

# UNNATURAL CAUSES...is inequality making us sick?

A four-hour series airing on PBS and a national public impact campaign

Produced by California Newsreel with Vital Pictures. Presented by the National Minority Consortia.  
Public Engagement Campaign in Association with the Joint Center for Political and Economic Studies Health Policy Institute.

## Collateral Damage

TRT 29 min

### DVD Chapter 1: Tuberculosis on Ebeye

**NARRATOR:** In the middle of the Pacific Ocean there's a small country made up of a chain of islands, with white sand beaches and an aqua green lagoon. The Marshallese people have made their home here for many centuries. But in the last 60 years something has gone terribly wrong in the Marshall Islands. Today the tuberculosis rate here is 23 times that of the United States. Other infectious diseases also run rampant.

There are many reasons why the health of the Marshallese people is compromised. Their long relationship with the United States may be one. One of the islands – Ebeye – is a mile long and an eighth of a mile wide – but it's home to about 10,000 people, making it more densely populated than Manhattan. This crowded environment is ideal for the spread of infectious diseases like tuberculosis.

**IRENE PAUL:** You cannot build anything anymore on Ebeye. It's crowded. So if somebody in the family has TB of course it's eventually going to spread to everybody in the house in a short period of time. So if somebody is diagnosed with TB, our staff will go out to the neighbors and even to the same household and start giving them medication right away.

**RIHNA JAMES (TB Program Coordinator, Kwajalein Atoll Health Care Bureau):** From this side all the way to the other side...this is where TB never goes away. One of the reasons I guess is because the houses are very close together. And so many people in one house, there'll be like 20 or more than 20 individuals in each house.

**NARRATOR:** Like everywhere else in the world, the frontline soldiers in the fight against TB are public health outreach workers like Rihna James and Molly May. Everyday they drive the streets of Ebeye tracking their patients to make sure they're taking their TB medications.

**RIHNA JAMES:** They don't have money to come to the hospitals but we have to make sure they bring the medicine, so that's why we go to those who cannot come.

**NARRATOR:** The Marshallese are hardly alone in suffering high rates of TB. It's a disease that shows up wherever people are poor. Public health experts estimate that one third of the earth's population, about two billion people, carry the bacterium that causes TB. But most of those people will never become sick. Their immune systems will keep the disease in check.

However, about 9 million people each year *do* become sick with this potentially deadly lung ailment, often because they live in conditions of poverty that compromise their immune systems and undermine their body's ability to fight it off. And because it's airborne, TB can spread rapidly among people who live in crowded urban environments.

**JIM YONG KIM (Harvard University, Brigham and Women's Hospital):** What tuberculosis needs to flourish in a person's body is a broken down immune system. So just the stress itself of poverty can contribute to the likelihood of developing active tuberculosis. And malnutrition. We know that people living in poverty are malnourished. And there's nothing like malnourishment to decrease the immune response enough to let tuberculosis flourish.

**RIHNA JAMES:** We have one patient here. And door opens to the other door and we just treated the other one on this side and then now we're coming to this side. She was starting to lose weight, and then chest pain, and SOP, shortness of breath. And she doesn't feel well. She feels weak all the time. So she was actually admitted in the hospital and they referred her to us.

**NARRATOR:** To successfully cure tuberculosis requires completing a full course of treatment on schedule - up to four different drugs a day, every day, for six months. If patients fail to complete their drug regimen, the disease can come back in a drug-resistant form...far more dangerous.

**RIHNA JAMES:** She says she's doing good. She got some... she has TB of the lymph nodes, swelling of the stomach.

## **DVD Chapter 2: Rich Island, Poor Island**

**NARRATOR:** The Marshallese were once known as the master navigators of the Pacific. They created stick charts, their own unique navigational aids, to plot their way through almost a million square miles of ocean. For centuries the Marshallese lived like other indigenous peoples in the Pacific.

**NEAL PALAFOX (Chair, Dept. of Family Medicine, Univ. Hawaii School of Medicine):** The traditional diet was breadfruit, and it was taro, a lot of naturally grown crops. It was a lot of fish; it was bananas, and fruit crop; and just were loaded with natural, you know, vitamins and minerals, that you know, over thousands of years that's what these people subsisted on.

**NARRATOR:** Today much of that cultural legacy is lost to centuries of colonization by other countries. But when the United States took the Marshall Islands from the Japanese in 1944, it triggered changes no one could have foreseen. The islands remained under US control until the late-1970s, when the Republic of the Marshall Islands became an independent nation. But the US military has never left one island: Kwajalein, home of the Ronald Reagan Ballistic Missile base; a facility the US considers vital to its national security. This is where the controversial "Star Wars" anti-missile program carries out its testing.

About 1700 mostly American defense contractors and their families live on Kwajalein in a suburban environment - with a golf course, a country club, a small department store, and access to state of the art healthcare. More than 1100 Marshallese people work on Kwajalein. The army base is one of the few large employers in the nation. But only a few Marshallese contractors are allowed to live on Kwajalein. Each day the Marshallese employees take a ferry home to the neighboring island of Ebeye - a divide that takes only 30 minutes to cross, but one that separates two worlds of wealth and health. Julie Kroeker is an American anthropologist who lived in the Marshall Islands for three years.

