FINAL NARRATIVE REPORT

UTAH NURSE RESIDENCY IMPLEMENTATION PROGRAM

RWJF Grant ID# 70695

Period: February 1, 2013 – January 31, 2015

$150,000

Goal: To Implement the Institute of Medicine Goal #3,

Nurse Residency Programs in Utah

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***Question #1. What goals did you set for this project and how well do you think the project
met these goals? Do you have measures of your performance?***

Three major project goals were set for Utah's State Implementation Program (SIP) 1 grant:

1. To increase the number of formalized, evidence-based, yearlong residency
programs (from one to six) in Utah supporting registered nurses (RN) in their
transition into practice.
2. To achieve measurable consistency and quality in Utah residency program
curriculum, implementation, and evaluation.
3. Increase gender, ethnic, and racial diversity of new RN graduates that have
access to RN residency programs to create a workforce that is at least as diverse
as the population served.

Goal #1 was exceeded with eight nurse residency programs operational in all acute care
hospital corporations in the state. Goals #2 and #3 were met with encouraging results. Utah will
be building upon our SIP 1 grant experience and findings in our SIP 3 grant (which was recently
funded) seeking to significantly expand the number of operating nurse residency programs
statewide. Specific objectives and measures achieved are described below.

Goal 1/Accomplishment #1: A statewide consortium of RN residency program partners,
consisting of schools of nursing and hospitals, was successfully created. Eight nurse residency
programs were implemented in all acute care corporations in the state (Iasis Healthcare
Hospitals, University of Utah Hospitals, Mountain Star Hospitals, Veteran's Administration
Hospital, and Intermountain Healthcare Hospitals). Participating schools of nursing partners
include Weber State University, University of Utah, Westminster College, Brigham Young
University, Southern Utah University, and Dixie State University.

Goal 1/Accomplishment #2: Coaching and resources were provided to facilitate design,
implementation, and evaluation of each residency program. A tool kit was developed,
distributed, and used by all residency programs. The tool kit contained practical items to help
new programs in curriculum development, data collection systems, program evaluation, RN
education progression/leadership, and increasing the gender, ethnic, and racial diversity of
Utah's RN workforce. A SharePoint site was created in which individual programs could share
and highlight best practices. This site was valuable in supporting the development of new
residency programs. Technical assistance meetings included both on-site visits by the grant
coordinator, in order to answer questions and provide recommendations, along with nurse
residency steering committee meetings held every two months (with participation from the
nursing schools and hospital sites). A program evaluation plan was completed and implemented
at each residency site. Indicators such as retention and turnover, evaluation of preceptors,
resident nursing skill levels, demographics/diversity, and Casey Fink data (job satisfaction and
adjustment, confidence, etc.) were collected at baseline, 6 months, and annually upon
completion of the residency.

Goal 2/Accomplishment #1: Core components and resources, such as educational materials, tools, teaching strategies, and best practices were developed for shared use by the residency programs in implementation and evaluation. An environmental scan of existing nurse orientation programs, internships, and residencies were conducted at the beginning of the grant. As anticipated, the results of the review showed a wide variety in the type, focus, and content of these nursing orientation programs. A model for curriculum, mentoring, and a seamless transition into clinical practice was developed in summer 2013. Due to cost limitations and the feedback from individual hospitals that they wanted to build on their existing curriculum instead of replacing it, purchasing a national nurse residency model for use was not selected. However, a model needed to be developed so that consistent components of a successful nurse residency program were in place. To accomplish this, a Commission on Collegiate Nursing Education (CCNE) crosswalk document was developed in early summer 2013. Individual residency programs used this as an overlay document on their existing curriculum to determine where more emphasis was needed and in planning for future nurse residency accreditation. The nursing school partners assisted in curriculum development, use of teaching methods (such as simulation labs and inter-professional education models) and ensured that duplication of educational content (previously learned in nursing school), did not occur. Initial site visits occurred in the summer of 2013 to provide coaching to facilitate design, implementation, and evaluation of each program.

