



DATE: January 25, 2016

REFERENCE #: 01116

PROJECT TITLE: [858158-1] Facilitating forensic research in multiple fields using a unique computed tomography dataset

PI OF RECORD: Heather Edgar, Ph.D.

SUBMISSION TYPE: New Project

BOARD DECISION: DETERMINATION THAT IRB APPROVAL IS NOT REQUIRED

EFFECTIVE DATE: January 21, 2016

DOCUMENTS:


- Application Form - project information (UPDATED: 01/19/2016)
- Consent Form - Spanish consent form (UPDATED: 01/19/2016)
- Consent Form - English consent form (UPDATED: 01/19/2016)
- Investigator's Brochure - project team (UPDATED: 01/19/2016)
- Other - Department review (UPDATED: 01/19/2016)
- Protocol - Protocol (UPDATED: 01/19/2016)
- Questionnaire/Survey - Minor questionnaire English (UPDATED: 01/19/2016)
- Questionnaire/Survey - Adult questionnaire English (UPDATED: 01/19/2016)
- Questionnaire/Survey - Minor Questionnaire Spanish (UPDATED: 01/19/2016)
- Questionnaire/Survey - Adult questionnaire Spanish (UPDATED: 01/19/2016)

Thank you for your submission of New Project materials. The University of New Mexico (UNM) IRB Main Campus has determined that this project does not meet the definition of human subjects research according to federal regulations. IRB approval is not required.

This determination applies only to the activities described in the submission and does not apply should any changes be made to this research. A change in the research may disqualify this research from the current determination. If changes are being considered, it is the responsibility of the Principal Investigator to submit a new project for IRB review.

The Office of the IRB can be contacted through: mail at MSC02 1665, 1 University of New Mexico, Albuquerque, NM 87131-0001; phone at 505.277.2644; email at irbmaincampus@unm.edu; or in-person at 1805 Sigma Chi Rd. NE, Albuquerque, NM 87106. You can also visit the OIRB website at irb.unm.edu.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Scott Tonigan". The signature is fluid and cursive, with the first name "J. Scott" and the last name "Tonigan" clearly distinguishable.

J. Scott Tonigan, PhD
IRB Chair

NEW MEXICO DECEDENT IMAGE DATABASE PROTOCOL

TITLE: Facilitating forensic research in multiple fields using a unique computed tomography dataset

VERSION DATE: 11/2019

PRINCIPAL INVESTIGATOR/ Heather Edgar

RESPONSIBLE FACULTY:

STUDENT INVESTIGATOR:

FUNDING AGENCY: National Institute of Justice and National Science Foundation

BACKGROUND/SCIENTIFIC RATIONALE

INTRODUCTION

- Opponents of motorcycle helmet laws argue that people killed in motorcycle crashes sustained injuries to their bodies such that helmets would not have saved their lives. Is this true? Are there social or behavioral predictors associated with high risks such as electing not to use a helmet?
- How frequently does gas embolism play a role in the pathophysiology of death? How frequent are traumatic pneumothoraces and tension physiology in cases of multiple blunt force traumas? Additionally, what information about decomposition can be gained from a better understanding of internal gas collections?
- What is the range of normal bone density for children of varying sex, age, and ancestral groups? How does normal and compromised bone density affect the recognition of non-accidental trauma in suspected cases of child abuse?

Each of these questions is important, central to their fields of inquiry, and, until the development of this database, unanswerable. The resource we are creating will allow these and many other basic questions to be answered. We are developing a complete, ready to use, user-friendly, large-scale, next generation data resource that will allow research in multiple forensic fields.

The overall project involves creating a database (the Decedent Database) of Computed Tomography (CT) images with associated lifestyle and health information. To achieve this we use CT images and medical examiner information (from their database) as well as contact next of kin. This protocol is focused on the contacting of next of kin, one portion of the overall project.

PURPOSE

The metadata and CT image database and website allows broad, important, basic forensic research questions to be addressed in ways currently not possible.

1. Decedent CT dataset, metadata, and website

In 2010, the Office of the Medical Investigator (OMI) received a grant from the National Institute of Justice (NIJ) to test whether CT images can supplement or supplant traditional autopsies. Unfortunately, they are only available in a flat data file, with only the most basic data associated, including name, record number, and birthdate. Requests to conduct research on these CTs started coming in to the OMI. Because there is no way to query to find the relevant scans, most requests simply cannot be met. The few requests that have been successfully filled have been for data sets that are simple from a data standpoint, for example, “all children.” However, even meeting those requirements required multiple

steps and was extremely labor intensive. Below is a description of some research projects that will be made possible through the completion of a database of the CT images along with associating medical and lifestyle information gathered from both the OMI files and next of kin interviews. These are intended to provide examples of the kinds of foreseeable research, but it is far from all-inclusive.

Bone density, childhood health, and child abuse

Skeletal trauma in children is often considered non-accidental injury (i.e. child abuse) when the bone is healthy and the description of how the injury occurred is inconsistent with the fracture type or pattern. Clinically, healthy bones are those that have normal bone mineral density (BMD). Accurate and precise measurements are available for BMD in adult bones through dual energy X-ray absorption (DXA), quantitative computed tomography (QCT), and biochemical assay of serum levels²⁷. However, blood chemistry analysis is not applicable to postmortem specimens. DXA and QCT scans require advance scheduling in the hospital setting, and DXA and QCT equipment is not typically available in medical examiner offices. Even with access to DXA and QCT equipment, the standards for infants are poorly defined^{1-2; 6}. In the absence of blood chemistries, QCT and DXA scans, physicians assess bone health through visual evaluation of skeletal radiographs. However, recent research shows there is high inter-observer error associated with this qualitative analysis¹⁸. Additionally, subtle radiological changes may go unrecognized or low levels of BMD loss may be undetectable, creating the potential for the misidentification of pathologic fractures as non-accidental injury. Whole body pediatric CT is the gold standard for quantifying BMD for direct comparison with the BMD derived from 2D radiographic data²⁹. Access to our decedent CT dataset could allow the development and validation of analytical tools to improve medical evaluation of non-accidental skeletal injury in infants and children. This research will also have application to understanding bone density variation in living children, and may be useful in paleopathological studies of childhood health.

Body mass estimation

Body mass is a critical component of the biological profile. However, current predictive models result in estimates that are associated with high confidence intervals. As such, their usefulness within forensics is questionable. Predictive models currently focus on the femoral head, bi-iliac breadth and stature, and the subtrochanteric region of the femur. Each of these methods has limitations, which can be seen in the error rates when used on known samples^{4;8;17;22-23}. Using multiple elements from a single individual increases the precision of prediction⁴. However, previous research aimed at improving prediction precision has been limited by a lack of known body mass at death in human skeleton collections. Most individuals in these collections self reported their weight some time prior to donation, so these figures do not necessarily represent the actual weight at death. The sample that will be made available by the project proposed here will provide a large number of observable skeletal elements (via CT's) associated with known body mass at death, allowing for the creation of more precise predictive models with known error rates. This research will allow body mass to become more useful to forensic investigators as a component of the forensic biological profile.

