

HEAD TO TOE ASSESSMENT

A Minimum Data Set Supplement for Reducing Documentation Burden

A Product of Nursing Knowledge Big Data Science

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Project Charter

Adult Head to Toe Assessment Task Force

A Product of the Nursing Knowledge Big Data Science Initiative

<https://nursing.umn.edu/centers/center-nursing-informatics/nursing-knowledge-big-data-science-initiative>

Document Control

Title:	Adult Head to Toe Assessment & NKBDS Cross-Workgroup Task Force
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File Name/Path:	MS Teams Guest Access – Kaiser Permanente
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Charter Approvals

Name	Role	Date
Cross Workgroup Task Force Judy Murphy, Steering Committee Liaison NKBDS	Business Owner	09/08/2022
NKBDS Steering Committee Connie Delaney, Chair	Project Sponsor	09/08/2022

Purpose of Document

The purpose of this charter is to establish authorization for the Head to Toe Assessment: NKBDS Cross-Workgroup Task Force assignment. This document delineates roles and responsibilities, outlines the scope and objectives, identifies the main stakeholders, and

provides high level details of critical items (i.e. risks, dependencies, etc.). Upon approval, the charter allows the task force to proceed with the assignment as stated in this document.

Executive Summary

The Head to Toe (H2T) Assessment: NKBD Cross-Workgroup Task Force is charged with defining a model for H2T Assessments for the adult patients in an acute care facility. The output of the Task Force will be presented at the 2025 NKBD conference. The scope of work for the Task Force is deliberately confined to facilitate rapid progression of the work. The outputs will provide the foundation for continued work in defining Head to Toe Assessment for other patient populations and care settings.

The Task Force is composed of volunteers and representatives from five NKBDs Work Groups: Transforming Documentation, Care Coordination, Social Determinants of Health, Clinical Data Analytics and Knowledge Modeling & Encoding.

Each collaborating Work Group will participate in the review of the outputs of the Task Force.

The Task Force is accountable to the NKBDs Steering Committee.

Introduction and Overview

Current State	The ideal content and approach for Nursing H2T Assessments is not clearly defined within the nursing profession. There is wide variation in the approach across hospitals and health systems and within the model content provided by EHR vendors, including the use of charting by exception and/or use of the verbiage "within defined limits." This variability inhibits reuse of data for decision support and research.
Opportunity Statement	An opportunity exists to define and standardize Nursing H2T Assessment content that provides important data and information for providing and coordinating patient care, patient population management and research while minimizing documentation burden for the nurse.
Overall Objectives	Define a standardized, harmonized, minimum Nursing H2T Assessment dataset for a general floor / acute care / medical-surgical nursing care context, with recommendations for charting against "within defined limits" criteria.
	1. Approval of Task Force Charter by Task Force and NKBDs Steering Committee 2. Approval of Ground Rules for Task Force processes by Task Force

Specific Objectives	3. Approval of Guiding Principles for Nursing H2T Assessments by Task Force and NKBDS Steering Committee 4. Define sections/categories of Nursing H2T Assessments 5. Define Content of Nursing H2T Assessments 6. Present outputs to Transforming Documentation Workgroup and NKBDS Steering Committee for input 7. Present outputs to national / international professional nursing associations for input and alignment with evidence-based nursing resources 8. Present content to Knowledge Modeling and Encoding workgroup for mapping to appropriate reference terminologies 9. Publish content and mapping
Approach	The Task Force members designated by September 30, 2022, will serve through June 2023 (NKBDS Conference), or until completion of the work. To maximize the consistency and speed of the work, membership changes will not be made until this phase of development is complete. The Task Force will be the working group that is responsible for producing the outputs. The Collaborating Work Groups will be asked to review and provide feedback on each output. The NKBDS Steering Committee will review outputs and provide feedback prior to the publishing of content. Content will be introduced for dissemination at a preconference workshop of the NKBDS Conference. The H2T Task Force collected and collated general medical-surgical (med-surg) nursing assessment datasets from multiple sources including model content from major EHR and clinical content vendors plus current state content from multiple health systems. Dataset contributing organizations include Epic, Elsevier, the Veterans Administration, Kaiser Permanente, Montefiore, Atlantic Health, Essentia Health, and UCHHealth. We divided into small sub-subgroups by body system to review the collated datasets and create recommendations, based on our critical distillations of contributed content with a focus on including only assessments and assessment findings suited to the general med-surg context that would meaningfully impact the interprofessional plan of care. Our intention is for the final dataset to represent clinically meaningful, actionable assessments for a med-surg hospital setting focused on the fastest, safe path of progression to discharge. We seek to exclude (a) non-normal assessments that are pertinent for treatment only in a less costly, less intensive care context and (b) specialized assessments. Specialty assessments could be added on to this baseline med-surg assessment where necessary. For each assessment concept, we identified values for Within Defined Limits (WDL) findings and exceptions with the aim of limiting response value list choices to less than 12 when possible, in recognition that excessively long lists impose cognitive and workflow/scrolling burden.

