



Public Health in the Vilna Ghetto as a Form of Jewish Resistance

Citation

Longacre, Mckenna. 2017. Public Health in the Vilna Ghetto as a Form of Jewish Resistance. Doctoral dissertation, Harvard Medical School.

Permanent link

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**Scholarly Report submitted in partial fulfillment of the MD Degree at Harvard
Medical School**

Date: January 26, 2017

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Scholarly Report Title: PUBLIC HEALTH IN THE VILNA GHETTO AS A FORM
OF JEWISH RESISTANCE

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Abstract

We describe the system of public health that evolved in the Vilna Ghetto as an illustrative example of Jewish innovation and achievement during the Holocaust. Furthermore, we argue that by cultivating a sophisticated system of public health, the ghetto inmates enacted a powerful form of Jewish resistance, directly thwarting the intention of the Nazis to eliminate the inhabitants by starvation, epidemic, and exposure. In doing so, we aim to highlight applicable lessons for the broader public health literature. We hope that this unique story may gain its rightful place in the history of public health as an insightful case study of creative and progressive solutions to universal health problems in one of the most challenging environments imaginable.

Contribution

I conceptualized the thesis of this study and was the primary author and project coordinator. The concept was born from exposure to primary evidence that I accessed while working with M.A. Grodin on a related project, the original manuscript Jewish Medical Resistance in the Holocaust. I solicited further guidance from S. Beinfield and S. Hildebrandt, who are both experts in the field. L. Glantz, and M.A. Grodin provided critical revision of the article for intellectual content and style.

Longacre, Mckenna, et al. "Public Health in the Vilna Ghetto as a Form of Jewish Resistance." *American journal of public health* 105.2 (2015): 293-301.

URL: <http://ajph.aphapublications.org/doi/abs/10.2105/AJPH.2014.302312>

Appendix 1. Published Manuscript: Public Health in the Vilna Ghetto as a Form of Jewish Resistance

Public Health

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as a Form of Jewish Resistance

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We describe the system of public health that evolved in the Vilna Ghetto as an illustrative example of Jewish innovation and achievement during the Holocaust. Furthermore, we argue that by cultivating a sophisticated system of public health, the ghetto inmates enacted a powerful form of Jewish resistance, directly thwarting the intention of the Nazis to eliminate the inhabitants by starvation, epidemic, and exposure. In doing so, we aim to highlight applicable lessons for the broader public health literature. We hope that this unique story may gain its rightful place in the history of public health as an insightful case study of creative and progressive solutions to universal health problems in one of the most challenging environments imaginable. (*Am J Public Health*. 2015;105:293–301. doi:10.2105/AJPH.2014.302312)

DURING WORLD WAR II (WWII), food, water, medical supplies, and other necessities were withheld by the Nazis, and sanitary living was made virtually impossible in ghettos throughout Eastern Europe.

Thus although ghettos preceded the more mechanized extermination camps, which had as their sole purpose the murder of Jews, the result of living in ghettos, which included segregation, humiliation, and death, was similar.¹ In response, Jewish public health evolved as a form of resistance to policies that were explicitly designed to ruin human life, health, and dignity.^{2–5} Using the Vilna Ghetto as an illustrative

example of the state of public health achieved *in extremis*, we hope to demonstrate applicable lessons for the broader public health literature. Furthermore, as scholarship illustrating dilemmas and triumphs of Jewish medicine in the Holocaust continues to prompt reflection in the field of medicine, we aimed to inspire similar discussion with respect to the historical importance of Jewish public health resistance.

Although virtually all ghettos had organized departments designed to manage sanitation and public health, hitherto there has been no systematic study of the public health policies of the Jewish leadership in the

Nazi-imposed ghettos during WWII. Overall, the Warsaw Ghetto has received the greatest attention, partly because of the particular adversity it faced, as discussed by Charles G. Roland,¹ S.M. Shasha,² and Myron Winick.³ Other important and applicable works have been published by Sara Bender⁴ and George Weisz et al.⁵ Mark Dworzecki's

to universal health problems in one of the most challenging environments imaginable.

