

## Headache Version 2.0 NINDS CDE Project

**Subgroup in Headache:** Imaging and Neurophysiology

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- 1. Approach for selection of elements** (*How did you go about drafting the recommendations and/or reviewing the current tools/instruments, and did you have any criteria for selection and classification?*)

The Imaging and Neurophysiology subgroup reviewed and revised the version 1.0 common data elements. Initially, we reviewed the topics that each CRF described and determined that a case report form on magnetoencephalography (MEG) was needed. A subgroup member volunteered to serve as the person primarily responsible for each of the case report forms. Additional members of the subgroup volunteered to assist with each of the case report forms according to their level of expertise on the topic. Following the initial drafting and revising of each case report form, the subgroup revised and circulated the updated case report forms to the rest of the subgroup for review. Each case report form was then discussed via teleconference and further revisions were made according to subgroup consensus.

- 2. Differential application to types of Headache** (*Do the instruments/elements you recommended differ between the types of Headache?*)

No

- 3. Recommendations Summary Table:**

<b>Instrument / Scale / CRF Name</b> <i>Name and acronym of the instrument/measure that is recommended for inclusion in the CDEs</i>	<b>Domain</b>	<b>Sub-domain</b>	<b>Classification</b> (e.g., Core, Supplemental - Highly Recommended, Supplemental, Exploratory)
Anatomical Imaging	Assessments and Examinations	Imaging Diagnostics	Supplemental
Cortical Evoked Potentials	Assessments and Examinations	Imaging Diagnostics	Supplemental
Functional Magnetic Resonance Imaging	Assessments and Examinations	Imaging Diagnostics	Supplemental
Magnetic Resonance Angiography	Assessments and Examinations	Imaging Diagnostics	Supplemental
Magnetic Resonance Spectroscopy	Assessments and Examinations	Imaging Diagnostics	Supplemental

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Magnetoencephalography	Assessments and Examinations	Imaging Diagnostics	Supplemental
Nociceptive Blink Reflex and Pain-Related Evoked Potentials	Assessments and Examinations	Imaging Diagnostics	Supplemental
Positron Emission Tomography	Assessments and Examinations	Imaging Diagnostics	Supplemental
Quantitative Sensory Testing	Assessments and Examinations	Imaging Diagnostics	Supplemental
Transcranial Magnetic Stimulation	Assessments and Examinations	Imaging Diagnostics	Supplemental

**4. Comparison to other Headache standards** (*Are there any notable similarities/differences in the CDE recommendations as compared with other standards?*)

No

**5. Issues unique to Headache** (*Were there any issues encountered when developing the CDE standards which are unique to Headache or which highlight a unique concern about Headache data collection?*)

The Imaging and Neurophysiology techniques included within these headache CDEs are used to study other pain and neurological conditions using the same methodology. Since the clinical manifestations of most headache disorders are episodic, documenting the timing of the testing/imaging in relation to symptoms is necessary (e.g. testing/ imaging during a headache; testing/imaging between headaches).

**6. Unmet needs; unanswered questions** (*What unmet need / unanswered questions were identified via the CDE process in Headache? What areas are in need of further research and development?*)

Although it is an issue that is not unique to imaging of Headache, there are multiple methods for collecting, postprocessing, and analyzing imaging data. The existence of numerous different techniques can make it challenging to reproduce study results when data are collected by different investigators. Standardizing the methods for imaging data collection, postprocessing, and analyses would likely advance the field more efficiently.