Goal 2/Accomplishment #2: To implement a coordinated system to capture data for evaluation of the residency programs, the Research Electronic Data Capture (REDCap) data collection system was used. The following data is collected through the REDCap system on all of the residents at periodic intervals throughout the yearlong program:

- Demographic Information – Indicators such as age, gender, college degree, racial, ethnicity, geographic location (urban vs. rural), and first time college graduate. This data is collected at baseline when the nurse resident begins the program.
- Casey-Fink Scale – A nationally tested research scale designed to assess nurse resident job satisfaction and confidence in a variety of nursing skills. This data is collected at baseline, 6 months, and upon completion of the nurse residency program.
- Preceptor Evaluation – This scale is designed to assess the nurse resident's satisfaction with their assigned preceptor. This data is collected at baseline, 6 months, and upon completion of the nurse residency program.
- Resident Competency Assessment – This scale is completed by the nurse resident's preceptor and assesses their nursing skill levels. This scale is completed at baseline, 6 months, and upon completion of the nurse residency program.

Some key findings from the Utah REDCap data include but are not limited to:

Demographics
- *Age:* The average age of nurse residents is 30.1 years, ranging from 26.9 - 41.5 years. Most hospitals are not only taking new graduates in their nurse residency programs, but also accepting practicing RNs that have not recently worked in an acute care hospital setting.

- *Gender:* 30% of nurse residents are male. Utah significantly exceeds this diversity category nationally, compared to 9.6% of the national nursing workforce that is male (American Community Survey, 20110).
- *Race/Ethnicity:* 91% of nurse residents are Caucasian. The remaining 9% is composed of Hispanic, Native American, and Pacific Islanders. For the first year of the nurse residency grant, there were no minority nurse residents. This 9% increase in the diversity of Utah's nurse residents is significant.
- *Urban vs. rural:* Thirty eight percent (38%) of nurse residents are from a rural area, compared to 62% of residents that reside in an urban area.
- *First Generation College Student:* Twenty eight percent (28%) of nurse residents are first generation college students, compared to 72% that are from families that previously had generations of college graduates.

Casey Fink Scale
- *Top Skill Nurse Residents are Uncomfortable Performing Independently:* At baseline, the top two skills nurse residents (32 residents) were uncomfortable performing were insertion of arterial/venous lines/swan ganz and handling codes/emergency responses. At 6 months, these two procedures remained the top skills that nurse residents were uncomfortable performing, although only 14 residents felt uncomfortable performing the procedures. At completion of the nurse residency program, only two residents were uncomfortable in performing these skills.
- *Independence in all Nursing Skills:* Fifteen percent (15%) of Utah's nurse residents reported that they were independent in all skill levels upon entry to the residency program. At 6 months, 27% of nurse residents reported independence in all skill levels, and at completion of the residency program, 33% of nurses reported being independent in all skills.
- *Difficulty Prioritizing Patient Care Needs:* Twenty-two percent (22%) of nurse residents stated that they have difficulty prioritizing patient care needs, compared to 20% of nurse residents upon completion of the program. This may be an area to continue to concentrate learning experiences /curriculum so that a greater percentage of nurse residents show confidence in this area.
- *Overwhelmed by Patient Care Responsibilities and Workload:* Thirty percent (30%) of nurse residents reported feeling overwhelmed by patient care responsibilities at the beginning of the residency, compared to only 10% at completion of the program.
- *Feeling Prepared to Complete Job Responsibilities:* Thirty-one percent (31%) of nurse residents did not feel prepared to complete their job responsibilities upon entry into the residency program, compared to zero percent (0%) of nurse residents reporting feeling unprepared at completion of the residency program.

Competency Assessment
- *Manage Patient Care Assignments:* The preceptors reported that 90% of nurse residents at completion of the residency program performed independently the ability to manage patient care assignments. At the beginning of the residency program, preceptors reported that 14%

of nurses had never performed, needed some, or minimal, supervision managing patient care assignments.

- *Recognize Changes in Patient Condition:* The preceptors reported that all nurses (100%) could recognize changes in patient condition at the end of the residency program. At the 6 month assessment, 28% of nurses were assessed as needing some, or minimal, supervision in this task.