Motorcycle deaths

About 50 motorcyclists die in New Mexico alone every year; 94% of these were not wearing a helmet when they were involved in a traffic accident ("Rider's choice partial motorcycle helmet initiative" SB308, 2015). Hurt et al.¹⁰ made clear that helmet wearing is associated with fewer head injuries in motorcycle accidents. However, anti-helmet advocates point to Goldstein⁷, who argues that helmet wearers are more risk averse than non-helmet wearers, so that a third variable (risk aversion) is responsible for the correlation between helmets and survival. Additionally, despite a lack of evidence, some argue that neck injuries due to helmet use cause at least as many deaths as the helmets prevent, and that in high-speed crashes, bodily injuries are so great that head protection is superfluous (www.bikersrights.com/statistics/twisting.html). Tests of these arguments have never been conducted because of the difficulties comparing injury patterns in riders who died while wearing helmets and those

who died without them. The scans and associated metadata that will be made available by this project will allow these tests, as well as many others in forensic science.

Transverse process fractures

Clinically, it is known that vertebral transverse process fractures often herald the presence of additional injury to the internal organs and pelvis. Additionally, early work suggests that bilateral transverse process fractures only occur when victims are overrun¹⁶. A searchable database would make it a simple task to confirm if associated injuries are similar in the forensic setting (when forces are often more severe) as well as allow us to test the hypothesis that connects bilateral injury with overrun – possibly yielding confirmation of key findings that may signal the presence of additional injury and to reconstruct mechanism of injury in unclear cases.

Data for the Decedent Database is collected from two sources: the existing OMI database, known as VAST, and next of kin interviews. The OMI VAST database is the primary database used by the OMI to store and organize information regarding the cause of death, lifestyle and health information in order to conduct investigation into the cause of death. The current process of information gathering at the OMI involves a Death Investigator contacting the next of kin and the primary care physician. Depending on the circumstances of the death, certain information is gathered from the next of kin regarding the decedent to assist the investigators. This information could include factors such as alcohol usage, drug usage, and history of disease, depending on the manner and cause of death. As a result, this information is not standardized and is dependent upon how the individual died. In order to complement the data present in VAST, under this protocol, undergraduate and graduate student assistants on this project will contact next of kin, in order to gather the remaining unknown metadata fields. This protocol describes the process we are using to collect data from next of kin interviews, including training the students who will conduct those interviews, measures to protect next of kin privacy, and associated risks.

The data collected consists of the following 69 variables, which are modified to be HIPAA compliant. For example, birth date and death date include year only. Zip code is only the first three digits.

OBJECTIVES/AIMS/HYPOTHESES

1. A website that makes available to bona fide researchers data regarding a dataset of 15,000 full-body CT scans of unembalmed human decedents. Each individual is represented by ~10,000 images and 69 data variables. Researchers will request the scans that meet their research requirements. The lifestyle and health data will be collected from the OMI database and through additional phone calls with next of kin.

STUDY DESIGN

I. Target Population and Inclusion/Exclusion Criteria

The target population for telephone surveys is next of kin of decedents whose bodies have been processed through the OMI since 2010. Next of kin is determined by the OMI. As such, their specific demographics are unknown. However, the demographics of the decedents are known and there are some inferences about the next of kin that can be drawn from them.

The cadaveric population demographics are as follows:

The OMI is a centralized medical examiner's office for the entire state of New Mexico. With a few exceptions, any individual who dies in the state in a sudden, violent, untimely, or unexpected manner, and any person who is found dead and the cause of death is unknown, is routed to the OMI where an autopsy may take place. In 2013, 5,577 deaths were processed by the OMI, accounting for 35% of the total deaths in the state and closely mirroring the ethnic and racial composition of the state^{21; 25}. See Table 1 for demographic and manner of death data for this sample²⁰. People often assume that decedents sent to the OMI for post-mortem examination have all succumbed to a violent death. However, the

majority of these cases are from natural causes (56.3%). Only 42.3% of the cases sent to the OMI actually undergo autopsy. Of those autopsied, roughly 33% died from natural causes, 37% from accidents, 16% from suicides, 6% from unknown causes and 7 % from homicides²¹. As a result, although somewhat skewed with regard to cause of death, the sample is more representative of the state's population than might be predicted.

Table 1- OMI sample characteristics of deceased individuals examined for 2013

Race/Ethnicity	Count-		2010 NM census		Manner of death	
	2013	%		%		%
Non-Hispanic White	3701	66.36	40		Accident	37.3
Black	111	1.99	2.5		Natural	33.04
Asian/Pacific Islander	49	0.88	1.6		Homicide	7.15
American Indian	464	8.32	10.1		Suicide	16.29
Unknown	9	0.16	-		Other	6.09
Hispanic	1202	21.55	45.8			
Non-human	41	0.74	-		Total	5577

Next of kin demographics:

As they likely mirror the decedent demographics, the next of kin will be racially and ethnically diverse, but of unknown ages and sexes. The inclusion criteria are that the decedent underwent an autopsy with a full-body CT scan. Next of kin under the age of 18 years are not be asked to participate for the survey. Adults with diminished mental capacity will not have the data entered into the database. Prisoners are not contacted.

II. *Participant Enrollment*

The maximum number of enrolled participants will be 16,000. The Office of the Medical Examiner routinely contacts next of kin, after they determine the legal next of kin, to gather relevant information for their death investigation. As such, they have stored names and telephone numbers of each person's next of kin. Only next of kin will be contacted for this study and not other family members since their information is not recorded and stored at the OMI. If no next of kin is known, then information will only be gathered from the OMI VAST database.

Furthermore, a previous research project (presented at NAME-National Association of Medical Examiners-in 1999) involved contacting next of kin again to enquire about the circumstances of suicide victims. Death Investigators contacted next of kin and consented them to participate in an interview. Of the seventy-two cases identified in 1999 suicides, only two people contacted refused to participate. Death Investigators found that next of kin appreciate talking about the decedent and wish to assist in research.

III. *Recruitment and Screening Procedures*

Any decedent that underwent a full-body CT scan is eligible to be included in the Decedent Database. As such, we received a list of decedents from the Office of the Medical Investigator and their next of kin information. This is the only recruitment that will occur. If the next of kin has changed phone numbers we will make no additional effort to locate them. Two calls are placed at different times of the day in order to account for schedules. After two unsuccessful attempts to reach the next of kin they will be deemed unreachable.

