

Erin Welsh

Hi, I'm Erin Welsh and this is This Podcast Will Kill You. You're listening to the latest episode of the TPWKY Book Club where we bring on authors of best selling books in science, medicine, and the history of science and medicine and ask them all sorts of questions about those wonderful books. So far this series we've gotten to dig into topics ranging from the deadly draw of plant and animal derived poisons to the origins of American gynecology; from the way a single molecule can change your entire identity to the current landscape and possible future of the COVID pandemic. And we've got so many more episodes to come.

If you're curious about those book club episodes to come, check out our website [thispodcastwillkillyou.com](http://thispodcastwillkillyou.com) and head over to the EXTRAS tab where you'll find a link to our Bookshop affiliate page. On that page you'll find lists of TPWKY books, including a book club list which includes all of the books we've covered so far and the ones we'll be covering throughout the rest of the season. As always, keep sending in your recommendations, your follow up questions, your thoughts, whatever else. We truly appreciate hearing from you all. Now on to the book of the day. I hope you like time travel because that's exactly what we'll be doing in this week's episode.

New York City in the early decades of the 20th century was a booming, bustling city at the center of the world where everything seemed possible and the good times would never end. It was just basically like 'The Great Gatsby', right? Not for everyone. Underneath this gilded facade of champagne towers and limitless prosperity was a city built on the backs of those deemed second class citizens, immigrant families from Europe and Black families from the South who had packed up their entire lives only to find that this city of opportunity for all turned out to be a city of opportunity for a select few. Crowded into tenement buildings where poor ventilation and inadequate sanitation lit the match and fanned the flames of contagion, these impoverished individuals were stricken by tuberculosis and other infectious diseases in ever increasing rates. Without an effective treatment for tuberculosis, the most feared among these infections, city officials relied on quarantine at specially designated hospitals to solve this problem. Hospitals like Seaview on Staten Island.

In 'The Black Angels: The Untold Story of the Nurses Who Helped Cure Tuberculosis', Author Maria Smilios transports readers to Seaview Hospital in the first half of the 20th century where tuberculosis nursing and treatment underwent a huge transformation. Smilios weaves together an intimate portrait of the Black nurses at Seaview Hospital who bravely took on the challenge of caring for patients sick with an incurable disease, knowing that they themselves were likely to end up infected with this pathogen. She follows their stories as they settled into their work and home lives in New York; as they fought against discrimination; as they feared for their own health and the health of their families; as they celebrated life events and milestones. And ultimately as they helped to bring about the first truly effective cure for tuberculosis. By integrating oral histories, hospital records, and narratives of scientific and medical advancements, Smilios creates a compassionate and immersive reading experience that offers a valuable insight into the lives of these women whose stories had largely been lost to time. I am very excited to share this interview with you all. So let's get right to it.

TPWKY

(transition theme)

Erin Welsh

Maria, thank you so much for joining me today.

Maria Smilios

Thank you for having me.

Erin Welsh

I am so excited to chat about your fantastic book 'The Black Angels'. It was such a captivating and heartfelt read about this really pivotal time in the history of tuberculosis. And you wrote that you came across the story of the Black Angels while you were working as an editor. How did this story spark your interest? And then how did this interest turn into wanting to write an entire book about the Black Angels?

Maria Smilios

I was working, it was 2015, it was August. I was living in New York City. It was a hot day, one of those days where people who live in New York or anywhere in the South can understand where the humidity just claws at you. And it was the middle of the day. And I was editing a book on rare lung diseases, I was working for Springer. And the book was a series of essays about these diseases that affected one in a million people. And the doctor in this chapter was trying out a new medication and he made an allusion in a line that said the cure for tuberculosis was found at Seaview Hospital in 1952. And as I said, I was hot and I was ready for the day to end. And I just thought oh, I'm going to procrastinate now. And I googled it because I'm a native New Yorker and I just love disease and stories about disease and how it moved through the city and how the Harbor Islands were used for purposes where they had built orphanages, sanatoriums, and a TB hospital as I found out.

And up came this article about the cure for tuberculosis found at Seaview Hospital. But next to it was another article about a woman named Miss Virginia Allen and that she belonged to this cadre of black nurses called the Black Angels. And so the next thing I did was started googling her but I put in all sorts of combinations and spent hours doing it and nothing came up and hours turned into days. And then finally towards the end of that week, this was on a Monday... On Thursday I was so frustrated that on a lark I called the Staten Island Museum. I don't know what possessed me to do that. But I thought maybe they know. And the woman on the other end kind of paused when I asked her do you know a woman named Miss Virginia Allen or anything about this cadre of nurses called the Black Angels? And she paused and then she answered me tersely. She said why of course I do, you don't? I said no. And she said we're having a grand reopening of the museum this weekend and she'll be there talking about the Black Angels.

