Building a Nursing Research Program in a Children's Hospital in One Year!

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Objectives

1. Describe how research compares to quality improvement and evidence-based practice
2. Describe how to make the business case to support nursing research
3. Describe 10 key elements required for a hospital-based nursing research program

Seattle Children's Hospital-Founded in 1907
Free Standing Non Profit Children's Hospital

We believe all children have unique needs and should grow up without illness or injury. With the support of the community and through our spirit of inquiry, we will prevent, treat and eliminate pediatric disease.
In 2013, a 330,000 sq. ft. addition was added, making room for 96 new cancer and critical care beds, and a new Emergency Department.

Organizational Structure

Research Institute

$91.9M extramural funding in 2014
Seattle Children's Hospital received a four year re-designation as a Magnet hospital from the American Nurses Credentialing Center, sponsor of the Magnet Recognition Program.

In 2015, Seattle Children's was ranked No. 6 in the country among the nation's best children's hospitals by U.S. News & World Report. Six specialties were named among the top ten nationwide.

In 2013, Seattle Children's Hospital received a four-year re-designation as a Magnet hospital from the American Nurses Credentialing Center, sponsor of the Magnet Recognition Program. PICU earned a Beacon award from the American Association of Critical Care Nurses. The Beacon award signifies excellence in critical care.

Nursing Staff

- Nurse Practitioners: 170 in 33 specialties
- Clinical Nurses: 1,400

91% RNs hold BSN or higher degree
56.7% RNs are certified
Definitions

- Continuous Performance Improvement (CPI)
  - Using benchmarks to compare and improve performance
  - Solutions for Patient Safety Collaborative
  - NDNQI (National Database on Nursing Quality Indicators)
  - National Organizations
- Evidence Based Practice (EBP)
  - Using a comprehensive and disciplined method to evaluate existing evidence to determine best practice
- Research
  - Using rigorous scientific methods to generate new evidence to determine best practice

Model for Improving Practice

Seattle Children’s Nursing Research History

- Nurses have participated in research over the years
  - Principal investigators on own studies (limited number of individuals)
  - Principal investigators to meet academic requirements
  - Caring for patient on study protocols
  - Research nurses supporting studies of others
  - Members of IRB
- There was no formal process or structure to promote and facilitate nursing research
2010 Nursing Research Proposal
(Not Effective for Obtaining Resources)

Proposal Outline
A. Importance of Nursing Research
   • Provide best clinical care
   • Determine best evidence when lack of evidence exist
   • Improve engagement of professional nurses
   • Magnet standards
   • Hospital Research Strategic Plan
B. Connection to Mission/Vision of Hospital
C. Infrastructure and Resource Requirements
D. Review of Literature

2014 – Four Years Later!

Senior Leadership Connection Between Nursing Research and 2012-2016 Hospital Strategic Plan Made!

Find Cures and educate clinicians and researchers
1. Develop new cures through a sustained commitment to innovative research.
2. Ensure every child has the opportunity to benefit from research.
3. Accelerate discovery, education and sharing of our expertise globally.
4. Enhance our training of new clinicians and our continuing medical education.

10 Interventions in One Year (2014)

1. Clear leadership accountability
2. Align with Hospital and Research Goals
   Obtain Senior Leadership Support
3. Financial Support
4. Marketing and Culture
5. Mentorship
6. Skill Building for Research
7. Intramural Grant Mechanism
8. Resource Identification and Alignment
9. Policies and Processes
10. Institutional Review Board and Human Subjects Protection
1. Clear Leadership Accountability

- Role Defined
  - Prior to 2014
    - Associate Chief Nurse for Practice
  - 2014
    - Associate Chief Nurse for Practice and Research
  - ~30% of role dedicated to oversight for nursing research
  - Other areas of responsibility:
    - Associate Chief Nurse Responsibilities
    - Standards of Practice
    - Oversight
      - Professional Development
      - Quality & Safety
      - Informatics
      - Wound Care
      - Education
      - Magnet
      - Pain
      - Schools of Nursing