IV. Informed Consent Process

Graduate and undergraduate student employees contact next of kin and obtain informed consent via the telephone, with no signature required. Prior to contacting any next of kin, the students will undergo 40 hours of training prior to contacting next of kin. This is similar in time to the training that Death Investigators at the OMI undergo before processing scenes and talking to next of kin. This training involves: introduction and first meeting with the grief counselor at the OMI, training on the computer programs employed at the OMI, observing other Death Investigators speaking to next of kin, and on scene time.

Student employees also search through the OMI VAST database in order to gather information relevant to the 69 data variables we are collecting. For any missing data, the student employees will call next of kin, describe our study in a summary format and consent the individual. If they agree to participate a survey questionnaire will be asked over the telephone. The questions will all be concerning the 61 data variables in Table 1 (see attached surveys for adults and juveniles). The next of kin can withdraw their consent at any time and the data captured from their survey will be expunged from the system.

Spanish speaking participants are consented using a Spanish consent form and asked questions from a Spanish language survey. Some of the undergraduate/graduate students that are calling next of kin will be bilingual in order to aid in effective communication.

No next of kin minors will be consented to participate in the study. If cognitive impairment of next of kin is determined through conversation, the undergraduate/graduate student ends the conversation politely and the information is not recorded in the database. We do not contact any next of kin in prisons or jails.

There is no signed documentation of the interview process. This study involves minimal risk as we are only obtaining health and lifestyle information on next of kin that have passed away. We request a waiver of signed documentation of informed consent because the OMI ONLY has phone numbers for the next of kin, it is prohibitive to seek out next of kin's physical addresses and require an in-person meeting. However, informed consent will be obtained verbally. As such, we will only contact them on the phone and for a 20 to 45 minute interview. The next of kin's name and phone number will not be stored in the Decedent Database. There will be no link between the next of kin and the data collected in our database.

All data collected are designed to comply with HIPAA as the HIPAA Omnibus Final Rule states the PHI is PHI for 50 years after death. Dates of death and birth will only be years and zip code will only include the first three digits. As such none of the 18 PHI variables are being collected and thus no HIPAA authorization is required.

V. Data Collection Procedures

Data will be collected through a telephone survey that will last between 20 and 45 minutes. They will be asked about data variables lacking from the OMI VAST database. A maximum of 69 data variables will be collected by questioning the next of kin.

Next of kin's name and telephone number is stored in the OMI's VAST database, and thus that information if a part of public records. These will be accessed and student employees will contact NOK via the telephone.

Some student employees are bilingual and consent and interview those next of kin that are Spanish speakers. The next of kin does not need to be literate to participate in the study.

Before contacting next of kin information is gathered from the OMI's VAST database. The 69 data variables will be searched for within the OMI database. Each investigation collects different information, as such the next of kin will be asked about the data NOT collected by OMI during the initial case. The information collected will be de-identified prior to being entered into the Decedent Database.

While data collection is in process, data will be stored at the OMI in a password protected computer in a secure office. Data will be permanently housed at the Center for Advanced Research computing (CARC) in a secure area where a key code is necessary for entry.

VI. *Study Location(s)*

Office of the Medical Investigator (OMI) and the Center for Advanced Research Computing (CARC) are the two locations where data is housed. At the OMI student employees are responsible for calling next of kin and recording the data in the Decedent Database. The data is then stored at CARC in a secure area.

Student employees ONLY call next of kin at the OMI, which is highly secure and requires the use of badges for entry and exit. The OMI will provide office space and phones for the student employees to call next of kin in a private area.

VII. *Participant Compensation*

There is no compensation for participating in this research.

VIII. *Study Resources*

Facilities:

The New Mexico Scientific Laboratories building, a 196,399 ft² multi-agency secure building, houses the OMI. The OMI investigates any death in the state of New Mexico that is sudden, violent, untimely, unexpected, or in which the cause of death is unknown. The OMI investigates these deaths and performs roughly 2,000 autopsies per year. All autopsy services are conducted in Albuquerque in a state-of-the-art facility that includes both CT and MRI scanners for post-mortem imaging evaluation. All documentation is archived by the OMI and is available as required by public record statutes and regulations.

CARC is the UNM campus' supercomputing center and the largest academic computing center in the State of New Mexico, with over 2,200 cores, 15 TFlops aggregate compute power, and nearly 0.5 PB of RAID6 enterprise storage. CARC's resources are available to staff, faculty and students without charge. The center has 2,700 square feet of machine room space and supports advanced hardware and software for a diverse community of researchers at the University, spanning five Colleges and more than twenty departments.

Equipment:

The OMI opened a large, state of the art facility in 2010. The autopsy suite is outfitted with a 1.5 Tesla Siemens Sonata MR scanner as well as a Philips Brilliance Big Bore 16 CT scanner. The CT data gathered can be processed to create a 3-D image that can be rotated and viewed from any projection. These images are not a "likeness" of the body, but rather are a true representation of the acquired image data.

The OMI provides student employees the space and phones to contact next of kin in privacy.

Other resources:

J and J Technical Services is the IT consultant for the OMI. They are responsible for the “data dump” out of the OMI’s VAST database. This data determines what information (from the 69 data variables sought) will be asked to the next of kin during the interview.

EXPECTED RISKS/BENEFITS

I. *Potential Risks*

This research involves minimal risk to the participants. Next of kin are already regularly contacted by the OMI for information regarding the decedent. As always with contacting the next of kin, there is the potential to bring up memories of the decedent or feelings. The participants have access to the grief counselor at the OMI, if needed. Student workers may also experience emotions as a result of speaking with next of kin. They also have access to OMI’s grief counselor.

No identifiable information for the decedent is stored in the Decedent Database and no information on the next of kin is stored on the electronic database (Decedent Database). As such, a breach in confidentiality or privacy would not be detrimental to the participants. This complies with the HIPAA Omnibus Final Rule.

II. *Benefits*

There is no direct benefit to the participants for consenting to the study. There is however, great potential for societal benefits. With the creation of this Decedent Database with CT images and associated lifestyle and health information a plethora of anthropological, forensic, medical, etc. research can take place that cannot be conducted without access to the information gathered in this study to create the enhance database of information about decedents in New Mexico. This includes health disparities research, including research on the health of New Mexicans that can more directly affect those participating. Completing this project, in addition, will act as a model for other states to similarly complete such database to enhance research opportunities in other states.

III. *Privacy of Participants*

No information on the participants (next of kin) is stored. The health and lifestyle variables is available on a website ONLY to bona fide researchers. The researchers request access to the data, and after a review by the Center for Forensic Imaging at the OMI access may be granted. Any information that the participant views as sensitive about their deceased next of kin, and the study participant NOK does not want to be disclosed about their deceased NOK can be skipped in the survey and that information not captured by the researcher.

