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Less Than Human: A Study of the Institutional Origins of the Medical Waste Recovered at the Milwaukee County Poor Farm Cemetery

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LESS THAN HUMAN: A STUDY OF THE INSTITUTIONAL ORIGINS OF THE MEDICAL WASTE RECOVERED AT THE MILWAUKEE COUNTY POOR FARM CEMETERY

by

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ABSTRACT

LESS THAN HUMAN: A STUDY OF THE INSTITUTIONAL ORIGINS OF THE MEDICAL WASTE RECOVERED AT THE MILWAUKEE COUNTY POOR FARM CEMETERY

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Poor Laws enacted in the early 19th-century condemned the most destitute to confinement in almshouses, poor farms, and workhouses. These laws paralleled contemporary Anatomy Acts that turned the unclaimed bodies of individuals who died at those institutions over to medical facilities for dissection, often simultaneously removing anatomization as a punishment for murder. In essence, pauperism became punishable by anatomization. Thus, dissection served the dual purpose of reinforcing social identity amongst the lower class and privileging the social identity of upper-class medical students. This study is an analysis of the material medical waste recovered from the graves of individuals interred at the Milwaukee County Poor Farm Cemetery. My goal is to determine from which medical institution in Milwaukee County the medical waste, and thus the body, originated, in concert with ongoing, collaborative bioarcheological analysis. This study utilizes a presence and absence analysis of types of medical waste found at burial locations alongside bioarcheological evidence for types of post-mortem medical intervention in order to determine the institutional origin of the waste recovered.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

AMA: American Medical Association

ARL: Archaeological Research Laboratory

GLARC: Great Lakes Archaeological Research Center

MCBS: Milwaukee County Board of Supervisors

MCPFC: Milwaukee County Poor Farm Cemetery

MMC: Milwaukee Medical College

SCP: Superintendent(s) of the County Poor

WCPS: Wisconsin College of Physicians and Surgeons

UWM: University of Wisconsin-Milwaukee

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You are alive and living now. Now is the envy of all the dead.

— Don Hertzfeldt, *World of Tommorow*

Chapter I: Introduction

Introduction

In 1991, 1992, and 2013 archaeological excavations were carried out at the Milwaukee County Poor Farm Cemetery (MCPFC) (47-MI-0527, 47-BMI-0076, Milwaukee County Grounds, Froedert Tract) in Wauwatosa, Wisconsin ahead of multiple construction projects on the Milwaukee County Grounds. Although osteological analysis is still in progress, the total potential number of individuals represented, including commingled Minimum Number of Individuals (MNI), is 2480 from 2281 coffin locations (Richards et al. 2016). A number of these grave locations contained remains which exhibited evidence of peri-mortem or post-mortem medical intervention in the form of autopsy, dissection, amputation, or use as medical specimens. Additionally, a number of grave locations contained material medical waste (Richards et al. 2016, Richards and Kastell 1993). Several medical facilities in Milwaukee County had the opportunity to place waste into coffins which were to be buried at the Poor Farm Cemetery. This project is intended to attempt to narrow down from which medical institution in the county certain medical waste originated. If it is possible to determine the origin of this particular class of grave inclusions, then we will be provided with a broader understanding of the interactions of the medical community with the marginalized and largely immigrant urban poor in Milwaukee County at the turn of the last century. The primary question addressed in this research was which medical facilities were more likely to place waste into the Milwaukee County Poor Farm Cemetery graves. The data set under consideration contains medical waste from 74 coffin locations and includes medical tools, laboratory items, and general waste produced through medical practices.

The presence of material waste associated with medical practices often correlated with osteological evidence of peri and post-mortem medical intervention although not always. I argue that the medical community of Milwaukee reduced the poor to the equivalent of garbage when they included medical waste in the graves of paupers; most strikingly when refuse was placed in the graves of dissected individuals. Poor Laws enacted in the early nineteenth century paralleled contemporary Anatomy Acts that turned the unclaimed bodies of individuals who died at state and local institutions over to medical facilities for dissection, often simultaneously removing anatomization as a punishment for murder (Richardson 2001; Sappol 2002; Trattner 1999 [1974]). In essence, pauperism became punishable by anatomization. Thus, dissection served the dual purpose of reinforcing social identity amongst the lower class and privileging the social identity of upper-class medical students (Sappol 2002). Placing medical waste in the graves of the anatomized poor did more than reinforce social identity; it actively lowered their status from that of a person to a collection of parts or waste. The poor became trash and the students became doctors in the course of their interaction with one another.

Medical debris is not the only class of material culture recovered during excavations that can be classified as waste. However, unlike other grave inclusions, medical waste can be associated with distinct medical facilities in Milwaukee County where individuals had the opportunity to utilize coffins for the disposal of human remains prior to interment at MCPFC. Medical waste recovered at MCPFC likely originated from three categories of medical locations within Milwaukee County. The first of these was the medical colleges that were formed in Milwaukee at the turn of the last century. The Wisconsin College of Physicians and Surgeons (WCPS 1893-1913), the Milwaukee Medical College (MMC 1894-1903), and later the Marquette University Medical School have been positively associated with individuals buried at

the county cemetery (Richards et al. 2016:32). In addition to the medical schools, there were two other institutions on the county grounds from which medical waste may have originated. The County Hospital or Infirmary and the Pathology Department were both located on the MCPFC grounds, and employees at these two facilities might have had an opportunity to dispose of medical waste within coffins destined for the Poor Farm Cemetery. Additionally, some of the bodies that passed through the Milwaukee County Coroner's office were eventually interred at MCPFC. Each of the medical institutions described above performed different, sometimes overlapping, types of procedures upon the human body, including, but not limited to, autopsy, dissection, and amputation. Additionally, medical specimens were kept for display and research at these institutions

(Richards et al. 2016). The goal of this study is to determine at which medical institution the waste, and thus the human remains originated. If each institution performed distinct, but overlapping procedures, then an examination of the material medical waste associated with those practices in correlation with bioarcheological evidence for autopsy and anatomization can be utilized to determine the medical institution where the coffin and by association the individual(s) and items within it originated.

The remainder of Chapter I provides a broad examination of the history and intersection of dissection, criminalization, and poverty across Europe and the United States from the medieval period into the nineteenth century. Chapter II narrows the focus of the conversation to Milwaukee County and discusses the local poor relief system and medical institutions, as well as a discussion of the Milwaukee County Poor Farm Cemetery. In Chapter III, I discuss the methods used in the examination of the material culture as well as historic document analysis. An analysis of the data collected over the course of this project is provided in Chapter IV. In Chapter V, I provide an examination of specific coffin site locations, discuss obstacles

encountered by this research project, and provide a brief examination of modern parallels for the historical context of this site.

A Detestably Savage Practice

The insult of including medical waste in the graves of the poor was compounded when considered in the context of the fear surrounding post-mortem medical treatment by those outside of the medical community in the nineteenth century (Cherryson 2010; Richardson 2001). Christianity adopted many pre-Christian customs as it moved across Europe and into the British Isles, including the practice of burying a body with the feet towards the east and the rising sun, where the "last trump will sound" (Richardson 2001: 6). A proper burial was therefore necessary for the Second Coming. Dissection added a further affront to the lack of a proper burial. A body dismembered and reduced to a series of parts and pieces could not rise upon the return of Christ.

This belief likely originated in AD 1299 when Pope Boniface VIII issued the bull *Detestande feritatis* which was soon adopted into the *Extravagantes communes* and became part of canonical Church law regulating burial practices (Brown 1981). The bull specifically prohibited the practice of boiling and eviscerating a human body before burial. This was a common technique used to prepare a corpse for transportation when a person, especially a noble, died far from their intended burial place. The thirteenth century edict made clear that the pope considered this to be a "detestably savage practice" (Brown 1981: 221). Historians have noted, however, that the way Boniface enforced the edict indicated that he was equally opposed to dismemberment or cremation of a corpse before burial. For instance, when the bishop-elect of Lisieux requested permission to disinter his brother in order to rebury his corpse in France, the

Pope authorized the move "on the condition that the body be reduced to ashes and that it not be burned, boiled, or *cut into pieces* before the transfer" (Brown 1981: 222; emphasis mine). The closely held belief that a person must be buried for an undefined period of time, intact, seems to have survived the Reformation and had become a tenet of all of Christianity by the nineteenth century.

The Confluence of Poverty, Criminality, and Medical Training

Social movements and legislation regarding modern criminality, dissection, and poor relief extend back into the early sixteenth century. In some areas of the world ripples of medieval criminal laws enduring well into the nineteenth century had lasting legal ramification, especially among the poor. Enlightenment era reform movements set about changing the way society dealt with crime and poor relief, as well as the slow, but general acceptance of the need for dissection in medical training, which also had deep negative associations for poor and marginalized communities.

In AD 1275 the threshold for what constituted grand larceny versus petty larceny was set in England at one shilling. Despite inflation, the distinction between felony theft and misdemeanor remained unchanged for nearly seven centuries (McCarthy and O'Donnabhain 2016). According the British National Archives one shilling in AD 1275 was equivalent to five days wages for a skilled tradesman. By 1830 one shilling was less than that same tradesman would earn in a day (British National Archives 2018). For more perspective, accounting for inflation, a 1275 shilling had the equivalent purchasing power of approximately 36 British pounds (or 45 US dollars) in 2017; an 1830 shilling had the modern purchasing power of just over three British pounds (or four US dollars) in 2017 (British National Archives 2018; Bank of

America Currency Converter 2019). Felonious offenses were punishable by execution and judges had no other punishment at their discretion until the Elizabethan Era (1558-1603) when transportation to the American Colonies became an alternative punitive option. Thus, a person convicted of a felony could find reprieve from a death sentence if they agreed to be transported to a distant land and serve as an unpaid laborer. In theory the theft of a handkerchief in nineteenth century Britain could result in a death sentence (McCarthy and O'Donnabhain 2016). This is more than an interesting historical note, it is an example of the passive hyper-criminalization of poverty. This placed the most destitute into a difficult situation. For instance, prior to the Great Hunger (1845-1849) the poor in Ireland who relied on the potato for sustenance endured yearly summer famines as stores were exhausted and they awaited the first harvest of the yearly crop (Geber 2015). When faced with starvation theft can become the only means of survival. Ensuring the survival of your family might mean facing the gallows.

A sentence of execution became ever more terrifying when the threat of anatomization was tacked on as well. As early as 1501 the Edinburgh Guild of Surgeons and Barbers received royal recognition when James IV granted them the bodies of certain executed criminals for dissection. In 1540, Henry VIII gave the society the right to four hanged felons per year (Richardson 2001). The absurdly low threshold for felonious larceny bound poverty to criminality, and royal edicts bound criminality to dissection; thus poverty has borne an association with dissection since the early sixteenth century. An Act of Parliament passed in 1752 strengthened the association between crime and dissection when it gave judges the discretion to substitute dissection for gibbeting in cases of murder, freeing the more petty criminal from the threat of dissection (Laqueur 2015; Richardson 2001; Sappol 2002). Further, the punishments were meant to expose, humiliate, and stigmatize the wrongdoers. Hung in cages

thirty feet in the air, gibbetted bodies were commonly left on display to decay for decades. Bodies sentenced to anatomization were often cut and spread open in inns and other convenient places, exposing the executed individual's naked body and internal workings to the public gaze before being taken away to medical laboratories to be methodically disarticulated (Tarlow and Lowman 2018). Ultimately, the intent of either punishment was to deny the offender a burial (Richardson 2001). In doing so, the state undermined commonly held religious and cultural beliefs (Cherryson 2010; Tarlow and Lowman 2018) to the horror of the condemned individual and the loyal family and friends who were "all obliged to share some of the discredit of the stigmatized person to whom they are related" (Goffman 1986 [1963]:30). In the end, the practice denied the condemned and their family the comfort of a decent burial (Tarlow and Lowman 2018).

This type of legislation was not limited to Great Britain. In the United States, the former colonies passed similar regulations. In 1789, the New York legislature passed an act that provided the bodies of executed criminals for medical dissection, ostensibly to prevent body snatching, which was on the rise due to an increased academic interest in medicine. In 1790 the United States Congress passed legislation giving federal judges the option of adding dissection to capital punishment in murder cases (Sappol 2002).

In Britain, legal attempts were made to expand the number of criminal bodies available for dissection twice after the passage of the 1752 Murder Act. The Dissection of Convicts Bill was introduced to the House of Commons in 1786. The passage of this bill would have expanded the crimes punishable by execution to include high treason, rape, and burglary, among others, with the bodies made available for dissection. The bill was determined to undermine the

effectiveness of anatomization as a deterrent for murder by the House of Lords and thrown out entirely (Tarlow and Lowman 2018).

A second effort was made to expand the legal parameters of which criminal corpses could be dissected in 1796. The Motion for the Dissection of Robbers and Burglars was introduced by Richard Jodrell and was, in part, intended to quell the perceived increase in crime after the loss of the American Colonies, as well as to put an end to grave robbery by increasing the legal supply of bodies to medical schools (Tarlow and Lowman 2018). The act failed for the same reason that the previous attempt to expand post-mortem punishment had ten years earlier; the fear of lessening the deterrent effectiveness of the punishment for murder (Tarlow and Lowman 2018).

Through the end of the eighteenth and beginning of the nineteenth centuries the study of medicine gained popularity to a point where medical colleges were having difficulty supplying corpses for their students to dissect (Richardson 2001; Sappol 2002). Colleges were already stretching the limits of the laws to obtain adequate supplies of cadavers. In the early nineteenth century the New York College of Physicians and Surgeons was acquiring cadavers from the state prison under the 1789 act. Evidence suggests that many of the bodies sent to the college were those of inmates who had died of disease or other causes and not those of executed prisoners, in violation of the law (Sappol 2002).

Anatomization by medical students outside of course work proliferated as well. Groups of students gathered in the New York College of Physicians and Surgeons dissection rooms to gain further experience with the human body. A fee of $5 was charged to students wishing to join in order to acquire additional cadavers for the extracurricular anatomizations. The college Regents turned a blind eye to the origin of the fresh cadavers and to whom the $5 fee was given

(Sappol 2002). Body snatching became big business with the growth of anatomical instruction and the difficulties of the legal and consistent procurement of cadavers for instructive purposes. Resurrectionists could earn between $5 to $25 per body on the illicit market. One body could equal a week's earnings for a skilled journeyman in the 1820s (Sappol 2002). Enlightened reformers began to look to alternative sources from which to acquire adequate supplies of cadavers for anatomical instruction and put an end to the market for illegally exhumed bodies of respectable citizens.

Grave robbery became a particularly pervasive problem in American and British cemeteries near institutions providing anatomical education. Several legislative acts were passed with the intent of putting an end to the resurrectionist's trade. In 1789, New York passed "An Act to prevent the odious Practice of Digging up and Removing Bodies…" (quoted in: Sappol 2002:123). Similar acts were passed throughout New England in Massachusetts, Connecticut, and Maine (Sappol 2002). Legislation intended to prevent the disinterment of graves for the purpose of dissection did little to stem the flow of the illicit exchange of cadavers. The precipitous growth of medical education created an ever-increasing demand for fresh corpses. Law-makers in concert with medical professionals began exploring alternative sources of cadavers for dissection.

The Anatomy Act

The 1752 Murder Act in Britain, and similar legislation in America, provided the primary legal source of cadavers for medical institutions for dissection for the following fifty years. In

1832 the passage of the Warburton Act in Great Britain shifted the burden of the provision of corpses for anatomization from murderers to the poor (Richardson 2001).

The 1832 act was initially conceived and suggested to members of the British Parliament in 1828 by utilitarian philosopher Jeremy Bentham. The proposed act was intended to simultaneously put an end to illicit body snatching, while ending dissection as a punishment for murder (thus ending the medical professions association with the vulgarities of both), while at the same time supplying an adequate provision of corpses needed for anatomical instruction (Richardson 2001; Sappol 2002). In correspondence with a British MP in 1926, Bentham described an early framework of the eventual anatomy act. He recommended that it be deemed that any person applying for treatment at a hospital was also, at once, providing consent to dissection after their death. In his letter, he suggested that dissection be limited to individuals whose kin had not applied for burial. By arguing that dissection be reserved for individuals being treated at hospitals, Bentham implicitly points to the poor as the new subjects of dissection, as a person of means would have found other sources of medical treatment (Richardson 2001).

The act that was passed in 1832 is worded somewhat differently than outlined in Bentham's initial correspondence, due to nimble politics, but with predictable consequences. Rather than singling out individuals who had been treated at hospitals (or workhouses and other institutions of aid as later drafts proposed) the bill as enacted states that "any party having lawful possession of the body of any deceased person…to permit the body of such deceased person to undergo anatomical examination…unless the surviving husband or wife, or any other known relative of the deceased person, shall require the body to be interred without such examination" (LXXV 1832: Sec. VII). The new sterilized language had broad effect as the corpses of those who died within a public institution such as a workhouses, hospitals, infirmaries, and poor-

houses were legally in the possession of the superintendents of said institutions. Dr. Thomas Southwood Smith, an early proponent of the act, cut to the quick of it when he unceremoniously stated that "those who are supported by the public die in its debt" (quoted in: Sappol 2002: 120). The legislation does offer an allowance for families to prevent anatomization in order to provide burial, but not friends, ignoring the larger social network to which the poor belonged (Richardson 2001). Also, importantly, it makes no clarification as to who is responsible for the costs of burial when family members do claim the body of a loved one. Proponents of the bill argued, in the words of Smith, "only … that portion … who die *unclaimed* and without friends" (quoted in: Sappol 2002: 120; emphasis mine) would be subject to dissection. The implication was that dissecting a body which remained unclaimed could have no negative emotional effect on nonexistent friends or family. These assertations were made in spite of witness testimony prior to the passage of the act that indicated corpses often remained unclaimed due to the financial inability of friends and family to provide a burial rather than as a result of emotional indifference (Richardson 2001).

Additionally, under the Warburton Act, criminals were no longer allowed to be sentenced to dissection as part of their punishment; persons who died with no family or friends to claim them and were to be buried at public expense would be put under the anatomist's knife instead (Laqueur 2015; Richardson 2001; Sappol 2002. Proponents of the measure argued that the purpose of dissection was to gain scientific knowledge, and as such, dissection should not be degraded by an association with criminality and punishment. Still others countered that shifting the focus of the legislation from hardened criminals to those dying in need of burial at the public expense served to turn the poor into petty criminals (Richardson 2001). After nearly 300 years of

dissection acting as a form of post-mortem criminal punishment, it had become a punitive measure targeting victims of poverty.

The New Poor Law

The 1832 Anatomy Act was birthed within a broader milieu of Enlightenment era social reform movements. Thirty-four years prior to the creation of the Anatomy Act, Thomas Malthus published "An Essay on the Principle of Population" in which he counted poor relief as one of the fundamental sources of poverty (1798). Malthus' opposition to the poor laws as they stood were rooted in two arguments. First, he contended that the laws served to increase the national population without increasing food supplies. This population growth, particularly among the poor, stemmed from the fact that men in poverty could wed (and presumably reproduce) without the means of supporting a family by themselves outside of parish provision. Secondly, the assistance provided to the workhouse "upon a part of the society that cannot in general be considered as the most valuable part" (Malthus 1798: 27) lessened what was then available to assist the more deserving and industrious in need of aid. In the end, he argued, the poor laws contributed more misery to the poor than they alleviated.

At the time of Malthus' publication, the form of public aid provided to the poor throughout much of Britain was a type of rate-in-aid of wages, sometimes known as the Speenhamland system (Trattner 1999 [1974]). Poor relief was provided locally, and often overseen by unpaid members of the community. As such, poorer regions had less in their coffers to offer for aid, and allegations of corruption were not uncommon (Trattner 1999 [1974]). First adopted in 1795 in the district of Speenhamland, and soon adopted by others, the system ensured

that all laborers paid less than a certain amount in wages, based on family size and cost of wheat, would have sufficient income to provide for their family between their earnings and the rest drawn from the poor rates (Trattner 1999 [1974]). It was this system that Malthus railed against as contributing to overpopulation, increased taxes, and as broadly detrimental to the poor if not the individual. Drawing from these Malthusian principles, Bentham proposed the 1832 Anatomy Act and eventually his call for Poor Law Reform which passed in Britain in 1834 (Richardson 2001; Sappol 2002; Trattner 1999 [1974]).

The New Poor Law was preceded by a Royal Poor Law Commission, established in 1832, to assess the need for poor law reform. This was a seven (later nine) member commission in which two Benthamite commissioners seem to have had significant influence on the final report (Driver 2004). Both believed, as Bentham put it, "as labour [sic] is the source of all wealth, so poverty is of labour [sic]. Banish poverty, you banish wealth" (quoted in: Driver 2004:23). Poor law reform was not about relieving the harsh conditions of poverty as much as policing the free market. As it stood, providing able-bodied male laborers with wage supplements, they argued, undermined the self-discipline of laborers and the operations of a free market. By supplementing a laborer's income, the poor law provided for his sustenance, removing his fear of want and therefore his motivation for diligence and to live providently (Driver 2004). Additionally, the local system encouraged the able-bodied laborer to remain sedentary, rather than offer a flexible mobility in search of higher wages offered elsewhere. This was an important point in an increasingly urbanizing, industrial landscape, where many who received poor relief lived in rural parishes (Trattner 1999 [1974]). A fluid mobile workforce would be a boon to the national economy and to industrial barons in need of a low-income workforce.

The report issued in 1834 by the Special Commission included two central recommendations which were immediately incorporated into law. The first was to combine the local and regional authorities under one national supervisory board. The second was to end public assistance to all able-bodied individuals, except those who voluntarily submitted themselves for confinement in an institution (Trattner 1999 [1974]). Although this was to be applied to only specific individuals, in practice it ended outdoor aid to many young, old, and decrepit individuals in desperate need of aid. A nationalized workhouse system was created in response. The able-bodied, 'undeserving', poor would be institutionalized in workhouses, cut-off from society at-large. The workhouse was designed to deter all but the most destitute from applying for aid (Driver 2004; Richardson 2001; Sappol 2002; Trattner 1999[1974]) from the imposing architecture meant to intimidate (Driver 2004; Spencer-Wood and Baugher 2010) to the internal cramped quarters, meager rations, and demand of labor (Sappol 2002). The commission defended the use of a harsh workhouse system by claiming that the system was not designed to be punitive; rather, echoing the claims of contemporary prison reformers, it was meant to reform through strict discipline (Trattner 1999 [1974]).

The new workhouse plan included a strategy of classification and segregation within the institution. The poor were strictly divided by male and female, a controversial measure which often separated husbands from wives (Driver 2004). The Commissioners' Workhouse Rules Order of 1842 defined seven classes of inmate: "aged and infirm men, able-bodied men over fifteen years of age, boys between seven and fifteen, aged and infirm women, able-bodied women over fifteen, girls between seven and fifteen, and children under seven" (Driver 2004:64). The spatial separation was intended to provide inmates with appropriate treatment, prevent moral contagion, and provide a deterrent to pauperism (Driver 2004). In practice, it also

served to divide families and friends, further isolating inmates from their roles in the social world outside of the institution.

'Unclaimable'

The passage of the New Poor Law in 1834, and the Anatomy Act two years prior, represented a substantial shift in the societal view of the poor. This model of intertwining institutionalized poor relief with anatomical dissection was paralleled throughout the United States during this time. The seemingly contradictory Benthamite beliefs that poverty was both necessary for wealth to exist (Driver 2004) and conversely that pauperism should be treated as a moral failing meant that applicants for aid were subjected to questions of eligibility (Trattner 1999 [1974]) and categorized as deserving or undeserving of assistance according to the prevailing system. Consequently, the pauper should be removed from society and confined in institutions in order to address their moral failings and his or her unclaimed body faced the threat of anatomical dismemberment.

It is worth exploring the metonymical implications behind the word 'unclaimed.' Although it does not appear in the final version of the Anatomy Act, it is a word embedded in the lexicon of early supporters of the legislation. In his pamphlet "An Appeal to the Public and the Legislature on the Necessity of Affording Dead Bodies to the Schools of Anatomy, by Legislative Enactment", William Mackenzie proposed that "if the directors of hospitals, poor-houses, and prisons, were to establish it as a regulation, that the body of any person dying in those institutions, *unclaimable* by immediate relatives, be given to the surgeon" (1824:32; emphasis mine). Smith published a review, "The Use of the Dead for the Living", of

Mackenzie's work in 1827 in which he perpetuated and expanded upon the concept of the 'unclaimable'. For Smith, "all persons dying in the said hospitals, infirmaries, workhouses, poor-houses, foundling-houses, houses of correction, and prisons *unclaimed by immediate relatives, or whose relatives decline to defray the expenses of interment*" (1827:36; emphasis mine) were recommended as subjects for anatomization. The authors of these statement intended "unclaimed" to refer to the fact that no family member or friend had stepped forward to remove the body for burial. In this case, however, the terminology can be more broadly interpreted metonymically in the case of the pauper whose life ended in the workhouse (Jakobson 1960) who had been 'unclaimed' by society for some time prior to the loss of life.

Upon their forced institutionalization, inmates suffered what Goffman (1961:43) referred to as "processes of mortification" in which the social roles and identities they maintained outside of the institution were systematically removed and replaced with new institutionalized ones. In other words, inmates endured a social death. Drawing from Orlando Patterson's analysis of slavery, Price (2015) and others (Hubert 2000; Lynch 2014) have suggested that a social death is experienced by individuals enduring long-term institutional confinement. Patterson characterized a "social death" as having three overriding features: systemic violence, humiliating treatment, and "natal alienation" (Price 2015:5). Natal alienation meant the slaves were separated from their ancestors and their descendants by sale or trade, and even when on the same plantation they were powerless to help one another. For instance, a mother could not protect her child from the lash of a master (Price 2015).

Total institutions affect the inhabitants similarly. The workhouse strategy of classification and separation functioned to alienate the inmates from their families and support groups, especially the frail and indigent, who were unlikely to return home from confinement (Price

2015). Incarcerated isolation exposed inmates to violence and humiliation from other residents as well as from figures in authority (Anthony 2016; Casella 2000; Goffman 1961; McAtackney 2005; Price 2015; Rhodes 2004). Removing the pauper from their social world was an intentional act of societal forgetting, a social homicide committed by a society that had determined the indigent pauper morally deficient and a contaminant who needed to be isolated to keep the moral contamination from spreading (Douglas 1966; Wacquant 2009). Society had determined that the indigent should be excluded from the greater social milieu; they had refused to claim them as their own. Long before the lifeless poor were designated as *unclaimed* and thus, an acceptable subject for dissection, they had been classified as *unclaimed* by society in life.

In the end, the mandatory institutionalization of poor relief forced many in need to leave their homes and enter the workhouse system, which included the very real threat of bodily dissection. Thus, the pauper first suffered a social death through institutionalization, with dissection as the final act of erasure, an anonymization of the individual through anatomization. Over five hundred years after Boniface issued his papal bull, the combined efforts of Malthus, Bentham, and their followers formally institutionalized a truly "detestably savage practice" (Brown 1981:221).

Chapter II: Poverty and Medicine in Milwaukee County

The Creation of a Poor Farm in Milwaukee County

After the formation of the state of Wisconsin in 1848, the newly created State Legislature approved regulations on the management of poor relief. The new law "Of the Relief and Support of the Poor" assigned the burden of care of the poor to towns. However, the Board of Supervisors representing a town could, with a majority vote, determine the expense of maintaining the poor to be a county expense (Wisconsin Statute Ch. 28, Sec. 32), a section of the bill advocated for by the people of Milwaukee (Richards et al. 2016).

In January 1851 the Milwaukee County Board of Supervisors (MCBS) resolved to abolish the distinction between town and county poor. It was then decided that the expense of maintaining the poor would fall under the supervision of the county (Proceedings of the MCBS 1851). The board elected three Superintendents of the County Poor (SCP) to oversee the new county poor relief expenditures. Initially, not much change was seen in the way relief was provided. In June of that year the MCBS unanimously agreed that the supervisors of county towns could supply the poor with necessary relief, keeping an account to be audited by the county (Proceedings of MCBS 1851). At the same June session, the SCP were instructed to keep detailed ledgers of their expenditures to be audited by MCBS in a similar fashion to other accounts (Proceedings of MCBS 1851).

The county quickly became concerned about the costs of caring for the poor. In an afternoon session in November 1851, Supervisor West presented a resolution instructing the SCP to offer outdoor relief only when "absolutely necessary… believing that to adopt the rule of sending to the almshouse such as apply for relief, will be a saving of expense to the county"

(Proceedings of MCBS 1851:69). The resolution was immediately adopted, and a letter was sent to the SCP instructing them as such. Prior to this resolution, assistance was commonly provided in the form of outdoor relief, which allowed the poor to stay in their homes while being provided with food, firewood, and, at times, lodging when necessary (Richards et al. 2016; Richards and Kastell 1993). It was not just the provision of outdoor relief that was costing the county so dearly, but indoor relief was provided in a financially ineffectual way as well, although this was never noted publicly in the proceedings. In the morning meeting of the aforementioned November session the MCBS approved payment of $10.99 to Charles Osborn for the "provisions and boarding of a lunatic", $30 to the town of Wauwatosa for "provisions and boarding of a pauper", and $11 to St. Johns Infirmary for the "same" (Proceedings of MCBS 1851:69). Using the Federal Reserve's Consumer Price Index, the $52 spent in this one session on outsourced indoor relief is the equivalent of $1566 in 2018, and there are many similar payments for indoor relief recorded throughout the year (United States Bureau of Labor 2018; Proceedings of MCBS 1851).

Later in that same month the MCBS determined that the county system of support was the correct relief system, but that it was not being well implemented. A resolution was put forth that rather than three SCP, there should only be one, and that that person would serve as the Superintendent to a County Farm "upon which *all persons* unable to support themselves ought to be put" (Proceedings of MCBS 1851:75; emphasis mine). Further proponents argued that such a farm would provide the county with a source of revenue and alleviate the expense of providing relief under the present law (Proceedings of MCBS 1851). The resolution failed to pass after an equally divided MCBS voted twice. Only ten months after assuming responsibility for the county poor, MCBS had already begun seriously considering a strict system of indoor relief.

The proceedings from January of 1852 demonstrate a MCBS clearly weary of the issue of poor relief. A resolution on returning to a town system of relief and abolishing any appointments and employment related to county poor relief was narrowly rejected in a 5-6 vote (Proceedings of MCBS 1852). Rather, it was decided that an amendment be added to allow the MCBS to return to a distinction between town and county poor at their discretion. Additionally, they altered the law so that there was only one SCP and town supervisors could accept applications for aid and submit said applications to the SCP (Proceedings of MCBS 1852). The MCBS was inching its way toward the previously failed resolution from the preceding November session in incremental steps.

Due to the instruction to provide outdoor relief on a strictly limited basis, the Milwaukee Almshouse had become overcrowded, so a special committee was created to inquire about enlarging and improving the property (Proceedings of MCBS 1852). On September 29, 1852 the Report of the Committee on the Almshouse was presented to the MCBS. Although the stated goal of the committee was the enlargement of the almshouse, the first recommendation made was the prohibition and abolition of the use of the outdoor relief system by the county. This, they claimed, "is attended at great expense and has actually become burdensome to the tax payers" (Proceedings of MCBS 1852:91). As for the almshouse, it was recommended that repairs were necessary to make it suitable for the upcoming winter, but the current buildings would not be sufficient for the needs of the county in the future. Therefore, the purchase of a county farm to which all paupers could be sent was recommended. The report stated that expenditures would be "lessened more than fifty per cent and the property purchased constantly increase in value" (Proceedings of MCBS 1852:92) if this resolution passed. It was resolved that the farm would be no more than 200 acres in size and be purchased for no more than $5000. The monies

contributing to the purchase of the farm would come from a tax levied on the assessment rolls of the city of Milwaukee and surrounding towns. The resolution was narrowly passed in a 6-5 vote by the board. A committee of three members, Supervisors Prentiss, Martin, and Hendrik Gregg were tasked with the responsibility of purchasing the new county farm (Proceedings of MCBS 1852).

