Ivermectin use may reduce the risk of contracting COVID-19 by up to 91% (avg. 86%) and may reduce mortality by up to 86%

(early treatment, avg. incl. later treatment 68%).

(BiRD Group, February 2021)



Introduction

The distinguished experts of the U.S. Front Line COVID-19 Critical Care Alliance "based on the existing and cumulative body of evidence ... recommend the use of ivermectin in both prophylaxis and treatment for COVID-19." They further explain: "In the presence of a global COVID-19 surge, the widespread use of this safe, inexpensive, and effective intervention would lead to a drastic reduction in transmission rates and the morbidity and mortality in mild, moderate, and even severe disease phases." They are "encouraged and hopeful at the prospect of the many favorable public health and societal impacts that would result once adopted for use." The renowned British Ivermectin Recommendation Development (BiRD) experts come to the conclusion that "of every nine patients who would otherwise die from COVID-19, six can now be saved by using ivermectin." Prof. Abdulgabar Salama from the German Charité states clearly: "If you want to save human lives, you have to use this remedy immediately".

A failure to act will cost further tens (maybe hundreds) of thousands of lives worldwide. Ivermectin will become standard of care globally. The question is: How many people must die before this essential medicine will be adopted? A growing number of countries including

Slovakia in the EU are already using ivermectin with success. In Mexico City the government has implemented a Test & Treat program with significant success. A government-led study with over 230.000 participants comes to the conclusion that compared to a control group, there was up to a 76% reduction in hospitalizations in the ivermectin group, the result being significant at 99%.⁴



When in years from now people, researchers and authors look back on this pandemic, the responses to it and failures, they will hopefully come to the conclusion that we did everything we could to save lives, to prevent grief, to heal the sick and to protect the vulnerable. We hope this information can help move forward into that direction.

¹ Kory, Pierre; Meduri, Gianfranco Umberto; Varon, Joseph; Iglesias, Jose; Marik, Paul E. (2001). Review of the Emerging Evidence Demonstrating the Efficacy of Ivermectin in the Prophylaxis and Treatment of COVID-19, American Journal of Therapeutics: May/June 2021 - Volume 28 - Issue 3 - p e299-e318 doi: 10.1097/MJT.000000000001377

² British Ivermectin Recommendation Development/BiRD Group (2021): Response to EMA. https://b3d2650e-e929-4448-a527-4eeb59304c7f.filesusr.com/ugd/593c4f c12195d52477491a9bd070ca0b702837.pdf.

³ MERKUR (2021): "Hätten tausende Tote weniger": Kann Anti-Wurmmittel gegen Corona helfen? Immunologe prangert fehlende Freigabe an. https://www.merkur.de/welt/coronavirus-medikament-ivermectin-zulassung-immunologe-todesopfer-kritik-90459652.html.

⁴ Merino, José; Borja, Victor H.; Lopez, Oliva; Ochoa, José A.; Clark, Eduardo; Petersen, Lila; Caballero, Saul (2021).

[&]quot;Ivermectin and the Odds of Hospitalization Due to COVID-19: Evidence from a Quasi-experimental Analysis Based on a Public Intervention in Mexico City." SocArXiv. May 4. doi:10.31235/osf.io/r93g4.

About ivermectin

Ivermectin's discovery won the Nobel Prize for Medicine in 2015. It is recognized globally as an essential medicine. It is exceedingly safe⁵ and has a better safety profile than remdesivir, ibuprofen or Aspirin. It has already been taken 3.7 billion times worldwide in human medicine for different indications. Ivermectin is off-patent and can therefore be produced in a cost-efficient manner ensuring equity and global access.