All interviews are conducted from inside the OMI where access is limited and secure and private space can be used. All information will be gathered on the phone and none in person.

IV. *Participant Complaints*

All complaints and concerns are routed to Dr. Heather Edgar at the Office of the Medical Investigator. Participants will be given her contact information as the PI, which will remain available to them after the study is completed.

STUDY DATA

I. *Data Management Procedures and Confidentiality*

Data is collected at the OMI from the OMI’s VAST database and from phone interviews with next of kin. All information is de-identified before leaving OMI. The data will then be transferred electronically to CARC at UNM.

WORKFLOW

1. Decedent CT dataset, metadata, and website

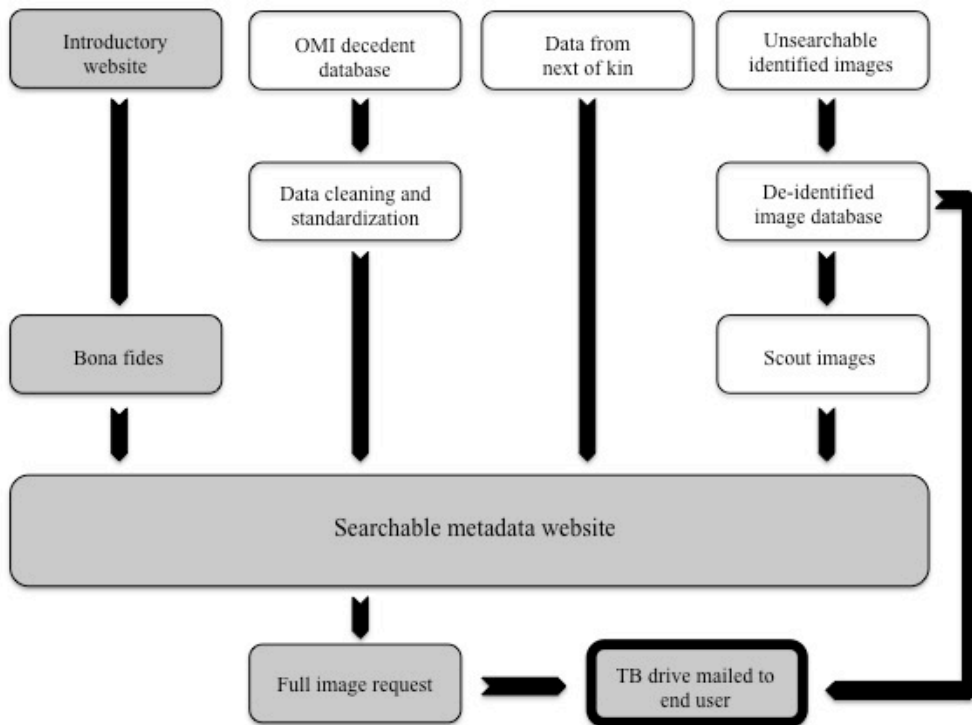
Numerous organizational meetings have occurred between the investigators and multiple on-campus collaborating institutions to ensure a logical flow for processing and storing data. The investigators met with representatives from the Center for Forensic Imaging, OMI's IT consulting company, the Radiology Department, the College of Arts and Sciences Website and Database Development group, and the Center for Advanced Research Computing (CARC).

The de-identified data is transferred to an Edge Workstation at CARC from OMI via a 1GB per second connection. This workstation acts as a buffer for the Research Storage Consortium (RSC) and ensure that there is no unauthorized access to the data. The RSC also houses the CT images.

CARC will store the images and data in perpetuity. The one-time fee for storage includes the unending hosting of the products of this grant. In the unlikely event that CARC is dismantled, the data will be transferred to LoboVault, UNM's institutional repository.

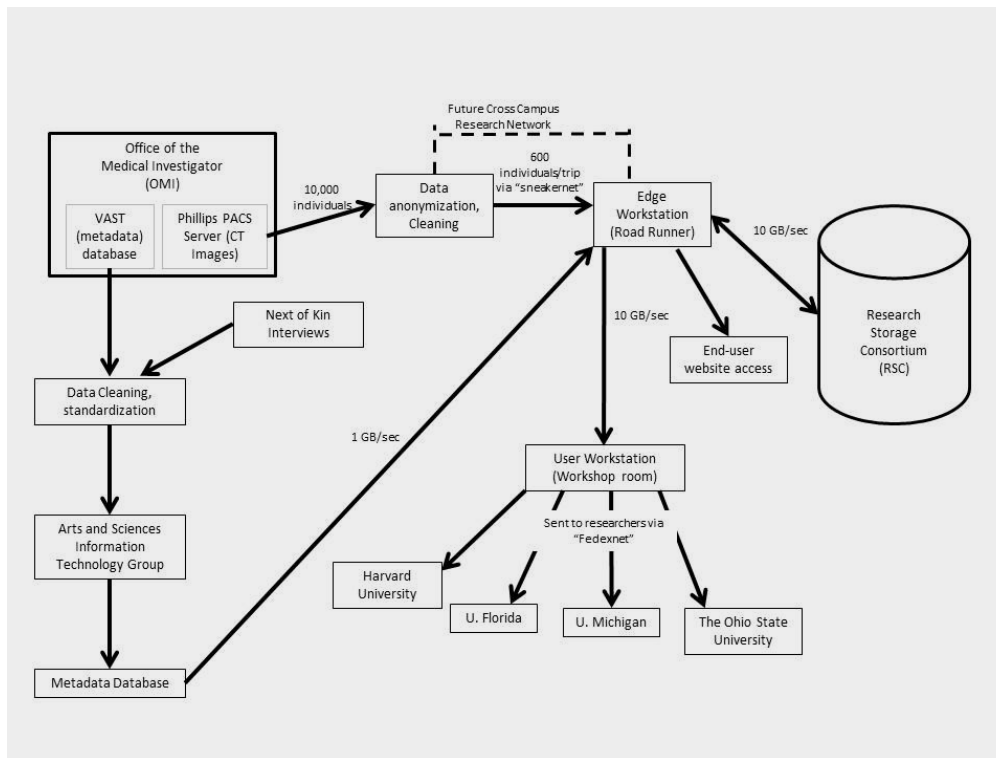
Figure 2 shows the workflow from start to finish, including the end-user experience. Figure 3 visualizes the data flow.

Figure 2. Workflow. Components shown in gray illustrate the **end-users experience** of the product described in project 1.



(delivery method modified from this image)

Figure 3. Data flow. The dashed line represents a possible tie-in to a 10/40/80 GB data line.