	We will include a comprehensive statement about charting by exception with our published dataset.
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Scope

High Level Scope Statement	The Task Force will define a standardized, harmonized, minimum Nursing H2T Assessment dataset for the adult general medical-surgical care population, suitable for use on initial assessment, shift assessments, and reassessments. **Note that documentation burden reduction is among our major goals. We seek to define a streamlined and minimized minimum dataset to define not only what's essential to include but also to encourage health systems to remove that which does not contribute meaningfully to nursing assessment documentation in the setting of a general med-surg nursing care context where the focus is on progression to discharge.
Scope Inclusions	Define optimal standardized content for Nursing H2T Assessments by body system. Provide mapping of content to the appropriate terminologies.
Scope Exclusions	Other patient populations Other sites of care Content collected in the standardized minimum dataset for Admission History published by the NKBDS Task Force Screening tools and risk assessments Interventions Environmental safety management Care planning Education Lines, Drains and Airways Specialized wound documentation beyond the scope of a non-specialized RN Output Vital Signs Pain detail
Emerging Design Considerations	Charting against defined clinical parameters for each body system provides documentation standardization, efficiency and enhances clear team communication of assessment findings. The content set will include 'Within Defined Limits' (WDL) criteria.

	Some health systems present nursing assessment documentation tools that include normal assessment findings for documentation while others exclude normal assessment response values or provide “Return to WDL” as a generic response value to reflect patient improvement. Organizational consideration is advised. Emerging documentation efficiency (and other) tools within the EHR vendor community include functionality to permit saving pre-defined templates to allow users to automate repetitive data entry, trigger predictive model rules, and support other technology tools (e.g., ambient voice recognition). These tools may utilize ‘normals’, so the inclusion of normal assessment findings requires organization specific consideration. Consider also the inclusion of standard response values for every row for the nurse to reflect Not Assessed and Other (comment) for unique clinical scenarios. By providing Other (comment) as a selection, the list of response values for each row need not be exhaustive. Long response value lists contribute to cognitive burden and may require scrolling action to reveal all choices. We recommend response values that cover 80% of clinical scenarios, with the use of free text where needed.
Additional Considerations	The outputs will be developed and presented in a manner that is EHR vendor agnostic. Exemplars from previous standardization efforts will be collected to inform this work. Output from other Nursing Knowledge Big Data Science (NKBDS) workgroups will inform this work.

Assumptions

Assumption	Assumption Description
Ownership	The outputs from this task force are attributed to the NKBDS Conference. Authorship of any publications will be decided prior to starting work on a manuscript. The Task Force will be acknowledged in any publications or presentations.

Dependencies/Risks

Issue	Impacts	Impacted By
Task Force meetings	Frequency and length of meetings will vary at different stages of this work	Consistent participation
Clinical expert content review	Clinical expertise for alignment with evidence-based practice needed to advise Task Force	Reviewer consultation and participation

Deliverables

Deliverable Name	Responsible Owner (s)	Approver (s)
Charter		Task Force & NKBDS Steering
Ground Rules for Task Force Processes		Task Force
Guiding Principles for H2T Assessment content		Task Force & NKBDS Steering
Guidelines for Charting Within Defined Limits” and “Charting By Exception”		Task Force
Content for standardized, harmonized, minimum Nursing H2T Assessment		Task Force & NKBDS Steering
Publication		Task Force & NKBDS Steering
Charter		Task Force & NKBDS Steering

Roles & Responsibilities

Role	Name	Company
Task Force Chair	David Boyd	Kaiser Permanente
Task Force Co-Chair	Bonnie Adrian	UCHealth