And so off I went with my then four year old to Staten Island. It had been the third time I had ever been there. I grew up in New York and Staten Island may have well been in another continent. So I met her. I said to her I'm interested in this story. And she said call me. Actually she said email me and I emailed her. And we began meeting up in this little cafe in Harlem Hospital. She was working volunteering at the Schomburg on Wednesdays. I would meet her from 12:00-1:00. And we talked about everything but the Black Angels, we talked about literature and New York City in the 1940s. And right before I would leave, all the time, every time right before I left, she would say to me a little bit about the Black Angels, tell me a little bit about her Aunt Edna who was one of the first to come up and say go find out more.

And the 'go find out more' would have been fine but there were no archives. So I would come back with what eventually became the backdrop of the book, stories about the Great Depression and nursing during that time in Harlem Hospital and the role of Harlem Hospital. And about six weeks into this weekly meeting she said to me why don't you come to my home in Staten Island? And I said okay. And Virginia lives in the restored nurses residence which sits in the middle of this abandoned complex. And it was there where the story really began to unfold and it wasn't so much from her memories as it was her connections. When Virginia came, she was young and it was 1947 and her aunt was one of the first people to come up. And so she had a lot of connections on the island with families of the nurses who had been there. And so she gave me their phone numbers. It was there, through the community of Staten Island and through these families where it began to unfold.

Erin Welsh

It's amazing. I think that we can all relate to going down that rabbit hole. But I think not very many of us decide to dig that rabbit hole further and further until they get to the end of what ends up being this really incredible story. The story that you tell largely takes place between 1929-1952 which is a period of incredible transformation for tuberculosis, which is sometimes called the Great White Plague. Can you set the stage a bit by describing how this infection was feared, treated, and dealt with specifically in New York City in the late decades of the 19th century and into the first decades of the 20th?

Maria Smilios

Absolutely. I love this question because I love this time period in New York. It is a time, it was a dark time. And these places where the microbes thrived were dark places. So I just say imagine this, it's the turn of the 20th century and people are pouring into New York City by the thousands, they're coming off these grand liners from Europe with hopes for a better life, their dreams packed into these suitcases. And they're making their way to different boroughs but most of them are kind of making a beeline to the Lower East Side. This is a small area, maybe about two square miles. But at the time it had 80,000 five story tenement buildings that collectively housed over 2 million people. Then, that was 2/3 of New York City's population. The apartments inside of them were no more than 300 square feet.

And you had entire generations, sometimes 10-12 people living in these places where during the day the families would transform the space into these punishing low wage jobs, which included stuff like shelling pecans, rolling cigars, tying tags on clothing. And at night they would sweep away the day's work and go to sleep, head to foot, 4-5 to a bed, some were on the floor, some were under chairs, between chairs. Others went into the hallway and curled up on the staircase where these giant roaches and mice skittered, upsetting the cobwebs and the TB microbes. There was no indoor plumbing. Most apartments had a single window that usually looked out on an air shaft. Now the air shaft was used to toss garbage into the shaftway and so garbage could be piled five stories high, making it impossible to open the window. This was an environment perfect for the TB microbe to survive. And I always say it is a beautifully rendered microbe designed to torture and kill slowly.

The city officials, especially the medical officer, this man Hermann Biggs, Dr. Hermann Biggs who was a kind of bulldog of a guy, he had this lofty aspiration to eradicate tuberculosis in a single generation. He despised the tenements but more importantly he despised the people who lived in them. He blamed them for being sick which is the stigma of tuberculosis. The people are the sum of the disease. So in an effort to control the spread, he waged a war on TB which consisted of disease maps, mass mailings, posters, tent colonies. He even enlisted a health clown named Chew Chew, who along with his health dog sidekick Cream-O, went into the slums and sang ditties to little kids about drinking milk and washing their hands and opening up the windows.

But none of this worked. The disease kept proliferating and Biggs grew desperate. So he went to city officials and he gave this really interesting speech where he reduced human life to dollars and cents. And he said that the quote "immoral, uncouth, uncultured, indigent consumptives" are costing the city millions of dollars a year and they're making other people sick, so we need to quarantine them. Let's build a hospital. In six weeks they approved the plan and eight years later Seaview opened in 1913. Within two days, it had reached its original capacity of housing 800 sick people. Seaview was built on Staten Island which is an island and was not connected to the city. Now it is by the bridge. But it was inhabited. The other harbor islands were uninhabited and this caused the people of Staten Island to become angry. They did not want an infectious disease hospital on their island.

They had some years, some decades earlier, I think it was in 1860, they had burnt down the quarantine station which was a station right on the port where the ships coming in, they would check them for yellow fever and malaria and then they would quarantine the people. And the people of Staten Island had burned this down because they said it was a scourge to their island and to the people. And so when Seaview was built they had a similar reaction to it. So that was kind of the scene during that time of where TB was thriving. It was also proliferating up in Harlem because of the influx of people coming in from the Great Migration, the housing conditions there were awful, medical care for African Americans was also underfunded. African Americans, like the immigrants, were seen as expendable. And so the rate of tuberculosis in the Black community of Harlem was African Americans were dying at three times the rate of white people. So it was these two areas bookending the city.