THE VILNA GHETTO

Before the war, Vilna was a major European center of Jewish culture, and more than a third of the city's residents were Jewish. Its erudite, highly organized, and multifaceted Jewish culture earned prewar Vilna the colloquial title "the Lithuanian Jerusalem."

Setting the Stage for the War on Public Health

The Jewish community of Vilna was all too familiar with crisis. No fewer than nine civilian and military regimes, none of them benevolent, controlled the city between 1914 (when Vilna was part of czarist Russia) and 1923 (when it became part of Poland), all amid violent objections by the Lithuanians, who regarded Vilna as their historic capital. During the interwar years, Jewish Vilna continued to flourish as a major Jewish center despite mounting anti-Semitism in the 1930s. When the Nazis invaded Poland, Vilna was first occupied by the Soviets, then briefly given to Lithuania, itself soon annexed to the Soviet Union, and then ultimately occupied by German troops. When the Germans arrived in June 1941, approximately 60 000 Jews resided in the city (including a significant number of Jewish refugees from other parts of Poland). Another 6500 had emigrated from Vilna to the United States, Palestine, and elsewhere.⁹ Although it is clear that ghettoization was anticipated by many of the community leaders, who had weathered countless upheavals, the full truth of what

was to come could not have been reasonably anticipated.

Shortly after the Germans occupied Vilna, liquidation of the predominantly poor, old Jewish section of the city commenced, clearing the site of the impending ghettos. Most residents were deported to the nearby Ponary forest and subsequently shot. In total, 5000–10 000 Jews were killed during this three-day "purge."¹⁰ The two Jewish ghettos were established in Vilna on September 6, 1941, and the population was divided: those deemed fit for labor—about 30 000 people—were eventually sent to Ghetto I. The remaining 11 000 people were sorted into Ghetto II, which was liquidated within a few weeks of inception. An additional 6000 Jews never made it into the ghettos but were detained and executed in the following days.¹⁰ This was consistent with the ever-increasing violence of ghettoization in other parts of Europe that preceded the more mechanized killing associated with the Final Solution. Browning presents a more complete discussion of ghettoization preceding the Final Solution.¹¹

The Jews of Vilna were herded into the ghettos with less than an hour's notice, bringing with them only what they could carry. As a result, the limited quantities of money, medicine, clean clothes, adequate shoes, and soap quickly vanished. Wood and coal for heating were also chronically scarce. In the winters, maintaining heat was a constant battle, and indeed cold was among the greatest killers in the ghetto.¹⁰

People were forced into unfamiliar and poorly equipped homes crowded with strangers. This extreme overcrowding immediately threatened health and sanitation. It has been

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memoirs from the Vilna Ghetto⁶ and a new work edited by M. A. Grodin add to this literature.⁷ For this article, we relied on these and other important historical works, including Solon Beinfeld's *Health Care in the Vilna Ghetto*.⁸

Vilna is of particular importance because, whereas other ghettos (such as Warsaw's) have received special attention for their profound challenges—including immense size and less systemic planning—Vilna stands out as an example of what could be accomplished. Jewish leaders in the Vilna Ghetto created a public health system designed to stymy the Nazis' genocidal mission for as long as possible and vigilantly maintained this organization under increasingly dire circumstances. Because of this, public health measures not only directly benefited the residents but were also a form of political resistance; by their very nature, they were designed to thwart the Nazi genocidal program via organized health policy and practice. Thus we present the Vilna Ghetto as a case study of creative and progressive solutions

estimated that the population density immediately increased by 7–10 times.¹⁰ As a result, the old sewer systems, which were barely adequate for the poorer neighborhood before the war, were quickly overwhelmed. Most housing complexes had only outdoor privies with two to four seats each, which were originally intended for a population only one tenth the size of the ghetto. The water supply was also inadequate—particularly in the winter, when the pipes froze in the unheated buildings. These factors made personal hygiene exceedingly difficult to maintain.¹⁰

