The Role of the Anthropologist in Identification at Two Urban Medical Examiner Offices: New York City and Harris County

Sharon M. Derrick, Benjamin Figura

ABSTRACT

Two urban jurisdiction medical examiner offices, the New York City Office of the Chief Medical Examiner (NYC OCME) and the Harris County Institute of Forensic Sciences (HCIFS), receive large numbers of unidentified decedents each year. In 2015, the NYC OCME received over 400 decedents whose identities were initially reported as unknown. The HCIFS received 226 unknown decedent cases in 2015. These offices have faced similar challenges in the past when pursuing identification of long-term and otherwise complex identification cases. Within the past decade, the NYC OCME and HCIFS have successfully integrated forensic anthropologists into their offices to supervise routine identifications, direct resolution efforts in complex identification cases, manage disaster victim identification efforts, and organize community outreach events focused on identification. Accordingly, the NYC OCME and HCIFS anthropologists have successfully streamlined identification procedures to make them more efficient for all cases, and increased identifications of completely unknown individuals, effectively discharging the statutory responsibility held by the Chief Medical Examiner for decedent identification. *Acad Forensic Pathol.* 2016 6(3): 413-423

AUTHORS

Sharon M. Derrick PhD D-ABFA, Harris County Institute of Forensic Sciences - Forensic Anthropology Division

Roles: Project conception and/or design, data acquisition, analysis and/or interpretation, manuscript creation and/or revision, approved final version for publication, accountable for all aspects of the work, general supervision, writing assistance and/or technical editing.

Benjamin Figura PhD D-ABFA, Office of Chief Medical Examiner NYC - Forensic Anthropology Unit

Roles: Project conception and/or design, data acquisition, analysis and/or interpretation, manuscript creation and/or revision, approved final version for publication, accountable for all aspects of the work, writing assistance and/or technical editing.

CORRESPONDENCE

Sharon M. Derrick PhD D-ABFA, 1885 Old Spanish Trail, Houston TX 77054, sharon.derrick@ifs.hctx.net

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INTRODUCTION

The incorporation of a formalized Forensic Anthropology department within the organizational structure of the medical examiner office is a relatively new, but expanding phenomenon. As such, forensic anthropologists working daily in the medical examiner setting are charting new territory and have the singular opportunity to develop innovations that effectively support the mission of the office through valuable contributions to medicolegal casework. One example of the innovative value currently provided by anthropologists is a new take on a traditional forensic anthropology role, that of contributing to the identification of unknown deceased persons. Two large urban jurisdiction medical examiner offices, the New York City Office of the Chief Medical Examiner (NYC OCME), which received 7444 cases in 2015, and the Harris County Institute of Forensic Sciences (HCIFS), which received 4644 cases in 2015, have faced similar challenges in the past when pursuing identification in complex cases. Both offices currently rely on organized strategies and formalized procedures developed by their forensic anthropology department personnel to manage and resolve complex identification cases.

DISCUSSION

The Forensic Anthropology Unit, New York City Office of the Chief Medical Examiner

Background

Anthropologists at the NYC OCME have been involved in the investigations of unknown individuals for decades. However, this involvement has historically been limited to cases of individuals with advanced decomposition or skeletonization. The first full-time anthropologist at the NYC OCME was hired in 1999 and their involvement in identification issues increased dramatically in the response to the 2001 World Trade Center (WTC) disaster. When this first anthropologist left the agency in 2004, the position was filled by a doctorate-level anthropologist, with a second masters-level staff member added in 2005. The Forensic Anthropology Unit (FAU) expanded further in 2006

and 2007 in response to renewed WTC-related efforts. By the end of 2007, the FAU consisted of eight anthropologists: three with doctorates, three with master's degrees, and two with bachelor's degrees.