Erin Welsh

One of the most memorable things that stuck out immediately to me in your book was when you mention a block of the city nicknamed Lung Alley.

Maria Smilios

Yeah.

Erin Welsh

Which I just couldn't fathom how tuberculosis was so notorious and so densely prevalent in that one area that there was a nickname for it. But it makes sense considering all of what you just mentioned about these conditions leading to the transmission of this microbe.

Maria Smilios

Yeah. Lung Alley was a quote "special place". I mean when I read about Lung Alley, I actually was astonished that such a place existed. This one block area housed 4000 people. And Ernest Poole, he was a muckraking journalist and he went in there and he was trying to bring attention to the living conditions. And he was one of the people who said the disease is spreading because of these inhumane conditions. And he wrote this little slim book but it was this little 50 page book and he described 400 babies all over the place, in the hallways, on the fire escapes, anywhere you could put a little human body, they were just scattered in these apartment buildings. And there was a monkey, there were parrots, there were all sorts of animals living alongside the people as well.

Erin Welsh

Let's take a quick break. And when we get back, there's still so much to discuss.

TPWKY

(transition theme)

Erin Welsh

Welcome back, everyone. I've been chatting with Maria Smilios about her book 'The Black Angels: The Untold Story of the Nurses Who Helped Cure Tuberculosis'. Let's get back into things. As you mentioned, one of the ways that the city of New York responded to this high rate of tuberculosis was of course building Seaview Hospital on Staten Island. Quarantine. What factors determined which hospital a tuberculosis patient would be sent to? And what was it like to be a nurse, a doctor, or a patient at Seaview in those early days?

Maria Smilios

That's a great question. The factors that determined where somebody would go was money and social status. It's very similar to what happens today. Those who had money were sent to Saranac Lake. And they convalesced in Adirondack chairs, they had bucolic views of the Adirondack mountains where there were babbling brooks and streams. They saw deer and their days were filled with bird song and sitting on these rustic porches wrapped in patchwork quilts, doing art or reading. If they were really wealthy, they could go to Europe to some of the most famous sanatoriums in Switzerland or Germany. If they were immigrants or people who didn't have money, mostly it was other people who lived on the fringes of society, Bowery bums, prostitutes, petty thieves; they were sent to Seaview because it was a municipal hospital and they couldn't turn anybody away.

So that's really how it was determined where a person would go. Sometimes they went to other hospitals in the city that did have TB wards but most of these people needed long term care. Tuberculosis didn't have... There was no remedy for it at the time. As a matter of fact this was like pre antibiotics, there wasn't an antibiotic for anything at the time. So really what was happening was these people were languishing. They were being warehoused and they were waiting to die. So it was what we call today palliative care really or hospice. Long term hospice.

The second question about what it was like to be a nurse or a doctor or patient... I think well to be a nurse, from what I've read and researched and heard, meant those years was to risk your life to take care of these patients. And as I said we're talking about the pre antibiotic era where there are no drugs for anything. And a lot of times with the surgeries, there were secondary infections like staph or strep. And at Seaview the supervisor refused to let her nurses wear masks because she believed masks made them complacent. So they were working without protective gear. We're also talking about like the early 30s where it was the dawning of research on masks and nurses working in these infectious disease environments. And so it was just starting to become I guess you could say of a more popular opinion that hey, maybe we should let these women wear masks. But this particular supervisor along with others didn't believe in masking, she believed in hand washing as the foremost protection against tuberculosis.

To be a patient meant to be stigmatized and ostracized from your community. It meant carrying a stigma that was akin to a scarlet letter. Children who went to sea view were often abandoned, they were orphaned and a lot of the nurses "adopted" them and I use "adopted" in quotes because they weren't legal adoptions, they just took them home because they were going to be sent to orphanages. Families didn't want people to know they had a loved one, a husband, a wife, a brother, a sister, or a son and daughter that had TB because it meant that, as I said, they would be ostracized from the community. It was that feared.

Erin Welsh

You kind of mentioned how tuberculosis nursing was more like palliative care. What were some of the other ways that tuberculosis nursing was different than other kinds of nursing? And as a nurse, could you choose to go into tuberculosis or was it more of like you were assigned to the tuberculosis ward?

Maria Smilios

Yeah, that's a great question. So the difference between TB nursing and other nursing... Well the nurses who worked with tuberculosis knew the nuance of the disease so well. They knew how it ebbed and flowed. They knew that this was a very wily stealth disease, that people could turn on a dime, they could wake up one morning and be fine and then begin hemorrhaging and choke to death. And these nurses, and this is part of the reason that the nurses eventually became part of the isoniazid trials, knew this disease really, really well. So anybody who was in TB nursing understood that. They also understood that patients were put in this sanatorium often with no family that came to visit them. And so they became their family. I looked at medical cards that told such an appalling and harrowing story. People were at Seaview for 600 straight days; 800 straight days. One read 1019 straight days. That's almost three years at Seaview.

