

COVID Doctor Who Left Hospital Job Has New Vision for Health Care

Analysis by [Dr. Joseph Mercola](#)

✓ Fact Checked

April 16, 2023

STORY AT-A-GLANCE

- › Before the COVID pandemic, Dr. Paul Marik became well-known for his development of a highly effective sepsis protocol using intravenous vitamin C, which resulted in a dramatic reduction in mortality rates
- › In 2020, he cofounded the Front Line COVID-19 Critical Care Alliance (FLCCC) and subsequently published one of the most comprehensive and effective protocols for treating COVID-19, called MATH+
- › While COVID mortality in Marik's ICU was half that of his peers, the hospital banned the protocol from being used
- › Marik sued to get MATH+ reinstated, at which point he was put through a sham peer review. The hospital levied fabricated charges against him and his hospital privileges were immediately suspended
- › After Marik's long tenure with numerous accolades, the hospital reported him to the National Practitioner Data Bank, which makes it near-impossible to get a medical license again in any state. This effectively ended his clinical career. However, Marik is taking a new route. Having discovered the falsehoods that conventional medicine has been built upon, he's now researching and developing health protocols using lifestyle modification, diet and repurposed drugs

Before the COVID pandemic, Dr. Paul Marik became well-known for his development of a highly effective [sepsis protocol](#) using intravenous vitamin C, which resulted in a

dramatic reduction in mortality rates. Then, in 2020, he cofounded the Front Line COVID-19 Critical Care Alliance (FLCCC) and subsequently published one of the most comprehensive and effective protocols for treating COVID-19.

Despite a stellar career up to that point, the sin of insisting on early treatment for COVID-19, and sharing that information with the public, resulted in him being vilified, discredited and ultimately forced to resign. I'm a veteran of this too, so much so that the first two times I attempted to interview Marik, he turned down the invitation, in part because of how I was being portrayed by the media.

"I was still digesting what was happening and I was unsure," Marik says. "I didn't realize how important you are in telling the truth and standing up for the truth. I was a little bit protective. We have subsequently met and, obviously, you're one of my heroes because you stand up for the truth and you've known about the dishonesty, the deceit, the deception for much longer than I have.

I had swallowed the Kool-Aid. I was a tenured professor of medicine. I was the only one tenured in my department, in fact. I believed the medical literature, I believed the narrative. I believed what I taught, and you can understand how disturbing it is to one's very core when you discover that what you've been teaching and promoting is based on lies, falsehood and deception."

Indeed, it's a hard pill to swallow for anyone, and I applaud Marik for having the courage and moral fortitude to follow the real evidence and not back down from the truth once it dawned on him. Some can't handle it and simply stick their head in the sand and pretend they don't know what they know.

COVID Revealed What the Medical System Is All About

As noted by Marik, COVID changed not only the world but medicine as well. Before COVID, intensive care specialists were relatively insulated against the evils of Big Pharma and they had therapeutic freedom. Their job was to save the patient using whatever means available, and they did so.

That changed when COVID came around. Suddenly, doctors were told to send patients home, without treatment, until or unless they were unable to breathe, at which point they were to put them on mechanical ventilation and follow a strict drug protocol. Together, these treatments proved deadly for most patients.

Marik was among those who refused to accept this and set out to develop treatment protocols, one for use in-hospital and another for early outpatient treatment.

"We had a really successful protocol for treating COVID in the hospital," he says. "That's how we really started the MATH+ protocol. We knew it was effective. My results were better than any of my colleagues'. But the hospital decided to basically outlaw what I was doing.

I was using safe FDA approved drugs which have been shown to be effective for COVID, and the hospital I worked at, the Sentara Healthcare system, publicly made a statement that the pharmacy would no longer dispense the medications I had used ...

Basically, all I was left with was remdesivir. As we know, the use of remdesivir was halted for Ebola because it was shown to be a toxic drug that killed people. We know that Gilead and the National Institutes of Health (NIH) and [Dr. Anthony] Fauci committed scientific fraud in the conduction of the remdesivir study ...

They committed out-and-out scientific fraud. We know, according to publicly available World Health Organization data, that remdesivir increases the risk of a patient developing renal failure 20-fold. We know it increases your risk of dying.