Nursing Research Steering Committee

Committee Structure and Purpose

- Develops strategic plan
- Identifies resources
- Promotes collaboration (RNs, Research Institute, MDs, Universities)
- Mentor nurses to conduct research
- Identifies funding sources
- Reviews grant applications
- Promotes Dissemination
- Plans Nursing Research Symposium
- Increases visibility of nursing research

Nursing Research Steering Committee Members

<table>
<thead>
<tr>
<th>Department</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Nursing</td>
<td>Associate Chief Nurse, Practice &amp; Research (Chair)</td>
</tr>
<tr>
<td>Inpatient</td>
<td>Clinical Nurse Specialist</td>
</tr>
<tr>
<td>Ambulatory</td>
<td>Chief, Clinical Practice</td>
</tr>
<tr>
<td>Patient Care Unit (2 positions)</td>
<td>Clinical Nurse</td>
</tr>
<tr>
<td>Advanced Practice (2 positions)</td>
<td>Chief, Advanced Practice</td>
</tr>
<tr>
<td>Centralized Department (2 positions)</td>
<td>Director &amp; Clinical Nurse</td>
</tr>
<tr>
<td>Pediatric Clinical Research Center</td>
<td>Nurse Manager</td>
</tr>
<tr>
<td>Clinical and Translational Research</td>
<td>Business Director</td>
</tr>
<tr>
<td>University of Washington</td>
<td>Nurse Research Mentor</td>
</tr>
<tr>
<td>University of Washington</td>
<td>Nurse Scientist</td>
</tr>
<tr>
<td>Seattle Pacific University</td>
<td>Dean</td>
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</tbody>
</table>
2. Align with Hospital and Research Goals
Obtain Senior Leadership Support

1. Hospital and Research Goals
Strategic Plan: 2012-2016

2. Senior Leadership Support
• Chief Nursing Officer
• President of Research Institute
• Chief Academic Officer (MD)

3. Key Collaborations in Center for Clinical and Translational Research
• Bonnie Ramsey, MD
  Medical Director
• Dedra Schendzielos, MHA
  Business Director

3. Financial Support

5 year agreement $250,000 per year (2014-2019)

<table>
<thead>
<tr>
<th>Resource</th>
<th>2014 (Year 1)</th>
<th>2015 (Current)</th>
<th>2016</th>
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<tbody>
<tr>
<td>Associate Chief Nurse – Practice &amp; Research</td>
<td>3 FTE</td>
<td>3 FTE</td>
<td>0</td>
</tr>
<tr>
<td>Nurse Researcher – University of Washington</td>
<td>25 FTE</td>
<td>5 FTE</td>
<td>2 FTE</td>
</tr>
<tr>
<td>Administrative Assistant</td>
<td>3 FTE</td>
<td>2 FTE</td>
<td>2 FTE</td>
</tr>
<tr>
<td>Intramural Grants ($10,000)</td>
<td>7 grants</td>
<td>8 grants</td>
<td>9 grants</td>
</tr>
<tr>
<td>Nursing Research Symposium</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$5,000</td>
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<tr>
<td>Statistician</td>
<td>$0</td>
<td>$0</td>
<td>0.25 FTE</td>
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<tr>
<td>Dissemination Grant</td>
<td>0</td>
<td>0</td>
<td>$5,000</td>
</tr>
<tr>
<td>Conference Travel</td>
<td>$5,000</td>
<td>$3,000</td>
<td>$5,000</td>
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In-Kind Resources Provided by Hospital and Research Institute:
Research administration, 2 hours “free” statistical consult, IRB, Library

4. Marketing and Culture

• Nursing Research Symposium
• Marketing and Communications Department
• Presentations at Research and Hospital Board Meetings
• Develop the “elevator speech”
• Newsletter
• Key Collaborations
  • Research Institute
  • Schools of nursing
  • Nursing leaders
  • Physician researchers
  • Foundation
Visibility of Nursing Research
(Large Posters Placed at Hospital Entrances)

