With deepest gratitude, we celebrate the commitment of all NKBDS participants and partners to advancing big data science through who we are and what we do in partnership and community.

This year, due to unprecedented times and a commitment to everyone’s safety and health during the COVID-19 pandemic, the NKBDS conference moved to an online format. The change supported our commitment to lifting up the Initiative’s amazing vision and transformative work to advance better health outcomes resulting from the standardization and integration of nursing data, information, and knowledge. This decision was made considering health and safety factors and in consultation with the NKBDS Steering Committee. The Initiative welcomed this new adaptive format, including an agenda advancing our understanding and innovations related to the COVID-19 pandemic. We recognize and welcome our current paradigm shift, where innovation, quick adaptation and adoption, and engagement in partnership and community are experienced daily and are hallmarks of re-envisioning and transforming health and health care. The online format was comprised of four three-hour sessions held monthly from June to September 2020.

The 2020 proceedings follow the same format as previous years. The workgroup reports of achievements for the year 2019-2020 are followed by the workgroup action plans for the year 2020-2021. We also introduce the revised and approved Nursing Knowledge: Big Data Science (NKBDS) Initiative framework. We acknowledge all attendees, from the United States and Europe, in the four online sessions.
SUMMARIES OF SESSIONS

SESSION 1 (JUNE 4, 2020): Workgroup Leaders and Steering Committee members only.

The session brought together NKBDS workgroup leaders and Steering Committee members for in-depth dialogue, reflection, and visioning. The opening keynote featured Dr. Jakub Tolar, MD, PhD, Professor and Dean of the Medical School, and Vice President for Academic Clinical Affairs for the University of Minnesota. This keynote acknowledged NKBDS’ accomplishments over the year, discussed the initiatives currently being done in response to the COVID-19 emergency, and fostered enriched discussions. Dr. Tolar highlighted five key trends during the pandemic thus far:

1) Telehealth has proved itself and there is now an opportunity for informatics teams to leverage themselves in this new normal. The challenge is to use data to show how telehealth impacts health outcomes, and how telehealth has been used, not just for long-distance visits, but also inside institutions to prevent exposure to the virus (e.g. helping to communicate with patients in isolation).

2) A need for protecting patient privacy as well as developing identifiers that can be shared across organizations.

3) A need to find a way to reimburse nurses’ contributions, equipment, etc. as telehealth has been employed in new ways.

4) A need to provide enhanced telehealth education to nurses as we move forward.

5) A need to adjust language according to this change, e.g. virtual visits are now just care visits.


Invited speakers Judy Murphy, RN, FACMI, LFHIMSS, FAAN Chief Nursing Officer, IBM Global Healthcare and Laura Reed, RN, DNP, Chief Nurse Executive, Chief Operating Officer, Fairview Health System expanded on complementary experiences in practice and industry in response to the pandemic. Ms. Murphy provided a national overview of current adoptions related to COVID-19 surveillances and emphasized the outstanding partnership model created and used by the state of Minnesota. Dr. Reed shared the Dashboards for COVID-19 created and implemented by MHealth Fairview Health System. She described the expedited process of building the dashboard, data views, use of the command center, and daily huddles to evaluate, coordinate and advance planning. Conference participants engaged in breakout sessions for its discussions on “Critical Discussions and Applications to NKBDS Activities”, and current “hot” topics, followed by questions and action-based solutions. Informatics best practices were lifted up, enhanced by listening and learning from each other about their COVID-19 experiences, and highlighting the implications for informatics and data.

SESSION 3 (AUGUST 6, 2020): Learning from COVID: Perspectives from Academia & the VHA.

Deborah Trautman, PhD, RN, FAAN, President and Chief Executive Officer of the American Association of Colleges of Nursing (AACN) discussed academic nursing leadership and their advancement of research, patient-care, and workforce development. Dr. Trautman stressed the importance of evidence, communication, and relationships in responding to the current crisis. This includes understanding how science and data informs nursing practice and policy, identifying and sharing best practices and resources, conducting webinars, holding discussions with nursing school deans, leveraging academic-practice partnerships, and the importance of documenting and disseminating what we are learning.

Sheila A. Ochylski, DNP, RN-BC, Chief Nursing Informatics Officer, Veteran Health Administration (VHA), joined by Constance Berner, MSN, RN-BC, Nursing Informaticist, Office of Nursing Informatics, shared perspectives from the VHA, the largest integrated health care system in the United States. This large system also utilizes different systems and workflows across its regions. In response to the surge of patients during the pandemic, the Office of Nursing Informatics (ONI) organized a Nursing Admission and Shift Assessment (NASSA) legSonomy systems modernization taskforce to tackle the reduction of nursing admission documentation. Using guiding principles brought back from a workgroup at the 2019 NKBDS, a patient and nurse driven template of six domains was created using data as the foundation. This standardized template was released nationally in just 21 days across this largest integrated health care system with a 100% adoption rate. It can be upgraded within 24 hours with updated CDC guidelines. As a result, the time for patient assessments was reduced from 60 to 15 minutes.

SESSION 4 (SEPT 17, 2020): Reimaging the Future of Big Data: How COVID-19 has elevated the importance of nursing informatics.

This session brought all speakers from the previous sessions together for a panel discussion focused on nursing and nursing informatics education needs for the present and near future of health care, the value of nursing work and how to increase visibility and consumer engagement, and addressing future challenges. Dr. Tolar emphasized teams and networks as the new platform which has resulted in an overwhelming amount of work at the information level. Implementing AI applications can support eliminating errors and prevent waste and variability of care. Dr. Reed discussed the import of making nursing care and nursing information visible and the need for nursing to be part of a plan of care. She emphasized the need to further advocate for standards of documentation that support nursing’s focus on nursing care. Ms. Murphy raised the question of nurses’ recognition as social heroes and the need to create a platform for nurses to have higher visibility and valued as a partner. This platform would help to clarify health information as disseminated to patients and communities. Dr. Ochylski reinforced the need to increase adoption of standardization of documentation and the priority of launching more informatics projects across the VHA system. Dr. Trautman highlighted the active response
from both practice nursing and academia and how extraordinary these partnerships have been in applying new knowledge. She noted that nursing is the most trusted profession, which the pandemic has brought to the forefront, along with the need to continually demonstrate nurses’ contributions to health and promote innovation and creativity in nursing. Closing out this last session, workgroup leaders and workgroups members discussed and defined their action plans for 2020-2021, including demonstrating nurses’ contributions to health.

Throughout these four sessions, participants identified and discussed key hot topics and challenges currently present in nursing and nursing informatics, including how the world has moved to digital technologies, specifically around telehealth, and the nursing role in this new trend. With the increased use of technology, interdisciplinary discussions (and work) are paramount. Further collaboration across disciplines is particularly needed now in response to the pandemic. Along with the increased use of technology, there is a need to re-envision nursing competencies that are aligned with the expectations that nurses (including faculty) are knowledgeable and able to incorporate these competencies into their daily practice. To make this happen, policy standards and advocacy for nurses in a digital world are needed to address specific challenges, such as the burden of documentation, reduction of national regulations during COVID-19 times, the protection of the nursing workforce, and ensuring fair and equal opportunities to all nurses.

Repeatedly, data and documentation were emphasized as not only useful but necessary for informing decision-making. Methods for collection of unbiased data, different types of data available due to COVID-19, the use of technologies to accelerate the process between data generation and implementation with a nursing perspective, and the inclusion of nursing-sensitive measures are still necessary. Examples of successful stories and implementations were discussed and the need to share these stories and further accelerate successful models and standards across settings. Aligned with the use of data, standardization and the successful implementation of models are key to reinforce the NKBDS vision of sharable and comparable nursing data across systems. COVID-19 has shown the import of addressing this gap now, spanning informatics capacity from local systems through national implementation. Addressing this opportunity now will also address health disparity, prevent injustices, and provide advocacy support for minorities. This emerging “new normal” triggered by COVID-19 had already been in place for months. Let’s celebrate the many insights and innovations resulting from the pandemic. Attendees expressed appreciation of the speakers, the breakout sessions, and the timely discussion around COVID-19, especially the input from multiple perspectives. The move to an online conference format was very well received for its accessibility and flexibility, while supporting health and safety. The conference also increased awareness of new resources, in particular a number of people were impressed by the use of technology together with key stakeholders for real-time COVID-19 surveillance. Attendees renewed commitment to continuing making contributions to workgroups, sharing resources, and expanding new ways to use data and analytics in their work to advance the NKBDS vision and goals.

