

STANDARD DEVIATIONS: Who is Eunice Rivers?

Part 2

Greetings,

In our previous installment we embarked on an exploration of syphilis in order to uncover the story behind the *Tuskegee Study of Untreated Syphilis in the Negro Male* and the role of **Nurse Eunice Rivers** in recognition of Black History Month. Today, I'll discuss the history of treating syphilis, and the study that became an infamous piece of racial injustice in America.

There was a young man from Back Bay,
Who thought syphilis just went away.
He believed that a chancre
Was only a canker,
That healed in a week and a day.

{Anonymous poem on syphilis from the 1920s}

Treatment

Between the 16th and the end of the 19th century there was little progress made regarding either the etiology or treatment of syphilis. Early known therapies for “the Great Pox”, or “bad blood” were not only painful, they were largely ineffective.

In the early 16th century, the main treatments for syphilis were **mercury ointments** and **guaiaacum**, or “holy wood”, a New World plant.

Sweat baths were also used as it was thought induced salivation and sweating eliminated the syphilitic poisons. Recall that syphilis is heat-labile at 42 °C.

In 1907, **arsenic** in the form of Salvarsan or Compound 606, was introduced as the “magic bullet” to treat syphilis and African sleeping sickness (trypanosomiasis). Salvarsan became the first modern antibiotic and most widely prescribed drug in the world.

Arsenic was a brilliant, timely, and dangerous treatment, *but not the weirdest*.

In 1927, Austrian psychiatrist Julius Wagner-Jauregg received a Nobel Prize in Medicine for curing patients with brain damage from syphilis by infecting them with **malaria**.

Penicillin, discovered in 1928, took fifteen years to be developed as a drug. After its introduction in '43 it is still the primary syphilis therapy. Penicillin G is the preferred drug for treating all stages of syphilis.



{Penicillin}

The Studies

Before penicillin, before malaria, before arsenic, researchers wondered about the long-term effects of syphilis because the condition had so many facets and a poorly understood latency that seemed preferable to the poor treatments available.

OSLO 1891-1910

Around the end of the 1800s, it was realized that mercurial treatment was inadequate. A landmark retrospective study examined hundreds of white Norwegians with syphilis. The study provided a glimpse at the rates of disease progression and suggested that ~70% of cases became latent and some advanced into a neurosyphilis. Vascular disease was observed but not stressed.

The Oslo study was a retrospective study involving 473 patients at three to forty years after infection. As a result of the Oslo study, clinical data were available to suggest the probability of spontaneous cure, continued latency, or serious or fatal outcomes.

The Oslo study only looked at white males. Before 1945, around 10% of all psychiatric admissions were due to syphilis of the brain, which affected predominantly white middle-class males to cause dementia, psychosis, paralysis and death (because that's who had the resources for treatment, not the real incidence). Neurosyphilis happened to whites and vascular disease was a black trait, according to a flawed Social Darwinism.

GUATEMALA 1946-1948

Syphilis experiments were also carried out in Guatemala from 1946 to 1948. They were United States-sponsored human experiments, conducted with Guatemalan cooperation to study the novel antibiotics being discovered. US Doctors purposely infected Guatemalan soldiers, prisoners, and mental patients with syphilis and gonorrhea, *without informed consent*, and then treated them with antibiotics. In October 2010, the US formally apologized to Guatemala for conducting these experiments.

At this same time, we were trying Nazi war criminals for the same types of abuses in Nuremburg.

But the study that would outrage the country and highlight the racism and hypocrisy in a white dominated medical community happened here in the US, in Alabama.

TUSKEGEE 1932-1972

In 1928, to study the effects of syphilis in blacks, a study was proposed by the US Public Health Service (USPHS) to look at the disease in black men. The USPHS planned for a six-month study, to record observations "on a group of 400 syphilitic male Negroes who have received no treatment and a comparable group who have received adequate therapy" (*Annual Report of the Surgeon General*, 1938). The study was designed to measure the progression of untreated syphilis in blacks.