Nursing Research Symposium Marketing

Melinda Garberich and Jennifer Patano's Research Featured in Hospital Newsletter
5. Mentorship

Karen Thomas, PhD, Professor
The Ellery and Kirby Cramer Endowed Professor in Nursing
Family and Child Nursing
University of Washington

Role
• Hospital: Mentor
• University: Own program of study

Lessons Learned
• Aligned vision between university and hospital
• Right “personality” to support diverse group of nurses with varied skill level simultaneously all in different steps of the research process

6. Building Research Skills

Design, Methods, Data Collection, Analysis, Dissemination

• Mentorship
• Annual Nursing Research Symposium
• On-line resources
• Web site
• Newsletters
Nursing Research Website

Nursing Researcher Creates Nursing Research Newsletter

7. Intramural Grant Mechanism

Creation of the Grant Process
- Developed application templates
- Amount and length ($10,000 over 2 years)
- Priorities for funding (patient versus nurse research)
- Approval process for application
- Marketing – if you build it, will they come?
- Logistics for submission: nursingresearch@seattlechildrens.org
- Grant review process
- Administrative distribution of funds
- Mentorship support, once funded
Research Institute Website

Application Completion:
- Download and complete the application document.
- Submit research and institutional review board (IRB) documents.
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Application Submission:
- Submit the completed application to the Research Committee.
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Nursing Research Grant Components

COVER PAGE
- Demographics and Signatures
- Abstract (500 words)

BUDGET AND JUSTIFICATION (2 pages)

BIOSKETCH (Use NIH Biosketch)

RESEARCH PLAN (5 pages)
- Background and Significance
- Specific Aims and Research Questions
- Research Design and Methods (include statistical analyses plan)

DISSEMINATION PLAN (1/2 page)

TIMETABLE (1 page)

REFERENCES (1 page)

APPENDIX (letters of support, additional materials, instruments, etc.)

Nursing Research Grant Review Process

- Conflict of Interest
- Funding Decision
- Scoring

Nursing Research Review Template (1=Excellent, 2=Good, 3=Marginal)

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>Strengths</th>
<th>Limitations</th>
<th>Score</th>
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</thead>
<tbody>
<tr>
<td>Proposal Significance for Seattle Children’s Nursing (30%)</td>
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<tr>
<td>Methods/Approach (20%)</td>
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<tr>
<td>Innovation (20%)</td>
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<tr>
<td>PI/Investigators Qualifications &amp; Environmental (20%)</td>
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<tr>
<td>Plan for Dissemination and Publication (15%)</td>
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Investigator:

Project title:

25
Post Award Support Provided By Nursing Research Mentor

- Meet with investigators following award to discuss start-up
- Assist with IRB application
- Liaison with research institute and core services
- Liaison with statistician
- Monthly grant follow-up check in's
- As needed, meet with grant recipients and their teams
- Assist writing of abstracts for conference presentation and manuscripts for publication

Funded Research Grants (2014/2015)

- A multicenter analysis and comparison of nursing interventions to prepare children and families for pediatric urodynamic exams
- Impact of child life intervention during outpatient cystic fibrosis clinic procedure: A pilot study
- Improving patient satisfaction and decreasing emergency visits through prompt response by triage nurse
- Kids and iron supplements for sleep (KISS)
- An education bundle to reduce ED return rate among pediatric patients with bronchiolitis
- Predicting emergency severity index (ESI) level based on pre-arrival information
- Determining inter-rater reliability of the Cornell Assessment of Pediatric Delirium (CAPD) screening tool among PICU nurses

Funded Nursing Research Grants con't (2014/2015)