It is not entirely clear if the cost of poor relief to the county was at any point lessened by the fifty percent mentioned above, but an examination of the expenses incurred at the Poor Farm in the years leading up to 1859 indicates the opposite. The expenditures for the support of the poor in 1856 totaled $18,895 and had increased to $27,249 by the following year. In the words of the county examiners "the large increase of 1857 over 1856 – nearly fifty percent seems at least to indicate most extravagant appropriations by the Superintendents" (Proceedings of MCBS 1859:83). Expenses in 1858 were decreased from 1857 but were still significantly higher than in 1856. It seems unlikely that the shift to indoor relief was an effective cost cutting measure. Some have argued that a cholera outbreak contributed to the ballooning costs of outdoor relief which subsequently caused the shift from an outdoor to indoor relief system (Avella 1987). From the broader conversations of the MCBS over the course of 1851 and 1852 it appears that at least some board members were determined from the outset to follow the broader cultural trends of poor relief (Trattner 1999[1974]) described in Chapter I and to embark upon a deterrent policy of indoor relief (Richards et al. 2016; Richardson 2001).

Milwaukee County Institutions

Subsequent to the resolution, the County purchased a 160-acre farm from board member Hendrik Gregg located in Wauwatosa, seven miles outside of the Milwaukee city limits (Richards et al. 2016). Hendrick Gregg appears to have benefitted from the purchase. Since he also sat on the special committee in charge of purchasing a farm, in essence, he sold his farm to himself, and at a good price for the seller, if not the county. The final sale price of the property amounted to $6000, one thousand dollars more than the county had approved in the November resolution (Proceedings of MCBS 1852). This in spite of having received "several applications from persons desirous of selling their farms" (Proceedings of MCBS 1852:103). The Gregg farm included a 24 by 33-foot farmhouse with a 16 by 40-foot addition, two barns, a horse barn, livestock, and crops (Proceedings of MCBS 1852). In 1852 the first 24 paupers were moved into the County Poorhouse. By 1860 the number people residing in the farmhouse had more than doubled, and the poor, sick, orphans, and insane all resided together under one roof (Richards et al. 2016).

The housing issue was alleviated in 1868 when the county constructed a new hospital on a hilltop on the old Gregg farm, near the Poorhouse. The hospital contained 30 beds used for the poor with contagious diseases and the insane, and a wing of the Almshouse was then designated for the care of the non-contagious sick poor (Richards et al. 2016). Healthcare in the mid-nineteenth century was generally provided in the home, thus individuals applying for aid at the county hospital were those who could not afford treatment elsewhere (Richards et al. 2016; Richardson 2001). Dr. F.H. Day, a local physician, visited the hospital over a hundred times in 1868 to provide services to the patients there. Included in those services were surgeries including the amputations of fingers, toes, and feet (Richards et al. 2016).

Eleven years after the construction of the hospital, it was destroyed in a fire, resulting in the death of two inmates (Richards et al. 2016). The county immediately approved the

Figure 1 Rebuilt Milwaukee County Hospital unknown date. Photograph on file at the Medical College of Wisconsin Library.

construction of a new hospital including additions (Fig. 1). Further, it was determined that a separate facility be constructed in order to separate the sick from the insane. Thus, the purchase of the 70-acre Hart Farm was approved and the Asylum for the Chronically Insane was constructed in 1880 (Richards et al. 2016).

Additional institutional facilities were added over the decades in order to classify, separate, and care for the incoming poor as needed. This included the construction of the Asylum for the Acute Insane in 1889 to divide the insane deemed incurable from those who were considered treatable (Richards et al. 2016). Further, in 1882, the county constructed a temporary home for children in response to a stipulation restricting children between the age of 5 and 15 from residing at the Poorhouse. By 1897, the number of children under the care of the county had grown sufficiently that MCBS approved the construction of a permanent Home for

Dependent Children which was completed in 1898 (Richards et al. 2016). Additionally, Muirdale Sanatorium was constructed in 1914 on the grounds for the quarantine and treatment of tuberculosis patients (Werner 2015). The Almshouse was moved into a new facility in 1893 that was designed to accommodate 700 inmates. Due to the negative connotations associated with Almshouses, the county changed the name from "Almshouse" to "Infirmary" as can be seen in the 1924 map below (Fig. 2). Other institutions on the grounds also underwent similar name changes over the tenure of the use of the grounds, although they post-date the drawing of this map.

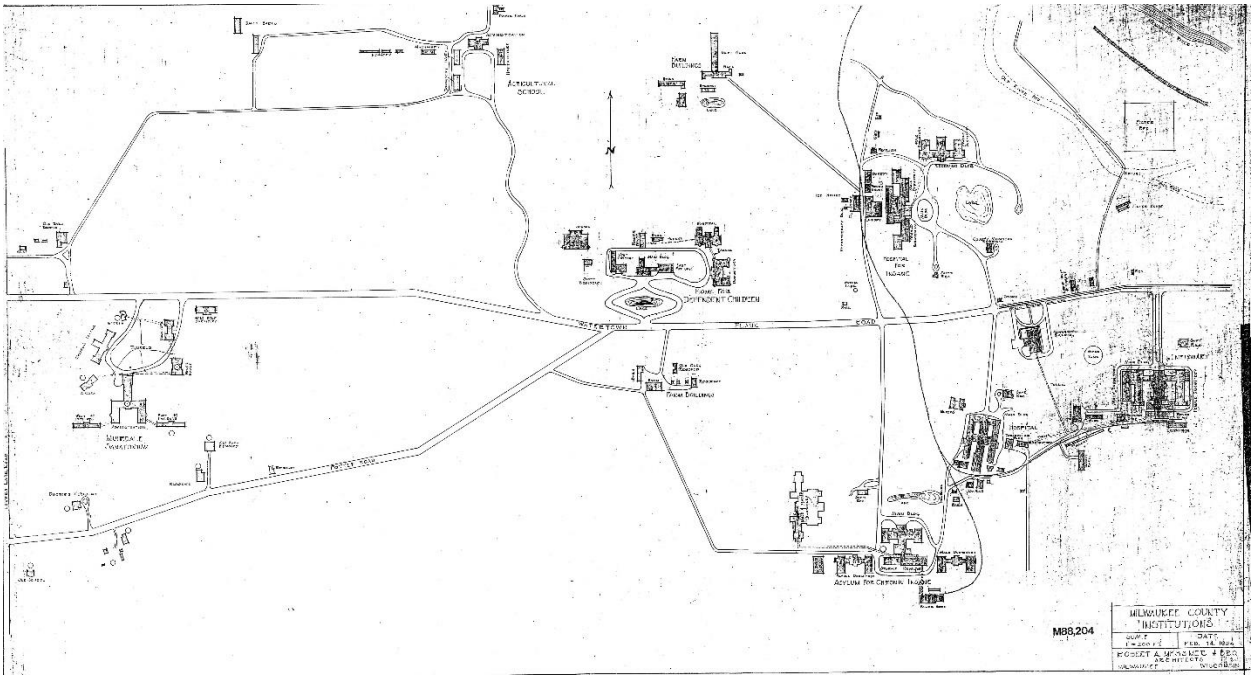


Figure 2 1924 Map of Milwaukee County Institutions. On file at the UWM ARL archives.

The Milwaukee County Pathology Department

Construction commenced for a separate building housing the Pathology Laboratory in 1905 east of the County Hospital (Annual Report from the Office of the Superintendent of the

County Hospital 1905; Richards et al. 2016) labelled “Laboratory” on the 1924 map of the grounds (Fig. 3). The laboratory facilities included a new morgue, amphitheater, and museum for holding anatomical specimens. In a report from 1909, the Pathology Department recorded that they had 275 anatomical specimens in their museum. The department claimed that the specimens were particularly useful for instructional purposes and as aids during autopsy clinics (Richards et al. 2016).

In 1905, the Pathology Department performed 14 autopsies, and in the years between 1900 to 1905 only 51 autopsies were recorded in total prior to the completion of the new laboratory (Annual Report from the Office of the Superintendent of the County Hospital 1906). After the completion of the Pathology department, 80 autopsies were reported in the first year alone (Annual Report from the Office of the Superintendent of the County Hospital 1906). With some slight fluctuation, the number of autopsies performed at the pathology lab remained relatively high; reports from 1915, 1916, and 1917 recorded 87, 90, and 90 respectively (Annual

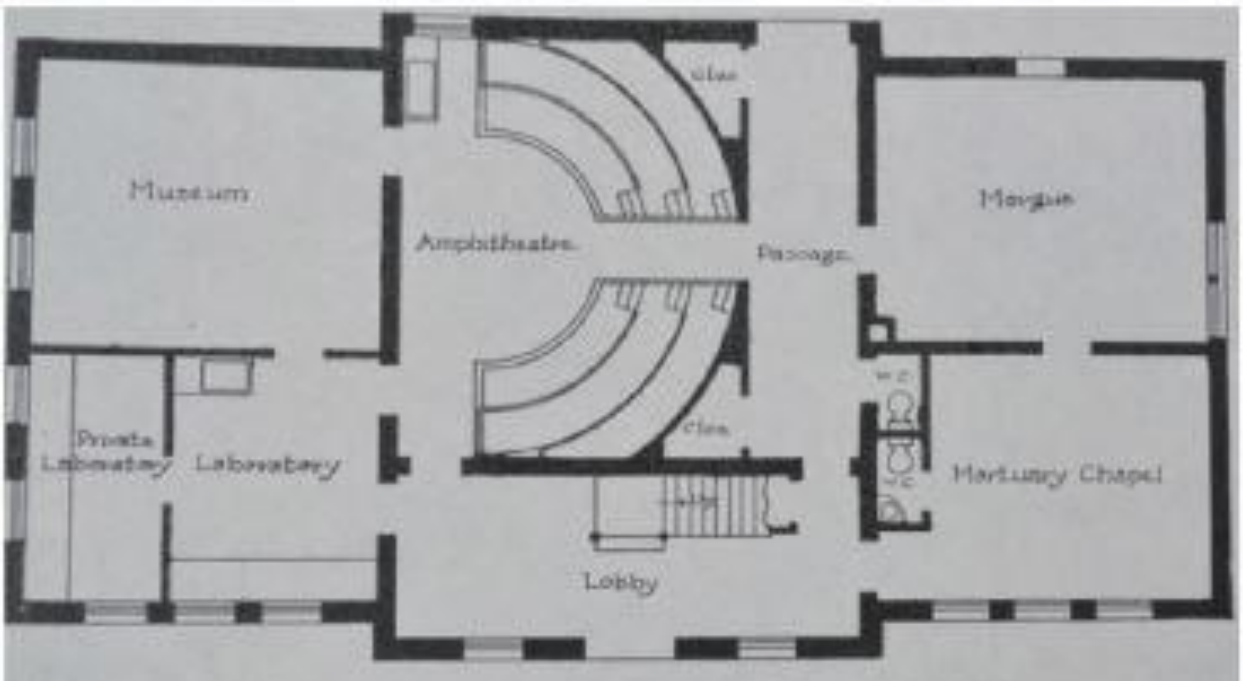


Figure 3 Floor Plan of Pathology Department (Richards et al. 2016: 34).

Report from the Office of the Superintendent of the County Hospital 1915; 1916; 1917). Based on available data, the Pathology Department averaged approximately 76 autopsies a year a number the department felt was much lower than they would like considering the number of anatomical remains that passed through the facility (Richards et al. 2016).

The autopsies performed at the Milwaukee County Pathology Department were often research based or for academic purposes. Several doctors from the department published academic articles based on research carried out at the department in contemporary medical journals (Richards et al. 2016; Warfield M.D. and Kristjanson M.D. 1916). As discussed later, evidence suggests that the two medical colleges operating in Milwaukee at the turn of the century also made use of the facilities on the County Grounds to provide training in post-mortem procedures.

Milwaukee County Coroner's Office

Another facility in Milwaukee County that regularly performed autopsies and disposed of human remains at the County Cemetery was the County Coroner's Office. While both the Coroner's Office and the Pathology Department were performing autopsies, the reasons seem to have been somewhat different. Autopsies performed at the Milwaukee County Coroner's Office (now known as the Medical Examiner's Office) were typically performed as part of death investigation in order to uncover the underlying cause of death for legal purposes. The Pathology Department utilized the procedure more as part of research or the investigation of interesting cases. At the Pathology Department 65% (n=74) of death investigations were performed on individuals who had died of non-infectious medical reasons and the remainder for other medical

reasons. Conversely, only 45% (n=106) were autopsied for non-infectious medical reasons, but an additional 40% of the autopsies were for investigations of death surrounding homicide (n=61), trauma (n=25), and suicide (n=3) (Richards et al. 2016).

Wisconsin Anatomy Act

The first medical society founded in the state of Wisconsin met in Madison on the second Monday of January 1842 as the *Medical Society of the Territory of Wisconsin,* subsequently becoming the *Medical Society of the State of Wisconsin* in 1848 (Miller 1935). From its early days, the society concerned itself with the legal procurement of cadavers for anatomical education. In 1850, Dr. A.L. Castleman was to confer with the Regents of the Wisconsin University on the topic of formulating a Department of Medical Education, in which the study of anatomy would play a key role. Subsequently, in 1851, at a Mass Medical Convention held in Madison, a draft of the first "bill providing for the prosecution of dissection and inquiries intended for adoption by the legislature" (Miller 1935:853) was presented to the gathered convention goers and suggested for presentation to the state legislature. The bill was eventually tabled at the convention, as it was suggested by some in attendance that the introduction of subjects (such as legislation) was not in line with the goals of the convention, which was the incorporation of the *Wisconsin State Medical Society*. It is interesting to note the wording of this early draft and how it differs from what was later presented to Wisconsin legislators and the language of the legislation that eventually passed. The initial draft of Section I of the proposed bill stated:

> …the board of health, any one of the Supervisors, any Justice of the Peace, Mayor or Alderman of any county, town, city or village in this state to deliver or surrender the dead body or bodies… to be buried at the public expense, to any regularly educated physician…for the advancement of anatomical and surgical science, preference being in all cases given to the medical schools… *Provided always*… if within thirty-six hours from the time of its death, any one or more persons claiming to be kin or friend… require said body to be inhumed at his or their own expense… a stranger or traveler who suddenly died without making known who he was or from whence he came… shall be respectably inhumed… *Provided further*… such dead body shall… be used only for the promotion of anatomical and surgical science… and that after having been thus used the remains shall be decently interred by the person so using them (Miller 1935:853-854).

Although the draft from the 1851 convention was tabled, the topic continued to be discussed by the medical society. Four years later, an updated version of the bill was drafted and presented to the legislative body of Wisconsin. The second draft closely followed the provision stated above with some minor, although not unimportant updates. Perhaps most contentiously, as will be discussed later, the time frame for the deceased to be claimed by family or friends had been lessened to a 24-hour window. Further, in addition to unknown travelers being excluded from dissection, any person who in their final illness expressed a desire to be interred "shall be buried in the usual manner" (Miller 1935:854). The new draft also included regulations that a person to whom a body had been delivered for dissection was required to surrender the body if it was subsequently claimed by family or friends. Additionally, the anatomist was required

"decently to bury *in some cemetery* the remains of all bodies" (Miller 1935:834; emphasis mine). The 1851 draft merely required a decent burial. It seems that a decent burial and burial in a cemetery were, in the minds of Victorian anatomists, sufficiently exclusive of each other as to need to be legally defined. The bill passed in the 1855 session of Legislature, but was not signed by Governor Barstow, and therefore failed to pass into law (Miller 1935).

The Civil War began in 1861, drawing the attention of the entire nation and much of the medical community towards more pressing matters. When the *Wisconsin State Medical Society* reconvened at a special meeting in 1867, only nine members were present. After the vetting of new applicants, membership soon increased to 25. Immediately, the need for medical cadavers was brought to the forefront and a committee of five, Drs. Treat, Manley, Ayers, Davies, and Benson, were sent to propose a new bill to the state legislature in 1868 (Miller 1935).

The state of Wisconsin finally passed its anatomy act known as "Act to Legalize Dissections" on February 29, 1868 (Ch. 53, Sect. 1-3) twenty-five years before the first medical college opened in the city of Milwaukee (Richards et al. 2016) and seventeen years after the first bill was drafted. Again, following the broader cultural trends discussed in the previous chapter, the state determined that:

> it shall be the duty of each and every public officer having the care of dead bodies, such as are required to be buried at public expense, to deliver to any member or agent of a county or state medical society… unless within forty-eight hours after the death… friends or relatives shall claim (Ch. 53, Sect. 1).

Mirroring the 1832 Warburton Act, the Wisconsin act veiled the source of the provision of dissectible cadavers through the use of sterilized language. Using contemporary newspaper

articles the language of the act as it passed through congress can be traced. Interestingly, the language seems to vary quite a bit from the earlier drafts presented by the Medical Society. It is possible that the society anticipated resistance to the reintroduction of the act, and thus altered the language to call for the bodies of criminals. Articles published in the *Daily Milwaukee News* leading up to the final passage of the act provide an almost time-lapse history of dissection in the nineteenth century US as the language of the law becomes finalized. According to an article titled "Legislative Body-Snatching", the initial draft of Section I of the bill, brought forth by Dr. Davis [sic] of Portage City, called for the "keeper of any county jail… to deliver… the body of any prisoner or criminal who shall die in jail…" to a medical society for dissection (DMN 1868a). That is, unless the body was claimed by family or friends within 24 hours. Harkening back to the early days of dissection, the society seems to have recommended the bodies of criminals, although not exclusively murderers, to be used for anatomical instruction

The Daily News returned to the topic again four days later, ten days prior to the act's passage, with the significantly toned-down title "The 'Dissection' Bill." According to this article, the reach of the legislation had been extended to include the "bodies of criminals *and paupers*" (DMN 1868a:4; emphasis mine). Most importantly to the author of the article, the time allowed for family and friends to claim the body had been extended in the new draft from 24 to 48 hours. This was enough time, at least, to allow "their corpses to get comfortably cold before the business of dissection begins" (DMN 1868b:4).

As enacted, the Wisconsin law required three important conditions to be met in determining whose body could be dissected involuntarily upon their death. These included (1) individuals who had died within a *public institution* and thus, were to be (2) buried at *public expense*, excepting those whose bodies were (3) *claimed* by friends or family within 48 hours of

death. Additionally, the dead body was only to be used "for the advancement and promotion of anatomical science" (Miller 1935:834; Ch. 53, Sect. 1-3). As such, the unclaimed and unclaimable, societally burdensome poor would be subjected to a bodily eminent domain, thus paying back in death the debt they had incurred to society in life (Jordan, et al. 2015). For the full text of the drafts of the 1851, 1855, and the enacted 1868 dissection bills, see Appendix A.

An important addition was made to the Wisconsin anatomy law in 1878; although the language appeared in the earliest drafts of Society records it was excluded from the 1868 bill. The amended statute mandated that the dissectors pay for the burial of anatomized remains, and specifically stipulated a "decent" burial for the bodies and body parts (Freire 2017:44-45). Thus, by the time the county began using Cemetery II in 1882, and the two medical colleges had begun anatomical instruction in the city of Milwaukee in the 1890s, a decent burial for anatomized remains had long been codified as state law. The requirement for a decent burial, and the stipulation that the expense of the burial of dissected remains would be the responsibility of the institution making use of the bodies, are important aspects of this research project and will be discussed in Chapter V.

The Medical Colleges of Milwaukee

After several false-starts and failed attempts, the first medical college was chartered in Milwaukee as the Wisconsin College of Physicians and Surgeons (WCPS) in 1893 (Miller 1936; Richards et al. 2016). Located at the corner of Fourth and Reservoir, the college opened with an inaugural freshman class of 42 students (Miller 1936). Initially opening as a for-profit institution, the college began with $1600 in capital which eventually grew to $100,000 by 1906 when

stakeholders agreed to surrender their shares and focus energies on the education of students rather than the accumulation of profit (Miller 1936; Richards et al. 2016).

The second institute of medical education in Milwaukee was formed a year later, in 1894, at Ninth and Wells as the Milwaukee Medical College and School of Dentistry (MMC). MMC was a for-profit venture from its conception and remained so until it ceased to exist in 1913 (Miller 1936). The college had a turbulent existence and, shortly after it opened, the Milwaukee County Medical Society accused the faculty of granting degrees to unqualified graduates. In 1902, at a meeting of the Association of Medical Colleges, the society submitted a formal complaint against MMC for judicial review (Miller 1936). After review, the charges were found to be warranted, and the college was suspended. Somewhat strangely, appeals for leniency were made by the president of the competing WCPS; the vote was reconsidered and the MMC was instead severely censured (Miller 1936).

In 1906, then Marquette University Vice President Father Henry S. Spalding approached the owner of MMC, Dr. William H. Earles, and proposed a merger (Hamilton 1953). The Ninth and Wells street location was within blocks of Marquette's campus, and MMC had recently "won a court proceeding which had vindicated its academic standards" (Hamilton 153:71), making the prospect of a merger attractive to the Jesuits. After several meetings throughout 1906, the two institutions agreed to be joined by an "affiliation". The agreement was as follows: Marquette would be responsible for academic supervision and degree granting, while MMC would retain responsibility of the facilities and the expense of maintenance (Hamilton 1953). Such an arrangement was mutually beneficial. The Jesuits were protected from the risk of financial embarrassment in the new endeavor, while MMC retained their stakeholders and remained a for-profit organization (Hamilton 1953).

There were some roadblocks on the way to affiliation, however. Marquette University administration had to await authorization from their General Superior in Rome. Unfortunately for both institutions, the General Superior had died in April of that year, and the new Superior would not be in place until delegates from around the world had travelled to Vatican City to submit their ballots (Hamilton 1953). Finally, in September of 1906 the new Superior was presented with the proposal and approved of the merger two months later.

This was not the last obstacle the merger faced before its completion. The state of Wisconsin did not yet have legal parameters in place for the affiliation of two institutions where neither was owned by the other (Hamilton 1953). The Legislature passed what was popularly known as "The Marquette Bill" in the spring session of 1907 and the resolution to affiliate the two educational facilities was adopted in May of that year (Hamilton 1953:72). Thus, the two institutions formed a loose affiliation, although the troubles of MMC did not end there.

Abraham Flexner examined WCPS and MMC for the Carnegie Foundation for the Advancement of Teaching in 1910 and submitted a report claiming that both facilities "were without redeeming feature" (Flexner 1910:319). Of WCPS, nominally part of Carroll College at this time (Flexner 1910; Richards et al. 2016), Flexner stated that there was not a complete skeleton to be found upon his inspection, that "anatomy is very poor" (1910:318), and the clinical facilities were "utterly wretched" (1910:319). The report also recorded 60 students in attendance at WCPS under the supervision of 67 instructors (30 professors) (Flexner 1910).

MMC faired only slightly better under Flexner's withering gaze. He considered the laboratory facilities "meager", the clinical facilities "extremely weak", but conceded that "anatomy was better than ordinary" (1910:318). Attending MMC at the time of inspection was a substantially larger student body of 168, and a faculty of 66 (26 professors) (Flexner 1910).

It appears that neither MMC nor WCPS took the critical review too seriously, however, and when the Council on Medical Education of the American Medical Association (AMA) inspected the Milwaukee medical colleges in 1912 the long simmering troubles began to boil over. The Council assessed every nationally recognized medical school in the nation using a scale system of up to 1000 points. The points were assigned based on ten categories, each category scaled up to 100 points, thus, in theory, each being equal to up to ten percent of the final cumulative score (Myers 1913). The ten headers were as follows:

1. Showing of graduates before state boards and other evidences of the training received.
2. Enforcement of a satisfactory preliminary educational requirement and the granting of advanced standing.
3. Character of the curriculum, grading of course, length of session, time allowed for matriculation and supervision.
4. Medical school buildings; light, heat, ventilation, cleanliness.
5. Laboratory facilities and instructions.
6. Dispensary facilities and instruction.
7. Hospital facilities and instruction, maternity work, autopsies, specialties.
8. Faculty, number and qualifications of trained teachers, full-time instructors, and assistants, especially of the laboratory branches, and extent of research work.
9. Extent to which the school is conducted for properly teaching the science of medicine rather than for the profit of the faculty directly or indirectly.

10. Possession and use made of libraries, museums, charts, stereopticons, etc. (Myers 1913:257).

The educational facilities were then assigned as score of A+, A, B, or C dependent upon their overall average score as well as their scores within individual categories. For instance, a college with an overall average score over 70 percent, but with a score of less than 70 in three or more categories would be ranked as Class B; a college with an overall average over 70 percent, but with only one or two categories having scores less than 70 was ranked Class A (Myers 1913). Colleges with an A+ score were considered satisfactory, a score of A were institutions considered acceptable but which could use improvement in some areas, B scores were assigned to colleges that could become acceptable with some improvements, and C scores were reserved for colleges that needed a complete reorganization to be considered satisfactory (Myers 1913). A score of C could be the death knell of an institution. In 1912, 24 state licensing boards had adopted resolutions to not acknowledge medical educational programs ranked as Class C, and many had also determined to refuse reciprocity with other state licensing boards that still recognized institutions in that classification (Myers 1913). Thus, graduation from a Class C medical college could limit practice within the state lines in which the degree was conferred.

After the AMA inspection of the two medical colleges in Wisconsin, the examiners threatened to reclassify both from Class B to Class C, unless solutions suggested by the AMA were put into place (Hamilton 1953; Myers 1913). The AMA recommended that 1) the two medical schools merge; 2) the school become purely academic and no longer a stock-holding company; 3) a true union be made with an academic organization; and 4) the employment of four new full-time professors be secured (Hamilton 1953; Myers 1913).

Upon this threat, Marquette University contacted the owners of MMC and offered to purchase the college outright. Marquette was unable to afford the price suggested by MMC, however, and because of the loose affiliation there was little Marquette could do to enforce changes to ensure a Class B rating (Hamilton 1953). The Jesuits did have some leverage however, and they informed the owners of MMC that no more degrees would be granted to students until they undertook the recommendations offered by the AMA (Hamilton 1953). The student body was incensed and demanded that MMC act to ensure a Class B status.

> When no satisfactory answer was forthcoming, the entire student body left the Milwaukee Medical College and marched to the Wisconsin College of Physicians and Surgeons and enrolled themselves there with the understanding that action would be taken immediately to make the changes required to obtain a higher rating (Myers 1913:258).

Thus, without a student body to instruct, the affiliation between Marquette University and MMC ended. The AMA examination had also shown that WCPS was insolvent, and since one of the solutions offered by the AMA was a true union with an academic university, the doctors at WCPS offered to turn the facilities over to Marquette on the condition that they assume all debts. Thus, the Jesuits purchased WCPS in January 1914 (Hamilton 1953; Miller 1936; Myers 1913) and the Medical Department of Marquette University, alternately the Marquette University School of Medicine, came into being. Seeing that they were being outmaneuvered, MMC approached Marquette with a counter offer and agreed to a 10-year lease of their buildings, which the university used to house its Schools of Dentistry (Hamilton 1953). Consequently, the 1912 inspection was the impetus that served to end the more turbulent years of medical education in Milwaukee.

The study of anatomy was a key element of the curriculum at MMC, WCPS, and eventually at the Marquette University School of Medicine. Both of the original medical colleges advertised "adequate" (WCPS Announcement 1908:33) or even "plentiful" (MMC Announcement 1902:28) supplies of anatomical materials, available to the students at no charge. According to course catalogues published in the early part of the twentieth century by the two colleges, third- and fourth-year students would take part in Practical Anatomy classes in which they would perform dissection upon human cadavers. MMC touted their state-of-the-art anatomy lab (Fig. 4) as "pronounced by those competent to judge to be the most completely appointed suite of rooms for practical anatomy in the West" (MMC Announcement 1902:28), a statement supported years later in one of the few complimentary remarks made by Flexner in his 1910 report about the college (Flexner 1910). The WCPS curriculum only required the student to dissect a lateral half of a body but encouraged students to take part in as much dissection as time and *supplies* allowed, perhaps foreshadowing Flexner's finding of this institution's inability to produce "even a complete skeleton" (1910:319) upon his inspection.

Coursework began as cooler weather set in, typically from mid-October to March, relying on the cold weather to help preserve the bodily remains (Richards et al. 2016). Both colleges assured students in their respective announcements of their abilities to properly preserve cadavers. WCPS claimed that their laboratory was replete "with facilities for the preservation of anatomical material" (WCPS Announcement 1908:33) and reminded students that the anatomy laboratory was open all winter long. MMC assured prospective students that "preservation is now, through experimentation, entirely satisfactory" (MMC Announcement 1902:28).

Additionally, at least one of the two medical colleges utilized the facilities at the Milwaukee County Hospital as part of their Pathology curriculum. Second- and third-year

students at WCPS were required to attend autopsies at the Milwaukee County Hospital Morgue, presumably in the Pathology Department Amphitheater. There, they were instructed on post-mortem procedures, and the medicolegal aspects of the subject (WCPS Announcement 1908). Pupils at MMC in their Junior year were also required to attend four autopsies minimally and

Figure 4 Milwaukee Medical College Anatomical Laboratory. (M. Announcement 1902).

provide a write up of each (MMC Announcement 1902). It is not clear from the MMC 1902 *Announcement* where the students attended autopsies, although the Flexner (1910:318) report states that the pathology facilities at MMC were "meager" and that students attended unspecified clinics in amphitheaters at both Trinity Hospital and the Milwaukee County Hospital. It is worth noting that while it appears dissections took place within both institutions, it is likely that autopsies performed in relation to medical education at the colleges took place elsewhere.

Access to a steady supply of human remains for dissection and post-mortem instruction would have been a priority to the institutions, and they both took advantage of the state law giving medical colleges access to the bodies of the poor. Between 1895 and 1913 the County handed over the unclaimed bodies of 149 people to the WCPS and 283 to the MMC (Richards et al. 2016:33). On average, MMC received 15 cadavers a year, and WCPS only 8 (Richards et al. 2016), for what were, by 1910 student bodies of 168 and 60, respectively (Flexner 1910). In 1903, both colleges became the official recipients of bodies from the eastern US judicial district, no doubt an instructional as well as economic benefit to both institutions (Richards et al. 2016). The Practical Anatomy coursework at WCPS which required students to only dissect one lateral half of a body (WCPS Announcement 1908) would have been a clever way to extend a potentially limited supply of anatomical material. Thus, one cadaver was sufficient to train, minimally, two medical students. As will be discussed in later chapters, it appears that while both

Figure 5 WCPS Surgical Clinic. On file at the Medical College of Wisconsin Library. Used with Permission.

colleges took advantage of their legal right to take possession of unclaimed bodies held by the county, neither fulfilled their legal obligations to provide a decent burial.

The Milwaukee County Pathology Department, the County Coroner's office, and the medical colleges located in Milwaukee disposed of some, and sometimes all, of the human anatomical remains that passed through their facilities at cemeteries on the Milwaukee County Grounds in Wauwatosa. Despite of the requirement of a decent burial stipulated in the Wisconsin dissection bill, bodies were often interred as disarticulated parts and multiple individuals, or fragments of several people, commonly shared one coffin. Heads were removed and presumably kept as memorabilia and symbols of status to be displayed on a doctor's desk, signaling his successful completion through the right of passage of medical school and cementing the otherness of the identity of the former owner (O'Donnabhain 2011). Additionally, waste, medical and otherwise, was sometimes included in the coffin alongside the discarded anatomical material. The variability of anatomical procedures, although with some overlap, performed at each institution mentioned above, as evidenced by the bioarcheological data, when combined with a material culture analysis of medical waste help to determine which medical institution in the county most egregiously ignored the legal, and arguably the human, right to a decent burial.