Just as few resources were allowed into the ghettos, little refuse was allowed out. Proper garbage removal and even burials were extremely limited. As a result, in the beginning, residences became soiled with excrement. Garbage bins quickly overflowed, sometimes piling as high as second-story windows, with grave impact on both the physical and mental health of inhabitants.¹⁰

A significant threat to the health of the ghetto was the constant influx of individuals from labor camps in the rural areas surrounding Vilna, as the living conditions were generally even worse in the labor camps than in the ghetto. As these workers were transported to the ghetto, they further taxed the limited resources and infrastructure and were often exhausted, dirty, lice infested, and sick and thus constituted the greatest source of new diseases in the ghetto.¹⁰

These challenges were common among the ghettos of the period.⁸ Indeed, the death tolls in other major ghettos were staggering: the entire Jewish population would have perished of disease, famine, and cold in a matter of years had the Nazis been willing

to wait that long.⁸ Remarkably, however, such was not the case in the Vilna Ghetto.

Building a Framework for Public Health Resistance

The story of the Vilna Ghetto is exceptional, partly because of a collection of fortuitous circumstances. Before the war, Vilna had been a key center for Jewish medicine. In the weeks preceding the creation of the ghetto, the Vilna Jewish doctors met to plan for public health *in extremis*. As had been hoped, Ghetto I ultimately encompassed the venerable pre-war Jewish hospital and 130 Jewish doctors, who were thus able to facilitate the implementation of their plans.⁸ The inclusion of such an invaluable asset within Vilna was unprecedented. Why the Nazis allowed the inclusion of the Jewish hospital is unclear, although it has been proposed that special connections held by persons such as Jacob Gens contributed to this anomaly.⁹ Within the first days of the ghetto they created an organized system of public health, the pillars of which were prophylaxis, healing, and child care.^{8,10}

At the behest of the Nazis, the *Judenrat*, or Jewish council, was formed within days of the ghetto's inception. The Nazis demanded that this Jewish governing body, which was instated in all the ghettos across Europe, act as an intermediary to the Jewish population. Among their motivations was the desire to gain tighter control of the Jews. The Nazis appointed five-member *Judenrats* in both Ghettos I and II. The first *Judenrat* in Ghetto I consisted of known public figures, whereas the appointments to the short-lived *Judenrat* in Ghetto II were more random. Of course, the *Judenrat* was subject

at all times to Nazi orders, but in addition it acted to govern many aspects of life in the ghetto, including food, work, housing, education, the Jewish police, and, first and foremost, public health. To accomplish this, various committees and departments were created by the *Judenrat*, including the Sanitation Commission and the Epidemiological Section.^{8,10} Furthermore, by contrast to substantially larger ghettos such as that of Warsaw, the implementation of systematized public health was perhaps made more manageable after the population purges that occurred both before and soon after ghettoization, which resulted in the death of nearly half of the Vilna Jewish population.

In July 1942 the Nazi authorities replaced the *Judenrat* with what amounted to a police regime led by Jacob Gens, who the *Judenrat* had appointed as the head of the Jewish police. Gens, who had been an officer in the Lithuanian army, assumed an increasingly active role in the ghetto. Although this tight control was deeply resented by many ghetto inmates, it did facilitate strict adherence to the system of sanitation and health that had been established by the *Judenrat*. Although initial access to important medical capital, including health care workers, was not unique to the Vilna Ghetto, this particular confluence of resources must be taken into account when considering the innovation of the Vilna Ghetto with respect to other ghettos of the period.

PUBLIC HEALTH SOLUTIONS

Few had access to clean water in the ghetto, and even fewer to

electrical heating sources, which were illegal in the ghetto. For that reason, by 1942 six “teahouses” were established by the Sanitary–Epidemiological Section. These were modest places where hot water was made available for various critical purposes, such as cooking, cleaning, laundry, and washing children. The teahouses opened as early as 4:00 a.m. and remained open until 9:00 p.m. to provide hot water and perhaps a glass of tea for laborers both before and after work; they charged a nominal fee.⁸

Starvation was an imminent threat from the ghetto’s inception. However, the Jewish community of Vilna had an established tradition of community assistance that only intensified during the ghetto period.¹² At designated facilities including various soup kitchens, food was distributed on the basis of need.¹²

