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| **Domain:** | Speech and Hearing |
| **Measure:** | Word Decoding |
| **Definition:** | This measure is a test to assess the respondent's ability to pronounce words accurately. |
| **Purpose:** | This measure tests a respondent's word reading accuracy and fluency to provide an efficient means of monitoring word reading skills that are critical in the development of overall reading ability. Difficulty with word decoding is a key component of dyslexia. |
| **Essential PhenX Measures:** | Current Age |
| **Related PhenX Measures:** |  |
| **Collections:** | Other Sensory Functioning |
| **Keywords:** | Word decoding, Reading, Test of Word Reading Efficiency, TOWRE, Dyslexia, Decoding, Fluency, Sight word efficiency, Phonetic decoding efficiency, proprietary, Speech and Hearing |

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| **Protocol Release Date:** | October 8, 2010 |
| **PhenX Protocol Name:** | Word Decoding |
| **Protocol Name from Source:** | This section will be completed when reviewed by an Expert Review Panel. |
| **Description:** | The Test of Word Reading Efficiency (TOWRE) is a nationally normed measure of word reading accuracy and fluency. The test contains two subtests: the Sight Word Efficiency (SWE) subtest and the Phonetic Decoding Efficiency (PDE) subtest. The Sight Word Efficiency subtest involves presenting the respondent with a list of real printed words. The respondent must accurately read and pronounce as many words as possible in 45 seconds. The Phonetic Decoding Efficiency subtest involves presenting a list of printed non-words. The respondent must accurately decode and pronounce as many words as possible in 45 seconds. The examiner scores each item as it is being pronounced. |
| **Specific Instructions:** | The Test of Word Reading Efficiency (TOWRE) is a proprietary protocol and administration requires a licensing agreement from Pro-Ed, Incorporated. In order for this assessment to be considered valid, the investigator should make sure that the respondent speaks English as a first language. |
| **Protocol:** | **Summary of the Test of Word Reading Efficiency (TOWRE)**  The Test of Word Reading Efficiency (TOWRE) contains two subtests: the Sight Word Efficiency (SWE) subtest and the Phonetic Decoding Efficiency (PDE) subtest.The Sight Word Efficiency subtest assesses the number of printed words that can be accurately identified in 45 seconds.The Phonetic Decoding Efficiency subtest measures the number of pronounceable printed non-words that can be accurately decoded in 45 seconds.  Test of Word Reading Efficiency (TOWRE). Copyright © 1999 Pro-Ed, Incorporated. All rights reserved. |
| **Selection Rationale:** | The Test of Word Reading Efficiency (TOWRE) was selected because it is a widely used, validated protocol that can be administered very quickly. Additionally, normative data are available to assist scoring. |
| **Source:** | Joseph Torgesen, Richard Wagner, and Carol Rashotte. Test of Word Reading Efficiency (TOWRE). 1999.  The Test of Word Reading Efficiency (TOWRE) is a proprietary protocol and can be obtained through:  Pro-Ed, Inc. 8700 Shoal Creek Boulevard Austin, Texas 78757-6897 Telephone: 800-897-3202 www.proedinc.com |
| **Life Stage:** | Child Adolescent Adult |
| **Language of source:** | English |
| **Participant:** | Children, adolescents, and adults, ages 6 through 24 years |
| **Personnel and Training Required:** | The Test of Word Reading Efficiency (TOWRE) can be administered by trained research assistants. Examiners should have formal training in the ethical administration, scoring, and interpretation of clinical assessments. Additionally, investigators are encouraged to have quality control procedures in place to maintain consistency across tests and among examiners. |
| **Equipment Needs:** | The interviewer will need the Test of Word Reading Efficiency (TOWRE) Examiner's Manual, Form A or Form B Profile/Examiner Record Booklet, and Form A or Form B Word Cards. |
| **Standards:** | |  |  |  |  | | --- | --- | --- | --- | | **Standard** | **Name** | **ID** | **Source** | | Common Data Element (CDE) | Speech Word Decoding Assessment Score | 3144938 | [CDE Browser](https://cdebrowser.nci.nih.gov/CDEBrowser/search?elementDetails=9&FirstTimer=0&PageId=ElementDetailsGroup&publicId=3144938&version=1.0) | | Logical Observation Identifiers Names and Codes (LOINC) | Word decoding proto | 63006-1 | [LOINC](http://s.details.loinc.org/LOINC/63006-1.html?sections=Web) | |
| **General references:** | Rice, M. L., Smith, S. D., & Gayan, J. G. (2009). Convergent genetic linkage and associations to language, speech and reading measures in families of probands with Specific Language Impairment. *Journal of Neurodevelopmental Disorders, 1,* 264–282. |
| **Mode of Administration:** | Interviewer-administered questionnaire |
| **Derived Variables:** | None |
| **Requirements:** | |  |  | | --- | --- | | **Requirement Category** | **Required** | | Major equipment | No | | Specialized training | No | | Specialized requirements for biospecimen collection | No | | Average time of greater than 15 minutes in an unaffected individual | No | |
| **Process and Review:** | This section will be completed when reviewed by an Expert Review Panel. |