



# Center for Nursing Research & Innovation

*Bridging Research & Practice – Summer 2008*

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Research & Innovation  
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## Celebrating 10 Years of Research & Innovation

Nancy Donaldson

It is indeed my pleasure, with this special issue of our newsletter, to highlight the accomplishments of the Center for Nursing Research & Innovation (aka, The Center) over the past 10 years, while providing you with a glimpse of our current projects and visions for the future. When the Center was launched in the spring of 1999, we could not know that the merger uniting UCSF and Stanford that made the Center possible, would dissolve. We have been grateful since then for the sustaining support of our founding partners Lucile Salter Packard Children's Hospital, Stanford Hospital and Clinics and UCSF Medical Center and Children's Hospital. Over the past 10 years we have had the exceptional opportunity to work closely with the patient care leadership teams across these three world class hospitals, to participate in the launch of 2 Nursing Research Councils and to coordinate ten Research Day Conferences providing a venue for sharing research and innovations between partners, and the world-at-large. We have developed and implemented a robust Evidence-based Practice (EBP) Program, now serving six hospitals.

The Center has established a virtual footbridge between the UCSF School of Nursing and our founding sponsor hospital partners, building on paths already established, and increasing the thrilling exchange of ideas, innovation and professional role development made possible

because of this dynamic and strategic collaboration. We have recently expanded our hospital affiliates, adding John Muir Health System's Walnut Creek and Concord sites, plus San Francisco General, to our group of Center hospital partners. On September 11, 2008 we celebrate the completion of our 4<sup>th</sup> EBP Fellows Program, with a total of 81 graduates and their Coaches having completed this exciting program. In October we host our 10<sup>th</sup> -Research Days Conference, including our newest co-sponsor, Kaiser Northern California region, and engaging 13 hospitals (including Oregon Health and Sciences University Medical Center, Portland Oregon) and four schools of nursing. Each year the podium presentations and poster sessions grow in number and clinical significance!!

Since our inception, the Center has obtained \$4.5 million in grants and contracts, reduced the funding asked of its founding sponsors, and achieved its goal of being totally self supporting. We have  
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also been extremely fortunate to recruit Mary Foley RN, MS, Past President of the American Nurses Association, in the role of Center Associate Director. Donna Frantz, Senior Administrative Analyst has also been key to our success as the highly regarded coordinator of our Research Days Conference and so many other projects that exemplify the Center's work bridging research and practice. Richard Ching, our Accounting Analyst, is also vital to our work as he manages our myriad sources of revenue and monitors our expenses, projects our financial performance and handles our complex funds and accounting requirements. We have also welcomed a special Senior Nurse Scientist (see Welcome... below) to the Team, which is expected to enable us to pursue new avenues of activity and inquiry. Embedded in the Department of Physiological Nursing (DPN), the Center also benefits from the spirit of collaboration and support of the DPN faculty and staff as well as the Dean's Office Team.

In the next year the Center will continue to expand its reach and impacts. Leveraging technology, we intend to make our EBP Program available to a new generation of participants through multi-media presentations. We are embracing the emerging science of implementation and will explore innovative methods to sustain and spread the important process and outcome improvements emerging from the EBP Fellows Program "small tests of change". We also anticipate unprecedented research opportunities arising from CalNOC's (see Glossary of Acronyms, p. 9) ongoing studies, and will pursue publication of a monograph that captures our insights and expertise in developing capacity for evidence-based performance excellence. As we celebrate our first decade we are clearly poised to break more new ground bridging research and practice, with the aim of improving patient care quality, safety, outcomes and costs!! We are grateful, everyday, for the opportunities of this exciting work!



### **WELCOME TO SUSAN SHAPIRO**

The Center is pleased to welcome Susan E. Shapiro RN PhD to our team, effective July 1, 2008.

Susan comes to us from UCSF Medical Center, and she will continue to devote 20% of her time there as facilitator of research and evidence-based practice. The remaining 80% of her time will be devoted to a variety of Center activities and projects/studies, including assisting Nancy Donaldson and Mary Foley with the Research and Operations support of the California Nursing

Outcomes Coalition (CalNOC). Susan is also an Associate Clinical Professor in the DPN at UCSF School of Nursing.

Susan has been instrumental in team teaching with Nancy Donaldson in the Center's Evidence-based Practice Fellows Program, a joint venture with six Bay Area Hospitals. In the year ahead, Susan will increase her involvement in the EBP Fellows Program, handling program coordination and web-based courseware development.