**JULIE KROEKER:** When you're on that ferry going from Kwajalein, the base, to Ebeye, the island, I just can't believe it sometimes. This relationship is so powerfully unequal.

## **DVD Chapter 3: Worst of Both Worlds**

**NARRATOR:** Though Ebeye is just three miles from the US military base on Kwajalein, the contrast between the two islands is an everyday reminder of how inequities in wealth affect people's health. The health of Americans living on Kwajalein is similar to what you'd expect for a middle class American neighborhood, while on the other Marshall Islands the indicators are very different. On average, Americans live to 77.5 years old. In the Marshall Islands longevity is 62 years. Infant mortality in the US is 7 deaths per thousand. In the Marshall Islands it's 52 deaths per thousand. In the US, 7 percent of the population has diabetes. In the Marshall Islands it's about 30 percent. And the rate of Tuberculosis in the Marshall Islands is 23 times that of the US.

**NEAL PALAFOX:** They have probably the worst of both worlds. They have a lot of the developing country illnesses - you know, all the infectious diseases you find in Africa and places in Asia and India.

**NARRATOR: Dr. Neal Palafox is a family practitioner who researches health issues that affect the islanders.**

**NEAL PALAFOX:** Then they have the illnesses that interface with Westernizing countries. Heart disease, for instance, is the number one cause of death; a lot of high blood pressure, strokes. And then in between they have malnutrition. So, they have a spectrum of illness which represents both worlds, which makes it a very difficult situation.

**NARRATOR: For most of Ebeye's 10,000 residents, the chores of daily life are made difficult by a neglected infrastructure that can't handle the over crowding. Ebeye is plagued by power outages and water shortages.**

**DISE LANGRUS:** Two weeks ago, we had a power outage for two weeks straight. And if there's no power, no water. And imagine what we went through.

**NARRATION: Dise Langrus has lived on Ebeye for over 30 years. The water shortages mean Dise and other residents often can't do their laundry on Ebeye. Instead, they take a water taxi or ferry to the American base, Kwajalein, where they can do laundry as long as they have a special permit and can pay the price.**

**DISE LANGRUS:** If we ride the taxi from here to Kwajalein – for two people it's \$8 and then we do laundry for \$20. That is why we don't go to Kwajalein and do laundry all the time.

#### **DVD Chapter 4: Atomic Testing**

**NARRATOR: For the people of the Marshall Islands like Dise there's another fact of life besides poverty that has profoundly affected their health. Between 1946 and 1958, 67 nuclear devices were detonated on and around the northernmost Marshall Islands. Measured in tons of TNT, it was the most extensive nuclear weapons testing ever carried out by the United States.**

**TONY DEBRUM (Former Minister of Foreign Affairs & Health, Republic of the Marshall Islands):** The yield of those tests has been estimated at one point seven Hiroshima shots. Every day. Every day for twelve years.

**NARRATOR: The largest explosion took place March 1, 1954. Code-named Bravo, it was a 15-megaton hydrogen bomb equivalent to 1000 Hiroshimas. A miscalculation caused radioactive fallout to drift onto two inhabited atolls. More than 200 men, women and children were on those atolls. Among them was Dise Langrus, a 4 year old growing up on Rongelap.**

**DISE LANGRUS:** Young people at the time were saying that they thought the powder that was falling was from heaven. They rubbed their faces, hands and legs with it. And that's how they got skin burns from the fall out.

**NARRATOR: They were treated and then tracked to study the effects of nuclear fallout on human beings. Among them was Dise's father. These are photos of her father Dise has never seen before.**

**ABBACA:** It looks like he's been treated for burns around his ear...

#### **DVD Chapter 5: Dislocation**

**NARRATION: To make way for the testing, US military authorities moved hundreds of Marshallese people off their home islands and resettled them on different islands. These dislocations triggered a chain of events that tore apart Marshallese culture and that continues to undermine their health.**

**NEAL PALAFOX:** When you move people off their islands where they live to do the testing, you break down their entire community structure. What is the impact on health? You know, the stress issues. You contaminate their lands; they can't grow things that they used to eat. They get more diabetic, because you know, they're eating a

western diet. They weren't urbanized. But when you urbanize, infectious diseases tend to take off, because TB is transmitted person-to-person, very close, very crowded.

**NARRATOR:** The changes on Ebeye began in 1951, when US military authorities re-settled about 600 people from Kwajalein to Ebeye to make way for the military base. In the decades since, thousands more Marshallese have settled here...hoping to get a job at the military installation. Now, almost one-fifth of the nation's population lives on Ebeye. And the small island can't absorb them. In one part of Ebeye residents don't even have indoor toilets. Abbaca Anjain Maddison grew up on Ebeye before it became so crowded. She's now a senator in the Marshall Islands parliament.