II. Data Analysis/Statistical Considerations

N/A

III. Participant Withdrawal

When a participant withdraws from the study any information gathered from the next of kin will be deleted from the record. For a participant to withdraw they must contact Dr. Heather Edgar. This information is given in the consent process.

Investigators and interviewers may withdraw a participant if they are deemed to be of diminished capacity and unable to consent to the study. Their information will not be entered into the database.

Data obtained from withdrawn participants will immediately be deleted from the Decedent Database.

PRIOR APPROVALS/REVIEWED AT OTHER IRBS

N/A

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Survey for Decedent Database-ADULTS

NOTE: Information from the OMI's VAST database will already include answers to some of these questions. That information will be gathered prior to NOK contact, so those questions will not be asked of NOK. What follows below are the complete list of questions; the subset not already answered from pre-existing information will be requested from the participant. In the questions below, the word "decedent" will be replaced with the decedent's name.

Please answer these questions to the best of your recollection. If there is a question to which you do not know the answer, just say, "I don't know."

1. Are you the next of kin for ___decedent___?
 - i. Yes
 1. What is your relationship to them?
 - ii. No
2. Are you over 18 years old?
 - i. Yes
 - ii. No
3. What year was ___decedent___ born?
4. What year did ___decedent___ die?
5. Was ___decedent___ a male or a female?
 - i. Male
 - ii. Female
 - iii. Other
6. What race was ___decedent___?
 - i. White
 - ii. Black or African American
 - iii. Asian
 - iv. Native Hawaiian or Pacific Islander
 - v. American Indian or Alaska Native
7. Was the ___decedent___ Hispanic?
 - i. Yes
 - ii. No
8. What country was ___decedent___ born in?
 - a. If other than USA: How many years had ___decedent___ lived in the United States?
9. Where were ___decedent___ parents born?
10. What was ___decedent___ zip code at the time of death?
 - a. ONLY record first three digits
11. Were ___decedent___ 's parents' upper, middle or lower class?
 - i. Upper
 - ii. Middle
 - iii. Lower
12. Did their parents own their own home when ___decedent___ was growing up?
 - i. Yes
 - ii. No
13. Was ___decedent___ upper, middle or lower class?
 - i. Upper
 - ii. Middle
 - iii. Lower
14. Did ___decedent___ own their home?
 - i. Yes
 - ii. No
15. What was the highest level of education that they had?
 - i. Did not graduate from High School

- ii. High school or GED
 - iii. Some college
 - iv. Vocational School
 - v. College Graduate
 - vi. Postdoctoral degree
16. At their time of death, what did ___decedent___ do for a living?
17. What was their major occupation in life?
18. Did they hold other types of jobs in the past?
19. Were they exposed to strenuous lifting at work?
- i. Yes
 - ii. No
20. Were they exposed to carcinogens or lethal substances?
- i. Yes
 - ii. No
21. Did ___decedent___ serve in the military?
- i. Yes
 - ii. No
- b. if yes: How long did they serve?
22. Did ___decedent___ smoke at the time of death?
- i. Yes
 - ii. No
23. Did ___decedent___ smoke in the past?
- i. Yes
 - ii. No
24. Did ___decedent___ drink alcohol excessively at the time of death?
- i. Yes
 - ii. No
25. Did ___decedent___ drink alcohol excessively in the past?
- i. Yes
 - ii. No
26. Did ___decedent___ take illegal drugs at the time of death?
- i. Yes
 - ii. No
27. Did ___decedent___ take illegal drugs in the past?
- i. Yes
 - ii. No
28. Did ___decedent___ participate in any habitual or repetitive activities?
- i. Yes
 - ii. No
- b. If yes, what activities or hobbies?
29. Did ___decedent___ have any dietary restrictions? Vegetarian? Vegan?
- i. Yes
 - ii. No
- b. If yes, what restrictions?
30. Did ___decedent___ have dental problems?
- i. Yes
 - ii. No
31. What was their dental health like as an adult?
- i. Excellent
 - ii. Good
 - iii. Poor
32. What was their dental health like as a child?
- i. Excellent

- ii. Good
 - iii. Poor
33. Did ___decedent___ have any medical diagnoses?
- i. Yes
 - ii. No
- b. What were they?
34. Was ___decedent___ on any medications at the time of death?
35. Did ___decedent___ break a bone at any time?
- i. Yes
 - ii. No
- b. If yes: what bones did they break?
36. Did ___decedent___ have any implanted devices?
- i. Yes
 - ii. No
- b. If yes: what type?
37. If female: Number of pregnancies?
38. If female: Number of live births?
39. What was ___decedent___ weight at birth?
40. Did ___decedent___ have any congenital abnormalities/birth defects?
- i. Yes
 - ii. No
- b. If yes, what were they?
41. Did ___decedent___ have a family history of cancer?
- i. Yes
 - ii. No
42. Did ___decedent___ have a history of radiation therapy?
- i. Yes
 - ii. No
43. Did ___decedent___ have a history of facial trauma?
- i. Yes
 - ii. No
44. Did ___decedent___ have any genetic disorders?
- i. Yes
 - ii. No
- b. If yes, What were they?
45. Did ___decedent___ have a family history of genetic disorders?
- i. Yes
 - ii. No
- b. If yes, What were they?
46. Did ___decedent___ have scoliosis?
- i. Yes
 - ii. No
47. Did ___decedent___ have a history of plastic surgery?
- i. Yes
 - ii. No
48. What was ___decedent___'s surgical history?
49. What was the primary cause of death?
50. What were the contributing factors to death?
51. Where did ___decedent___ die?
52. What did ___decedent___ weigh when he/she died?
53. How tall was ___decedent___?
54. Where was ___decedent___'s family from?
55. Was ___decedent___ left or right handed?

- a. Left
 - b. Right
56. Is there other information about ___decedent___ that you think it would be helpful for researchers to know?

Survey for Decedent Database- JUVENILES

NOTE: Information from the VAST database will already include answers to some of these questions. That information will be gathered prior to NOK contact, so those questions will not be asked of NOK. What follows below are the complete list of questions; the subset not already answered from preexisting information will be requested from the participant. In the questions below, the word “decedent” will be replaced with the decedent’s name.

Please answer these questions to the best of your recollection. If there is a question to which you do not know the answer, just say, “I don’t know.”