Numerous controlled clinical trials from multiple centers and countries worldwide (55 as of May 17, 2021, of which 28 are randomized controlled trials) are reporting consistent, large improvements in COVID-19 patient outcomes when treated with ivermectin. Comprehensive scientific meta-analyses from seven different expert groups have found an average absolute reduction in mortality in these trials of between 68% and 91%. Based on seven controlled trials

with over 2,600 patients it was found that in the best dosed studies⁷ ivermectin further reduces the risk of contracting COVID-19 if taken prophylactically by over 90%.⁸ Ivermectin has also been shown to successfully treat the post-COVID-19 syndrome (Long COVID).⁹

IVERMECTIN FOR COVID-19

55 TRIALS, 459 SCIENTISTS, 17,730 PATIENTS
28 RANDOMIZED CONTROLLED TRIALS

85% IMPROVEMENT IN 14 PROPHYLAXIS TRIALS RR 0.15 [0.09-0.25]
79% IMPROVEMENT IN 22 EARLY TREATMENT TRIALS RR 0.21 [0.11-0.37]
46% IMPROVEMENT IN 19 LATE TREATMENT TRIALS RR 0.54 [0.40-0.72]
74% IMPROVEMENT IN 20 MORTALITY RESULTS RR 0.26 [0.15-0.44]
66% IMPROVEMENT IN 28 RANDOMIZED CONTROLLED TRIALS RR 0.34 [0.24-0.50]
SUMMARY OF RESULTS REPORTED IN IVERMECTIN TRIALS FOR COVID-19. 05/17/21. IVMMETA.COM

Ivermectin works by blocking the spike protein and the virus from entering into the human cell, thus blocking viral replication, and by regulating viral suppression of the human immune response. Ivermectin has potent anti-inflammatory properties which play a key role in the later stage of COVID-19. In has demonstrated profound inhibition of both cytokine production and transcription of nuclear factor-κB (NF-κB), the most potent mediator of inflammation.¹⁰ Ivermectin thus has proven highly potent anti-viral and anti-inflammatory properties. Finally, due to its mechanism of action, the effects of ivermectin are independent of SARS-CoV-2 strains.¹¹

⁵ Guzzo, C. et al. (2002). Safety, Tolerability, and Pharmacokinetics of Escalating High Doses of Ivermectin in Healthy Adult Subjects. Journal of Clinical Pharmacology, 42, 1122–1133.

⁶ Navarro, M. et al. (2020). Safety of high-dose ivermectin: a systematic review and meta-analysis. Journal of Antimicrobial Chemotherapy, DOI: 10.1093/jac/dkz524.

⁷ Note: Variety in percentages comes from differences in dosages, protocols and study designs. Five dose studies have seen more impressive results than single low-dose studies for example.

⁸ Front Line COVID-19 Critical Care Alliance (2021). https://flccc.net.

⁹ Kory, P. et al. (2021).

¹⁰ Kory, P. et al. (2021).

¹¹ Front Line COVID-19 Critical Care Alliance (2021). https://flccc.net.

Expert recommendations

Distinguished medical experts and researchers from all over the world are recommending ivermectin use in the prevention and treatment of COVID-19 (incl. Long COVID). What follows is a list of some of the most notable experts advocating for the immediate adoption of ivermectin.

Front Line COVID-19 Critical Care Alliance (USA)
Evidence-Based Medicine Consultancy/BiRD Group (UK)
Tokyo Medical Association (Japan)
Nobel Prize Laureate Prof. Satoshi Ōmura (Japan)
Dr. Peter Schleicher (Germany)
Prof. Abdulgabar Salama (Charité, Germany)
Prof. Alessandro Santin (Yale University, USA)
Prof. Eli Schwartz (Sheba Medical Center, Israel)

i. Front Line COVID-19 Critical Care Alliance (USA)



"[B]ased on the existing and cumulative body of evidence, we recommend the use of ivermectin in both prophylaxis and treatment for COVID-19. In the presence of a global COVID-19 surge, the widespread use of this safe, inexpensive, and effective intervention would lead to a drastic reduction in transmission rates and the morbidity and mortality in mild, moderate, and even severe disease phases. The authors are encouraged and hopeful at the prospect of the many favorable public health and societal impacts that would result once adopted for use." 12

The FLCCC unites leading US critical care experts and pulmonologists. It was founded by Prof. Paul Marik, the second most published critical care physician in the world ever. He has written over 500 peer-reviewed journal articles, 80 book chapters and authored four critical care books. He has been cited over 43,000 times in peer-reviewed publications and has an H-index of 77. He has delivered over 350 lectures at international conferences and visiting professorships. He has received numerous teaching awards,



Prof. Paul Marik

including the National Teacher of the Year award by the American College of Physicians in 2017. He has already co-authored 10 papers on many therapeutic aspects of COVID-19.