SAVE THE DATE
FOR NEXT YEAR’S CONFERENCE TO BE HELD VIRTUALLY, JUNE 9-11, 2021.

More information about current and future activities related to the NKBDS Initiative can be found at the Initiative/conference website, z.umn.edu/bigdata.

Everyone is invited to join the conversation via the LinkedIn platform Big Data: Empowering Health, www.nursingbigdata.org.
Care Coordination

**HISTORY**

- By 2013, big data activities were exploding in all fields, including health care. However, nursing found itself on the outside looking in.
- The University of Minnesota School of Nursing invited nurse leaders to address obstacles to achieving sharable and comparable nursing data.
- Over 40 nurse leaders and informaticians attended the inaugural meeting.
- Participants included health system leaders, electronic medical record vendors, educators, researchers, and informaticians.
- Priorities were identified and structured into Work Groups with defined goals to be completed by the next annual meeting.
- All participants agreed that nursing data must be codified in universally-accepted, standardized terminologies in order to be included in big data research.
- The group decided to align with the professional nursing informatics communities of AMIA and HIMSS and to adopt SNOMED CT and LOINC as standardized terminologies.

**CURRENT STATE**

Starting in 2014, additional attendees were invited to the annual meeting/conference.

**The conference:**

- Has grown in number of participants and in the breadth and depth of the discussions, topics, and Work Group activities.
- Includes pre-conference educational tracks, plenary sessions, Working Group meetings, goal setting, accomplishment sharing, and networking.

**Work Groups:**

- Include volunteers, led by a chair and/or co-chairs, that focus on specific topics.
- Meet virtually throughout the year at a time and frequency convenient for its members in order to complete their objectives.
- Welcome all interested individuals to join in and participate!

**PROJECT TEAM**

**Co-Leaders**

Mary Hook, PhD, RN-BC, Research Scientist, Advocate Aurora Health Care
Lori Popejoy, PhD, RN, FAAN, Associate Professor, Helen E. Nahm Endowed Professor, University of Missouri

**Members**

Chelsea Biel
Kyle Carson
Greg Craig
Laura Hermann Langford
Stephanie Hartleben
Sharon Hewner
Stephanie Johnson
Matthew Keller
Jean Scholz
Pauline Sokolow
Christine Spisla
Brooke Traunum
Nikki VandeGarde
Bonnie Wakefield

**PURPOSE**

To identify nursing-sensitive essential shareable and comparable data elements for exchanging across settings to support care coordination activities and improve patient outcomes. Based on group input, missing information includes patient preferences, goals, strengths, ability to self-management.

To use a cross-sectional survey methodology with care coordinators (managers/direct care providers)

**AIM:**

- to describe: 1) characteristics of care coordinators, 2) how they do their work, 3) the current state of information that they collect, and 4) identify gaps/missing information needed to facilitate the communication and care across the care continuum.

To identify specific data elements used by professional nurse care coordinators to support the exchange of vital information between all stakeholders (future).

**CURRENT ACTIVITIES**

1. The team has reviewed the literature and created working document to describe the workflow for transitional and problem-focused care coordination and a working list of data elements described in the literature (e.g. AHRQ, CMS, etc.) and used by care coordinators.
2. Team members collaborated on publishing on transitional care.
3. The team is working to finalize a research protocol with an on-line survey and a purposive recruitment technique to sample a wide variety of settings where care coordinators work. We are finalizing the survey tool and communication instructions for submission to the IRB. Goal to distribute tool in July 2020 using a variety of sources to support distribution (e.g. BDNS/Workgroup personal contacts, ANI, ANA, and outreach to AAACN). Analysis will be completed in August with work toward dissemination.

**RECENT AND UPCOMING PRESENTATIONS**

None

**PUBLISHED, ACCEPTED, AND UNDER REVIEW PUBLICATIONS**


**RECENT AND UPCOMING OTHER PRODUCT**

1. Survey results will be analyzed and summarized as a manuscript for publication
Clinical Data Analytics

PROJECT TEAM
Co-Leaders
Lisiane Pruinelli, PhD, RN, FAMIA, Assistant Professor, University of Minnesota, School of Nursing
Bonnie L. Westra, DO, RN, FAAN, FACMI, Associate Professor Emerita, University of Minnesota, School of Nursing

PurPOSE
Demonstrate the value of sharable and comparable nurse-sensitive data to support practice and translational research for improving patient care and outcomes. The subgroups are: Data Science and Information Modeling (previously Information Model Validation)

DATA SCIENCE SUBGROUP
Apply data science methods, using validated information models derived from diverse sources of health care data, to address nurse-sensitive research questions that have the potential to inform nursing and multidisciplinary approaches for better patient care outcomes

INFORMATION MODELING SUBGROUP
Validate previously developed information models from flowsheet data to extend national standards with nurse-sensitive data; assist with information modeling what is requested i.e. Admission History and Screening task force; and, continuously improve and adapt information model validation and creation from flowsheet data and other nurse-sensitive information

CURRENT ACTIVITIES – DATA SCIENCE SUBGROUP
1. Nursing data science Year in Review. Literature review across all publish papers in the last year that were related to Nursing Data Science
2. Developed and explore cloud data science environments capable of being sharable across institutions, such as Google BigQuery. These shared environments allow group members to explore data science techniques, machine learning and working with large healthcare datasets for complete research projects, while sharing the same virtual desktop
3. Current research project is focused on building a model for predicting ventilator associated pneumonia (VAP) in the ICU using the MIMIC III dataset. We are redefining research question based on covid-19 pandemic, and focus on a covid-19 related question with a covid-19 related environment capable of being sharable across institutions
4. Developing a literature/educational resource targeting nurse leaders in the use of data science for research and quality improvement

RECENT AND COMING-UPCOMING PRESENTATIONS

PUBLISHED, ACCEPTED, AND UNDER REVIEW PUBLICATIONS

RECENT AND COMING-UPCOMING OTHER PRODUCTS
2. Several queries to explore and capture information about VAP
3. Shared query environment in GoogleBigQuery

CURRENT ACTIVITIES – INFORMATION MODELING SUBGROUP
1. Updating flowsheet meta-data for validating information models. In progress of developing an updated data source for mapping nursing data to IMs
2. Sent two surveys for external validation of the GU and Fall Prevention information models
3. Completed the GU Model and formed a collaborative group with Encoding Modeling Workgroup to clearly specify definitions and context when adding terminologies
4. Submitted an article on modeling process and exemplar from the GU IM for publication to JAMIA. This has been revised twice and we are waiting for a response
5. Completed the Fall Prevention survey, finalizing value set definitions, and will send final model to Encoding group in June
6. Cross walked the Pain IM spreadsheet of concepts with the LOINC/ SNOMED CT mapping spreadsheet from Susan Matney
7. Developing an article on the Fall Prevention IM
8. Created an initial VTE IM model. Since this is a very interprofessional topic, revised process to show handoffs between physicians/ advanced practitioners and nurses. This included swim lane diagrams for workflow, formal UML modeling as well as Excel spreadsheet of classes, concepts (questions), value sets (answers), relationships, and definitions
9. Collaborated with the Admission History and Screening task force to complete definitions and do the UML modeling. Communicated with Cerner to evaluate similarities and differences in their Adult History/ Screening compared with the task force. Actual modeling/ data standardization to begin after June 2020

(continued next page)
Clinical Data Analytics

10. Identified the need to develop Guiding principles – similar to what the Admission/ History group did and then display all the time to keep focus on inclusion/exclusion criteria for the models

11. Provided feedback to Young Park, DNP Student on development of a CLABSI IM

12. Requested support from the Alliance for Nursing Informatics for participation in future surveys to validate IMs. Received a positive response

13. Initiated discussion about process for updating IMs in the future once they are completed. Agreed to have a running document of requests, but models would be updated only every 3-5 years.


