Public Healthcare: From the rise of 18th Century Surveillance Medicine to 21st Century Biomedical Risk Assessments to Prevent Illness and Disease

Introduction

I first became interested in medical surveillance when I did an archival project in a Methodology class in the fall of 2017. For that project, I focused on eighteenth and nineteenth century public healthcare in France and Great Britain. For the next three semesters, I expanded my medical knowledge by reading source material focused on American public healthcare from the twentieth to the twenty-first century. This final paper combines the above readings to examine the rise of medical surveillance in the eighteenth century, to twenty-first century biomedical risk assessments to prevent illnesses and disease.

The French Revolution and the rise of medical surveillance

The French revolutionary war in 1789 may have marked the end of a feudal, class-based system, but it did nothing to improve the living conditions of the poor French citizens (Foucault, 1973; Hobsbawm). To address the public healthcare needs of French peasants, in 1793, the French provisional government initiated a change in the 'Clinic's role as a research center—that focused on post-mortem dissections to discover diseases—to focus on treating living patients (Foucault, 1973). In addition, the French provincial government creation the L'École Polytechnique—an academic institution concentrated on medicine, science and technology, and promoted a focus on public healthcare for teaching hospitals (Foucault, 1973; Hobsbawm, 1975).

By the late 1920's, Pierre Louis, the Director of the Paris School of Medicine, had created a center of medical learning that focused on clinical and surgical methods—that stressed the importance of good hygiene, pre-and-post, surgery—as well as medical statists. Students from all over Europe and Great Britain traveled to Paris to study at the medical school (Foucault, 1973).

In 1829, William Farr, a young British medical student, traveled to France to study at the Paris School. While there, he attended lectures on clinical diagnoses of illnesses and infectious diseases, viewed live surgeries performed by Dr. Pierre Louis, and received training in calculating medical surveillance data. In the early 1830's, Farr was among the students studying in Paris who were forced to flee when the Paris peasants rioted (Lilienfield, 2007).

Dr. William Farr's Contribution to Public Healthcare in Victorian England

After returning to England in the 1830, William Farr completed his medical training and moved to London to set up a practice. Unfortunately, because he did not have support from a wealthy benefactor, Farr could not set up a practice. To earn a living, he wrote journal articles for on hygiene, public health and statistics for local London newspapers. After reading one of Farr's articles, Dr. Thomas Wakley, the editor of the *Lancet*, was so impressed, that he offered him a job as a journalist. While working for the *Lancet*, Farr co-authored a book chapter on 'Vital Statistics' for the pre-eminent Victorian economist John McCulloch's reference text 'Statistical Account of the British Empire;' wrote for the 'British Annals of Medicine, Pharmacy, Vital Statistics, and General Science;' and edited the British Medical Almanack (an annual review of the medical profession). He additionally, wrote an article on consumption (from which his wife had died that year), with Sir James Clarke.

In 1836, when Parliament created a position in the Government Registrar Office (GRO) to track births and deaths in England and Wales, and to insure the proper transfer of property rights between generations of the landed gentry. In 1837, Sir James Clarke recommended to Thomas Wakley that he consider Farr as a possible candidate because of he had extensive medical and statistical expertise in compiling life cycle data. Wakley offered Farr the temporary post of Compiler of Abstracts (Lilienfield, 2007). Farr's main role as compiler of abstracts was to

gather statistical data from government census reports on the births, life cycles and death. Within the first year, he expanded his position to include compiling data on all vital statistics and epidemiological outcomes on reported deaths in Great Britain (Eyler, 1979).

There are three major works often cited by medical historians when referring to Farr's contributions to Victorian public healthcare. The first is the 1843 Registration of the Causes of Death: Regulations and a Statistical Nosology Report (Farr, 1843); the "Influence of the Elevation on the Fatality of Cholera" (Farr, 1852); and the English Life Table of Lifetimes, Annuities, and Premiums (Life Table) (Farr, 1864). The Life Table was a 772-page longitudinal study of two census reports on the causes of mortality for 6,470,720 Victorian subjects over a seventeen-year period. The GRO used The Life Table data to calculate the monetary value of a human life for tax purposes. And, the insurance industry used the Life Table data to calculate annuity rates for British men (Eyler, 1979). Farr is known for his 'law of epidemics;' and as the creator of the International Classification of Diseases (ICD). The ICD was used by Greenhow and Seaton in their occupational epidemiological studies in the 1850's and 1860's to analyze the efficacy of smallpox vaccinations. His vital statistics system was the scientific basis for English public health policy for more than a half century.