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¹² Kory, P. et al. (2021).



Prof. Umberto Meduri

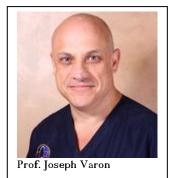
A co-founder of the FLCCC is Prof. Umberto Meduri, the father of ventilation. The worldwide implementation noninvasive ventilation – based on the protocol developed by Dr. Meduri - is recognized as a significant contribution to reducing morbidity and mortality in critical care medicine. In patients with severe COVID-19, noninvasive ventilation has played an essential role in decreasing the need for endotracheal intubation. Prof. Meduri has contributed to others life-saving innovations as well with his work having been referenced in 25,000 peer-reviewed publications.

Another co-founder as well as the President and Chief Medical Officer of the FLCCC is Dr. Pierre Kory, former Chief of the Critical Care Service and Medical Director of the Trauma and Life Support Center at the University of Wisconsin. He is considered one of the world pioneers in the use of ultrasound by physicians in the diagnosis and treatment of critically ill patients. Dr. Kory was also one of the U.S. pioneers in the research, development, and teaching of performing therapeutic hypothermia to treat post-cardiac arrest patients. Dr. Kory has led ICU's in multiple COVID-19 hotspots throughout the pandemic. He



Dr. Pierre Kory

has co-authored 5 influential papers on COVID-19, with the most impactful being a paper that was the first to support the diagnosis of early COVID-19 respiratory disease as an organizing pneumonia, thus explaining the critical response of the disease to corticosteroids.



The FLCCC further includes the co-founder Prof. Joseph Varon who has contributed more than 830 peer-reviewed journal articles, 10 full textbooks, and 15 dozen book chapters to medical literature. He currently serves as Editor-in-Chief for Critical Care and Shock and Current Respiratory Medicine Reviews. Prof. Varon has won many prestigious awards and is considered one of the top physicians in the United States. Prof. Varon is also known for his groundbreaking contributions to Critical Care Medicine in the fields of

cardiopulmonary resuscitation and therapeutic hypothermia. During the past 11 months of the COVID pandemic, Prof. Varon has become a world leader for his work on COVID-19 and his co-development of the MATH+ protocol to care for these patients. For this he has won multiple awards, including a proclamation by the Mayor of the City of Houston as "Dr. Joseph Varon Day".

Prof. Jose Iglesias, another founding member, is an Associate Professor of Medicine at the University of Medicine and Dentistry of the N.J. School of Osteopathic Medicine, and Associate

Professor of Medicine at Hackensack Meridian School of Medicine. He is the medical director of the John J. DePalma Renal Institute of Central Jersey, one of the largest dialysis centers in New Jersey. He is involved in active clinical research in many areas of critical illness including septic shock, congestive heart failure, and acute kidney injury. He has also worked tirelessly at bedsides in ICUs of multiple hospitals in New Jersey throughout the pandemic. His rapidly accumulated clinical insights and expertise helped develop the MATH+ hospital treatment protocol for COVID-19.



Prof. Jose Iglesias

Further founding members include medical experts such as Dr. Keith Berkowitz, Dr. Howard Kornfeld and Dr. Fred Wagshul.

ii. British Ivermectin Recommendation Development (BiRD Group) / Evidence-Based Medicine Consultancy (UK)



"The panel recommends ivermectin for the prevention and treatment of covid-19 to reduce morbidity and mortality associated with covid-19 infection, and to prevent covid-19 infection among those at higher risk." ¹³



The British Ivermectin Recommendation Development (BiRD) group, a panel of global medical experts, has presented a rigorous meta-analysis of available clinical trials of ivermectin against COVID-19. Dr. Tess Lawrie MB ChB PhD requested evaluation by a panel of experts, within a "DECIDE" Evidence-to-Decision (EtD) framework, the standard tool for developing clinical practice guidelines of the WHO.