15. Identified 3 issues for cross workgroup sharing:
   a. Initiated discussion on Copyright/Licensing of products created by the Workgroup. Requested assistance for how to do this process across Workgroups
   b. Developed a policy on “Research Data Management: Acquisition, Use, Retention and Removal Flowsheet Metadata for Information Modeling”
   c. Discussed dissolving the Clinical Data Analytics Workgroup and instead the 2 subgroups (Data Science and Information Modeling) would become workgroups. Also discussed whether the IM subgroup could merge with the Encoding and Information Modeling workgroup. There were significant concerns that the group would become too big so for this next year, the recommendation is to have cross subgroups by topic i.e. VTE that provides expertise from informatics nurses in practice/academia and experts in data standards. The intent is to develop a model to merge these groups in the future if this is successful

RECENT AND UPCOMING PRESENTATIONS


Context of Care

**PROJECT TEAM**

**Co-Leaders**

Amber Oliver, DNP, RN-BC, Director, Clinical Informatics, Sanford Health
Heather Shirk, MSN, RN, Clinical Informatics Nurse, WellSpan Health

**PURPOSE**

Demonstrate sharable and comparable nurse data across the care continuum by capturing nursing “big data” in the Nursing Management Minimum Data Set (NMMDS), the Nursing Minimum Data Set (NMDS) and the Nursing Knowledge: Big Data Science Conference Nursing Value Data Set (NVDS) to increase nurse data usability, provide patient, family and community centric data and, fortiﬁc data generated by nurses, about nurses and nursing care across the care continuum and across care transitions in all settings where nurses provide care.

**CURRENT ACTIVITIES**

1. Work with the SDOH group to promote #SocialVitalSigns & Continuity of Care MDS
   a. Ongoing collaboration with SDOH identifying potential Social Vital Signs vendor engagement & pilot organization
2. Secondary examination of existing data set from one of the workgroup participants
   a. Completed August 2019
3. Literature Review for Mental/Behavioral Health Taxonomy Selection
   a. Initial Literature Review completed November 2019 & remains ongoing
4. SDOH & Psychosocial Asmt EHR Vendor Crosswalk for Information Model
   a. Cerner & Epic Model SDOH crosswalks completed September 2019
   b. Epic client SDOH comparison completed November 2019
5. Review of Continuity of Care (Intake/Discharge Information) for SDOH & Mental/Behavioral Health
   a. Initial Information Model & Interoperability Design completed
   b. Proof of Concept data exchange of patient demographics, allergies, meds & problem list successfully completed from data aggregation level of data repository without mapping at a discrete field level
   c. Actively working on cross vendor export & import of Facesheet, Diagnosis List with ICD10 codes, awaiting initial data extract
   d. Received approval for expansion of Proof of Concept work to include SDOH, Infection Control Flags, Care Plan NNN, Treatments & Activities Record, Discharge Summary, & last Head to Toe Assessment data. Will be built as a cross vendor export to import data exchange Acute to Post Acute
6. Application of ﬁndings to taxonomy design for Danger to Self/Others Plan of Care
   a. Ongoing goal for 2020

**RECENT AND UPCOMING PRESENTATIONS**

None at this time

**PUBLISHED, ACCEPTED, AND UNDER REVIEW PUBLICATIONS**


**RECENT AND UPCOMING OTHER PRODUCTS**

None at this time

---

Education

**PROJECT TEAM**

**Co-Leaders**

Marisa L Wilson, DNSc, MHSc, RN-BC, CPHIMS, FAMIA, Director, KUMC Center for Interprofessional Health Informatics, Clinical Informatics, School of Nursing
LaVerne Manos, DNP, RN-BC, FAMIA, Director, KUMC Center for Interprofessional Health Informatics, Clinical Associate Professor, Kansas University Medical Center, School of Nursing

**PURPOSE**

To recognize and address the signiﬁcant gaps in faculty knowledge related to informatics processed and the use of information and communication technologies in care settings; signiﬁcant gaps in competency and capability in students who are expected to use these technologies to move data to information to knowledge to improve outcomes and efﬁciencies; faculty knowledge to advance the uptake of the work done by the Nursing Knowledge Big Data Science Initiative into the classroom and out into the care environment; and need for signiﬁcant faculty development in response to the AACN Re-Envisioning of the Essentials Domain 8, Informatics, Information and Communication Technology, with speciﬁc competency and measurable subcompetency expectations at the Entry to Practice and Advanced Nursing levels.

**CURRENT ACTIVITIES**

2. Created subgroups:
   a. Review of Materials
   b. Development of Case Study
   i. Creating complex case studies which will serve as linkage to materials
   c. Faculty Development Plan
   i. Synthesizing assessment tool evidence
   d. Visual/Graphic Development for Repository
3. Monitor changes to AACN Re-Envisioning of Essentials
4. Monitor changes to ANA Scope and Standards of Nursing Informatics Practice
5. Coordinate with organizations focused on competency development

**RECENT AND UPCOMING PRESENTATIONS**

1. Summer Institute in Nursing Informatics, July 17, 2019, Baltimore, MD
3. AACN Review of Re-Envision Essentials
   a. Entry to Practice (March 4-6, 2020, Atlanta GA)
   b. Advanced (June 17 & 23, 2020 Virtual)
4. Summer Institute in Nursing Informatics, Baltimore, MD July 15-19, 2020
   (moved to 2021)
5. Ni2020, Brisbane Australia, August 4-8, 2020 (moved to MedInfo 2021 in Sydney, AU)

**PUBLISHED, ACCEPTED, AND UNDER REVIEW PUBLICATIONS**

None at this time

**RECENT AND UPCOMING OTHER PRODUCTS**

1. Educational materials
2. Faculty Development plan
3. Case study to link materials
4. Graphic tools to place into the NKBDSI repository
**Encoding and Modeling**

**PROJECT TEAM**

Co-Leaders
Tess Settergren, MHA, MA, RN-BC, Independent
Stephanie Hartleben, RN-BC, MSN, MHA, Senior Manager, Clinical Informatics, Elsevier

**PURPOSE**

Develop LOINC and SNOMED Clinical Terms content for electronic health record nursing data and incorporate the content into a framework and repository for dissemination.

**CURRENT ACTIVITIES**

1. Review Basic Physiologic Assessment Value Sets for Publication in VSAC
2. Pain assessment tools:
   a. Prioritized list provided for LOINC to obtain copyright permissions:
      i. Permission granted: N-PASS, NIPS, rFLACC, CNPI
      ii. Seeking developer permission: PAINAD
3. Mapping Heuristics Foundations: Completed
4. Content Request Process:
   a. Draft to be reviewed by Information Modeling team
   b. Finalize June/July time frame
5. Education:
   a. Provided learning opportunities to WG members to promote mapping expertise (LOINC panel building, CIMI & FHIR education by Susan Matney)
   b. Completed content for Education WG/Marisa Wilson (audience non-NI Faculty)
   c. Updated foundational slides for WG member use

**RECENT AND UPCOMING PRESENTATIONS**

1. WG priorities & accomplishments to LOINC Nursing Subcommittee (7-19-19)
2. N-PASS Submission & Content Request Process to LOINC Nursing Subcommittee (3-2-20)
3. North Dakota Center for Nursing Annual Conference (3-13-20)
4. Foundational Heuristics Document Creation to LOINC Nursing Subcommittee (5.3.20)

**PUBLISHED, ACCEPTED, AND UNDER REVIEW PUBLICATIONS**

None

**RECENT AND UPCOMING OTHER PRODUCTS**

1. GIU Model
2. Nursing Admission History
3. Falls Model
4. VTE Model
5. PAINAD Pain Scale
6. PIPP Pain Scale
7. NIPS Pain Scale (hope to be submitted by July)
8. rFLACC Pain Scale (hope to be submitted by July)
9. CNPI Pain Scale (hope to be submitted by July)
10. Explore appropriate pre-conference/confERENCE opportunities for presentations (e.g. SINI)
11. Continue to monitor for opportunities to publish the work

**eRepository**

**PROJECT TEAM**

Leader
Lyn Hardy, PhD, RN, FAAN, Associate Professor of Clinical Practice; Director, Data Science, and Discovery, College of Nursing, The Ohio State University

**PURPOSE**

The purpose of this workgroup is to house exemplars of best practices, in a vendor-neutral way, to prevent the need to start from scratch with each EHR implementation. In addition aims to increase learning, sharing wisdom and lessons learned, create the ability to build upon prior generations, and prevent process redundancy.