Task Force Members

Name	Company
Bonnie Adrian	UCHealth
David Boyd	Kaiser Permanente
Cheryl Abbott	Dartmouth-Hitchcock
Constance Berner	Veterans Health Administration
Amy Both	Allina
Terri DeClerck	Oracle Cerner
Jennifer Edmiston	UCHealth
Meredith Farrell	Kaiser Permanente
Susan Grossman	Montefiore
Cheryl Hager	SSM Health
Stephanie Hartleben	Elsevier
Janice Kelly	AORN
Michelle Martins	Atlantic Health
Jen Messel	Essentia
Anna Miller	Epic
Natalie Peleg	Atlantic Health
Toni Phillips	Veterans Health Administration
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Teresa Saxon	JPSys.com
Sam Schmidt	Kaiser Permanente
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HEAD TO TOE ASSESSMENT

**A Dataset Supplement for Reducing Documentation Burden by
Standardizing Assessment Concepts and List Choices**

Instructions

This dataset supplement and background provides guidelines for applying outputs of the Nursing Head to Toe Assessments Task Force to documentation burden redesign efforts. Users are encouraged to reference the previously published Admission History Toolkit (reference link below) which defined the minimal necessary dataset for the admission history interview for an adult patient entering the acute care environment. The overall process, toolkit components, and guiding principles outlined here are generally applicable and recommended as a companion reference to this dataset.

<https://nursingbigdatarepository.umn.edu/node/211>

Optimizing the Head-to-Toe Assessment

The ideal content and approach for Nursing Head to Toe (H2T) Assessments is not clearly defined within the nursing profession. There is wide variation in the approach across hospitals and health systems and within the model content provided by EHR vendors, including the use of charting by exception and/or within defined limits. This variability inhibits reuse of data for decision support and research. The goal of this workgroup is to define a standardized, harmonized, minimum Nursing Head to Toe Assessment dataset for a general floor / acute care / medical-surgical nursing care context.

The H2T Task Force collected and collated general med-surg assessment datasets from multiple sources including model content from major EHR and clinical content vendors plus current state content from multiple health systems. Dataset contributing organizations include Epic, Elsevier, the Veterans Health Administration, Kaiser Permanente, Montefiore, Atlantic Health, Essentia Health, and UCHealth.

Step 1:

Head to toe assessments from Epic, Elsevier, the Veterans Administration, Kaiser Permanente, Montefiore, Atlantic Health, Essentia Health, and UCHealth were collated using the following body systems:

- Neuro
- HEENT
- Respiratory
- Cardiac
- Neurovascular/Musculoskeletal
- GI
- GU
- Behavioral Health

The larger workgroup organized into smaller sub-groups by body system to review the collated datasets and create recommendations, based on our critical distillations of contributed content

with a focus on including only assessments and assessment findings suited to the general med-surg context that would meaningfully impact the interprofessional plan of care.

Process:

Instructions: The following table is a framework used by workgroups to complete the review process. Each group determined if each concept row should be included in the final Harmonized Data Set. In general, keep rows that are documented by most organizations or any that are important to nursing practice (up to the professional discretion of each workgroup). If a concept row is deemed important enough to keep, then specify response values (also known as custom list choices) for the concept row.

Example: Below is an example with a selected set of neuro values. In this example, the (fictitious) workgroup decided to keep the Level of Consciousness row and therefore included the list of relevant values. The subgroups decided Orientation Level should not be included in the Harmonized Data Set and therefore did not bother to define Custom List Choices. For Cognition, they wanted to discuss with the larger group whether this should be kept or not. For Language, they decided the row was appropriate to keep but wanted to discuss which custom list choices should be included.

Concept Row Name	Concept Row Decision (Include in Harmonized Data Set or Not?)	Custom List Choices to Include (use "Alt+Enter" to add new lines in the same cell)	Notes
Neuro Basic Level of Consciousness	Include	Alert Lethargic Agitated Comatose Sedated Obtunded Responds to pain Responds to voice Other (Comment)	
Orientation Level	Do Not Include		Kaiser and VA do not include orientation. Is it important to keep?
Cognition	Needs Discussion	Confused Impulsive Unable to follow commands	There was much debate about whether "Short term memory loss" should be included. Discuss with larger group.

Step 2:

Following initial review by subgroups, each section was re-reviewed and approved by the entire workgroup. The approved assessments were cross walked with similar body systems reviewing for duplication and assuring list choices are consistent between body systems. The subgroups developed within defined limits (WDL) statements for each body system.

Step 3:

The complete document was compiled and re-reviewed by a new set of reviewers for clinical relevance. Review scope included task force members sharing content with other informatics nurses and practicing clinicians in their organizations (including hospitalist physicians and respiratory care practitioners).