The E-BMC and the British Ivermectin Recommendation Development (BiRD) were founded and are led by Dr. Tess

¹³ BiRD (2021): The BiRD Recommendation on the Use of Ivermectin for Covid-19. https://b3d2650e-e929-4448-a527-4eeb59304c7f.filesusr.com/ugd/593c4f 1324461135c749dab73ed7c71e47d316.pdf.

Lawrie (MD, MBBCh, DFSRH, PhD), the director of E-BMC. Her range of research expertise, based on research experience in both developing and developed countries, uniquely positions her to evaluate and design research for a variety of healthcare settings. She is a frequent member of technical teams responsible for developing international guidelines. She has done and participated in 41 expert reviews for the renowned Cochrane Collaboration and has contributed to WHO as well as NIH clinical treatment guidelines. Her peer-reviewed publications have received in excess of 3000 citations and her ResearchGate score is among the top 5% of ResearchGate members.

The BiRD group also includes global specialists such as Prof. Héctor Carvallo (MD), an internationally renowned expert on ivermectin. He is a leading physician at the Department of Internal Medicine, Buenos Aires University, Argentina. He also is the investigator and author of the IDEA Trial and IVERCAR Trial, two ground-breaking studies for the prevention and treatment of COVID-19.

"Clinicians in many countries are using ivermectin and have reported on the positive results they have observed. It is troubling to think that with every day that passes, the death toll of this pandemic grows when an effective treatment was, all along, right under our noses." "For a government to continue not to take action on ivermectin is to let people suffer from this terrible disease." 14 – Dr. Tess Lawrie

iii. Tokyo Medical Association (Japan)



Haruo Ozaki, chairman of the Tokyo Medical Association, recommends the emergency use of ivermectin to prevent disease progression.¹⁵

¹⁴ Front Line COVID-19 Critical Care Alliance (2021a): UK-Based Panel of Leading Experts Publish Their Review of the Latest Research and Call for the Immediate Global Adoption of Ivermectin to Prevent and Treat COVID-19. https://covid19criticalcare.com/wp-content/uploads/2021/03/FLCCC-Release-on-BIRD-meeting-2021-03-09.pdf.

¹⁵ TrialSiteNews (2021): Chairman of the Tokyo Medical Association: Household Doctors Should Prescribe Ivermectin to Treat COVID-19. https://trialsitenews.com/chairman-of-the-tokyo-medical-association-household-doctors-should-prescribe-ivermectin-to-treat-covid-19/.

iv. Nobel Prize Laureate Prof. Satoshi Ōmura (Japan)

"A meta-analysis reported improvements of 83% in early treatment, 51% in late treatment, and 89% in the prevention of [COVID-19]. The probability of this judgment being a mistake is as low as 1 in 4 trillion." ¹⁶

Prof. Satoshi Ōmura (MD) is a distinguished researcher who won the Nobel Prize in Medicine for his outstanding work. He has reviewed the data and is convinced that further trials are not needed before an adoption of ivermectin as it would only cost lives that can be saved otherwise.

v. Dr. Peter Schleicher (Germany)

"It is completely incomprehensible that there is no approval for [ivermectin against COVID-19] in Germany. We would have thousands fewer deaths to mourn."