1. Are you the next of kin for ___decedent___?
 - i. Yes
 1. What is your relationship to them?
 - ii. No
2. Are you over 18 years old?
 - i. Yes
 - ii. No
3. What year was ___decedent___ born?
4. What year did ___decedent___ die?
5. Was ___decedent___ a male or a female?
 - i. Male
 - ii. Female
 - iii. Other
6. What race was ___decedent___?
 - i. White
 - ii. Black or African American
 - iii. Asian
 - iv. Native Hawaiian or Pacific Islander
 - v. American Indian or Alaska Native
7. Is the ___decedent___ Hispanic?
 - i. Yes
 - ii. No
8. What country was ___decedent___ born in?
 - a. If other than USA: How many years had ___decedent___ lived in the United States?
9. Where were ___decedent___ parents born?
10. What was ___decedent___ zip code at the time of death?
 - a. ONLY record first three digits
11. Were ___decedent___ ‘s parents’ upper, middle or lower class?
 - i. Upper
 - ii. Middle
 - iii. Lower
12. Did their parents own their own home when ___decedent___ was growing up?
 - i. Yes
 - ii. No
13. If aged 5-18 years, was ___decedent___ enrolled in school?
 - a. If no, What was the last grade of school completed?
14. Did ___decedent___ participate in any habitual or repetitive activities?

- i. Yes
 - ii. No
 - b. If yes, what activities or hobbies?
15. Did ___decedent___ have any dietary restrictions? Vegetarian? Vegan?
- i. Yes
 - ii. No
- b. If yes, what restrictions?
16. Did ___decedent___ have dental health problems?
17. What was their dental health like?
18. Did ___decedent___ have any medical diagnoses?
- a. What were they?
19. Was ___decedent___ on any medications at the time of death?
- i. Yes
 - ii. No
- b. If yes, What were they?
20. Did ___decedent___ break a bone at any time?
- i. Yes
 - ii. No
- b. If yes: what bones did they break?
21. Did ___decedent___ have any implanted devices?
- i. Yes
 - ii. No
- b. If yes: what type?
22. What was ___decedent___ weight at birth?
23. Did ___decedent___ have any congenital abnormalities?
- i. Yes
 - ii. No
24. Did ___decedent___ have a family history of cancer?
- i. Yes
 - ii. No
25. Did ___decedent___ have a history of radiation therapy?
- i. Yes
 - ii. No
26. Did ___decedent___ have a history of facial trauma?
- i. Yes
 - ii. No
27. Did ___decedent___ have any genetic disorders?
- i. Yes
 - ii. No
28. Did ___decedent___ have a family history of genetic disorders?
- i. Yes
 - ii. No
- b. If yes, what were they?
29. Did ___decedent___ have scoliosis?
- i. Yes
 - ii. No
30. Did ___decedent___ have a history of plastic surgery?
- i. Yes
 - ii. No
31. What was ___decedent___'s surgical history?
32. What was the primary cause of death?
33. What were the contributing factors to death?

34. Where did ___decedent___ die?
35. What did ___decedent___ weigh when he/she died?
36. How tall was ___decedent___?
37. Where was ___decedent___'s family from?
38. Was ___decedent___ left or right handed?
 - i. Left
 - ii. Right
39. Is there other information about ___decedent___ that you think it would be helpful for researchers to know?

Encuesta para la base de datos de fallecidos – ADULTOS

ANOTACIÓN: La información de la base de datos VAST ya va a contener las respuestas de algunas de esas preguntas. Vamos a coleccionar esa información antes de contactar al pariente más cercano, así que no le/la vamos a poner aquellas preguntas en la entrevista. Lo siguiente es una lista completa de preguntas. Solo vamos a pedir respuestas de los participantes para la parte que no haya sido contestado previamente por parte de la información preexistente. En las preguntas siguientes, la palabra “fallecido” será sustituida por el nombre del fallecido.

Por favor responde estas preguntas de acuerdo a su conocimiento. Si hay alguna pregunta a la que no sabe la respuesta, simplemente puede decir “No lo sé.”

1. ¿Es usted el/la pariente más cercano/a de ___fallecido___?
 - i. Sí
 1. ¿cuál es su relación con ellos ?
 - ii. No
2. ¿Es usted mayor de 18 años?
 - i. Sí
 - ii. No
3. ¿En qué año nació ___fallecido___?
4. ¿En qué año falleció ___fallecido___?
5. ¿Fue ___fallecido___ hombre o mujer?
 - i. Hombre
 - ii. Mujer
 - iii. Otro
6. ¿A qué raza perteneció ___fallecido___?
 - i. Blanco
 - ii. Negro o Afro Americano
 - iii. Asiático
 - iv. Nativo de Hawái o isleño del Pacífico
 - v. Amerindio o Nativo de Alaska
7. ¿Fue ___fallecido___ hispanico?
 - i. Sí
 - ii. No
8. ¿En qué país nació ___fallecido___?
 - a. Si otro que E.E.U.U: ¿Por cuántos años vivió ___fallecido___ en los Estados Unidos?
9. ¿Dónde nacieron los padres de ___fallecido___?
10. ¿Cuál fue el código postal de ___fallecido___ al tiempo de su muerte?
 - a. Apunta UNICAMENTE las tres primeras cifras
11. ¿Los padres de ___fallecido___ pertenecieron a la clase social alta, media o baja?
 - i. Alta
 - ii. Media
 - iii. Baja

12. Cuando ____fallecido____ estaba creciendo, ¿sus padres poseyeron su propia casa?
- Sí
 - No
13. ¿Pertenebió ____fallecido____ a la clase social alta, media o baja?
- Alta
 - Media
 - Baja
14. ¿____fallecido____ tenía su propia casa?
- Sí
 - No
15. ¿Cuál fue el nivel de educación más alto que tenía?
- No graduó de High School (Preparatoria)
 - High School o GED (Preparatoria)
 - Algo de tiempo en Universidad sin graduación
 - Escuela de formación profesional
 - Egresado de Universidad
 - Posdoctorado
16. Al tiempo de su muerte, ¿cómo se ganó la vida ____fallecido____?
17. ¿Cuál fue su principal ocupación en su vida?
18. ¿Tenía otros trabajos o actividades profesionales en el pasado?
19. ¿En su trabajo, tenía que levantar cosas pesadas?
- Sí
 - No
20. ¿Estaba expuesto a carcinógenos o sustancias letales?
- Sí
 - No
21. ¿Sirvió ____fallecido____ en el ejército?
- Sí
 - No
- b. En caso que sí: ¿Cuánto tiempo sirvió?
22. ¿Solía ____fallecido____ fumar al tiempo de su muerte?
- Sí
 - No
23. ¿Solía ____fallecido____ fumar en el pasado?
- Sí
 - No
24. ¿Solía ____fallecido____ tomar alcohol de manera excesiva al tiempo de su muerte?
- Sí
 - No
25. ¿Solía ____fallecido____ tomar alcohol de manera excesiva en el pasado?
- Sí
 - No
26. ¿Solía ____fallecido____ tomar drogas ilegales al tiempo de su muerte?
- Sí
 - No
27. ¿Solía ____fallecido____ tomar drogas ilegales en el pasado?
- Sí
 - No
28. ¿Solía ____fallecido____ participar en alguna actividad habitual of repetitiva?
- Sí
 - No
- b. En caso que sí, ¿qué actividades hizo o qué pasatiempos tuvo?
29. ¿Tenía ____fallecido____ restricciones alimenticios? Fue vegetariano/a o vegano/a?