Susan is passionate about bridging nursing research and practice and has a vibrant spirit of inquiry. In October she will represent the Center at the Council for Advancement of Nursing Science meeting (CANS), presenting the results of our RWJF Rapid Response Team Initiative Evaluation. (See Research Report, p. 7 for details). We eagerly anticipate her contributions to many of our ongoing initiatives in the coming year.

### **CENTER REACH – LOCAL**



Fellows from San Francisco General discussion lead by Coordinator Sharon McCole-Wicher

**EVIDENCE-BASED PRACTICE PROGRAM 4<sup>TH</sup> YEAR – Celebration on Sept. 11, 2008**

On February 7, 2008 the Center for Nursing Research & Innovation welcomed the 4<sup>th</sup> cohort of nurses and allied health staff into the Evidence-based Practice (EBP) Fellowship. Staff from UCSF Medical Center, Stanford Hospital & Clinics, Lucile Packard Children's Hospital, San Francisco General Hospital, and John Muir Medical Centers – Walnut Creek and Concord campuses gathered to begin their six-month journey of discovery, learning, and innovation in practice.

Working with specially trained coaches, advanced practice nurses, or educators, from their hospitals, the EBP Fellows identify a clinical practice challenge, search and critically appraise the relevant literature, synthesize the evidence into an appropriate better practice for their situation, and then plan, implement, and evaluate a small test of change with the aim of improving patient care quality, safety, outcomes or costs.

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*EBP Fellows continued from page 2*

The program draws on the assembled expertise of the staff Fellows and their coaches to identify and overcome well-known barriers to successful implementation of best, evidence-based practice. The return on investment



Susan Shapiro with UCSF Evidence- Based Practice Fellows and Coaches for 2007

for participating hospitals is the increased capacity of their staff to engage in clinical inquiry in support of strategic imperatives for excellence in patient safety and improved patient and system outcomes.

The 4<sup>th</sup> Annual Evidence-Based Practice Fellow Project Presentation and Celebration will be held on Sept. 11, 2008, when the twenty-four fellows completing the 2008 program present their projects results.



**CENTER REACH – REGIONAL**

**10<sup>TH</sup> ANNUAL RESEARCH DAYS**

The call for abstracts was distributed in April for the 10<sup>th</sup> annual Center Research Days to be held on October 22<sup>nd</sup> and 23<sup>rd</sup> at the South San Francisco Conference Center. Lunched in

1999 at the request of Jane Hirsch, then CNO at UCSF Medical Center, this annual conference is one of the earliest of Center initiatives, and has grown from the initial solo sponsorship by the original Center, to its present support that includes 15 collaborating hospitals and schools of nursing. Co-sponsors include El Camino Hospital, John Muir Medical Center – Concord and Walnut Creek Campuses, Kaiser Permanente: Northern California, Lucile Salter Packard Children’s Hospital, Mills Peninsula Health Services, Oregon Health & Science University, Hospitals & Clinics, Santa Clara Valley Medical Center, San Francisco General, Stanford Hospital & Clinics, San Francisco State University, School of Nursing, San Jose State University, School of Nursing,



Research Day 2007 posters

UCSF Medical Center, UCSF Children’s Hospital, UCSF School of Nursing, VA Palo Alto Healthcare System, and VA Medical Center San Francisco.

This special event is open to all clinicians with an interest in sharing research and evidence-based performance improvement projects aimed at optimizing the quality, safety and outcomes of patient care.

As in the past three years, Research Days has become a two-day event, beginning with a day of investigative role development workshops, followed by a day-long celebration of the innovative work of nurses and other clinicians who share their results via podium and poster presentations.

**DAY 1: RESEARCH ROLE DEVELOPMENT WORKSHOPS DAY: October 22<sup>nd</sup>**

Our Fourth Research Role Development Workshop Day will provide both novice and clinical staff with opportunities to learn basic skills appropriate for clinical inquiry and practice improvement. We will reprise some of our more popular workshops, including basic research design, formulating a PICOT question, issues in measurement, grantsmanship for beginners, and writing for publication. We’re also debuting new workshops this year, for example, a hands-on interactive workshop on literature searching led by a UCSF health information librarian, a panel to discuss an “EBP toolkit” of ideas and strategies to support clinical inquiry, and a workshop on implementation science. Don’t miss the chance to select workshops well matched to your interests and expertise! Mark your calendars now!

