, you know. I guess I want to ask

the question, should we be thinking enrolling people so that we can learn more and more about what you're talking, about those indirect [causes]. What kinds of things would you suggest that researchers start thinking about now?

BL Sure, sure, well a couple of things. One is that just given the nature of war, the fact that many people are displaced and sometimes permanently displaced as a result of war and that a lot of the basic infrastructure for public health, for example, is destroyed during war that it's difficult to put together a cohort study like we might in the United States with a group of workers, for example. So, but there are other valid means of doing ongoing studies, retrospective studies, to identify not only mortality but as you're asking to try to identify these indirect effects of war. So, one is going in and doing cross-sectional studies, even during war, okay, because those kinds of studies help to guide humanitarian assistance, but also doing cross-sectional studies, field studies, immediately after war to assess populations and indeed to look at these indirect health effects as you're asking about. Another is that there's been systematic studies for example about the Iraq war. I know some of these are controversial and so forth, but people doing systematic, very well designed epidemiological studies, systematically for example in Iraq breaking down the country by the equivalent of states or provinces then randomly sampling neighborhoods and houses within those neighborhoods, conducting interviews, working closely with local staff, and it's really sort of a bottom up study but designed in part by people in Iraq working with people from the United States and elsewhere. So there are ways of studying these situations systematically with valid epidemiological designs that have already been developed. They need to be improved but there are valid ways of doing this epidemiologically to try to better define these indirect effects.

BG And I would also just add while we're awaiting those studies, which are very important and we've certainly presented them when we've had them within the decades of programs here at APHA by the Peace Caucus, you've also relied on the impacted communities and particularly have had numerous

panels over the years of veterans who reflect on their experience from, whether it be veterans against the Vietnam War all the way up to the veterans of Iraq and Afghanistan who've been able to talk in very heartfelt ways what the impact of things like Agent Orange have been on their own health, let alone those in Southeast Asia and extending forward towards exposure to depleted uranium or, you know, things that have been implicated, various toxic agents and Gulf War Syndrome; the experience of veterans with the burn pits in Afghanistan that have been very deleterious to their health as well as Afghanis. So, we try to combine the best of those type of studies to get out the information to the public health community here.

AM Yeah, I would like to bring the conversation, you know, change a little bit the perspective, and because we've been talking about situations of war. But, I'd like to move to how can we prevent wars and the role of public health. And so, could you tell us more about what, you know, the importance of public health, its development, its reach for universal care, equity, et cetera, is a factor that can prevent wars.

BL Sure, sure, and I think it's—I'm so glad you raised the question because we need to be thinking about war as a preventable public health problem, and it's not only a public health problem, but so one way of thinking about this, you might say, schematically or, is to think about three sets of activities that can be used, and have been used, to prevent war, okay. One is resolving disputes and conflicts which of course occur all the time among nations and within nations. Most wars, by the way, are civil wars within countries; but one is preventing conflicts and disputes from becoming violent, okay, and there's a lot of public health measures that have been used in other settings to, to diffuse conflicts before they become violent. So, that's one thing. A second thing is addressing the underlying causes, thinking in public health terms, the upstream causes of war. And not only upstream causes, but the upstream causes above those upstream causes, so to speak.

AM Exactly, you have to--

BL Exactly, so some of the upstream causes of war are, or underlying, whether metaphor you like, but vast socioeconomic disparities in population, abject poverty where sometimes people fight because their life is so bad they don't see, they see more to be gained, perhaps, by trying to bring down the government. So, socioeconomic disparities. Militarism and military culture and the arms that go along with that, and you know, we as a country provide arms directly or indirectly to so many other countries around the world that use those arms to resolve conflicts, and we know that from a public health perspective that's not the best way to resolve conflicts. Environmental stress—you know, climate change is now at least contributing, and I know this is controversial somewhat, but for example there was a major drought in the four years before the civil war in Syria began in 2011, it was a major drought throughout the Middle East, the most severe drought in perhaps a hundred years, part of which we believe, at least part of which was due to climate change. This led to farmers abandoning their farms, became desert land; they went to the cities, about a million of them. It added to the existing political instability. It did not cause the Syrian civil war which probably would have happened without climate change, without the drought; but it was certainly a contributing factor for these million people moving in, adding to the political instability. And the final thing is building an infrastructure for peace. You know, once, about half the wars in the world are sort of like recidivism. That is, they're war that are being fought in the same country, sometimes among the same actors who just fought a war five years or ten years before. So, an important thing about prevention of future wars is to adequate resolve the wars that were already taking place. That means rehabilitating individuals, rehabilitating communities, truth and reconciliation commissions, building a strong civil society, rule of law, and importantly having these building a peace come from the grassroots up rather than to be imposed by the UN or Washington or whoever else and involving women in the peace process. It's been shown that when women are involved, really involved, in the peace process is higher, much higher likelihood of sustainable peace.