In 2008, the FAU took a more central role in managing long-term unknown cases by providing anthropological analysis on all unknowns regardless of body condition and by managing case entry into the National Missing and Unidentified Persons System (NamUs). NamUs is a web-based reporting and searching system funded by the United States National Institute of Justice and currently managed by the University of North Texas Health Science Center. NamUs provides and maintains integrated unidentified deceased persons and missing persons databases with assigned levels of access. The general public may search these databases with sensitive information redacted and may also contact NamUs to process their missing persons case. Medical examiner office staff, law enforcement entities, and other authorized professionals may upload information to the databases and see the redacted information once they receive approved official access. All uploaded case information is validated by NamUs personnel prior to publication on the website (1).

The FAU shift toward management of long-term unknown cases was based in large part on the unit's experience managing the WTC victim identification operations. In 2009, the FAU's involvement in long-term unidentified cases resulted in an anthropologist being put into the position of Director of Identification to oversee daily identification work in the agency's Identification Unit. The Identification and Forensic Anthropology Units have historically served as part of the agency's Pathology department. The Identification Unit was recently moved to become part of a newly developed Forensic Investigations department.

At the NYC OCME, all medical examiner cases begin as unidentified, with two subcategories of unknown and unverified. Cases are considered as unknowns if there is no tentative identifying information; cases with tentative identifying information are categorized as unverified and are treated separately. If the tentative identity of an unverified case is proven to be incorrect,

the case will be recategorized as unknown. Conversely, cases are often called into the agency as unknown but tentative identity information is quickly found and the case may change from unknown to unverified. In 2015, the NYC OCME received over 400 cases that were initially reported as unknown. The vast majority of these cases received tentative information and/or were formally identified quickly after the agency took jurisdiction. As of May 2016, only seven cases remain listed as unknown for 2015.

In 2008 the FAU began tracking long-term unknown cases on a day-to-day basis and also began performing a historical accounting of all unknown cases. Long-term unknowns are loosely defined at the NYC OCME as cases that remain unknown after 30 days. The historical review began with the year 2007 and worked backwards through 1990. Case files were requested for any cases with death certificates filed with the name as “Unknown Unknown,” “John Doe,” “Jane Doe,” or any other combination of words that may have been used to indicate an individual had no tentative identity. Each case file was reviewed by an anthropologist and then entered in NamUs. To date, the NYC OCME has reviewed and entered nearly 1300 unknown cases into NamUs dating back to the late 1980s.

During the late 1990s and early 2000s, the NYC OCME averaged around 50 long-term unknown cases annually. This number dropped in the mid-2000s to around 30 cases per year. Since 2008 this number has dropped further to an average below ten cases per year. This significant drop is attributed to a number of factors including more emphasis on the use of fingerprints, increased use of DNA, the advent of the NamUs website, and increased involvement of forensic anthropologists.

Beginning in 2012, members of the FAU took part in a joint effort between the NYC OCME and the New York Police Department Missing Persons Squad to resubmit fingerprints from our unknown decedents for searches in various databases. Technological advances and the inclusion of additional records meant that there was a high potential that resubmission of fingerprints may lead to additional identifications. This

effort led to the subsequent identification of over 100 long-term unknown decedents dating back to 1990.

Most recently, the FAU applied grant funding from the National Institute of Justice to the purchase of a three-dimensional (3D) printer. The printer is used to create full-size duplicates of the skulls of unknown individuals whose remains were skeletonized. The FAU provides the printed skulls to a forensic artist to create facial reconstructions without the need to use the physical remains.

Process

In 2015, the NYC OCME created an Identification Investigator (IDI) position, staffed by former death investigators and managed by a forensic anthropologist. The purpose of this position is to provide enhanced investigative capabilities to cases with complex identification issues, including unknowns. Each morning, the IDI reviews the cases for that day and develops a “plan of action” to resolve their identifications.

For unknown individuals, this process includes a thorough review of all case information including scene photos, medicolegal investigator’s report, The New York City Police Department (NYPD) reports, and postmortem findings. The NYC OCME has the benefit of NYPD Missing Persons detectives being stationed at each morgue location, permitting the exchange of postmortem information obtained during examination of the body and investigative information obtained through law enforcement efforts.