**DAY 2: RESEARCH IN ACTION DAY – PODIUMS & POSTERS: October 23<sup>rd</sup>**

Research in Action Day is the premier Bay Area regional nursing research symposium. On this day, nurses and other clinicians present their projects to an appreciative audience of peers. This year 62 abstracts were received in mid-July, and they are being reviewed by experts from all 13 collaborating hospitals and schools of nursing. Authors of twelve of the best abstracts are invited to give podium presentations of their projects. Other peer-reviewed projects may be presented as posters, making Research



2007 Research Day poster award goes to Sarah Lee and Ngozi Onyike of San Francisco General Hospital

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*Research Day continued from page 3*

in Action Day a stimulating blend of oral presentations and creatively displayed visual accounts of successful EBP projects. All of this is supplemented by a range of exhibitors whose products support both clinical care of patients as well as research and evidence-based practice.

### RESEARCH IN ACTION DAY KEYNOTE ADDRESS

Research in Action Day Podium & Posters event always opens with a provocative keynote address, and this year's presentation builds on that tradition. **Lena Gunningberg, RN, PhD**, University Hospital Uppsala, Sweden, will be our Keynote Speaker this year. She will be speaking on "Transforming Patient Care through Nursing, Research and Evidence-Based Practice—the Ties that Bind Us"

We invite new participant hospitals and academic schools to join us in 2008! For more information contact Donna Frantz, phone: 650-723-7062 or email: [dfrantz@stanfordmed.org](mailto:dfrantz@stanfordmed.org).

Registration is available online at:

<http://www.acteva.com/booking.cfm?bevalD=160695>



### CENTER REACH – NATIONAL NDNQI - BENCHMARKING BEST PRACTICES

It was with great pride that members of the CaINOC and the UCSF Center for Nursing Research and Innovation had two podium presentations at the 2nd NDNQI National Conference in January, 2008. The program was titled "Workforce Engagement in Using Data to Improve Outcomes" and was held in Orlando, Florida. Dr. Nancy Donaldson and Dr. Diane Brown, Co-PIs for CaINOC, and Mary Foley, MS attended the meeting on behalf of CaINOC. The conference celebrated the many accomplishments of the national nursing database since its founding over a decade ago. CaINOC was an active participant in NDNQI from the beginning and continues today as the largest, on-going, statewide nursing sensitive database. Updates were provided on a range of cutting edge issues, from pressure ulcers to the nursing work environment; from evidence based practice to pay-for-performance.

The full CaINOC team prepared the two presentations, one from Dr. Diane Brown, on "Benchmarking Best Practices: Use of Standardized Indicators to Contrast Top and Bottom Performance for Care Practices and Patient Outcomes", and the second by the Center's Associate Director Mary Foley on "Developing a Medication Administration Accuracy Nurse Sensitive

Indicator: Research and Implementation Opportunities and Challenges".

The team is already anticipating the 3rd NDNQI national meeting in January 2009 and two abstracts submitted and are now under review.



### CENTER REACH – INTERNATIONAL VISITING SCHOLARS BUILDING BRIDGES TO SCANDINAVIA

The Center was privileged to host visiting scholar **Lena Gunningberg** from Uppsala University Hospital in Uppsala, Sweden February through July of 2007. Her visit resulted in an ongoing tie between Uppsala University and UCSF faculty with exciting potential for future collaboration.

Lena's insight and expertise related to pressure ulcers could not have been more crucial to The Center's work. In response to National Pressure Ulcer Advisory Panel (NPUAP) changes, Lena assisted CaINOC and our resident expert, Dr. Nancy Stotts, to update the Pressure Ulcer content in the CaINOC Codebook and edit and revise the CaINOC Pressure Ulcer web-based tutorial, including redesigning the pre- and post test courseware. Lena also provided expert advice and consultation to the team during conference calls and meetings in which decisions were being made related to pressure ulcer coding changes. Finally, she observed CaINOC methods in the field and provided feedback to CaINOC leadership by participating in the UCSF



Lena Gunningberg

and Veteran's Administration (VA) San Francisco pressure ulcer prevalence studies.

In addition to her work with pressure ulcers, Lena participated in the qualitative data analysis as part of the Robert Wood Johnson Rapid Response Team evaluation project (see, Research and Innovation – recently completed, p.7) arising from interviews with nurses, Chief Nursing Officers, and Rapid Response Team leaders in 18 hospitals in 13 states.

Lena left us in June of 2007 but will be visiting us again in October to present the Keynote address at our Research Days 2008 –Research in Action Day – Podiums & Posters program.