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Dr. Peter Schleicher (MD) is a renowned immunologist from Munich who is treating clients who come to him from all over the world. Dr. Schleicher led the first measurements to immune therapies controlled by FACS 420 (analyzer and sorter) in the world through the introduction of flow cytometry and laser spectroscopy for practical applications in 1984. This method allowed the measurement of cell surface structures for the first time. This was the beginning of applied immunology in daily practice among immune monitoring. Because of this, Dr. Peter Schleicher was appointed in 1988 to the World Academy of Art and Science (WAAS) in the field of immunology. The application for the appointment to the WAAS was presented by Prof. Linus Pauling and Prof. Jonas Salk Edward.

vi. Prof. Abdulgabar Salama (Charité, Germany)

"The mechanism has been researched. The active ingredient blocks the docking of the virus on the target cell and the virus from multiplying. It can even be used prophylactically." "In the event of a corona infection, the virus is blocked immediately. it works best if it is taken early on when symptoms appear. If you want to save human lives, you have to use this remedy immediately." 18

Prof. Abdulgabar Salama (MD) is the Director of the Institute of Transfusion Medicine at the renowned German university hospital Charité in Berlin. He has reviewed the data on ivermectin and given a strong recommendation to use it immediately.

¹⁶ Yagisawa, M.; Foster, P. J.; Hanaki, H.; Ōmura, S. (2021). Global trends in clinical studies of Ivermectin in COVID-19. Japanese Journal of Antibiotics, 74(1) in press.

¹⁷ MERKUR (2021).

¹⁸ MERKUR (2021).

vii. Prof. Alessandro Santin (Yale University, USA)

"The bottom line is that ivermectin works. I've seen that in my patients as well as treating my own family in Italy. We must find a way to administer it on a large scale to a lot of people." "I have witnessed firsthand very rapid responses after the administration of Ivermectin both in Long COVID patients who have not been breathing well for months, as well as in extremely severe patients during the acute phase who were on oxygen and close to intubation." ¹⁹

Prof. Alessandro Santin (MD) from Yale University is an award-winning member of the American Medical Association, the American Society of Immunologists, the Society of Gynecologic Oncologists, and the American Association for Cancer Research. In his treatment of high-risk patients suffering from COVID-19 he has found that ivermectin yields impressive results and was helping when other medications were not. He successfully treated cancer patients suffering from COVID-19 as well as an 88-year-old father with an existing heart condition, all of whom recovered. He is now advocating the widespread adoption of ivermectin.

viii. Prof. Eli Schwartz (Sheba Medical Center, Israel)

"We think that ivermectin can help break the transmission chain ... Nobody knows what's going to happen in the future. Do we have new mutations with more variability? Perhaps the vaccine will be less effective? I think to have an antiviral agent is highly important in so severe a disease." ²⁰

Prof. Eli Schwartz (MD, DTMH) is known for his speciality in tropical diseases. He is currently president of the Asia Pacific Travel Health Society (APTHS) as well as the Israel Society for Parasitology, Protozoology and Tropical Diseases (ISPPTD). At clinical practice, he is a leading member of the Sheba Medical Center and a Professor at the Sackler Faculty of Medicine at Tel Aviv University. Prof. Schwartz himself has led a randomized placebo-controlled trial of

ivermectin in COVID-19 coming to the conclusion that ivermectin can "cure" people of the virus in six days.



¹⁹ TrialSiteNews (2021a): Top Yale Doctor/Researcher: 'Ivermectin works,' including for long-haul COVID. https://trialsitenews.com/top-yale-doctor-researcher-ivermectin-works-including-for-long-haul-covid/.

²⁰ Neves, J. (2021): 'We think that Ivermectin can help break transmission chain', says Prof Schwartz.

https://www.biznews.com/thought-leaders/2021/02/26/ivermectin-research.

Global experiences and case studies

An increasing number of countries, states and/or regions worldwide are adopting ivermectin-based protocols against COVID-19 based on the recommendations of distinguished experts. What follows are three out of multiple examples from different parts of the world where ivermectin was used systematically.

i. Mexico City, Mexico

Mexico City implemented a Test & Treat program starting December 31, 2020, whereby if someone tested positive for COVID-19 they would be immediately given ivermectin with cofactors. Hospitalizations and fatalities went down shortly after.