- *Examine and Implement Evidence-based Interventions at the End of Life:* The preceptors reported that 89% of nurses could perform this task independently at the end of the residency program. At the 6-month assessment, 40% of nurses were assessed as having never performed, needing direct, or minimal supervision in this task.

- *Identify Patient and Family Education Needs:* The preceptors reported that 100% of the nurses could identify patient and family education needs at the end of the residency program. At the 6-month assessment, 19% of nurses were assessed as needing some, or minimal supervision.

Preceptor Evaluation

- *Provides and Supports Opportunities for Daily Learning:* At 6 months, 76% of nurses stated that they strongly agree that their preceptor provides and supports opportunities for daily learning. Ten percent (10%) of nurses stated that they strongly disagreed with this.

- *Promotes Hands-On Learning, Discusses Abnormal Findings:* At 6 months, 86% of nurses stated that they strongly agree that their preceptor promotes hands-on learning and discusses abnormal findings with them. Ten percent (10%) of nurse stated that they strongly disagreed with this.

- *Actively Uses and Promotes Plan of Care:* At 6 months, 81% of nurses stated that they strongly agree that their preceptor actively uses and promotes the plan of care. Ten percent (10%) of nurses stated that they either strongly disagreed, or disagreed, with this.

- *Promotes an Attitude of Learning and a Safe Place to Ask Questions:* At 6 months, 91% of nurses stated that they agree that their preceptor promotes an attitude of learning and a safe place to ask questions. Ten percent (10%) of nurse stated that they strongly disagreed with this.

- *Supports Team Member During MD Interaction:* At 6 months, 91% of nurses stated that they agree that their preceptor supports the team member during MD interactions. Ten percent (10%) of nurse stated that they strongly disagreed with this.

- *Teaches During Assessment and Procedures:* At 6 months, 91% of nurses stated that they agree that their preceptor teaches during assessments and procedures. Ten percent (10%) of nurse stated that they strongly disagreed with this.

The above is a sampling of Utah's REDCap data. For a more complete list of data and graphs, please refer to the Final Program Evaluation Report on Utah's Nurse Residency Program, submitted as a grant deliverable to the Future of Nursing Campaign for Action, AARP Office in February 2015.

Goal 2/Accomplishment #3: Hospital metrics, such as turnover and retention, have been collected on Utah's residency programs. Results are positive with three hospitals showing a retention rate of 100% and a termination rate of 0%. One hospital had a 95% retention rate because one nurse resident voluntarily terminated the program because of relocation of her family. The remaining hospital had two residents terminate the program (3% termination rate and 97% retention rate) because one resident resigned due to health problems and the other failed to pass the national nursing board exams. This data will also be collected longitudinally (annually after completion of the residency) in Utah's SIP 3 grant on these nurse residents.

Goal 3/Accomplishment #1: In this grant, we designed and implemented a targeted recruitment strategy to support the successful recruitment of a diverse pool of nurses. To begin we needed a system to track diversity data as this has been lacking in the past. To accomplish this, we successfully created a Nurse Data Center, which is now permanently housed in the Utah Medical Education Council. This step was monumental as we are creating a baseline, and subsequent tracking, of RN and APRN diversity data in Utah. RN supply, employer demand, and educational preparation are the databases being collected. A comprehensive survey of all Utah licensed RNs was conducted in fall 2014, with several reminders for completion being subsequently done. We are presently compiling this data and will be monitoring RN diversity trends in the future, with statewide RN surveys to be conducted every two years. Data on the RN education area has been completed in conjunction with the Utah Organization of Nurse Leaders. To further our work in the diversity area, we are developing an easy-to-use and read document, "Nursing in Utah", which describes the various career options available to potential nurses, emphasizing the need for diversity.