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In September 2007, we welcomed visiting scholar **Unni Knutstad RN, Cand Paed** Pro-rector (Vice President) of Oslo University College in Norway. Unni has worked in Nursing Education since 1989. From 2000 to 2003, she was the dean of the School of Nursing and in 2003 she became the pro-rector of the entire college –11,000 students. She chose to spend her sabbatical year visiting the Center for Nursing Research & Innovation because of her interest in strengthening the connection between nursing research and practice. She says she was “lucky to get in touch with Nancy Donaldson, who is a great resource for capacity development in research utilization and evidence-based nursing and who has developed educational programs for nurses in evidence -based practice. I hope to be able to develop courses for nurses and nursing students based on her programs. And I got advice for my own research on how our bachelor program in nursing prepares students for using research in their practice.”



Unni Knutstad

On June 11<sup>th</sup>, the Center hosted a School of Nursing reception in which Unni shared with the SRO audience the original aims for her visit, her accomplishments during her journey, new insights and how her time with us will advance her ongoing role development and work in Norway.

### DONALDSON PARTICIPATES IN HISTORIC OXFORD INTERNATIONAL LEARNING COLLABORATIVE

The Osler-McGovern Centre was the venue for the two day inaugural meeting of The Oxford International Learning Collaborative which took place on February 27th-28th of this year. Hosted by Green College, this historic event brought together senior nurse leaders from four continents to explore how nursing can improve the scientific, clinical, and practice base of the fundamentals of patient care. The impetus for the meeting was the establishment of the first Academic Health Science Centre (AHSC) in the UK at Imperial College Healthcare NHS Trust, London. Nurse leaders from other established and emerging AHSCs converged in Oxford to discuss how the structure and governance processes in the new alignment of patient delivery systems

and the pursuit of academic and research excellence can improve patients’ experience of care and safety.

The Warden, Dr. Colin Bundy, welcomed the group and reminded them of the appropriateness of their mission to the philosophy and vision of Sir William Osler. Osler was a visionary and transformer who was also a passionate advocate for the integration of clinical excellence in medicine with the highest standards for scientific research and scholarship.

“That ambition is aptly demonstrated in this important and visionary initiative and Green College is proud to be associated with it through Alison Kitson, Fellow of Green College and organizer of the event” said Dr. Bundy. “I believe this may be one of the first times that a group of international nurse leaders has come together to see how AHSCs can collaborate in the study of the fundamentals of patient care. All our health systems face the same strategic challenges – optimizing patient safety and ensuring quality patient care that is reliable, affordable, and accessible. With this emerging ILC work we have the potential to produce and compare the vital metrics we need to understand clinical effectiveness and improve our systems.”

Representatives from Canada, the US, Australia, Singapore and the UK enjoyed the warm spring atmosphere of Oxford and the hospitality of Green College.

The Oxford International Learning Collaborative will be continuing its work and is planning its second meeting. The Center is committed to this exciting work.



Oxford Research collaborative

Dr. Colin Bundy(8th from left), Warden of Green College welcoming international guests to the inaugural Oxford International Learning Collaborative in February 2008.(L to R: A. Kitson,UK; B. Brady-Fryer, Canada; E.Tagliareni, USA; N. Donaldson, USA; D. Allen, Canada; R. Parkes, Australia; E. Stracken-Hall,UK; Colin Bundy Warden; L. Long, Australia; J. Profetero-McGrath, Canada; J. Sigsworth, UK; E. Ang, Singapore; A. MacCallum, UK; D. Foster, UK; C. Shuldham, UK; L. Querengesser, Canada)



**CalNOC Corner**  
**California**  
**Nursing**  
**Outcomes Coalition**  
**A CalNOC Primer**

The California Nursing Outcomes Coalition (CalNOC) (<https://www.calnoc.org/globalPages/mainpage.aspx>) is an unprecedented collaborative initiative engaging a diverse team of staff nurses, advanced practice clinicians, educators, researchers, administrators, and leaders in nursing in attaining the shared vision of designing, systematically implementing, and evaluating a statewide nursing outcomes database. Launched in 1996, the CalNOC project is the one of the nation's most highly regarded ongoing nursing quality measurement, data repository, and research development projects. CalNOC is an entirely self-funded, and although begun with small grants from ANA as a joint venture between the Association of California Nurse Leaders (ACNL) (<http://www.acnl.org>) and the American Nurses Association-California (ANA/C), CalNOC is sustained by its member hospital data management fees, research grants and contracts for services. CalNOC is governed by a Steering Committee, and managed by a multi-disciplinary Operations Team. From an operations standpoint, the ACNL handles the administrative functions of CalNOC in the role of fiscal agent, Cedars Sinai Medical Center Research Institute handles the CalNOC database and data analysis and the robust web-based virtual dashboard used by CalNOC member hospitals. The Center, with Dr. Donaldson as CalNOC co-Principal Investigator, coordinates CalNOC's overall operations, research, publications, and presentations.