Seaview is 400 ft above sea level. It has a gorgeous view of lower Manhattan. And so when I would go there, I always imagined these people who came to the United States from other places, as I said on these big ships, they come through New York Harbor, the hospital overlooks New York Harbor as well. And as you come through New York Harbor, the first thing you see is the Statue of Liberty. I am the daughter of immigrants. And my mom told me the story when they came over from Greece, everybody ran to the top of the ship like you see in the movies to look at the Statue of Liberty because they felt that they had reached the promised land. And so here were these people coming with all these big giant dreams of a new life and what they find are the slums, sickness, stigma, and Seaview. And so now they're at the hospital and they can see lower Manhattan where they landed, they can see the Statue of Liberty. And it made them depressed, it made them angry. They had no outlet. This is the time before...

Now we have all these teams that take care of people who are terminally ill. You have different types of therapists, psychologists, that really wasn't the case back then. That was all incumbent on the nurses. They became the psychologist, they became the palliative care nurse. The stories that patients told me of nurses sitting bedside reading to them. They became the eyes of people. When they couldn't read because of the fever, they would sit bedside and read for them. So these nurses had to understand all of that and patients often lashed out at them. They had to remain staid, focused. There were lots of racial slurs, that's another thing. There was a lot of patients who didn't want the Black nurses taking care of them. And so they endured a lot on those wards. And then they endured what we call today the systemic racism of the nurses. And I know I deviated a little bit from the actual question of the TB nursing. The other part of the question, could you choose TB nursing? Yeah, you could. And that's why the white nurses began leaving because they had a choice.

Erin Welsh

Let's talk about that. So as you write, in 1929 Seaview began to face this nursing shortage with nurses, predominantly white nurses, leaving in droves. And so how did Seaview come up with a solution for this? And how did that solution fit into the larger context of segregation during this period of the 20th century?

Maria Smilios

Yeah. So when the white nurses began leaving at the end of 1929, it was right before, months before the crash. And the city was just alive. It was thrumming and churning and many people considered at the end of a glorious decade. And it was for white working women. They had so many options for jobs that wouldn't kill them. They could be secretaries, librarians, sales clerks, cashiers. Or as I say in the book, they could work for the New York Telephone Company in this beautiful soaring art deco skyscraper which was the exact opposite of the dark and sprawling Seaview. So they grew tired of the five hour commute from Manhattan to Staten Island. They were tired of the successive 14 hour shifts. But really they were tired of the disease. They were tired of watching their colleagues fall ill, become sicker and sicker from fevers that climbed and climbed. Their faces turned ashen, their eyes glistened from these neverending fevers.

That was the thing with TB. It was just this relentless disease that caused your fever to spike and you became anorexic and it literally consumed you from the inside out, hence the name consumption. So they started quitting. They said you know what? We don't want to do this anymore. And they began leaving. And suddenly the city was faced with a problem. This dream hospital basically overnight became the Commissioner of Health's nightmare. And he said the death rate, it had helped lower the death rate from 10,000 annually when it opened in 1913 to 5000. And there it had stalled, it hovered. And all of a sudden he says oh my goodness, if we can't staff these wards, we're going to be forced to close this hospital, thousands of highly contagious patients are going to converge on the city. They're gonna start getting people sick, infection rates are gonna rise, and we're going to have an epidemic on our hands.

And so he was like this isn't gonna happen on my watch. And meetings ensued and they came up with this idea that it was really kind of born out of the Great Migration. They were like the Great Migration, recruiters are going down and bringing up sharecroppers from the South. They're promising them jobs and homes and they're making steel mills and factories look really good. Nursing isn't factory work but maybe it would work. What they did know was that there were hundreds of underemployed nurses in the South because the same country that drew lines around water fountains and bus stations also drew them around hospitals. At the time, Black nurses could only work in black hospitals. There were about 260 of them vs 6000 white hospitals. So the city said let's offer them a package.

Free schooling if necessary at Harlem Hospital, a steady salary, housing if needed, and most of all as they saw it, a quote "rare opportunity to work in one of the city's integrated hospitals". It's another fact that a lot of people don't know and I didn't know it. I grew up in New York, it was never taught to me. At the time, only four of New York's 29 municipal hospitals allowed Black nurses to work. And Seaview was one of them. And so the call went out, it moved across the Mason-Dixon line through the Carolinas, Virginia, Tennessee, and deeper into the American South. And suddenly the nurses began coming.

Erin Welsh

Let's take another quick break here. We'll be back before you know it.

TPWKY

(transition theme)

Erin Welsh

Welcome back, everyone. I'm here chatting with Maria Smilios about her book 'The Black Angels'. Let's get into some more questions. And one of those nurses of course is Edna Sutton, who is featured prominently in your book as one of the Black Angels at Seaview Hospital. Can you tell us a bit about Edna's story, especially her life leading up to her moving to New York and some of her influences that got her into nursing?