**CURRENT ACTIVITIES**

1. Continue platform development
   a. Repository is built on Drupal
   b. Work products are tagged to the assigned document type
   c. A public face was built with a navigational association to the “Resource Center”
   d. Work products are housed on a public server
2. Evaluation of repository methodology to include the use of repository software that would ease the repository development
3. Description and suggestion of copyright for work products not yet published to protect the intellectual property
4. Pilot submissions, Phase I and II is complete; site revisions being made post pilot
5. Development of submission guidelines to assist persons submitting work products to include items without difficulty

**RECENT AND UPCOMING PRESENTATIONS**

1. The eRepository Workgroup continues to emphasize the need for data sharing and has mentioned the work done and in progress at conferences such as MedInfo in Lyon, France

**PUBLISHED, ACCEPTED, AND UNDER REVIEW PUBLICATIONS**

None at this point

**RECENT AND UPCOMING OTHER PRODUCTS**

1. Further development of repository site with easier access and public submission privileges
2. Development of training resource/guideline to assist individual submissions of work products
3. Encouragement for copyright protections
4. “Elevator speech” for individuals attending conferences (virtual or in person)
Mobile Health for Nursing

**PROJECT TEAM**
**Co-Leaders**
Melissa Breth, DNP, RN-BC, CPHIMS, Director, Clinical Informatics, Burwood Group, Inc
Christie Martin, MN, MPH, RN, PhN, LHIT-HP Registered Nurse, Abbott Northwestern Hospital, Allina Health Graduate Research Assistant, University of Minnesota School of Nursing

**PURPOSE**
Explore the use of mobile health (mHealth) data by nurses including both nursing-generated data and patient-generated data. Identify and support activities and resources to address unmet needs and create opportunities to utilize mHealth data within nursing workflows

**CURRENT ACTIVITIES**
1. Completed Systematic Review and submitted for publication
2. Obtained sample of data fields within a Korean health app to examine what is asked of patients, data collected, and potential role of the nurse
   a. Examine the role of the nurse in mobile health app development and deployment
   b. Explore mobile health data collection
      i. What data are collected?
      ii. How could nursing better utilize the data?
3. Impact of COVID-19 on mobile health
   a. Access to care, Telehealth
   b. Data available, collected, used, and examined

**RECENT AND UPCOMING PRESENTATIONS**
None

**PUBLISHED, ACCEPTED, AND UNDER REVIEW PUBLICATIONS**

**RECENT AND UPCOMING OTHER PRODUCTS**
None

Nursing Value

**PROJECT TEAM**
**Co-Leaders**
John Deckro, DNP, RN-BC, CPHIMS, RN Clinical Information Systems Coordinator, Providence VA Medical Center, VA Nursing Academic Partnership (VANAP) Faculty, Providence VAMC & Rhode Island College School of Nursing
Martin Michalowski, PhD, Assistant Professor, School of Nursing, University of Minnesota

**PURPOSE**
To measure the value of nursing care as well as the contribution of individual nurses to clinical outcomes and cost. Develop big data techniques for secondary data analysis that will provide metrics to monitor quality, costs, performance, effectiveness, and efficiency of nursing care

**CURRENT ACTIVITIES**
1. Complete transitions of both a leadership and extending the breath of focus
2. Validate the fiscal contributions that nurses bring to health care continues to be of great importance
3. Especially in this current time as the world is faced with a pandemic for which there is not yet a cure or vaccine, traditional nursing values such as care have gained importance, recognition of informal measures of impact, and as essential to addressing wellbeing
4. Shift towards broadening the concepts of nursing value beyond financial
5. Include employing AI to discern evidence-based practices which contribute to the value of nursing and caring
6. Consider additional outcomes could include length-of-stay, mortality, complication rates, decreasing 30-day readmissions, spirituality, patient/family satisfaction, and workforce retention and wellbeing, including the Quadruple aim
7. Celebrate current workgroup members, and heartily invite past and new members to engage in the NKBDS Nursing Value Workgroup
Policy and Advocacy

PROJECT TEAM
Leader
Whende M. Carroll, MSN, RN-BC,
Founder, Nurse Evolution

PURPOSE
To elevate the voice and visibility of each workgroup’s nurse-led Big Data initiatives and recommend policy statements and advocacy to support the dissemination of leading-edge collateral and work products.

CURRENT ACTIVITIES
1. Name Change
   a. Implement full impact of workgroup name, formerly known as “Equip and Engage Nurses in Health IT Policy” to meet the information dissemination needs of the Nursing Knowledge Big Data Science (Big Data) initiative workgroups to also focus efforts on policy topics essential to the Big Data agenda, as well as offer advocacy support to any other Big Data workgroup to advance policy development and information dissemination of collateral and work products.

2. Unique Nurse Identifier
   a. Continued engagement with the following organizations for advocacy of the Unique Nurse Identifier:
      i. American Medical Informatics Association (AMIA)
      ii. American Nurses Association (ANA)
      iii. Alliance for Nursing Informatics (ANI)
      iv. American Academy of Nursing (AAN)
      v. Healthcare Information and Management Systems Society (HIMSS)
      vi. National Council of State Boards of Nursing (NCSBN)
      vii. Office of the National Coordinator (ONC)
   b. Exploring proof-of-concept (POC) pilots with healthcare organizations and health IT systems vendors to determine the technical feasibility and benefits of using the unique nurse identifier. Several organizations and several vendors have expressed interest or are actively working on pilots.
   d. Distribute the National Council of State Boards of Nursing (NCSBN) published an article in their “Leader to Leader” Fall 2019 newsletter about the use of the unique nurse identifier. The article was distributed to 14,000 recipients. Link to article: https://www.ncsbn.org/L2L_Fall2019.pdf
   e. Finalize policy statement to outline our recommendations for the Unique Nurse Identifier, and present for approval at the ANI Business Meeting in June 2020

3. Advocacy
   a. The workgroup developed a Frequently Asked Questions (FAQs) Document and distributed it to all workgroups for information about our name change and mission, definitions and how we will lend advocacy support
   b. Consult with Care Coordination Workgroup in October 2019 to discuss our advocacy support for drafting a policy statement to develop recommendations for a minimum data set, and advocate for the creation of a standardized list of data elements to support nurse-led care coordination/decision-making with a focus on selecting unique elements relevant to the patient/person plan of care, support their purpose of identifying nurse-sensitive shareable and comparable data to support care coordination activities and improve patient outcomes

RECENT AND UPCOMING PRESENTATIONS
2. A workgroup member was presenting a poster at the Summer Institute in Nursing Informatics (SINI) Topic: Unique Nurse Identifier. This poster has been cancelled.