CalNOC evolved in a volatile healthcare marketplace driven by the need for value-enhancing quality and safety outcomes. CalNOC enables patient care leaders to use their own data to examine links between the nursing work environment, nursing processes, and nurse-sensitive patient outcomes. The ability of providers to reliably measure both patient care quality and patient outcomes is the first step toward understanding the effectiveness of services for both individuals and populations. Better understanding of the effect of hospital nurse staffing on patient care safety, outcomes, and quality, made possible by the data available in the CalNOC database, is an emerging public policy issue and a critical health care concern.

CalNOC has contributed measures to the National Quality Forum's quest for the first Nursing Standards for Hospital Quality, worked closely with The Joint Commission in creating their coding specifications for the NQF 15 Pilot Project, and provided data for public

reported to the California Hospital Assessment and Reporting Taskforce (CHART).

## CalNOC RECEIVES EDGE RUNNER AWARD

In preparing for the 2007 Annual Meeting, the members of the American Academy of Nursing (AAN) were challenged to nominate a few rich examples of interventions, programs, and projects that nurses have designed and used to integrate mental and physical care for patients, families and communities. These nominees were called *Edge Runners*, based on the work of health futurist and motivational speaker, Leland Kaiser. Convinced that their ideas will produce results, *Edge Runners* push them forward — sometimes against formidable resistance. The momentum and the results often lead to necessary and permanent changes in systems and practices. Thanks to *Edge Runners*, innovative experiments become permanent solutions

([http://www.aannet.org/files/public/17\\_Edge%20Runner%20Profile%20Form.doc](http://www.aannet.org/files/public/17_Edge%20Runner%20Profile%20Form.doc)).

We were gratified to learn that the work of CalNOC was recognized by the AAN when it received a 2007 *Edge Runner* award. A summary of CalNOC's goals and achievements is posted on the AAN's website ([http://www.aannet.org/files/public/CalNOC\\_template.pdf](http://www.aannet.org/files/public/CalNOC_template.pdf)), attesting to CalNOC's unique and substantial contributions to improving nursing care and related patient outcomes.

## CALNOC CONFERENCE APRIL 7-9, 2008



CalNOC Ops Team – Patricia McFarland, ACNL, Nancy Donaldson, UCSF, Diane Brown, Kaiser Permanente, and Carolyn Aydin and Linda Burnes Bolton Cedars' Sinai Medical Center

## RADICAL TRANSFORMATION OF NURSING PERFORMANCE IMPROVEMENT: RESPONDING TO EXPLODING MEASUREMENT DEMAND

CalNOC had an overwhelmingly successful conference at Universal City from April 8-9, 2008. Over 300 nurses attended the meeting to learn more about CalNOC's emerging findings and tactics to transform patient care. A central theme of the meeting was characteristics of High Reliability Organizations (HRO) and how those characteristics apply to hospitals, nursing care, and

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*CalNOC Conference continued from page 6.*

assuring quality patient outcomes. The keynote was presented by Paul Plsek, an expert in transformational change and innovation in complex organizations. Other guests included quality leaders from Lumetra, the California Medical Quality Improvement Organization, the California Hospital Association, the VA, and the Military Nursing Outcome Databases.

CalNOC took this opportunity to share cutting edge information from the nation's largest statewide nurse sensitive database. Each member of the CalNOC operations team had an active role in presentations and shared critical findings about Hospital Acquired Pressure Ulcers, Restraints, and, in response to requests from Chief Nursing Officers across the state, CalNOC revealed its first preliminary findings describing "Best Practices" to reduce falls and pressure ulcers. In addition to the general summary findings of this exploratory study, CalNOC invited representatives from participating hospitals to share their expertise and best practices. As the first such investigation in this exciting area, and as a model for exploration of other nursing initiatives, CalNOC has launched a new era of research and innovation and we will continue to pursue this initiative in the coming year.