You can understand the situation that I was in. I was the director of the ICU. I had run the ICU for 15 years, and now I was told I can't use safe and effective drugs to treat my patients. Rather, I must use a toxic drug for which the hospital gets an additional bonus.

That was a big awakening for me and it speaks to the depth, the breadth of corruption. Basically, the health care system is not patient-gearred or health care-gearred or gearred to enlighten patients, improve their health, improve their lifespan, make them happy, improve their general health.

The system is designed to make money. Simple as that. Make money for Big Pharma. Make money for the hospitals and the system and therefore empower the NIH. That's a brief overview of this journey that I've traveled. They have persecuted me professionally and personally. Their goal was to take me down and destroy my career.

They were somewhat successful in ending my clinical career, but I'm not going to give up. I will never give up because you have to fight for truth and honesty. I think now I have a much bigger role because I and you and many of us have revealed the deceit of the system, and we need to empower patients and health care providers to do what our Hippocratic duty is: To help patients. That's what we're here to do."

The MATH+ Protocol

The initial MATH+ protocol the FLCCC developed in early 2020 got its name from:

- Intravenous **M**ethylprednisolone
- Intravenous **A**scorbic acid
- **T**hiamine (B1)
- Full dose low molecular weight **H**eparin
- **Plus** optional treatments zinc, vitamin D and melatonin

Since then, the protocol has been revised several times as more data became available. Additional protocols have also been developed, including one for long-COVID and COVID jab injuries. You can [find them all on the FLCCC's website](#).

Duty to the Patient Led to Sepsis Treatment Discovery

As explained by Marik, the MATH+ protocol grew out of his HAT protocol for sepsis, developed four years earlier.

"HAT stands for hydrocortisone, ascorbic acid and thiamine. How did this start? I'm a bedside clinician and as [Sir William] Osler said, 'You learn medicine at the bedside.' Why? Because that's where the patient is ... That's where some of the most important discoveries are made, at the bedside. [In] January 2016, I had a patient who had overwhelming sepsis. I think she was in her 50s.

She had biliary sepsis. She arrived in the ICU. She became intubated. She was in renal failure. She was on multiple doses of vasopressors. As a doctor, I knew she was going to die ... and when you're at the bedside, you have a duty to the patient. The doctor always thinks, 'What can I do to help this patient? Is there a rabbit I can pull out of the hat to help her?'

It just so happened I had read some work on vitamin C by Dr. [Alpha] Fowler and I was really impressed by his work. He had done a preliminary study looking at vitamin C in sepsis and I thought, 'You know what? Why don't I try it?' It's available in the hospital. It's FDA approved. I called my pharmacist; we had vitamin C. I told them what I wanted to do. I explained to the family what we were going to do. I decided to use vitamin C.

I was unclear about what dose to use. I looked at Dr. Fowler's study and in his paper, he used two different doses, 50 milligrams per kilogram per day and 200 ... We started off on 100 mg per kg per day, which came out to 1.5 grams every six hours ...

I was always very impressed with hydrocortisone for sepsis. More recently, like a week ago, we now have a paper proving the lifesaving benefit of hydrocortisone in pneumonia. So, this wasn't something I sucked out of the air.

Then I added thiamine because of its multiple beneficial effects. At first I thought it would help protect against oxalosis with vitamin C, but that wasn't true. But thiamine actually has important effects in intermediary metabolism, mitochondrial function, energy, metabolism, and patients with sepsis are often both vitamin C deficient and thymine deficient.

That was the initial rationale for this. I thought, 'Well, what do we have to lose?' I was convinced the next morning when I came to work, she would not be with us. I can tell you, I was completely dumbfounded and stunned. The next morning, she was sitting up in bed, she was off vasopressor agents. She got extubated. Her kidney function had improved, and she left the ICU three days later.

I was stunned. Our nurses were stunned. The residents were stunned. They'd never seen such a thing. This is a woman who we knew was going to die and she walked out of the hospital. When you see something like this, you say, 'Wow, maybe that was just a fluke.' But I did it again and again and again, and exactly the same thing happened.

We started this as a protocol in our ICU and this was endorsed by our nurses because they could see the dramatic effect. The nurses tell the truth. They're the ones at the bedside ... although the hospital tried to silence them."