Goal 3/Accomplishment #2: Creation of career fair/booths and information for graduating diverse students was accomplished. Each of our individual residency sites has individual career fairs designed to attract potential nurses to the field. Emphasis has been on increasing the diversity of Utah's nursing workforce. To spearhead a larger audience, grant staff attended the November 2014 Utah School Counselor's Association Statewide Conference. In that venue, we had materials/booth explaining career options in nursing. Grant staff emphasized the professional nature of a nursing career, the need for a strong science background, and the emphasis on recruiting a more diverse field of potential nurses. We learned that much more effort needs to be directed at working with the middle school and high school counselors, as many of them had an inaccurate and antiquated view of nursing. In our SIP 3 grant, continued work in this area will occur.

Goal 3/Accomplishment #3: Ensuring retention of ethnically diverse new RN graduates is an important goal of Utah's SIP 1 grant. Each residency site has a specific plan to ensure retention of all of their nurse residents, including those that are ethnically diverse. This goal is a continuing item for discussion at the statewide Nurse Residency Steering Committee meetings.

Goal 3/Accomplishment #4: We have developed systems to capture diversity data across sites with comparisons to statewide trends. In addition, we have imbedded diversity data collection

strategies into the REDCap data collection system. The following is a chart comparing the percent of Utah nursing students with a minority classification, compared to the Utah's nurse residents and the 2010 U.S. Census Information.

Table 1	Native American	Asian	African American	Pacific Islander and Native Hawaiian	Two or More Races	Missing or Unknown	Hispanic
Associate Degree Nursing Students (Generic and Bridge)	0.9%	2%	0.9%	0%	1.4%	3.6%	14%
Baccalaureate Nursing Students (Generic and 2nd Degree)	0.2%	3%	1.3%	0%	0.7%	1.7%	11%
Nurse Residents (REDCap Data)	2.2%	0%	0%	1.1%	O%	0%	4.4%
U.S. Census Data (Utah)	1.5%	2.2%	1.3%	1.0%	----	---	13.3%

Presently, Utah nurse residency programs are well represented (above the state percentage) with the Native American and Pacific Islander/Native Hawaiian populations. Gains need to occur however in the number of Asian, African American, and Hispanic nurse residents. An additional area where Utah significantly exceeds in diversity is in the gender category, with males representing 30% of Utah's nurse residents.

Goal #3/Accomplishment #4: Establishment of a Utah State Chapter of the National Hispanic Nurses Association. This goal was established and presently the Utah Chapter has well over 20 members, including practicing RNs, APRNs, and students from a variety of nursing academic programs across the state. Goals of the Utah Chapter include, but are not limited to, mentoring prospective Hispanic nursing students, conducting health promotion in the Hispanic community, conducting continuing education sessions for Hispanic RNs, and developing information on scholarships/financial aid for minority students.

Question #2. Do you have any stories that capture the impact of this project?

Yes. One article was published in the Salt Lake Tribune announcing the grant award and the nurse residency program. Three other articles were published on Danielle Howa-Pendergrass regarding receiving a national nurse leadership award from the Future of Nursing Campaign for Action. Nurse leadership has been a key theme in Utah's residency programs and Danielle has been an example to highlight in our curriculum. Please see the *Bibliography* attachment for the

articles. Finally, multiple newsletter articles in the Utah Nurses Association, Utah Chapter of Nurse Practitioners, and the Utah Organization of Nurse Leaders have been published on the project (please see the attached *Bibliography*).

Question #3. Did RWJF assist or hinder you in any way during the grant period?

We received technical assistance from RWJF on implementing our diversity plan in Utah. Furthermore, we were invited to be the Action Coalition coordinator to comment on the first draft on the Diversity Plan (national example) developed by a team of experts assembled by the staff from the Campaign for the Future of Nursing. Utah also received communications technical assistance from RWJF on our documents and newsletter articles. Finally, RWJF has helped us in contacting peers in other states to learn from what has been developed in the nurse residency and diversity area. Similarly, other national peers have contacted us for assistance on various items when needed through the RWJF network. In conclusion, RWJF was very helpful to us on this grant project.

Question #4. Did the project encounter internal or external challenges? How were they addressed? Was there something RWJF could have done to assist you?

