

GUARANÍ

VIDEO TITLE: Vakúna oĩma ápe: mba'e ko'ága? | Pehẽngue 1

[00:00:10] (00:00:23) Matei. Tapeẽguahẽ porãite ñepyrumby orekóva ko mbo'esyry. "Momaranduháruera oikuaava'erã COVID-19 Vakúna rehegua". Che Meryn McKenna, momaranduhára, apohára ha mbo'ehára mbo'eha guasúpe, ambo'e kuatia jehai tembikuaahára oĩva Atlantape.

[00:00:27] (00:00:41) Amotenonde ko mbo'esyry inglés pe irundy arapokõindy aja, avei iporã peikuaa che pytyvõha ñembohasa haguã ambu'e ñe'ẽme, Yves Sciama, francófono pe guarã, André Biernath, portugués pe ha Federico Kukso, castellano ñe'ẽme.

[00:00:46] (00:01:09) Opavave rérape ame'ẽ aguyje peimére ko mbo'esyrýpe. Amomba'eusemi mba'éichatapa. Ko mbo'esyry ojejapo ikatuhaãua ojetypeka mba'emapá ogehupyty vakúna rupive, opáma haãua mba'asy vai COVID-19, toiko ñe'ẽ sarambi vakúnagui, tojeikuaa oikévo nde jyvãre oñangarekotaha nde rehe.

[00:01:09] (00:01:29) Oĩva guive pehẽ ko mbo'esyrýpe, jahecháta mba'éicha ojepytyso tembikuaaguive oñeguenohẽ pya'e haãua vakúna, oñemoguahẽ pya'e arapyre, avei jahechata apañuãi oĩva oguhẽ joja haãua opavavépe.

[00:01:30] (00:02:02) Jahecháta mba'éicha tuicha apañuãi ojapo umi maranduỹ oñemosarambiva, oĩ ojapo porãségui he'i vaíva, avei ñañeha'ãta ñambohovái mba'éichatapa arapy vakúna oñeme'ẽmbarire, mba'éicha oñeha'ãta ojevy teko yma. Hi'ã oreve ogehupyty ñomongeta rupive umi apytu'ũ roky, tosẽ pohe omboajéva momaranduhára oiporúva'erã.

[00:01:57] (00:02:31) Ipyahu ko mba'e opavavépe. Ojapo peteĩ ary ramo COVID-19 ha coronavirus osẽva SARS-COV-2, ipyahuete. Arapyre oñeha'ã opa haãua mba'asy, upéva avei ipyahu, he'ise pya'eterei ojeha'ĩma haãua hembiasa. Kuaapy ojeguerekóva ojekuaayka oparupi, ojejapóva heta hendarupi heta tapichare.

[00:02:31] (00:03:42) Upéicharõ peguerekóta mbo'ehára ha avei ñañomongetáta tapichakuéra katupyryndive. Ijapytépe jaguerekota kuaaha'ãhára ojetypekáva heta mba'ere, oĩta avei momaranduhára oikóva vakúna rapykueri omombe'uva ñeha'ã oikóva hese. Iporã ha'e peimeha heta hendagui ko mbo'esyrýpe, ore mbovy'a, ha'e peteĩ hatapyña. Peicha ite avei ko Pandemia, ambue ary opa tetãme oguhẽ joavy vakúna, ha iñemoĩ noguahẽ joj ai. Oĩ tetã oñepyrũ porãva oñeha'ãva, oĩ katu neírãva oñepyrũ. Upévare ikatu ro'éva, yrõ r ohechaukáva pe tenda nde reikohárupi ja ohasáma, ekapa'e oiméramo uéicha epyta ore ndive reikuaahaãua mba'éicha romba'apo, upekuevo emoñe'ehaãua umi Moñe'era rogue rekova. Néi ko'ã mba'e ha'esekuri. Ñañepyrũ katu.

[00:03:45] (00:03:55) Momaranduhára haicha ndaikatui jagueroviapa oíva guive, ha katu hasy upéva, ikatu javy'a osẽ pya'ere vakúna Coronavirus rehegua.

[00:04:02] (00:04:23) Oiméne opavave pe ne mandu'a arangere, sapy'areirõguarã jahecha jevyta. Arapy oikuaa mba'asy vai oíha ojopyva pytũhẽ, ha isarambiva Chinaguive upe 30 jasyapakõi ary 2019pe. Oje'e ha'eha coronavirus upe 9 jasyteĩ ambue arýpe.