PUBLISHED, ACCEPTED, AND UNDER REVIEW PUBLICATIONS
2. Textbook (includes Case Study about the Nursing Big Data initiative and annual conferences):
   Link to textbook: https://www.springerpub.com/emerging-technologies-for-nurses-9780826146496.html
3. Social Media Strategy
   a. Developed a Social Media-Digital Strategy Guide to equip members with the resources and knowledge to inform the public and disseminate our collateral and work products on multiple social media platforms

RECENT AND UPCOMING OTHER PRODUCTS
1. The Unique Nurse Identifier policy statement will be presented for approval at the ANI Business Meeting on 2020. We will also distribute this document to other workgroups to use as an example for their policy statements
2. Publication submission in 2020: ANA American Nurse article – Topic: Unique Nurse Identifier
4. Development of a policy and advocacy toolkit to serve as a toolkit to help other workgroups advocate for their work products.
5. Continue advocacy on the unique nurse identifier with healthcare organizations and health IT systems vendor partners

(continued next page)
Social and Behavioral Determinants of Health

PROJECT TEAM
Co-Leaders
Susan C. Hull, MSN, RN-BC, NEA-BC,
FAMIA, Chief Health Information Officer
CareLoop
Erin D. Maughan, PhD, APHN-BC,
FNASN, FAAN, Director of Research
National Association of School Nurses

PURPOSE
To support the inclusion, interoperability and data exchange of Social Determinants of Health (SDOH) data in electronic health records, personal and m-health tools, community and public health portals across care settings, and empower nurses (practice, education, research, policy) to use SDOH data as context for planning and evaluating care

CURRENT ACTIVITIES
1. Advocacy and recommendations for inclusion of SDOH in the 2030 Future of Nursing report, focusing on:
   a. The role of the nurse and the difference between social needs and social determinants of health, SBDHO as social vital signs
   b. The inclusion of standardized terminologies for collecting, measuring and reporting data use regarding SDOH (Erin Maughan, Susan Hull, Sarah DeSilvey, Joyce Senseremi)
2. Outreach to the current Future of Nursing Campaign for Action to discuss health equity toolkit-and possible addendum to include data and a more cohesive approach of SBDHO (Erin Maughan, on behalf of group)
4. Participation in UCSF Siren sponsored Gravity Project, an HL7 FHIR Accelerator, Health Coding Collaborative consensus effort on 3 national standards for food security, housing instability, and transportation, https://www.hl7.org/gravity/ (Sarah DeSilvey, Ruth Wetta, Sharon Hewner, and Lynn Choromanski)
5. Participation in National Alliance to Impact Social Determinants of Health, including Technology Workgroup (Susan Hull)

RECENT AND UPCOMING PRESENTATIONS
2. Hewner, S. (2019, Sept). Role of Health IT to Improve Care Transitions: Presenting results of the coordinating transitions project and addressing the role of clinical decision support tools to improve the quality of transitions for adults with multiple chronic diseases. Invited panelist in the AHROQ National Web Conference

(continued next page)
Transforming Documentation

**PROJECT TEAM**
- **Co-Leaders**
  - David Boyd, DNP, RN, CNS, RN-BC, Regional Director - Nursing Informatics, Kaiser Permanente
  - Shannon L. Hulett, DNP, RN, CNL, Manager - Nursing Technology, Gunderson Health System

**PURPOSE**
To explore ways to decrease the nursing documentation burden and serve up the information already in the electronic health record at the right time in the workflow to support evidence-based and personalized care; elevate purpose-driven, role-based, patient-centric, evidence-informed documentation transformation to capture nurse observations and interventions and drive purposeful secondary-use & precision nursing; and engage in transformation that enhanced data utilization to drive and measure improvement in patient outcomes and illuminate nursing’s value and contribution in healthcare.

The Admission History Cross-WG Task Force is charged with defining a model for Nursing Admission History for the adult patient admitted to an acute care facility for medical/surgical care. The outputs will guide continued work in defining Nursing Admission History and Screening for other patients/settings.

**CURRENT ACTIVITIES**
1. Finalized foundational Guiding Principles & process documentation for Admission History WG
2. Developed & reached consensus/approval on a clinical content format/worksheet for hand-off to Encoding/Modeling group for terminology mapping
3. Completed and forwarded finalized worksheet for Regulatory review by HCA Subject Matter Expert & The Joint Commission. Team is reviewing post-pandemic handoff timing to Encoding/Modeling WG
4. Drafted communication plan for content and mapping dissemination and publication
5. Drafted publication for leadership journal on admission history WG purpose & process
6. Epic plans to incorporate content in Foundation system for customer use
7. Next steps for post-pandemic WG activities: Can documentation burden reductions for pandemic response be maintained? Focus on new standard content/workflow – e.g. pediatric admission? Move to new focus on cognitive burden/decision support/predictive analytics (beyond the EHR ‘haircuts’)?

**RECENT AND UPCOMING PRESENTATIONS**
1. P. Songstack, NENIC Annual Symposium, April 2019: Think Globally, Act Locally: Reducing the Burden of Documentation in the EHR
3. J. Englebright, SINI July 2019: Reducing documentation burden: Results from the front line
4. S. Hulett, SINI July 2019: Electronic Health Record Remodeling: Gunderson Health System’s Nursing Journey
5. R. Freeman, SINI July 2019: Documentation Burden: A View from the Top

**RECENT AND UPCOMING OTHER PRODUCTS**
None

---

Care Coordination

**PROJECT TEAM**
- **Co-Leaders**
  - Mary Hook, PhD, RN-BC, Research Scientist, Advocate Aurora Health Care
  - Lori Popejoy, PhD, RN, FAAN, Associate Professor, Helen E. Nahm Endowed Professor, University of Missouri

**PURPOSE**
To identify nursing-sensitive essential shareable/exchangeable and comparable data elements to support care coordination activities and improve patient outcomes; Identify gaps/missing information needed to individualize care (e.g. patient preferences, goals, strengths, ability to self-manage, etc.)

**ANNUAL GOALS**
1. Conducting a descriptive study to identify information that is gathered and used to support care coordination in ambulatory settings
   a. Study Aims: Use a cross-sectional survey methodology to describe:
      1) characteristics of professional care coordinators, 2) what/where information is gathered, 3) what/when information is used in the care coordination process
   b. Sample: Professional care coordinators who work in ambulatory settings (goal = 200)
   c. Methodology: Subjects will be invited to participate in the study via an e-mail message containing a brief description of the study, their right to choose to participate, and lack of consequences if they choose not to participate. The email will contain a link to the google docs survey
d. Development: Q1-2 2020
e. IRB Submission: August/Sept
f. Recruitment: Q4 2020 - distribute survey using a variety of sources including NBDS Workgroup and larger group personal contacts and professional organizations to reach sample
g. Analysis: Q4 2020 – Q1 2021 to identify similarities and differences
h. Dissemination: Q1 2020
2. Future: To identify specific data elements used by professional nurse care coordinators to support the exchange of vital information between all stakeholders (future)
Context of Care

**PURPOSE**
To demonstrate sharable and comparable nurse data across the care continuum by capturing nursing “big data” in the Nursing Management Minimum Data Set (NMMDS), the Nursing Minimum Data Set (NMDS) and the Nursing Knowledge: Big Data Science Conference Nursing Value Data Set (NVDS) to increase nurse data usability, provide patient, family and community centric data and, fortify data generated by nurses, about nurses and nursing care across the care continuum and across care transitions in all settings where nurses provide care.

**ANNUAL GOAL**
1. Work with the SDOH group to promote #SocialVitalSigns & Continuity of Care
   - Ongoing collaboration with SDOH identifying potential Social Vital Signs vendor engagement & pilot organization
2. Work with pilot healthcare organization to build unidirectional interface from EPIC Acute Care to PCC LTC including the following data for phase 1:
   - Demographics
   - DNR Status
   - Allergies
   - Nursing Problem & Medical Diagnosis List
   - Discharge Medication List (after discharge Medication Reconciliation)
   - Phase 2 project to explore bidirectional interface & additional location data sharing
   - Initial Literature Review completed November 2019 and remains ongoing
4. Review of Continuity of Care (Intake/Discharge Information) for SDOH & Mental/Behavioral Health
   - Initial Information Model & Interoperability Design completed
   - Proof of Concept data exchange of patient demographics, allergies, meds & problem list successfully completed from data aggregation level of data repository without mapping at a discrete field level
   - Actively working on cross vendor export & import of Facesheet, Diagnosis List with ICD10 codes, awaiting initial data extract
   - Received approval for expansion of Proof of Concept work to include SDOH, Infection Control Flags, Care Plan NNN, Treatments & Activities Record, Discharge Summary, and last Head to Toe Assessment data. Will be built as a cross vendor export to import data exchange Acute to Post Acute
5. Apply findings to taxonomy design for Danger to Self/Others Plan of Care
   - Ongoing goal for 2020

---

Data Science and Clinical Analytics

**PURPOSE**
To apply data science and clinical analytic methods, incorporating validated information models derived from diverse sources of health care data to address nurse-sensitive clinical research questions that have the potential to inform and educate nursing and multidisciplinary approaches for better patient care and outcomes.

