



HARRIS COUNTY, TEXAS

Office of Budget Management 1001 Preston; Suite 500 Houston, TX 77002 713-274-1135
Grants Coordination Section - Conveyance Form Application Award

Amendment

Department Name / Number		DUNs	Grant Title
Institute of Forensic Sciences - 270		072206378	Children's Justice: Improving the Detection of Pediatric Skeletal Injuries
Funding Source: U.S. Department of Health & Human Services: CFDA# 93.643		Grant Agency: Texas Center for the Judiciary	
Program Year: 9 th		Program Ending:	
Grant Begin Date: 10/01/2019		Grant End Date: 03/31/2022	
Grant Org. Key: 1000000439 ZYU27001		If applicable, Prior Year Org. Key: ZYT27001	

Grant Description:

The Children's Justice Act (CJA) is a federal award granted to each state to develop, establish, and operate programs designed to improve (1) the handling of child abuse and neglect cases; (2) the handling of cases of suspected child abuse or neglect related fatalities; (3) the investigation and prosecution of cases of child abuse and neglect; and (4) the handling of cases involving children with disabilities or serious health-related problems who are the victims of abuse or neglect. The Texas Center for the Judiciary (Texas Center) has been designated by the Governor's Office to administer CJA funds in Texas. The Texas Center was created in 1973 by members of the Judicial Section of the State Bar.

	Revised Total Budget	New Grant Funded	Orig. Grant Funded	New County Funded	Orig. County Funded
Salary & Benefits	\$159,733.00	\$80,640.00	\$79,093.00	\$0.00	\$0.00
Non-Labor	\$81,225.00	\$22,827.00	\$58,398.00	\$0.00	\$0.00
Sub Tot. Incremental Cost	\$240,958.00	\$103,467.00	\$137,491.00	\$0.00	\$0.00
Indirect Cost	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
TOTALS	\$240,958.00	\$103,467.00	\$137,491.00	\$0.00	\$0.00

* under development

Full Time Equivalent Positions

Date Guidelines are Available

% of Positions Paid by Grant

Grant Submittal Deadline Date

Grant Discussion:

This item relates to an award that was accepted by Commissioners Court on 9/24/19. The purpose of the item is to extend the end date of the grant through 3/31/22. The additional time will allow the Department to complete the goals and objectives of the grant, which were delayed as a result of the COVID-19 pandemic.

County Funded Cost Projection

Year	Required	Discretionary
2020	-	-
2021	-	-
2022	-	-
2023	-	-
2024	-	-

Completed by: Cadow, Eric

Date: 9/7/2024

Reviewed by: _____

Date: _____

THE STATE OF TEXAS §
§
COUNTY OF HARRIS §

On this date, _____, the Commissioners Court of Harris County, Texas, sitting as the Governing body of Harris County, at a regular meeting of the Court, upon motion of Commissioner _____, seconded by Commissioner _____, duly put and carried;

IT IS ORDERED that County Judge Lina Hidalgo or her designee be and is hereby authorized to approve for and on behalf of Harris County, Texas, permission to extend the award period for the Children’s Justice Act Program – Texas Center for the Judiciary 2020 Grant Award for the project titled **“Improving the Detection of Pediatric Skeletal Injuries through the Development of Best Practices and Practitioner Training”** and to sign any ancillary documents pertaining thereto. The new grant period is October 1, 2019 through March 31, 2022. The total project cost for this grant is \$240,958.00.

Grant Number: CJA-20-05A3



CHILDREN'S JUSTICE ACT PROGRAM · TEXAS CENTER FOR THE JUDICIARY
 1210 San Antonio, Suite 800 · Austin, Texas 78701
 (512) 482-8986 PHONE · (512) 469-7664 FAX

Grant Number – CJA-20-05A3

Children's Justice Act Program Grant Award

THIS AGREEMENT IS MADE BY and between the Texas Center for the Judiciary, hereinafter called TCJ, and **Harris County**, hereinafter called Subgrantee, and becomes effective on the first day of the grant period as specified below.

Grant Period: This Agreement becomes effective 10/1/2019 and ends 3/31/2022 unless terminated or otherwise modified.

Maximum Amount Eligible for Reimbursement in FY20/FY21: \$240,958

Project Title: Improving the Detection of Pediatric Skeletal Injuries through the Development of Best Practices and Practitioner Training

Federal Awarding Agency: Department of Health & Human Services (DHHS), Administration for Children and Families (ACF).