Throughout his life, William Farr not only supported, but emphasized medicine as a body of scientific knowledge, as well as a social institution in which its primary goal should be to treat all aspects of a patient's life (Lilienfield, 2007).

The Rise of Medical Surveillance and Risk Assessments

In the Preface of The Birth of the Clinic, Michel Foucault states that the book is about space, language, and death, 'it is the act of seeing, the gaze' (Foucault, ix). In a latter passage, Foucault goes on to explain that the human body defines, by natural right, the space of origin and distribution of disease (Foucault, 1973, 3). It is through Foucault's analysis of the ways in which

illness and medicine have become spatialized (socially constructed) upon the body, that I would like to highlight the emergence of medical surveillance and risk assessments.

In chapter 6 of *The Birth of the Clinic* (Foucault, 1973), Foucault states that the Clinic was probably the first attempt of the doctor to use the 'clinical gaze.' Prior to the birth of the clinical, the doctor was an independent observer of the patient who made medical intervention decisions on his own. After he became associated with the Clinic, he received scientific institutional support and justification for his medical decisions of intervention (Foucault, 89). Foucault continues by explaining that 'in the medical tradition of the eighteenth century illnesses and disease was observed in terms of 'symptoms and signs' (Foucault, 90). The doctor's ability to focus on the body and correctly diagnose the illnesses or disease for medical intervention, could determine if a patient lived or died. It is through this 'clinical gaze' that the emergence of medical surveillance and assess risks occurred.

The Rise of Medicine, Medicalization and Biomedicalization

In chapter 3 of *Biomedicalization*, (Clarke, et al., 2003), Adele E. Clarke posits that the United States medicine went through three overlapping eras of transformations, before coalescing into twenty-first century biomedicalization. These transformations occurred between 1890 to 1945; 1940-85; and 1980-Present (Clarke, et al., 104).

The historical rise of the medicine in the United States occurred between 1890 to 1945. This period was called 'the golden age of medicine,' because medical treatments became more effective. And as a result, more patients lived than died (Clarke, et al., 111). By the 1930's the integration of medicine and the consumer culture resulted in medicine becoming a major economic industry. Drugs and toiletries led the way as major industries. During the Depression, Americans spent over $3.5 billion annually on medical services and commodities. The public's interest in scientific research also contributed to the rise in the social and cultural authority of

medicine (Clarke, et al., 113-117). Another contribution to the rise of medicine was doctors becoming more specialized. To take advantage of new innovations in surgical equipment and other medical tools, many doctors moved their practices into clinics and hospitals. This era also saw a greater emphasis on providing public healthcare for women and children (Clarke, et al., 118).

The medicalization era emerged at the end of World War II when medical institutions coalesced and integrated, to lower the cost of maintaining emergency rooms and other services (Clarke et al., 51). A greater emphasis was placed on transformation of the body through medical enhancements and plastic surgery after the war to repair war injuries. The GI Bill and *Hill-Burton Act* of 1946 financed students attending medical schools, and the construction of new hospitals to handle the increased demand for patient care. The 1965 Social Security Act created Medicare and Medicaid—which expanded medical coverage for many previously uninsured Americans (Clarke, et al., 122).

The introduction of penicillin and other pharmaceuticals resulted in the transference of the 'clinical gaze,' to the 'medicalization gaze.' For the most part, modern technology diagnosed patient illnesses and disease, consequently, doctors prescribed pharmaceuticals to help patients deal with their illnesses, and disease, as well as the stresses of modern life (Clarke et al., 126). The introduction of the birth control pill in the 1960s, and the 1970s publication of 'self-help' and 'lifestyle books' gave women more control over their bodies and freedom to express themselves. The proliferation of medical information permeating health networks in the 1990s also gave individuals more control over their health through self-surveillance (Clarke et al., 132).

The biomedicalization era emerged around the 1980s after computer programs were integrated into the infrastructure of biomedicine to medical records, accounting and other tasks (Clarke, et a.,131). The biomedicalization era resulted in the transference of the 'medicalization

gaze' to the 'molecular gaze,' because of a greater emphasis on observing the body at the biological level (Clarke, et al. 142-143). "In the biomedicalization era, the focus is no longer on illness, disability, and disease as matters of fate but on health as a matter of ongoing moral self-transformation"…."risk and surveillance are aspects of the medical gaze that is disciplining the body" (Clarke et al., 63, 64).