Considerations for Implementation

Use of "Within Defined Limits" (WDL) Charting

The workgroup recommends using "Within Defined Limits" (WDL) as a standardized method for patient assessment documentation.

Benefits of WDL Charting:

- **Efficiency:** WDL charting eliminates the need to document extensive normal findings, focusing instead on significant deviations from predefined limits.
- **Clarity:** By documenting only deviations from WDL, critical information is more visible and easier to interpret.
- **Consistency:** Using WDL aligns with LOINC codes and standardizes terminology across health systems.

Terminology: WDL charting is preferred over "Charting by Exception" because it clarifies that the method involves batch documentation rather than documenting only exceptions. WDL represents a collection of pre-determined, objective, standardized assessments within a body system, while charting by exception might imply that no documentation is needed if there are no exceptions.

Documentation Practice:

WDL = The nurse documents one data element that captures a batch assessment for a body system all at one time in pre-determined, objective, standardized verbiage. The single data point represents multiple specified assessments that have been performed. WDL criteria for each body system are listed out in detail in the data set.

WDL Except = The nurse batch documents that all assessments included in the WDL list were performed and all findings match WDL criteria with the exception of documented exception findings that do not match the criteria contained within the definition.

- If all elements of the WDL are NOT assessed, do not use the WDL or WDL Exception. Document the findings assessed in the individual rows. (guided by normal values in the lists).
 - *Example: Chart Cardiac WDL (to represent S1S2, regular rhythm and no reported chest pain). If the patient is sedated and intubated and cannot answer the chest pain part document the S1, S2 and regular rhythm and document Not Assessed on the Cardiac Symptoms row.*

Correcting a Common Misconception: "Not Documented Not Done" is not applicable to WDL charting. Some nurses feel compelled to fill every row, which can lead to unnecessary documentation. Educate staff that WDL charting is a valid, efficient practice and well-established in nursing supported by organizational policy and procedure. Documentation on the WDL row of either WDL or WDL Except batch documents that all items covered in the WDL statement were assessed as WDL except as noted.

Nursing Policy and Procedure Support:

It is important that the organization's documentation policies and procedures clearly articulate the WDL concept, what it means, and how it's used.

Implementation Considerations:

- **Standardized Assessment Practice for the Institution:** WDL Criteria must be aligned with nursing practice expectations for nurses working with a typical medical-surgical unit patient population. We do not include assessments that require special equipment such as tongue depressors, pupilometers, otoscopes/ophthalmoscopes, etc.
 - Items that are not typical/not routinely needed could be made available for specialty areas or special uses.
- **Legal and Practice Alignment:** Ensure WDL criteria match nursing practice and are practical for the tools used in assessments. This clarity benefits both nurses and patients.
- **Inclusion of WDL assessment findings in response list for each row?** The workgroup recommends consideration of whether or not to include WDL findings on row response lists.
 - Healthcare organizations that include "normal" response list choices do so for the purpose of reflecting patient improvements on reassessments.
 - There are compelling reasons not to include normal list choices:
 - Tempts nurses to over-document on the misconception that "not documented, not done" is applicable. Excluding WDL assessment findings from response lists demonstrates your organization's commitment to WDL charting.
 - Routine documentation of "normals" generates visual clutter, obscuring clinically significant findings.
 - An alternative is to provide an option of "Return to WDL" for nurses to reflect patient improvements noted on reassessments while excluding all WDL assessment findings from row response list choices.
 - **NOTE:** Emerging documentation efficiency (and other) tools within the EHR vendor community include functionality to permit saving pre-defined templates

to allow users to automate repetitive data entry, trigger predictive model rules, and support other emerging technologies (e.g., ambient voice recognition). These tools may utilize 'normals', so the inclusion of normal assessment findings requires organization specific consideration.

- **Include Other (comment) for uncommon clinical findings:** We recommend against providing response list choices for every conceivable assessment finding to minimize cognitive burden and keep response choice lists as brief as possible. Avoid long lists that require the nurse to scroll to see the full list.
- **Unable to Assess and/or Not Assessed:** Can be included as response choices on each row if desired.
- **Historical Records:** Maintain clear definitions and archives of WDL criteria to ensure accurate interpretation of past records.
- **Education:** Provide training for nurses on WDL documentation and how to interpret WDL records. Create tip sheets and configure reports to align with WDL practices.
- **Review of Documentation:** It is necessary to review the WDL definition for each body system to understand what assessments were performed.