The Milwaukee County Poor Farm Cemetery

Cemetery 2, located in Wauwatosa, WI, alternately referred to as the Milwaukee County Poor Farm Cemetery (47-MI-0527, 47-BMI-0076, Milwaukee County Grounds, Froedert Tract) is one of four cemeteries utilized by Milwaukee County to inter the remains of the unclaimed and indigent between the 1870's and 1974 (Fig. 6). Approximately 3.8 acres in size originally Cemetery 2 was temporally the second cemetery to be used on the grounds between 1882 and 1925 (Richards et al. 2016). Of the four cemeteries utilized over the years on the grounds, Cemetery 2 is located on a part of the grounds heavily utilized by the county and subsequent institutions over the years, thus the burial site has been disturbed multiple times since 1932 (Fig. 7).

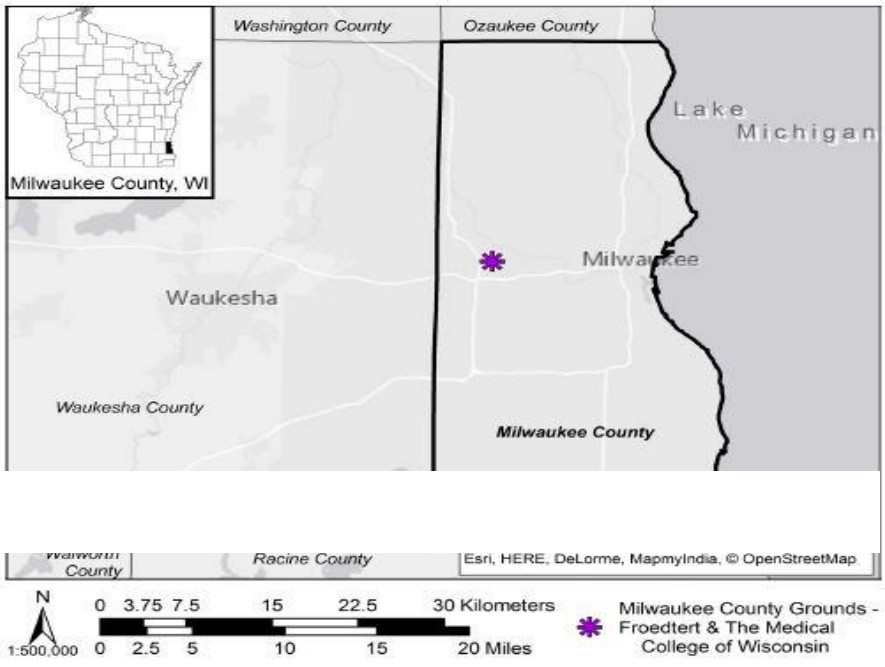


Figure 6 Location of Cemetery 2 and the project location for the Froedtert Tract (MI-0527, BMI-0076) excavations. (Adopted from Richards et al. 2016).

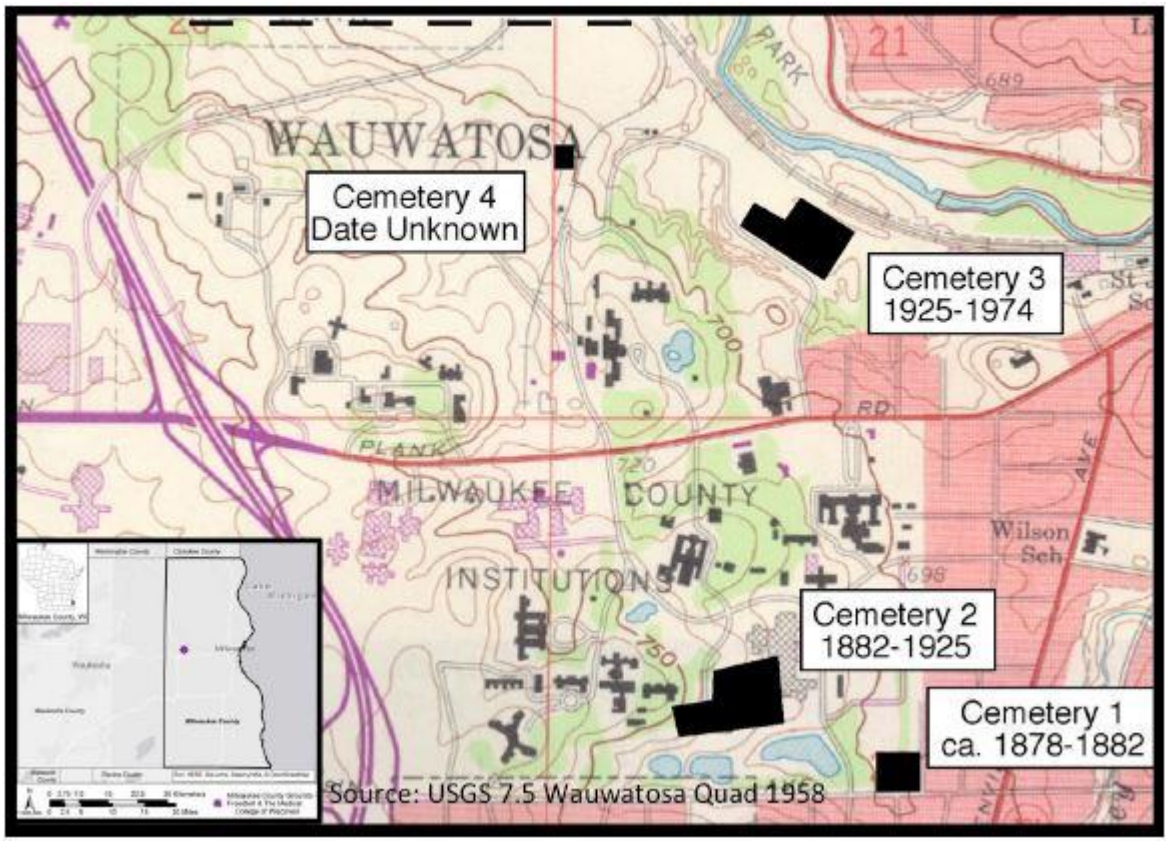


Figure 7 Locations of the Milwaukee County Poor Farm Cemeteries (Adopted from Richards et al. 2016).

Historical Disturbance

Construction of a new Nurses' School and Residence was the cause of the first major disturbance at the Milwaukee County Poor Farm Cemetery 2 (MCPFC). In 1928 in preparation for the construction of the school, the county is reported to have exhumed and re-buried graves in Cemetery 2 into Cemetery 3. There is some evidence archaeologically that this occurred for some individuals, but relatively few (Richards et al. 2016:4). In 1932 the *Milwaukee Sentinel* reported the disturbance of graves when mechanical shovels excavated during the construction

phase of the new home, a mere seven years after the last burial in the cemetery (Richards et al. 2016). Archaeological evidence yields clues of further disturbances over the years related to water line construction, other utilities, as well as the construction of other hospital facilities (Richards et al. 2016; Richards and Kastell 1993).

Archaeological Excavations

The first archaeological excavation to take place at MCPFC was in 1991 in compliance with the Wisconsin Burial Site Compliance Statute (Wis. Stat § 157.70) after human remains were found during the construction of an Ambulatory Care Center (Richards et al. 2016; Richards and Kastell 1993). Milwaukee County received permission to disturb the burials pursuant with the demolition of the Nurses' School and the construction of an Ambulatory Care Center and an associated parking structure resulting in the destruction of approximately 1.88 acres of the original cemetery. Excavations by Great Lakes Archaeological Research Center (GLARC) in 1991 and 1992 of approximately 0.8 of the remaining acres resulted in the removal of 1,649 burials (Richards et al. 2016; Richards and Kastell 1993).

More recently, proposed construction by Froedert Hospital pursuant to Wis. Stat § 157.70 resulted in the archaeological excavation of an additional 0.48 acres of Cemetery 2. In 2013 the University of Wisconsin-Milwaukee Historical Resource Management Services (UWM HRMS) excavated 632 coffin locations resulting in the recovery of 665 individual humans and one dog. Additionally, 50 of the coffin locations contained commingled remains with a total Minimum Number of Individuals (MNI) of 166, accounting for a total of approximately 831 individuals (Richards et al. 2016: 217). It is approximated that an additional 0.292 acres of the cemetery

remains intact, all to the south of the areas disturbed by construction underneath what is now Doyne Ave. (Richards et al. 2016: 86).

The human remains and material collections from the excavations in the early 1990's were housed at a temporary storage facility until the Wisconsin State Historical Society awarded final disposition to the University of Wisconsin-Milwaukee Archaeological Research Laboratory (UWM-ARL) in 2008. The materials and remains recovered from the 2013 excavations have joined the 1990's collection at the UWM-ARL while they await determination of their final disposition (Richards 2010).

Chapter III: Methods

Methods

The research for this project utilized methods from two connected disciplines; archaeological assessment of material culture, data from prior bioarcheological analysis, and historic documents analysis.

Material Culture

The material culture assemblage and human remains recovered from MCPFC during both excavations are currently housed in the University of Wisconsin-Milwaukee (UWM) Archaeological Research Laboratory's (ARL) artifact storage facility. During initial analysis, artifacts from the 2013 excavations recovered in burial contexts were divided into two broad categories of grave goods and grave inclusions. Grave goods were defined as items that were intentionally interred with the interred individual and consist mostly of personal items and clothing. The second category was defined as grave inclusions, determined to be representative of intentional disposal practices or artifacts that may not have been connected to the deceased individuals in the grave (Richards et al. 2016). Grave inclusions were further divided into sub-categories; one of which was Hospital and Medicine.

The current project followed the subclassification within the Hospital and Medicine category utilized by Richards et al. (2016) fairly closely with minor nominal modifications including grave inclusions determined to be related to the professional practice of medicine, or a

related subdiscipline, further defined as Medical Tools, Research Items, and Other Medical Waste.

Items determined to be in the first category, Medical Tools, were those that were clearly identifiable as tools or tool fragments. Subcategories within Medical Tools included hammers, hooks, knife/blades, picks, saws, scissors, tweezers, other tools, and unidentified tools.

The second category of Research Items was a classification designed to include materials related to broader medical laboratory work. Subcategories within Research Items include dripper/stoppers, eyedroppers, microscope slides, petri dishes, pipettes, specimens jars, supply bottles, test tubes, other, and unidentified.

The third, and broadest class, Other Medical Items, was used to classify litter and other discarded materials resulting from medical and laboratory work. Subcategories of waste include bandages/gauze, cut wood, electrical insulators, flat/pane/plate glass, jars, bottles, light bulbs/filaments, newspapers, plaster, rubber, tile, tubing, wood shavings, x-ray materials, other medical waste, and unidentified medical waste.

These categories were created for inventory and analysis during the writing of the report of investigations for the 2013 excavation. Because of the broad nature of the medical waste subcategories, waste items which could not be definitively correlated to medical activity was occasionally included. Thus, I reviewed artifacts from every burial lot marked as containing an item in any of the three broader categories in the report. For this analysis, only items which could be definitively correlated with medical activity, either through bioarcheological data, gathered previously by other researchers, or by association with other items with definitive medical/laboratory uses, were included.

The analysis and inventory of the materials excavated in 2013 had different definitions and parameters than those used by GLARC on the collection recovered in the early 1990s. Prior to my project, undergraduate researcher Karly Cushway, under the supervision of Dr. Shannon Freire, reviewed the digitized Grave Good Inventory Record forms completed by GLARC after excavations. Via an Excel database, she recorded every burial lot with a potential medical/laboratory discard using the aforementioned categorization developed for the analysis of the 2013 collection. This was done as a component of the work carried out under the Research Growth Initiative Award 101x357 from the UWM Graduate School awarded July 2017. Ms. Cushway took part in this research as part of her involvement in the Undergraduate Research Opportunity Program through the university. Using the spreadsheet created by Ms. Cushway, I then physically reviewed every burial lot marked as containing potential medical waste from the collection recovered in the early 1990s.

For each lot containing medically related grave inclusions a number of variables were recorded on a standardized Medical or Hospital Material Culture Inventory Record form. In addition to an Access database, a paper record was recorded for every lot, and remains on file at UWM-ARL. Information gathered from excavation forms, photographs, and previous bioarcheological analysis includes the following: coffin lot number, burial lot number, associated burial lots, coffin type (four, six, indeterminate, none), burial type (single, mixed, commingled), body position (supine, prone, disarticulated, none), medical intervention (anatomization, amputation, autopsy, none, missing cranium and mandible), age assessment (infant, juvenile, adult, indeterminate), and sex assessment (male, female, indeterminate). Additionally, I recorded whether an osteological analysis had been completed yet, and, if so, whether evidence of pathology was recorded. Osteological analysis is complete on the 2013 skeletal collection.

Analysis on skeletal collection from the 1990s excavation is ongoing, so data on the presence of pathology, age, and sex assessments were not available for all of the lots included in this thesis. Metrics recorded for each artifact that was part of this analysis include: count, material, length, width, and depth (thickness), when complete (cm), weight (g), condition, and occasionally a brief description when useful.

Bioarcheological Data

Burial Type

Burial type designations were used following the guidelines created by Richards (2016) in the report of investigations on the excavations from 2013. The report describes three burial contexts; single, mixed, and commingled. Single burials contained the remains of one individual, sometimes incomplete, and were given one lot number. Mixed burials are defined as a burial containing the remains of at least one individual over 50% complete as well as the remains of other individuals. Commingled lots contain the fragmentary remains of a number of individuals, none more than 50% complete (Richards et al. 2016).

Medical Intervention

Determination of type of medical intervention was based on available bioarcheological data from prior analysis by other researchers. Categorization of medical intervention were formulated by Richards, et al. (2017) based on the presence of particular osteological markers as recorded on the analysis form. The terms autopsy and anatomization (or dissection) are used as described by Nystrom (2017: 7). Autopsy refers to an examination to determine cause of death,

and dissection refers to practices related to anatomical study. Autopsy was evidenced by craniotomy and "cross-sectional cuts to the body or sternal end of multiple ribs" (2017:244). Cross-sectional cuts to the post cranium, and cuts to the cranium not associated with craniotomy was considered evidence of dissection. Dissection was recorded as Anatomization, Thoracotomy, and Laminectomy. Anatomization was used to describe dissection in which the body was significantly dismembered. Mid shaft cuts through the clavicle, scapula, and/or cuts through the ribs without evidence of cuts in other locations were taken as evidence of the opening of the thoracic cavity for the purposes of dissection and were recorded as Thoracotomy. Laminectomy was recorded when cuts were observed through the vertebral lamina and ribs. Occasionally, the cranium and mandible were not buried with the rest of the body, sometimes with no other evidence of post-mortem medical intervention, thus the absence of these elements was recorded as well.

Historic Documents

A number of different types of documents were mined for data on the formation of the County Grounds, the practice of medical education in Milwaukee County, the development of legal language, and for the identification of material culture when possible. These documents include official government publications and reports, daily and yearly supply ledgers from county institutions, newspapers, and surgical supply catalogs. Archival locations of these various texts include the Milwaukee County Historical Society Library, the Todd Wehr Library at the Medical College of Wisconsin, the Milwaukee Public Library Central Library, as well as various internet archival databases.

Two government reports and publications, in particular, were used heavily in this research. These are the *Proceedings of the Milwaukee County Board of Supervisors* published on a yearly basis, and the *Annual Reports from the Office of the Superintendent of the County Hospital*, renamed as the *Annual Report of the Milwaukee County Hospital and Milwaukee County* Dispensary in 1922. The Proceedings proved critical to the recreation of the narrative surrounding the shift in county poor relief from an outdoor to an indoor system of aid. Additionally, the reports form the county hospital were used for data on the Pathology Department. These documents included information on the arrangement of the department itself, such as the numbers of museum specimens, autopsies performed, and the spatial arrangement of the laboratory.

Other official county documents used as research materials were unpublished supply and purchase ledgers held at various archives. Through the ledgers I was able to track and record local and national suppliers from whom the County Hospital purchased surgical and laboratory materials. With this information I have been able to locate a number of contemporary medical equipment catalogs from companies that appear in the purchase ledgers. Whenever possible, the catalogs of known suppliers to the County Hospital have been used for material culture identification. These include commercial publications from businesses such as the E.H. Karrer Company of Milwaukee (1929), Sharp and Smith of Chicago (1889), Charles Lentz and Sons of Philadelphia (1915; 1892), and the Bausch and Lomb Optical Company of New York (1904). Occasionally, the material culture itself pointed out the need to acquire a catalog, such as multiple glass fragments embossed with the maker's mark of the Whitall, Tatum Glass Company of Philadelphia (1880; 1894; 1904).

Newspapers have been relied upon to a lesser degree than the aforementioned sources. Although used less frequently, newspapers have contributed information regarding community reactions to events at the Poor Farm Cemetery, as well as the finalization of the state dissection bill in 1868. The historic newspapers can be found on file at the Milwaukee County Library Main Library on microfilm, or on the internet behind a pay wall.

Chapter IV: Analysis

Material Culture

Medical waste was identified for a total of 74 coffin lot locations during this analysis, which represents a relatively small sample of the MCPFC sample. Overall, 2281 burial locations were excavated archaeologically at MCPFC, and, of these, 842 (37%) included some type material culture. Thus, a sample of 74 locations represents only 3% of all of the burial locations excavated, and less than a tenth (9%) of the locations that included material culture.

As discussed in the previous chapter, medical waste was further classified into three categories: Medical Tools, Research Items, and Other Medical Items. The aim of the analysis that follows is to determine if a correlation exists between the medical material waste and the presence of post-mortem medical practices, as well as burial type (discussed in the previous chapter). Information on artifact counts is therefore less useful than the presence of an artifact type in the burial context. Thus, what follows is a discussion of the presence and absence of artifact types within discrete coffin locations. In theory, medical procedures at the different institutions within the county would have produced signature evidence of post-mortem interventions, and subsequently variation in types of burial due to the state of the remains. Thus, it is likely that a relationship exists between types of post-mortem modification/burial type and classes of medical waste recovered. Therefore, a multiple regression analysis was used to test the predictive relationship between types of post-mortem medical intervention and specific artifact types, and the predictive relationship between burial type and artifact types. First, types of post-mortem medical intervention were used as an independent variable to predict for artifact class,

after which a second regression was run using burial type as the independent factor to predict for artifact class. An alpha level of 0.05 was used for all statistical tests.

Other Medical Items

As expected due to the broad nature of the category, the broadest category of Other Medical Items was found most frequently and 61 (82%) of the coffin lots containing medical waste included an item from this category. Of the 74 coffins containing waste of this kind, 58% (n=43) only had items within this classification. While types of post-mortem medical intervention significantly predicted the presence of Other Medical Items, $p = .03$, medical intervention also explained a portion of the variance in Other Medical Items, $R^2 = .21$, $F(18, 53) = 1.99$, $p = .03$. Additionally, while burial type significantly predicted the presence of Other Medical Items, $p = .02$, it also explained a portion of the variance in Other Medical Items, $R^2 = .21$, $F(18, 52) = 2.0$, $p = .03$

Bandages

Bandages were, by far, the most abundant type of medical waste found in this, and all, categories. Over one-third (n=27) of the coffin lots containing any type of medical waste included gauze or bandages. Bandages appear in coffin lots with individuals exhibiting nearly every type of post-mortem medical intervention; anatomization, autopsy, thoracotomy, and laminectomy. While types of post-mortem medical intervention significantly predicted the presence of bandages, $p = .002$, medical intervention explained only a small portion of the variance in bandages, $R^2 = .11$, $F(1, 71) = 9.99$, $p = .002$. Additionally, while burial type

significantly predicted the presence of bandages, $p = .02$, it explained only a very small portion of the variance in bandages, $R^2 = .05$, $F(1, 71) = 5.3$, $p = .03$

Bottles

Another item in this category found in relative abundance are bottles. Bottles, considered separately from Supply bottles, were recovered from 23 (31%) coffin lots that also included medical waste. For a presence/absence analysis, bottles were divided into two subcategories based on bottle shape and finish as established by Lindsey (2018): prescription and other. Bottle type provides insight into the likely original use of the bottle, thus differentiating into individual specimens potentially suggesting an origin for the piece. While types of post-mortem medical intervention significantly predicted the presence of both types of bottles, $p = .01$, medical intervention explained only a small portion of the variance in bottles, $R^2 = .09$, $F(2, 71) = 4.5$, $p = .01$. Additionally, while burial type significantly predicted the presence of both types of bottles, $p = .007$, it explained only a very small portion of the variance in bottles, $R^2 = .11$, $F(2, 70) = 5.3$, $p = .007$.

Prescription bottles are defined by the flaring lip, specifically the outside of the lip, which is seen to flare out while the inside tapers inward (Lindsey 2018; Whitall, Tatum & Co. 1880) as seen below in Figure 8. Prescription bottles were found in only 12% of the coffins containing other medical waste, however they account for 40% of the coffin lots that contain a bottle. Bottles with a prescription finish were the most popular type for druggist and prescription bottles between 1870 and the early 1920s (Lindsey 2018). While types of post-mortem medical intervention significantly predicted the presence of prescription bottles, $p = .01$, medical

intervention explained only a small portion of the variance in bottles, $R^2 = .075$, $F(1, 71) = 6.8$, $p = .01$. Additionally, while burial type significantly predicted the presence of prescription bottles, $p = .004$, it explained only a portion of the variance in bottles, $R^2 = .099$, $F(1, 71) = 8.97$, $p = .004$. The lack of parsimony may be a result of the small sample size, but a broader investigation of prescription bottles site wide might change this initial impression.

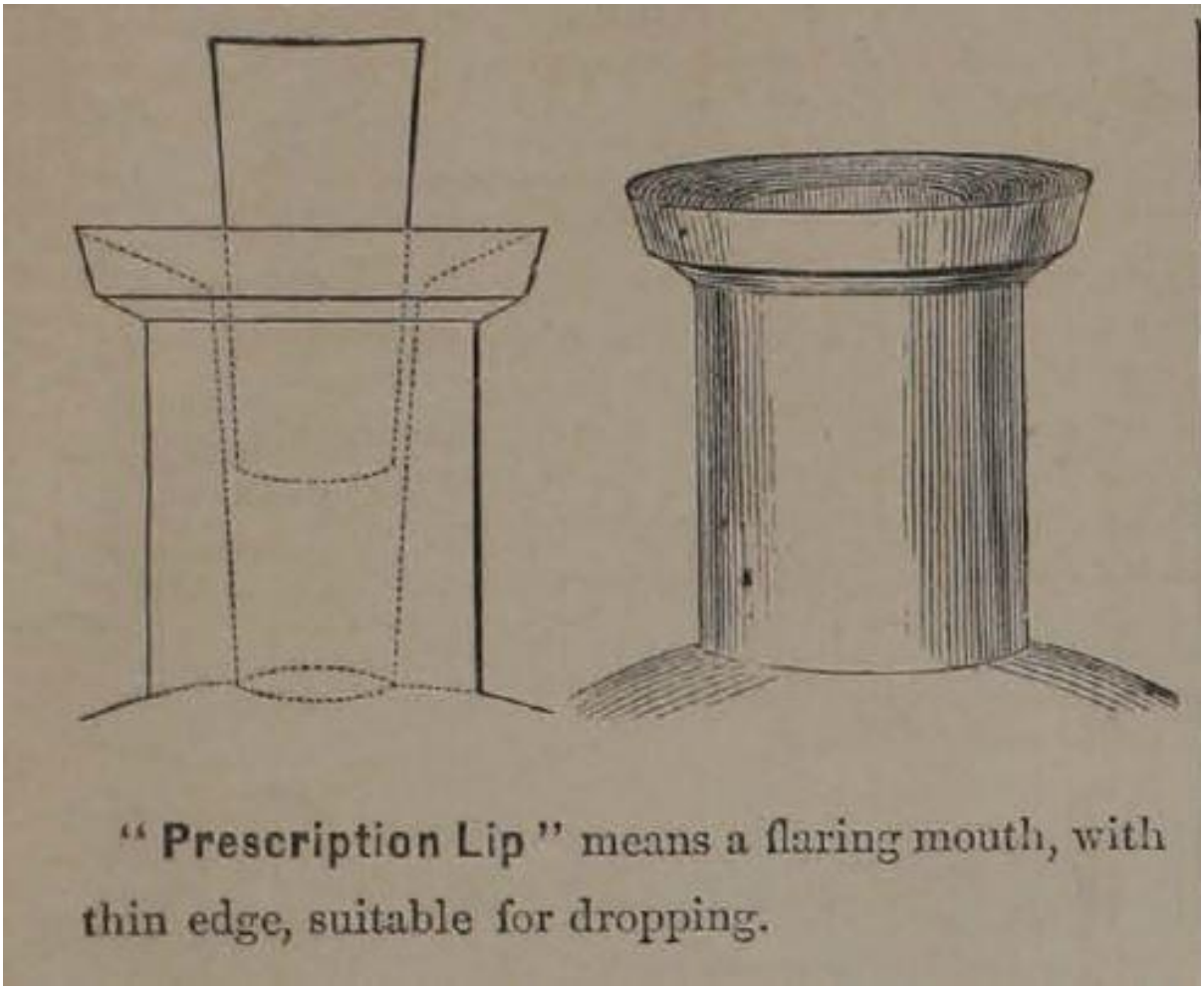


Figure 8 Prescription Lip (Whitall, Tatum & Co. 1870: 7).

Other Bottles were the most prevalent type in coffin lot locations (n=11; 15%) with medical waste. This was a catch-all category and mostly consists of glass bottle fragments which can not be definitively placed into another category with some exceptions such as an ink bottle

and a *bitterquelle* bottle. Types of post-mortem medical intervention did not significantly predict the presence of other bottles, $p = .08$. However, while burial type did significantly predict the presence of other bottles, $p = .04$, it explained only a small portion of the variance in bottles, $R^2 = .04$, $F(1, 71) = 4.3$, $p = .04$.

Flat Glass

Flat glass was present in 17 coffin lot locations containing other medical waste. A distinct type of flat glass was found repeatedly during analysis, so the presence of this type of flat glass was treated separately. This glass had two qualities distinguishing it from other types of flat glass. It was always aqua-tinted and was significantly thicker than average flat glass, ranging between 1.3cm to 1.9cm thick. Additionally, thick flat glass was present in a coffin lot in association with a fragmented museum jar lid (an artifact type discussed in more detail later) suggesting a potential shared origin (10971). Thus, the two subcategories are Flat Glass, defined as flat glass 1cm or less in thickness, and Thick Flat Glass, as described above.

Flat Glass is present in nine coffin lot locations, occurring concurrently with Thick Flat Glass in three locations. This category is a catchall for all sorts of flat glass; aqua-tinted, clear, frosted, etc. Types of post-mortem medical intervention did not significantly predict the presence of Flat Glass, $p = .28$, However, while burial type did significantly predict the presence of Flat Glass, $p = .004$, it explained a only portion of the variance in Flat Glass, $R^2 = .01$, $F(1, 71) = 8.9$, $p = .004$.

Thick Flat Glass is present in 11 coffin lot locations, only 15% of the total coffin locations containing medical waste, but with some potentially interesting correlations. While types of post-mortem medical intervention significantly predicted the presence of Thick Flat

Glass, $p = .02$, medical intervention explained only a small portion of the variance in bottles, $R^2 = .06$, $F(1, 71) = 5.6$, $p = .02$. Additionally, while burial type significantly predicted the presence of Thick Flat Glass, $p = .004$, it explained only a portion of the variance in Thick Flat Glass, $R^2 = .10$, $F(1, 70) = 9.1$, $p = .004$. Fifty-five percent (n=6) of the coffin locations with Thick Flat Glass contained mixed burials. The same percentage of the coffin locations (although different) containing this artifact type also included one or more laboratory artifact type (discussed below). At one coffin location (Lot 10526) where this glass was noted the presence of certain non-medical waste artifacts is worth noting. This location also included the head of a garden rake, indicating that at least some of the waste in the grave originated from the county grounds. The previously mentioned association with a museum jar lid (discussed below), and the high frequency of association with laboratory items and waste associated with the grounds crew suggests a likely origin in the Pathology Department which had an adjoining museum and laboratory and was situated on the county grounds.

Autopsy Tags

One artifact type of interest is present in only three coffin lot locations. Previously identified as Autopsy Tags (Richards 1997), these are small round brass tags approximately one inch in diameter stamped with a serial number and perforated at the top to allow a wire to run through it (Fig 9). Very few other artifacts are found in association with the Autopsy Tags; only a small piece of white plastic sheeting was recovered in one coffin lot location. Interestingly, in only one coffin location does the individual definitively exhibit signs of an autopsy, albeit, this may be due to lack a of current data.

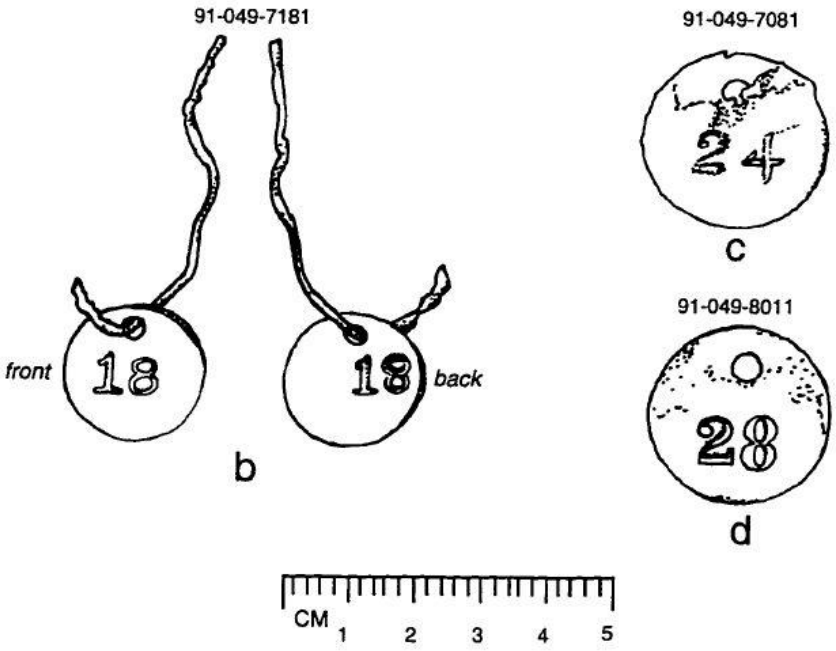


Figure 9 Illustration of Autopsy Tags. (Richards 1997:215).

Osteological analysis of one of the individuals buried at these locations has not yet been carried out, although from photographic evidence the burial is missing a cranium and mandible. Although the third individual has undergone an osteological analysis, with no cut marks recorded, the remains are fragmentary, and evidence of peri-mortem medical intervention may have been lost due to taphonomic processes. Due to the rare occurrences of this artifact type, and lack of available osteological data, it was concluded that post-mortem medical intervention was not a significant predictor for the presence of tags $p = 0.32$, nor was burial type, $p = 0.11$.

Vaseline Jars

Vaseline jars are present in four coffin lot locations. These are characterized as small pomade style jars or bottles with a longer neck and patent finish (Lockhart 2015). Vaseline was

Figure 10 Gauze and Vaseline Jar from Lot# 10669 (Richards et al. 2016:136).

used to prevent cadavers from drying in cold storage or in the dissection room. Bodies and limbs were smeared with petroleum jelly and then wrapped in fabric (Richards et al. 2016). Two bottles at the same coffin location are embossed "CHESEBROUGH MFG CO. VASELINE" and were found in association with fabric, among a vast amount of other waste (Fig. 10) (Lot # 10669). The other three coffin locations each contained one petroleum jelly jar, although the jars appear to have had paper labels. The aforementioned coffin location contains no artifacts that fall within the Research Items category. The other three locations containing Vaseline style jars all included artifacts one would expect to find in a laboratory setting. In one of these locations the petroleum jelly jar was amber colored glass, indicating that it held carbolated petroleum jelly (Lockhart 2015). It is possible that dissectors used carbolated Vaseline to preserve cadavers, although the presence of carbolic acid in the product may have done some harm. In a letter to the

editor of *Journal of the American Medical Association*, Dr. Patton reports skin sloughing off a patient's ankle after it had been applied to heal a minor wound (Patton M.D. 1960). The presence of carbolated Vaseline bottle may represent a product used by and on the living persons at the institution it originated from, for personal medical care. Additionally, all four coffin locations containing Vaseline jars also included prescription drug bottles. Despite this, post-mortem medical intervention was not a significant predictor for Vaseline jars, $p = 0.3$, neither was burial type, $p = 0.8$.