A sanitation commission oversaw the distribution of food. Although some questionable food was incorporated by necessity, other food that was spoiled was withheld to help protect the health of the community.¹² The guideline “Special Sanitary Instructions for Food Enterprises” was created. This required that food handlers receive immunizations against typhoid and paratyphoid, bathe regularly, and report suspicious products to the Sanitary–Epidemiological Section. Furthermore, all personnel were prohibited from sleeping where they made, sold, or distributed food products.⁸

In addition to low caloric intake, lack of nutrition was a critical concern. Among the most industrious of public health measures, vitamins were manufactured from various waste products. For example, Girschowich, a well-known internist in

Vilna before the war, improvised a special laboratory in which he used waste from a local brewery—obtained both legally and illegally—to produce vitamins for children. Calcium and phosphorus preparations (popularly called “ghetto phosphatin”) were extracted from horse bones. In addition, vitamins B1 and D were produced, as was iodine.¹⁰

To further supplement the scant foodstuffs provided by the Nazis, the *Judenrat* helped organize extremely dangerous food-smuggling campaigns.¹² These often involved children, who were best suited to slip through the fenced enclosures. The select few Jews who the Nazis granted limited access outside the ghetto also participated in this effort. Through these organized efforts of collection and redistribution, the ghetto significantly supplemented its provisions.¹³

Faced with a scarcity of resources, the *Judenrat* introduced a system of rationing. In the early days of the ghetto, food and water were often purchased from other Jews or from community facilities for a nominal fee. As monetary resources dwindled, resources were distributed either free or on a sliding scale. Because the Nazis provided (insufficient) rations to forced laborers who worked at Nazi military installations, it was imperative to redistribute rations to be able to feed those who were unable to work. Laborers were required to donate 5% of their provisions to the community. In addition, public kitchens served 75 000 free dinners.¹² Food was also reserved for children and the sick and was distributed at special locations for this purpose. At times, food was also withheld from those who did not meet basic standards of personal hygiene.¹⁰ This was

but one of various extreme means used to enforce sanitation within the ghetto.

Sanitation

From the beginning, the Nazis intentionally created conditions favorable to the outbreak of epidemics such as typhus and typhoid. Furthermore, the Nazis’ fanatical fear of typhus, which inspired mass murder in other ghettos, was well known. In response, the *Judenrat* took immediate actions to prevent such outbreaks, including the meticulous oversight of sanitation.

Appropriate trash disposal was required, and cleanliness was mandated and enforced by the Jewish Sanitation Police and the Sanitary–Epidemiological Section. Even so, because of inadequate infrastructure, waste and human excrement created a significant public health threat. A resourceful solution was devised. An agreement was made with nearby non-Jewish peasants to remove the ghetto waste, which was then used as manure and cattle feed. In January 1943 alone, 518 wagonloads of waste were removed. “So vital was this achievement, that when the thousandth wagonload of garbage left, a celebration was organized by the Sanitary–Epidemiological Section.”^{8(p73)}

Because clean water was exceedingly scarce, personal hygiene became a significant concern. The problem escalated during the winter, as there were few opportunities to heat water, and thus showering itself became dangerous to one’s health. At first, people from Ghetto I were escorted to the old communal baths located in front of the historic synagogue of Ghetto II. After Ghetto II was destroyed, the *Judenrat* established two

public sanitation stations.¹² These new facilities proved vital for the surviving population of Ghetto I; they provided shower and hand-washing facilities, and the steam from one of these facilities was used to heat the Reading Room of the much visited ghetto library. With the aid of vigilant oversight by the ghetto police, “by December 1942 the number of visits to the baths (18 026) was essentially identical to that of the population as a whole.”^{8(p75)}

As the population became weaker and more vulnerable to disease, the *Judenrat* responded with more aggressive measures. People were required to have written proof that they had visited the sanitation facilities to receive food rations. “In addition to the regular obligatory visits, ‘special’ groups (from flats where communicable disease had occurred, as well as exceptionally dirty or infested individuals) often literally had to be dragged to the baths.”^{8(p75)} A nominal fee was collected from those who were able to pay. Disinfection was free for all those with contagious diseases.¹⁴