It is with the above last sentence, that I would like to introduce examples of medical surveillance and risk assessments during the biomedicalization era from Khiara Bridges ethnographic study in *Reproducing Race* (Bridges, 2011).

Biomedical Surveillance and Risk Assessments in Reproducing Race

Khiara M. Bridges' ethnographic study, *Reproducing Race*, is focused on low-income pregnant women participating in New York City's Medicaid Prenatal Care Assistance Program (PCAP) at Alpha—a hospital that has one of the best prenatal programs in the United States. Alpha offers world-class medical care through state-of-the-art medical equipment, a competent staff, and highly qualified doctors, who are both attending physicians and residents. Alpha is able to provide these exceptional services because it is affiliated with a for-profit, teaching hospital, associated with the Omega University School of Medicine. Additionally, Alpha's costs for Medicaid/PCAP patient participation are reimbursed by the state of New York (Bridges, 31).

To receive this 'world-class' prenatal care from Alpha, PCAP patients must agree to go through a plethora of prenatal monitoring and supervision. This includes: revealing personal information about their social lives (including sex), taking prenatal vitamins, having scheduled examinations at Alpha throughout their pregnancies, taking urine and blood tests for sexually transmitted diseases, agreeing to be vaccinated for Hepatitis B and screened for tuberculosis, and they must agree to group examinations by doctors and medical students from Omega. Alpha

patients must also agree to extensive medicalization, medical surveillance, and risk assessments by Alpha staff and doctors throughout their participation in the program. Although the above monitoring and risk assessments by the Alpha staff of PCAP patients may appear extreme, if viewed from a governmental, biopolitical perspective, then Alpha staff's vigilance may not be extreme. Alpha staff believe these PCAP patients—from similar socioeconomic backgrounds, who, for the most part are minorities, and dependent on Medicaid for their prenatal care—participate in 'risky behavior.' Consequently, Alpha staff have placed them in a special category, 'Alpha patient population,' that requires constant monitoring to prevent behaviors that will harm their unborn children (74-79).

In the section on risk assessments (Bridges, 167-178), Bridges addresses the issue of surveillance to prevent participation in 'risky behaviors' by pointing to Paul Rabinow's concept of 'biosociality.' Biosociality refers to groups of people with shared cultural, social and environmental identities who are collectively placed in a communal environment (Rabinow, 1992). Rabinow defines the prevention of risks in the modern practice of medicine as:

> "Modern prevention is, above all, the tracking down of risks—not in the sense of the result of specific dangers posed by the immediate presence of a person or group, but rather, the composition of impersonal 'factors' that make risk probable. Prevention then, is surveillance not of the individual but of likely occurrence of diseases, anomalies, deviant behavior to be minimized and health behavior to be maximized" (Bridges, 169).

To receive reimbursement from the state of New York's Medicaid program for PCAP patients, Alpha staff have to keep extensive records on each patient's progress throughout their prenatal care. On the one hand, Alpha staff are vigilantly surveilling the PCAP patients to insure they follow mandated Medicaid procedures, while on the other hand, the state of New York City's Medicaid program is surveilling Alpha staff to insure they follow record-keeping requirements for reimbursement. (Bridges, 76-78).

And finally, as Bridges points to Foucault to underscore the need for the Alpha's surveillance and assessments of risks vigilance in monitoring Medicaid PCAP patients (Bridges, 177),

> "in the era of biopolitics the health of the people (and even more specifically, the health of the reproductive woman) has been read as a sign of the health of the nation." "Indeed, the health of the population-as-nation is that which demonstrates and foments the state's (bio)power." "Thus, modern subjects find the government promoting healthy behaviors for the subject's…own good" (Foucault, 1991).

If viewed from that Foucauldian perspective, Alpha staff required by law to insure the protection of PCAP patient's reproductive rights while they were participating in a state (government) Medicaid program.

Conclusion

In this final paper, I combined previous research on eighteenth and nineteenth century public healthcare, medical surveillance and risks assessments, with current readings from the Social and Cultural Studies of Biomedicine fall seminar, focused on medicine and biomedical research. I am appreciative of how much effort went into planning the syllabus and format of the seminar. Although some of the readings affected me more than I would have imagined, they provided valuable source material. The blogs and discussions in class—with such exceptional undergraduate and graduate students—provided a glimpse of future graduates who will contribute exponentially to social justice through their various careers. I am grateful for having been given the opportunity to participate in the fall seminar with people who truly care about the sociological aspects of healthcare and society.

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