

Sharing a 'short-form' version of the Index of Care

Alyson Caine¹, Ihuixaya Tapia², Christopher Canzonieri³, Tony Cameron⁴, and Lorna Tilley⁵

¹ Dickinson College; ² California State University, Monterey Bay; ³ Basin Research Associates; ⁴ IT Support, Canberra, Australia, ⁵ Independent Researcher, Canberra, Australia



Dickinson



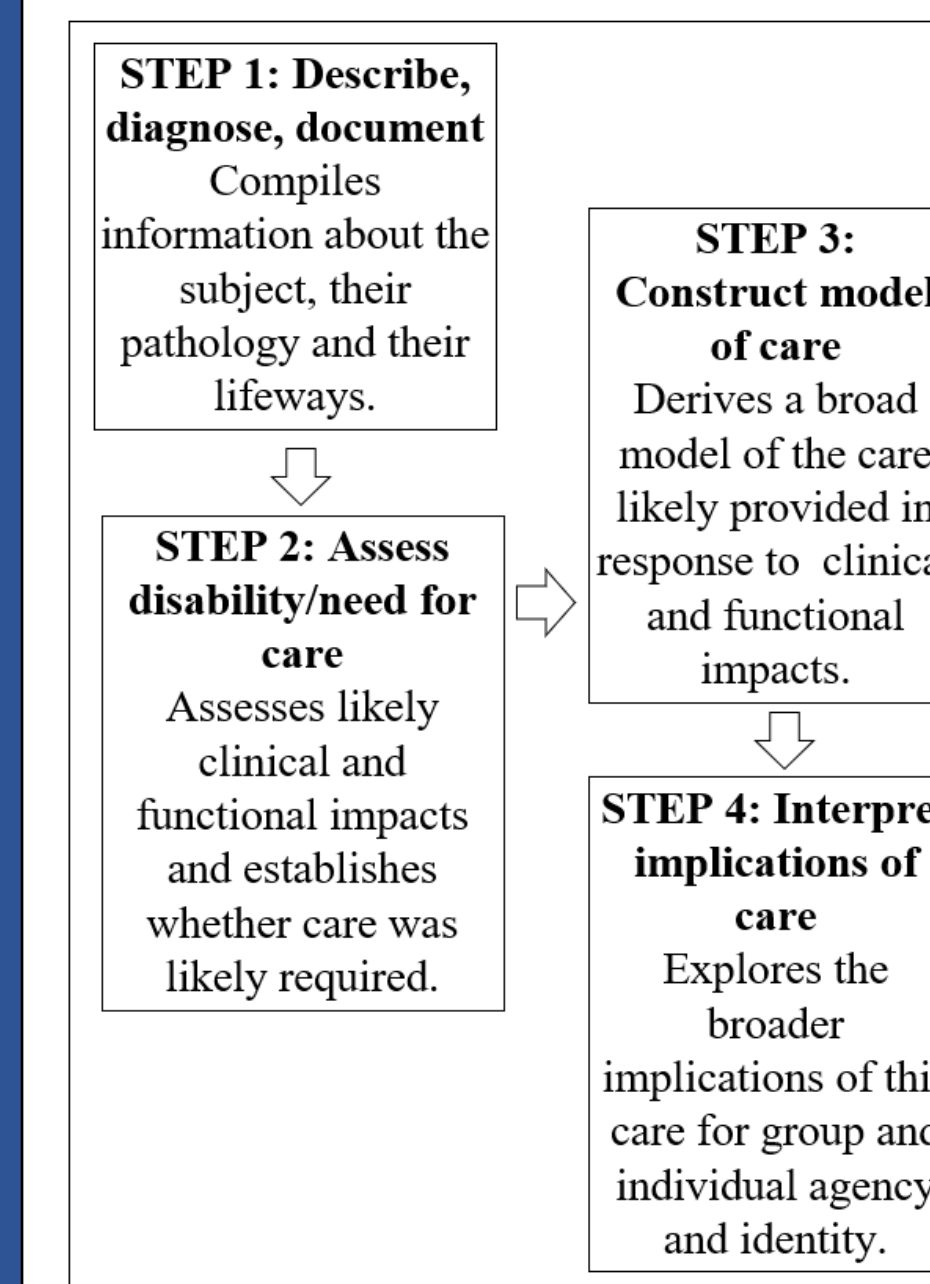
Introduction

The Index of Care (www.indexofcare.org) is a free, cloud-based instrument supporting bioarchaeology of care analysis by providing a four Step framework (Figure 1) for (i) interpreting evidence in human remains suggesting presence of disability and receipt of care, and (ii) exploring the implications of this care for understanding past individual and collective behaviours^{1,2}. The bioarchaeology of care approach has increased in use by bioarchaeologists, resulting in its integration in undergraduate bioarchaeology courses. We argue the Index could be a valuable teaching tool in this context. However, in practice, the Index was designed for bioarchaeologists and, even for these specialists, its application can be time-consuming and complicated.

To address this problem, we have produced a 'short form' version of the Index of Care for use in the classroom. The Short-Form Index is intended for application by students working individually or in groups and in a classroom or laboratory environment. It gives undergraduate students a hands-on introduction to the first stages of a bioarchaeology of care analysis, and it covers basic description of the subject; consideration of likely clinical and functional impacts of pathology(ies) identified; and assessment of probable need for caregiving. Its contents loosely correspond to those of Steps 1 and 2 of the Index, and its application provides an evidence base for student reflection on past disability experience and need for care. The Short-Form Index is currently in the beta testing phase. At the end of 2023 the first two authors employed the first version of this form in introductory and upper-level anthropology courses at their respective institutions and received feedback leading to some minor modifications (see Feedback below).

Development of the Short-Form Index is part of the wider User-Friendly Index of Care project. Information about other elements of this project is available at the Index website www.indexofcare.org