All cases are fingerprinted during the initial exam using Live Scan capture devices installed on dedicated mobile carts. The captured fingerprints are electronically submitted to the New York State Division of Criminal Justice Services (NYS DCJS) to be searched against their criminal and civil databases. If the mortuary technicians are unable to capture the fingerprints using the Live Scan devices due to decomposition or other factors, they will attempt acquisition using more advanced methods such as ink and paper, powder and lifters, injection, rehydration, or silicone casting material. Multiple reviews of the current science of fingerprinting,

including discussion of techniques, procedures, and submission policies, are available in the literature (2-6).

The resulting fingerprints are manually or electronically transferred to a standard ten-print fingerprint card template and submitted to the NYS DCJS by way of a certified fingerprint card scanning device. The submission results are then returned electronically into the NYC OCME's Case Management System (CMS). If a match was found, the response will include the individual's civil/criminal history record, including demographic information, prior addresses, social security numbers, and associated aliases. If no matching record is found at the NYS DCJS, the record is automatically passed to the federal level for search in the Federal Bureau of Investigation Next Generation Identification (FBI-NGI) system. Fingerprints are also regularly submitted to the Department of Homeland Security or to neighboring states.

All fingerprint results are reviewed by an IDI prior to submission to the medical examiner for approval. The IDIs compare the demographic information contained in the record to the case in question and attempt to resolve issues with multiple aliases. Any leads are followed up on immediately using Accurint.com, HHS Connect (a database allowing access to records from other city agencies), and other Internet search engines.

If tentative antemortem information is located but is insufficient for formal identification, the case is referred to the Identification Review Committee (IRC). The IRC meets once a month to review cases with complex identification issues and make recommendations for or against identification, or for additional investigative avenues. The IRC is comprised of individuals from the FAU, forensic biology, pathology, and investigations, and is chaired by a forensic anthropologist.

If the identification cannot be resolved, the case will be prepared for burial by the City of New York. A checklist of items is completed to ensure that all information necessary for identification is collected prior to release. This list includes photographs for visual identification (e.g., facial, tattoos, scars, birthmarks or other unique features), dental charting, dental ra-

diographs, full-body radiographs, fingerprints, and a DNA sample. DNA samples from unknowns are processed at the NYC OCME's Forensic Biology laboratory for both short tandem repeat (STR) nuclear DNA and mitochondrial DNA (mtDNA), with resulting profiles uploaded to the Federal Bureau of Investigation (FBI) Combined DNA Index System (CODIS) database.

The final action on the checklist is an anthropological age estimate, at minimum; the policy was put into place in 2008. The anthropological age estimate provides two primary benefits. First, it provides age information based on reliable and reproducible scientific techniques. In our experience, age assessments based on subjective judgment of the physical appearance of a body have been off by as much as 20 years. Secondly, using age estimation methods with defined confidence intervals provides scientifically justified limits for searches of potential missing persons. Age estimates are performed regardless of the condition of the body and are accomplished by removing the medial ends of the clavicles, the sternal ends of the fourth ribs, and the pubic symphysis. Assessment of ancestry, race, or stature may also be completed depending on the condition of the body. Fully skeletonized cases are investigated directly by the FAU and undergo a full analysis with the creation of a biological profile and description of any antemortem trauma, pathological conditions, or other notable features.

The NYC OCME is a heavy user of the NamUs website, having entered over 1200 cases since 2008. The FAU manages the entry of the case to the site. Case entry occurs around the 30-day mark, though it may be completed earlier depending on the context of the case. Complete details of the case are entered, including the anthropological age estimate and identification photographs, when appropriate. Any resulting matches or inquiries are handled by the FAU.

The work that began in 2008 was supported in part by multiple grants through the National Institute of Justice's "Using DNA Technology to Identify the Missing" program. The grant submissions were joint projects between the FAU and the Missing Persons unit in the

NYC OCME's Forensic Biology Department. The first grant provided funding to facilitate the historical review of cases and made the NYC OCME's anthropological services available to other jurisdictions in New York State. The second grant made it possible for FAU to disinter nearly 50 unidentified individuals from the late 1990's and early 2000's to obtain DNA samples and perform anthropological examinations if warranted.