**ANNUAL GOALS**
1. Nursing Data Science Year in Review target January 2021 for next publication, includes a librarian who helps to perform the search strategy, and will rotate first authors, providing the opportunity to everyone lead a manuscript
2. Data science and clinical analytics education, best practices and projects
   - Data Science infrastructure and education resources
     - Continue building cloud environment and expanding use
     - Submit grant and funding opportunities to support workgroup activities, such as PCORI, RWJF
     - Incorporate MIMIC OMOP data model and tools to show nursing relevant research and data
3. Projects
   - Predicting ventilator associated pneumonia (VAP) in the ICU
   - Viral pneumonia endotypes
4. Explore NCATS N3C COVID Database
   - Establish Nursing Task Group under N3C to reinforce nursing visibility and data representativeness
5. Establish resources for nurses and nursing leaders to support data science for research, quality improvement and clinical analytics
   - Explore another workshop options, such as for NKBDS 2021 and Medinfo 2021
     - Deeper dive into one part of life cycle rather than an overall workshop
   - Data exploration and team science is one of the topics where people need the most
   - Health System or company nurse centered data science success stories
     - Show examples of benefit of data science in Nursing
     - Demonstrate why anyone should care about data science. What can it do for you?
     - Explore Award and showcase projects
       1. Criteria for entry, publish paper highlighting, data challenge
       2. Nursing data science success stories
       3. UHealth success story to share
6. Recruit new members
   - Target members who can add skills, experience, projects to the team, such as pneumonia or VAP clinician
   - Reach out to Grad students and PostDocs interested in learning more about data science and clinical analytics
   - Changing meeting time if the current one doesn’t work the best
### Education

**PROJECT TEAM**

Co-Leaders  
Marisa L. Wilson, DNSc, MHiSc, RN-BC, CPHIMS, FAMIA, FAAN, Associate Professor. Interim Department Chair: Family, Community and Health Systems, Health Systems Leadership Pathway Director, Specialty Track Coordinator, MSN Nursing Informatics, The University of Alabama at Birmingham School of Nursing

Dorcas Kunkel, DNP, RN, CNE, PHNA-BC, CPHIMS, Assistant Professor, Nursing Programs, Keigwin School of Nursing, Jacksonville University

Members  
- Deb Adams
- Chito Belchez
- Connie Bishop
- Christina Bivona-Tellez
- Joyce Brettner
- Juliana Brixey
- Jane Carrington
- Heather Carter-Templeton
- Cathy Fant
- Lynda Hardy
- Kathy Johnson
- Erin Langmead
- LaVerne Manos
- Susan McBride
- LaVerne Manos
- Susan McBride
- Carren Ondara
- Barb Pinekestein
- Jana Pownell
- Mary Jane Rivard
- Denise Sandell
- Mary Tietze
- Donni Toth
- Marie Vanderkooi
- Gwen Verchota
- Cheryl Wagner
- Ann Weiben
- Donguan Xu

**PURPOSE**

To ensure a nursing workforce capable of using digital technology to innovate, to create efficiencies, and to generate knowledge through collaborating with other workgroups and organizations and developing tools and strategies and disseminate

**ANNUAL GOALS**

1. Substantiate and disseminate through literature synthesis the existence of an informatics competency gap among nursing faculty which is key data to inform this workgroup’s efforts given the mandate to strengthen the domain
2. Evaluate and recommend competency self-assessment tools for faculty
3. Collaborate with the leadership of the Canadian Association of Schools of Nursing (CASN) to understand lessons learned from their initiatives for workforce and faculty development
4. Synthesize from each NKBDIS Workgroup the teachable content packets that they want to disseminate to ensure important concepts are not overlooked
5. Continue to coordinate with other organizations (AACN, AMIA, ANIA, HIMSS, QSEN, NLN, TIGER, CAHIM) overseeing aspects of competency, accreditation, and professional development so that joint learning activities can occur to reach the maximum audience
6. Develop an evaluation plan for the interventions using evidence informed models and the experiences of CASN and other international nursing organizations

### Encoding and Modeling

**PROJECT TEAM**

Co-Leaders  
Tess Settigren, MHA, MA, RN-BC, Independent

Stephanie Hartleben, RN-BC, MSN, MHA, Senior Principal, Clinical Informatics, Elsevier Clinical Solutions

Members  
- Mischa Adams
- Samira Ali
- Lisa Anderson
- Melissa Serna Breth
- Janice Doran
- Nikki Vande Garde
- Carol Geary
- Maria Hendrickson
- Penni Hernandez
- Kara Wynkoop Hirz
- Luke Jobman
- John Lussier
- Kay Lytle
- Chris Macintosh
- Susan Matney
- Luz Ortiz-Corral
- Roberta Severin
- Marisa Wilson
- Cyndalynn Tilley

**PURPOSE**

To curate LOINC and SNOMED-CT mappings for nursing-specific value sets, submit requests for new codes where appropriate, and incorporate the content and standards into a framework and repository for dissemination

**ANNUAL GOALS**

1. Complete 2020 projects:
   a. Publish Basic Physiologic Assessment in VSAC
   b. Pain assessment tools in LOINC
   c. Pain interventions mapping in context of FHIR procedure resource
2. Continue process/heuristics development in collaboration with KM WG
3. Partner with Knowledge Modeling WG to encode/map knowledge models:
   a. Genitourinary
   b. Falls
   c. VTE
   d. Nursing History/Screening
4. Harmonize content across NKBDS work groups and other entities
5. Increase education/awareness:
   a. Provide learning opportunities to WG members
      i. Structure: Learn CEM model base types & FHIR templates
   1. Start with observations (e.g. assertion of presence)
   2. Develop processes to map interventions & outcomes
   b. LOINC Conference presentation: “Sharing Your Pain” (October 16, 2020)
   c. Submit abstract to 2021 SINI
6. Explore possible funding sources to expedite the projects
7. Collaborate with EHR vendors on data standards implementation
   a. Determine implementation ‘owners’
8. Publish copyrighted work artifacts on NKBDS LinkedIn site
   a. Processes & heuristics—creating the models, terminology mapping, FHIR resources
   b. Create style guide: “How to use these models to standardize your documentation”—with vendor collaboration
**eRepository**

**PURPOSE**
To house exemplars of best practices, in a vendor-neutral way, to prevent the need to start from scratch with each EHR implementation; increase learning, sharing wisdom and lessons learned across workgroups and in the broader community; create the ability to build upon prior generations; and prevent process redundancy.

**ANNUAL GOALS**
1. Obtain feedback on usability of the eRepository and continue with further development.
2. Create an education video to (E3)
   a. Explain the site
   b. Encourage contributions
   c. Establish intellectual property protections
3. Explore the ability of future storage capabilities related to UMN resources
4. Expand the workgroup to include representatives of other workgroups to encourage uploading their work products
5. Expand use of the eRepository through marketing to reach
   a. Dean’s group
   b. Associations
6. Encourage individuals wishing to place their work product in the repository to copyright their information using Creative Commons

**PROJECT TEAM**

**Co-Leaders**
Lyn Hardy, PhD, RN, FAAN, Associate Professor, Director, Data Science and Discovery The Ohio State University, College of Nursing

**Members**
Maribeth Slebodnik
Charlotte Weaver
Bonnie Westra

---

**Knowledge Modeling**

**PURPOSE**
To validate previously developed information models from flowsheet data to extend national standards with nurse-sensitive data, continuously improve and adapt knowledge model validation and creation from flowsheet data and other nurse-sensitive information, and harmonize nursing data standards across workgroups.