Pass-Through Entity: Texas Center for the Judiciary

Federal Award Identification Number: 1901TXCJA1; 2001TXCJA1

Federal Project Description: 2019 CJA; 2020 CJA

Federal Award Date: September 5, 2019; September 15, 2020

Total Federal Funding Amount: \$1,455,189.30; \$1,467,464

Legal References: CJA funds are awarded under the provisions of Section 107(a), (b), (c), (d), (e) and (f) of the Child Abuse Prevention and Treatment Act (CAPTA) (42 U.S.C. 5106 et seq.) as amended by Public Law 111-320 enacted December 20, 2010; and the Victims of Crime Act of 1984, as amended (42 U.S.C. 10601 et seq.).

CFDA Number and Name: 93.643 Children's Justice Act Grants to States

ACF Name and Number: The ACF name for the CJA grant is Children's Justice Act grant, and the ACF grant document number awarded to TCJ is G-1901TXCJA1; G-2001TXCJA1.

Texas CJA	
Category	Amount
100: Salaries	\$ 106,310.00
200: Fringe	\$ 53,423.00
300: Travel	\$ 0.00
400: Equipment	\$ 1793.00
500: Admin/Operating	\$ 3500.00
600: Contractual	\$ 75,932.00
TOTAL	\$ 240,958.00

By their signature, the subgrantee agrees

- To expend CJA funds as reasonable and necessary to carry out the grant program as provided grant award and approved budget.
- To maintain appropriate documentation for all CJA grant expenditures.
- To abide by the general terms and conditions of the grant award.
- That a violation of any term of the grant award or any applicable federal grant regulation may result in the CJA Program Director placing a temporary hold on grant funds, and subject to CJA Task Force approval, permanently de-obligating all or part of the grant funds, requiring reimbursement for funds already spent, or barring the organization from receiving future grants.

Disbursement is subject to the availability of funds and disbursed monthly on a reimbursement basis unless otherwise stated in the grant agreement.

SUBGRANTEE

By _____
[Authorized Signature]

[Printed Name]

[Title]

[Legal Name of Agency]

Date: _____

TEXAS CHILDREN'S JUSTICE ACT PROGRAM

By _____
Hon. Mark D. Atkinson
CEO
Texas Center for the Judiciary

Date: _____

Harris County Institute of Forensic Sciences

Children's Justice Act Program

Texas Center for the Judiciary

Request for Extension of CJA Grant #20-05

Project Title:

Improving the detection of pediatric skeletal injuries through the development of best practices and practitioner training: a prospective comparison of the sensitivity of computed-tomography, conventional radiography, and direct visual examination

Key Words:

child abuse, forensic anthropology, forensic pathology, pediatric radiology, skeletal injuries, imaging techniques

Principal Investigator: Jason M. Wiersema, PhD, D-ABFA

Co-Principal Investigators: Miriam E. Soto Martinez, PhD
Susan John, MD
Deborrah C. Pinto, PhD, D-ABFA
Julie Fleischman, PhD
HaiThuy Nguyen, MD
Angela Bachim, MD

Contact: Dr. Jason M. Wiersema
Harris County Institute of Forensic Sciences
1861 Old Spanish Trail
Houston, TX 77054
Jason.Wiersema@ifs.hctx.net

Table of Contents

Project Scope of Work 3
 Project Activities & Rationale3
Evaluation Plan.....4
Sustainable Outcomes5

Project Scope of Work

Project Activities & Rationale

Harris County Institute of Forensic Sciences (“HCIFS”) respectfully requests a 6-month grant extension to March 31, 2022 to expend the remaining grant funds.

The direct and indirect effects of the on-going COVID19 pandemic have resulted in delays in the procurement of contracts and research activities. A 6-month extension is requested to complete the goals and objectives of the grant. The proposed new grant term would be October 1, 2021 to March 31, 2022.

The goal of the proposed project remains unchanged. The goal is to improve assessments of suspected child abuse cases by increasing both the sensitivity and specificity of skeletal injury detection in the pediatric population (living and deceased). In order to achieve this goal, the following objectives will be addressed:

1. Evaluate the sensitivity and specificity of three modalities (i.e. conventional radiography, CT, gross visual examination) used to detect rib and extremity fractures in a pediatric autopsy sample.
2. Identify factors that decrease the effectiveness of each modality for detecting skeletal injuries.
3. Evaluate the incidence of skeletal injuries considered highly specific for physical abuse in a pediatric autopsy population.
4. Maximize the effectiveness of child abuse assessments by developing best practices for detecting skeletal injuries in the pediatric population and providing training to clinicians, radiologists, and forensic anthropologists.

Proposed Timeline:

- October 2021-January 2022: The full-time employee (FTE) will work with grants management at the HCIFS to obtain new and/or amend current purchase orders and/or contracts with the McGovern Medical School of the University of Texas Health Science Center – Memorial Hermann Hospital and Baylor College of Medicine – Texas Children’s Hospital.