The poor availability of water and soap also made laundry a significant issue. At first, a disinfection chamber, fashioned from an old Lithuanian army stove, was used. “By August 1, 1942, it had handled some 87 000 kg of clothing of those suffering from contagious diseases and their families,” including from the hospital and quarantine stations.^{8(p76)} In February 1942, a communal laundry service was added, but its daily capacity proved inadequate for the needs of the entire ghetto. A second, larger laundry facility was later opened. However, it was also required to wash the clothes of German casualties. Again, although nominal fees

were collected in the beginning, the disinfection of clothes and bed linens of people with lice and other contagious diseases was conducted free to better protect overall public health.¹²

As another creative public health measure, barbers were employed to cut hair and beards to further promote personal hygiene by reducing the risk of obtaining lice. Although the rabbis and other leaders sanctioned the practice as a preventive sanitation measure, maintaining facial hair was viewed as a demonstration of orthodox faith and thus cutting beards met with a degree of cultural opposition.⁸

Because sanitation was viewed as an imperative defense against the outbreak of disease, a strict system of enforcement was created. The two main agents were the Sanitary–Epidemiological Section and the Sanitary Police. “The Sanitary Police were relentless in their inspections. The courtyards in particular . . . fell under intensive scrutiny, each inspected on average more than once a day, sometimes even every few hours.”^{8(p73)} The Sanitary Police also collected data on inhabitation and cleanliness during these inspections. On one round of inspections, they assessed the number of people who were still sleeping on the floor to provide plank cots for them. Under the Sanitation Police were the “block commanders,” who presided over cleanliness and other issues pertinent to the block. Below them were the *komendantins*, or women in charge of individual courtyards (shared by multiple residences), who inspected every flat once per week. When violations were assessed, the Jewish Sanitary Police imposed fines and even

jail time in the ghetto prison. Nevertheless, the Sanitary–Epidemiological Section relied primarily on propaganda and persuasion to promote sanitation. For example, they organized districtwide competitions, which promised prizes for cleanliness, and orchestrated collective “cleaning weeks.”⁸

These extensive measures were also intended to prepare the ghetto for the periodic inspections of the Nazi Sanitation Police. The Nazis were known to have a fanatical fear of typhus, which in other ghettos was used

“*These extensive measures were also intended to prepare the ghetto for the periodic inspections of the Nazi Sanitation Police. The Nazis were known to have a fanatical fear of typhus, which in other ghettos was used as a pretext for mass killings.*”

as a pretext for mass killings. This was well known and heeded by the *Judenrat*. Paradoxically, the *Judenrat* and other Jewish leaders used the Nazis’ fear of disease to enable resistance efforts. Several ghetto hospitals, for instance, placed signs outside their doors warning of disease outbreaks to keep the Nazis at bay, thus enabling secret meetings by resistance forces.^{10,14}

In total, the efforts to maintain sanitation were remarkably successful. Perhaps most notably, lice became virtually absent. “In its report the Sanitary Epidemiological Police could boast of the ultimate proof of the success of their policy; there were eight German ‘visits’ . . . to the ghetto . . . without a single complaint of dirt.”^{8(p74)}

Prevention and Containment of Contagious Disease

Additional initiatives were introduced to further prevent and contain contagious diseases. Foremost among these was public health education. Perhaps the most colorful example is the mock “trial of the louse,” led by the “head prosecutor,” the head of the Sanitary–Epidemiological Section. The trial is referenced in numerous memoirs as an engaging, enjoyable, and effective example of creative public health education.¹⁰

Posters and leaflets containing public health propaganda were routinely distributed. Biweekly medical lectures with short question and answer periods were also provided for the public.⁸ Transcripts of the meetings were posted at various points in the ghetto, some of which survived the war intact.¹² Titles included “About Vitamins,” “Bedbugs,” “You Mustn’t Pick Your Nose,” “Don’t Be Frightened If Your Child Turns Yellow,” “Mama, I Don’t Want to Go to the Hospital,” “About Frequent Urination in Healthy People,” “Nervous Children,” and “Superstitions and Old Wives’ Tales.”⁸