Newspaper and Wood Shavings

Newspaper (n=3) and Wood Shavings (n=7) were included as medical waste in this analysis only when there was other corroborating evidence of the coffin passing through a medical institution, such as other definitive medical waste or bioarcheological evidence of post-mortem intervention. The carpenter may have placed left over wood shavings inside the coffin for superstitious reasons, although another likely purpose of both wood shavings and newspaper would be to absorb bodily fluids. Post-mortem medical intervention was not a significant predictor for the presence of newspaper and wood shavings, $p = 0.1$, neither was burial type $p = 0.7$.

Enamel Plated Wash Basin

Two coffin locations contain one enamel plated wash basin, one 10 inches in diameter, the other 12 inches. Additionally, they both show signs of wear on the exterior upper portion just underneath the rim (Fig. 11), indicating they likely rested in a stand as illustrated in the Lentz

Figure 11 Wear marks under rim of enamel plated basin recovered from Lot 9263.

Section II. CHARLES LENTZ & SONS, PHILADELPHIA. 113

Hospital, Operating Room and Office Furniture.

WASHSTANDS. BATH TUBS.

LENTZ & SONS

LENTZ & SONS PHILA.

1360 1361

1360.* Washstand, single form, wrought iron frame, white enameled, on casters, with steel enameled basin $6 00

1358. Washstand, double form, same as above, with two basins 8 00

1361.* Washstand, triple form, same as above, with three basins 10 50

Figure 12 Enamel plated wash basin in stand (Charles Lentz & Sons 1915:113).

and Sons (1915) catalog seen above (Fig. 12). Post-mortem medical intervention was not a

significant predictor for the presence of wash basins, $p = 0.4$, neither was burial type, $p = 0.20$.

Additional Other Medical Waste

Several other, less diagnostic, artifact types were included in the Other Medical Waste category. These included tubing (n=11), insulation (n=1), jars (n=11), latex gloves (n=1), a small cut wood block (n=1), and fabric (n=4). None of these artifacts had a significant correlation with variations in medical intervention or burial type.

Research Items

Twenty-eight coffin lot locations contained one or more artifact types classified as Research Items. This accounts for 38% of the coffins containing some form of medical waste. Of these, 10 coffin locations only contained artifact types classified as Research Items. Post-mortem medical intervention as a significant predictor for the presence of Research Items $p = 0.04$, it explained a portion of the variance seen in Research Items, $R^2 = .16$, $F(15, 55) = 1.9$, $p = .04$, Additionally, while burial type significantly predicted the presence of Research Items, $p = .04$, it explained only a portion of the variance in Research Items, $R^2 = .17$, $F(15, 54) = 1.97$, $p = .004$.

Laboratory Items

Within the Research Items category is a group of artifact types which can be definitively associated with laboratory activities. These include: drippers (n=2), eyedroppers (n=2), test tubes (n=5), microscope slides (n=8), petri dishes (n=2), pipettes (n=4), specimen jars (n=1), mustard seeds (n=1), a homeopathic shell vial (n=1) (Fig 13), the bulb of a distillation tube (n=1) (Fig 14), and a plaster cranial cast (n=1). Coffin lot locations containing laboratory items account for

Figure 13 Homeopathic shell vial (second from right) (Whitall, Tatum and Co. 1904:61).

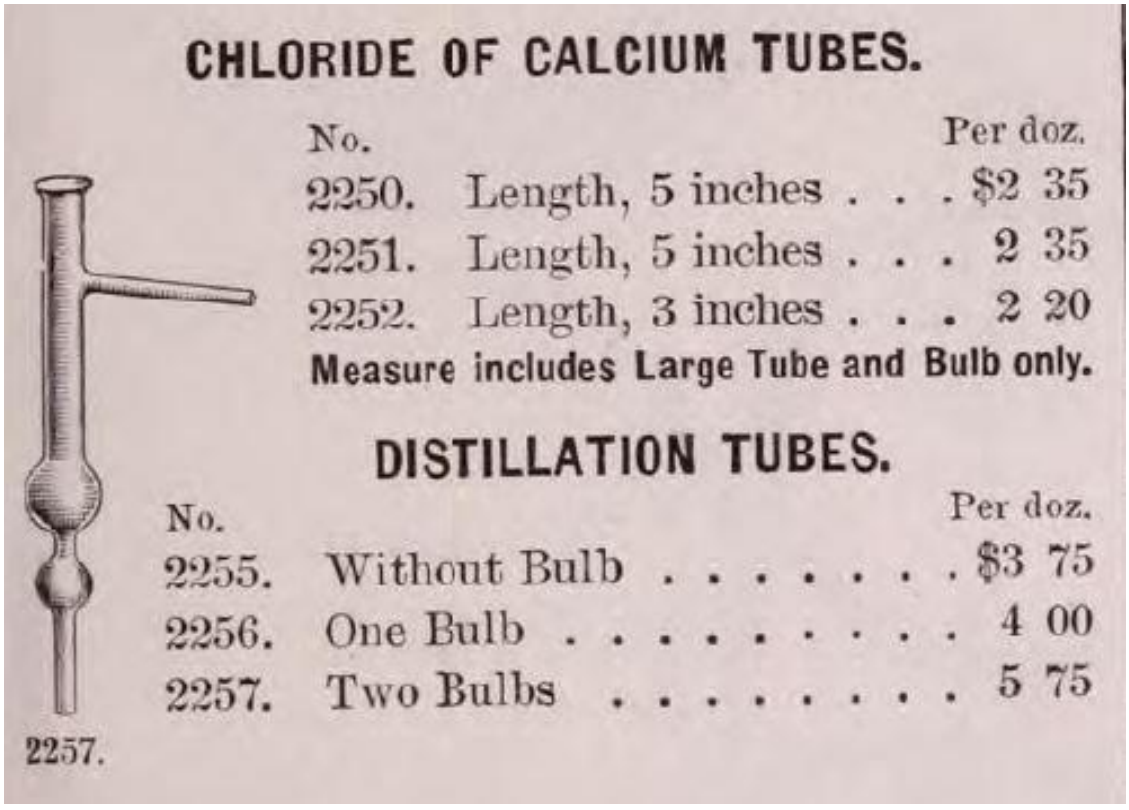


Figure 14 Distillation tube (Whitall, Tatum and Co. 1904:11).

32% (n=24) of the locations containing medical waste and 86% of the locations containing Research Items. While post-mortem medical intervention was a significant predictor for the

presence of laboratory items, $p = 0.004$, it only explained a portion of the variance seen in laboratory artifacts, $R^2 = .21$, $F(10, 62) = 2.97$, $p = .004$, Additionally, while burial type significantly predicted the presence of laboratory artifacts, $p = .0002$, it explained only a portion of the variance in laboratory artifacts, $R^2 = .31$, $F(10, 61) = 4.1$, $p = .0002$.

The mustard seeds, identified by Jennifer L. Picard (Sept. 2018, pers. comm.), were included with laboratory items due to their use in measuring cranial capacity in the nineteenth century. An excerpt from *Crania Americana* describes their use:

> In order to measure the capacity of a cranium, the foramina were first stopped with cotton, and the cavity was then filled with *white pepper seed* poured into the foramen magnum until it reached the surface and pressed down with the finger until the skull would receive no more (Morton 1839: 253; emphasis original).

The grains were then poured from the cranium into a graduated cylinder and the cubic volume recorded. In a footnote, the text states that the seed was chosen due to its hardness and homogeonously sized grains. Although mustard seed is not mentioned specifically, later publications referring back to this work reference the use of mustard seed specifically (Meigs 1857; Morton 1849). Excavator notes for this lot indicate that the mustard seed was recovered near the mouth and chest cavity, and that a sample was taken aproximately six inches from the mouth.

Museum Jar Lids

The lids of Museum Jars were recovered from three coffin lot locations. Both locations contained a single lid identically embossed; “Whitall Tatum & Co. Philadelpha New York” on top of the lid around the rim and “Pat. June 11th 1895” near the center on the top of the lid (Fig.

15). These were positively identified as closures for museum jars by the two glass rings on the underside of the lids themselves. Initially identified from the Whitall, Tatum and Co. catalog (1880) (Fig 16) illustrating a specimen hanging from a ring on the underside of the glass lid, however, the description of the product in 1880 describes a single glass ring. The presence of a second glass ring for securing the museum specimen is mentioned in the 1904 catalog (Fig. 17). Additionally, the 1894 catalog (Fig. 18) makes no mention of rings on the underside of the lid, nor are they present in the illustration, although this seems to be due to the angle at which the product is being illustrated, rather than the result of an oversight on the part of the artist. Further, the difference in the lid embossing between the 1894 and the 1904 catalog suggests that the lids from the MCPFC lots discussed here were manufactured after 1894, potentially as late as 1904.

Figure 15 Museum Jar Lid recovered from Lot 10971.

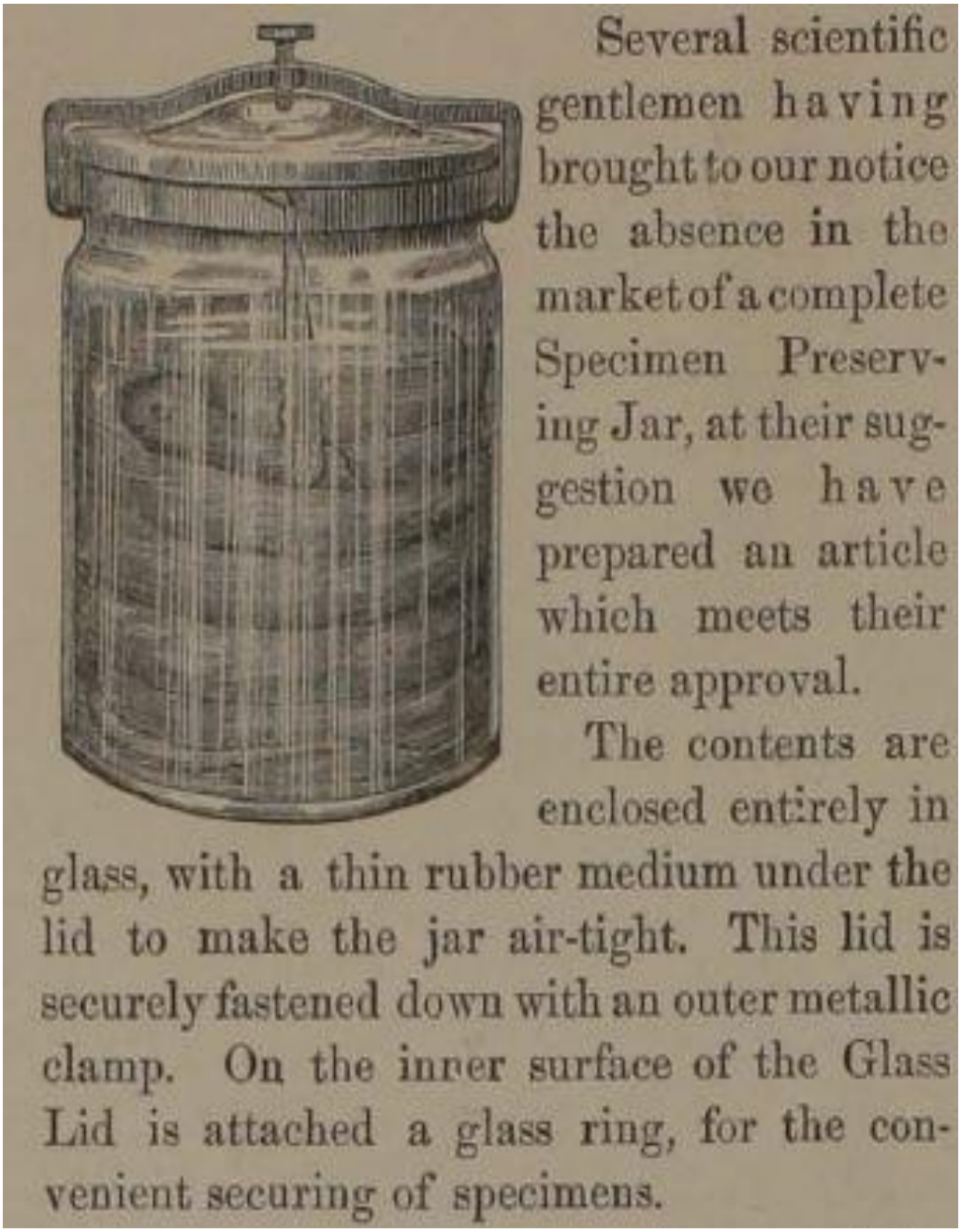
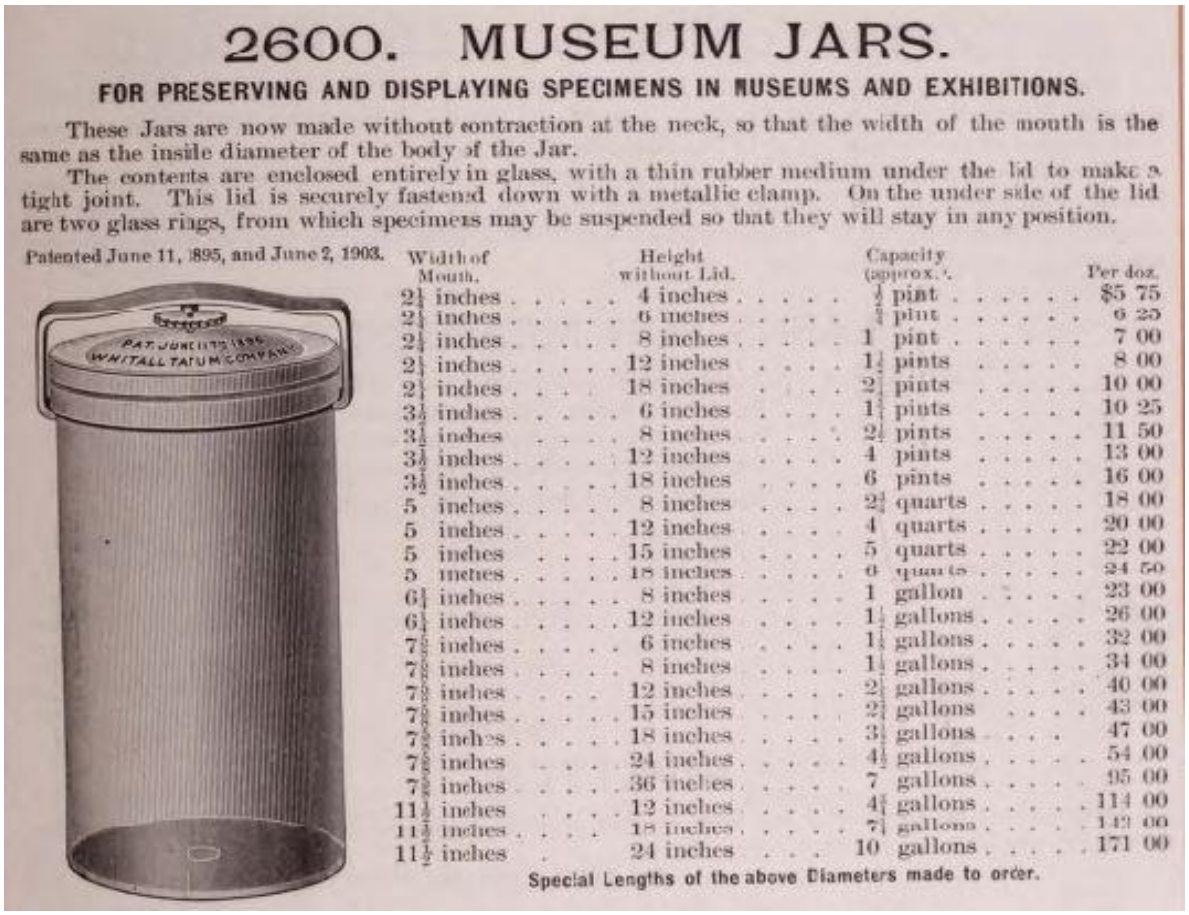


Figure 16 Museum Jar with illustrated glass ring (Whitall, Tatum and Co. 1880:44).



2600. MUSEUM JARS.

FOR PRESERVING AND DISPLAYING SPECIMENS IN MUSEUMS AND EXHIBITIONS.

These Jars are now made without contraction at the neck, so that the width of the mouth is the same as the inside diameter of the body of the Jar.

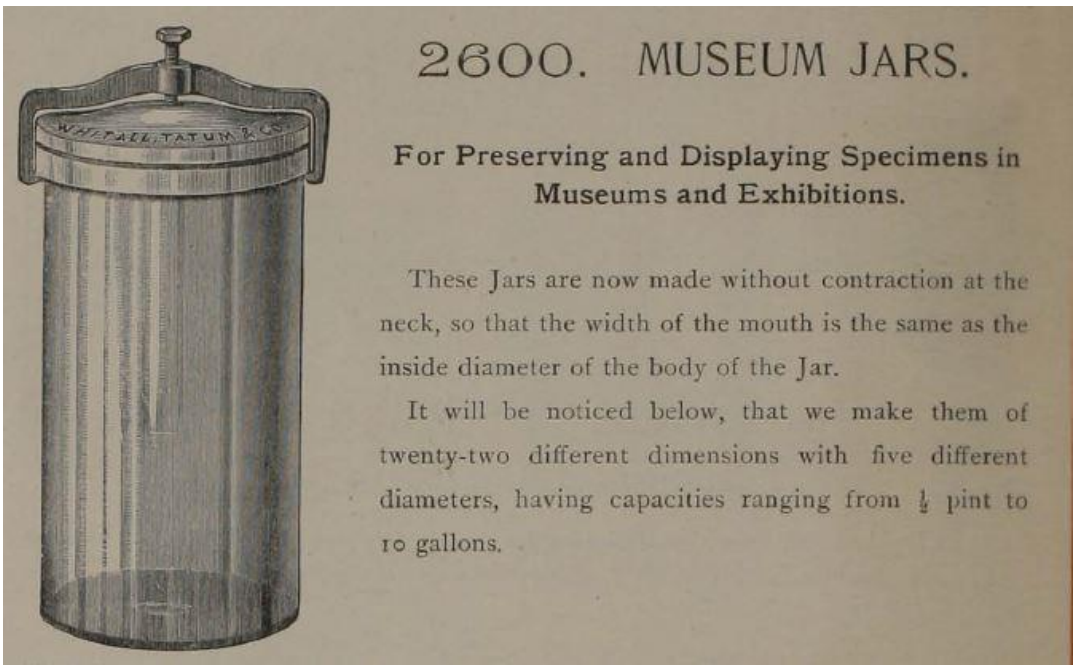
The contents are enclosed entirely in glass, with a thin rubber medium under the lid to make a tight joint. This lid is securely fastened down with a metallic clamp. On the under side of the lid are two glass rings, from which specimens may be suspended so that they will stay in any position.

Patented June 11, 1895, and June 2, 1903.

Width of Mouth.	Height without Lid.	Capacity (approx.).	Per doz.
2½ inches	4 inches	½ pint	$5 75
2½ inches	6 inches	¾ pint	6 25
2½ inches	8 inches	1 pint	7 00
2½ inches	12 inches	1½ pints	8 00
2½ inches	18 inches	2½ pints	10 00
3½ inches	6 inches	1½ pints	10 25
3½ inches	8 inches	2½ pints	11 50
3½ inches	12 inches	4 pints	13 00
3½ inches	18 inches	6 pints	16 00
5 inches	8 inches	2½ quarts	18 00
5 inches	12 inches	4 quarts	20 00
5 inches	15 inches	5 quarts	22 00
5 inches	18 inches	6 quarts	24 50
6¼ inches	8 inches	1 gallon	23 00
6¼ inches	12 inches	1½ gallons	26 00
7½ inches	6 inches	1½ gallons	32 00
7½ inches	8 inches	1½ gallons	34 00
7½ inches	12 inches	2½ gallons	40 00
7½ inches	15 inches	2½ gallons	43 00
7½ inches	18 inches	3½ gallons	47 00
7½ inches	24 inches	4½ gallons	54 00
7½ inches	36 inches	7 gallons	95 00
11½ inches	12 inches	4½ gallons	114 00
11½ inches	18 inches	7½ gallons	142 00
11½ inches	24 inches	10 gallons	171 00

Special Lengths of the above Diameters made to order.

Figure 17 Embossing on Museum Jar Lid. Note description on the under-side of the lid are two glass rings..." (Whitall, Tatum and Co. 1904:17).



2600. MUSEUM JARS.

For Preserving and Displaying Specimens in Museums and Exhibitions.

These Jars are now made without contraction at the neck, so that the width of the mouth is the same as the inside diameter of the body of the Jar.

It will be noticed below, that we make them of twenty-two different dimensions with five different diameters, having capacities ranging from ½ pint to 10 gallons.

Figure 18 Embossing on Museum Jar Lid (Whitall, Tatum and Co. 1894:20)

At two coffin locations the museum jar lid were found with laboratory items; the third is

found in association with the unidentified artifact described below as well as the thick aqua-tinted flat glass discussed previously. One likely origin of the museum jar lids is the Pathology Department on the county grounds. As can be seen in the department floor plan in Chapter II (Fig. 6), the department had an in-house pathology museum adjacent to the laboratory and amphitheater. The potential 1904 *terminus post quem* of the lids aligns closely with the completion of the construction of the Pathology building in 1906

Unidentified Item

Pictured Below (Fig. 19), this artifact was recovered at five descrete coffin locations. These are small nozzle-like ceramic hollow artifacts (although one is made of bone) with a round hole at the base and a slit on the top. The bottom portion has a slight taper toward the base with evidence of rotational wear on the sides. Immediately above the tapered portion is a groove which extends around the entire circumfrence of the object. The upper portion is a half dome with a narrow slit which exhibits wear and discoloration from contact with metal. The artifacts

Figure 19 Unidentified Artifact Type. From Left: Lots 10409, 10410, 10525, 10539, 10971..

are all of similar size and shape, but the diameters range between 0.8cm to 0.9cm and they are all 1.5cm tall.

Specimen Jar

One coffin location contained a specimen jar (Lot 10971). The jar does not appear to be a museum specimen jar of the type discussed earlier and does not match any jars found in the medical equipment catalogs. It has been positively identified as a specimen jar due to the fact that the remains of two infants were discovered inside the jar during excavation. This lot will be discussed in more detail below. The specimen jar was found in association with a museum jar lid, the unidentified artifact discussed earlier, and large amounts of thick flat glass.

Additional Research Items

In addition to the artifacts classified as Research Items discussed above are several less diagnostic artifact types. These include pencils (n=5), supply bottles (n=4), writing tablet (n=1), and the base of an unidentfied vial type (n=1).

Medical Tools

Medical tools are present at only 8 (11%) coffin lot locations, only two of which included other medical waste as well. Grave locations included in this study because of the presence of solely Medical Tools exclusively account for 4% (n=3) of the total 74 coffin lot locations. Medical Tools co-occur most frequently with Other Medical Items in five coffin locations. Tools are found with Research Items at only two coffin lot locations that are also the only two coffin

lots containing all three categories of medical waste (Lots 10730 and 10983). These two lots both contained the same artifact type; fragments of a chain from a dissecting chain and hook (Fig. 20). Other Medical Tools recovered during excavations at MCPFC include tool handles (n=2), tweezers (n=2), surgical scissors (n=1), and a wooden autopsy table head rest (n=1) (Fig. 21). Post-mortem medical interventon was not a significant predictor for the presence of Medical Tools, p = 0.4, neither was burial type p = 0.52.

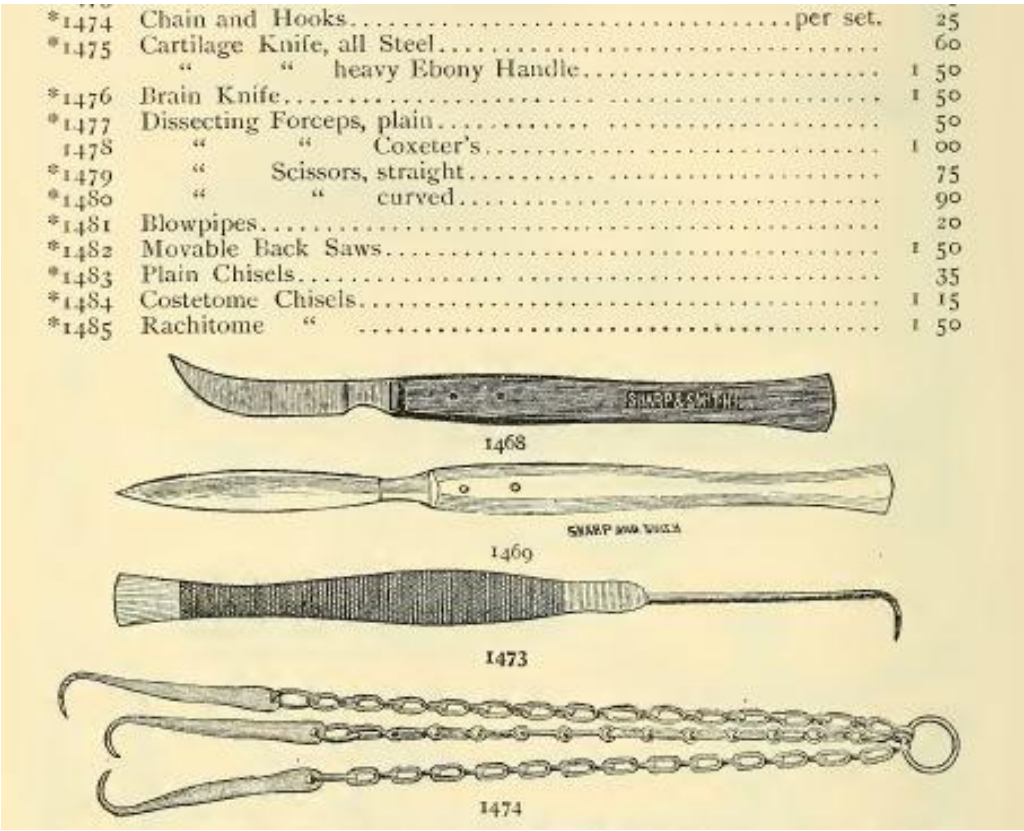


Figure 20 Dissecting chain and hook. (Sharp and Smith 1889:338).

Figure 21 Wooden autopsy table headrest.

Entire Artifact Collection

The entire collection of artifact types present at the 74 coffin locations containing medical waste accounts for a total artifact count of 5201 objects. Besides being present in the greatest number of coffin locations, Other Medical Items were also the most abundant artifact type (n=4449). This is, in part, due to the nature of the materials themselves, which are commonly fragmentary, such as glass and bandages. Additionally, Research Items were the second most abundant artifact type (n=720) due to the large amounts of glassware found in a laboratory setting. Medical Tools (n=32) were the least abundant; and were also fragmentary, the total accounts for the presence of nine tools. A regression analysis of the presence and absence of the entire collection of medical waste indicates that post-mortem medical intervention was a significant predictor for the presence of medical waste, $p = 0.006$, and explained a significant

portion of the variance seen in laboratory artifacts, $R^2 = .43$, $F(37, 32) = 2.42$, $p = .006$. Additionally, burial type significantly predicted the presence of laboratory artifacts, $p = .005$, it explained a significant portion of the variance in laboratory artifacts, $R^2 = .46$, $F(37, 31) = 2.55$, $p = .005$.

Bioarchaeological Correlates

Formal osteological analysis had been completed on 62 of the 74 primary individuals interred in coffin lot locations containing medical waste when this study was carried out. When possible, photographs and excavation paperwork were used to fill in incomplete data in the absence of osteological analysis, as was the case in observing the presence and absence of a cranium and mandible identified on the basis of field photographs for the lots discussed above.

Medical Intervention

In the 62 burial lot locations containing medical waste in which osteological analysis had been previously completed by other researchers, 44 (71%) exhibited evidence of peri-mortem medical activity in the form of sawn or cut bone, 23 (39%) of these have been anatomized, 14 (19%) had been autopsied, 5 (8%) were thoracotomies, one had an unhealed cut on the right femoral medial condyle interpreted as an abandoned amputation, one was a hemispherectomy (2%) and the remaining individual exhibited evidence of laminectomy (2%). Perhaps, not surprisingly, burial type was a significant predictor for types of medical intervention $p = 0.002$

and explained a portion of the variation seen within this sample, $R^2 = .12$, $F(1, 71) = 10.36$, $p = .002$. The positive correlation can be seen in Figure 22 below.

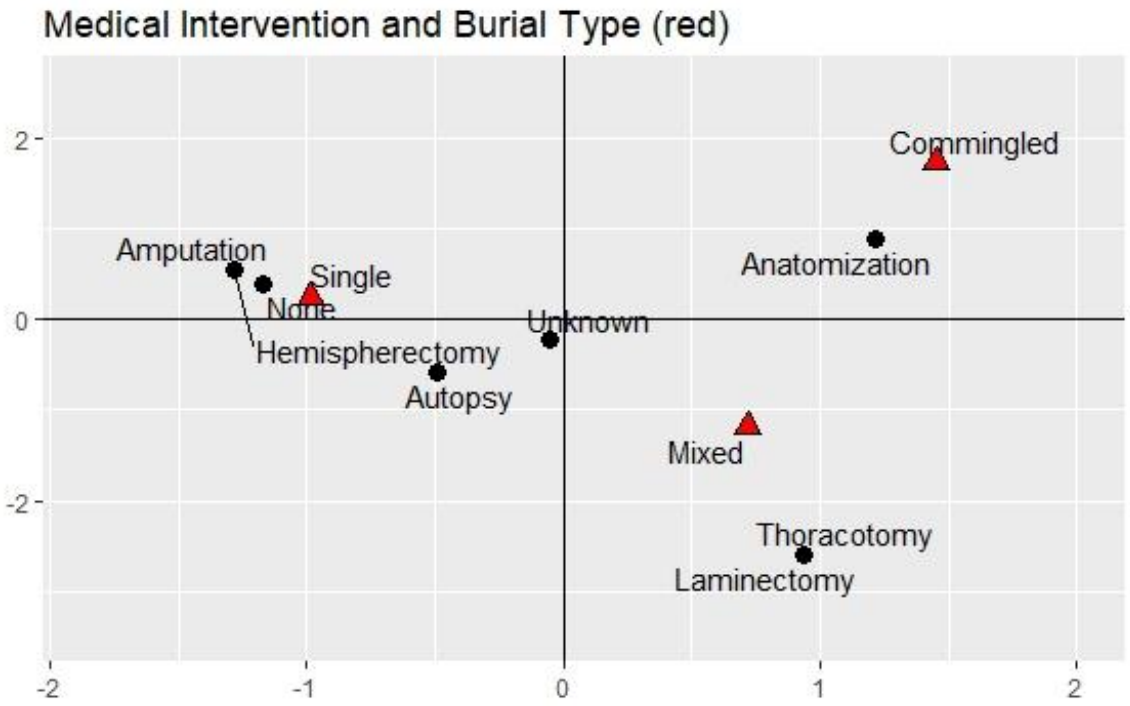


Figure 22 Correlation of Medical Intervention and Burial Type.

Sex Assessment

Of the individuals whose sex could be, and had been, determined by previous researchers, in the entire skeletal collection at MCPFC, 18% are females and the remaining 82% are males (Richards et al. 2016). The demographic profile of the individuals interred with medical waste mirrors the larger demographic profile of the cemetery closely. Of the individuals whose sex had been determined (in the case of mixed and commingled burials the sex of the primary individual was used) 13% are female and 87% are male. Table 1 illustrates the types of post-mortem medical intervention by sex observed for those individuals who were interred with medical waste.