The Forensic Anthropology Division of the Harris County Institute of Forensic Sciences

Background

In February 2006, a specialized full-time equivalent position (FTE) was created within the Investigations Division of the Harris County Medical Examiner's Office (renamed the HCIFS in 2009). The Agency Coordinator/ID Unit Supervisor was assigned to spend 50% of the FTE as the primary liaison with organ and tissue donation agencies contracting with the office and the other 50% as the supervisor of the ID Unit. At the time the position was created, the ID Unit consisted of a group of four forensic investigators and two administrative assistants who maintained a large file cabinet of long-term unidentified case files, fielded phone calls related to unidentified cases, and managed the flow of unidentified or unclaimed decedents to the Harris County disposition assistance program. When directed by the medical examiner, one of the investigators was responsible for packaging skeletal remains and shipping them to a contract forensic anthropologist. The ID Unit duties related to long-term unidentified cases were discharged when time permitted because daily casework had to be prioritized. Therefore, progress on long-term unidentified cases was basically at a standstill in 2006.

The Agency Coordinator/ID Unit Supervisor position was filled by a doctorate-level physical anthropologist. A staff liaison with the organ and tissue procurement agencies was a necessary position for the office but the hire of a physical anthropologist provided a means to segue decedent identification from the previous ID Unit design into a component of a full-fledged Forensic Anthropology Division (FAD). By late fall

of 2006, the Forensic Anthropology Division was firmly in place, managed by an experienced Forensic Anthropology Director and staffed by two doctorate level anthropologists and an administrative level Identification Specialist.

In addition to setting up a functional forensic anthropology laboratory and conducting routine casework, the initial time-sensitive responsibility of the newly formed FAD was the examination of approximately 100 decedents awaiting identification under refrigeration in the HCIFS morgue. The storage of these bodies dated back to the early 1970s, when the office was located in the basement of a county hospital. The remains were subsequently moved with the medical examiner's office to the current building in 1985 in the hope that these unknown individuals might be identified due to expected future improvements in forensic identification methods.

Each of the three anthropologists performed full anthropological analyses of the stored bodies, including creation of a biological profile and description of any antemortem trauma, pathological conditions, or other notable features. Detailed photographs were taken and the images were electronically archived. DNA samples were collected from each body and submitted to the University of North Texas Center for Human Identification in Fort Worth, Texas (UNTCHI) for analysis and upload to the missing persons component of CODIS. Detailed examination results and appropriate images were entered into NamUs. The National Crime Information Center (NCIC) unidentified decedent entries were either updated or created through submission to the Texas Department of Public Safety (TXDPS). Following the collection of all pertinent evidence, the decedents were released for burial in the county-maintained cemetery.

As a part of FAD examination of the stored bodies, long-term unidentified decedent hard copy files retained in the large file cabinet at the HCIFS were also reviewed. Many of the files represented the stored bodies but some of the files represented previously buried unidentified individuals and some of the stored decedents were not associated with a file on-site. Cop-

ies of missing and incomplete files were ordered from the Harris County Archives, a well-maintained document repository. During review and organization of the files, the FAD located over 400 paper files corresponding to long-term unidentified decedents that dated as far back as 1957, the year the Harris County Medical Examiner's Office was formally established. The majority of these case files contained inked fingerprints, which were resubmitted to law enforcement.

In 2010 and again in 2013, the FAD received an award through the National Institute of Justice "*Using DNA Technology to Identify the Missing*" grant program to exhume some of the long-term unidentified decedents that were buried prior to standardized DNA sample collection for identification. The grant funds were used to defray exhumation costs and to hire a full-time project forensic anthropologist to oversee disinterment and reinterment of 45 unidentified decedents whose files had been archived. The project anthropologist performed a complete skeletal analysis on the exhumed decedents, provided full reports, updated the information in NamUs and other databases, and collected and submitted DNA samples to UNTCHI for each case. Additionally, the project anthropologist reviewed archived case files and resubmitted fingerprints. The two NIJ funded projects resulted in 46 identifications, bringing the total number of identified cases from the archived case files to 70. Most of these identifications were obtained through fingerprint resubmission or DNA profile comparisons.

