Background

The story of pellagra is not a straightforward one. With years of questions surrounding the cause of the disease, and the outright rejection of the eventual answers to those questions, pellagra ravaged the American South for decades. The World Health Organization labels 1906 as the beginning of the pellagra epidemic, but the truth is a little more complex. A study of pellagra done by Dr. George Alexander Wheeler during the height of the epidemic surveyed sixty-two practitioners, fifty percent of whom claim to have seen pellagra-like illnesses before 1906, with the earliest being in 1885.

Methods

In order to understand the role of pellagra at the North Carolina Hospital for the Insane in Raleigh (renamed Dorothea Dix Hospital in 1959), I have identified 111 pellagra cases from among the more than 7,000 original admissions and general case book records kept by the North Carolina Hospital for the Insane in Raleigh from its opening in 1856 to 1918, which have been preserved by the North Carolina State Archives. These digitized records include admissions ledgers (1856-1921) and general case book forms (1887-1921). Admissions ledgers contain 25 data fields with information such as patient name, occupation, admission date, gender, marital status, residence, supposed cause, and form (diagnosis) of insanity. In addition, the admissions ledger details each patient’s stay at the hospital through their eventual discharge, transfer, or death. General case book forms go into greater detail than the admissions ledger and include over 100 data fields covering family history, health history, current habits, current physical condition, and symptomatic manifestations of their illness. Each patient is also assigned a unique patient ID which helps to track them across both sets of records.

Gender and Occupation

The most common job of the patients admitted with pellagra symptoms was “Housewife,” with thirty-seven women. This was closely followed by “Domestic” with twenty-one women. These terms most likely indicate the same thing: they were married women not working outside the home. When thinking about the relationship between gender, occupation, and pellagra, it is important to consider the culture surrounding gender during the early twentieth century. Women were homemakers, confined to the private sphere, caring for children, cooking, and cleaning. Of the 111 pellagra patients in Dix Asylum, seventy-five were women and 39 of those worked within the home.

So how does this relate to nutrition? Firstly, we must consider how this homemaker role relates to sacrifice. Pellagra is caused by a lack of access to fresh meat and dairy, and if a household had the privilege of having such things once or a while, who is more likely to receive the larger portion? Most likely the men of the household, who would be going out to work in the fields or in the mills everyday. They are the ones who “needed the strength.” On top of this, nutritional deficiencies are exacerbated by pregnancy, and as a result, pellagra disproportionately affected women of reproductive age.

Pellagra at Dix: Final Condition

Untreated pellagra can lead to death within 4-5 years. Of the patients who died at Dix due to their pellagra, patients had been at the hospital ranging from 6 days to 7 years, though most individuals had been at Dix for 1-2 months. Patients who died within a few months of admission are unlikely to have contracted the disease from the food they were fed in the asylum. Mental symptoms are not as severe early on in the progression of the disease, which would suggest that patients admitted to Dix Asylum with a supposed cause of pellagra would have been in the later stages of the disease. Patients with no mention of pellagra as their cause or form of attack until their death likely contracted the disease during their stay at the asylum. Four patients show clear signs of having contracted pellagra at the hospital. These four patients had been in the hospital from about three years to seven years, none of which were admitted with pellagra. Their diagnoses included acute mania, melancholia, epilepsy, and “idiot” (likely some kind of mental impairment). This varies greatly from the typical pellagra patient at Dix. In contrast to these long-term patients is patient 7255, who came into Dix with their form (diagnosis) listed as pellagra, their supposed cause of attack listed as pellagra, and their cause of death listed as “probably pellagra” on both their admissions entry and their official death certificate.

Of the 110 patients admitted with pellagra either as their supposed cause of attack or form, I was able to locate seventy-nine of their death certificates through Ancestry.com. Fifty-four of these patients died while at Dix asylum, forty-three of whom had their cause of death listed as pellagra. Other causes of death included pulmonary edema, asphyxia from convulsions, lobar pneumonia, and pulmonary tuberculosis—conditions made more likely due to the nutritional and immune deficiencies characteristic of pellagra and its social and economic causes.