The meeting was brought to a successful and challenging close with perspectives from Linda Burnes Bolton, CalNOC leader and nurse champion. Linda reminded us all of the importance of research in an era of public reporting, and reiterated the value of research as accomplished by participation in CalNOC. The next annual meeting is planned for mid July, 2009

## **RESEARCH AND INNOVATION**

### ***BREAKING NEWS!***

#### ***CENTER LAUNCHES CALNOC'S NEW RWJF INQRI STUDY!***

On July 25, 2008 we were pleased to learn that the Center's RWJF proposal "Impact of Medical Surgical Acute Care Microsystem Nurse Characteristics and Practices on Patient Outcomes" (N. Donaldson, PI, in collaboration with Dr. C. Aydin PhD) will be funded as one of 8 new Interdisciplinary Nursing Quality Research Initiative (INQRI) studies! The aim of this 2 year, \$300,000 study leverages the ongoing work of the CalNOC project to develop an empirically derived predictive model examining individual and collective effects of unit level nurse workload, staff nurse characteristics and selected risk assessment and preventive intervention processes of



Carolyn Aydin

care on variance in nurse sensitive acute care patient outcomes at the microsystem level of acute care medical-surgical units. The outcomes studied will include, (1) incidence of falls and fall related injuries, (2) prevalence of hospital acquired pressure ulcers (HAPU), (3) prevalence of medication administration errors, and (4) prevalence of peripherally inserted central catheter (PICC) associated blood stream infections. As a secondary aim, we will add a new measure, Hospital Acquired Stage 3-4 Pressure Ulcer Incidence, to the CalNOC dataset. Integrating this publicly reported indicator into the CalNOC dataset will enable timely study of the association between HAPU prevalence and incidence, and an exploratory investigation of the sensitivity of both HAPU measures to variation in nurse workload, staff expertise and selected clinical practices, and the predictive power of early stage prevalence for late stage incidence. These aims are explicitly responsive to the primary goals of RWJF's INQRI, advancing understanding of how nurses contribute to and improve quality of care.

### **RECENTLY COMPLETED RESEARCH**

## **RAPID RESPONSE TEAMS THROUGH THE EYES OF THE NURSE**



RWJ RRT Evaluation Project Team, left to right, Mary Foley, Nancy Donaldson, Mary Scott and Susan Shapiro

The Center has recently completed one of our most exciting research projects, the evaluation of a Robert Wood Johnson Foundation program that funded nine multi-hospital agencies in support of rapid response team (RRT) initiatives in over 500 hospitals across the country (Nancy Donaldson, RN, DNSc, FAAN, PI). In addition to gathering quantitative information about the participating agencies and their member hospitals, such as numbers of beds, type of hospital (teaching vs. non-teaching), RRT configuration and scheduling, and outcomes such as number of codes outside the intensive care unit (ICU) and overall mortality, we sought to

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understand the impact of RRTs “through the eyes of the nurse”. The Center RWJF RRT Team (Donaldson, Foley, Shapiro and Dr. Mary Scott) interviewed 56 staff nurses in 18 hospitals across 13 states representing all areas of the country in order to find out how they experienced the RRT and how having the RRT affected their practice.



We are currently in the process of preparing manuscripts for peer review and publication, but here are some highlights from among our findings. First, there is no one universal model of RRTs, although a common theme was the presence of a critical care nurse – usually ICU but occasionally emergency department – on the team. Typical RRTs in most hospitals function 24/7, but some are days only; some are nights only; some exclude week-end coverage. Staff nurses, RRT leaders, and chief nursing officers (CNOs) were also very consistent in reporting that RRT activation takes about 30 minutes to run, which is important to know when planning for staffing.

What we learned from the staff nurses was really enlightening, and will be reported in detail in subsequent publications. Participants in the study described the RRT as an incredible asset to their work and to patient safety. In hospitals with the most successful RRTs, the nurses didn't hesitate to call the RRT, and when the team came, the nurses felt a great deal of relief at the arrival of help for their patients. The RRT helped the nurse care for the patient and when necessary, they helped tremendously in facilitating transfer to the ICU. The nurses who had come to rely on their RRTs told us, “I won't work anywhere that doesn't have a RRT.”

As mentioned, we are preparing several manuscripts to report different aspects of this study, and will also be presenting results at the Council for the Advancement of Nursing Science (CANS) in Washington, DC in October, 2008.

## RESEARCH IN PROGRESS

### MEDICATION ACCURACY STUDY

Nurses and others at Lucile Packard Children's Hospital (LPCH) are examining the effects of a computerized physician order entry (CPOE) and computerized nursing documentation on medication administration accuracy in the pediatric population. Medication errors pose significant threats to this vulnerable population, and there is limited research available related to the epidemiology and prevention of medication errors in the pediatric population, although there is emerging evidence on the effects of CPOE on medication accuracy.