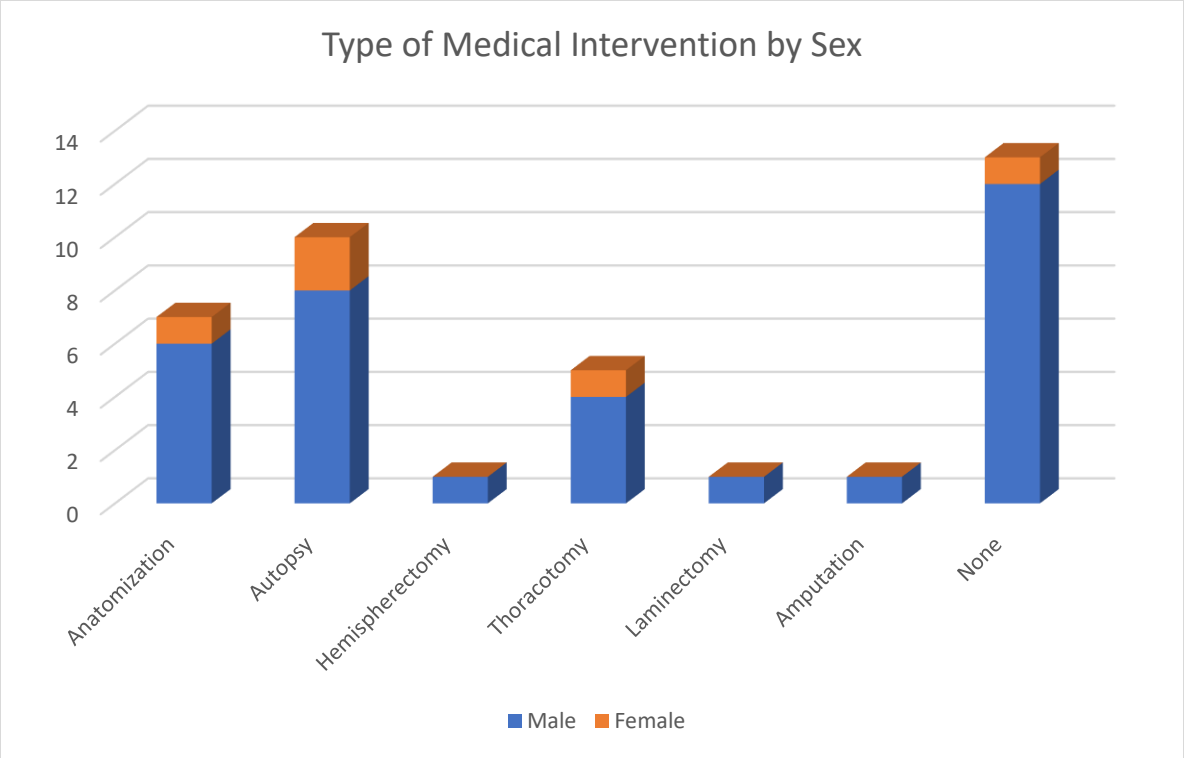


Figure 23 Medical intervention by sex within this study.

Medical Intervention	Male	Female
Anatomization	6	1
Autopsy	8	2
Hemispherectomy	1	0
Thoracotomy	4	1
Laminectomy	1	0
Amputation	1	0
None	12	1

Table 1 Medical intervention by sex within this study.

Missing Cranium and Mandible

Of the 74 coffin lot locations, the primary individual was missing their cranium and mandible in 18 (24%) cases, while 56 (76%) were buried with those elements. As seen in Table 2 the type of post-mortem medical intervention exhibited by the primary indiduals who had lost their heads were as follows: thoracotomy (n=4, 22%), anatomization (n=7, 39%), amputation (n=1, 6%), autopsy (n=3, 17%), and none (n=1, 6%) . An additional four individuals have not had osteological analysis completed but, the absence of the cranium and mandible was gleaned from excavation paperwork and photographs. The individual with no evidence of peri-mortem medical intervention (other than the missing head) was labelled as such because osteological analysis detected no signs of cut marks on the extant remains. In the absence of the cranium, autopsy and thoracotomy were differentiated by the type of cut marks on the ribs. The medical intervention was labelled an autopsy if sagital cuts to the sternal end of the ribs were observed, or to the sternum itself, consistent with medicolegal autopsies. A regression analysis did not find a statistically significant (p-value=0.3) correlation between the absence of a cranium and mandible and variation in medical intervention. Of the primary individuals who were missing their cranium and mandible, and had sex determined, 79% (n=11) were male and 21% (n=3) were female. Burial types observed are as follows: five were disarticulated, 14 were supine, one was in a prone position. Unfortunately, osteological analysis had not yet been completed on the individual in the prone position (Lot 2058) at the time of this study so no further bioarcheological information was available at this time.

Medical Intervention	Sum of Cranium/Mandible Present	Sum of Cranium/Mandible Absent
Amputation	1	0
Anatomization	16	7
Autopsy	11	3
Hemispherectomy	1	0
Laminectomy	1	0
None	17	1
Thoracotomy	1	4
Grand Total	**48**	**15**

Table 2 Medical intervention and the presence of the cranium and mandible.

This study examined only 74 coffin locations of the 2,281 locations archaeologically excavated at MCPFC. In order to try and find a pattern in the data, I attempted to identify key artifact types that could be positively correlated with either practices occurring at a known medical institution, or with discrete types of post-mortem medical intervention. However, due to the small sample size, no clear trends could be found within the data. As discussed previously, certain classes of medical waste could be significantly predicted based on medical intervention and/or burial type. It is likely that a larger sample size would present clearer trends.

Chapter V: Analysis and Conclusions

As discussed in the previous chapter, due to the small sample size, no clear patterns could be found in this data through an examination of artifact types alone. Therefore, given the small sample size, it might be more useful to examine specific cases in more detail. Below is a closer investigation of seven coffin lot locations chosen for the unique collections of medical waste recovered at those locations, the potential of shared institutional origin, or a combination of both.

Lots 10981, 10982, 10983

Lots 10981, 10982, and 10983 are three adjacent burial lots containing similar medical waste items. They are located at the western terminus of the cemetery bounds and in line with each other from north to south with 10981 furthest north, 10982 immediately south of that location, and 10983 south of 10982. Table 3 conveys the burial types and variations of medical intervention observed at these three coffin lot locations.

Coffin Lot	Burial Type	Position	Medical Intervention	Head Direction
10983	Commingled	Disarticulated	Anatomization	None
10982	Single	Supine	Hemispherectomy	West
10981	Mixed	Disarticulated	Anatomization	None

Table 3 Burial Information for three adjacent lots.

Lot 10981

Lot 10981 was a mixed, disarticulated burial containing the remains of anatomized individuals (Fig. 24). Included in this coffin location are microscope slide fragments (n=2), glass pipette fragments (n=2), clear container glass fragments (n=195), a clear prescription drug bottle,

Figure 24 Excavation Photo of Lot 10981. On File at the UWM-ARL. Used with permission.

a clear Vaseline jar with a cork and no embossing, an ink bottle basally embossed "Higgins Inks Brooklyn, N.Y.", and the fragmentary remains of at least two museum jar lids. The first is in two fragments that refit. It is embossed "WHITALL TATUM & CO. PHILADELPHIA NEW YORK" around the edge of the rim and "PAT. JUNE 11th 1895" on the top of the lid. This lid is for a smaller museum jar and is only 3 inches in diameter. The second lid is much more fragmentary (n=9) and incomplete. Only fragments of the second embossed rim were disposed of, but enough to definitively state that it is a Whitall, Tatum & Co. museum jar lid. A 20% complete rim fragment indicates that the lid was approximately 8 inches in diameter.

Lot 10982

Lot 10982 contained a single individual interred in a supine position (Fig. 26). This individual appears to have been subjected to an atypical dissection technique. The right side of the calvarium has been removed by an incision through the sagittal suture, into the frontal and around the cranium through the frontal and parietal bones (Richards et al. 2016). This is

Figure 25 Excavation photograph of Lot 10982. Photograph on file at the UWM-ARL. Used with permission.

consistent with a modern medical procedure called an anatomical hemispherectomy in which of the frontal, parietal, temporal, and occipital lobes of the brain are removed as a treatment for epilepsy (Cleveland Clinic). The first recorded use of this technique on a living human cranium was in 1928 (Cleveland Clinic). Although this skeletal collection predates this procedure, the removal of this portion of the cranium on a cadaver would have similar desired results, exposing those lobes of the brain for anatomical study.

Medical material waste interred with this individual included four intact microscope slides, 45 microscope slide fragments, 36 petri dish fragments, 309 fragments of clear test tubes, and a clear unlabeled petroleum jelly jar. In addition to the laboratory artifacts the burial lot contained multiple bottles, including one amber Boston style (Whitall, Tatum & Co. 1880:14) (Fig 26) bottle with an applied patent finish basally embossed "W.T.&CO.", one post molded bottle with a tooled prescription finish embossed "HUGO E. BAUCH NORTH AVE & 3RD ST. MILWAUKEE" on the face and basally embossed "W.T. CO. & O A", and a two-piece cup

molded bottle with a tooled prescription finish basally embossed with a logo best described as the letter “N” encircled by the letter “O”.

Figure 26 Boston style bottle. (Whitall, Tatum & Co. 1880:14).

The first basally embossed maker’s mark described above was used by the Whitall, Tatum & Co. glass manufacturers between 1870 to 1901 (Lindsey 2018). The “W.T. CO. & O A” mark is a second Whitall, Tatum & Co. mark used post-1901 (Lindsey 2018). The third basally embossed mark with the encircled “N” was used by the Obear-Nester Glass Co. between 1895 and the mid-1920s (Lindsey 2018). Other waste includes two fragments of a rubber gasket, one glass jar rim fragment, another rubber seal, and 192 clear glass fragments.

Lot 10983

Figure 27 Excavation photo of Lot 10983. On file at the UWM-ARL. Used with permission.

This lot was heavily disturbed during mechanical stripping for excavations (Figure 27). The western end of the coffin remained intact and artifacts were recovered *in situ* (Richards et al. 2016). Limited human remains were recovered, potentially due to the disturbance, representing an MNI of four. Material culture related to medical practices include four clear glass pipette fragments, a fragmentary (n=30) Whitall, Tatum & Co. glass museum jar lid, a fragment of a distillation tube with the bulb, two fragments of glass that refit to form a single homeopathic shell vial, a two-piece cup molded bottle with an applied prescription finish with "Roemer Drug Co. 415 Grand Ave. Milwaukee, Wis." embossed on the face and basally embossed "D F & Co.", a two-piece cup molded bottle with an applied finish with a glass dripper, a fragmentary (n=50) amber Vaseline jar, a white tile fragment, two small pieces of unidentified cut wood, and 20 fragments of clear unidentified container glass. Additionally, Lot 10983 contained two

fragments of chain from a dissecting hook chain. The "D F & Co." mark was used by the Dean Foster & Co. glass company between approximately 1894 and 1911 (Lindsey 2018).

Table 8 illustrates some of the similarities in the types of artifacts found at these three coffin locations. Each of the locations contain artifacts utilized in a laboratory setting, Vaseline jars, prescription bottles, and unidentified clear glass container fragments. Additionally, two contained museum jar lids, and one had fragments of a chain from a dissecting hook, a tool used in both dissection and autopsy. The parallels in artifact types and close proximity of coffin locations suggests a high likelihood that these coffins originated from the same medical institution and were probably buried in a short time frame.

As noted earlier, the Pathology Department at the Milwaukee County Hospital is known to have had a specimen museum adjacent to the laboratory. The presence of museum jar lids alongside laboratory items potentially points to this department being the origin of the waste in these lots. Additionally, the type of dissection observed in Lot 10982 is not consistent with the type of post-mortem intervention that would have taken place for medico-legal purposes, thus ruling out the Coroner's Office as a source. Further, it is unlikely that the medical colleges would have discarded a cadaver which could have been used for additional anatomical instruction after such minimal peri-mortem dissection, strengthening the likelihood of the Pathology Department as an origin point. Thus, the various types of medical interventions observed at these three coffin lot locations might be indicative of the variety of medical practices taking place at a single institution; the Pathology Department on the county grounds. Although only a partial record of what was interred at Lot 10983, the nature of the remains recovered there indicates more comprehensive dissection practices. This is more consistent with the type of anatomization that

would have occurred at the medical colleges, although it may also be evidence of the range of practices taking place on the county grounds.

Coffin Lot	Laboratory Artifacts	Museum Jar Lid	Vaseline Jar	Prescription Bottle	Other Bottle	Clear Container Glass	Medical Tool
10981	P	P	P	P	P	P	A
10982	P	A	P	P	A	P	A
10983	P	P	P	P	A	P	P

Table 4 Presence (P) and Absence (A) table for Lots 10981, 10982, and 10983.

Lot 10971

Figure 28 Excavation photo of Lot 10971. On file at the UWM ARL. Used. With permission.

If the presence of a Whitall, Tatum & Co. museum jar lid is a potential indicator that the contents of a coffin lot originated at the Milwaukee County Pathology Department, then it is worth investigating the only other lot to include this artifact type further. As with the three

previously discussed lots, Lot 10971 (Fig. 28) is located at the far western end of the cemetery, although it is approximately eight grave rows south of 10983 (one of these rows was obliterated by a water utility pipeline). The primary lot at this location (10983) represents a commingled lot with an MNI of five (Richards et al. 2016). This burial lot is associated with two other burial lots that were interred within the same coffin lot location (Lots 10996 and 11098). The associated lots represent the remains of two fetuses found inside a specimen jar at this coffin location.

Medical inclusions recovered from this lot include a fragmentary (n=2) 18-inch diameter Whitall, Tatum & Co. museum jar lid, a fragmentary (n=81) clear glass specimen jar, an intact clear glass specimen jar (containing fetal remains) 13.5 inches in diameter, a fragmentary (n=2) glass supply bottle with a prescription finish and glass stopper, an unidentified bone artifact described in the previous chapter, three bandage fragments, a fragmentary (n=43) green turn-molded glass bottle embossed "Franz Josef Bitterquelle", seven fragments of aqua-tinted thick flat glass approximately 1.75 cm thick, and seven carbon rods for a battery. *Bitterquelle* is a type of bitter water, characterized by large proportions of sodium sulphate and magnesium sulphate, that was used in small doses for the treatment of habitual constipation (Friedenwald 1925). Of course, it is not possible to determine if the *bitterquelle* was used as a personal medication by somebody at the medical facility or for professional medical care. It has been included as medical waste here for the sake of caution. Additionally, this coffin lot contained several non-medically related artifacts not included in the analysis, most notably a set of volcanized rubber dentures which were classified as personal medical care and thus were deemed not relevant to this analysis.

The presence of the thick flat glass in this coffin lot location is worth further note. If the potential suggested origin of the Whitall, Tatum & Co. museum jar lids is the Pathology

Department on the county grounds, then it is possible that the thick flat glass is originating from the same facility since both artifact types are found in the same location in at least one instance. The presence and absence table below (Table 9) illustrates the difficulty of using either museum jar lids or thick flat glass an artifact type for determining institutional origin. Burial type, medical intervention type, and other artifact associations vary greatly between coffin locations.

Coffin Lot	Medical Intervention	Burial Type	Thick Flat Glass	Laboratory Artifacts	Bandages	Unidentified Artifact	Museum Jar Lid
2080	NA	Single	P	A	A	A	A
10318	Autopsy	Mixed	P	A	A	A	A
10525	Anatomization	Mixed	P	A	A	P	A
10526	Autopsy	Mixed	P	A	P	A	A
10539	Anatomization	Commingled	P	P	P	P	A
10695	Anatomization	Commingled	P	A	A	A	A
10746	Anatomization	Commingled	P	P	P	A	A
10970	Anatomization	Mixed	P	A	P	A	A
10971	Anatomization	Commingled	P	A	A	P	P
10981	Anatomization	Mixed	A	P	A	A	P
10983	Anatomization	Commingled	A	P	A	A	P

Table 5 Presence (P)/Absence (A) Table of thick flat glass and museum jar lids. NA indicates lack of osteological analysis.

Lots 10525 and 10526

Lots 10525 and 10526 are of note due to their proximity to one another as well as the similarities in the artifacts they contain (Figures 26 and 27). These coffin lot locations are centrally located in the portion of the cemetery excavated in 2013 and are immediately adjacent to each other, with 10526 south of 10525. The two lots are classified as mixed burials, containing the remains of multiple individuals, but having 50% or more of one individual. Both contain thick flat glass fragments measuring 1.3cm in thickness or greater. Additionally, both locations contain clear etched glass fragments that, although they do not refit, have remarkably similar patterns. Lot 10526 includes non-medical material waste worth noting as well, specifically, the head of a garden rake and a tire iron. Considering the urban nature of the two medical colleges

Figure 29 Excavation photo of Lot 10525. On file at UWM ARL. Used with permission.

Figure 30 Excavation photo of Lot 10526. On file at UWM ARL. Used with permission.

and the County Coroner's office, it is very likely that the garden rake originated on the county grounds. The primary individual interred in 10526 exhibited evidence of autopsy, a procedure more likely performed in the Pathology Department than at the medical colleges. Thus, the garden rake found in association with thick flat glass potentially suggests the Pathology Department or the county grounds as a source of origin. The presence of thick flat glass in Lot 10525, the fragments of similarly etched clear glass and its proximity to 10526, also indicates

that the refuse in 10525 most likely came from the same medical institution as the refuse found in 10526.

Lot 10669

Figure 31 Excavation photo of Lot 10669. On file at UWM ARL. Used with permission.

Lot 10669 is a mixed lot, partially disturbed by a water utility line, in which the primary individual had been anatomized (Figure 28). This lot contains the only bottles that can be definitively typed as Vaseline bottles due to the embossing on the face of the bottle. A minimum of three petroleum jelly bottles, two intact and one fragmentary were recovered from inside the coffin. Additionally, Lot 10669 included a fragmentary piece of fabric. As discussed in the previous chapter, the fabric and Vaseline may have been used to preserve one of the cadavers during the process of dissection. Due to the presence of multiple anatomized individuals in this lot in association with multiple Vaseline jars, it is possible that this location represents the discards of the end of an academic year from one of the medical colleges in the county. However, this lot contains the remains of at least 50% of one individual, which suggests a dissection practice which did not completely disarticulate the individual as might be expected at the medical colleges.

Discussion

The lots highlighted above illustrate the difficulty of finding any definitive correlation between artifact type and variations in types of post-mortem medical intervention which might indicate a medical institution from which the waste and the body originated. Lots 10981, 10982, and 10983 are an excellent example. Their proximity to one another, and similarities in artifact type strongly suggests these burials occurred within a short time frame and likely have a shared institutional origin, yet the state of the human remains interred in the coffins varies drastically. In 10982, for instance, contained a single individual who had undergone a minimally invasive dissecting technique meant to expose only a portion of the brain. It is very unlikely that the medical colleges would have "wasted" a cadaver in this way. Yet, the coffins immediately north and south of 10982 contain the remains of individuals who had been heavily disarticulated which is more consistent with the type of post-mortem medical intervention practices taking place at the two medical colleges. However, as stated earlier, this may also be evidence of the range of practices engaged in by the Pathology Department.

Lots 10525 and 10526 present a similar picture. Their proximity and artifact inclusions suggest a shared origin and close temporal affiliation. Lot 10526 has been interpreted as having undergone an autopsy, based on sagittal cuts along the sternal ends of the left ribs. However, the missing cranium means I am unable to determine if a craniotomy took place and leaves the possibility that the cuts are more representative of a type of thoracotomy. From photographs, the state and condition of the remains interred at the two locations appear very similar however. Both lots are classified as mixed burials, meaning the dissection practices did not completely

disarticulate on or more of the individuals interred in the coffins. This combined with the presence of artifacts used for grounds maintenance suggests the coffins were used by individuals on the county grounds for disposal. I discuss the difficulty in relying on this interpretation completely below.

These five coffin lot locations seem like prime locations in which to identify key artifact types to potentially narrow down institutional origin of some lots. For instance, if 10981-10983 came from the same institution, then refuse found in those coffins that is also found in other lot locations might indicate a coffin originating from that location. Thus, it seems that thick flat glass and museum jar lids could be key artifact types for institutional origin. Lot 10971 contained both artifact types, which presents the possibility that these two artifact types are source indicators for the same institution. This becomes problematic when we pull back and look at the broader trend of artifact types in correlation with evidence of medical intervention and burial type.

In correlating burial type and types of post-mortem medical intervention, it seems likely that anatomized remains in a commingled burial came from one of the medical colleges. This is based on the probability that the colleges made the most use of a cadaver before disposing of the remains, thus disarticulating it and utilizing one coffin to dispose of elements from multiple individuals. If this is true, then coffin locations with anatomized remains that include 50% or more of an individual (Mixed) or a single individual are less likely to have passed through the medical colleges and more likely to represent activities occurring at the Pathology Department.

If the above assumption holds true, then we might expect a correlation between artifact type with medical intervention and burial type. Unfortunately, this doesn't appear to be the case. As can be seen in Table 10, thick flat glass, which in 10525 and 10526 appears to have been

refuse associated with the Pathology department, is also found fairly regularly in coffins containing commingled dissected remains. The same can be seen in the case of the museum jar lids, which are found in coffin lot locations containing both mixed and commingled dissected remains. Vaseline jars that are known to have been used by medical students to preserve cadavers over the course of the semester present similar issues, as they were recovered from locations with varying burial types. It is, of course, possible that petroleum jelly was used by medical professionals in the Pathology Department for similar purposes, as the evidence from this study suggests that cadavers were subjected to a wide range of medical practices at that institution.

Coffin Lot	Medical Intervention	Burial Type	Thick Flat Glass	Laboratory Artifacts	Bandages	Unidentified Artifact	Museum Jar Lid	Vaseline Jar
2080	NA	Single	P	A	A	A	A	A
10318	Autopsy	Mixed	P	A	A	A	A	A
10525	Anatomization	Mixed	P	A	A	P	A	A
10526	Autopsy	Mixed	P	A	P	A	A	A
10539	Anatomization	Commingled	P	P	P	P	A	A
10669	Anatomization	Mixed	A	A	P	A	A	P
10695	Anatomization	Commingled	P	A	A	A	A	A
10746	Anatomization	Commingled	P	P	P	A	A	A
10970	Anatomization	Mixed	P	A	P	A	A	A
10971	Anatomization	Commingled	P	A	A	P	P	A
10981	Anatomization	Mixed	A	P	A	A	P	P
10982	Hemispherectomy	Single	A	P	A	A	A	P
10983	Anatomization	Commingled	A	P	A	A	P	P

Table 6 Presence (P)/Absence (A) Table of potential key artifact types. NA indicates lack of osteological analysis.

I went into this study looking for unique identifiable patterns in material culture and bioarcheological data that would in turn point towards the medical institution from which the material culture and remains originated. A number of variables may be causing a lack of definitive correlation between the medical material culture and the osteological data. I believe the most likely reason is that, to date, we do not have detailed information on the procedures in place at the various institutions around the placement of bodies in the coffin and coffin

procurement. Apart from the county grounds, the Coroner's Office and the medical schools, an undertaker was responsible for the transfer of a body between institutions. The undertaker, often a furniture maker, supplied coffins to these institutions at cost (Richards et al. 2016). The County had a similar agreement with local undertakers until 1884, when it was determined that the superintendent of the county farm should be responsible for furnishing coffins (Richards et al. 2016). What is not known at these locations is who was responsible for placing the body into the burial container. For instance, when the coroner requested an undertaker to transfer a body to the county grounds for burial, it is not known if the coroner, the undertaker, an intern, a custodian, or some other person was responsible for the placement of the body in the coffin. Although the county supplied its own coffins, it is also not clear who was responsible for placing a body into the coffin in that context.

Additionally, it is not known when the coffin was sealed. Thus, there is a distinct possibility that the person who placed the body, or bodies, into the coffin was not the same person who threw waste into the container. Based on primary individuals, and excluding fragmentary and disarticulated burials, only one individual was buried in a prone position. The remaining (n=49) individuals who were interred in a formal position were supine. Of these individuals, only three were placed in the coffin so that their head would be oriented east rather than the west. Subsequently, among the primary individuals for whom formal positioning was observed, 92% were placed in the coffin with some level of respect. Therefore, it is plausible that the person who placed the waste in the coffin was not the same person who placed the body in the coffin, which may explain the apparent disconnect between the level of respect paid to the person and that given to the grave itself. This seems especially likely if the coffin lid was not immediately secured.

If the undertakers themselves placed the body in the coffin and immediately secured it, it is improbable that any of the coffin lots included in this study came to MCPFC directly from the Coroner's Office, unless, of course, the undertaker agreed to allow the coroner to use the coffin for waste prior to sealing it, which seems unlikely, although see Richards (2016: 143) for a discussion of the scruples of some of the Milwaukee County undertakers. If standard procedure at the Coroner's Office was for the undertaker to arrive with a coffin, place a body inside, and immediately seal it then it is possible that only three coffin lot locations included in this study passed directly from that office to the cemetery, specifically those three containing autopsy tags. The autopsy tags themselves were most likely unintentional grave inclusions, since, as metal objects, they were probably meant to be reusable. It also explains the paucity of other artifacts in those coffin lot locations. Only one of the three locations contained another artifact, a small piece of shredded plastic, which may have been inadvertently transferred into the coffin with the body. Thus, it is possible that, other than these three locations, the remainder of the locations included in this study represent practices at the local medical colleges and the Pathology Department and not at the Coroner's Office.

The procedure of removing human remains from the medical schools to the county cemetery is also not clear from historic records. It was the undertaker's responsibility to transport the coffin and its contents from one institution to another, as well as supply the coffin to the college at cost. However, we do not know when the coffin was supplied to the school and how long it remained at the college before it was transferred to the cemetery. Did the colleges order coffins at the beginning of the semester, place human remains into them throughout the course period and only when they were full request the undertaker to transfer them to the cemetery? Or did they utilize another temporary container that was then dumped into a coffin when one

became available? Both practices would allow ample opportunity for waste to become intermingled with disarticulated human remains. This also creates a scenario in which individuals associated with the colleges, yet not medical professionals, might have used the coffin (or other container) for expedient dumping. One can easily imagine a custodian sweeping broken laboratory glass off the floor and tossing it into a box of what was, by then, a collection of dehumanized parts.

The questions surrounding procedure extend to the Pathology Department and the county grounds as well. Evidence from historic documents and the homogeneity of coffin handles recovered during excavations (Richards et al. 2016: 158) indicates that as early as 1884 the Superintendent of MCPFC was responsible for providing coffins for the individuals who died on the county grounds, and that those coffins were constructed on the grounds. Thus, the coffins used by the Pathology Department would have been drawn from this supply. Who placed the body into the coffin, and how many people had access to the coffin prior to it being sealed is unknown, though. Ultimately, the grounds crew would have been responsible for interring the coffin and its contents in the cemetery and the inclusion of artifacts related to grounds maintenance in Lot 10526 indicates that the coffins may not have always been sealed before leaving the Pathology Department.

One additional issue presents itself at the county grounds in relation to the timing of sealing coffins or in the possibility of reopening and resealing them. As stated earlier, the coffins used by institutions on the grounds were crafted on site, and the county had discontinued the purchase of coffins from undertakers as early as 1884. This practice reduced the cost of coffins, yet it did not make them free. Materials, such as wood, handles, and nails, had to be purchased for each coffin constructed. Therefore, it is plausible that when a coffin came to the county

cemetery from one of the medical colleges, the county institutions may have used such "free" coffins to dispose of remains and refuse rather than using one constructed at the expense of the county. This would be especially tempting if the coffins were not yet sealed upon their arrival to the grounds. Even sealed coffins can be re-opened and it is worth noting that alongside the garden rake head found in Lot 10526 was a tire iron, which could have been used as a pry bar to open said coffin and tossed into it before being resealed. Although this may be a slightly unlikely scenario, it would hardly be the first time an institution utilized a labor and cost saving measure in burying the poor (Geber 2015).

Other than the procedural unknowns around the timing of the placement of remains in the coffin, another confusion likely stems from the overlapping nature of the medical practices and material culture likely to be found at the different types of medical facilities. Based on this study, it appears likely that the activities occurring at the medical colleges and the Milwaukee County Coroner's Office were sufficiently distinct enough to not create confusion in the archaeological record between waste deposited between the two institutions. The medical practices, and associated material culture, at the Milwaukee County Pathology Department, on the other hand, appears to have been so varied that it overlaps with both the medical colleges *and* the Coroner's Office. This makes differentiating institutional origin of the medical waste found in any locations exceedingly difficult. Figure 32 illustrates just a sample of the overlapping variables found between the Pathology Department and the other medical institutions in Milwaukee County at the turn of the last century. Future research, such as spatial analysis, may find clustered use areas in the cemetery that may help tease out the confusion caused by this overlap.

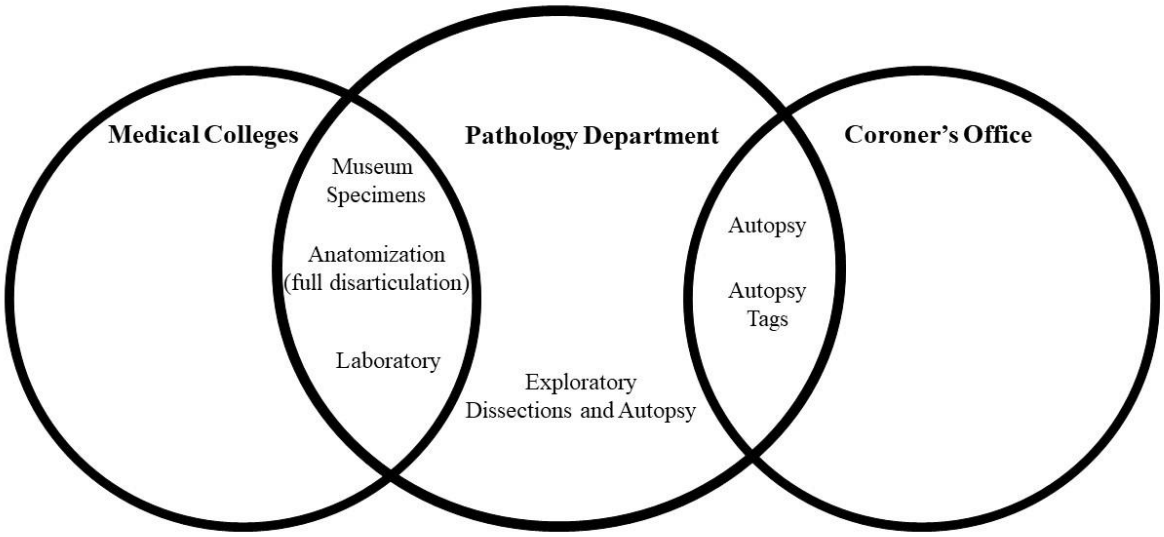


Figure 32 Venn diagram illustrating overlapping variables between institutions.

These are just a few of the variables that may be preventing a definitive correlation between the osteological data and the types of medical waste present in the coffin lot locations included in this study. A 1920s map of the county grounds indicates the presence of an incinerator. While it is not entirely clear when the incinerator was constructed, it does not appear on earlier maps. The placement of waste in the coffins of the poor who died at county institutions was very likely mainly an expedient measure, especially prior to the construction of the incinerator. Expedience does not excuse the disregard done to the dead in turning their coffin into a trash receptacle, however. Although the city of Milwaukee was struggling with what to do with its garbage at the turn of the last century (Leavitt 1982), the medical facilities within the city limits would have had access to waste disposal through the city in one form or another. Therefore, the decision to use a coffin as a waste bin was a truly intentional act and indicative of the views of all of the contents held in the coffin by those disposing of the waste.

It is clear that one or more of the medical institutions in Milwaukee County at the turn of the last century determined that it was appropriate to utilize the graves of the poor for waste disposal. Although this study was unable to determine exactly which medical facility made use of coffins in this way, the inclusion of medical waste in the graves of the, sometimes involuntarily anatomized, poor was beyond disrespectful, it was dehumanizing. This mentality was in lockstep with the Benthamite principals that led to the living bodies of the poor being forced into workhouses and poor farms and ultimately their lifeless bodies becoming cadavers on dissection tables. This issue points to why research like this, and other work at MCPFC is relevant today. The same core principles at the heart of reformist movements pioneered by Malthus and Bentham remain closely tied to the social policies involving the poor, crime, and poverty today.