In terms of recent unidentified cases, 226 decedents were completely unknown at arrival to HCFIS in 2015. Only six 2015 cases remain unidentified at this writing. The majority of the 220 identified cases were quickly resolved through fingerprints. The other identifications were made through DNA, radiograph comparison by the FAD, and an occasional consultation with a contract forensic odontologist. Including the six unidentified 2015 cases, 28 unknown decedents have been added to the long-term unidentified files since 2006, accruing an average of only three long-term unresolved cases per year. The FAD regularly compares the unidentified case files against missing persons entries in NamUs, and queries from law en-

forcement or the public regarding missing persons. Available fingerprints are resubmitted for each case on a two year rotating schedule.

In 2014, one of the forensic anthropologists was named Director of Forensic Investigations, where he oversees the Forensic Investigators and Victims Assistance Specialists. He also continues to develop and provide input into revision of identification procedures. The FAD Director reports to the Deputy Chief Medical Examiner and oversees the FAD Identification Manager (ID Manager) and two other doctoral level forensic anthropologists. The FAD and Investigations are housed under the HCIFS Medical Examiner Service.

Process

Identification at HCIFS follows a procedural path outlined in a comprehensive standard operating procedure document (SOP) developed by representatives from the FAD, Investigations, and the Quality Division with input from the medical examiners. The SOP, modeled on principles of mass fatality preparedness plans (2, 7-10), delineates HCIFS departmental responsibilities in the identification process, and defines the membership and role of the Identification and Disposition Committee (IDC). The IDC is similar to the IRC at NYC OCME, and is managed by the FAD and chaired by the ID Manager. IDC core membership includes representatives from the FAD, Investigations, Pathology, the Forensic Genetics Laboratory (FGL), the Quality Division, and Morgue. The comprehensive SOP is supported by several procedural SOPs that detail the technical steps to follow for specific aspects of the identification process.

The first attempts at identification occur at the death scene where the forensic investigator assigns one of three identification statuses based on information gathered from law enforcement or individuals well-acquainted with the decedent. Decedents are not assigned a positive identification status prior to transport to HCIFS. Positive identification is based on a thorough evaluation of available information and analytical processes and is assigned by a medical examiner post-examination. The identification statuses

that may be assigned at the scene are presumptive, tentative, or unknown. Presumptive status is assigned by the investigator at the scene based on available preliminary information that forms a reasonable basis to support positive identification. The presumptive status indicates strong support for positive identification but the medical examiner performs an evaluation of the evidence prior to assigning the positive status. Tentative status is assigned based on preliminary information available at the scene that provides a lead for identification. Tentative status requires that further information is sought prior to attempting positive identification. The unknown status is assigned if there is no available information regarding identification at the scene, and/or if the condition of the body renders the individual visually unrecognizable.

Once the decedent is checked in to the HCIFS morgue, forensic investigators facilitate electronic fingerprinting and transmission of fingerprints to law enforcement or other agencies using a fingerprint scanning device (Live Scan). All fresh decedents are electronically fingerprinted without respect to identification status at check in. Submission results for the electronically submitted fingerprints are received rapidly and viewed by the investigators on a transaction monitor, often providing evidence for positive identification prior to autopsy. Possible aliases or other identification discrepancies related to presumptive identification status may also be caught with the scanned fingerprint results. In cases of decedents whose condition requires advanced techniques to capture fingerprint features, morgue staff specially trained in complex fingerprinting methods attempt fingerprints post-examination. When the resulting fingerprints are not of sufficient detail for automated comparison, a scan of the inked prints is sent to a qualified law enforcement latent examiner for analysis.