[00:04:24] (00:04:59) Yvy ape ári ogehupyty 1.000 te'ongue upe 3 jasykõi ha ára pavẽre katu ogehupyty 100.000 upe 7 jasyapy. Irundy árante ohasa upe 11 jasyapy OMS he'ima COVID-19 ha'eha pandemia. Pe 2 jasyrundy jahasámakatu 1 sua. Jasyporundymeve jaguereko 1 sua te'õngue.

[00:04:50] (00:05:20) Ko'ágã tuichaitereíma jahasa umi papaha. Ajaporõ guare ko tembiapo ojehasa potaitéma 115 sua, ha omanõva arapyre ohasama 2 sua. Katuete rehechávo ko tembiapo ojupivema umi papapy.

[00:05:14] (00:06:02) Ñepyrũ guive pohãnohára kuéra oñeha'ã ojoko haãgua mba'asy vai, avei ponove oñemanõ. Jerereko ipyahuvéva ojejukereko UCI pe, pohã antiviral, antibiótico, ñepama hapykuerigua, ojeikuaa antibiótico nomõkechéi virus pe. Heta pohã oje'eva'ekue ikatuha oipytyvõ. Pe ne mandu'ane ñomongeta tendido ojejukereko'ekue ambue ary umi hidroxiclороquina, remdesivir yrõ ivermectina, ni peteíva ndoikói.

[00:05:51] (00:06:22) Avei ñepyrũ guive ojeikuaama oñeikotevẽha vakúnare. Hesakã porã upéva, opavave pohã oñeha'ãva pohanõhára ndoikói. Vakúna añoite ikatu ohape joko mba'asy. Iporãve jejoko anitei ñambyasy upéi.

[00:06:12] (00:07:04) Ha'ete ku ñanderesaraiva mba'éicha imbarete vakúna. Ñaimevaguive ko mbo'esyrýpe ñane reñoi vakúna érape. Jajepokuaama jahape joko 28 mba'asy oguerekóva yvy póra vakúna rupive, oñemoíva mitã aja, tuicha rirẽ yrõ mokõive. Ijapytépe oĩ rabia, poliomiélitis, rotavirus, meningitis, paperas, sarampión, tos ferina, influenza ha viruela - térã mbiru'a, ko mba'asy opaitéma, ñevakuna rupi.

[00:06:52] (00:07:32) Jaikuaaháicha viruela hapejoko rupi oñepyrũva'ekue vakúna ñemoĩ 1796 pe, Edward Jenner ohechauka ikatuha oñangareko peteĩ mitã oguerekova 8 aryre, ohape joko mbiru'a. Upevarã okarãi péu orekóva mba'asy amýi mbiru'a vaka ha omoĩ mitã jyvare.

[00:07:14] (00:07:56) Sa ary pukukue, siglo XIX aja, opavave tetã oñeha'ã, oheka vakúna upeicha rupi mbiru'a opiate siglo XX pe, upeicha oje'e 1980 pe. Oñepyrũ mbarete vakúna, peicha avei oĩgueteri mba'asy ndaikatuí ojejoko.

[00:07:40] (00:08:27) Péicha rupi ojehecha mba'éicha ojejoko poliomiélitis opa rupi, oñeñepyrû rupi ogehape joko yvy ape ári 1980 guive. Péicha ojehecha sarampión Estados Unidos pe oñevakunaguive 1960. Pea rupi ikatu ñaikumby mba'érepa kuaaha'áhára he'í vakúna añoite ohapejokóta COVID-19.pe.

[00:08:10] (00:08:59) Arapoty ohasava'ekuépe, ojepytaso coronavirus arapy tuichakue, uperõ avave noimo'ãi ojequerékone haguã pyáete vakúna. Oñeikotevẽ 10 yrõ 15 ary oñeguenohẽ haguã vakúna, ipuku hape, oñepyrũguive, oñemonéimeve. Vakúna apo mbykyve ojequerékova ha'e vakúna papera peguarã, apena 4 arýpe oíma.