Modern Benthamites

The Malthusian principles that Bentham and his followers utilized in Poor Law reform are in line with what is now the belabored opinion of many modern conservative economists. Malthus argued that giving paupers cash assistance "…would make every man fancy himself comparatively rich and able to indulge himself in many hours or days of leisure. This would give a strong and immediate check to productive industry…" (1798:25). The assumption of substance abuse is also inherently intertwined with surviving through the aid of social programs by opponents. In his essay, Malthus asserted that assistance programs discourage people from saving for the future due to the safety net provided to them, and that "[e]ven when they have the opportunity of saving they seldom exercise it, but all that is beyond their present necessities

goes, generally speaking, to the ale-house" (1798:27). Both assertions have served as rallying calls for cuts to or restrictions on social assistance programs over the 220 years since Malthus first published these unsubstantiated claims.

In a recent Executive Summary from the current administration, "Trump signed an executive order on April 2018 instructing agencies to reform their welfare programs by *encouraging work and reducing dependence*" (C.E.A. 2018: 1; emphasis mine) in order to "transition *more non-disabled working age men* into the workforce" (C.E.A. 2018: 1; emphasis mine). Echoes of Malthus and Bentham can be heard in the White House statement. Additionally, 15 US states have passed legislation requiring some form of drug testing or screening for applicants of social assistance programs (NCSL 2019), indicating an assumed correlation between substance abuse and poverty and implying that poor relief supports "immoral habits" rather than providing essential subsistence for those receiving it.

Recent scientific studies rebuke Malthus's historic claims repeated so often by modern politicians and economists. A 2015 study of seven assistance programs in six countries found no correlation "on either the propensity to work or the overall number of hours worked, for either men or women" (Banerjee, et al. 2015:3) with the receipt of cash assistance. Additionally, in 2014, Evans and Popova reviewed thirty studies for evidence of a correlation of cash assistance with increased purchases of "temptation items", defined as tobacco and alcohol for the purpose of their study (Evans and Popova 2014). Their findings indicated that 82% of cases exhibited a negative correlation, and only 5% of the cases indicating positive correlation were statistically significant (Evans and Popova 2014). Thus, the claims of Malthus and many conservative economists appear to be unfounded and the underlying nature of these claims are laid bare. Free market comes before a moral obligation to help those in need. When the poor live in fear of the

workhouse, starvation, and eviction, they gain the freedom to accept underemployment, low wages, and dangerous industrial jobs.

Conclusion

As social reform movements swept across Great Britain and the United States in the eighteenth and nineteenth centuries, the poor were caught up in their wake, becoming criminalized by the capitalist state that relied on their existence as much as it reviled it. As a grand finale to the social death they had endured in life, their bodies became the subject of anatomical study and their social position was crystalized in a process of anonymization through anatomization. This fact can be stated no more clearly than it is in the county documents themselves. According to the death certificates, 1,471 individuals were used for medical study between 1882 and 1925. Of these, only 82% appear in the Register of Burials at MCPFC (Richards et al. 2016), forgotten and dehumanized by the role they were forced to play by society and the medical community.

Placing waste into the graves of the forgotten poor added insult to injury. As they were subjected to a detestably savage practice they feared would bar their entrance into the afterlife, their bodies became little more than a collection of parts to be disposed of alongside the other waste produced by the medical community. In the case of coffins containing an assortment of elements from dissected individuals, it is not hard to imagine how the disconnect between the parts and the humanity they represented occurred. Prior to the passing of early anatomy acts, arguments were made by physicians that it would be impossible to store the dissected parts of an individual over long periods of time, and therefore it would be impossible to bury anatomized

individuals intact (Fowler and Powers 2018). Another important consideration can be found in an argument made by Hurren (2012:30-31), that it is important for historians to consider Victorian notions of 'decent' and 'decently' in this type of examination. This is worth consideration, as it is impossible to separate language from the context in which it was created (Strange 2012). As Hurren argues, decent is not the same as dignified, which implies fundamental human rights regardless of economic class. Thus, it was indecent to claim a body before family and friends had a chance to provide a burial, but it was not undignified to dissect that body. Once dissected to a mere collection of parts, all identifiable dignity had been removed, therefore, a *decent* burial might meet minimal standards, such as being interred in the ground with the proper prayers said over the grave (Hurren 2012).

The tension between decent and dignified may, in part, explain the practices observed in the burials of anatomized individuals, but nearly half of the coffin locations (n=36) included in this study contained single individuals. These coffins held the remains of what was undeniably another human being. Here it is not difficult to tease out where the edges of decent and dignified fail to overlap; clearly the line is mainly an economic one. Whomever placed medical waste into these graves, whether expediently or not, already viewed the remains as something less than human, somebody less deserving of a decent burial than "normal" people.

As noted in Chapter II, Wisconsin state law required medical practitioners to provide a decent burial for the remains of individuals turned over to the medical community for post-mortem study. This study illuminates the vast gap between representation and practice among the medical community of Milwaukee County at the turn of the last century. On paper, and by law, they dignified what was considered an abhorrent act by pointing to the progress of science and medicine and the promise of a 'decent' burial. In practice, the lack of basic humanity assigned to

the undeserving pauper by the medical community can be observed through an examination of the archaeological data. Since these graves held the remains of individuals not claimed by the community from which they came, the doctor, student, or grounds crew could place waste into their graves with the reasonable expectation that it would never be reopened or discovered. Thus, a pauper's coffin became a place of expedient waste removal and lip service could still be given to 'decency'. Using the coffin as a place for trash disposal enacted the division between representation and practice in a way they believed would be hidden from the public gaze in perpetuity.

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Wisconsin Legislature

1868 Chapter 53, Sections 1-3. General Laws Passed by the Legislature of Wisconsin in the year 1868, together with Joint Resolutions and Memorials.

Appendix A: Drafts of the Wisconsin Anatomy Act

Below are the complete working drafts of the dissection bill for the state of Wisconsin as drafted by the State Medical Society found in Miller (1935:853-857).

1851 Bill Drafted by the State Medical Society and Tabled for a Later Date

FORM OF BILL PROVIDING FOR THE PROSECUTION OF ANATOMICAL SCIENCE, ETC.

A Bill to legalize the study of anatomical and surgical science and to provide for the prosecution of the same.

Whereas the statutes of the State of Wisconsin at present exhibit the anomaly of placing a heavy penalty on ignorance in anatomical and surgical knowledge, and on the only means of obviating that ignorance and improving in such knowledge; therefore in order to remove the impediments now existing to obtaining a thorough knowledge of anatomical and surgical science within this state.

The People of the State of Wisconsin, represented in Senate and Assembly, do enact as follows; viz.

Section I. That it shall be lawful from and after the passage of the Bill, for either the board of health, any one of the Supervisors, any Justice of the Peace, Mayor or Alderman of any county, town, city or village in this state to deliver or surrender the dead body or bodies of such person or persons as may be required to be buried at the public expense, to any regularly educated physician or person under his direction on his application for such body or bodies, to be

used by said physician or his agent for the advancement of anatomical and surgical science, preference being in all cases given to the medical schools that now are, or may hereafter be established by law in the state: *Provided always* that no such dead body shall be so surrendered, if within thirty-six hours from the time of its death, any one or more persons claiming to be kin or friend of the deceased shall require said body to be inhumed at his or their own expense, or if it be made to appear to the persons aforesaid empowered to surrender such bodies that such dead body is the remains of a stranger or traveler who suddenly died without making known who he was or from whence he came, but such dead body shall be respectably inhumed: and *Provided further*, that every physician so receiving any such dead body shall in each case give to the persons surrendering such body good and sufficient bond that each body so received by him shall be used only for the promotion of anatomical and surgical science, that it shall be used for that purpose only in this state, and in a mannner not to outrage or injure the public feelings, and that after having been thus used the remains thereof shall be decently interred by the person so using them.

Section II. That from and after the passage of this bill it shall be lawful for any physician having the degree of Doctor of Medicine or any Medical student or person under the authority of any such physician to have in his possession to use and employ human dead subjects or any of the parts thereof for the purposes of anatomical and scientific enquiry and instruction.

Section III. That section (17) seventeen of chapter (139) one hundred and thirty-nine of the Revised Statues of Wisconsin be and continue in full force, except in so far as it may contravene the provisions of this bill.

1855 Bill that Passed Through the Legislature but Failed to be Signed by Gov. Barstow

AN ACT ENTITLED "AN ACT TO LEGALIZE THE STUDY OF ANATOMICAL AND SURGICAL SCIENCE"

The People of the State of Wisconsin, in Senate and Assembly represented, do enact as follows:

Section I: It shall be lawful, from and after the passage of this Act, for the Supervisors of any town or county, or the Alderman or Board of Health of any incorporated city or village in this State, or any of them, to deliver to any regularly educated and well-known physician, or person under his direction, on his application for the same, the dead body or bodies of such person or persons as may be required to be buried at the public expense; said body or bodies to be used by said physician or his agent for the advancement of Anatomical and Surgical science, preference being in all cases given to the medical schools that are now or may hereafter be established by law in this State, and to such persons as are or may be engaged in instructing in medical science; *Provided* that such remains shall not have been regularly interred, and shall not have been regularly desired for interment by any relative or friend of said deceased person within twenty-four hours after death; *Provided,* also, that the remains of no person who may be known to have relatives or friends, shall be delivered or received without the consent of said relatives or friends; and *Provided,* also, that in case the remains of any person so delivered or received, shall be subsequently claimed by any surviving relative or friend, they shall be given up to said relative or friend for interment. And it shall be the duty of the said physician thus receiving said bodies as aforesaid, decently to bury in some cemetery the remains of all bodies after they shall have answered the purpose of said aforesaid; and for any neglect of this provision of this Act, the

party so neglecting shall forfeit and pay a penalty of not less than twenty-five (25) nor more than fifty (50) dollars, to be sued for and recovered by the health officers of said city, or village, or town, for the benefit of their department.

Section II. Every person who shall deliver up the remains of any deceased person in violation of, or contrary to any or all of the provisions contained in the first section of this Act, and any person who shall receive said remains, knowing the same to have been delivered contrary to any of the provisions of said section, shall each and every of them be deemed guilty of a misdemeanor.

Section III. All former laws, so far as inconsistent with this Act, are hereby repealed.

1868 Bill as Passed by the State Legislature and Signed into Law

AN ACT TO LEGALIZE DISSECTIONS

The People of the State of Wisconsin, represented in Senate and Assembly to enact as follows:

Section 1. It shall be the duty of each and every public officer having the charge of dead bodies, such as are required to be buried at the public expense, to deliver to any member or agent of a county or state medical society, each and every dead body of persons dying under his charge, unless within forty-eight hours after death of such person or persons, the friends or relatives shall claim the same for interment.

Section 2. It shall be the duty of each and every such officer, having in charge the dead body of such person, to notify the friends or relatives of the deceased of the death of such

person and in no event to deliver the same to the surgeon until they are so notified, and express a willingness that the body shall be so disposed of.

Section 3. It shall be the duty of each and every such officer, after complying with the provisions of section two of this act, to deliver each and every dead body under his charge to the surgeon, first complying with the provisions of section one of this act, if such officer is personally satisfied that the dead body so delivered shall be used only for the advancement and promotion of anatomical science within the State.

Section 4. This act shall take effect and be in force from and after its passage and publication.

Approved Feb. 29, 1868.

Appendix B: Lot Information

Coffin Lot	Burial Lot	Associated Burial Lots	Coffin Type	Burial Type
1028	1028	1023	Indeterminate	Commingled
1048	1048	1042	Six	Commingled
2044	2044	2109	Six	Mixed
2045	2045	2107	Six	Mixed
2058	2058	2104	Indeterminate	Mixed
2080	2080	NA	Six	Single
5071	5071	NA	Six	Single
5076	5076	NA	Six	Single
6180	6180	NA	Four	Single
6246	6246	NA	Six	Single
7048	7048	NA	Six	Single
7181	7181	NA	Six	Single
7230	7230	NA	Six	Single
8011	8011	NA	Indeterminate	Single
8028	8028	NA	Six	Single
8112	8112	NA	Six	Single
8114	8114	NA	Indeterminate	Single
8124	8124	NA	Six	Single
8174	8174	8198	Indeterminate	Mixed
8179	8179	NA	Six	Single
9003	9003	NA	Indeterminate	
9010	9010	NA	None	Single
9263	9263	NA	Six	Single
9279	9279	NA	Six	Single
9295	9295	NA	Six	Single
9314	9314	NA	Six	Single

Appendix B: Lot Information

Coffin Lot	Position	Medical Intervention	Head Direction
1028	Indeterminate	NA	Indeterminate
1048	Indeterminate	Anatomization	Indeterminate
2044	Supine	NA	West
2045	Supine	NA	West
2058	Supine	NA	West
2080	Indeterminate	NA	None
5071	Supine	None	West
5076	Supine	NA	West
6180	Supine	NA	West
6246	Supine	NA	West
7048	Supine	NA	West
7181	Supine	Autopsy	West
7230	Supine	NA	West
8011	Supine	None	West
8028	Supine	None	West
8112	Supine	Autopsy	West
8114	Supine	Autopsy	West
8124	Supine	Anatomization	East
8174	Supine	Autopsy	West
8179	Supine	NA	West
9003	Indeterminate	NA	Indeterminate
9010	Supine	None	West
9263	Supine	None	West
9279	Supine	Autopsy	West
9295	Supine	None	West
9314	Supine	None	West

Appendix B: Lot Information

Coffin Lot	Missing Cranium and Mandible	Osteological Data	Pathology
1028	FALSE	FALSE	FALSE
1048	FALSE	FALSE	FALSE
2044	TRUE	FALSE	FALSE
2045	TRUE	FALSE	FALSE
2058	TRUE	FALSE	FALSE
2080	FALSE	FALSE	FALSE
5071	FALSE	TRUE	TRUE
5076	FALSE	FALSE	FALSE
6180	FALSE	FALSE	FALSE
6246	FALSE	FALSE	FALSE
7048	FALSE	FALSE	FALSE
7181	FALSE	TRUE	TRUE
7230	FALSE	FALSE	FALSE
8011	FALSE	TRUE	TRUE
8028	FALSE	FALSE	FALSE
8112	FALSE	TRUE	TRUE
8114	FALSE	TRUE	FALSE
8124	TRUE	FALSE	FALSE
8174	FALSE	FALSE	FALSE
8179	TRUE	FALSE	FALSE
9003	FALSE	FALSE	FALSE
9010	FALSE	TRUE	FALSE
9263	FALSE	TRUE	TRUE
9279	FALSE	TRUE	TRUE
9295	FALSE	TRUE	TRUE
9314	FALSE	TRUE	TRUE

Appendix B: Lot Information

Coffin Lot	Age Assessment	Sex Assessment
1028	Indeterminate	Indeterminate
1048	Indeterminate	Indeterminate
2044	Adult	NA
2045	Adult	NA
2058	Adult	Indeterminate
2080		NA
5071	Adult	Male
5076	Adult	NA
6180	Infant	Indeterminate
6246	Adult	Indeterminate
7048	Adult	NA
7181	Adult	Male
7230	Adult	Indeterminate
8011	Adult	Male
8028	Adult	Indeterminate
8112	Adult	Male
8114	Adult	Male
8124	Adult	Indeterminate
8174	Adult	Indeterminate
8179	Adult	NA
9003	Indeterminate	Indeterminate
9010	Juvenile	Indeterminate
9263	Adult	Male
9279	Indeterminate	Indeterminate
9295	Adult	Male
9314	Adult	Male

Appendix B: Lot Information

Coffin Lot	Comments
1028	
1048	
2044	Extra leg bone in coffin.
2045	Assoc. Lot 2107 - Left leg and foot next to primary Lot's left leg - Likely an amputation
2058	Excavation form: Two vert columns present, two arms, pelvis fragments, and two legs. Cut marks visible on pelvis
2080	Original excavation form missing.
5071	
5076	Excavator Notes: Small (tiny) light yellow objects. Appear to be stone. Located in mouth cavity and chest. Six inches from mouth cavity [Mustard Seeds]
6180	
6246	
7048	
7181	Craniotomy
7230	
8011	Poor perservation. Skeleton only 25% complete
8028	Excavator Notes: Red rubber tubing (?) Found close to verts
8112	Craniotomy
8114	Craniotomy
8124	Excavator Notes: Femurs were obviously sawed off. Scapula Frags, Vert and Rib Frags, Partial Right and Left Femur
8174	Craniotomy. Excavator Notes: Lot # 8174 - The skull was cut also right tibia - Rest of Right leg is missing, left leg below femur is missing. Lot # 8198 - No mention of cuts - missong Right arm, Left hand, parts of both legs, and all of feet. Lot # 8174 and 8198 marked as adult of indeterminate sex
8179	
9003	In infant coffin, but not HR. May have been soft tissue and waste. Excavator Notes: Infant burial #9003 contained no wood or bone. A few nails were found suggesting it along with the shape of the stain, that the coffin remains were blown out from South and pushed North. No photos were taken
9010	
9263	
9279	Craniotomy
9295	
9314	

Appendix B: Lot Information

Coffin Lot	Burial Lot	Associated Burial Lots	Coffin Type	Burial Type
10096	10096	11015, 10479, 10475 (Flot)	Six	Mixed
10269	10269	NA	Four	Single
10271	10271	NA	Six	Single
10282	10282	NA	Six	Single
10318	10318	10393	Six	Mixed
10350	10350	NA	Six	Single
10352	10352	NA	Six	Single
10360	10360	NA	Six	Single
10381	10381	NA	Six	Single
10409	10409	NA	Four	Commingled
10410	10410	NA	Four	Commingled
10525	10525	11052	Six	Mixed
10526	10526	10872	Six	Mixed
10529	10529	NA	Six	Single
10534	10534	10841, 10842	Six	Mixed
10536	10848	10843, 10844, 10848	Six	Mixed
10539	10539	NA	Four	Commingled
10563	10563	NA	Six	Single
10569	10569	NA	Four	Commingled
10570	10570	10940, 11053	Four	Mixed
10571	10571	10607	Four	Mixed

Appendix B: Lot Information

Coffin Lot	Position	Medical Intervention	Head Direction
10096	Supine	Anatomization	West
10269	Indeterminate	None	East
10271	Indeterminate	Autopsy	West
10282	Supine	None	West
10318	Supine	Autopsy	West
10350	Supine	Autopsy	West
10352	Supine	None	West
10360	Supine	None	West
10381	Supine	Autopsy	East
10409	Disarticulated	Anatomization	West
10410	Disarticulated	Anatomization	None
10525	Supine	Anatomization	West
10526	Supine	Autopsy	West
10529	Supine	None	West
10534	Supine	Thoracotomy	West
10536	Supine	Anatomization	West
10539	Disarticulated	Anatomization	Indeterminate
10563	Supine	See comments	West
10569	Disarticulated	Anatomization	None
10570	Disarticulated	Laminectomy	None
10571	Disarticulated	Thoracotomy	None

Appendix B: Lot Information

Coffin Lot	Missing Cranium and Mandible	Osteological Data	Pathology
10096	TRUE	TRUE	TRUE
10269	FALSE	TRUE	TRUE
10271	FALSE	TRUE	FALSE
10282	FALSE	TRUE	TRUE
10318	FALSE	TRUE	TRUE
10350	FALSE	TRUE	TRUE
10352	FALSE	TRUE	TRUE
10360	FALSE	TRUE	TRUE
10381	FALSE	TRUE	FALSE
10409	FALSE	TRUE	TRUE
10410	FALSE	TRUE	TRUE
10525	FALSE	TRUE	TRUE
10526	TRUE	TRUE	TRUE
10529	FALSE	TRUE	TRUE
10534	TRUE	TRUE	TRUE
10536	TRUE	TRUE	TRUE
10539	FALSE	TRUE	TRUE
10563	FALSE	TRUE	TRUE
10569	FALSE	TRUE	TRUE
10570	FALSE	TRUE	FALSE
10571	TRUE	TRUE	TRUE

Appendix B: Lot Information

Coffin Lot	Age Assessment	Sex Assessment
10096	Adult	Male
10269	Infant	Indeterminate
10271	Juvenile	Indeterminate
10282	Adult	
10318	Adult	Female
10350	Adult	Male
10352	Adult	Male
10360	Adult	Male
10381	Adult	Male
10409	Indeterminate	Indeterminate
10410	Adult	Indeterminate
10525	Adult	Indeterminate
10526	Adult	Male
10529	Adult	Male
10534	Adult	Female
10536	Adult	Female
10539	Indeterminate	Indeterminate
10563	Adult	Male
10569	Indeterminate	Indeterminate
10570	Adult	Male
10571	Adult	Male

Appendix B: Lot Information

Coffin Lot	Comments
10096	Two loose teeth present; 11015 missing cranium/mandible, both clavicles cut at distal end, right scapula cut through body, cut lumbar vert, missing pelvis and lower half; 10479 multiple cut elements include clavicles, verts, sacrum, scapula,
10269	
10271	Craniotomy
10282	
10318	Assoc. Lot is infant/ primary individual has
10350	Craniotomy
10352	
10360	
10381	Craniotomy
10409	MNI=2, ES=2
10410	MNI=5, ES=14
10525	10525 missing Cranium/Mandible; 11052 Fragmentary MNI=2 ES=6 Supine in photos Missing Cranium/Mandible Anatomized Adults
10526	Peri-mortem amputation of left leg (unhealed) Ribs cut for autopsy; 10872: MNI 6 ES 8, multiple cut bones including clavicles, long bone shafts; Other non-med waste includes garden rake head and crow bar. Likely from grounds crew suggesting origins on County grounds
10529	
10534	10842 Supine, Head to East, Craniotomy (missing calvaria), no analysis, anatomized, included skull thoracic, no lower extremeties or long bones
10536	10848 Bottom Individual; 10536 Top Individual Female Adult Supine Missing Cranium/Mandible Path Present Anatomized; 10843 Middle Ind Male Adult Path Present Supine Missing Cranium/Mandible Anatomized; 10844 Paired legs
10539	MNI=5, ES=15
10563	Unhealed cut on right medial condyle, possible abandoned amputation
10569	MNI=1, ES=28
10570	10570: cut ribs, verts? Laminectomy; 10940 Supine Missing Cranium and Mandible Adult Male Path Present No med int supine head west, 11053 MNI=4 ES=9 fragmentary no formal position anatomized path present
10571	10571: right clavicle cut midshaft Thoracotomy; 10607 MNI=2 ES=4 Anatomized Fragmentary

Appendix B: Lot Information

Coffin Lot	Burial Lot	Associated Burial Lots	Coffin Type	Burial Type
10572	10572	10609, 10610	Six	Mixed
10622	10622	NA	Six	Single
10655	10655	NA	Six	Commingled
10662	10662	11045	Six	Mixed
10664	10664	11054	Six	Mixed
10665	10665	NA	Six	Single
10669	10669	11042, 11043	Six	Mixed
10670	10670	10851	Six	Mixed
10683	10683	NA	Six	Single
10695	10695	NA	Six	Commingled
10714	10714	NA	Six	Single
10725	10725	10715,10925, 11041	Six	Mixed
10730	10730	NA	Six	Commingled
10746	10746	NA	Six	Commingled
10751	10885	10885, 10886	Six	Mixed
10763	10763	11036, 11037	Six	Mixed
10809	10809	11031, 11033	Six	Mixed

Appendix B: Lot Information

Coffin Lot	Position	Medical Intervention	Head Direction
10572	Supine	Thoracotomy	West
10622	Supine	None	West
10655	Disarticulated	Anatomization	None
10662	Supine	Autopsy	None
10664	Supine	Anatomization	None
10665	Supine	None	West
10669	Disarticulated	Anatomization	
10670	Supine	Thoracotomy	East
10683	Supine	None	West
10695	Disarticulated	Anatomization	None
10714	Supine	Anatomization	West
10725	Supine	Autopsy	West
10730	None	Anatomization	None
10746	Disarticulated	Anatomization	None
10751	Disarticulated	None	None
10763	Prone	Thoracotomy	West
10809	Disarticulated	Anatomization	None

Appendix B: Lot Information

Coffin Lot	Missing Cranium and Mandible	Osteological Data	Pathology
10572	TRUE	TRUE	TRUE
10622	FALSE	TRUE	TRUE
10655	FALSE	TRUE	TRUE
10662	TRUE	TRUE	TRUE
10664	TRUE	TRUE	TRUE
10665	FALSE	TRUE	TRUE
10669	TRUE	TRUE	FALSE
10670	FALSE	TRUE	FALSE
10683	FALSE	TRUE	FALSE
10695	FALSE	TRUE	TRUE
10714	TRUE	TRUE	TRUE
10725	TRUE	TRUE	FALSE
10730	FALSE	TRUE	TRUE
10746	FALSE	TRUE	TRUE
10751	TRUE	TRUE	TRUE
10763	TRUE	TRUE	TRUE
10809	FALSE	TRUE	FALSE

Appendix B: Lot Information

Coffin Lot	Age Assessment	Sex Assessment
10572	Adult	Male
10622	Adult	Female
10655	Indeterminate	Indeterminate
10662	Adult	Male
10664	Adult	Male
10665	Adult	Male
10669	Adult	Male
10670	Adult	Male
10683	Adult	Male
10695	Indeterminate	Indeterminate
10714	Adult	Male
10725	Adult	Female
10730	Indeterminate	Indeterminate
10746	Adult	Indeterminate
10751	Adult	Male
10763	Adult	Male
10809	Adult	Indeterminate

Appendix B: Lot Information

Coffin Lot	Comments
10572	10610 MNI=2 ES=3 Anatomized, path present
10622	
10655	MNI=2 ES=2
10662	Rib cut for autopsy for 10662; 11045 MNI=3 ES=11 Anatomized, pathology present
10664	11064-Lower half of individual in supine position; 11054 MNI=5 ES=7 Cut/sawed bone (Anatomized)
10665	
10669	
10670	10670: Craniotomy, additionally occipital and C verts 1-3 are cut sagittaly, both clavicles cut through shaft, 4th right rib cut through mid rib: Thoracotomy; 10851 Perimortem amputation of left leg Adult Male Supine Head west
10683	
10695	MNI=6 ES=13
10714	
10725	10715 Supine Adult Male Autopsy Missing Cranium/Mandible Autopsy; 11041 ES=5 Cut bone present, long bone shafts. MNI=3 Disarticulated
10730	MNI=1 very few HR, coffin mostly "empty" may have been filed with soft tissue
10746	MNI=3 ES=15; Imp non-med waste 1900 US Nickel (1), 1908 "Indian Head" Penny (1)
10751	10751 Adult Female No saw/cut bone, 10885 missing head path present no cuts nearly complete, 10886 Unid fragmentary most were saw/cut bone
10763	10763: Right clavicle cut midshaft: Thoracotomy; 11036 Prone Missing Cranium/Mandible Path Present Ind Adult; 11037 MNI=4 ES=10 Adult amputated remains Amputation; Imp non-med waste: molded ironstone bowl frag w/makers mark used by Homer Laughlin China Co. "Colonial" pattern used ca.1907 (Kovel &Kovel 1986:70B), and Ironstone frag w/mark "T.P.C.Co." used by Dresden Potter 1882-1915 (Debolt 1994:42)
10809	10809: Craniotomy, also vertical sagital cuts through mandible and maxilla; 11031 MNI=7 ES=20 Anatomized; 11033 Ind Sex Adult Antatomized

Appendix B: Lot Information

Coffin Lot	Burial Lot	Associated Burial Lots	Coffin Type	Burial Type
10811	10811	10955	Six	Mixed
10812	10812	NA	Four	Commingled
10819	10819	NA	Four	Single
10820	10820	NA	Six	Single
10968	10968	NA	Six	Single
10970	10970	10993, 11034, 11035	Six	Mixed
10981	10981	11032	Six	Mixed
10982	10982	10990	Six	Single
10983	10983	NA	Six	Commingled
10971a	10971	10996, 11026	Six	Mixed
10971b	10996	10971, 11029	Six	Mixed

Appendix B: Lot Information

Coffin Lot	Position	Medical Intervention	Head Direction
10811	Supine	Anatomization	None
10812	Disarticulated	Anatomization	None
10819	Supine	Autopsy	None
10820	Supine	None	West
10968	Supine	Autopsy	West
10970	Disarticulated	Anatomization	None
10981	Disarticulated	Anatomization	None
10982	Supine	Hemispherectomy	West
10983	Disarticulated	Anatomization	None
10971a	Disarticulated	Anatomization	None
10971b	None	None	None

Appendix B: Lot Information

Coffin Lot	Missing Cranium and Mandible	Osteological Data	Pathology
10811	FALSE	TRUE	FALSE
10812	FALSE	TRUE	TRUE
10819	FALSE	TRUE	TRUE
10820	FALSE	TRUE	TRUE
10968	FALSE	TRUE	TRUE
10970	TRUE	TRUE	TRUE
10981	FALSE	TRUE	TRUE
10982	FALSE	TRUE	TRUE
10983	FALSE	TRUE	TRUE
10971a	FALSE	TRUE	TRUE
10971b	FALSE	TRUE	TRUE

Appendix B: Lot Information

Coffin Lot	Age Assessment	Sex Assessment
10811	Adult	Male
10812	Indeterminate	Indeterminate
10819	Juvenile	Indeterminate
10820	Adult	Male
10968	Adult	Male
10970	Adult	Male
10981	Adult	Indeterminate
10982	Adult	Male
10983		
10971a	Adult	Indeterminate
10971b	Infant	Indeterminate

Appendix B: Lot Information

Coffin Lot	Comments
10811	10811 has 2 unhealed trepanation holes, saw cut manubrium, r. clavicle thoracotomy, l. patella, l & r tibia shafts -might be exploratory; 10955 Evidence of thoracotomy and prosection Adult Male Path Present Autopsy No formal positioning Head to East, clavicle cut midshaft: thoractomy, bilateral cut to sacrum and lower verts: prosection
10812	MNI=3 ES=7 (3 partial cranium)
10819	Craniotomy
10820	
10968	Perimortem fractures of femurs, Saw marks around fractures, Evidence of peri-mortem medical intervention
10970	10970: cuts through right elbow and right knee; 11034: bilateral cut through sacrum and lumbar: prosection, 11035: 3 elements, 1 cut femur shaft
10981	
10982	Craniotomy - Not typical craniotomy/ removal of right lateral side of cranium
10983	3 element sets - Right lower leg, left lower leg, right and left arms
10971a	10971 MNI=2, 10996 and 11026 are Infants in jar in coffin, jar is associated w/10996
10971b	Two infants found in jar 11028 has path present

Appendix C: Research Items

Coffin Lot	Burial Lot	Dripper/Stopper Count	Dripper/Stopper Description	Eyedropper Count
1028	1028			
1048	1048			
2044	2044			
2045	2045			
5076	5076			
6180	6180			
7048	7048			
8174	8174			
9003	9003			
9279	9279			
9295	9295			
10318	10318			
10409	10409			1
10410	10410			
10525	10525			
10536	10848			
10539	10539			

Appendix C: Research Items

Coffin Lot	Microscope Slide Count	Microscope Slide Description	Pencil Count	Petri Dish Count	Petri Dish Condition
1028				5	Fragment
1048					
2044	4	One complete. Three fragments - Refit of three fragments (two complete)			
2045	2				
5076					
6180					
7048	1				
8174					
9003					
9279					
9295					
10318					
10409					
10410					
10525					
10536			7		
10539			1		

Appendix C: Research Items

Coffin Lot	Pipette Count	Specimen Jar Count	Specimen Jar Description	Supply Bottle 1 Count
1028				
1048	14			
2044				
2045				
5076				
6180				
7048				
8174	1			
9003				
9279				
9295				
10318				1
10409				
10410	1			
10525				
10536				
10539	1			1