Marik's Sepsis Protocol Proven to Save Lives

At one point, Marik considered doing a randomized study to test his sepsis protocol, but his nurses dissuaded him. They deemed it unethical to withhold a treatment that clearly had superior effectiveness from people in the placebo or conventional treatment group. In the end, he published a prospective observational study in which he compared his treatment to retrospective data.

"We used the same selection criteria and we showed a significant reduction in mortality from about 40% in the ICU to 8%," he says. "At the beginning, I was a

hero at the hospital. They thought this was the most wonderful thing. They supported me.

They endorsed me and the dean supported me. But with time, as the media and [other] forces started playing out, I became less and less and less popular, to the point when it came to COVID, I was a pariah and they wanted to destroy me.

At that time, in the early or late 2017, 2018, sepsis was ... one of the indicators of the quality of hospital care, and CMS [the Centers for Medicare & Medicaid Services] had quality indicators. Hospital sepsis mortality was a big deal ...

The CEO of the hospital at that time was a very nice man. He provided me with the [hospital mortality] data. This was independent data from a data analytics company, which showed that since I had introduced the protocol ... the hospital mortality from sepsis fell from 20% to 8%."

How Does Vitamin C Combat Sepsis?

As for how vitamin C works in sepsis,¹ Marik points out that vitamin C is more of a stress hormone than a vitamin. All animals, with the exception of humans and guinea pigs, make vitamin C when stressed. It's made predominantly by the liver and kidneys.

So, it's very important for or during stress. It's also a powerful antioxidant, and it's required as a cofactor for the synthesis of many enzymes and proteins. It also plays an important role in your immune system, as it's involved in white blood cell function and the production of interferon.

Unfortunately, humans do not make endogenous vitamin C like other animals. So, when we are under stress or experience acute illness or infection, we need vitamin C, and oftentimes more than we get from our diet. As explained by Marik:

"When patients are septic, they have exceedingly low vitamin C levels. Animal models show that when you replace the vitamin C, it improves the outcome. This is not rocket science.

Vitamin C is essential as a stress hormone. It's an essential antioxidant. And sepsis is a potent prooxidant. It's important for the immune system. It's important for the synthesis of catecholamines. It's essential for tissue repair. It just makes sense that it would be beneficial in sepsis."

The Timing of Vitamin C Administration Matters

The timing of the vitamin C administration for sepsis appears to be crucial, however. In his paper, Marik stated that patients were treated within 24 hours. However, they were really treated within six hours of ICU admission, and this is probably why some attempts at replication have failed.

For example, in one, vitamin C was administered within a 10-hour window. Others waited days before giving it. In one of the largest studies, which sought to invalidate Marik's data, they didn't give the first dose until 18 hours or more had passed.

"In this large randomized study which so-called 'disproved' our paper, the time to initiation of therapy was exceedingly long. Most patients were more than 24 hours ... And, the investigators had previously viciously attacked me. In fact, at an open meeting they implied that I was a snake oil doctor ...

As you know, this is a war on repurposed drugs, and they will do whatever they can. When you look at the data, it seems that if [vitamin C] is given early, it works. I did somewhat of a dose-finding study with our initial patients, just based on the variation according to what the pharmacy did, and it seemed like 1.5 grams, if given early, makes a difference ... If it's given after six to 10 or 12 hours, I think you need a higher dose ...

Dr. Pierre Kory has done work in his ICU and he found exactly the same thing, that when there's a delay in the initiation of vitamin C, the mortality benefit disappears. The question is, if you give it later, can you use a higher dose? That's what we now are suggesting – that if you miss that window of opportunity, you probably need to use a higher dose ...

There was a randomized study done in Taiwan, but they couldn't get it published because the results were so striking. They gave [vitamin C] within two hours and the mortality reduction was completely off the charts. So, I think there's a relationship between time and dose ... But what the optimal dose is, I'm not sure ... We need better dose-finding studies ..."

One of the reasons Marik is still cautious about giving high doses of IV vitamin C for sepsis is because at high doses, it can act as a prooxidant. This is particularly true when there are free metals and free iron, and with sepsis you do get release of ferritin.

Marik Falsely Accused of Data Fabrication

As mentioned, in 2020, the MATH+ protocol became an extension of the HAT therapy for sepsis. At that time, the NIH, the CDC and WHO all claimed there was no treatment for patients hospitalized with COVID, which, as Marik notes, "is completely absurd."