Other direct means of prevention were employed. When possible, mass immunization campaigns were conducted for typhoid, paratyphoid fevers, dysentery, and cholera at designated vaccination areas.¹² Because these immunizations were often acquired from the Nazis (likely because of the Nazis’ fanatical fear of the most virulent pathogens), they were tested on dogs before they were administered.¹⁴ Vaccines were offered free but were required for those employed in food shops, kitchens, schools, and health institutions. On October 2, 1941, the *Judenrat* announced, “In order to protect

the population against communicable diseases, the *Judenrat* has decided that all the ghetto inhabitants from 14–60 years of age must be vaccinated.”^{13(p87)} By the end of October 1942, nearly 22 000 people had been vaccinated against typhoid and paratyphoid A and B. Another 900 were immunized in the labor units.⁸ This was a remarkable success, and in fact no typhoid or paratyphoid epidemics swept the ghetto. Isolated instances of disease were predominantly among people coming from the labor camps.⁸

Several additional diseases prompted special initiatives by the Sanitary–Epidemiological Section, including scabies, tuberculosis, and infestations of bedbugs. A special scabies station was constructed at which 2000 people were examined and 400 were treated. Nearly all those originally infected were considered cured after treatment.⁶ A tuberculosis station was similarly established. Again, isolated cases of tuberculosis were contained, and no large-scale epidemic of tuberculosis developed in the ghetto. Furthermore, an “anti-pest brigade” was created, in particular to combat bedbugs.⁸

When cases of infectious disease were identified, various containment strategies were implemented. For example, controversial quarantine stations were established. Quarantines were often feared, perhaps with good reason, because of the deadly nature of the associated diseases and harsh conditions of confinement.

When . . . two children came down with typhus, the most dreaded disease of the ghetto, the Sanitary Police drove everyone out of our flat, took them all to the bathhouse, carried out

a thorough disinfection at home, with bedclothes removed for disinfection. The tenants were strongly dissatisfied with the whole fuss, but [their protests] made no difference. All preventive measures were carried out to the end.^{8(p74)}

A doctor visited those placed under quarantine twice a day and gave them soap, increased food rations, and firewood, which the *Judenrat* provided.¹⁴ In general, this comprehensive system of containment “so impressed the German authorities that they ordered it copied elsewhere.”^{15(p32)}

With the successful instatement of these preventive and containment strategies, the greatest persistent threat to the health of the ghetto came from outside the ghetto: the new arrivals from the labor camps. Significant measures were taken to address this problem as well. First, efforts were made to improve the conditions in the camps themselves. Each camp was allocated its own doctor and large ones a nurse as well. Medical care was given free.¹² Welfare organizations inside the ghetto donated clothing. The health department organized a special commission of Jewish doctors to survey and improve sanitary conditions. Eventually, all workers entering the ghetto were required to first be examined at the quarantine station.

Those found to be or suspected of being ill with typhus or other communicable disease were sent to the Ghetto Hospital; all others remained in quarantine for a certain time. Even after release, those who had been in quarantine continued to be visited by a nurse, who also inspected their bedding for signs of disease.^{8(p77)}

In this way, the outside sources of contamination were managed.

Medicine

The scope of services rendered at the Jewish hospital was remarkable and included outpatient and emergency services.⁴ The hospital doctors also made house calls. Later, minor procedures were added as well as departments of internal medicine, pediatrics, gynecology, surgery, neurology, ophthalmology, otolaryngology, and radiology. The clinic also offered dentistry and physical therapy and staffed its own laboratory.¹⁰ Scientific lectures and meetings were routinely presented on issues immediately relevant to the health of the ghetto.¹² In many ways, this structure, which includes collegiate discourse and review, mirrors the format by which medicine is practiced at leading hospitals today.