Figure 1: The four Steps of the Index of Care



The Activity: Pilot-testing the Short-Form Index

Following a lecture on the bioarchaeology of care approach, the Short-Form Index was trialed in a laboratory setting with undergraduate students enrolled in Anthropology and Archaeology courses at Dickinson College, Carlisle, Pennsylvania, and California State University (CSU), Monterey Bay, California. In terms of academic level of students completing the activity, both groups ranged from freshmen to seniors, and most students had little to no exposure to the bioarchaeology of care approach before the course.

Based on a published bioarchaeology of care case study by the first author³, students were provided with a brief description of an individual displaying clear evidence for pathology (Figure 2). Students were asked to complete the Short-Form Index using this information as their starting point (Figure 3). This form comprises two main sections, the first focusing on documenting the individual, including pathological alterations observed. The second focuses on estimating the clinical and functional impacts of the documented pathological alterations, including societal/instrumental impacts the individual may have experienced. On completing these sections, students are given a flowchart for assessing whether the case study qualifies for long form Index of Care analysis (Figure 4) and asked to tick the boxes corresponding to the individual's experience.

Upon finishing, students were asked to complete a feedback form (Figure 5). Feedback was voluntary; at this early stage of the project, we were looking for initial reactions and ideas for improvement rather than data from a representative sample of all students involved. In total, 45 students from Dickinson College and 20 students from CSU, Monterey Bay provided feedback.

Figure 2: Description from bioarchaeology of care case study

Disease Identity – Bioarchaeology of Care

Read the information about the individual and examine the images of their skeletal remains below to complete the 'short form' outlining the necessary care to the best of your ability.

Mortuary Context:

- An individual was recovered from a Middle Period (400 – 1000 A.D.) cemetery in the Atacama Desert of Chile (Figure 1).
- The site, Sotol, was a cemetery for wealthy individuals who would have lived in a generally prosperous environment engaging in interregional trade networks.