In summary, adopting WDL charting streamlines documentation, highlights essential patient information, and standardizes practice across health systems. Address misconceptions through education and ensure clear implementation strategies to align with nursing practice.

Sample nurse education on WDL charting:

- How to Use the WDL descriptions:
 - o If all elements of the WDL are assessed
 - **AND all elements are true**, then “WDL” is documented. No “normals” need be charted.
 - **And NOT ALL elements are true**, then “WDL except” is documented and the exception(s) must be indicated, no “normals” need be charted.
 - o If all elements of the WDL are NOT assessed: Do NOT use the WDL or the exception. Document the findings assessed in the individual rows.
 - Example: Cardiac WDL-S1S2, regular rhythm and no reported chest pain. If the patient is sedated and intubated and cannot answer cardiac symptoms questions, the nurse leaves the WDL row blank. Document the S1, S2 and regular rhythm and not WDL
 - o Remember:
 - **When you select WDL**, you have documented the entire WDL statement into the medical record.
 - **When you select WDL Ex**, you have documented the entire WDL statement into the medical record with the exceptions you identify.
 - o Therefore, READ the entire WDL statement each time before documenting so you are aware of what you are entering into the medical record!

Head to Toe Content

The images below are snapshots of the dataset from a robust worksheet to assist with assessing content for H2T Assessments. To download the full editable and harmonized worksheets by Body System/Sub-System/Concept Row, list choice count of the H2T Assessment and detailed content including standard list choices and WDL statements, please visit:

<https://nursingbigdatarepository.umn.edu/transforming-documentation>

Body System	Body Sub-System	Concept Row	Count of List Choice
Behavioral	Behavioral	Behavior WDL	1
		Behavior	12
		Mood and Affect	6
		Thought Process	4
Cardiac	Cardiac	Cardiac WDL	1
		Cardiac Regularity	2
		Heart Sounds	5
		Cardiac Symptoms	7
GI	GI	GI WDL	1
		Abdomen	7
		Bowel Activity	5
		GI Symptoms	6
Cardiac	Cardiac	Cardiac WDL	No cardiac symptoms. Regular rate. S1, S2, no adventitious heart sounds.
		Cardiac Regularity	WDL= Regular rate Irregular
		Heart Sounds	WDL= S1S2, no adventitious heart sounds Click Gallop Murmur Rub
		Cardiac Symptoms	WDL= No cardiac symptoms Chest pain at rest Chest Pressure Chest Tightness JVD Lightheaded Palpitations

Keep Us Posted

If your organization uses these references in support of a documentation burden reduction or redesign initiative, the Transforming Documentation workgroup chairs would appreciate connecting to know how things are going, learn about successes and barriers, and hear ideas about how these tools & references might be improved.

Please contact us via nursingbigdata@umn.edu and request the Transforming Documentation workgroup.

Thank you!

References

- American Academy of Nursing. (2023). Meeting's Proceedings: More Than Documentation Burden Creating Burnout: What Systems Must do to Achieve Safe, Efficient Patient Care Using Technology.
https://cdn.ymaws.com/aannet.org/resource/resmgr/policydocuments/policy_dialogue_proceedings/2023_meeting_proceeding_itp.pdf
- AMIA 25x5 Documentation Burden Reduction Toolkit (2022).
<https://brand.amia.org/m/3aaa0f687a601441/original/25x5-toolkit.pdf>
- Englebright, J., Michel, S., Boyd, D., and Hulett, S. (2021). A Framework for National Collaboration to Reduce Documentation Burden and Design for Usable and Reusable Data. *JONA: The Journal of Nursing Administration* 51(3).
https://journals.lww.com/jonajournal/fulltext/2021/03000/a_framework_for_national_collaboration_to_reduce.10.aspx
- Gesner, E., Dykes, P., Zhang, L., & Gazarian, P. (2022). Documentation Burden in Nursing and its Role in Clinician Burnout Syndrome. *Applied Clinical Informatics*, 13(5).
<https://pmc.ncbi.nlm.nih.gov/articles/PMC9581587/>
- Wang, Z West CP, Vaa Stelling, BE, Hasan B, Simha, S, Saadi, S, Firwana, M, Nayfeh, T, Viola, KE, Prokop, LJ, Murad, MH. (2024) Measuring Documentation Burden in Healthcare. Technical Brief No. 47. Prepared by the Mayo Clinic Evidence-based Practice Center.
<https://effectivehealthcare.ahrq.gov/products/documentation-burden/prepub-tech-brief>