**ANNUAL GOALS**
1. Submit publication on Fall Prevention Information Model
2. Post Fall Prevention Information Model in the data repository and publicize availability and use
3. Develop a process to disseminate and publicize materials and resources using social media with standardized messages
4. Complete validation of the VTE Knowledge Model
5. Start the validation of the Admission History and Screening Information Model
6. Collaborate with Encoding & Modeling Workgroup on the Fall Prevention Information Model coding steps
7. Proposal to harmonize nurse-sensitive data elements across workgroups.
   a. Notify Workgroups about the opportunity for standardization and request for sharing.
   b. Establish a platform (i.e. Google spreadsheet) for sharing and comparing.
   c. Involve terminology experts to recommend best practices for consistent standardization across projects.

**PROJECT TEAM**

**Co-Leaders**
Bonnie Westra, PhD, RN, FAAN, FACMI, Associate Professor Emerita, University of Minnesota, School of Nursing
Kay Lytle, DNP, RN-BC, NEA-BC, CPHIMS, FHIMSS, Chief Nursing Information Officer, Duke University Health System, Clinical Associate, Duke University School of Nursing

**Members**
Mischa Adams
Mar Akre
Samira Ali
Tucker Annis
Rivka Atadja
Tristin Fin
Meg Futukawa
Stephanie Hartleben
Mary Hook
Steve Johnson
Mikyoung Lee
Tess Settgren
Darinda Sutton
Manuela Thibodeaux
Luann Whittenburg
Joe Zillmer
Mobile Health for Nursing

**PURPOSE**
To explore the use of mobile health (mHealth) data by nurses including both nursing-generated data and patient-generated data and identify and support activities and resources to address unmet needs and create opportunities to utilize mHealth data within nursing workflows

**ANNUAL GOALS**
1. Promote Nursing involvement in the creation, storage, and exchange of mobile health data
   a. Develop and publish a white paper on nurse-participation on mobile health application development teams
   b. Support and encourage nurse-involvement in mHealth R & D teams that build infrastructure and backend databases to store and retrieve valuable content
   c. Promote participation in the mHealth Institute among mHealth group funded by NIH
2. Survey US nurses to determine use of mobile health apps and associated tools in telehealth related to COVID-19 purposes
   a. Survey US nurses to determine how mobile health apps, including the use of biometrics/wearables, are used for remote patient monitoring for COVID purposes?

---

Nursing Value

**PURPOSE**
To measure the value of nursing care as well as the contribution of individual nurses to clinical outcomes and cost. Develop big data techniques for secondary data analysis that will provide metrics to monitor quality, costs, performance, effectiveness, and efficiency of nursing care

**ANNUAL GOALS**
1. Recruit members to the group with a variety of expertise, including artificial intelligence and data science
2. Study the appropriateness of existing value model(s) to capture expanded notions of value as defined by the group
3. Find relevant data sources to use in development and validation of nursing value model

---

**PROJECT TEAM**

**Co-Leaders**
Melissa C. S. Breth, DNP, RN-BC, CPHIMS, Director, Clinical Informatics, Burwood Group, Inc.
Tami H. Wyatt, PhD, RN, CNE, CHSE, ANEF, FAAN, Associate Dean of Research & Professor, University of Tennessee, Knoxville

**Members**
Christel Anderson
Caitlin Bakker
Grace Gao
Lisa Janeway
Knoo Lee
Mikyoung Lee
Christie Martin
Vicky Tiase
Kathy Warmbold

**PROJECT TEAM**

**Co-Leaders**
John Deckro, DNP, RN-BC, CPHIMS, RN Clinical Information Systems Coordinator, Providence VA Medical Center, VA Nursing Academic Partnership (VANAP) Faculty, Providence VAMC & Rhode Island College School of Nursing
Martin Michalowski, PhD, Assistant Professor, School of Nursing, University of Minnesota

**Members**
Whende Carroll
Melissa Knox
Dorcas Kunkel
Laura Heemann Langford
Karen D. Lopez
Jana Pownell
Greg Springan
Elizabeth (Liz) Swanson
Brandon Turner
Policy and Advocacy

PURPOSE
To elevate the voice and visibility of each workgroup’s nurse-led Big Data initiatives by recommending policy statements and advocacy to support the dissemination of leading-edge collateral and work products.

ANNUAL GOALS
To advance Unique Nurse Identifier by:
1. Policy Statement Dissemination
2. ANI Sponsored Webinar
4. Unique Nurse Identifier – Presentations, posters, webinars at virtual and live nursing conferences and events in 2020-2021:
   a. HIMSS21 Global Conference. August 2021
   b. NCSBN 2021 Annual Conference, Winter 2021
   c. ANIA 2021 Annual Conference, Spring 2021
   d. N2021 Annual Conference, Summer 2021
5. Unique Nurse Identifier – FAQ Document with Infographic
6. Advocacy Summary/Statement – Telehealth: Data empowerment for Patient access, Integration/Interoperability, Reimbursement, Consumer incentives, and Measuring outcomes
7. Collaboration with Nurse Value Workgroup

Social and Behavioral Determinants of Health

PURPOSE
To support the inclusion of Social and Behavioral Determinants of Health (SBDOH) in electronic health records and digital health tools to empower nurses to partner with patients, families, and communities for whole person care.

ANNUAL GOALS
1. Partner in conducting pilots and projects to contribute data to the Simplified Omaha System Terms in MyStrengths+MyHealth in partnership with Karen A. Monsen, PhD, RN, FAMIA, FAAN and Robin R. Austin, PhD, DNP, RN-BC
2. Contribute to the Coordination of Nurse Sensitive Data elements across workgroups
3. Continue participation in the Gravity Project including development and ballot an HL7 FHIR SDOH Implementation Guide
4. Continue advocacy activities for inclusion of SBDOH in the 2030 Future of Nursing report and future activities. Focusing on the role of the nurse and the difference between social needs and social determinants of health, social vital signs, and the inclusion of standardized terminologies for collecting, measuring, and reporting data use.

PROJECT TEAM
Co-Leaders
Whende M. Carroll, MSN, RN-BC, Founder, Nurse Evolution

Members
Kelly Aldrich
Susan Alexander
Christel Anderson
Ida Androwich
Mananne Baernholdt
Kari Ballou
Nancy Beale
Melissa Sema Breth
Willa Fields
Valerie Fong
Brenda Kulhanek
Norma Lang
Laura Heermann Langford
Karen Dunn Lopez
Ellen Makar
Judy Murphy
Anna Omery
Jana Pownell
Priya Rajamani
Nur Rajwany
Cathy Schwartz
Tamara Schwitchtenberg
Joyce Sensmeier

PROJECT TEAM
Co-Leaders
Susan C. Hull, MSN, RN-BC, NEA, FAMIA, Chief Health Information Officer, CareLoop, Inc
Erin D. Maughan, PhD, MS, RN, APHN-BC, FNASN, FAAN, Director of Research, National Association of School Nurses

Members
Nonko Abe
Tucker Annis
Robin R. Austin
Sue Bell
Christina Biovana-Tellez
Laura Block
Kathy Bobay
Christie Broaddus
Terry Bryant
Kyle Carson
Lynn Choromanski
John Deckro
Sarah DeSilvey
Linda Dietrich
Dawn Dowding
Nancy Dutton
Amy Garcia
Mina Ghale
Nicholas Guenzel
Brian Harmon
Colleen Hart
Sharon Hawner

Members
Shannon Hulett
Madeleine Kerr
Rebecca Kohler
Brenda Kulhanek
Dorcas Kurkel
Karen Lane
Donna Mayo
Lisa Moon
Karen A. Monsen
Laura Munro
Susan Nokleby
Anne O’Brien
Amber Oliver
Dawn Petrokas
Marti Rheault
Joyce Rudenick
Roberta Severin
Vicky Tiase
Gwen Verchota
Ruth Wetta
Marisa Wilson
Transforming Documentation

2020-2021 NATIONAL ACTION PLAN

PROJECT TEAM
Co-Leaders
David Boyd, DNP, RN, CNS, RN-BC, Regional Director - Nursing Informatics, Kaiser Permanente
Bonnie Adrian, PhD, RN, Research Nurse Scientist, UCH Health Clinical Informatics

Members
Cheryl Abbott
Mischa Adams
Tricia Forman
Becky Fox
Susan Grossman
Cheryl Hager
Anna Halvorson
Stephanie Hartleben
Mary Hook
Sharon Kirby
Rebecca Kohler
Erik Langmead
Toni Laracuente
Kay Lytle
Ann O'Brien
Luz Ortiz-Corral
Bonnie Adrian
Regional Director - Nursing Informatics, DNP, RN, CNS, RN-BC, David Boyd

Co-Leaders

PURPOSE
To explore ways to decrease the nursing documentation burden and serve up the information already in the electronic health record at the right time in the workflow to support evidence-based and personalized care, elevate purpose-driven, role-based, patient-centric, evidence-informed documentation transformation to capture nurse observations and interventions and drive purposeful secondary-use & precision nursing, and enhance data utilization to drive and measure improvement in patient outcomes and illuminate nursing’s value and contribution in healthcare.