- Impact of translated DC instructions on caregiver knowledge and post-hospitalization care among families with limited English
- RN/Resident reciprocal shadowing program
- Health literacy and diabetes management outcomes
- Assessing child and parent experience of pain and related patient reported outcomes in pediatric hospital inpatients
- Accuracy, sensitivity and patient preference of non-invasive thermometers in a pediatric surgical acute care setting
- Validation of automatic versus manual blood pressure measurements on children using Philips MP30 monitors
Grant Recipient Principal Investigators

- Roles
  - Clinical Nurses
  - Educator
  - Clinical Nurse Specialist
  - Managers
  - Director
  - Nurse Practitioner
- Units
  - Ambulatory clinic
  - Procedure/Exam area
  - Acute care surgical
  - Acute care medical
  - Emergency department
  - Pediatric intensive care unit

8. Resource Identification and Alignment

- Library
  - Access to medical librarians
  - Perform high quality searches
- Statistics
  - Provided by research institute
  - 2 hours “free” consultation
- Research Staff Support
  - Research nurses, research associates, psychometrists
- Business Practices
  - Grant funds management
- Grant Support
  - Identification, write, submit
- Foundation
  - Potential donor pool

9. Policies and Processes
Facilitate research rather than create barriers

IRB
- Nurses as principle investigators
- Pre-IRB approvals

Nurses in graduate school
- Can they do their research at place of employment?
- Hospital view versus university view

Job Description
- Is research allowed and or expected?
- What about the union?

Pay practices
- Charging time to grants
- Hourly paid staff versus exempt staff
Added to all nurse job descriptions

Innovation and Improvement:
Promotes and participates in scientific inquiry within quality improvement, evidence based practice, and research processes. Open to change and embraces new initiatives in the spirit of improving the quality of patient care and discovering new knowledge. Able to articulate unit-based quality improvement, evidence based practice, and research projects.

10. IRB and Human Subjects Protection

- IRB added nurses as reviewers to every committee meeting
- IRB Chair provided in-person, pre-conference human subjects protection training for the Inaugural Nursing Research Symposium
  - 36 participants
  - Ongoing training through on-line CITI(Collaborative Institutional Training Initiative)
- Assistance with IRB processes

11. Dissemination Support

- Not prioritized as part of “10 Interventions in First Year”
- Built into Nurse Researcher standard work with grant recipients
- Informal advertising
- Nursing Research Steering Committee members offer mentorship support
- New grant mechanism
  - Formal mentor support
  - Modest financial support for clinical nurses
- Future: Add as job expectations for key nursing leaders, including collaboration with clinical nurses
Moving Forward – Goals for 2016

- Fund and Hire 1.0 Nursing Scientist
- Formalize Nursing Research Program as a “Center” within the Research Institute
- Extramural Funding
- Dissemination
- Support Research-Hospital Integration Work
- Collaboration outside our organization
  - Research with university faculty
  - Multi Center Studies
  - Structure and Process

Goal to Formalize Nursing Research Program to a “Center” within Research Institute

- Center for Nursing Research
- Treuman Katz Center for Pediatric Bioethics
- Center for Diversity and Health Equity
- Center for Child Health, Behavior and Development
- Center for Clinical and Translational Research
- Ben Towne Center for Childhood Cancer Research
- Center for Developmental Biology and Regenerative Medicine
- Center for Developmental Therapeutics
- Center for Integrative Brain Research
- Center for Immunity and Immunotherapies
- Center for Global Infectious Disease Research

Thank You to Colleagues Across the Country!

Pam S. Hinds, PhD, RN, FAAN
Associate Center Director, Center for Translational Science
Director, Nursing Research and Quality Outcomes
Children’s National Health System (Washington, DC)

Martha A. Q. Curley, PhD, RN, FAAN
Ellen and Robert Kapito Professor in Nursing Science
Penn Nursing Science
University of Pennsylvania

Kathleen Sawin, PhD, RN, CPNP-PC, FAAN
Joint Research Chair in Nursing
Children’s Hospital of Wisconsin & University of Wisconsin-Milwaukee

National Pediatric Nursing Science Collaborative Members
Thank You
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