To better serve the ghetto, the hospital supplemented its services with a separate outpatient clinic, which also provided emergency services. Having been thoughtfully planned before the inception of the ghetto, it opened almost immediately, on September 7, 1941. More than 300 patients were seen every day. Significantly, the outpatient clinic also included the only committee with the power to issue medical excuses for absence from work. Patients were rigorously assessed on a grading system from A to D, in which A denoted healthy and D only sitting work.¹² Rigorous criteria were used to balance empathy for the weakening populace, the limited tolerance of the Nazis, and the collective need for additional rations earned by the labor force.

The high operating level of the medical services in the Vilna Ghetto belied the chronic deficit of medical supplies with which the hospital was plagued.

Although a shortage of medical supplies had been anticipated in the preghetto medical planning, it had been hoped that nearby Frumkin's Pharmacy would be included in the ghetto. In practice, it lay just outside the gates. Like all practical problems in the ghetto, the supply shortage was overcome in several creative ways. "Early on doctors scoured the attics and the ruined or abandoned premises of the ghetto in search of iodine, bandages, and other materials left by previous occupants. The doctors themselves—and some laymen—donated medications they had brought with them into the ghetto."^{8(p83)} Although the Nazis allowed the purchase of certain pharmaceuticals from outside the ghetto, other, more vital supplies were purchased illegally from Polish pharmacists and then smuggled to the hospital. Jews with limited access outside the ghetto risked their lives by posing as Aryans with forged prescriptions to purchase these necessary supplies. Eventually, however, Nazi control became such that virtually nothing could be obtained from outside the ghetto.¹⁰

Some essential pharmaceuticals were subsequently produced within the ghetto itself from various waste products, including vitamins B and D, calcium phosphorus, and iodine as well as antirheumatic, antineuralgic, and analgesic medications.⁸

As with food and water, medical resources were carefully rationed within the community. In the early days of the ghetto, services were offered for a small fee proportional to the patients' financial means. A system of subsidy was created by the *Judenrat* to provide minimal compensation for the medical staff and to partially recuperate the cost of

supplies, which at that time could still be purchased outside the ghetto. However, ultimately, most care was provided free.¹⁰ These medical subsidies were critical; the individual need was often desperate, and it was critical to treat and contain the sickest people in the ghetto to help control the spread of major diseases. The need to treat infected individuals to protect the population is a mainstay of contemporary public health policy.

It is important to note that the hospital staff was engaged in its own campaign of medical resistance. Both before and during the ghetto period, various important persons were hidden among the patients and were thus enabled to evade death from the Nazis.¹⁰ Furthermore, hospital staff hid instances of contagious disease from the Nazis. In required regular epidemiological reports, such cases either were not reported at all or were mislabeled as a more benign condition.^{8,10} This is but one small testament to the high level of professional integrity and humanitarianism the Vilna Ghetto medical staff practiced during its entrapment.

Children

In all aspects related to health and welfare, special attention was given to children. The pediatric department of the hospital cared for hundreds of children in the ghetto.¹⁶ Additionally, an orphanage, called the Ghetto Children's Home, was created.¹²

Both hospitals and orphanages were allotted additional food rations by the health department to distribute to children in need. In addition, a children's kitchen was created. The intention was to provide midday soup for the poorest children of the ghetto. By mid-1942 the

kitchen regularly served about 1000 children and, for some, constituted their only source of nutrition. A milk kitchen was also created to provide dairy supplements, predominantly for infants.⁸ Their resources were ultimately inadequate for the demand.

An additional branch of the health department, known as the School Medical Center, oversaw the impressive array of schools in the ghetto.⁸ The entire system served about 3000 children, or about one sixth of the ghetto population. The School Medical Center helped to organize extra-curricular activities, and the educational system was used to facilitate medical screening for children.¹² “Before a child could be registered in any educational or vocational institution, they had to be inspected by a doctor of the School Medical Center and obtain a certificate of admissibility.”^{8(p86)} A spectacular testament to these efforts, “the children in fact suffered less from infestation with lice and nits than Vilna school children before the war.”^{8(p86)} The School Medical Center also secured charity for the poorest children. The concerted effort to care for children is a testament to the decision to protect the values most directly under attack in the ghetto: human dignity, equity, and posterity.