Appendix C: Research Items

Coffin Lot	Supply Bottle 1 Description	Supply Bottle 2 Count	Supply Bottle 2 Description
1028			
1048			
2044			
2045			
5076			
6180			
7048			
8174			
9003			
9279			
9295			
10318	Bottle 1 - Clear glass, 3-piece mold, Applied finish (prescription finish). ~1840-1880s (Lindsey 2018) SHA Bottle Site. Circular - 7.5 in tall	1	Bottle 2 - Clear glass, "6 oz" embossed on front top above label area, 2-piece cup mold, prescription finish, Post-1860s (Lindsey 2018) SHA Bottle Site. Rectangular - 6 in tall
10409			
10410			
10525			
10536			
10539	Aqua-tinted, base embossed "8"		

Appendix C: Research Items

Coffin Lot	Test Tube Count	Test Tube Condition	Test Tube Description	Writing Tablet Count	Other Research Item 1 Count
1028					
1048					
2044					1
2045					
5076	9	Fragment	Fragments of one possible test tube		100
6180					14
7048					
8174					
9003	1	Fragment			
9279					1
9295	9	Fragment			
10318					
10409					
10410				1	
10525					
10536					
10539					

Appendix C: Research Items

Coffin Lot	Other Research Item 1 Material	Other Research Item 1 Condition	Other Research Item 1 Description	Other Research Item 2 Count
1028				
1048				
2044	Glass	Complete	Syracuse Water Glass. Karrer (1929) p49-50	
2045				
5076	Seed		Per JLP appears to be mustard seed. Used as a mesuring device? Cubic cm?	
6180	Glass	Fragment	Slide Cover	
7048				
8174				
9003				
9279	Plaster		Cranial cast	
9295				
10318				
10409				
10410				
10525				
10536				
10539				

Appendix C: Research Items

Coffin Lot	Other Research Item 2 Material	Other Research Item 2 Condition	Other Research Item 2 Description	Other Research Item 3 Count
1028				
1048				
2044				
2045				
5076				
6180				
7048				
8174				
9003				
9279				
9295				
10318				
10409				
10410				
10525				
10536				
10539				

Appendix C: Research Items

Coffin Lot	Other Research Item 3 Condition	Other Research Item 3 Description	UnID Research Item Count	UnID Research Item Material
1028				
1048				
2044				
2045				
5076				
6180				
7048			1	Glass
8174				
9003				
9279				
9295				
10318				
10409			1	Ceramic
10410			1	Ceramic
10525			1	Ceramic
10536				
10539			1	Ceramic

Appendix C: Research Items

Coffin Lot	UnID Research Item Condition	UnID Research Item Description
1028		
1048		
2044		
2045		
5076		
6180		
7048	Fragment	Frosted one side. Very smooth other side
8174		
9003		
9279		
9295		
10318		
10409	Complete	Found in 10971, 10539, 10410, 10525
10410	Complete	Also found in 10971, 10539, 10409, 10525
10525	Complete	Also found in 10971, 10539, 10409, 10410
10536		
10539	Complete	Also found in 10971, 10409, 10410, 10525

Appendix C: Research Items

Coffin Lot	Burial Lot	Dripper/Stopper Count	Dripper/Stopper Description	Eyedropper Count
10569	10569	1	cork stopper for bottle	
10670	10670			
10715	10925			
10730	10730	1	Glass bottle stopper	
10746	10746			
10763	10763			
10809	10809			
10981	10981			
10982	10982			1
10983	10983			

Appendix C: Research Items

Coffin Lot	Microscope Slide Count	Microscope Slide Description	Pencil Count	Petri Dish Count	Petri Dish Condition
10569			1		
10670					
10715	1				
10730					
10746					
10763	1		1		
10809					
10981	1		1		
10982	49	4- Complete, 45 - Fragments. weight of one complete slide - 5.36g		36	Fragment
10983					

Appendix C: Research Items

Coffin Lot	Pipette Count	Specimen Jar Count	Specimen Jar Description	Supply Bottle 1 Count
10569				1
10670				
10715				
10730				
10746	7			
10763	2			
10809	1			
10981	2			
10982				
10983	4			

Appendix C: Research Items

Coffin Lot	Supply Bottle 1 Description	Supply Bottle 2 Count	Supply Bottle 2 Description
10569	Brown glass, 3 piece mold with tooled prescription finish (1890s-1910)(Lindsey 2018), Basal embossing "B&L.O. Co 11" Bausch & Lomb mark (Bausch and Lomb 1904: 86)		
10670			
10715			
10730			
10746			
10763			
10809			
10981			
10982			
10983			

Appendix C: Research Items

Coffin Lot	Test Tube Count	Test Tube Condition	Test Tube Description	Writing Tablet Count	Other Research Item 1 Count
10569					
10670					1
10715					
10730					
10746					
10763					1
10809					
10981	39	Fragment			
10982	309	Complete and Fragment	300 - fragments, 2 - Complete, 7 - Near complete		
10983					30

Appendix C: Research Items

Coffin Lot	Other Research Item 1 Material	Other Research Item 1 Condition	Other Research Item 1 Description	Other Research Item 2 Count
10569				
10670	Plastic	Fragment	Brown, bottom of a Vial	
10715				
10730				
10746				
10763	Glass	Fragment	Glass push pin frag	
10809				
10981	2	Fragment	Refit-Museum Jar lid 3in diameter; embossed "WHITALL TATUM & CO PHILADELPHIA NEW YORK" around rim and "PAT JUNE 11th 1895" on top	9
10982				
10983	Glass	Fragment	Museum Jar Lid	1

Appendix C: Research Items

Coffin Lot	Other Research Item 2 Material	Other Research Item 2 Condition	Other Research Item 2 Description	Other Research Item 3 Count
10569				
10670				
10715				
10730				
10746				
10763				
10809				
10981	Glass	Fragment	Partial refit-Museum Jar lid aprox 8in diam; embossed "WHITALL TA…", "…PHIA", "…YORK"	
10982				
10983	Glass	Fragment	Glass tube with bulb. Distillation tube with bulb. See Whitnall Tatum 1904 Catalog (p11)	2

Appendix C: Research Items

Coffin Lot	Other Research Item 3 Condition	Other Research Item 3 Description	UnID Research Item Count	UnID Research Item Material
10569				
10670				
10715				
10730				
10746				
10763				
10809				
10981				
10982				
10983	Fragment	Homeopathic shell vial. Refit (Whitnall Tatum 1904: p61)		

Appendix C: Research Items

Coffin Lot	UnID Research Item Condition	UnID Research Item Description
10569		
10670		
10715		
10730		
10746		
10763		
10809		
10981		
10982		
10983		

Appendix C: Research Items

Coffin Lot	Burial Lot	Dripper/Stopper Count	Dripper/Stopper Description	Eyedropper Count
10971a	10971			

Appendix C: Research Items

Coffin Lot	Microscope Slide Count	Microscope Slide Description	Pencil Count	Petri Dish Count	Petri Dish Condition
10971a					

Appendix C: Research Items

Coffin Lot	Pipette Count	Specimen Jar Count	Specimen Jar Description	Supply Bottle 1 Count
10971a		81	clear glass	2

Appendix C: Research Items

Coffin Lot	Supply Bottle 1 Description	Supply Bottle 2 Count	Supply Bottle 2 Description
10971a	Prescription finish w/stopper frag		

Appendix C: Research Items

Coffin Lot	Test Tube Count	Test Tube Condition	Test Tube Description	Writing Tablet Count	Other Research Item 1 Count
10971a					2

Appendix C: Research Items

Coffin Lot	Other Research Item 1 Material	Other Research Item 1 Condition	Other Research Item 1 Description	Other Research Item 2 Count
10971a		Fragment	Refit-Museum specimen jar lid 18in Diam Lid for a 16in Diam Jar Embossed "Whitall Tatum & Co. Philadelphia New York" around edge of rim, Embossed "Pat. June 11th 1895" on top of lid. Possible date 1895-1904 Based on placement of embossing see Whitall Tatum Glass Catalogs 1894 and 1904	

Appendix C: Research Items

Coffin Lot	Other Research Item 2 Material	Other Research Item 2 Condition	Other Research Item 2 Description	Other Research Item 3 Count
10971a				

Appendix C: Research Items

Coffin Lot	Other Research Item 3 Condition	Other Research Item 3 Description	UnID Research Item Count	UnID Research Item Material
10971a			1	Bone

Appendix C: Research Items

Coffin Lot	UnID Research Item Condition	UnID Research Item Description
10971a	Complete	also found in 10539, 10409, 10410, 10525

Appendix D: Other Medical Items

Coffin Lot	Burial Lot	Bandage 1 Count	Bandage 1 Material	Bandage 2 Count	Bandage 2 Material
1028	1028				
1048	1048				
2044	2044				
2045	2045				
2058	2058				
2080	2080				
5071	5071				
6246	6246				
7048	7048				
7181	7181				
8011	8011				
8028	8028				
8112	8112	1	Gauze		
8124	8124				
8179	8179				
9010	9010				
9263	9263				
9314	9314				
10096	10096	1	Gauze		
10269	10269				
10271	10271	1	Gauze		

Appendix D: Other Medical Items

Coffin Lot	Bandage 3 Count	Bandage 3 Material	Bottle 1 Count	Bottle 1 Condition
1028				
1048				
2044			1	Fragment
2045			1	Complete
2058				
2080				
5071				
6246				
7048				
7181				
8011				
8028				
8112				
8124				
8179				
9010				
9263				
9314				
10096				
10269				
10271				

Appendix D: Other Medical Items

Coffin Lot	Bottle 1 Description	Bottle 2 Count	Bottle 2 Condition
1028			
1048			
2044	Base - 2 piece suction mold		
2045	Clear "F.D.G" on base		
2058			
2080			
5071			
6246			
7048			
7181			
8011			
8028			
8112			
8124			
8179			
9010			
9263			
9314			
10096			
10269			
10271			

Appendix D: Other Medical Items

Coffin Lot	Bottle 2 Description	Bottle 3 Count	Bottle 3 Condition
1028			
1048			
2044			
2045			
2058			
2080			
5071			
6246			
7048			
7181			
8011			
8028			
8112			
8124			
8179			
9010			
9263			
9314			
10096			
10269			
10271			

Appendix D: Other Medical Items

Coffin Lot	Bottle 3 Description	Bottle 4 Count	Bottle 4 Condition
1028			
1048			
2044			
2045			
2058			
2080			
5071			
6246			
7048			
7181			
8011			
8028			
8112			
8124			
8179			
9010			
9263			
9314			
10096			
10269			
10271			

Appendix D: Other Medical Items

Coffin Lot	Bottle 4 Description	Bottle 5 Count	Bottle 5 Condition
1028			
1048			
2044			
2045			
2058			
2080			
5071			
6246			
7048			
7181			
8011			
8028			
8112			
8124			
8179			
9010			
9263			
9314			
10096			
10269			
10271			

Appendix D: Other Medical Items

Coffin Lot	Bottle 5 Description	Bottle 6 Count	Bottle 6 Condition	Bottle 6 Description
1028				
1048				
2044				
2045				
2058				
2080				
5071				
6246				
7048				
7181				
8011				
8028				
8112				
8124				
8179				
9010				
9263				
9314				
10096				
10269				
10271				

Appendix D: Other Medical Items

Coffin Lot	Cut Wood Count	Flat/Pane/Plate Glass 1 Count	Flat/Pane/Plate Glass 1 Thickness (cm)	Flat/Pane/Plate Glass 2 Count
1028				
1048				
2044				
2045				
2058				
2080		21	1.65	
5071				
6246				
7048				
7181				
8011				
8028				
8112				
8124				
8179				
9010				
9263				
9314				
10096				
10269				
10271				

Appendix D: Other Medical Items

Coffin Lot	Flat/Pane/Plate Glass 2 Thickness (cm)	Gasket/Seal Count	Gloves Count	Jar 1 Count	Jar 2 Count
1028					
1048					
2044				3	4
2045				15	
2058				12	
2080					
5071					
6246				6	
7048					
7181					
8011					
8028					
8112					
8124					
8179					
9010					
9263					
9314					
10096					
10269					
10271					

Appendix D: Other Medical Items

Coffin Lot	Lightbulb/Filament Count	Newspaper Count	Newspaper Description	Rubber Count
1028				
1048				
2044				
2045				
2058				
2080				
5071				
6246				
7048				
7181				
8011				
8028				
8112				
8124				
8179				
9010				
9263				
9314				
10096				
10269				
10271				

Appendix D: Other Medical Items

Coffin Lot	Tile Count	Tubing Count	Tubing Material	Tubing Condition	Wood Shavings Count
1028					
1048					
2044					
2045					
2058					
2080					
5071					
6246		2	Rubber	Fair	
7048					
7181					
8011					
8028		5	Rubber	Poor	
8112					
8124					
8179					
9010		7	Wood and Rubber	Fragment	
9263					
9314		9	Rubber	Fragment	
10096					
10269		1	Glass	Fragment	
10271					

Appendix D: Other Medical Items

Coffin Lot	Other Medical Waste 1 Count	Other Medical Waste 1 Material	Other Medical Waste 1 Condition	Other Medical Waste 1 Description
1028				
1048				
2044				
2045				
2058	5	Tin	Fragment	
2080				
5071	1	Enamel plated tin		White enameled metal basin with blue around rim
6246				
7048				
7181	1	Brass	Good	Autopsy tag "18" with wire
8011	1	Brass	Good	Autopsy tag "28"
8028				
8112				
8124				
8179	1	Brass		Autopsy Tag "24"
9010				
9263	1	Enamel plated tin		See Comments
9314				
10096				
10269				
10271				

Appendix D: Other Medical Items

Coffin Lot	Other Medical Waste 2 Count	Other Medical Waste 2 Material	Other Medical Waste 2 Condition	Other Medical Waste 2 Description	UnID Medical Waste Count
1028					1
1048					6
2044					
2045					
2058	20	Rubber	Fragment	Rubber blanket. Fragmented. Orange	
2080					
5071					
6246					8
7048					2
7181					
8011					5
8028					
8112					
8124					
8179					
9010					
9263					
9314					
10096					
10269					
10271					

Appendix D: Other Medical Items

Coffin Lot	UnID Medical Waste Material	UnID Medical Waste Condition	UnID Medical Waste Description
1028	Iron/Brass	Good	Ring - round/smooth. Base is flat with opening for screw?
1048	Metal	Poor	Iron fragments. Knife handle (?)
2044			
2045			
2058			
2080			
5071			
6246	Glass	Fragment	Melted glass
7048	Paper		No writing - Waffle pattern
7181			
8011	Plastic		Thin white plastic sheeting shredded
8028			
8112			
8124			Fiber glass insulation. 1 bag sample
8179			
9010			
9263			
9314			
10096			
10269			
10271			

Appendix D: Other Medical Items

Coffin Lot	Additional Comments
1028	
1048	
2044	
2045	
2058	
2080	
5071	Under rim of basin are four spots worn from use. Probably from taking the basin in and out of metal stand
6246	
7048	
7181	
8011	
8028	
8112	
8124	
8179	
9010	Tubing: Rubber tube fragments with a wooden fitting. The fitting has remnant of rubber tube coming out of one end. Fitting: 0.9cm - Length, 0.68cm - Diameter
9263	Enamel plated tin wash basin. Diameter 33 cm (13 in) - Depth 13 cm (5 in). Lentz, Charles (1915)
9314	
10096	
10269	
10271	

Appendix D: Other Medical Items

Coffin Lot	Burial Lot	Bandage 1 Count	Bandage 1 Material	Bandage 2 Count	Bandage 2 Material
10282	10282	2	Gauze		
10318	10318				
10350	10350	12	Fabric		
10352	10352				
10360	10360				
10381	10381				
10410	10410				
10525	10525	100	Rubberized bandage		
10526	10526	100	Gauze		
10529	10529	8	Bandage		
10534	10534				
10539	10539	50	Bandage	50	Rubber bandage
10563	10563				
10569	10569	30	Bandage		
10570	10570	100	Bandage		
10571	10571				
10572	10572	5	Bandage		
10622	10622	100	Bandage		
10655	10655	70	Bandage	100	Gauze
10662	10662	50	Bandage	50	Rubberized bandage
10664	10664	50	Fabric	50	Rubberized banage
10665	10665	2	Rubberized fabric		
10669	10669	100	Fabric		
10683	10683				

Appendix D: Other Medical Items

Coffin Lot	Bandage 3 Count	Bandage 3 Material	Bottle 1 Count	Bottle 1 Condition
10282				
10318				
10350				
10352				
10360				
10381				
10410				
10525			3	Fragment
10526			6	Fragment
10529				
10534				
10539			1	Fragment
10563				
10569				
10570				
10571				
10572				
10622				
10655				
10662	10	Fabric		
10664	50	Ruberized bandage		
10665				
10669			11	Fragment
10683				

Appendix D: Other Medical Items

Coffin Lot	Bottle 1 Description	Bottle 2 Count	Bottle 2 Condition
10282			
10318			
10350			
10352			
10360			
10381			
10410			
10525	Illegible embossed fragments		
10526	Three fragmentss w/illegible embossing similar to those found in 10525		
10529			
10534			
10539	2-piece cup mold (1850s-1910), tooled prescription finish (1870s+) (Lindsey 2018)		
10563			
10569			
10570			
10571			
10572			
10622			
10655			
10662			
10664			
10665			
10669	Clear glass. 0.6cm in thickness. 2-piece cup mold. Tooled prescription finish. Basal embossed "USA PAT DEC 11 1894"	1	Complete
10683			

Appendix D: Other Medical Items

Coffin Lot	Bottle 2 Description	Bottle 3 Count	Bottle 3 Condition
10282			
10318			
10350			
10352			
10360			
10381			
10410			
10525			
10526			
10529			
10534			
10539			
10563			
10569			
10570			
10571			
10572			
10622			
10655			
10662			
10664			
10665			
10669	Clear glass. 2-piece cup molded bottle. Front embossed "CHESEBROUGH MFG CO. Vaseline". 1880s (Lockhart)	4	Fragment
10683			

Appendix D: Other Medical Items

Coffin Lot	Bottle 3 Description	Bottle 4 Count	Bottle 4 Condition
10282			
10318			
10350			
10352			
10360			
10381			
10410			
10525			
10526			
10529			
10534			
10539			
10563			
10569			
10570			
10571			
10572			
10622			
10655			
10662			
10664			
10665			
10669	Refit. Clear glass. 2-piece cup molded bottle. Front embossed "CHESEBROUGH MFG CO. Vaseline". 1880s (Lockhart 2015)	14	Fragment
10683			

Appendix D: Other Medical Items

Coffin Lot	Bottle 4 Description	Bottle 5 Count	Bottle 5 Condition
10282			
10318			
10350			
10352			
10360			
10381			
10410			
10525			
10526			
10529			
10534			
10539			
10563			
10569			
10570			
10571			
10572			
10622			
10655			
10662			
10664			
10665			
10669	2-piece cup mold. Threaded finish with Zine cap. Basal embossed "D, F 7 Co.". Dean, Foster and Co. used 1890-1901 via (Lockhart, et al. 2015)	4	Fragment
10683			

Appendix D: Other Medical Items

Coffin Lot	Bottle 5 Description	Bottle 6 Count	Bottle 6 Condition	Bottle 6 Description
10282				
10318				
10350				
10352				
10360				
10381				
10410				
10525				
10526				
10529				
10534				
10539				
10563				
10569				
10570				
10571				
10572				
10622				
10655				
10662				
10664				
10665				
10669	Clear glass. Incomplete. Partial side embossed "NE…". Possible Chesebrough New York, 1890s (Lockhar 2015t).	2	Fragment	Clear glass. Side embossed "CHES…". Possible Chesebrough Vasiline Bottle
10683				

Appendix D: Other Medical Items

Coffin Lot	Cut Wood Count	Flat/Pane/Plate Glass 1 Count	Flat/Pane/Plate Glass 1 Thickness (cm)	Flat/Pane/Plate Glass 2 Count
10282				
10318		2	1.5	
10350				
10352				
10360				
10381				
10410				
10525		50	1.29	1
10526		9	1.3	
10529				
10534				
10539		1	1.75	
10563				
10569				
10570				
10571		50	0.2	
10572		15	0.33	17
10622				
10655		167	0.35	2
10662				
10664				
10665				
10669		1		
10683				

Appendix D: Other Medical Items

Coffin Lot	Flat/Pane/Plate Glass 2 Thickness (cm)	Gasket/Seal Count	Gloves Count	Jar 1 Count	Jar 2 Count
10282					
10318					
10350					
10352					
10360					
10381					
10410					
10525		2			
10526					
10529					
10534					
10539					
10563					
10569					
10570					
10571					
10572	0.2				
10622					
10655	1.4			2	
10662					
10664				1	70
10665					
10669					
10683					

Appendix D: Other Medical Items

Coffin Lot	Lightbulb/Filament Count	Newspaper Count	Newspaper Description	Rubber Count
10282				
10318				
10350				
10352		50		
10360				
10381				
10410				
10525				
10526				
10529				
10534				
10539				
10563				
10569				
10570				
10571				
10572				
10622				
10655				
10662				
10664				
10665				
10669	6			
10683		50		

Appendix D: Other Medical Items

Coffin Lot	Tile Count	Tubing Count	Tubing Material	Tubing Condition	Wood Shavings Count
10282					
10318					
10350					2
10352					
10360		1	Rubber		100
10381					100
10410					
10525					
10526		11	Rubber	Fragment	
10529		1	Glass	Fragment	
10534					
10539		18	Rubber	Fragment	
10563					8
10569					
10570		2	Rubber	Fragment	
10571					
10572					
10622					
10655		4	Copper	Fragment	
10662					
10664					
10665					
10669		4	Rubber	Fragment	
10683					

Appendix D: Other Medical Items

Coffin Lot	Other Medical Waste 1 Count	Other Medical Waste 1 Material	Other Medical Waste 1 Condition	Other Medical Waste 1 Description
10282				
10318				
10350				
10352				
10360				
10381				
10410	80	Glass	Fragment	hurrican lamp shade
10525				
10526				
10529				
10534				
10539				
10563				
10569				
10570				
10571				
10572				
10622				
10655	19	Glass	Fragment	One fragment etched "MACBETH 1884 GLASS" MacBeth & Co Lamp Chimney
10662				
10664	45	Milk glass	Fragment	
10665				
10669	1	Ceramic	Complete	Stoneware crock. Salt glaze exterior with Albany slip interior
10683				

Appendix D: Other Medical Items

Coffin Lot	Other Medical Waste 2 Count	Other Medical Waste 2 Material	Other Medical Waste 2 Condition	Other Medical Waste 2 Description	UnID Medical Waste Count
10282					
10318					
10350					
10352					
10360					
10381					
10410					1
10525					
10526					
10529					
10534					1
10539					
10563					
10569					
10570					
10571					
10572					
10622					
10655	2	Wax	Fragment	Circular wax frag	
10662					
10664					1
10665					
10669					115
10683					

Appendix D: Other Medical Items

Coffin Lot	UnID Medical Waste Material	UnID Medical Waste Condition	UnID Medical Waste Description
10282			
10318			
10350			
10352			
10360			
10381			
10410	Rubber	Fragment	Illustration on sheet
10525			
10526			
10529			
10534	Copper	Unknown	Illustration in comments
10539			
10563			
10569			
10570			
10571			
10572			
10622			
10655			
10662			
10664	Metal	Fragment	Small metal bar w/copper residue
10665			
10669	Glass	Fragment	Milk glass. Hollow ware
10683			

Appendix D: Other Medical Items

Coffin Lot	Additional Comments
10282	
10318	
10350	
10352	
10360	
10381	
10410	
10525	
10526	
10529	
10534	
10539	
10563	
10569	
10570	
10571	
10572	
10622	
10655	
10662	
10664	
10665	
10669	
10683	

Appendix D: Other Medical Items

Coffin Lot	Burial Lot	Bandage 1 Count	Bandage 1 Material	Bandage 2 Count	Bandage 2 Material
10695	10695				
10714	10714	20	Bandage		
10730	10730	1	Gauze		
10746	10746	5	Rubberized bandage		
10751	10885	20	Rubberized bandage		
10763	10763	100	Bandage		
10809	10809				
10811	10811				

Appendix D: Other Medical Items

Coffin Lot	Bandage 3 Count	Bandage 3 Material	Bottle 1 Count	Bottle 1 Condition
10695			25	Fragment
10714				
10730			1	Fragment
10746				
10751				
10763			1	Complete
10809			1	Complete
10811				

Appendix D: Other Medical Items

Coffin Lot	Bottle 1 Description	Bottle 2 Count	Bottle 2 Condition
10695	Refit 1 bottle; 2 Piece cup mold (1880s-1910) tooled prescription finish, Frontal Emboss "…se DRUGGIST" Basal embossed "SHELDON" (ca. 1890-1911) (Lockhart et. al 2015)		
10714			
10730	Three piece molded, neck and finish broken off		
10746			
10751			
10763	2-piece cup mold w/toled prescription finish Body Embossed: "Louis Schmitt Parmacist Milwaukee, Wis.", Basal embossed: "USA WT&Co PAT DEC 11 94"	1	Complete
10809	2-piece cup bottom mold w/tooled prescription finish, clear glass, front embossed "Herman L. Emmerich Ph.G. Milwaukee, Wis"	1	Complete
10811			

Appendix D: Other Medical Items

Coffin Lot	Bottle 2 Description	Bottle 3 Count	Bottle 3 Condition
10695			
10714			
10730			
10746			
10751			
10763	Identical to previous bottle: 2-piece cup mold w/toled prescription finish Body Embossed: "Louis Schmitt Parmacist Milwaukee, Wis.", Basal Embossed: "USA WT&Co PAT DEC 11 94"		
10809	2-piece cup bottom mold w/tooled patent finish, Amber Vaseline bottle		
10811			

Appendix D: Other Medical Items

Coffin Lot	Bottle 3 Description	Bottle 4 Count	Bottle 4 Condition
10695			
10714			
10730			
10746			
10751			
10763			
10809			
10811			

Appendix D: Other Medical Items

Coffin Lot	Bottle 4 Description	Bottle 5 Count	Bottle 5 Condition
10695			
10714			
10730			
10746			
10751			
10763			
10809			
10811			

Appendix D: Other Medical Items

Coffin Lot	Bottle 5 Description	Bottle 6 Count	Bottle 6 Condition	Bottle 6 Description
10695				
10714				
10730				
10746				
10751				
10763				
10809				
10811				

Appendix D: Other Medical Items

Coffin Lot	Cut Wood Count	Flat/Pane/Plate Glass 1 Count	Flat/Pane/Plate Glass 1 Thickness (cm)	Flat/Pane/Plate Glass 2 Count
10695		5	1.9	
10714				
10730	1	8		
10746		28	1.6	
10751				
10763		3		3
10809		2	0.8	
10811				

Appendix D: Other Medical Items

Coffin Lot	Flat/Pane/Plate Glass 2 Thickness (cm)	Gasket/Seal Count	Gloves Count	Jar 1 Count	Jar 2 Count
10695		1			
10714					
10730			50		
10746					
10751					
10763	1.38				
10809					
10811				1	

Appendix D: Other Medical Items

Coffin Lot	Lightbulb/Filament Count	Newspaper Count	Newspaper Description	Rubber Count
10695				
10714				
10730		50	Adhering to wood and soil	
10746				
10751				
10763				
10809				
10811				

Appendix D: Other Medical Items

Coffin Lot	Tile Count	Tubing Count	Tubing Material	Tubing Condition	Wood Shavings Count
10695					
10714					100
10730					
10746					50
10751					
10763		1	Copper	Fragment	
10809					
10811					

Appendix D: Other Medical Items

Coffin Lot	Other Medical Waste 1 Count	Other Medical Waste 1 Material	Other Medical Waste 1 Condition	Other Medical Waste 1 Description
10695				
10714				
10730	2	Copper/rubber	Fragment	Insulated wire
10746				
10751				
10763				
10809				
10811				

Appendix D: Other Medical Items

Coffin Lot	Other Medical Waste 2 Count	Other Medical Waste 2 Material	Other Medical Waste 2 Condition	Other Medical Waste 2 Description	UnID Medical Waste Count
10695					
10714					
10730	3	Organic	Fragment	Peanut shell fragments	27
10746					
10751					
10763					
10809					
10811					

Appendix D: Other Medical Items

Coffin Lot	UnID Medical Waste Material	UnID Medical Waste Condition	UnID Medical Waste Description
10695			
10714			
10730	Rubber	Fragment	
10746			
10751			
10763			
10809			
10811			

Appendix D: Other Medical Items

Coffin Lot	Additional Comments
10695	
10714	
10730	
10746	
10751	
10763	
10809	
10811	

Appendix D: Other Medical Items

Coffin Lot	Burial Lot	Bandage 1 Count	Bandage 1 Material	Bandage 2 Count	Bandage 2 Material
10812	10812	100	Rubberized bandage		
10819	10819	1	Gauze		
10968	10968				
10970	10970	2	Bandage		
10981	10981				
10982	10982				

Appendix D: Other Medical Items

Coffin Lot	Bandage 3 Count	Bandage 3 Material	Bottle 1 Count	Bottle 1 Condition
10812			1	Complete
10819				
10968				
10970			6	Fragment
10981			1	Complete
10982			1	Complete

Appendix D: Other Medical Items

Coffin Lot	Bottle 1 Description	Bottle 2 Count	Bottle 2 Condition
10812	Two piece cup mold applied prescription finish, Front Embossed "D.R.G.M. 120728" Amber glass	1	Complete
10819			
10968			
10970			
10981	Medicine Bottle, 2-piece mold, tooled finish, prescription lip, clear glass	1	Complete
10982	Vaseline bottle , Machine blown, 2-piece mold, 2 verticle seam lines.	1	Complete

Appendix D: Other Medical Items

Coffin Lot	Bottle 2 Description	Bottle 3 Count	Bottle 3 Condition
10812	Two piece cup mold w/tooled patent finish, clear glass Medicine Dropper Botle (Whitall & Tatum 1904:29) w/Acid Drop Glass Cap/Pipette (Whitall & Tatum 1880:40) Possible dropper/cap was reused from another bottle and became stuck in this bottle since they do not match. Poor fit caused it to get stuck and disposed of. Purple residue inside		
10819			
10968			
10970			
10981	Vaseline bottle with cork, Machine blown, 2-piece mold, Patent finish (1870-1930), Clear with 1 in section of frosted glass on one side.	1	Complete
10982	Amber glass, post-bottom mold, Applied patent finish, Base embossed "W.T. & Co." - Whitnall Tatum & Co. logo used 1870-1901 (Lindsey 2018). - Tall or Boston style round presction bottle (Whitall Tatum 1880: 14)	1	Complete

Appendix D: Other Medical Items

Coffin Lot	Bottle 3 Description	Bottle 4 Count	Bottle 4 Condition
10812			
10819			
10968			
10970			
10981	Ink Bottle, Base embossed "Higgins Inks Brooklyn, N.Y.", Machine blown, 2-piece mold, Post 1880 (www.higginsinks.com)		
10982	Post-molded, Prescription Lip, Embossed side: "HUGO E. BAUCH NORTH AVE & 3RD ST. MILWAUKEE", Embossed Base: "W.T. Co & O A". Whitnall Tatum & Co mark on base 1901 - ca. 1924 (Lindsey 2018). Post 1901. Hugo Bauch - Dry Goods · Opened 1885-1917 (mpl.org/blog/now/h-e-bauch-building-subway-on-martin-luther-king-jr-dr) accessed 10/31/2018	1	Complete

Appendix D: Other Medical Items

Coffin Lot	Bottle 4 Description	Bottle 5 Count	Bottle 5 Condition
10812			
10819			
10968			
10970			
10981			
10982	2-piece cup mold, Prescription tooled finish, Base embossed "(N)". Obear-Nester Glass Co (1895-Mid 1920s) (Lindsey 2018)		

Appendix D: Other Medical Items

Coffin Lot	Bottle 5 Description	Bottle 6 Count	Bottle 6 Condition	Bottle 6 Description
10812				
10819				
10968				
10970				
10981				
10982				

Appendix D: Other Medical Items

Coffin Lot	Cut Wood Count	Flat/Pane/Plate Glass 1 Count	Flat/Pane/Plate Glass 1 Thickness (cm)	Flat/Pane/Plate Glass 2 Count
10812		3		
10819				
10968				
10970		25	1.4	
10981				
10982				

Appendix D: Other Medical Items

Coffin Lot	Flat/Pane/Plate Glass 2 Thickness (cm)	Gasket/Seal Count	Gloves Count	Jar 1 Count	Jar 2 Count
10812					
10819				2	
10968				1	
10970		1		10	
10981					
10982		2		1	

Appendix D: Other Medical Items

Coffin Lot	Lightbulb/Filament Count	Newspaper Count	Newspaper Description	Rubber Count
10812				
10819				
10968				
10970				
10981				9
10982				

Appendix D: Other Medical Items

Coffin Lot	Tile Count	Tubing Count	Tubing Material	Tubing Condition	Wood Shavings Count
10812					
10819					
10968					
10970					10
10981					
10982					

Appendix D: Other Medical Items

Coffin Lot	Other Medical Waste 1 Count	Other Medical Waste 1 Material	Other Medical Waste 1 Condition	Other Medical Waste 1 Description
10812				
10819				
10968	1	Plastic	Fragment	White
10970				
10981	195	Glass	Fragment	Clear container fragments
10982	1	Rubber	Fragment	Rubber seal

Appendix D: Other Medical Items

Coffin Lot	Other Medical Waste 2 Count	Other Medical Waste 2 Material	Other Medical Waste 2 Condition	Other Medical Waste 2 Description	UnID Medical Waste Count
10812					
10819					
10968	1	Ironstone	Fragment	Burned	
10970					
10981					
10982					192

Appendix D: Other Medical Items

Coffin Lot	UnID Medical Waste Material	UnID Medical Waste Condition	UnID Medical Waste Description
10812			
10819			
10968			
10970			
10981			
10982	Glass	Fragment	Clear glass fragments

Appendix D: Other Medical Items

Coffin Lot	Additional Comments
10812	
10819	
10968	
10970	
10981	
10982	

Appendix E: Medical Tools

Coffin Lot	Burial Lot	Dissecting Hook Chain Count	Dissecting Hook Chain Material
10655	10655		
10662	10662		
10669	10669		
10730	10730	13	Steel
10820	10820		
10983	10983	2	Copper
7230	7230		
8114	8114		

Appendix E: Medical Tools

Coffin Lot	Dissecting Hook Chain Condition	Dissecting Hook Chain Description	Scissors Count	Scissors Material
10655				
10662				
10669				
10730	Fragment	Dissecting chain fragments, hook missing		
10820				
10983	Fragment	Dissecting hook chain		
7230				
8114			4	Steel

Appendix E: Medical Tools

Coffin Lot	Scissors Condition	Scissors Description	Tweezers Count	Tweezers Material
10655				
10662			6	Steel
10669				
10730				
10820			5	Ferrous
10983				
7230				
8114	Fragment	Operating scissors. (Karrer 1929: p87-90)		

Appendix E: Medical Tools

Coffin Lot	Tweezers Condition	Other Medical Tool Count	Other Medical Tool Material
10655		1	Vulcanized rubber
10662	Fragment		
10669		1	Wood
10730			
10820	Fragment		
10983			
7230		1	Wood
8114			

Appendix E: Medical Tools

Coffin Lot	Other Medical Tool Condition	Other Medical Tool Description	Additional Comments
10655	Fragment	Handle fragment with textured grip	
10662			
10669	Fragment	Charred wood handle. Dissection/Surgical Tool handle. (Sharp 8 Smith 1889:338)	
10730			
10820			
10983			
7230	Good	Cut wood autopsy table head rest	Autopsy head rest found under left femur
8114			

Appendix G: Medical Waste Data Entry Form

Medical or Hospital Material Culture Inventory Record		Coffin Lot No: _____
Milwaukee County	Analyst:_____	**Burial Lot No:** _____
Poor Farm Cemtery	Date Started:_____	**Assoc. Burial Lots:** _____
Site #: 47BMI0076	Date Completed:_____	_____

Additional Lot Information

Coffin Type

Number of sides?