Individual SCL-34119:

- Approximately 100% of this individual's skeleton was represented (Figure 2).
- Estimated to be a female between the ages of 30 and 40 years at the time of death.
- Provided with ornate burial practices of the period, including pottery but was not one of the wealthier burials in terms of mortuary goods.
- Changes in the skeleton suggest this individual had some kind of disease or impairment previous to death (Figure 2 shaded area).

Pathological alterations:

- Figures 3 – 5 show pathological changes in this individual's skull at the mandible, maxilla, zygomatic bones, and nasal bones.
- The changes suggest possible traumatic injury to the nasal bones and/or mandible and maxilla (Figure 3).
- New bone formation (Figures 3–5) and openings (Figure 4 and 5) in a variety of bones suggest a possible infection was impacting this individual.

Figure 3: Short Form Index of Care

SHORT FORM INDEX OF CARE

Site No.: _____ Project Name: _____ Burial No.: _____
 Estimated Sex: _____ Estimated Age: _____ Other Identifier: _____

DOCUMENT

Diagnosis Select all that apply:
 Single (agreed) diagnosis
 Possible diagnoses (of more than one)
 Unknown

Comments _____

Disease Type Select all that apply:
 Infectious Metabolic Dental
 Trauma Joint Disease Congenital
 Neoplasm (Cancer) Other

Comments _____

Duration Chronic (> 6 months) or Acute (< 6 months) Unsure/Unknown

Activity Active Healing Healed

Comments _____

CLINICAL

Select all that apply:
 Muscle/Skeletal (e.g. trauma, joint disease, etc.) Nervous/Sensory Mental/Cognitive
 Respiratory Immune Digestive/Metabolic/Endocrine
 Reproductive/Conjunctive Skin/Soft Tissue Unknown/Unsure

Comments _____

Duration Chronic (> 6 months) or Acute (< 6 months) Unsure/Unknown

Comments _____

Male _____ Female _____ Probable Female _____ Ambiguous _____ Indeterminate _____
 Height (in cm) _____ Handedness (L or R) _____ Address (in 100' range) _____ Young Adult (18 to 25 years) _____
 MARR-AdB (30 to 35 years) _____ MARR-AdB (36 to 45 years) _____ MARR-AdB (46 to 55 years) _____ AdB (55 years) _____
 Recorder Name: _____ Date: _____

SHORT FORM INDEX OF CARE

FUNCTIONAL

Essential Select all that apply:
 Access to food/water Manage Personal Hygiene
 Mobility (short distances) Feed and Drink oneself
 Control body position Motor Control/handle objects
 Speech/function communication

Comments _____

Duration Chronic (> 6 months) or Acute (< 6 months) Unsure/Unknown

Comments _____

Societal/Instrumental Select all that apply:
 "Lifestyle" Demands Economic/Contribute to Community
 Domestic Duties Mobility (long distances)
 Community Life Interpersonal Relationships
 Learning/Applying Knowledge Unknown/Unsure

Comments _____

Duration Chronic (> 6 months) or Acute (< 6 months) Unsure/Unknown

Comments _____

Based on the evidence discussed in the case study above, do you feel that this individual is suitable for full assessment for the Bioarchaeology of Care Index of Care? Yes _____ Possibly _____ No _____