Maria Smilios

I love Edna's story. I love all the stories of the nurses in the book. But I love Edna's story because I love the backstory. It's such an incredible story of tenacity and will and following your calling, your passion, starting with her father. So Edna was born in 1900 on the floor of a tar paper shack in one of Savannah's poorest shanty towns. Her father, Reverend R. V. Sutton, was an enslaved man who in 1899 walked off his plantation in Confederate Wilkes County, Georgia and made his way to Savannah and decided that he was going to reinvent himself. So after Edna was born, her father worked probably for 8 years or so, just these menial jobs. He was doing woodworking. He was actually I was told an incredible woodsmith. But he worked on the hulls of ships, he worked in a dry goods store. Just piecemeal work.

Her mother was a laundress. I always say this, this is such an indication of how almost Edna's life was scripted for her. She rewrote her own story. When she was eight, the Savannah city directory listed her profession as a laundress because she used to help her mother with the laundry at the time. She dreamed of being a surgeon. She loved science, she loved biology. And I was able... The newspaper at the time, The Savannah Tribune, would write these little tiny articles about the community and they talked a lot about the kids who had excelled in school. And Edna's name was always in there. So I knew that she had gotten a 98 in biology and in Latin and she loved literature as well. She was part of a theater group that would often put on Shakespeare plays.

But she loved science and she dreamed of being a surgeon. And her family said like such dreams were considered quote "outrageous and fanciful" for a Black woman in Savannah at that time. But her father had told her to dream big and her parents encouraged her to do well in school, which she did. And after school she enrolled in the Georgia Infirmary which was this, what they called the godforsaken charity hospital that relied on student labor. So in exchange for some training and nursing, Edna had to work the wards. And that's really who ran the wards. They served 1800 impoverished people a year. And their jobs included wound care, assisting in surgical procedures, and cleaning the bathrooms, mopping the floors. But Edna loved her job despite the fact that there sometimes wasn't enough shrouds to bury the dead. Her family said she had found her calling.

Unfortunately after two years, because a new crop of students came in, the school let her go and she took a job sorting and stapling papers and taking care of her younger sister. Her family had migrated north with the Great Migration in 1925. And so she was left behind in Savannah with her younger sister who was at the time 5. Edna was 25. So she really couldn't leave. And she didn't want to go north with her family and become a domestic. She really wanted a career in nursing. So she sort of waited it out and did this job, this office work. And then in August of 1929, a teacher of hers, a former teacher of hers told her about Seaview and told her to apply. And Edna did because what she wanted most in life was to be in the field of medicine, to have a professional career, to be able to buy a house in a place where there weren't signs telling her where to walk, where to eat, how to talk, who to talk to, when to talk to them. And she also wanted her younger sister to have better opportunities than she did.

And so the story of how she makes this decision, her son told me that his mother was a woman who did not take decisions lightly. She weighed them, she was religious and she prayed. But it wasn't the kind of... It wasn't magical thinking where she was waiting for this sign from above. She prayed and she stood at this crossroad of her life. On one side was Savannah with its Jim Crowism and on the other side was New York with its sickness and Seaview and tuberculosis. And she decided that she was going to go north and wager her life on the wards of a TB hospital. I should also add that when they thought they were going to New York, they didn't know they were going to Staten Island. They believed they were going to the city. And so they arrived there and Edna spent the first year and a half having to take classes at Harlem Hospital because she didn't have enough credits to actually begin working at Seaview.

Erin Welsh

When she ended up in Staten Island and at Seaview, what kind of an adjustment was that for her? Both in terms of like this work environment and being able to finally achieve her dreams of working in the medical profession as well as moving away from the Jim Crow South.

Maria Smilios

I really love this question because when people think about other people leaving places, we often forget that even if the place is horrible the way it was in the Jim Crow South, people had lives there. Edna had an entire community of people. That's the only place she ever knew. She had friends. Her family had moved away but they had roots there. She lived on the same street basically for 20 years and it was familiar to her. And she had to go by herself to New York City. So remember, she's coming from this small place in Savannah and she's going to New York City. She ends up in Harlem and she she's living at the nurse's residence in Harlem Hospital when she graduates from the nurse's residence from Harlem. When she has enough credits, she moves into a boarding room. So she lived in Harlem for about 2.5-3 years. It was shocking to her. The cold was shocking to her. The amount of people jostling and pushing her all day long, touching, getting on the train and being pushed or the trolleys and her body being touched in all these ways that it never had been before. The landscape.



If anybody ever has been down south, Savannah is stunning. With the Spanish moss dripping from trees, the smell of the flowers in the spring, the river. Now here she is in an environment that's all buildings. It's gray, it's harsh, and anybody who's been in New York knows how that wind can whip around the buildings. And that was, for her, she couldn't get used to that, that kind of cold. So there was the initial shock of leaving your family and then there is this I guess you can say the shock of the landscape and the terrain on which you're now living. She liked Staten Island. She eventually moved to Staten Island. She moved into the nurse's residence because she got married and she wanted to save money to buy a home. And the only way she could do that is if she moved into the nurse's residence and her husband stayed in Harlem, they couldn't live together. It was an all women's facility.