- i. Sí
 - ii. No
- b. En caso que sí, ¿cuál restricciones tenía?
30. ¿Tenía ____fallecido____ problemas dentales?
31. ¿Cómo fue el estado de su salud dental como adulto?
- i. Excelente
 - ii. Bien
 - iii. Mal
32. ¿Cómo fue el estado de su salud dental como adulto?
- i. Excelente
 - ii. Bien
 - iii. Mal
33. ¿Tuvo ____fallecido____ algún diagnóstico médico?
- i. Sí
 - ii. No
- b. ¿Cuáles fueron?
34. Al tiempo de su muerte ¿estaba ____fallecido____ tomando alguna medicina?
- i. Sí
 - ii. No
- b. En caso que sí, ¿cuáles fueron?
35. ¿____fallecido____ se fracturó un hueso alguna vez?
- i. Sí
 - ii. No
- b. En caso que sí: ¿qué huesos se fracturó?
36. ¿Tenía ____fallecido____ algún aparato implantado?
- i. Sí
 - ii. No
- b. En caso que sí: ¿qué tipo?
37. Si fue mujer: ¿Cuál es el número de embarazos?
38. Si fue mujer: ¿Cuál es el número de nacidos vivos?
39. ¿Cuál fue el peso al nacer de ____fallecido____?
40. ¿Tenía ____fallecido____ alguna anomalía congénita?
- i. Sí
 - ii. No
- b. En caso que sí, ¿cuáles fueron?
41. La familia de ____fallecido____ ¿tuvo una historia de cáncer?
- i. Sí
 - ii. No
42. ¿Recibió ____fallecido____ terapia de radiación alguna vez?
- i. Sí
 - ii. No
43. ¿Sufrió ____fallecido____ traumatismos de la cara alguna vez?
- i. Sí
 - ii. No
44. ¿Tenía ____fallecido____ algún trastorno genético?
- i. Sí
 - ii. No
- b. En caso que sí, ¿cuáles fueron?
45. ¿Tenía ____fallecido____ una historia de trastornos genéticos en su familia?
- i. Sí
 - ii. No
- b. En caso que sí, ¿cuáles fueron?
46. ¿Tenía ____fallecido____ escoliosis?

- i. Sí
 - ii. No
47. ¿Recibió ____fallecido____ cirugía plástica?
- i. Sí
 - ii. No
48. ¿Cuál fue la historia quirúrgica de ____fallecido____?
49. ¿Cuál fue la causa primaria de la muerte?
50. ¿Qué factores contribuyeron a la muerte?
51. ¿Dónde murió ____fallecido____?
52. ¿Cuánto pesó ____fallecido____ al tiempo de su muerte?
53. ¿Qué tan alto/a fue ____fallecido____?
54. ¿De dónde viene la familia de ____fallecido____?
55. ¿Fue ____fallecido____ zurdo o diestro?
- i. Zurdo
 - ii. Diestro
56. ¿Puede usted pensar en alguna otra información sobre ____fallecido____ que podría ser útil para los investigadores científicos?

Encuesta para la base de datos de fallecidos – MENORES DE EDAD

ANOTACIÓN: La información de la base de datos VAST ya va a contener las respuestas de alunas de esas preguntas. Vamos a coleccionar esa información antes de contactar al pariente más cercano, así que no le/la vamos a poner aquellas preguntas en la entrevista. Lo siguiente es una lista completa de preguntas. Solo vamos a pedir respuestas de los participantes para la parte que no haya sido contestado previamente por parte de la información preexistente. En las preguntas siguientes, la palabra “fallecido” será sustituida por el nombre del fallecido.

Por favor responde estas preguntas de acuerdo a su conocimiento. Si hay alguna pregunta a la que no sabe la respuesta, simplemente puede decir “No lo sé.”

1. ¿Es usted el/la pariente más cercano/a de ____fallecido____?
 - i. Sí
 1. ¿cuál es su relación con ellos ?
 - ii. No
2. ¿Es usted mayor de 18 años?
 - i. Sí
 - ii. No
3. ¿En qué año nació ____fallecido____?
4. ¿En qué año falleció ____fallecido____?
5. ¿Fue ____fallecido____ hombre o mujer?
 - i. Hombre
 - ii. Mujer
 - iii. Otro
6. ¿A qué raza perteneció ____fallecido____?
 - i. Blanco
 - ii. Negro o Afro Americano
 - iii. Asiático
 - iv. Nativo de Hawái o isleño del Pacífico
 - v. Amerindio o Nativo de Alaska
7. ¿Fue ____fallecido____ hispánico?
 - i. Sí
 - ii. No
8. ¿En qué país nació ____fallecido____?

- a. Si otro que E.E.U.U: ¿Por cuántos años vivió ____fallecido____ en los Estados Unidos?
9. ¿Dónde nacieron los padres de ____fallecido____?
10. ¿Cuál fue el código postal de ____fallecido____ al tiempo de su muerte?
- a. Apunta UNICAMENTE las tres primeras cifras
11. ¿Los padres de ____fallecido____ pertenecieron a la clase social alta, media o baja?
- Alta
 - Media
 - Baja
12. Cuando ____fallecido____ estaba creciendo, ¿sus padres poseyeron su propia casa?
- Sí
 - No
13. Si ____fallecido____ tenía entre 5 y 18 años, ¿estaba inscrito/a en la escuela?
- a. En caso que no, ¿Cuál fue el último grado que completó?
14. ¿Solía ____fallecido____ participar en alguna actividad habitual of repetitiva?
- Sí
 - No
- b. En caso que sí, ¿qué actividades hizo o qué pasatiempos tuvo?
15. ¿Tenía ____fallecido____ restricciones alimenticios? Fue vegetariano/a o vegano/a?
- Sí
 - No
- b. En caso que sí, ¿cuál restricciones tenía?
16. ¿Tenía ____fallecido____ problemas dentales?
17. ¿Cómo fue el estado de su salud dental?
18. ¿Tuvo ____fallecido____ algún diagnóstico médico?
- a. ¿Cuáles fueron?
19. Al tiempo de su muerte ¿estaba ____fallecido____ tomando alguna medicina?
- Sí
 - No
- b. En caso que sí, ¿cuáles fueron?
20. ¿____fallecido____ se fracturó un hueso alguna vez?
- Sí
 - No
- b. En caso que sí: ¿qué huesos se fracturó?
21. ¿Tenía ____fallecido____ algún aparato implantado?
- Sí
 - No
- b. En caso que sí: ¿qué tipo?
22. ¿Cuál fue el peso al nacer de ____fallecido____?
23. ¿Tenía ____fallecido____ alguna anomalía congénita?
- Sí
 - No
24. La familia de ____fallecido____ ¿tuvo una historia de cáncer?
- Sí
 - No
25. ¿Recibió ____fallecido____ terapia de radiación alguna vez?
- Sí
 - No
26. ¿Sufrió ____fallecido____ traumatismos de la cara alguna vez?
- Sí
 - No
27. ¿Tenía ____fallecido____ algún trastorno genético?
- Sí
 - No