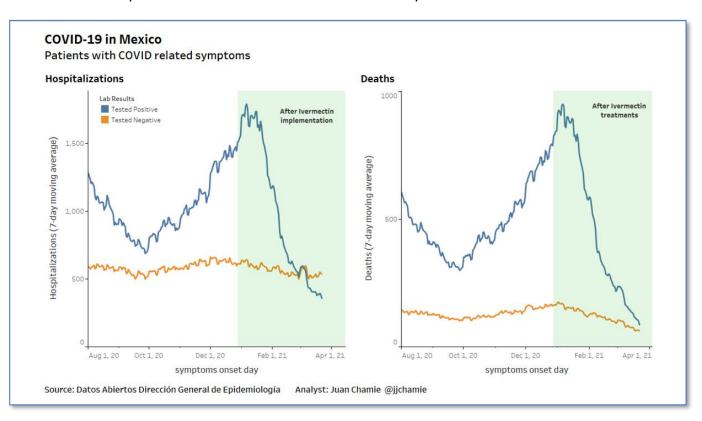


Image: Courtesy of Juan Chamie (Data Analyst, FLCCC)

With the participation of the Mexican Health Ministry a large quasi-experimental study was conducted with 233,849 participants (77,067 in the ivermectin group and 154,560 in the control group) to evaluate the Test & Treat program.²¹ The study found an up to 76% reduction of hospitalizations and severe disease with ivermectin.

²¹ Merino, José; Borja, Victor H.; Lopez, Oliva; Ochoa, José A.; Clark, Eduardo; Petersen, Lila; Caballero, Saul (2021). "Ivermectin and the Odds of Hospitalization Due to COVID-19: Evidence from a Quasi-experimental Analysis Based on a Public Intervention in Mexico City." SocArXiv. May 4. doi:10.31235/osf.io/r93g4.

The Mexican *proceso* reports the following:

The use of Ivermectin in people with covid-19 who underwent treatment at home reduced the probability of having severe symptoms and going to the hospital by up to 76%, according to the analysis of public policy that applied by the government of Mexico City since the end of December 2020.

The Secretary of Health, Oliva López, explained that during the study no negative effects on the health of patients were detected and that the drug will continue to be delivered to people who go to the macro kiosks and health centers to take the rapid test and their results are positive. Likewise, he called on the citizens of the capital not to self-medicate, as this drug must be consumed under medical supervision.

In a videoconference, José Antonio Peña Merino, general director of the Digital Agency for Public Innovation (ADIP), explained that in the investigation 220 thousand observations were made among people who were positive for covid-19 and received the health kit with Ivermectin 6mg, in addition to acetylsalicylic acid 100mg, and those who did not receive it, but had similar health characteristics and comorbidities.

He explained that the "quasi-experimental" analysis was made from administrative data of hospitalizations and monitoring by Locatel, comparing recipients of the medical kit against non-recipients. "The main result is that the range of the effect of the medical kit with ivermectin is a reduction of between 52% and 76% in the probability of being hospitalized, compared to identical people (symptoms, age, sex, comorbidities) without a kit, significant at 99%," he said. ... "The important thing here is really to validate that the public policy that Mexico City implemented on a massive scale, in this case the medical kit, was an important factor in reducing hospital admissions and, of course, possible deaths," he added.

Secretary Oliva López added that no side effects were identified in the use of this drug, and added: "What we do identify quite strongly is the reduction in terms of the probability of being hospitalized, that is, of developing a serious condition. That is the most important effect".

The official added that it is already a "standardized, massive" treatment in Mexico City, where more than 135,000 medical kits have been delivered. Then, he reiterated: "We see and it is demonstrated with this research that it has a positive effect to reduce the risk of serious disease of covid-19".²²

²² proceso (2021): Use of Ivermectin reduced the probability of severe symptoms and hospitalizations in CDMX by up to 76%. Secretary Oliva López added that no side effects were identified in the use of this drug. https://www.proceso.com.mx/nacional/2021/5/14/uso-de-ivermectina-redujo-hasta-en-76-la-probabilidad-de-sintomas-graves-hospitalizaciones-en-cdmx-263935.html.

A comparison of Mexico City (population ca. 9 million) with Israel (population likewise ca. 9 million), one of the countries with the highest vaccination rates, shows the efficacy of ivermectin.

