

HONOURING THE CHILDREN: THE ROLE OF FORENSIC ANTHROPOLOGY

NCTR Remembering the Children: A Community and Academic Research Gathering

Dr. Emily Holland
Forensic Anthropologist
Associate Professor

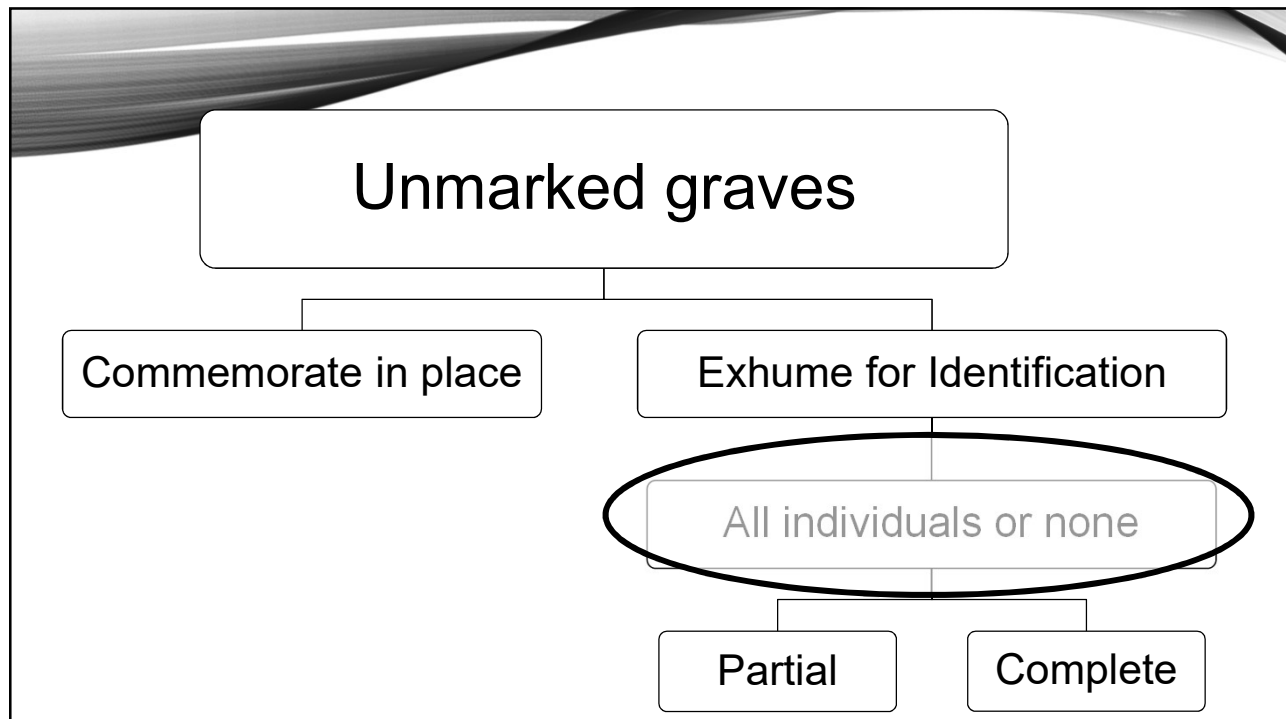


FORENSIC ANTHROPOLOGY

- Recovery and analysis of human skeletal remains for medico-legal investigations
- Works with law enforcement
 - Human vs animal remains
 - Recovery of human remains from outdoor scenes
- Works with forensic pathologist
 - Skeletonized human remains
 - Determine biological profile
 - Age at death, sex, ancestry, stature to help identification
 - Time since death
 - Skeletal trauma & disease

INDIGENOUS-LED INVESTIGATIONS

- All investigations must be Indigenous-led
- Mental health supports
- Access to technical expertise & financial support
- Space and time for ceremony
- Cultural training for those doing the work
- Opportunities for community capacity building and training



PARTIAL EXCAVATION

- Depending on the wishes of the community and family members it may be possible to:
 - Remove soil to determine if someone is in the grave
 - Do field assessments of age at death; if possible
 - Take samples of teeth and bone for DNA analysis
 - Cover the individual back up
 - Generate a comprehensive map of the cemetery
- Assessment is limited

FULL EXHUMATION

- Complete removal of individual from the grave
- Documentation of site and grave
- All individuals need to be stored in an appropriate place
- Process for identification

Skeletal
Analysis

DNA

EXHUMATION: THINGS TO CONSIDER

- What permits/permissions are required?
- Who is doing the work?
- Where will the children stay?
 - After exhumation
 - During analysis
 - While awaiting identification and repatriation
 - Is it secure or restricted access?
 - Will community/family have access for visitation and ceremony?

SKELETAL ANALYSIS

- Generate biological profile
 - Age at death
 - Sex (depends on age)
- Record dentition and possible dental work
- Assess for evidence of disease and/or trauma
 - Only those things that affect bones

SKELETAL ANALYSIS: OUTCOME

- Age at death can help narrow down who individual may be in archival records
- Dental assessment & disease/trauma
 - link to dental/medical records if available and if have access
- Trauma
 - Possibly assist in determination of cause of death
- May not be enough to identify individual
- May learn difficult information

SKELETAL ANALYSIS: THINGS TO CONSIDER

- What kinds of skeletal analysis do you want conducted?
- Who will do the work?
- Who will have access to the information and how will it be shared?
- Will families be able to visit or ceremonies performed during analysis?
- **Important to establish clear expectations and protocols before any work is done**

IDENTIFICATION: DNA

- Most likely only possible through DNA
 - Due to limited dental records available for children
- Analysis is destructive
 - Requires removal of tooth and/or piece of bone
 - Bone/tooth is ground up
- Requires DNA sample from living relatives
 - Cheek swab or blood sample

DNA: THINGS TO CONSIDER

- Who will conduct DNA analysis of samples?
- Who is taking samples from living relatives?
- How is this information stored/shared and who has access?

INVESTIGATION LIMITATIONS

- Not all graves found
- Limited/incomplete records
 - Individual not recorded to have died
 - Info about individual is incomplete/incorrect
 - Age, community, name
- Some children may not be identified
 - Limited preservation
 - Inability to get DNA from remains
 - No familial matches

WHAT IF THERE IS A DNA ISSUE?

- Not possible to extract DNA from child's remains
- No familial match
- May be possible to use stable isotopes to link individual to home community
 - Requires
 - Sample of tooth and bone
 - Isotope signatures from across Canada

ADDITIONAL CONSIDERATIONS

- Excavation/exhumation requires permissions/permits as per provincial/territorial regulatory systems
- Identification will require involvement of medico-legal system
- Excavation/exhumation and analysis requires qualified people with relevant expertise
- Identification &/or repatriation will take time & money
- Process needed for those children who remain unidentified

THANK YOU

- To everyone for being here and listening
- To Sioux Valley Dakota Nation and the Elder's Committee for your guidance and knowledge sharing
- Katherine Nichols for your continued collaboration and friendship
- Brandon University for supporting this important work
- To all those who have helped me be in a position to now help others
 - And to those who still are 😊