To track progress of tentative or unknown cases when initial fingerprint identification is unsuccessful, Investigations opens a tracking page in the medical examiner software package used at HCIFS to monitor case progress and disposition. The investigators then follow up on information gathered at the scene or provided by law enforcement that contains leads

for locating possible family members and potential documentary evidence, such as medical or dental records that include radiographic imaging. When antemortem radiographs are located, the FAD is consulted to perform radiographic comparison for identification. Dental comparisons that are determined to be beyond the expertise of the FAD are referred to a contract forensic odontologist. The imaging comparison results are submitted to the medical examiner along with recommendations regarding positive identification. If the identification is not resolved through these modalities, the case is referred to the IDC. Based on review of the case, the IDC suggests further actions, either returning the case to Investigations or transferring the case to the FAD for anthropological examination.

Fleshed cases transferred to the FAD may receive an examination for age only or for age and sex depending on the condition of the body. Those decedents with moderate bone exposure as well as fully skeletonized decedents receive a complete anthropological analysis that includes development of a biological profile, assessment of skeletal trauma and pathological conditions, and collection and submission of DNA samples.

The biological profile is used to target identification efforts by exclusion of missing persons who are not consistent with the profile. The FAD follows a similar procedure to the NY OCME FAU regarding dissemination of information for each unidentified case. Detailed anthropological examination results and appropriate images are entered into NamUs. National Crime Information Center unidentified decedent entries are submitted to the TXDPS for upload. If warranted by the estimated age of the decedent, the information is also submitted to the National Center for Missing and Exploited Children (NCMEC) intake line and the Internet version of Critical Reach within ten days of decedent check-in. An Unidentified Decedent Flyer (UDF), which is a single page summary of the physical description of the decedent and the events surrounding the decedent's death and/or discovery is created and uploaded to the Missing Persons page of the HCIFS public website. The UDF includes the law enforcement agency and case number, the demographic profile of the remains, clothing and personal

items found on or near the body, location, date and time the body was found, and events surrounding the death or discovery. Photographs of the decedent and personal items are incorporated into the UDF when possible. The FAD follows up on any leads generated by the local and national dissemination of the unidentified decedent information.

DNA samples collected during the examination are sent to one of two laboratories. The on-site internationally accredited FGL provides STR analysis and profile comparison with family reference samples (FRS). The samples obtained from decedents with a tentative status and known family members may be submitted to the FGL. In these cases, the FAD collects the FRS from the family members or facilitates collection if they are not local. In cases of completely unknown status, the decedent samples are submitted to the UNTCHI for mtDNA and STR analysis and upload to CODIS.

The files of unresolved identification cases remain open and are worked indefinitely until the decedent is finally identified. However, the remains must be transported for burial once all pertinent evidence is collected from the body itself and there are no open leads. The ID Manager maintains a list of all unidentified cases and monitors the progress of the investigation, referring decedents for burial in the Harris County-maintained cemetery to await further identification leads.

Missing Persons Day Initiatives at the NYC OCME and HCIFS

The anthropology units at the NYC OCME and HCIFS have played lead roles in the development of successful “missing persons days” in their jurisdictions. These events that are designed to support families of the missing while providing new leads to resolve long-term unidentified cases have become more frequent nationally in recent years. Missing persons days are primarily held at the state level, but the NYC OCME and HCIFS jurisdictions are large enough in population density and geographical spread to warrant their own events.

NYC OCME has held two New York City Missing Persons Days (MPDs) in 2014 and 2016, the second of which was partially funded through NIJ grant awards. The idea to develop a missing persons day event specifically for New York City grew out of previous experiences with a similar event occurring at the state level. While the NYC OCME works closely with the NYPD Missing Persons Squad, not all individuals who are missing are formally reported to law enforcement. Given the numerous state and local jurisdictions and the large numbers of undocumented individuals from various regions around the world in the greater New York City metropolitan area, the NYC MPD was developed as a barrier-free event for families of the missing to receive assistance, make an inquiry of the NYC OCME, and submit DNA reference samples for upload to CODIS. The NYC MPD was specifically developed to minimize law enforcement involvement in order to provide a neutral atmosphere where individuals would feel more comfortable to provide information.