"How can a doctor not treat a patient? We came up with the MATH+ protocol ... We demonstrated a reduction in mortality.² I had data from my own hospital showing the reduction in mortality. The first assault against me came when Kory, Dr. Jose Iglesias and I wrote a review paper on MATH+. We just reviewed the rationale for MATH+. In it, I quoted the hospital mortality, just one line, which was 8.6% at that time.

The hospital mortality worldwide at that point was 20% and we've subsequently published data in a peer-reviewed journal showing the average hospital mortality for COVID was 20%.

Where did I get the data? The chief medical officer of the hospital personally gave me the data, the hospital mortality, at Norfolk General. This was Dr. Michael Hooper. [But] Sentara Healthcare system and Hooper basically complained to the medical school [saying] I had fabricated the data.

There was a big inquiry. In the end, the medical school agreed with me ... Anyway, what happened is the hospital put pressure on the journal, the Journal

of Intensive Care Medicine, and forced them to retract our paper because of 'scientific fraud and misconduct.'

The journal followed what they said. Clearly there were other extraneous forces acting with the hospital, but they retracted our paper ... That was really the first major attack on me personally, and on the MATH+ protocol and against what we were doing ... It was immoral because what we had in the paper was the truth. I think this emphasizes the power that the hospital systems have, and these other forces."

As mentioned earlier, even though the MATH+ protocol was saving lives, the hospital essentially banned its use, leaving only toxic remdesivir. "The first week I went to work after this ban, I had seven patients with COVID and all seven died because I was basically put in a position that I wasn't able to treat my patients," he says.

Sham Peer Reviews and Kangaroo Courts

At the recommendation of his legal counsel, Marik sued the hospital in an effort to get the MATH+ protocol reinstated. The same day they went to court, Marik received a letter accusing him of a host of outrageous crimes.

"What hospitals do to get rid of doctors who are inconvenient to them, or who want to tell the truth, is they basically falsify a number of accusations," Marik explains.

"They accused me of seven most outrageous things, including that I was forcing nurses to give patients medications to which they were allergic. Can you imagine something as outrageous as that? I think you would have to be completely moronic to actually think that a doctor could ever do such a thing.

They claimed I was forcing nurses to put the medications down the NG [nasogastric] tube. These were outrageous accusations and there was no documentation. There were no names or patient records or anything to support

these claims, and based on these outrageous claims, they suspended my hospital privileges immediately.

I was found guilty. There was no due process. I wasn't allowed legal representation. They basically stopped me practicing medicine based on these false accusations.

At that time, I didn't know what was going on but I recognized subsequently, it's a process called 'sham peer review,'³ where hospitals invent accusations against doctors, and the system is such that because you don't have due process, you're assumed to be guilty.

You can lose your license and your privileges, and they get away with it. I then went to a hearing, which was indeed a kangaroo court with about 25 hostile people, and I wasn't allowed legal representation. They knew the previous charges were completely bogus. They did what sham peer review does. They changed the focus.

They didn't focus on the previous terrible crimes that I had committed. Now they basically said that I was a horrible individual. I was promoting an atmosphere of retaliation, distrust. I had angered people. I had annoyed people. I was just an awful human being, which was somewhat surprising to me because I'd never had a patient complaint in my entire clinical career, ever.

I'd never had a complaint from a medical student. I'd never had a complaint from a resident. I had never had a complaint from a nurse. All my evaluations were glowing. Suddenly I was this awful, horrendous human being that was creating distrust in the hospital. They went out of the way to not reinstate my privileges.

They reported me to the National Practitioner Data Bank. When you get reported to the National Practitioner Data Bank, your name is there forever, and it makes it almost impossible to get a license again in any state. The hospital essentially

ended my career based on fraud, falsification of data, deceit, dishonesty and unethical behavior.

And here I had data to prove that in my ICU, under my care, the mortality was at least half that of my colleagues. That was irrelevant. They had to get rid of me because I was challenging the system. Essentially, I was forced to resign because they have enormous power and influence ... That essentially ended my career."

Anonymous Career Undoer Strikes Again

In addition to all of that, after Marik's resignation in March 2022, a letter was sent to the CHEST journal, which had published his sepsis study in 2017, questioning the scientific validity of that paper and accusing him of data fabrication, yet again. The journal insisted he take the allegation seriously.