- b. En caso que sí, ¿cuáles fueron?
28. ¿Tenía ____fallecido____ una historia de trastornos genéticos en su familia?
- Sí
 - No
- b. En caso que sí, ¿cuáles fueron?
29. ¿Tenía ____fallecido____ escoliosis?
- Sí
 - No
30. ¿Recibió ____fallecido____ cirugía plástica?
- Sí
 - No
31. ¿Cuál fue la historia quirúrgica de ____fallecido____?
32. ¿Cuál fue la causa primaria de la muerte?
33. ¿Qué factores contribuyeron a la muerte?
34. ¿Dónde murió ____fallecido____?
35. ¿Cuánto pesó ____fallecido____ al tiempo de su muerte?
36. ¿Qué tan alto/a fue ____fallecido____?
37. ¿De dónde viene la familia de ____fallecido____?
38. ¿Fue ____fallecido____ zurdo o diestro?
- Zurdo
 - Diestro
39. ¿Puede usted pensar en alguna otra información sobre ____fallecido____ que podría ser útil para los investigadores científicos?

The University of New Mexico
Consent to Participate in Research
Short Form

Facilitating forensic research in multiple fields using a unique computed tomography dataset

You are being asked to participate in a research study that is being conducted by Heather Edgar, Ph.D., who is the Principal Investigator from the Maxwell Museum of Anthropology and Gary Hatch, M.D. Co-Investigator, from the Office of the Medical Investigator. The goal of this research is to collect information about individuals that received an autopsy at the Office of the Medical Investigator for a database. This information, on health and lifestyle, will be associated with CT images created during the autopsy procedure. We seek to make these images useful to researchers within Anthropology, Forensics, Medicine and other fields.

You are being asked to participate in this study because you are the next of kin to a person that underwent an autopsy at the Office of the Medical Investigator since 2010. If you agree to participate, we ask you to complete a phone interview that should last between 20 and 45 minutes. We will ask health and lifestyle question regarding your deceased next of kin. These data will be put into a database for qualified researchers to use to conduct research.

Your name and phone number will not be listed in the database and therefore the risk to you is minimal. There are no direct benefits from participating in this research. However, it will allow for a large amount of research to take place.

If you need to speak with the Heather Edgar, the PI, or another member of this study, you may call 505-277-3535 or, outside of public service hours or on holidays, 505-277-4415, at any time.

If you have any questions about your rights as a research subject, or about what you should do in case of any harm to you, you may contact the Office of the Institutional Review Board by calling (505) 277-2644.

Your participation in this research study is completely voluntary, and you will not incur any sanctions or loss of benefits if you refuse to participate or decide to withdraw. You may withdraw your consent at any time by contacting Heather Edgar. At such time any information you have provided will be deleted from the database.

If you agree to voluntarily participate in this research we will conduct a 20 to 45 minute interview over the telephone. Your participation in the interview indicates your agreement to participate in the study. Of course, you can stop your participation at any time and may choose not to answer specific questions.

Consentimiento Informado para Participar en un Estudio de Investigación

Versión Corta / Abreviada

La facilitación de investigaciones científicas en múltiples campos de estudio usando un conjunto de datos excepcional procediendo de tomografía computada.

Se les invita a participar en un estudio de investigación conducido por Heather Edgar, Ph.D. del *Maxwell Museum of Anthropology* (Maxwell Museo de Antropología), la cual es la investigadora principal, y por Gary Hatch, M.D. de la Oficina del Investigador Médico, en función del coinvestigador. El objetivo de este estudio es la colección de información sobre individuos que recibieron una autopsia en la Oficina del Investigador Médico para una base de datos. Esta información acerca de la salud y el estilo de vida va a ser asociada a imágenes de tomografía computada, que se crearon durante el proceso de la autopsia. Esas imágenes queremos rendir útiles para investigadores de los campos de antropología, estudios forenses, medicina e otras disciplinas.

Se les invita a participar en este estudio porque usted es el/la pariente más cercano/a de una persona que recibió una autopsia en la Oficina del Investigador Médico desde 2010. Si acepta participar, le pedimos completar una entrevista telefónica que debería durar ente 20 y 45 minutos. Le haremos preguntas acerca de la salud y el estilo de vida de su pariente fallecido. Vamos a introducir esos datos en una base de datos para que lo usen investigadores calificados para conducir estudios de investigación.

No vamos a incluir su nombre y número de teléfono en la base de datos, así que el riesgo es mínimo para usted. No hay beneficios directos resultando de la participación en este estudio de investigación. Aun así, la investigación va a permitir realizar una gran cantidad de estudios que pueden proveer beneficios a la sociedad más amplia.

Si desea hablar con Heather Edgar, la investigadora principal, o con otro miembro asociado a este estudio, puede llamar al número 505-277-3535 a cualquier hora. Si nos llama en días festivos o fuera del horario de oficina, por favor déjanos un mensaje al dicho número, y vamos a devolver su llamada lo antes posible.

Si tiene cualquier pregunta acerca de sus derechos como participante en un estudio de investigación, o acerca de que debe hacer en caso de cualquier tipo de daño hacía usted, puede contactar a la oficina de la Junta de Revisión Institucional (*Institutional Review Board*) llamando al número (505) 277-2644.

Su participación en este estudio es completamente voluntario. Usted no va a sufrir ningunas sanciones ni pérdida de beneficios si decide rechazar la participación o retirarse del estudio. Puede retirar su consentimiento en cualquier momento contactando a Heather Edgar. Es ese caso, vamos a eliminar toda su información que nos dio de la base de datos.

Si acepta participar voluntariamente en este estudio de investigación, vamos realizar una entrevista telefónica de 20 a 45 minutos. Su participación en la entrevista indica que usted es de acuerdo con la participación en este estudio. Por supuesto puede dejar de participar en cualquier momento. También puede decidir no contestar ciertas preguntas.