But her son told me she loved Staten Island because it had a little bit of reminiscence of the South. It was bucolic, it was not crowded. There were goats and chickens and turkeys roaming around. It was farmland. There were cows, there were farmers. Across the street from Seaview was the farm colony that grew all of the food for the patients. So she had this very deep pull to want to be in Staten Island vs Manhattan, which is interesting because some of the other nurses never moved to Staten Island and stayed in Harlem because they didn't want to be reminded of the South. So you did have these two extremes.

Erin Welsh

As you mentioned, there were very few integrated hospitals in New York City when Edna moved. How did desegregation in nursing and medical schools and hospitals eventually begin in the 1930s in New York? And what were some of the drivers of this much needed change?

Maria Smilios

This is such a big question. I'm going to try and reduce it as much as I can. So integration in New York City hospitals, the first movement towards it began in 1934. It was through a nurse that integration in the New York City hospitals began happening. At the time, Mayor LaGuardia was mayor of New York City and he was beloved. People loved him. And he really, really wanted to desegregate the hospital system because he knew that the Black community talked about the segregation of the hospital system on a regular, the Black press talked about it all the time. W. E. B. DuBois' The Crisis would print articles about it because Harlem Hospital was the heartbeat of the community. And nurses and doctors would walk in the dining room and they would be sat at separate tables. And another thing, the city refused to hire Black nurses and doctors. So he really wanted this to end.

Except he had a health commissioner at the time, Commissioner of Health, he had hired him, Goldwater, who there there was a hospital named after him too and he's touted as this incredible man and he did do pretty astonishing things, both good and bad. He was an overt racist. He did not believe Black nurses or doctors should be working in municipal hospitals. And he believed all these myths surrounding Black nurses that had been circulating in the nursing community from supervisors in high level positions. A lot of them believed that quote "Black nurses were immoral, they stole, they were unreliable, they couldn't run wards, they didn't know how to give direction or take direction". So in 1934 this young nurse, Alice Green, applied to Bellevue Hospital postgraduate training program and she had all the qualifications needed. And she received a letter saying that Bellevue Hospital does not have any quote "negro classes", that she should apply to Harlem or Lincoln.

And she decided to fight it. So she got in touch with the NAACP and they got involved and it began this four year investigation into Goldwater. And he was put on trial by the Citizens Committee. And it was found that his department of hospitals was perpetuating Jim Crowism. He eventually resigned. And it was after that event where the hospitals; where LaGuardia was like okay, we're going to desegregate all of the hospitals. And his successor, Goldwater's successor was the one who officially signed it into law that there was no more segregation in the hospital system. And that's how they became desegregated because of this one nurse who decided to take on the Commissioner of Health.

I love these stories that you include as sort of the backdrop in this book. And that's one of the things that I really loved and admired about your writing was how many threads of the story there are and how delicately you wove them all together. You've got the personal stories of the nurses on the front lines, the larger backdrop of New York which changed so much, dramatically changed during these decades. And then you've got these medical science breakthroughs eventually leading to a cure, which is what I want to ask about right now. So the first major breakthrough in tuberculosis treatment came in the form of streptomycin, which was initially hailed as this miracle drug but it didn't quite hold up to those early promises. What were some of the downsides of streptomycin that kept people looking for a better and safer tuberculosis treatment?

Yeah. Streptomycin is an interesting and complicated drug and the way it was discovered is complicated. But to answer your question, one of the major impediments was that it was really expensive to make. I think it was \$2 a shot. It had to be given six times a day. It was extremely painful, it's an intramuscular injection. So if you can imagine people who are anorexic whose muscles have wasted away and they're lax and these nurses having to give them a shot up to six times a day and trying to find a place to do it. It was so excruciatingly painful. I read patients who talked about it and they said that their arms had become... Like there were these big knotted, it looked like rocks underneath their skin, their arms, their buttocks, their thighs, anywhere they could try and find a muscle. So that was the first problem. It moved through the body very, very quickly.

The second problem was that it was also difficult to inject. It went into the barrel of the syringe. Because now remember also we're talking about the 40s, we didn't have disposable syringes. These were glass syringes where the barrels were wide and long. And so it moved through the barrel of the syringe like glue. So getting it into the syringe was difficult and then getting it out, it took a long time. So now you've got this like needle in somebody's muscles, they're in a lot of pain already because it hurts and the needle is thick itself. And it's taking a lot of time to get the medication into their muscle because it is... They described it as glue, it's like a gooey gluey substance. Then they had to wash out the barrel of the syringe which took time. All of this, when you think about this, you have a limited number of nurses, they're working on a ward that's overcrowded. Each nurse probably had 15-20 patients. So the longer it takes to wash out those barrels, the longer it takes to distribute the medication.