**ABACCA ANJAIN-MADDISON (Senator, Republic of the Marshall Islands):** Right here is the public toilets and these individual units are assigned to individual families. Top of the toilets, they're open. Even at nighttime they have to use the toilet, they have to use it in the dark. There's no sink to wash their hands so everyone is responsible to leave the toilet and go to their houses to wash their hands.

**NARRATOR:** There are many reasons for the slums on Ebeye. Most agree that a leading factor is the lure of jobs at the US base on Kwajalein.

**TONY DEBRUM:** The health problems that one would witness on Ebeye in Kwajalein are a result of the military base being there and the political decision to accommodate the military base being there. Because military bases attract people who seek jobs and as long as the people who are attracted to a military base cannot be accommodated in a better situation you're going to have the social problems of Ebeye. Providing more doctors or nurses on Ebeye is not going to solve that problem. There has to be a political decision made.

**NEIL PALAFOX:** There's always been questions of corruption at this level, that level, misspent monies, and certainly there's even been talk about the US government and the Auditor General's report that the US government didn't do its homework in monitoring monies. Poverty creates a dynamic in individuals where they feel they don't control their lives or any things that occur in their lives. You don't feel that you have the ability to move where you have to move. If you feel that the environment controls you, as opposed to you being able to control your destiny. And I think that's what's happened a lot in Ebeye and other places in the Pacific where there's been this level of poverty that's been introduced, because of the dynamics that have occurred.

**NARRATOR:** So in a place like Ebeye where poverty is so deeply entrenched, how do you eradicate tuberculosis? One thing is certain. It will take more than drugs. It will take an improvement in living conditions; alleviating crowding so one infected person doesn't infect others; improving nutrition so people's immune systems have the strength to fight off the disease. We know this by looking at the history of tuberculosis in the United States.

#### **DVD Chapter 6: Tuberculosis in U.S. History**

**NARRATOR:** In the early 1900s tuberculosis was a leading killer in America's crowded urban slums. There was no drug treatment available and there wouldn't be for many decades to come. TB victims often suffered a painful death, removed from their families to avoid spreading the disease.

**But then, something unexpected happened. TB death rates in American cities began to decline. Between 1900 and 1940 the TB death rate dropped 76 percent, even though drugs to treat the disease had not yet been invented. What made the difference? Aggressive public health policies made sure infected people were removed and isolated so they couldn't spread the disease. Equally important, social reforms brought better housing, better nutrition, the abolition of child labor, and a general improvement in the quality of living. With the advent of antibiotics in 1944 the death rate declined even further.**

**JIM YONG KIM:** Both of those things are important for tuberculosis. Improve the overall living conditions and nutritional status and as soon as someone gets sick with tuberculosis, treat them.

**RIHNA JAMES:** It's like a very shameful thing. Once you get TB, they, they don't want people to know, they don't want to come to the hospital. It's gradually going down, but I think it's not, it's not going to go away, like, all of the sudden.

### **DVD Chapter 7: Springdale, Arkansas**

**NARRATOR:** Social and political reforms have been slow to come to the Marshall Islands. For many Marshallese, there's another option: Springdale, Arkansas, near the Oklahoma border. An estimated 10,000 Marshall Islanders have migrated here, ever since one Marshallese man arrived in the 1980s and got a job at Tyson Foods. The Marshallese can live and work in the US freely, without a visa, under the terms of our special treaty. Jobs are plentiful in the food processing plants and the cost of living in Springdale is relatively low.

**MARSHALLESE WOMAN:** Life in Arkansas is much easier, healthier.

**MOTHER:** My kids can get a better education.

**MARSHALLESE MAN:** Looking for the good life and the futures...

**NARRATOR:** But even though the Marshallese here can leave the impoverished conditions of their homeland behind, they can't leave behind the effects of having lived in poverty. Not surprisingly, the rates of TB and other infectious diseases among the Marshallese in the US are far above the national average. So in Springdale, as in Ebeye, public health workers drive the streets to make sure their patients maintain the rigorous medication schedule required to cure TB. Public Health nurse Sandy Hainline believes the high disease rate results from the pressures of making a new life in an unfamiliar place.

**SANDY HAINLINE (Nurse Coordinator, Marshallese Outreach Program, AR):** It's stressful living here. They're coming from a nice, tropical climate. They get here and they have to deal with work schedules, with traffic. The cold is a serious issue for them, They just are not used to dealing with cold weather at all and most of them work in the poultry plants where it's wet and cold at all times. And after about two years of being constantly stressed they break down into tuberculosis or other diseases.

**NARRATOR:** For 60 years, the Marshallese have been living with the effects of massive dislocation and cultural disruption, largely a result of helping the US maintain a strategic military presence in the Pacific. The Marshallese people have paid a high price for that relationship in their economic wellbeing and their legacy of illness. Now there's a growing awareness that just as the Marshallese people didn't create these problems, they won't be able to solve them without help.

**JIM YONG KIM:** I often tell my students that 50 years from now, we will be judged on the basis of what we do for the poorest and the most marginalized people on the planet today. We have more than enough resources to provide treatment, prevention, and to transform the economic and social conditions that give rise to the diseases of poverty like tuberculosis that are so prevalent today.

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