[00:08:34] (00:10:52) Heta aty he'í ojeporekátaha, avei oĩ oimo'áva ojequerékoha jeporeka yma ha tuicha itenondetaha opavavégui. Empresa alemana BioNTech, oñemboja upéi Empresa estadounidense Pfizer re, omba'apo ñepyrũ ifórmulare jasyteíme. Upéichaite avei ojapo Empresa estadounidense Moderna. Jasypópe Empresa China CanSino Biologics oikuaayka mba'éichapa osẽ vakúna ñeha'ã ojavova'ekue yvy pórare. Jasypteíme, ambue aty Chino Instituto de Productos Biológicos Beijing gua, oikuaa mba'éicha osẽ ñetante'a ojavova'ekue ka'ikuérare. Jasypokõime Moderna ha Johnson & Johnson oikuaayka mba'éicha osẽ ñeha'ã ojavova'ekue ka'ire avei. Vakúna Pfizer ha Moderna pe Administración de Alimentos ha Medicamentos Estados Unidos gua upe Jasypakõime oñeme'ẽ sãso oñemoĩ haguã de emergencia, upe jasype avei Reino Unido omonéi vakúna Oxford AstraZeneca. Upe'aja heta tetãme oñemoĩma vakúna. China ovakúna ñepyrũ umi omba'apóva tekuãiramo ha omo'akáva empresakuéra upe Jasypokõime. Ha Jasypteíme gobierno ruso oporo vakuna ñepyrũ ivakúna Sputnik V re.

[00:09:54] (00:11:01) Hetaiterei mba'e jahapykuere rekátaramo, Empresa, formulas, ára.

Opavave iñambue ojuehegui.

[00:10:02] (00:11:47) Ajapo jave ko tembiapo, jasyapy ñepyrũme, ojequeréko 78 vakúna fórmula oíva kuaaha'áhára resa výpe, oñeha'ã mymbáre. Oĩ avei 71 fórmula opovyvýva yvy pórare, 20 oíma ñeha'ã pahápe. 8 vakúnape umi autoridad reguladora oíva tetãnguérare, ome'ẽ sãso oñemoĩ haguã. 4 ohupyty ipahápe ojavóre kuaaha'áhára arapyre oíva ha he'iva, oñemonéi hembiapokuéra oñeikotevẽterei rupi.

[00:10:39] (00:12:39) Ja'e porãserõ, peteĩ ary rasáma pandemia oñepyrũhañue, 12 vakúnama ohasa umi ensayo klíniko ojavova'ekue yvy pórare. Ha pe'a tuichaiterei mba'e. Jahechami ñaikumbýpa, ensayo klíniko ojevapóva osẽ haguã pohã pyahu ipuku, oreko heta pehẽ, ha vakúna aporã katu hetave pohã oikotevẽ, ohejava'erã heta fase rupi. Oñepyrũvo pe fase I, oikotevẽ sa'í yvy pórare oñetante'a haguã, upéi ohasa Fase II ha Fase III, ape oñeikotevẽ hetave yvy pórare, ojehecha haguã jahecha oikópa he'í hagueicha ijapohare.

[00:11:27] [00:13:57] Agência Kuéra ome'êva sãsõ oñekuave'ẽ haguã pohã, FDA Estados Unidos pe, Agencia Europea de Medicamentos, Organización Central de Control Estándar de Medicamentos oĩva India pe ha Administración Nacional de Productos Médicos China gua, jepivemi ojerure hetave jetypeka oñetante'a rirẽ umi fórmula ikatu haguã, ojehepyme'ẽ, péape oje'e Fase IV. Ko Fásepe ojeheka oime'a mba'e ikatúva ojehu, oñeme'ẽ haguã kyhyje'y opa omoĩkavape vakúna pyahu. Tuichaiterei mba'e ko ha'éva, vakúna ndaha'ei pildoraicha ikatúva reheja, nde re'uvéitema, vakúna oikeguive nde retepýpe ndaikatui onohẽ. Ojeikuaa oĩha apojováí vaíva peteĩ 100.000 apytépe térã, 1 sua apytépe.

[00:12:24] [00:14:34] Ñ mba'e oiko kuri 1976 Estados Unidos pe, ojejaporõ guare Kampaña vakunasiõn gripe porsina rehe. Upérõ oñemoĩ 45 sua dosis vakúna pyahu, ijapytépe 500 tekove oguereko parálisis trinchante upéi. Upévore iporã jahapykuere reka tapicha oñevakunáva. Katuete ndojóamoãi opa tetã rupi, iñambu'eta katuete, ha katu ape roipytyvõta reikuaahagua mba'épa oiko nde reimehamẽ.