The other problem was that it only worked for patients who were not near death, meaning that if the disease was caught early, it could get them well enough so they could have surgery. It did not cure the lesions. What it did was it made them healthy enough to undergo surgery. For those who were more critical or at a more advanced stage, it didn't work. And as a matter of fact and some of them... The other thing was it did become resistant, the microbe became resistant to the streptomycin. And I read accounts where in some cases it actually sped up the disease. That was the major issue. And then manufacturing it also at the capacity that they needed was a problem. But more importantly, the cost of it made hospitals unable to have enough of it. And so they started picking and choosing patients.

And I was always reminded when I read this of 'Five Days at Memorial' where Sheri Fink tells the story of Hurricane Katrina and how doctors and nurses had to pick and choose which patients were going to live in die. That's what was happening at Seaview. Doctors had to pick which patients would get this medication. And I read these newspaper articles of patients saying if I only had some streptomycin. But they weren't going to give it to these patients who were dying because it wasn't going to work. So it created this moral quandary for doctors. Who should get it and who shouldn't? And it was happening at Seaview as well. And then it stopped working and all hope, this incredible optimism that had come with streptomycin just sort of collapsed. It was like deflating a balloon. And people, this dour pessimism kind of overshadowed the TB community.

Erin Welsh

Fortunately there was a cure that came onto the scene not too long after, I guess.

Maria Smilios

Yep.

Erin Welsh

And when it did come onto the scene, Seaview Hospital was kind of at the center of all of the action. Can you paint us a picture of the first clinical trial of isoniazid? Like why Seaview? What were the results? How did patients react? What was the public's response?

Maria Smilios

Sure. I love talking about this because it's such a story of like the underdogs prevailing. As I said, patients were sent to Seaview by the city to languish and die. The nurses had also been sent there because they were considered expendable. And this was illustrated very clearly by the commissioner, by the President of Hospitals in 1933. He had held a meeting, 300 people showed up. City officials, nursing supervisors, and nurses. And one young nurse stood up and asked him, Mr. President, why do you send the Black nurses to Seaview Hospital? And he said, quote, "We send Black nurses to Seaview Hospital because in 20 years we won't have a colored problem in America because they'll all be dead from tuberculosis." So the nurses were seen just as expendable as the patients. And so this isoniazid trial is just such a moment of triumph because the nurses don't die and the patients who they managed to save, a lot of them kept living because of their care.

So it's 1951, June, Hoffmann-La Roche, which is about 20 miles from Seaview Hospital in New Jersey, is working on this drug which would eventually become isoniazid. And they're seeing these incredible results in mice and in guinea pigs that this drug is fighting tuberculosis. And so they call Seaview Hospital and they say you know this drug we've been testing, would you like to test it on humans? And within two days Dr. Robitzek, Dr. Selikoff, the Medical Director of Seaview, they meet, yes, we're going to do it. And so the initial trials were five patients. These were people who were on death's door, the criteria was death had to be imminent and no other drug had worked; surgery or any other drug that they might have had for TB at the time, which was streptomycin in combination with another drug called PAS.

And so these nurses are called to the forefront and they're told you are going to administer this drug to these people. And we don't know the side effects, we don't know anything, we don't even know how to dose. We just know the dosing based on the animal tests. And so the great thing is Dr. Robitzek's son is still alive and he gave me his dad's papers. So I have his father's trial papers which look, it's a handwritten Excel spreadsheet with the names of the patients and how he begins to dose each one. And the nurses are, as I said, on the front lines and they're tasked to not just administer the drug but to watch for any side effects. And it's not just clinical side effects, it's side effects regarding mood, mental state. And they do this and it looks good.

And by September they add another 92 people to the trial and they follow the same regime. Every day they look, they take the vitals, they test the mood of the patient, talk to the patient, look at their bodies, make sure there's no jaundice setting in, there's no bruising. And at night Robitzek would come with Selikoff and take these notes and go downstairs and collate them. And that's how they began to see what side effect was pre-eminent. So for example, they saw a lot of nurses writing about tendinitis. And I always say this is such a great moment because it shows you how astute and important these nurses were and why they are the ones that without a doubt should have been on those front lines, why they knew the disease so well. They were able to see that patients' legs were twitching while they slept underneath blankets. And you think about that and it's pretty extraordinary that these nurses were able to, that's how it tuned in they were. And Robitzek later said had it not been for the Black nurses, none of this would have been possible. This meaning the trials and this meaning the hospital staying open for decades. So that's really kind of the story of the, the trials in a nutshell.

Erin Welsh

The title of your book, 'The Black Angels', I realized I forgot to ask earlier where did this nickname come from? And I think it's an appropriate follow up to the story of this successful clinical trial of isoniazid and how impactful they were but how unsung as well at the same time, these nurses were.

Maria Smilios

So the title came from the patients themselves. The patients used to write Christmas cards to the nurses. And Edna's son told me that his mom, they loved Christmas, Edna and her husband loved Christmas. And she would transform the living room, he said, into this sort of Christmas wonderland with a big tree and lights. And she would string across the living room ribbon and hang these cards that came from patients that said 'you are my Black angel' or 'to the Black angels'. And so they came to be known as Black Angels because of the patients. And the reason the patients called them this is because it was the first time that these people who were seen as only the sum of their sickness were no longer being seen as that, they were being seen as human beings. And these nurses gave them back their dignity and integrity. And basically said you are not a disease, you are a person, you are not contaminated, and we will take care of you. And so that's really how the name came about.