And so, one way again in thinking about the prevention of war is prevent conflicts from becoming violent, you're addressing the underlying causes, and third is building the infrastructure for peace.

BG And I think that your points about climate are so particularly well taken. I mean it's estimated that we're going to have massive population displacement to be due to rising sea levels or droughts that are going to make places inhabitable and not be able to grow food. That's going to have millions of people on the march, tens of millions of people, really, and that's going to inevitably have conflict in terms of people having to be displaced and moving into other areas where people can pick up on ethnic differences to provoke warfare. That's happening already around the world, so, and you know, even to think about the current situation of food scarcity in Africa, the ongoing conflict in Ukraine, and in particular the dispersal of landmines and cluster munitions on the breadbasket of Europe is going to have profound impacts in terms of health, not only in Ukraine not being able to grow food, but being able to provide it to the rest of the world that's increasingly under climate stress.

VM I still want to get a sense of the 'how'. I mean I can hear the 'what', so put yourself in my place. I've got a class of 20, you know, students. Is it what I teach them, is it what they strive to go out and do as part of the exposure that we give them in the kind of practice side, is it the research that we direct? Just, the 'how'.

BL So, let me talk about it in two respects then ask Bob if he would add to what I say. So, one is, you know the technical skills, how do you do the kinds of epidemiological studies, how do you do health education that's culturally appropriate in a post-war situation, how do you try to build up the public health activities after a war's taken place? So I mean there are specific skills and so forth, okay, but there's also public health values. And, you know, one of the things I'm concerned, or Bob is concerned about, is how we've sometimes lost track of the true values of public health; our shared humanity; the dignity, you know, respect for human dignity; focus on prevention. I mean, the basic core public health values. So, I'll give you a real life situation. A month ago when the Hamas raid into Israel occurred

and then Israel's response with bombing, et cetera, occurred, I got on the phone with Bob and Patrice Sutton who are the basically the director and the program director of the Peace Caucus and I asked what can we do, and we talked for a while and we talked with other colleagues, and ultimately out of the discussion over about two weeks, came in a what we'll call a call to immediate action to health professionals with regard to Israel and Gaza. And it was expression without necessarily getting into all the details of what took place or who's right or who's wrong—you know, somebody once said, Bertrand Russell once said war does not determine who is right, it only determines who is left. And that's a sad commentary on war, but so, what we tried to put on paper and over the internet is this call to action, we developed this call to action which is five points which express public health values. One is end the violence and ensure security for civilians, end the violence against civilians. Second is release the hostages, third is make sure you're protecting healthcare and healthcare workers, healthcare facilities, fourth is ensure that humanitarian assistance is provided, and fifth is to *begin* the process, the long process, but to begin the process of building a sustainable peace guided by human rights and justice, okay. Now, those are public health principles. We argued among ourselves, we're saying sort of motherhood and apple pie, okay, but it's an expression, you know, what can we teach our students? We can teach our students these values. We make sure they're imbued with these values so that perhaps at some later time they confront a similar situation in which they're trying to discover, you know trying to find out what they can do and at their minimum they may be able, as we attempted to do and did do, express our values, our public health values by the statement. The statement's now been signed by over four hundred individuals, over twenty organizations globally, and many more are signing on. So, I'm using this just as an example, but this is a way that people in public health can not only do epidemiologic studies and do all the other things we do concretely in public health and work to preventing war, but to express our, our, starting with our solidarity with health and medical care in

public health workers in war zones and those who are directly affected but also to more generally express our public health values.

AM I would like to build on Bob's comment about migration, because migration following the war is how also the war consequences come to our door and the […] are with us. We have public health people and so we know that public health is allergic to any form of exclusion. And so those are human beings, they must be integrated. How do you explain that whether people are immigrants, undocumented migrants, et cetera, they should all be treated the same way by the public health system?