- □ Four
- □ Six
- □ Eight
- □ Ind.
- □ None

Burial Type

- □ Single
- □ Multiple
- □ Commingled

Medical Intervention

- □ Anatomization
- □ Amputation
- □ Autopsy
- □ None

Osteological Data

Analysis Completed?

□ Yes □ No

Pathology Present?

□ Yes □ No

□ See Comments

Age Assessment

- □ Infant
- □ Juvenile
- □ Adult
- □ Ind.

Sex Assessment

- □ Male
- □ Female
- □ Ind.

Photo Information

Date Uploaded:_____
File Name(s): _____
_____
_____
_____
_____

Additional Comments?

□ Yes □ No

Artifact Photos

Taken?

□ Yes □ No

Medical Tools

Item	Count	Material	Size (cm) length / width		Weight (g)	Condition	Description
Hammer							
Hook							
Knife/Blade							
Pick							
Saw							
Scissors							
Tweezer							
Other Autopsy Tool							
UnID Autopsy Tool							

Research Items

Coffin Lot No: _____

Item	Count	Material	Size (cm) length / width		Weight (g)	Condition	Description
Dripper/Stopper							
Eyedropper							
Microscope Slide							
Petri Dish							
Pipette							
Specimens Jar							
Supply Bottle							
Test Tube							
Other							
UnID							

Other Medical Waste

Item	Count	Material	Size (cm) length / width		Weight (g)	Condition	Description
Bandage/Gauze							
Cut Wood							
Electrical Insulator							
Flat/Pane/Plate Glass							
Jar							
Bottle							
Light Bulb/Filament							
Newspaper							
Plaster							
Rubber							
Tile							
Tubing							
Wood Shavings							
X-ray Materials							
Other Medical Waste							
UnID Medical Waste							

Coffin Lot No: ____________________

Additional Comments/Notes:

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	BurialType	Position	MedicalIntervention	HeadDirection
1028	Commingled	Indeterminate	Unknown	Indeterminate
1048	Commingled	Indeterminate	Anatomization	Indeterminate
2044	Mixed	Supine	Unknown	West
2045	Mixed	Supine	Unknown	West
2058	Mixed	None	Unknown	West
2080	Single	Indeterminate	None	None
5071	Single	Supine	None	West
5076	Single	Supine	Unknown	West
6180	Single	Supine	None	West
6246	Single	Supine	Unknown	West
7048	Single	Supine	Unknown	West
7181	Single	Supine	Autopsy	West
7230	Single	Supine	None	West
8011	Single	Supine	None	West
8028	Single	Supine	None	West
8112	Single	Supine	Autopsy	West
8114	Single	Supine	Autopsy	West
8124	Single	Supine	Anatomization	East
8174	Mixed	Supine	Autopsy	West
8179	Single	Supine	Unknown	West
9003	NA	NA	Unknown	NA
9010	Single	Supine	None	West
9263	Single	Supine	None	West
9279	Single	Supine	Autopsy	West
9295	Single	Supine	None	West
9314	Single	Supine	None	West
10096	Mixed	Supine	Anatomization	West
10269	Single	Indeterminate	None	East
10271	Single	Indeterminate	Autopsy	West
10282	Single	Supine	None	West
10318	Mixed	Supine	Autopsy	West
10350	Single	Supine	Autopsy	West
10352	Single	Supine	None	West
10360	Single	Supine	None	West
10381	Single	Supine	Autopsy	East
10409	Commingled	Disarticulated	Anatomization	West
10410	Commingled	Disarticulated	Anatomization	None
10525	Mixed	Supine	Anatomization	West
10526	Mixed	Supine	Autopsy	West
10529	Single	Supine	None	West
10534	Mixed	Supine	Thoracotomy	West
10536	Mixed	Supine	Anatomization	West
10539	Commingled	Disarticulated	Anatomization	Indeterminate

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	CoffinType	MissingCM	SexAssessment	Dripper	Eyedropper
1028	Six	FALSE	Indeterminate	A	A
1048	Six	FALSE	Indeterminate	A	A
2044	Six	TRUE	Unknown	A	A
2045	Indeterminate	TRUE	Unknown	A	A
2058	Indeterminate	TRUE	Indeterminate	A	A
2080	Six	FALSE	Unknown	A	A
5071	Six	FALSE	Male	A	A
5076	Six	FALSE	Unknown	A	A
6180	Four	FALSE	Indeterminate	A	A
6246	Six	FALSE	Indeterminate	A	A
7048	Four	FALSE	Male	A	A
7181	Six	FALSE	Male	A	A
7230	Six	FALSE	Indeterminate	A	A
8011	Indeterminate	FALSE	Male	A	A
8028	Six	FALSE	Indeterminate	A	A
8112	Six	FALSE	Male	A	A
8114	Indeterminate	FALSE	Male	A	A
8124	Six	TRUE	Indeterminate	A	A
8174	Indeterminate	FALSE	Unknown	A	A
8179	Six	TRUE	Female	A	A
9003	Indeterminate	FALSE	Unknown	A	A
9010	Six	FALSE	Indeterminate	A	A
9263	Six	FALSE	Male	A	A
9279	Six	FALSE	Indeterminate	A	A
9295	Six	FALSE	Male	A	A
9314	Six	FALSE	Male	A	A
10096	Six	TRUE	Male	A	A
10269	Four	FALSE	Indeterminate	A	A
10271	Six	FALSE	Indeterminate	A	A
10282	Six	FALSE	Male	A	A
10318	Six	FALSE	Female	A	A
10350	Six	FALSE	Male	A	A
10352	Six	FALSE	Male	A	A
10360	Six	FALSE	Male	A	A
10381	Six	FALSE	Male	A	A
10409	Four	FALSE	Male	A	P
10410	Six	FALSE	Indeterminate	A	A
10525	Four	FALSE	Indeterminate	A	A
10526	Six	TRUE	Male	A	A
10529	Six	FALSE	Male	A	A
10534	Six	TRUE	Female	A	A
10536	Six	TRUE	Female	A	A
10539	Six	FALSE	Indeterminate	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	MicroscopeSlide	Pencil	PetriDish	Pipette	SpecimenJar	SupplyBottle1
1028	A	A	P	A	A	A
1048	A	A	A	P	A	A
2044	P	A	A	A	A	A
2045	P	A	A	A	A	A
2058	A	A	A	A	A	A
2080	A	A	A	A	A	A
5071	A	A	A	A	A	A
5076	A	A	A	A	A	A
6180	P	A	A	A	A	A
6246	A	A	A	A	A	A
7048	P	A	A	A	A	A
7181	A	A	A	A	A	A
7230	A	A	A	A	A	A
8011	A	A	A	A	A	A
8028	A	A	A	A	A	A
8112	A	A	A	A	A	A
8114	A	A	A	A	A	A
8124	A	A	A	A	A	A
8174	A	A	A	P	A	A
8179	A	A	A	A	A	A
9003	A	A	A	A	A	A
9010	A	A	A	A	A	A
9263	A	A	A	A	A	A
9279	A	A	A	A	A	A
9295	A	A	A	A	A	A
9314	A	A	A	A	A	A
10096	A	A	A	A	A	A
10269	A	A	A	A	A	A
10271	A	A	A	A	A	A
10282	A	A	A	A	A	A
10318	A	A	A	A	A	P
10350	A	A	A	A	A	A
10352	A	A	A	A	A	A
10360	A	A	A	A	A	A
10381	A	A	A	A	A	A
10409	A	A	A	A	A	A
10410	A	A	A	P	A	A
10525	A	A	A	A	A	A
10526	A	A	A	A	A	A
10529	A	A	A	A	A	A
10534	A	A	A	A	A	A
10536	A	P	A	A	A	A
10539	A	P	A	P	A	P

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	SupplyBottle2	TestTube	WritingTablet	MuseumJarLid	MustardSeeds	CranialCast
1028	A	A	A	A	A	A
1048	A	A	A	A	A	A
2044	A	A	A	A	A	A
2045	A	A	A	A	A	A
2058	A	A	A	A	A	A
2080	A	A	A	A	A	A
5071	A	A	A	A	A	A
5076	A	P	A	A	P	A
6180	A	A	A	A	A	A
6246	A	A	A	A	A	A
7048	A	A	A	A	A	A
7181	A	A	A	A	A	A
7230	A	A	A	A	A	A
8011	A	A	A	A	A	A
8028	A	A	A	A	A	A
8112	A	A	A	A	A	A
8114	A	A	A	A	A	A
8124	A	A	A	A	A	A
8174	A	A	A	A	A	A
8179	A	A	A	A	A	A
9003	A	P	A	A	A	A
9010	A	A	A	A	A	A
9263	A	A	A	A	A	A
9279	A	A	A	A	A	P
9295	A	P	A	A	A	A
9314	A	A	A	A	A	A
10096	A	A	A	A	A	A
10269	A	A	A	A	A	A
10271	A	A	A	A	A	A
10282	A	A	A	A	A	A
10318	P	A	A	A	A	A
10350	A	A	A	A	A	A
10352	A	A	A	A	A	A
10360	A	A	A	A	A	A
10381	A	A	A	A	A	A
10409	A	A	A	A	A	A
10410	A	A	P	A	A	A
10525	A	A	A	A	A	A
10526	A	A	A	A	A	A
10529	A	A	A	A	A	A
10534	A	A	A	A	A	A
10536	A	A	A	A	A	A
10539	A	A	A	A	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	DistillationTube	HomeopathicShellVial	UnidentifiedArtifactType	Vial
1028	A	A	A	A
1048	A	A	A	A
2044	A	A	A	A
2045	A	A	A	A
2058	A	A	A	A
2080	A	A	A	A
5071	A	A	A	A
5076	A	A	A	A
6180	A	A	A	A
6246	A	A	A	A
7048	A	A	P	A
7181	A	A	A	A
7230	A	A	A	A
8011	A	A	A	A
8028	A	A	A	A
8112	A	A	A	A
8114	A	A	A	A
8124	A	A	A	A
8174	A	A	A	A
8179	A	A	A	A
9003	A	A	A	A
9010	A	A	A	A
9263	A	A	A	A
9279	A	A	A	A
9295	A	A	A	A
9314	A	A	A	A
10096	A	A	A	A
10269	A	A	A	A
10271	A	A	A	A
10282	A	A	A	A
10318	A	A	A	A
10350	A	A	A	A
10352	A	A	A	A
10360	A	A	A	A
10381	A	A	A	A
10409	A	A	P	A
10410	A	A	P	A
10525	A	A	P	A
10526	A	A	A	A
10529	A	A	A	A
10534	A	A	A	A
10536	A	A	A	A
10539	A	A	P	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	Bandage	Fabric	PrescriptionBottle	OtherBottleType	CutWood
1028	A	A	A	A	A
1048	A	A	A	A	A
2044	A	A	A	P	A
2045	A	A	A	P	A
2058	A	A	A	A	A
2080	A	A	A	A	A
5071	A	A	A	A	A
5076	A	A	A	A	A
6180	A	A	A	A	A
6246	A	A	A	A	A
7048	A	A	A	A	A
7181	A	A	A	A	A
7230	A	A	A	A	A
8011	A	A	A	A	A
8028	A	A	A	A	A
8112	P	A	A	A	A
8114	A	A	A	A	A
8124	A	A	A	A	A
8174	A	A	A	A	A
8179	A	A	A	A	A
9003	A	A	A	A	A
9010	A	A	A	A	A
9263	A	A	A	A	A
9279	A	A	A	A	A
9295	A	A	A	A	A
9314	A	A	A	A	A
10096	P	A	A	A	A
10269	A	A	A	A	A
10271	P	A	A	A	A
10282	P	A	A	A	A
10318	A	A	A	A	A
10350	P	A	A	A	A
10352	A	A	A	A	A
10360	A	A	A	A	A
10381	A	A	A	A	A
10409	A	A	A	A	A
10410	A	A	A	A	A
10525	P	A	A	P	A
10526	P	A	A	P	A
10529	P	A	A	A	A
10534	A	A	A	A	A
10536	A	A	A	A	A
10539	P	A	P	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	AutopsyHeadRest	ThickFlatGlass	FlatGlass	Gloves	Jar	Newspaper
1028	A	A	A	A	A	A
1048	A	A	A	A	A	A
2044	A	A	A	A	P	A
2045	A	A	A	A	P	A
2058	A	A	A	A	P	A
2080	A	P	A	A	A	A
5071	A	A	A	A	A	A
5076	A	A	A	A	A	A
6180	A	A	A	A	A	A
6246	A	A	A	A	P	A
7048	A	A	A	A	A	A
7181	A	A	A	A	A	A
7230	P	A	A	A	A	A
8011	A	A	A	A	A	A
8028	A	A	A	A	A	A
8112	A	A	A	A	A	A
8114	A	A	A	A	A	A
8124	A	A	A	A	A	A
8174	A	A	A	A	A	A
8179	A	A	A	A	A	A
9003	A	A	A	A	A	A
9010	A	A	A	A	A	A
9263	A	A	A	A	A	A
9279	A	A	A	A	A	A
9295	A	A	A	A	A	A
9314	A	A	A	A	A	A
10096	A	A	A	A	A	A
10269	A	A	A	A	A	A
10271	A	A	A	A	A	A
10282	A	A	A	A	A	A
10318	A	P	A	A	A	A
10350	A	A	A	A	A	A
10352	A	A	A	A	A	P
10360	A	A	A	A	A	A
10381	A	A	A	A	A	A
10409	A	A	A	A	A	A
10410	A	A	A	A	A	A
10525	A	P	P	A	A	A
10526	A	P	A	A	A	A
10529	A	A	A	A	A	A
10534	A	A	A	A	A	A
10536	A	A	A	A	A	A
10539	A	P	A	A	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	Tubing	WoodShaving	EnamelPlatedBasin	AutopsyTag	Insulation
1028	A	A	A	A	A
1048	A	A	A	A	A
2044	A	A	A	A	A
2045	A	A	A	A	A
2058	A	A	A	A	A
2080	A	A	A	A	A
5071	A	A	P	A	A
5076	A	A	A	A	A
6180	A	A	A	A	A
6246	P	A	A	A	A
7048	A	A	A	A	A
7181	A	A	A	P	A
7230	A	A	A	A	A
8011	A	A	A	P	A
8028	P	A	A	A	A
8112	A	A	A	A	A
8114	A	A	A	A	A
8124	A	A	A	A	P
8174	A	A	A	A	A
8179	A	A	A	P	A
9003	A	A	A	A	A
9010	P	A	A	A	A
9263	A	A	P	A	A
9279	A	A	A	A	A
9295	A	A	A	A	A
9314	P	A	A	A	A
10096	A	A	A	A	A
10269	P	A	A	A	A
10271	A	A	A	A	A
10282	A	A	A	A	A
10318	A	A	A	A	A
10350	A	P	A	A	A
10352	A	A	A	A	A
10360	P	P	A	A	A
10381	A	P	A	A	A
10409	A	A	A	A	A
10410	A	A	A	A	A
10525	A	A	A	A	A
10526	P	A	A	A	A
10529	P	A	A	A	A
10534	A	A	A	A	A
10536	A	A	A	A	A
10539	P	A	A	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	Unknown	VaselineJar	DissectingHookChain	Scissors	Tweezers	ToolHandle
1028	A	A	A	A	A	A
1048	A	A	A	A	A	A
2044	A	A	A	A	A	A
2045	A	A	A	A	A	A
2058	A	A	A	A	A	A
2080	A	A	A	A	A	A
5071	A	A	A	A	A	A
5076	A	A	A	A	A	A
6180	A	A	A	A	A	A
6246	A	A	A	A	A	A
7048	A	A	A	A	A	A
7181	A	A	A	A	A	A
7230	A	A	A	A	A	A
8011	A	A	A	A	A	A
8028	A	A	A	A	A	A
8112	A	A	A	A	A	A
8114	A	A	A	P	A	A
8124	A	A	A	A	A	A
8174	A	A	A	A	A	A
8179	A	A	A	A	A	A
9003	A	A	A	A	A	A
9010	A	A	A	A	A	A
9263	A	A	A	A	A	A
9279	A	A	A	A	A	A
9295	A	A	A	A	A	A
9314	A	A	A	A	A	A
10096	A	A	A	A	A	A
10269	A	A	A	A	A	A
10271	A	A	A	A	A	A
10282	A	A	A	A	A	A
10318	A	A	A	A	A	A
10350	A	A	A	A	A	A
10352	A	A	A	A	A	A
10360	A	A	A	A	A	A
10381	A	A	A	A	A	A
10409	A	A	A	A	A	A
10410	A	A	A	A	A	A
10525	A	A	A	A	A	A
10526	A	A	A	A	A	A
10529	A	A	A	A	A	A
10534	P	A	A	A	A	A
10536	A	A	A	A	A	A
10539	A	A	A	A	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	BurialType	Position	MedicalIntervention	HeadDirection
10563	Single	Supine	Amputation	West
10569	Commingled	Disarticulated	Anatomization	None
10570	Mixed	Disarticulated	Laminectomy	None
10571	Mixed	Disarticulated	Thoracotomy	None
10572	Mixed	Supine	Thoracotomy	West
10622	Single	Supine	None	West
10655	Commingled	Disarticulated	Anatomization	None
10662	Mixed	Supine	Autopsy	None
10664	Mixed	Supine	Anatomization	None
10665	Single	Supine	None	West
10669	Mixed	None	Anatomization	None
10670	Mixed	Supine	Thoracotomy	East
10683	Single	Supine	None	West
10695	Commingled	Disarticulated	Anatomization	None
10714	Single	Supine	Anatomization	West
10725	Mixed	Supine	Autopsy	West
10730	Commingled	None	Anatomization	None
10746	Commingled	Disarticulated	Anatomization	None
10751	Mixed	Disarticulated	None	None
10763	Mixed	Prone	Thoracotomy	West
10809	Mixed	Disarticulated	Anatomization	None
10811	Mixed	Supine	Thoracotomy	None
10812	Commingled	Disarticulated	Anatomization	None
10819	Single	Supine	Autopsy	None
10820	Single	Supine	None	West
10968	Single	Supine	Autopsy	West
10970	Mixed	Disarticulated	Anatomization	None
10971	Mixed	Disarticulated	Anatomization	None
10981	Mixed	Disarticulated	Anatomization	None
10982	Single	Supine	Hemispherectomy	West
10983	Commingled	Disarticulated	Anatomization	None

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	CoffinType	MissingCM	SexAssessment	Dripper	Eyedropper
10563	Six	FALSE	Male	A	A
10569	Six	FALSE	Male	P	A
10570	Four	FALSE	Male	A	A
10571	Four	TRUE	Male	A	A
10572	Six	TRUE	Male	A	A
10622	Six	FALSE	Female	A	A
10655	Six	FALSE	Indeterminate	A	A
10662	Six	TRUE	Male	A	A
10664	Six	TRUE	Male	A	A
10665	Six	FALSE	Male	A	A
10669	Six	FALSE	Male	A	A
10670	Six	FALSE	Male	A	A
10683	Six	FALSE	Male	A	A
10695	Six	FALSE	Indeterminate	A	A
10714	Six	TRUE	Male	A	A
10725	Six	TRUE	Female	A	A
10730	Six	FALSE	Indeterminate	P	A
10746	Six	FALSE	Indeterminate	A	A
10751	Six	TRUE	Male	A	A
10763	Six	TRUE	Male	A	A
10809	Six	FALSE	Indeterminate	A	A
10811	Six	FALSE	Male	A	A
10812	Four	FALSE	Indeterminate	A	A
10819	Four	FALSE	Indeterminate	A	A
10820	Six	FALSE	Male	A	A
10968	Six	FALSE	Male	A	A
10970	Six	TRUE	Male	A	A
10971	Six	FALSE	Indeterminate	A	A
10981	Four	FALSE	Indeterminate	A	A
10982	Six	FALSE	Male	A	P
10983	Six	FALSE	Indeterminate	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	MicroscopeSlide	Pencil	PetriDish	Pipette	SpecimenJar	SupplyBottle1
10563	A	A	A	A	A	A
10569	A	P	A	A	A	P
10570	A	A	A	A	A	A
10571	A	A	A	A	A	A
10572	A	A	A	A	A	A
10622	A	A	A	A	A	A
10655	A	A	A	A	A	A
10662	A	A	A	A	A	A
10664	A	A	A	A	A	A
10665	A	A	A	A	A	A
10669	A	A	A	A	A	A
10670	A	A	A	A	A	A
10683	A	A	A	A	A	A
10695	A	A	A	A	A	A
10714	A	A	A	A	A	A
10725	P	A	A	A	A	A
10730	A	A	A	A	A	A
10746	A	A	A	P	A	A
10751	A	A	A	A	A	A
10763	P	P	A	P	A	A
10809	A	A	A	P	A	A
10811	A	A	A	A	A	A
10812	A	A	A	A	A	A
10819	A	A	A	A	A	A
10820	A	A	A	A	A	A
10968	A	A	A	A	A	A
10970	A	A	A	A	A	A
10971	A	A	A	A	P	P
10981	A	P	A	A	A	A
10982	P	A	P	A	A	A
10983	A	A	A	P	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	SupplyBottle2	TestTube	WritingTablet	MuseumJarLid	MustardSeeds	CranialCast
10563	A	A	A	A	A	A
10569	A	A	A	A	A	A
10570	A	A	A	A	A	A
10571	A	A	A	A	A	A
10572	A	A	A	A	A	A
10622	A	A	A	A	A	A
10655	A	A	A	A	A	A
10662	A	A	A	A	A	A
10664	A	A	A	A	A	A
10665	A	A	A	A	A	A
10669	A	A	A	A	A	A
10670	A	A	A	A	A	A
10683	A	A	A	A	A	A
10695	A	A	A	A	A	A
10714	A	A	A	A	A	A
10725	A	A	A	A	A	A
10730	A	A	A	A	A	A
10746	A	A	A	A	A	A
10751	A	A	A	A	A	A
10763	A	A		A	A	A
10809	A	A	A	A	A	A
10811	A	A	A	A	A	A
10812	A	A	A	A	A	A
10819	A	A	A	A	A	A
10820	A	A	A	A	A	A
10968	A	A	A	A	A	A
10970	A	A	A	A	A	A
10971	A	A	A	P	A	A
10981	A	A	A	A	A	A
10982	A	P	A	A	A	A
10983	A	A	A	P	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	DistillationTube	HomeopathicShellVial	UnidentifiedArtifactType	Vial
10563	A	A	A	A
10569	A	A	A	A
10570	A	A	A	A
10571	A	A	A	A
10572	A	A	A	A
10622	A	A	A	A
10655	A	A	A	A
10662	A	A	A	A
10664	A	A	A	A
10665	A	A	A	A
10669	A	A	A	A
10670	A	A	A	P
10683	A	A	A	A
10695	A	A	A	A
10714	A	A	A	A
10725	A	A	A	A
10730	A	A	A	A
10746	A	A	A	A
10751	A	A	A	A
10763	A	A	A	A
10809	A	A	A	A
10811	A	A	A	A
10812	A	A	A	A
10819	A	A	A	A
10820	A	A	A	A
10968	A	A	A	A
10970	A	A	A	A
10971	A	A	P	A
10981	A	A	A	A
10982	A	A	A	A
10983	P	P	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	Bandage	Fabric	PrescriptionBottle	OtherBottleType	CutWood
10563	A	A	A	A	A
10569	P	A	A	A	A
10570	P	A	A	A	A
10571	A	A	A	A	A
10572	P	A	A	A	A
10622	P	A	A	A	A
10655	P	P	A	A	A
10662	P	P	A	A	A
10664	P	P	A	A	A
10665	P	P	A	A	A
10669	A	A	P	P	A
10670	A	A	A	A	A
10683	A	A	A	A	A
10695	A	A	P	A	A
10714	P	A	A	A	A
10725	A	A	A	A	A
10730	P	A	A	P	P
10746	P	A	A	A	A
10751	P	A	A	A	A
10763	P	A	P	A	A
10809	A	A	P	P	A
10811	A	A	A	A	A
10812	P	A	P	P	A
10819	P	A	A	A	A
10820	A	A	A	A	A
10968	A	A	A	A	A
10970	P	A	A	P	
10971	P	A	A	P	A
10981	A	A	P	A	A
10982	A	A	P	P	A
10983	P	A	P	A	P

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	AutopsyHeadRest	ThickFlatGlass	FlatGlass	Gloves	Jar	Newspaper
10563	A	A	A	A	A	A
10569	A	A	A	A	A	A
10570	A	A	A	A	A	A
10571	A	A	P	A	A	A
10572	A	A	P	A	A	A
10622	A	A	A	A	A	A
10655	A	P	P	A	P	A
10662	A	A	A	A	A	A
10664	A	A	A	A	P	A
10665	A	A	A	A	A	A
10669	A	A	P	A	A	A
10670	A	A	A	A	A	A
10683	A	A	A	A	A	P
10695	A	P	A	A	A	A
10714	A	A	A	A	A	A
10725	A	A	A	A	A	A
10730	A	A	P	P	A	P
10746	A	P	A	A	A	A
10751	A	A	A	A	A	A
10763	A	P	P	A	A	A
10809	A	A	P	A	A	A
10811	A	A	A	A	P	A
10812	A	A	P	A	A	A
10819	A	A	A	A	P	A
10820	A	A	A	A	A	A
10968	A	A	A	A	P	A
10970	A	P	A	A	P	A
10971	A	P	A	A	A	A
10981	A	A	A	A	A	A
10982	A	A	A	A	P	A
10983	A	A	A	A	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	Tubing	WoodShaving	EnamelPlatedBasin	AutopsyTag	Insulation
10563	A	P	A	A	A
10569	A	A	A	A	A
10570	P	A	A	A	A
10571	A	A	A	A	A
10572	A	A	A	A	A
10622	A	A	A	A	A
10655	P	A	A	A	A
10662	A	A	A	A	A
10664	A	A	A	A	A
10665	A	A	A	A	A
10669	P	A	A	A	A
10670	A	A	A	A	A
10683	A	A	A	A	A
10695	A	A	A	A	A
10714	A	P	A	A	A
10725	A	A	A	A	A
10730	A	A	A	A	A
10746	A	P	A	A	A
10751	A	A	A	A	A
10763	P	A	A	A	A
10809	A	A	A	A	A
10811	A	A	A	A	A
10812	A	A	A	A	A
10819	A	A	A	A	A
10820	A	A	A	A	A
10968	A	A	A	A	A
10970	A	P	A	A	A
10971	A	A	A	A	A
10981	A	A	A	A	A
10982	A	A	A	A	A
10983	A	A	A	A	A

APPENDIX G: PRESENCE/ABSENCE TABLE

CoffinLot	Unknown	VaselineJar	DissectingHookChain	Scissors	Tweezers	ToolHandle
10563	A	A	A	A	A	A
10569	A	A	A	A	A	A
10570	A	A	A	A	A	A
10571	A	A	A	A	A	A
10572	A	A	A	A	A	A
10622	A	A	A	A	A	A
10655	A	A	A	A	A	P
10662	A	A	A	A	P	A
10664	A	A	A	A	A	A
10665	A	A	A	A	A	A
10669	A	P	A	A	A	P
10670	A	A	A	A	A	A
10683	A	A	A	A	A	A
10695	A	A	A	A	A	A
10714	A	A	A	A	A	A
10725	A	A	A	A	A	A
10730	A	A	P	A	A	A
10746	A	A	A	A	A	A
10751	A	A	A	A	A	A
10763	A	A	A	A	A	A
10809	A	A	A	A	A	A
10811	A	A	A	A	A	A
10812	A	A	A	A	A	A
10819	A	A	A	A	A	A
10820	A	A	A	A	P	A
10968	A	A	A	A	A	A
10970	A	A	A	A	A	A
10971	A	A	A	A	A	A
10981	A	P	A	A	A	A
10982	A	P	A	A	A	A
10983	A	A	P	A	A	A