No internal challenges were encountered and this can be largely attributed to the support of the grant from University of Utah, School of Nursing Dean Emerita, Maureen Keefe and HealthInsight Executive Director, Juliana Preston. Necessary resources, guidance, and help in planning the project's implementation were also available from the two grant co-leads. It was ideal to have a neutral non-hospital based organization, such as HealthInsight, lead the statewide planning and implementation of the grant. Overall, the grant's effect has been very positive with hospitals, nursing education programs, and nurses in general. We have received ongoing support from the Utah Action Coalition for Health and the other nursing professional organizations, such as the Utah Nurses Association and the Utah Organization of Nurse Leaders. Utah's nurse residency grant did encounter some external challenges:

1. **Funding of the curriculum model –** *A* "one size fits all" curriculum model would not have worked in Utah. Each hospital corporation needed to have their nurse residency program tailored to their specific needs. We found that each hospital site had particular pride and ownership in their individual programs. Originally, our grant had planned to use a specific curriculum, with a considerably high price point, to be used by all programs. It became clear that mandating this would have doomed the grant to failure. Utah then proceeded to use the national Veteran's Administration residency as a model and utilized the Commission on Collegiate Nursing Education (CCNE) accreditation standards as the framework for developing the individual residency programs.
2. **Lack of funding for FTEs of actual on-site hospital residency operations –** There was an initial misperception that the grant would fund on-site hospital staff, or FTEs. This misperception had to be addressed clearly at the beginning of the grant and when new residency programs were becoming operational. Identifying what was to be funded,

and the type of support, was essential so that all had a common understanding of the monies available. Furthermore, delineating the project infrastructure, such as tool kits, technical assistance, a SharePoint site, a REDCap data collection system, etc. helped the participants understand the value of participating in the grant.

3. **Initial perception that only baccalaureate prepared nurses were eligible for the nurse residency program –** There was confusion at the beginning of the grant that associate degree nurses would not be eligible for enrolling in the nurse residency programs. This was a problem as Utah's hospital workforce is still heavily dependent upon associate degree nurse staffing. Clearly identifying up-front that both associate degree and baccalaureate prepared nurses were to be included in the residency program was essential. In addition, casting education progression of the associate degree nurse in a positive light, with associated incentives, helped portray the message that "it is okay where your start your education, just don't stop at the associate degree level".

4. **Lack of data collection skills in some nurse residency on-site coordinators –** Some hospital residency coordinators were not comfortable with actual data collection as their expertise was solely in clinical practice areas. To help bolster the data collection skills in these individuals, the education partner, usually a nursing school professor or graduate student, assisted the hospital residency coordinator in implementing the data collection system. This positive approach from the education partner helped mitigate the problems while positively coaching the residency coordinator.

The RWJF staff was available during the grant to help on any challenges we encountered and were always prompt in answering questions.

Question #5. Has your organization received funding from other foundations, corporations or government bodies for the project RWJF has been supporting?

Utah's nurse residency program received $75,000 in matching funds from the Utah Cluster Acceleration Programs (UCAP). This organization is a partnership between the Utah System of Higher Education, Utah Department of Workforce Services, and the Governor's Office of Economic Development. The primary objective of UCAP was to help key industry clusters, such as health care/nursing, become engines of job creation and economic growth in Utah. Having RWJF, a well-trusted grantee, helped in obtaining the matching funds for the grant. We look forward to our future SIP 3 work with RWJF and the matching funds for this grant provided by the Utah Hospital Association.

Question #6. When considering the design and implementation of this project, what lessons did you learn that might help other grantees implement similar work in this field?
The following are the lessons learned in Utah's nurse residency program:

- Allow Nurse Residency Program Curriculum to be Individualized to each Setting
- An Engaged Education Partner is Key to a Successful New Nurse Residency Program
- Simulation is an Important Teaching Method in Nurse Residency Programs