[00:12:57] [00:15:16] Iporã ja'e umi vakúna oñemonéiva'ekue ndaha'ei ojeuehigua. Heta oiporúva ARN mensajero, material genético, ome'êva ñande célulape mbarete ojapo haguã proteína. Umi pohã ojepuruva'ekue vakúna aporã ojapo upe proteína orekóva coronavirus oike haguã ñande célulape. Oikomaro upe proteina, ñande Sistema inmunitario, ohechakuaa ha upéi ohechakuaama coronavirus mba'asy oikero. Peicha ñaikumby porãta ndahasyi rupi.

[00:13:40] [00:16:02] Ambu'e fórmula oĩva omoingue material genético ambu'e virus ryepýpe, upe adenovirus, ha'eva virus ome'êva ára roýpe tĩ pa'ã. Upe virus jejapo pyre omo'ã pe gen oñemoĩva'ekue oikepeve ñande célula ryepýpe ha oñepyrú ojapo proteína ñande Sistema Inmunológico oikotevéva oikuaa haguã. Oĩ avei ambue fórmula oiporúva proteina oñe ensambla nanopartículare, ha ambu'e katu oiporu virus omanõ pyre ndaikatuí oporombohasy.

[00:14:16] [00:16:35] Ro'éta ndéve mba'éichagua ha mba'e Empresa pa ojapo. Ne mandu'áke oĩva guive arapýre vakúna fórmula iñambue ojeuehgui. Ñ mba'e iporã jaikuaa, hemikotevẽ iñambue, fórmula iñambue rupi. Mba'éicha ojeguerekóta, ára pytũhẽ mba'éichava'erã. Fórmulakuéra he'i mba'épa oikotevẽ, mba'éicha ojeguerojáva'erã mombyryve umi tetã imboryahúvape.

[00:14:43] [00:17:03] Ñ mba'ere iporã jajesareko, ha katu ndaha'ei ñ mba'e añõnte ojapóva vakúna ipya'e yvy ape ári. Péare ñaño mongetáta ambue arapokõindy: kotevepy oguerekóva vakúna ñemoĩ, avei upe hatapyña yypukuvéva orekóva teko porã ha tekojoja vakunare oguahẽvo opa tenda rupi opavavépe.

[00:15:16](00:17:18) Ko'ága aipota ikaturõ pe ma'ẽ Moñe'ërare. Oĩ ambu'ẽ pehechaserõ. Peguahẽkena Foro ñomongeta guasúpe, upépe rojapota porandu ikatu haña pe ñe'ẽ oñondive.

[00:15:29] (00:17:23) Aguyje ore moirũre. Eñangarekóke ndejehe

Module 1 - Vaccines are here: Now what?

[00:00:10] **Maryn Mckenna** Hello. Welcome to the first module in this course. Covering the COVID-19 Vaccines, What Journalists Need to Know. I'm Maryn McKenna. I'm a journalist, an author, and university science writing instructor in Atlanta.

[00:00:27] I'm the course leader and the instructor in English. Over the next four weeks, you may also meet the associate instructors. Yves Sciama, for the Francophones, André Biernath, who will handle the course in Portuguese, and Federico Kukso, who conducts the course in Spanish.

[00:00:46] On behalf of all of us, thank you for taking this course. Let me tell you a little about how this is going to work. This course is designed to explore the achievement of vaccines to end the COVID-19 pandemic and turning those vaccines into vaccinations, protection delivered into arms.

[00:01:09] In every module of this course, we're going to examine one aspect of this effort from the science that is achieved new vaccines in record time, to the logistics of delivering those vaccines around the world to the emerging problem of making sure vaccines are delivered equitably.

[00:01:30] We'll explore the massive problem of misinformation and disinformation, well-intentioned and also weaponized, and we'll try to predict what the world may look like after vaccinations are delivered and we begin to attempt to return to normal life. Our goal is to talk about the best story ideas and the best journalistic skills and practices to use right now.