BG In terms of immigrants coming to the United States or—I mean I think they need to be treated with dignity as human beings. We need to understand what are the conditions that drive them. So, again, you know, I think we need just immigration policy. I mean I certain reflect on my own background of, you know, my family surviving, those who survived the holocaust and the problems when people couldn't migrate to the US for safety and instead perished in concentration camps. And a lot of these things are driving immigration to the United States from Central and South, you know, South America partly due to climate stressors, partly due to dictatorships and violations of human rights to drive people to have to leave for their own survival. I think we've unfortunately closed our doors and manipulated for political reasons the differences between people, people that have come and take your jobs or whatever the usual—this is not just something that's the United States experience. It's going on certainly in Europe in terms of people being driven from Africa because of similar, often times climate-driven situations leading to their being uprooted. So, I think we need to have, I'm sort of echoing what Barry was saying as basic principles, is to look at the common humanity in people and realize that we all have a stake and particularly at times when we're going through such climate emergencies and threats of warfare that are building up. I think we need to be anticipatory of this and to be building the structures to be able to welcome people and integrate them, certainly as regards healthcare. The exclusion of immigrant populations from healthcare in our country is only going to be a reservoir of

potential disease, right, because you know people get the diseases. They get their tuberculosis which is not being treated; they go into prisons and they're in crowded conditions. I think we have to have a lot a forethought in preventing…

AM Absolutely.

VM Let me just follow up on that because, there's values and then there's where, you know, the rubber meets the road here. And we see our mayors—I'm in Los Angeles, I'm, you know, at UCLA. We see our mayors, you know, kind at their wit's end because we have people coming and then we have people in those cities who have already not had, you know, equitable access. So, give me a sense of how does public health play a key role in negotiating access for all.

BL Well, I would start that and it probably gets to some of the issues you were talking about: What are people thinking about as the range of possible solutions. So, if you get into a zero sum situation that someone's going to come here, I'm going to have less healthcare, I'm going to have less housing because they're increasing the demand, we could also argue that, gee, you know, if you didn't, if you took a significant cut, for example, out of the military budget or the nuclear weapons budget, you could provide those resources for people so you wouldn't have people competing in that way. I mean we are now embarked on a program of over 30 years and spent $4-6 million every hour to modernize our nuclear weapons arsenal, to make those weapons that could take the world at a moment even more lethal than they are. And that's why a lot of people are saying, well, how could it be that we're spending $850 billion a year on a military budget and we have such crying needs to deal with—climate change, to deal with providing the basic services for people in a country where there's still tens of millions of people don't have adequate healthcare before the immigrants even come here. So, I think we need to have city officials and public health officials step out of the box and question those assumptions that have driven the situation where politicians could sort of manipulate people and pit one unfortunate population against another.

BG Let me just build on… Two examples that we touched on briefly before and that was our measles and tuberculosis, but they're examples of a much larger issues and that is to the extent that people come into this country from, because of climate change, because of war situations, many other situations where people are persecuted, seeking asylum or coming here as refugees—if they are not immunized against measles, they're more likely to develop measles, okay, and indeed spread it to others and perhaps even create large outbreaks that contribute to that. Another is tuberculosis to the extent that people are not, tuberculosis is not detected, not treated adequately, and in fact treatment of course involves often months of treatment, often supervised treatment so that people make sure that medications are taken to the extent that it is not done, we're sewing the seeds of more disease, more ill health in our communities throughout the country. So it's in our enlightened health interests and our enlightened humanitarian interests, you might say, to welcome immigrants into this country, we're a nation of immigrants, but to do so in a way that protects the public health, their health, but everybody's health in the process.

AM Absolutely, and I want to thank both of you because I've learned a lot from this half an hour that we've spent together, and specifically on the fact that war is not limited to the war area but it's a global issue and have to address it as a global issue. I was hoping that something that is, we've been developing in the Journal for many years which we call the Public Health Dialog or Finding Common Ground is a way also of preparing this notion of trying to prevent explosions and try to work together in the action and that is maybe also contributing to preventing war.

VM Yeah, I just want to say kind of as our final wrap up and this builds on something that Bob, you said, about our veterans. One of the things we've seen is the cost to us in terms of their mental health. And so, you know, as we're in these conflictal situations, we really need to think about how do we keep people whole and healthy, and part of that also is their mental health as well, because when you're not doing well there, you're not as productive or participatory in society and can't think through and grasp

some of these values that you're talking about. So, I do like your comment about kind of the indirect consequences that come on from these conflicts and I think that's one that, you know, over time we really have to grapple with, so I want to thank you for the things that you've talked about, because I think it leaves insights to people and hopefully some hope as to, you know, I know I get asked and I'm sure you do as well, I want to do something. And so, thank you for helping us help people to understand there are some things to do.

BL Thanks for having us and thanks for what you're doing at the Journal in terms of including these issues, appreciate it very much.

BG It's a big deal.

AM Thank you very much, and I'm turning to our audience now. We were here with Barry Levy and Bob Gould and my good friend and colleague, Vickie Mays. I myself am Alfredo Morabia talking about war and public health from Atlanta at the 2023 Annual Meeting of the American Public Health Association. Thank you so much for watching and listening.