- Inter-Professional Team Care Management Training is Needed for New Nurse Residents
- Enrollment in Utah's Nurse Residency Programs Must Include Associate Degree (AD) Nurses as well as Baccalaureate Prepared Nurses (BSNs)
- Allow CCNE Accreditation to Occur When Individual Hospital Sites are Ready
- Trained Preceptors/Mentors for Nurse Residents are Needed on All Hospital Shifts
- Trained and Consistent Preceptors are Needed for New Nurse Residents
- Nurse Residency Program Evaluation Should Include Feedback from Physicians
- Nurse Residency Curriculum Must Build on the Learning from Nursing Schools and Not Repeat Curriculum that was Previously Emphasized
- Support of Hospital Unit RNs is Key to the Success of Nurse Residency Programs
- Do Not Use Nurse Residency Programs as a Re-Entry Training Program for RNs Who Have Been Out of the Workforce for a Length of Time
- Considerable Variability were Found in Utah's New Nurse Orientation Programs Prior to the Initiation of Nurse Residency Programs
- Clearly Identify Nurse Residents as Registered Nurses
- Keep Lines of Communication Open with Hospital Chief Executive Officers (CEOs) and Chief Financial Officers (CFOs)
- Share REDCap Data with Chief Nursing Officers (CNOs) and Quality Improvement (QI) Staff
- Data are Essential and Systems Must be Designed to Make it Easy to Collect
- Nurse Residency Retention and Termination Rates Should be Compared to Hospital Rates if Feasible
- Use the Education Partners to Help Nurse Residency Coordinators with Data Collection
- Increasing Diversity Takes Effort and Results Must be Measured Over Time
- Explore Alternative Mechanisms to Evaluate Potential Nursing Students for Admission to University Nursing Programs
- Educate High School and Middle School Counselors on Professional Nursing Career Opportunities
- Nursing is an Important Engine for Job Creation in Utah
- A Strong and Engaged SIP Oversight Committee is Critical to the Success of Nurse Residency Programs
- Strong SIP Leads are Essential and the SIP Grant Coordinator Should be Employed by an Independent Organization
- State Action Coalitions (and their Member Organizations) Must Take a Strong Interest in Developing Nurse Residency Programs

For more detailed information on the lessons learned in Utah's SIP 1 grant, please refer to the Lessons Learned Report submitted to RWJF, AARP Office, as part of the 24-month grant deliverables.

Question #7. What impact do you think the project has had to date? Who from outside the project could be called on to comment on it?

Utah's SIP 1 grant was highly successful in demonstrating the importance of nurse residency programs to acute care hospitals, academic institutions, and nurses alike. All of Utah's acute care hospitals continue to expand their residency programs in other sites. In addition, long-term care facilities and inpatient psychiatric facilities have expressed an interest in having nurse residency programs due to the SIP 1 grant success. We are planning to greatly expand the number of nurse residency programs in the state with our SIP 3 grant. We continue to receive positive comments from residents that have completed the program and the data demonstrating program effectiveness is very encouraging. Given the data findings on skill levels and confidence of the nurse residents, we are encouraged that patients and families will be the beneficiaries of improved care outcomes. Please contact Larry Garrett, RN, PhD, HealthInsight, who is available to comment on the project (LGarrett@healthinsight.org) in the future.

Question #8. What are the post-grant plans for the project if it does not conclude with this grant?

In our SIP 3 grant, we will continue to expand the number of acute care hospital nurse residency programs. Due to high community interest, nurse residency programs in long-term care facilities and in inpatient psychiatric hospitals will also most likely be implemented.

Question #9. With a perspective on the entire project, what were its most effective communications and advocacy approaches?

Two key areas for successful advocacy for the project were:
- Having a strong and engaged SIP Oversight Committee and a broad-based representation of hospitals and nurse educators
- Ensuring the program had dynamic SIP leaders and having the SIP Grant Coordinator be employed by an independent organization (so no vested interests)

Effective communication included involving all of the various nursing professional organizations in the planning of the project, such as the Utah Nurses Association and the Utah Organization of Nurse Leaders. Ensuring transparency of data, along with a quality improvement focus, was imperative to breaking down institutional barriers, which then promoted sharing of learning and best practices across all hospital corporations. Presenting information about the nurse residency programs at professional conferences and membership meetings was also another successful strategy. Finally, it was critical to have a supportive and engaged Action Coalition throughout the life of the entire grant project.