Erin Welsh

You mentioned how you talked to so many people, like the different types of sources that you used to research this book and to write this book are so varied and so incredible and allowed this amazing insight into the day to day lives of people who were patients at the hospital or nurses on the ward. And I loved that sort of oral history aspect of it. What was your process like in terms of choosing the threads that you incorporated? Which stuff did you bring in? Which stuff did you leave on the floor? And what was it like to work so closely with people like Edna's son or Virginia Allen?

Maria Smilios

That's another question that could probably take three hours to answer. But I loved writing this book. I loved it because I grew up in a family of oral history. Greeks love to tell stories. And I was very comfortable listening to people and instinctively knowing when and how to ask a question. That's the kind of overview. I think if this story had archives, it would have been written a very long time ago. And that's the only reason I say I wasn't daunted by the fact that it had to be an oral history. Now what was it like walking into these communities? For a long time I just listened. I decentered myself and listened to what they were saying. And I began by saying tell me about... And slowly and surely they began to trust me and I started to ask the harder questions and we built a relationship. It took me eight years to write this book.

I did an event last week and the families were up on stage with me and they were saying how I would text them and say what color nail polish did Missouriia wear? Because I really wanted the readers to see this person, like Missouriia or like Edna. And when they would talk to me, I said I want them to have the way the families talked about Missouriia or Edna or whoever they were telling me about, I wanted the reader to almost feel like they were listening to the families tell the story. And that's why I say the story was built on oral history and stitched together from the narratives of the families. I sat down after a couple of years and I was like all right, what is the nurse's narrative? How is it going to go? What are the tropes that I'm seeing? What is the main reason I'm hearing the nurses came up? Professional, they wanted a professional career. They wanted out of the Jim Crow South. And so that really came from the families.

But it was an amazing process. These families are so near and dear to me, they let me into their lives. They were so gracious with their time. They never said no. They sat down and talked about such hard things again and again. And they believed in the story as much as I did. And in the end it really became a labor of love. Because I rewrote the book during COVID. So that is like a kind of short answer to a very like deep question. I loved talking to Virginia, hearing the lived experience. She's one of two Black Angels that are still alive. She came at 16 years old to work at Seaview. And I always say like 16, she had no experience and they put her in pediatrics with babies. My daughter is 13 years old. I often would imagine like oh my goodness, in three years, there's no way I could put her, like I could conceive of her going to an infectious disease ward, like working with a disease like COVID with babies. And Virginia often talks about how the babies were abandoned.

And that really speaks to not just what were people thinking and how desperate they were to staff the hospital but like what are we doing with 16 year olds today? If you bring it back to today, they're not on hospitals but we're certainly exploiting their labor in different ways. But that is really so... It never left me. It shook me when I heard that again and again, like 16 years old. My goodness. But I love talking to her, she's so much fun, she's so wise. She's done so much with her life in terms of fighting for equal rights. She is an avid volunteer for voting, for equality in nursing, and she's just an overall fantastic person.

Erin Welsh

The story of the Black Angels is simultaneously heartbreaking, it's inspiring, it's infuriating at times, and it's incredibly uplifting too. What do you want people to take away most from this book?

Maria Smilios

I want people to take away that this is ultimately a story of triumph and hope. I want them to understand that there are always people who are willing to take care of us and that's what these women did. There are always people who are willing to rise to occasions where nobody else will and that gives us hope in humanity and that the world really is a good place. And that by doing so, these women saved tens of millions of lives. Isoniazid is still one of the gold standards of treatment. And so I hope when people read it, they take that away, they take away that ultimately it is triumphant and these women do restore the humanity in us all.

TPWKY

(transition theme)

Erin Welsh

Maria, thank you again so much for chatting with me. I had such a great time revisiting the amazing story of the Black Angels. If you also enjoyed this interview and would like to learn more about this transformative period in tuberculosis history, check out our website [thispodcastwillkillyou.com](http://thispodcastwillkillyou.com) where I'll post a link to where you can find 'The Black Angels' as well as a link to Maria's website. And pro tip, I believe the paperback version will be coming out shortly. So keep an eye out for that. Don't forget you can also check out our website for all sorts of other cool things, including but not limited to transcripts, quarantini and placeborita recipes, show notes and references for all of our episodes, links to merch, our [bookshop.org](http://bookshop.org) affiliate account, our Goodreads list, a firsthand account form, and music by Bloodmobile.

Speaking of which, thank you to Bloodmobile for providing the music for this episode and all of our episodes. Thank you to Lianna Squillace and Tom Breyfogle for our audio mixing. And thanks to you, listeners, for listening. I hope you liked this episode and are loving being part of the TPWKY Book Club. A special thank you as always to our fantastic patrons. We appreciate your support so very much. Well until next time, keep washing those hands.