[00:01:57] We understand this is a novel situation for all of us. Just a year ago, COVID-19 and the coronavirus causing it, SARS-coV-2, were completely new. Trying to inoculate the world to end a pandemic is also new, among other things, that means it is too soon for any history to have been written. The knowledge of what's going on is disseminated all over the world. Pieces of it are held in many places by many people.

[00:02:31] So every week, in addition to your instructors, we will talk to one or two experts who possess some piece of that widely disseminated knowledge. Some of them will be scientists in various disciplines, others will be journalists who've been covering vaccine science and the vaccination effort. One final note, those of you who are taking this course come from all over the world, that is thrilling and we're so glad you're here.

[00:03:01] But it also presents a challenge. Just as the pandemic hit different countries last year at different times, vaccines and vaccination also are arriving in a staggered manner. Some countries are well embarked on their vaccination efforts, others have barely begun.

[00:03:22] So, it's possible that some of the data we present you with or the story ideas we recommend may not be relevant to where you live right now. We hope you'll stick with us

anyway to experience this community and read the work we're recommending. That's my introduction. Let's get started.

[00:03:45] **Maryn Mckenna** As journalists, we have a professional obligation to be skeptical, but it's difficult not to be just astonished, maybe even joyful, about how quickly coronavirus vaccines got to market.

[00:04:02] **Maryn Mckenna** You probably all remember these dates, but let's go over them just in case. The day that the world outside China learned that a mysterious respiratory disease was spreading was December 30th, 2019. The cause was identified as a novel coronavirus on January 9th last year.

[00:04:24] The international death toll hit a thousand on February 3rd and the worldwide case count reached 100,000 on March 7th. Just four days later, on March 11th, the WHO declared COVID-19 a pandemic.

[00:04:40] On April 2nd, cases surpassed a million. It would take until September for us to get to one million deaths.

[00:04:50] Now, of course, we're at many times those numbers on the day I'm recording this, the global case count is about to cross 115 million cases, and the toll of deaths worldwide is more than 2 million. By the time you view this, those numbers are likely to be much higher.

[00:05:14] **Maryn Mckenna** From the start, medicine threw everything it had at this new disease to try to save victims lives. The most advanced ICU treatment, every possible antiviral drug, antibiotics for secondary infections, even though we know that antibiotics don't affect viruses.

[00:05:35] A slew of existing drugs that someone thought might help. You might remember the arguments last year about hydroxy chloroquine, and remdesivir, and ivermectin, none of which really turned out to make much difference at all.

[00:05:51] But it was also clear from the start that what we were going to need was a vaccine. It was clear, because none of the treatments that medicine tried were doing very well, and it was clear because only vaccines prevent illness and prevention is almost always a better goal than treatment is.

[00:06:12] I think we forget how powerful vaccination is, all of us participating in this course were born within the era of routine vaccination.

[00:06:22] 28 diseases that occur in humans are prevented now because of routine vaccination, either in childhood or in adults or both. Those include rabies, polio, rotavirus, meningitis, mumps, measles, whooping cough, flu, and smallpox - the only human disease ever eradicated, completely wiped out as a result of vaccination.

[00:06:52] **Maryn Mckenna** In fact, it's prevention of smallpox that starts us on the journey to routine vaccination in 1796, Edward Jenner showed that he could protect an eight year old boy against smallpox by scratching pus from a lesion from a related disease, cowpox, into the boy's arm.

[00:07:14] Across the 19th century, countries individually decided to require that vaccine, and this is what the impact of smallpox vaccination was in the 20th century, up to the point where smallpox was declared eradicated in 1980. The impact of vaccination has been just as dramatic, even for diseases that we haven't eliminated yet.

[00:07:40] This is what the incidence of polio has looked like around the world since the international campaign against it began in the 1980s. And this is what measles looks like in the United States since the vaccine was made mandatory in 1960. So you can understand why science immediately turned to the idea of a vaccine against COVID-19.

[00:08:10] **Maryn Mckenna** Last spring, as the coronavirus was spreading around the world, to achieve a vaccine rapidly seemed almost impossible. On average, it takes 10 to 15 years to get a vaccine from first concept through to approval and distribution. The shortest vaccine development on record is for the mumps vaccine, that took four years.

[00:08:34] But various research groups thought it was worth a try, and they also thought there might be preexisting research that could give them a head start. The German company Bio N Tech, which later joined forces with the U.S. company Pfizer, began work on its vaccine formula last January. So did the U.S. company Moderna. In May, the Chinese company Cansino Biologics published the first human trial results of its vaccine.