The MPDs provide opportunities for families with missing loved ones to visit the NYC OCME, participate in an antemortem interview to collect information about the missing person, submit DNA reference samples to be searched against the NYC OCME’s database, and ultimately be uploaded to the FBI’s CODIS database. Representatives from other city services and from NamUs and NCMEC were also present. The first MPD was in November of 2014 and assisted nearly 100 individuals on-site, with 250 other people providing information by phone, resulting in seven identifications of unidentified remains in NYC and surrounding areas. The second MPD took place in 2016 and assisted 50 families in person with 90 inquiries made via telephone. A total of 62 DNA kits were collected or mailed out. As of this writing, at least three cases have been resolved.

Two Missing in Harris County Days (MHCD) have also been held recently, one in April 2015 and one in May 2016 (**Image 1**). The strategy of MHCD is to provide one location for families to 1) report a missing person to law enforcement without concerns of being arrested or being questioned about their immigration

status, 2) have the missing person's information entered into NamUs, and 3) voluntarily submit cheek swabs for entry into CODIS. Those individuals not wishing to do any of the above at the event are given the information necessary to negotiate the processes on their own. Additionally, educational programming for the public regarding missing persons issues was provided in the form of panel discussions and community service tables at each of the two events. MHCD has not offered telephone assistance as provided by the NY OCME MPDs but this option may be explored in the future. Based on early identification successes and local response, this community service event will likely become an annual or biannual offering to the South East Texas region.

The idea for the first MHCD grew from the 2014 identification of a long-term unidentified decedent who arrived at HCIFS in 1980. The identification is a tes-

tament to the value of NamUs and improvements in dissemination of information, as well as the efforts of the public who use online databases to associate possible identities to medical examiner cases. This young woman in her mid-twenties was a "failure to stop and render aid" pedestrian fatality. She had no identification on her person at recovery, although her face was clearly recognizable. She was from Michigan and her large family had been searching for her off and on for decades. She had been traveling in 1980 but was not known to be in Texas. In 2014, her online missing persons profile and her NamUs unidentified decedent profile were compared by a member of the public who submitted the possible match to the HCIFS FAD. An investigation ensued that led to a positive identification. During multiple conversations with the FAD ID Manager and the person who submitted the comparison, the sisters of the missing woman extolled the successes of the well-established Missing in Michigan

Image 1: Missing in Harris County Day, May 14, 2016. Photograph courtesy of Desmond Bostick, HCIFS Forensic Imaging Division.

Day. Following these conversations, plans to have a MHCD were developed with the assistance of local law enforcement and community service agencies.

The April 2015 MHCD was funded entirely by donations from community service agencies and local businesses. It was held at a large church building whose pastor and congregation offered their hospitality and “day of” support without charge. Student volunteers from several universities and staff volunteers from HCIFS managed the flow of attendees, preparing and serving a donated lunch and setting up the panel discussions. Three panel discussions made up of local experts discussed missing persons issues for children, migrants and trafficked people, the homeless, and the mentally/emotionally challenged. The event was attended by 146 adults, and 46 persons submitted cheek swabs. As of this writing, eight long-term unidentified cases have been resolved as a direct result of the April 2015 event.

The May 2016 version of MHCD was expanded to include Galveston County. Once again the event was funded by donations. MHCD 2016 was held in a university atrium with use of an adjacent classroom hall designated as a private area for families to report missing persons. The atrium was the setting for refreshments, community service tables, and two panel discussions. The panel discussions at the 2016 event included effective participation from families of missing persons identified as a result of the 2015 MHCD. A severe thunderstorm with associated flash flooding may have limited public access but the event was still attended by 162 adults, and 28 persons submitted cheek swabs.