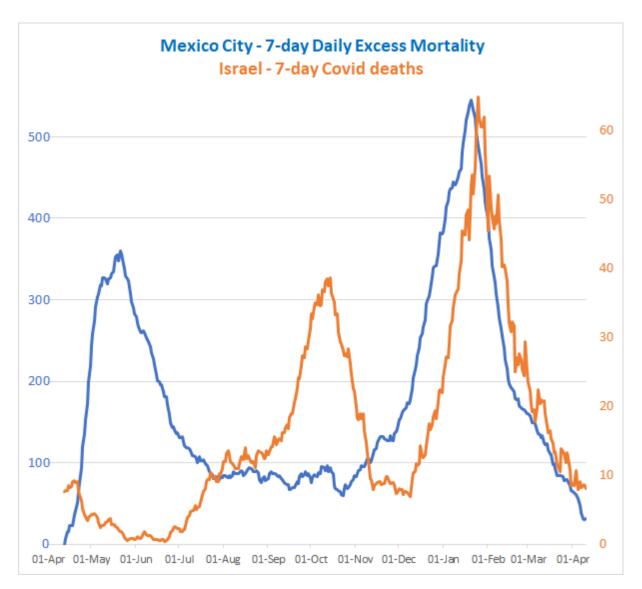


Image: C19C

ii. Slovakia, European Union

The EU country Slovakia started using ivermectin at the end of February with ivermectin import reaching highs in March.²³ Death, hospitalizations and cases went down shortly after.

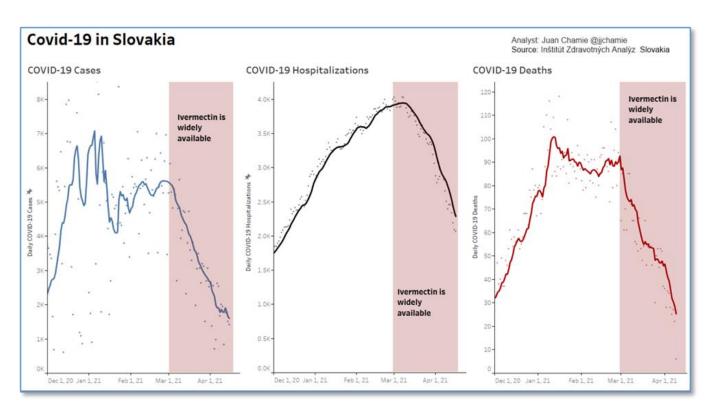


Image: Courtesy of Juan Chamie (Data Analyst, FLCCC)

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²³ TrialSiteNews (2021) Slovakia Authorized Ivermectin: Then What Happened? https://trialsitenews.com/slovakia-authorized-ivermectin-then-what-happened/.

iii. Zimbabwe, Africa

Faced with the South African variant, Zimbabwe decided to approve ivermectin use in January 2021 after government ministers recovered from COVID-19 due to treatment with ivermectin. Zimbabwe's cases and fatalities fell shortly after.

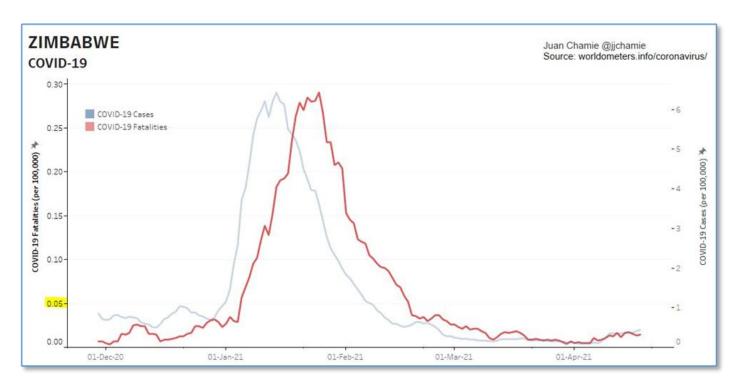


Image: Courtesy of Juan Chamie (Data Analyst, FLCCC)

Thank you for your attention.