Whole-body CT scans will be obtained from up to 50 deceased infants prior to their transport from the hospital to the HCIFS for autopsy. The CT data will be sent to a pediatric radiology consultant at the Baylor College of Medicine for post processing. The pediatric radiologist will use the CT data to develop three-dimensional renderings of the CT images. Two pediatric radiologists will review the CT images and record all noted instances of skeletal injuries. For each infant, a report discussing the findings will be provided by the pediatric radiologist for inclusion with the autopsy report. Prior to autopsy, each infant will receive a radiographic skeletal survey conducted by the FTE at the HCIFS. Post-autopsy, the FTE will perform a rib exam on all infants and record all observed injuries in the IID.

Upon request by the pathologist, a full PSE will be performed by a forensic anthropologist, which involves a gross examination of all long bones for injuries. All findings will be recorded in the IID along with relevant information obtained from CPS investigations and medical records.

After removing all personal identifying information, the FTE will send the conventional radiographs to two pediatric radiologist and a forensic anthropologist for review. The pediatric radiologists and forensic anthropologist will review each set of radiographs and record all instances of skeletal injury. The radiologists and anthropologist will report their findings back to the FTE to record in the IID.

- February 2022-March 2022: After all skeletal injury data have been recorded in the IID, the FTE will extract these data from the database and perform a statistical analysis in coordination with the HCIFS staff statistician. For each case, the skeletal injuries identified using each modality (CT, conventional radiography, and gross visual examination) will be compared to assess the sensitivity and specificity of each modality. Discrepancies between findings will be used to identify factors that may decrease the efficacy of each modality for detecting skeletal injuries. These findings will be used to develop best practices for detecting skeletal injuries in the pediatric population. Additionally, the frequency of skeletal injuries considered highly specific for physical abuse will be assessed based on cause of death to determine the incidence of these types of injuries in pediatric autopsy cases classified as homicide vs other manners of death.

The FTE and the pediatric radiologists will disseminate the research findings to the forensic and medical communities through presentations and publication of manuscripts. The project findings may be presented at the following conferences: Radiological Society of North America, Society for Pediatric Radiology, and/or the American Academy of Forensic Sciences Annual Meeting. Additionally, at least two manuscripts will be prepared to submit to peer-reviewed journals, such as the journals of *Child Abuse and Neglect* or *Pediatrics* to target the clinical community and the *Journal of Forensic Sciences* to reach the forensic and medicolegal community.

- To avoid disrupting the standard autopsy protocol at the HCIFS, throughout the grant period, the FTE will continue to perform PSEs for decedents that are autopsied at the HCIFS, regardless of their inclusion in the project. These individuals will be added to the IID in order to expand the sample.

Evaluation Plan

This project proposes to improve child abuse assessments by investigating the sensitivity and specificity of CT, conventional radiography, and PSE for detecting posterior rib fractures and CMLs and determining the positive predictive value of posterior rib fractures and CMLs for abusive injury. The progress of the project will be measured by the successful completion of the short-term goals described in the project timeline. The completion of the proposed activities will result in the data needed to achieve the project objectives. Standard statistical analyses (descriptive and inferential statistics) will be used to evaluate the sensitivity of three modalities for detecting skeletal injuries and investigate the circumstances that hinder their effective application. The

positive predictive value of posterior rib fractures and CMLs as indicators of abusive injury will be estimated by calculating the proportion of the pediatric autopsy sample with these injury types that are classified as homicides. The overall success of the project will result in the development of best practices for detecting skeletal injuries in the pediatric population. These best practices will be distributed to the medical and forensic communities via publications in peer-reviewed journals. Initially, the grant proposed to conduct training sessions for medical and forensic practitioners. However, this is not possible due to the ongoing COVID19 pandemic.

Sustainable Outcomes

Sustainment of the project objectives will occur via publication of our findings in peer-reviewed journals and implementation of the findings into our daily operations. Furthermore, the IID resides at the HCIFS and the staff anthropologist will continue to enter case information into the database, provide access to selected institutions for research and training purposes.

Previous CJA-funded projects have and will continue to produce sustainable outcomes. Currently, the IID includes data from 876 infants/children and continues to expand. A manuscript introducing the database to the forensic community has been published in the *Journal of Forensic Science*. Furthermore, the reviewers recognized the IID as an important contribution to the field. A student at the Texas State University has incorporated the rib injury data from the IID into her master's thesis. Regarding the bone quality data, a manuscript describing the mechanical behavior of infant bone has been published in *Bone*, a peer-reviewed journal. A manuscript comparing infant bone speed of sound (SOS) data to published data has also been published in the *Journal of Forensic Science*. At least two more manuscripts discussing the relationship between SOS and bone mineral density, the relationship between SOS and bone composition, and the overall relationship between SOS and infant bone quality will be submitted for publication.