CONCLUSIONS

Maintaining basic public health amid scarcity is an omnipresent, global challenge. With respect to scarcity, crisis, and public health disaster, parallels can be drawn between the closed ghettos of WWII and modern examples of displaced peoples left in public health peril, including some refugee camps. In the Vilna Ghetto,

a key factor leading to its relative success was the existing reservoir of public health knowledge in the community, which included the more advanced education of doctor and nurses as well as strong general community health awareness. Clearly, existing communal knowledge is an invaluable asset in crises. This speaks to the need to prepare at-risk communities with basic health education as a critical protective measure. Furthermore, Vilna’s level of education is not beyond attainment in resource-poor settings, as they were limited to knowledge acquired before 1942. This suggests that basic principles of hygiene and disease transmission may help sustain public health and may even be sufficient to yield profound innovation under duress.

The Vilna Ghetto is also notable for vigilant self-governance. This was in part because of the long history of cultural and religious oppression. Because of this, Vilna’s Jewish leaders foresaw the coming danger and were thus able to quickly establish a basic health infrastructure. This has several implications for contemporary areas of crisis. To begin with, it highlights the danger of the international brain drain, in which future health care workers travel to distant countries for training and rarely return. Without this existing reservoir of knowledge, it is nearly impossible to organize and enact public health resistance campaigns with due urgency. The success of the Vilna Ghetto also speaks to the need to promote indigenous leadership and local medical involvement, to effectively enforce self-governance with respect to all aspects of health. In the case of Vilna, prioritizing public health had significant secondary benefits:

“The health-care workers . . . preserved dignity, sustained hope, raised spirits, and improved the will to survive among the Vilna Ghetto inhabitants.”^{10(p147)}

The inhabitants of the Vilna Ghetto quickly mobilized a system of rationing with respect to all essential resources. This system was remarkably successful in ensuring the sustenance of all inhabitants. Because of the scarcity of resources, it is remarkable that inhabitants willingly donated a portion of their limited supplies, particularly as many contemporary developed countries have yet to develop and implement equally effective systems of health care rationing. The culture that enabled this communal ethic was truly profound. Contributing factors included a relatively even distribution of health and power at the inception of the ghetto. Equity of wealth, the shared climate of terror, and existing cultural values promoted a communal consciousness of the fact that disease, hunger, and exposure were epidemics that threatened all. Further reflection is needed to better understand the circumstances that enabled such effective community buy-in to such extreme rationing so that a similar ethic may be fostered in other settings of extreme scarcity.

The day-to-day struggle for existence in the ghettos has been eclipsed in the historical narrative by the atrocities of the Holocaust and the relatively rare instances of armed resistance. This may help explain why the general academic community has yet to fully appreciate the remarkable innovations and organization of the inmates of the Jewish ghettos. Furthermore, many of the innovations of public health in the ghettos were lost with the victims of the war; all ghettos, including

Vilna, were eventually liquidated and the inhabitants were deported to extermination camps. We have sought to illuminate the level of sophistication that enabled the Vilna Ghetto to withstand the Nazis' slow attack via epidemic, exposure, and starvation. In this context, the vigilant, creative, and effective public health response was truly remarkable. Further scholarship is warranted so that the Jewish ghettos of WWII may gain their rightful place in the history of public health. As the Vilna Ghetto demonstrates, this lost chapter may provide insights into creative and progressive solutions to universal health problems against the backdrop of one of the most challenging environments imaginable. ■

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This article was accepted September 5, 2014.

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M. Longacre conceptualized the thesis of this study and was the primary author and project coordinator. S. Beinfeld was a secondary author and provided important historical contextualization. S. Hildebrandt, L. Glantz, and M. A. Grodin provided critical revision of the article for intellectual content and style. M. A. Grodin contributed important secondary sources that helped inspire the thesis.

Acknowledgments

This work was supported by the Health Law, Bioethics and Human Rights Department of Boston University School of Public Health.

Human Participant Protection

No protocol approval was necessary because there were no human participants involved in this research.

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