[00:09:05] In June, another Chinese group, the Beijing Institute of Biological Products, had its first results in monkeys. And in July, Moderna and Johnson & Johnson published their first results in monkeys as well. Pfizer and Moderna vaccines were authorized for emergency use by the U.S. Food and Drug Administration in December.

[00:09:28] In that same month, the United Kingdom approved the Oxford AstraZeneca vaccine. But meanwhile, shots were already being given in parts of the globe, China began inoculating government officials and company executives as early as July. And in November, the Russian government began vaccinating people with its Sputnik V vaccine.

[00:09:54] That is a lot to keep track of, different companies, different formulas, different timelines.

[00:10:02] **Maryn Mckenna** But overall, at the point at which I'm recording this in early March, 78 vaccine formulas are under investigation in animals and 71 have already gotten to various stages of clinical trials in humans, 20 of those are in the final stages of testing. Eight vaccines have been allowed to go into limited use by regulatory authorities in some countries, and four have gotten all the way through internationally accepted standards for assessment and approval or emergency authorization.

[00:10:39] In other words, a little more than a year from the start of the pandemic, 12 vaccines have made it through some or all the stages of human clinical trials. That is extraordinary. Let's be sure we understand what that means. A clinical trial conducts a new drug, and a vaccine counts as a drug through several phases.

[00:11:07] **Maryn Mckenna** From phase I, which uses only a few people and tests only for the safety of the compound. Through phase II and then phase III, in which the drug is given to hundreds and then thousands of people to see whether it will work as its creators say it will.

[00:11:27] The major national drug licensing agencies, those are, for instance, the U.S. FDA, the European Medicines Agency, the Central Drugs Standard Control Organization in India and the National Medical Products Administration in China, often ask to see further studies after a formula is approved and allowed to be marketed.

[00:11:50] That's called phase IV. Phase IV looks for any long term problems with safety and effectiveness in the people receiving the new vaccine. And that's especially important for vaccines, because unlike a pill, you can't just stop taking it. Once it's administered, it's in your body. It's not reversible, and there are cases on record of severe vaccine reactions happening, only being discovered at rates of one in 100,000 or one in a million.

[00:12:24] This happened, for instance, in 1976 in the swine flu vaccination campaign in the United States, where 45 million doses of a new flu vaccine were given, and about 500 people developed a trenchant paralysis afterward. So, long-term monitoring of vaccine recipients is important. On how that occurs is going to be very different from country to country, but we'll help you figure out how it is occurring where you are.

[00:12:57] **Maryn Mckenna** It's important to say at this point that the vaccines that have been approved or authorized are not all the same. Several of them use what is called messenger RNA, which is genetic material that provides our own cells with instructions on how to make proteins.

[00:13:17] The material in the vaccine carries instructions on how to make the protein that the coronavirus uses to enter our cells. Once that protein is made, our immune systems learn to recognize it and then they recognize the actual coronavirus when it infects us.

[00:13:38] That's a super simple explanation. Other vaccine formulas insert genetic material inside another virus, usually an adenovirus, which is one of the array of viruses that cause colds in the winter time. That engineered virus protects that inserted gene until it can get inside our cells and begin making the protein that our immune systems need to learn to detect. Yet other formulas use proteins assembled into nanoparticles, and another set use killed viruses that cannot cause disease.

[00:14:15] We'll give you references for these types and for which companies make them, but the key point is that vaccine formulas are different around the world. That's important to know because different formulas have different storage requirements, including the temperatures they have to be kept at, and those place limitations on how vaccines can be transported, especially in low-income countries.

[00:14:43] **Maryn Mckenna** Those differences are one reason, but not the only reason, why vaccination is rolling out at such different speeds all around the world. That's what we're going to talk about next week, the logistical demands of vaccination campaigns and the even more profound challenge of vaccine ethics and equity; ensuring that everyone around the world gets the same fair chance at a shot.

[00:15:16] **Maryn Mckenna** For now, please look at the readings.

[00:15:18] There are recommended ones and also optional resources and references, and visit the discussion forum where we'll pose questions to get you talking to each other.

[00:15:29] Thank you for joining us. Stay safe.