The Admission History Cross-WG Task Force is charged with defining a model for Nursing Admission History for the adult patient admitted to an acute care facility for medical/surgical care. The outputs will provide the foundation for continued work in defining Nursing Admission History for other patient populations and care settings.

ANNUAL GOALS
1. Continue monthly WG meetings
2. Deliver Nursing Admission history dataset to Information Modeling/Encoding & Modeling WGs
3. Develop ‘How To’ dissemination/implementation guide/toolkit for the work
4. Establish plan for next dataset for burden reduction and plan for data harmonization (e.g. pediatric admission)
5. Engage at least 2 major EHR vendors regarding the Nursing Admission history dataset and integration plans with their core software (offering to existing and new customers)

2020 CONFERENCE PARTICIPANTS

A
Bonnie Adrian
Aurora, Colorado
Mari Akre
Minnetonka, Minnesota
Christa Anderson
Chicago, Illinois
Lisa Anderson
Crown Point, Indiana
Rivka Atadja
Minneapolis, Minnesota
Robin Austin
Minneapolis, Minnesota

B
Emily Barey
Verona, Wisconsin
Nancy Beale
Cottage Grove, Wisconsin
Julia Behrenbeck
La Crescent, Minnesota
Sue Bell
St. Paul, Minnesota
Natalie Bentzin
Woodbury, Minnesota
Constance Berner
Murfreesboro, Tennessee
Christina Bivona-Tellez
Redlands, California
Kathy Bobay
Lombard, Illinois
Mitchell Bourg
New Orleans, Louisiana
David Boyd
Oakland, California
Melissa Brath
Aurora, Illinois
Kyrz Bys-Goma
Blaine, Minnesota

C
Clark Campbell
LIVE Oak, Florida
Jane Carrington
Gainesville, Florida
Whende Carroll
University Place, Washington
Heather Carter-Templeton
Starkville, Mississippi
Arlene Carpuz
Richmond, Wisconsin

Cynthia Coviak
Aida, Michigan
Traven Cunningham
Highlands Ranch, Colorado
Jean Davis
Mesa, Arizona
Cristina de Rosas
Bismarck, North Dakota
John Deckro
Sharon, Minnesota
Ellen D'Enrico
Loma Linda, California
William Donovan
Brooklyn, New York
Janice Doran
Phoenix, Arizona
Lynette Dorsey
Missouri City, Texas
Katherine Dudding
Sahuarita, Arizona
Karen Dunn Lopez
Iowa City, Iowa

J
Jane Engelbright
Nashville, Tennessee
Cathy Fant
Big Cove Tenney, Pennsylvania
Esther Farley
Midwest City, Oklahoma
Miyon Fears
Miffler, Georgia
Tracia Forman
Harlingen, Texas
Rebecca Freeman
Meggett, South Carolina
Barbara Fink
Stevensville, Maryland
Helen Fu
Minnetonka, Minnesota

G
Carol Gaery
Omaha, Nebraska
Susan Grossman
Yonkers, New York

H
Lynda Hardy
Winston-Salem, North Carolina
Stephanie Hartleben
Bismarck, North Dakota
Rose Hayes
Pompano Beach, Florida
Laura Heermann Langford
Murray, Utah
Andrew Hehr
Cottage Grove, Colorado
Maria Hendrickson
Chelmsford, Massachusetts
Penny Hernandez
Lafayette, Colorado
Sharon Henner
Ransomville, New York
Catherine Hoang
Gainesville, Florida
Lynda Hoeksma
Grand Rapids, Michigan
Mary Hook
West Allis, Wisconsin
Shanelle House
Stockton, California
Shannon Hulett
La Crosse, Wisconsin
Susan Hull
Windsor, California

K
Alvin Jeffery
Nashville, Tennessee
Steve Johnson
Eagan, Minnesota
Kathy Johnson
Waukesha, Wisconsin
Alain Junger
Lausanne, Switzerland

L
Toni Laracuente
Concord, Massachusetts
Timothy Le
Swansboro, Illinois
Kay Lytle
Chapel Hill, North Carolina
Lailene Manos
Kansas City, Kansas City
Christie Martin
Eden Prairie, Minnesota
Susan Matney
Farmington, Utah
Erin Maughan
Silver Spring, Maryland
Susan Miodora
Lubbock, Texas
Kathleen McGrow
Lubbock, Texas
Constance McLaughlin
Horsesham, Pennsylvania
Martin Michalowski
Minneapolis, Minnesota
Anna Miller
Verona, Wisconsin
Holly Miller
San Diego, California
Karen Morsen
Minneapolis, Minnesota
Judy Murphy
Lake Elmo, Minnesota

N
Denise Nelson
Edina, Minnesota
Theresa Noonan
Wheaton, Illinois

O
Ann O’Brien
San Ramon, California
Sheila Ochylski
Washington, D.C.
Amber Oliver
Littleton, Colorado
Luz Ortiz-Coral
Abington, Maryland
2020 CONFERENCE PARTICIPANTS

P
Liz Palena Hall
Washington, D.C.
Lana Pasek
Alden, New York
Dipesh Paudel
Eagan, Minnesota
Roberta Pawlak
Middleton, Wisconsin
Toni Phillips
Gainesville, Florida
Andrea Plotsky
Atlanta, Georgia
Lori Popejoy
Columbia, Missouri
Juan Rodriguez
Minneapolis, Minnesota
Karina Rohrer-Meck
Verona, Wisconsin
Jethrone Role
Riverside, California
June Rondinelli
Glendora, California
Amy Rosa
Broomfield, Colorado
S
Mary Schultz
Upland, California
Joyce Seremeier
San Marcos, California
Theresa Settgren
Burnsville, Minnesota
Heather Shirk
Nottingham, Maryland
Laura Sorg
Springboro, Ohio
Gregg Springan
Verona, Wisconsin
Suzanne Sullivan
Buffalo, New York
Darinda Sutton
Saint-Augustine, Florida
Liz Swanson
Iowa City, Iowa
T
Mariaelena Thibodeaux
Lakewood, California
Victoria Tiasa
New York, New York
Matt Tietze
Irving, Texas
Cyndalynn Tilley
Woods Cross, Utah
W
Kathy Wambold
Park Rapids, Minnesota
Charlotte Weaver
Issaquah, Washington
Sijia Wei
Durham, North Carolina
Bonnie Westra
Minneapolis, Minnesota
Connie White Delaney
Minneapolis, Minnesota
Ann Wieben
Madison, Wisconsin
Bradley Wiering
Edina, Minnesota
Marisa Wilson
Nottingham, Maryland
Janine Wong
Houston, Texas
Tami Wyatt
Knoxville, Tennessee
Kara Wynkoop Hirz
Verona, Wisconsin
Y
Christine Yang
Houston, Texas
Z
Joe Zillmer
Verona, Wisconsin
The 2021 Nursing Knowledge: Big Data Science Conference will be held virtually June 9-11, 2021.