Led by Nancy Donaldson, RN, DNSc, FAAN, and Co-Investigators, Mary Foley, MS, RN, UCSF School of Nursing, Annette Nasr, RN, PhD, Amy Nichols, RN CNS, EdD and Pam Wells, RN, MSN, MSA, LPCH, the team has designed a study that uses the California Nursing Outcomes Coalition (CalNOC) Medication Administration Accuracy Measure to systematically observe direct care staff nurses prepare, administer and document medications. This measure involves a naïve nurse (defined as not familiar with the patient's medication orders) observing the medication process, then conducting a medical record review after the observation to compare what was administered with what was ordered. If any errors have occurred, the observer notes the type of error. The nurse-observers attend an 8 hour workshop to maximize data collection reliability. During the study, nurses will observe 100 medication passes before and 100 medication passes after the introduction of new electronic medication ordering and nursing documentation systems on three acute care units and two critical care pediatric units.



The results of this study will explore the impact of new technology on the accuracy of medication administration. This study will also be the first time the CalNOC Medication Administration Accuracy Measure is used in pediatrics.

This study is being supported by a \$35,000 grant from the LPCH Pediatric Research Fund, indicating a strong commitment on the part of LPCH to building capacity for research and making it integral to patient care excellence.

## **RECENT PUBLICATIONS**

### Peer Reviewed Publications

Bolton, L.B., Donaldson, N.E., Rutledge, D.N., Bennett, C., Brown, D.S., (2006) The Impact of Nursing Interventions – Outcome Measures, Effective Interventions and Priorities for Future Research. *Medical Care Research & Review*, 64, 123S-143S.

[http://mcr.sagepub.com.laneproxy.stanford.edu/cgi/reprint/64/2\\_suppl/123S](http://mcr.sagepub.com.laneproxy.stanford.edu/cgi/reprint/64/2_suppl/123S)

Bolton, L.B., Aydin, C., Donaldson, N., Brown, D.S., Sandhu, M., Fridman, M., Aronow, H.U., (2008) Mandated Nurse Staffing Ratios in California: A Comparison of Staffing and Nursing-Sensitive Outcomes Pre- and Post-regulation, November, 2007, *Policy, Politics and Nursing Practice* 8(4): 238-250

Shapiro, S.E. (2007). Evidence-based Practice for Advanced Practice Emergency Nurses. *Advanced Emergency Nursing Journal*, 29(4), 331-338

Shapiro, Susan E., Donaldson, Nancy A. (2008). Evidence-based Practice for Advanced Practice Emergency Nurses: Critically appraising the literature. *Advanced Emergency Nursing Journal*, 30(2), 139-147

Spetz, J., Donaldson, N.E., Aydin, C., Brown, D.S., (2008) How many nurses per patient? Measurements of Nurse Staffing in Health Sciences Research. *HSR Health Services Research*, 43(4).

### IN PRESS

In Press Aydin, C., Burnes Bolton, L., Donaldson, N., Brown, D. Beyond Nursing Quality, Measurement: The Nation's First Regional Nursing Virtual Dashboard. *Advances in Patient Safety: New Directions and Alternative Approaches*. Agency for Health Care Research & Quality, Monograph, slated for publication in 2008.



In Press Shapiro, SE., Donaldson, N.E. Evidence-based Practice for Advanced Practice Emergency Nurses Part III: Planning, Implementing, and Evaluating an Evidence-based Small Test of Change. *Advanced Emergency Nursing Journal*

In Press Brown, D., Donaldson, N.E., Aydin, C., Quartile Dashboards: Translating Large Datasets into Performance Improvement Priorities" *Journal for Healthcare Quality* slated for publication December 2008

In Press Donaldson, N, Rutledge, D., and Geiser, K. The Role of the Coach in Advancing Research Translation. *Advances in Patient Safety: New Directions and Alternative Approaches*. Agency for Health Care Research & Quality, Monograph.