Additional Comments: _____

Recorder Name: _____ Date: _____

Figure 4: Flow chart for Short Form Index of Care

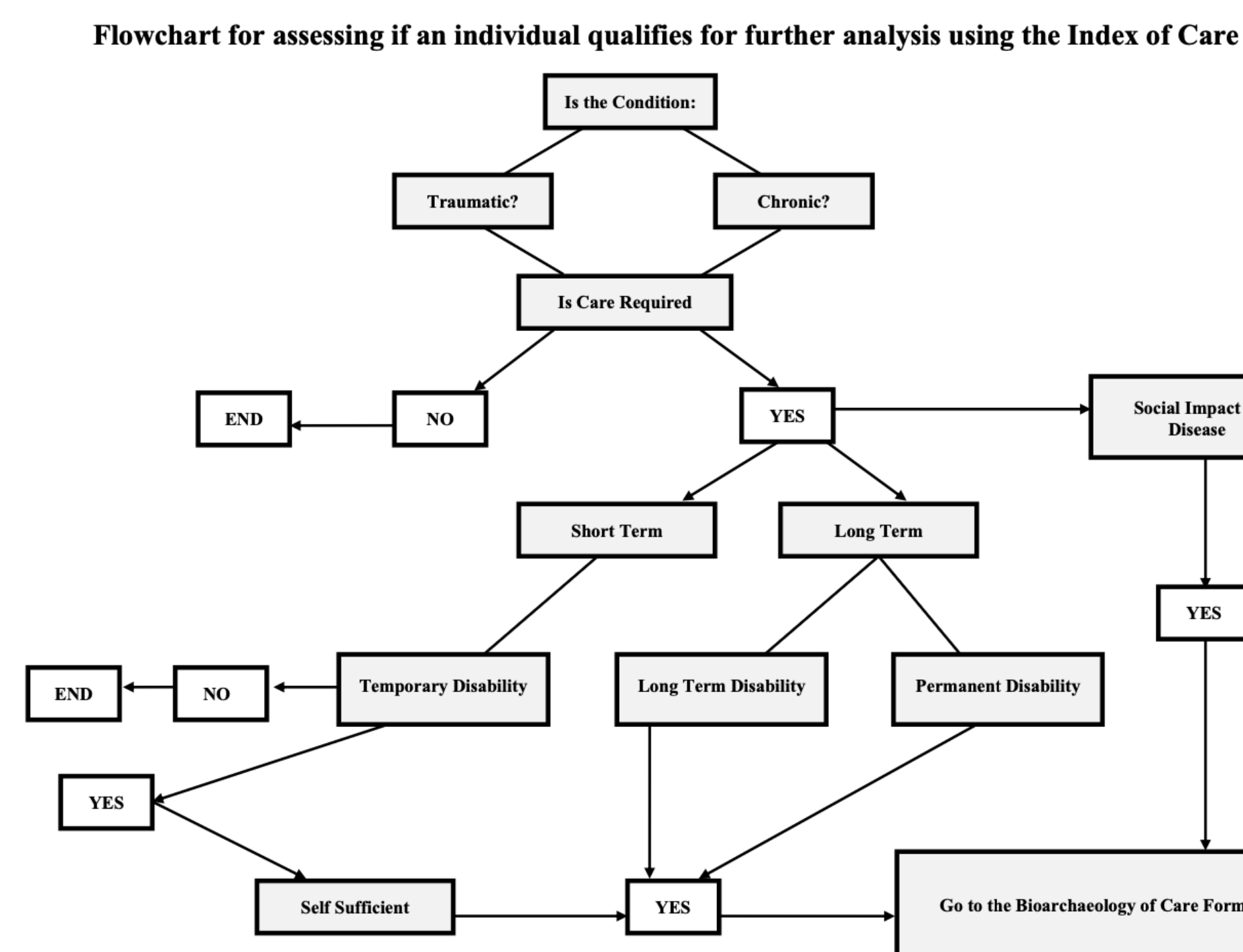


Figure 5: Feedback form

Feedback Questions

- What part of this assignment did you think was the easiest to complete?
- What part of this assignment did you think was the hardest to complete?
- Having used the Bioarchaeology of Care Form, do you think that it is a helpful tool for researching past caregiving practices?
- Were there any questions you felt were unanswered at the end of the assignment? Did those questions keep you from being able to complete the assignment confidently?
- Based on your previous answers, do you have any recommendations on how the form could be made easier to use?
- Do you have any additional comments or suggestions?