"I responded to the journal very professionally. I actually still had my data. I provided the data, I provided the IRB approval [from the] Institutional Review Board. The protocol was approved both by my medical school as well as the health care system. I provided all the data.

In September 2022, I received a letter from them, which said, 'After a thorough review of the statistical methods and facts of the case, no further action will be taken in response to these allegations.' CHEST cleared me of these allegations. However, it goes on. 'However, during the course of our investigation, we received a new allegation.'

There were now new allegations regarding the methodology in our paper, which they said would violate the journal's ethical policies, if true.

Basically, what they said is, review of the institution's records yielded a discrepancy in a number of patients meeting the inclusion and exclusion criteria ... [they were] basically saying that I had cherry-picked the patients. I had

manipulated the data. There's only one place that this accusation could have come from, only one source.

CHEST did not reveal the source of the allegation, but you put two and two together and there's absolutely no question of doubt where this allegation came from. This allegation came from Sentara Healthcare system, because they could in some fashion put together the data. There's no question that the chief medical officer, Dr. Michael Hooper, and Sentara had again wanted to discredit me.

This is the third time now they're going after me. Again, this went on from September 2022. I was absolutely convinced that much like the Journal of Internal Care Medicine, the editor would not show scientific integrity and would have our paper retracted.

However, I was really surprised that a few days ago, April 3, I actually received a letter from CHEST in which they basically said they found insufficient evidence to confirm all of these allegations.⁴ Essentially we were vindicated. What they did want us to do was to make two small changes to the methods section. The conclusions stayed the same ...

These were really inconsequential changes. In a way they validated our study. They vindicated me. They vindicated the protocol. I was really pleased that CHEST actually drew a line in the sand and said, 'You know what? We're going to look at the data. We're going to stand for the truth.' Although CHEST had dragged their heels and weren't that responsive, I'm really appreciative to CHEST and the editor for standing up for the truth ...

As you know, if you challenge the narrative and show that your treatment is actually efficacious, safer, and cheaper than that being promoted by the CDC, the NIH, the federal government, you are an enemy of the state and they were going to do whatever they could to take me down."

Near-Infrared Sauna Therapy for Long COVID

The FLCCC MATH+ protocol now also includes near-infrared sauna therapy, which I think is a phenomenal addition, as near-infrared activates the production of melatonin in the mitochondria. This is precisely where melatonin is needed most, because most of the oxidative stress is created in the electron transport chain during the production of ATP. Marik comments:

"At the beginning I was a little bit skeptical, but the reality is there's an enormous body of science to support this. I think if something is valid, it will be out there. If you actually do a MEDLINE search in the National Library of Medicine, you'll find over 6,000 publications on photobiomodulation. It's truly astonishing. Really what it is, is harnessing the power of the sun.

I know you go for a walk in the sun every day. Absolutely, there's enormous data on the curative powers of the sun. In fact, in 1918 during the influenza pandemic in Boston, they took patients who were in the hospital outside in the sun. They called this 'open air therapy' and they showed the mortality decreased from 40% to about 13%.

There's data now going back over 100 years attesting to the power of the sun. Most of the sunshine is near-infrared and near-infrared has enormous health benefits ... It's anti-inflammatory, it energizes the mitochondria, improves your metabolic dysfunction. It's really important.

The problem is people who live in an igloo or near the North Pole, that's not conducive to going outdoors. But you can purchase infrared lamps, one in particular that mimics sunshine, and you can expose yourself to near-infrared every day indoors.

That's what I do. It's part of my protocol. When I sit working or watching TV, I expose myself to near-infrared ... You really want to replicate the way that we've evolved.

Sunshine during the day. Eating sparingly during the day. Eating saturated fat, and then at night, you sit around a campfire. Campfire makes red light, which is infrared, and it doesn't switch off melatonin ... It's really about getting back to basics and I think you are one of the leaders in this lifestyle change."

Finding Truth Brought a Silver Lining: Better Health

As noted by Marik, what happened with COVID has shone a bright light on corruption, deceit and dishonesty in the medical system that had been there for decades. It just wasn't obvious to most people.

Once Marik began looking at protocols to treat COVID, he discovered that much of what's taught in medical school and published in medical journals is false. The fraud is perpetrated by Big Pharma, and it's to the detriment of our health.