Macon County, Alabama, was chosen for a couple reasons. First and foremost were the subjects; black, poor, uneducated, and a high incidence of syphilis checked a lot of boxes for the designer, Dr. Taliaferro Clark. Of the 3,684 African Americans tested in Macon County from 1929 to 1930, the study discovered 1,468 cases of syphilis (399 enrolled and 201 who tested negative were included as controls). Secondly, proximity to the Tuskegee Institute provided a base of operation and, more importantly, a false legitimacy and undeserved sense of trust among the population.

The study was meant to last 6 months and then provide treatment. When funding for the original study was withdrawn (due to the Depression) a decision was made by the USPHS to continue the observations but not pay to treat. **The 6-month experiment lasted 40 years without ever treating the affected.**

No participants were ever given their diagnosis. They were told that they were being treated for "bad blood". No subject ever received treatment for syphilis even after the introduction of penicillin as an effective cure in 1943. In order to track the disease's full progression, researchers provided **no effective care** as the men died, went blind or insane or experienced other severe health problems due to their untreated syphilis. Aspirin and placebo were the only prescriptions given.

Annual bloodwork was drawn but no medical services were allowed. They were all given spinal taps, without anesthesia. After enrollment the participants were simply observed until death and then autopsied. Permission to autopsy was given in exchange for burial insurance.

In 1968 a public health epidemiologist, Peter Buxton, submitted a letter of concern to superiors. It was rebuffed and buried. He leaked the story to the AP who broke the story July 25, 1972. Only after the public outrage was the study forced to shut down.

By that time, 28 participants had perished from syphilis, 100 more had passed away from related complications, at least 40 spouses had been diagnosed with it and the disease had been passed to 19 children at birth. Only 74 of 600 had survived to see the study end.

Congress made an out-of-court deal with survivors and families, in 1973, paying a \$10 million settlement. A formal apology from the United States did not come until 1997(!) when President Bill Clinton told the five survivors that attended, "*I am sorry that your federal government orchestrated a study so clearly racist. ... Your presence here shows us that you have chosen a better path than your government did so long ago.*"

The study was authorized, approved, and hidden by 7, **SEVEN**, Surgeon Generals of the US. An unknown number of USPHS doctors were rotated through the study, none of whom disclosed

the study or objections. The study's progress was regularly reported to the government and given repeated stamps of approval.

Local doctors cooperated with the government project and did not treat black men in the study, hardly an inconvenience since they did not treat blacks unless they could pay, anyway.

The patients' main contact point was an African-American nurse named **Eunice Rivers**. In 1930, Eunice was one of only 470 black public health nurses in the nation.

Her patients called the observation building "Mrs. River's Lodge" and many regarded her as a trusted friend. **She was the only staff member to stay with the experiment for the full 40 years.**

Nurse Rivers provided transportation to each patient, and provided the link between the doctors and their subjects. As a local, a nurse, and black she was trusted and a common denominator for the blacks to relate with help. She was responsible for keeping track of the study subjects and ensuring that the study could have access to the autopsies of the dead. Within the first 20 years of the study, Rivers approached 145 families and obtained autopsy rights from 144. Her work was essential to the progression of the study.

In 1975, three years after the Tuskegee experiment became public knowledge, Tuskegee Institute presented Rivers with an Alumni Merit Award. "*Your varied and outstanding contributions to the nursing profession,*" it was declared, "*have reflected tremendous credit upon Tuskegee Institute.*"

The families of the patients, however, didn't quite echo that praise of Rivers. "*It was one of the worst atrocities ever reaped on people by the Government*", said Albert Julkes Jr., whose father died in the study. "**You don't treat dogs that way.**"

The question remains; who is Eunice Rivers? Did she understand the full scope of the study?

Not exactly black and white questions.



{Nurse Eunice Rivers hands out packets of aspirin to test subjects.}

Have a great week, and be safe,

Bryan