CONCLUSION

Anthropological training in general stresses the idea of holism, which drives an appreciation of the individual as part of a species that has developed physically and culturally across chronologic, geographic, and social dimensions. Forensic anthropologists carry this idea into their work by understanding an unidentified person, and the subsequent approach to identification, from many different aspects. A well-trained forensic

anthropologist will not only understand osteology, but also dentition, DNA, radiography, and fingerprints and how they are applied towards identification. No other forensic discipline holds this concept of the corporeal unidentified human as a foundational principal for the majority of their work. Forensic anthropologists are ideal candidates to bring specialized insight into the medicolegal identification process.

Forensic anthropologists have traditionally acted as expert consultants for medical examiners and coroners in cases of advanced decomposition or fragmentation of unidentified individuals (7, 9-11). Although assessment of any suspected acute trauma is a given, the majority of the anthropological examination is focused on development of a biological profile and description of pathological conditions or remote trauma that may be helpful for identification. In the last 15 years or so, some larger medical examiner offices have embraced the benefit of on-site staff anthropologists whose skills may be utilized quickly for decedent recovery and for daily case consultations regardless of body condition. Trauma evaluations of fleshed elements and fresh cartilaginous tissues during autopsy and post-autopsy have become relatively routine at some offices. However, much of forensic anthropology casework within the medical examiner setting is still centered on supporting identification (11), whether working with completely skeletonized remains or, as noted previously, pursuing identification through radiographic comparison or removing skeletal age indicators from unidentified fleshed decedents to provide a more accurate age.

Despite the value forensic anthropologists bring to daily casework in the medical examiner office, hiring anthropologists for trauma consultations, archaeologically-based recoveries, and analysis of the sporadically received set of skeletal remains may be viewed by some as a luxury that cannot be justified or sustained under the typical medical examiner budget. In fact, the breadth of advanced anthropological training may be applied to medical examiner office functions that are considered by all to be essential. Consequently, and due to their background in identification, anthropologists are ideal candidates to lead or

coordinate forensic investigation of unidentified cases. The NYC OCME and HCIFS have successfully integrated forensic anthropologists into their offices. Despite the geographical distance between New York City and Houston and constraints built into the different structures of governmental oversight (city or county), the two large, urban offices have constructed anthropological approaches that are very similar. This similarity may be related to the fact that the field of forensic anthropology is relatively intimate, as is that of forensic pathology, and the utilization of forensic anthropologists at the NY OCME and HCIFS did not occur in a vacuum. Certain routine procedural aspects may be handled differently, such as the use of “unknown,” “unverified,” or “verified” identification statuses at the NY OCME versus “unknown,” “tentative,” “presumptive,” or “positive” statuses at HCIFS, but the basic mission and organizational principals are much alike.

Both offices have placed forensic anthropologists in management positions where they supervise routine identifications, direct resolution efforts in complex identification cases, manage disaster victim identification efforts, and organize community outreach events (MPDs) focused on identification. Accordingly, the NYC OCME and HCIFS anthropologists have successfully streamlined identification procedures to make them more efficient for all cases, and increased identifications of completely unknown individuals, effectively discharging the statutory responsibility held by the Chief Medical Examiner for decedent identification.

The NYC OCME and HCIFS have formally incorporated existing full-time forensic anthropology staff to lead forensic identification investigations. The NYC OCME Identification Unit is supervised by a doctoral level forensic anthropologist as the Director of Identification. At HCIFS, three doctoral level forensic anthropologists are integrally involved in supervision of identification efforts, the FAD Director, the FAD ID Manager, and the Director of Investigations. These two large, urban-based medical examiner offices have faced challenges in the past with a backlog of long-term unidentified cases. Forensic anthropologists

working on-site at the offices have reduced the number of long-term unidentified cases from previous decades and have developed innovative procedures and instituted formal SOP documents that have reduced the number of current unidentified cases that become long-term. This is highly responsive to the statutory requirement of medical examiners to securely identify medicolegal case decedents. The resolution of these cases is of great value to medical examiner offices but is invaluable to the families of the missing persons who receive an answer as to their whereabouts.

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