"Diabetes and metabolic dysfunction is part of that," he says. "If you believe the narrative, Type 2 diabetes is a progressive metabolic disease that'll result in cardiac complications. You're going to lose your legs. You're going to have kidney disease, and the only treatment is expensive pharma drugs. That is completely false. It's a lie.

This becomes important because it's projected that by the end of this decade, half of the world's population are going to be obese and over 20% to 25% will have Type 2 diabetes. The implications are enormous. The bottom line is Type 2 diabetes is a metabolic disease due to bad lifestyle and really bad eating habits.

We eat all the time. We snack all the time. This is part of the food industry's goal. Processed food, starch, becomes an addiction. Most of us are glucose addicted and it's, in fact, more addictive than cocaine. It creates this vicious cycle of insulin resistance.

If you're insulin resistant, it prevents leptin and the other hormones acting on your brain, so you're continually hungry. If you are continually hungry, you eat

more, which causes more insulin resistance. It causes this vicious cycle of overeating carbohydrates ...

What I did was, I started intermittent fasting ... I started eating real food, not processed food. I've significantly reduced my intake of carbohydrates. By changing my diet and lifestyle ... I'm off my diabetes medicine. My fasting glucose is down to 100 where it used to be 150 or 160. My hemoglobin A1C, probably the best marker of diabetes went from 7.1 to 5.6 ...

Through this journey, I have changed my lifestyle. I've changed the way I eat and hopefully we can help other people. I also discovered there is an ancient Chinese herb called berberine – it's been used for 3,000 years – which is probably the most effective diabetic medication there is. It's very effective and this has been demonstrated in really good, well-designed trials.

The reason most people don't know about it is you can't patent berberine, so no one can make money from selling berberine.

Therefore, there's no financial incentive in promoting it. It's cheap. It's over the counter, you can get on the internet. The combination of changing my diet, changing what I eat, taking berberine, I've basically cured my diabetes and there are many people that have followed this path.

Again, it attests to the deceit and dishonesty of the medical system. They benefit from people being chronically ill, from chronically taking medications because that's what generates their income. Actually, for the health care system, I've saved enormous money because you spend less money on food and no money on medication, and I'm not going to develop, hopefully, all these diabetic complications."

More Information

Again, you can find all the different treatment protocols on the [FLCCC website](#), including:

- Prevention protocols for COVID, influenza and RSV
- Early COVID treatment protocols for adults and children
- Acute treatment protocols for RSV and influenza as well as a hospital treatment protocol for COVID-19
- Recover protocols for long COVID
- Post-COVID jab protocol

They now even have a treatment protocol for insulin resistance. Marik is also working on a new cancer treatment protocol using a metabolic approach and repurposed drugs. "Much like diabetes, patients with cancer can empower themselves," he says, adding:

"I'll tell you about a remarkable peer-reviewed randomized controlled study – exactly what the ivory tower people want – that looked at three simple interventions to reduce the risk of cancer. Three. Vitamin B, omega-3 fatty acids and exercise – and not smoking. They showed that these simple interventions reduce your risk of cancer by 50%. Isn't that important?"

There are some other things I would add to the protocol. Melatonin is very important in preventing cancer. There's really good data that people who have low melatonin levels have much higher risk of cancer, particularly breast cancer ...

So, there are simple things people can do to empower themselves to both reduce their risk of getting cancer and if they have cancer, they can work with their oncologist in an integrative adjunctive way, which will allow a reduction in the doses of toxic chemotherapeutic drugs. I think this is a really exciting area of endeavor ...

[Dr. Thomas Seyfried's] book was the impetus of me going down this path. His book is brilliant. He is a true scientist. I'm absolutely astonished by the depth and breadth of his research. Once you read his book, it's perfectly clear that this is a metabolic disease and it can be controlled by metabolic intervention.

I think he is a pioneer, and for me, he's changed my direction. This is not based on hearsay or snake oil medicine. This is based on really high-level scientific investigation. His work gave me the springboard and the encouragement to follow this path."

Sources and References

- [1 Dropbox Metabolic Resuscitation of Sepsis & COVID-19: A Focus on Vitamin C](#)
- [2 Dropbox GICU Mortality](#)
- [3 Dropbox The Anatomy of a Career-Ending Sham Peer Review](#)
- [4 Dropbox World-Renown Physician's Landmark Research Validated](#)