Images and scenarios from Caine, Alyson, and Christina Torres. 2022. "Living with Chronic Impairment: Tracing Care Using Changes in the Skeleton." *Bioarchaeology International*, January. <https://doi.org/10.5744/bi.2022.0013>.

Figure 6: A sample of responses to Question 3

Feedback Question 3: Having used the Form, do you think that it is a helpful tool?

A helpful exercise ...

- It helps researchers think through the [bioarchaeology of care] process methodically, especially for beginners.
- It covers different possibilities and asks for important information. [It] has a simple setup, which I like.
- It can cause you to think about the skeleton as a person. It helps create a story for someone who lived long ago.
- I think this form was helpful actually. I think it made me holistically look at the case, instead of just reading a paragraph and moving on. I had to dig a little deeper into my thought process, and I think the form helped guide that thinking.
- Yes, I think it was incredibly useful. It made us think critically before making decisions.
- Even though I am not very well versed in this we were able to figure out or hypothesize about many things that could have happened to this individual.

... and an enjoyable one:

- I felt in a flow with the index activity, sort of felt like a scavenger hunt/fill-in-the-blanks activity. Which was fun for me.
- Great job, this was super fun and thought provoking
- Thank you for the opportunity and the lab. It was a fun thing to do in class.

Feedback

Feedback suggests an encouraging level of student engagement. We think that this engagement, evidenced in the quality and content of student responses, advocates for incorporating the Short-Form Index into courses on bioarchaeology. There were no discernible differences between responses from the two institutions involved, with one exception: several students from CSU, Monterey, specifically noted that the Short-Form Index might assist in understanding ancestral lives.

All but three students judged it 'a helpful tool for researching past caregiving practices' (Feedback Question 3). The two most common reasons given were the Short-Form's practical framework for organizing information about experiences of disability and care, which enabled a greater appreciation of the implications of past pathology (Figure 6). Many students also described the exercise as 'enjoyable' and 'fun'.

Feedback Questions 2 and 4 drew out difficulties encountered with the demands of the exercise and with design aspects of the form. Most frequently students noted (i) the lack of information provided about the individual, their social position, aspects of lifeways and burial contexts, identity of pathology and its likely impacts, and cause and timing of death – 'Well, there's just so much where you have to say "unknown"'; (ii) failure to provide a clear definition of terms – for example, what does 'duration' signify? What is the difference between clinical and functional impacts? – and the use of terminology which requires prior knowledge; and (iii) perceived lack of clarity in the way parts of the form and/or flow chart are structured – 'not sure what information I was [supposed] to provide'. Responses to Feedback Question 5, which asks for recommendations to make the form easier to use, revolve around possible remedies in these areas.

Key Takeaways:

- Students recognized the importance of context for applying the bioarchaeology of care analysis and therefore all case studies used in the classroom activity are published so the instructor(s) can provide students with relevant reference(s) and context
- Glossary of terms for students unfamiliar with bioarchaeology (particularly those in their first year) would be helpful
- Relationships between various sections could be clarified
- Provide a list of pointers for teachers to refer to when implementing the exercise in their classroom

Collaborate with us!

We invite those interested to access the Short-Form Index and accompanying support materials via the QR code at the bottom right-hand corner of the poster, and/or to contact the first two authors of the poster for further information at cainea@dickinson.edu or btapia@csumb.edu

References

- Tilley, L. (2015). *Theory and Practice in the Bioarchaeology of Care*. Springer: New York
- Tilley, L., & Cameron, T. (2014). Introducing the Index of Care: A web-based application supporting archaeological research into health-related care. *International Journal of Paleopathology*, 6, 5–9. <https://doi.org/10.1016/j.ijpp.2014.01.003>
- Caine, A., & Torres, C. (2023). Living with Chronic Impairment: Tracing Care Using Changes in the Skeleton. *Bioarchaeology International*. <https://doi.org/10.5744/bi.2022.0013>

Collaborate with Us!