### Monograph/Textbook Chapters/Contributions

Clarke, S, Donaldson, NE, Nurse Staffing and Patient Care Quality and Safety. In Hughes, RG (Editor). *Patient Safety & Quality: An Evidence-based Handbook for Nurses*. AHRQ Publication No. 07-00151. Rockville, MD: Agency for Health Care Research & Quality, 2008  
<http://www.ahrq.gov/qual/nursesfdbk/>

## **RECENT PRESENTATIONS**

### International

Donaldson, NE, Universidad Autónoma de Chihuahua, Chihuahua, México, "The Ultimate Innovation—Using Data to Drive Improvements in Nursing Quality and Outcomes—Introduction to the California Nursing Outcomes Coalition Database Project" at El Cuidado Como Ciencia & Estrategia del Arte en Enfermería, December 1, 2006

Donaldson, Clinica del Country 1st International Nursing Congress,, Care in Nursing, Excellence and Efficiency, "Practica Basada en la Evidencia —La clave para la Excelencia Clínica", (English: Understanding Nursing Practice Effectiveness – The Maximum Efficiency) Bogotá, Columbia, March 8, 2007

Donaldson, Clinica del Country 1st International Nursing Congress, Care in Nursing, Excellence and Efficiency, "El Uso de la Medición de los resultados en el Logro de la Excelencia Clínica (English: Using Outcomes Measurement to Drive Performance Improvement) Bogotá, Columbia, March 9, 2007

Donaldson, with Diane Storer Brown, "CaINOC Partners to Reduce Patient Falls Project – Results of a 4 Year Effort Leveraging Nursing Quality Benchmarks, Self-Assessment, and Coaching EBP to Improve Patient Falls." Sigma Theta Tau International 18th International Nursing Research Congress Focusing on Evidence-Based Practice, Vienna, Austria, July 12, 2007

Donaldson, with Diane Storer Brown, "California Nursing Outcomes Coalition Collaboration: A Transdisciplinary Roadmap to Discovery." Sigma Theta Tau International 18th International Nursing Research Congress Focusing on Evidence-Based Practice, Vienna, Austria, July 12, 2007

Donaldson, Invitation Discussant, Knowledge Utilization Colloquium 2007, Stockholm, Sweden, poster presentation August 15 & 16, 2007

Donaldson, Keynote Address, 6th Annual R&D Conference: "Knowledge in Nursing and Nursing Education" August 24, 2007, Aarhus, Denmark

**National**

Donaldson & Foley, National Database of Nursing Quality Indicators National Data Use Conference "Developing a Medication Administration Accuracy Nurse Sensitive Indicator: Research and Implementation Opportunities and Challenges" Orlando, FL, January 30, 2008

**Regional**

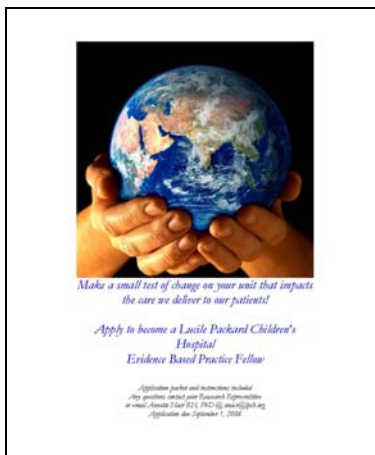
Donaldson, Association of California Nurse Leaders (ACNL) 30th Annual Conference, Win, Place or Show, Leadership on Track "General Session – Advancing High Reliability Patient Care Learning from and Leveraging CalNOC Data", February 13, 2008, Rancho Mirage, CA  
*Does the Evidence Make the Grade?*

Shapiro, S.E., *The Braden Scale Revisited*. Presentation at the 2008 Research Symposium co-sponsored by Kaiser Santa Rosa and the Sigma Theta Tau Lambda Gamma Chapter and North Bay Network for Health Education. May 6, 2008

Rutledge, D.N., Donaldson, N.E., Geiser, K., & Aydin, C.E. "The Circle of Nursing Knowledge: Education, Practice & Research. "Can coaches impact fall prevention efforts and fall rates in California hospitals?" Western Institute of Nursing, Garden Grove CA. April 17-19, 2008.

**GLOSSARY OF ACRONYMS**

AAN	American Academy of Nursing
ACNL	Association of California Nurse Leaders
ANA/C	American Nurses Association, California Affiliate
CalNOC	California Nursing Outcomes Coalition
DPN	Department of Physiological Nursing, UCSF School of Nursing
EBP	Evidence-based practice
NDNQI	National Database of Nursing Quality Indicators
UCSF	University of California, San Francisco
VA	Veterans Administration



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**Annette Nasr, LPCH  
 EBP 2009 poster**

**2008 Evidence-Based Practice Fellows Program**



Suzanne Seitz, JMMC – Concord coordinator leading discussion with some of her fellows & coaches



Garrett Chan, Stanford coordinator leading discussion with some of his fellows & coaches



Andrea Segura, JMMC – Walnut Creek coordinator leading discussion with some of her fellows & coaches



Annette Nasr LPCH coordinator leading discussion with some of her fellows & coaches