

PREVENTION OF INFECTIOUS DISEASES: The Public Health Nurse in All of Us

presented by The Institute for Health Care Education and Capitol Region
Alliance for Research and Research Utilization.

Friday, October 10, 2003

7:15 a.m.-2:30 p.m.



**HARTFORD
HOSPITAL**

Education and Resource Center
560 Hudson Street
Hartford, CT



7TH Annual Research/Research Utilization Conference

PREVENTION OF INFECTIOUS DISEASES: The Public Health Nurse in All of Us

CONFERENCE GOALS

PREVENTION OF INFECTIOUS DISEASES: The Public Health Nurse in All of Us

CONFERENCE GOALS

- **Provide a venue for dissemination of research findings to health care professionals.**
- **Through presentation of research efforts, illustrate ways in which utilization of research findings are improving clinical practice.**
- **Provide opportunities (through skill building/roundtable sessions) to enhance one's knowledge and the development of skill sets necessary for research utilization and research conduct.**

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CONFERENCE SCHEDULE

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- 7:15 A.M. REGISTRATION** *ERC Lobby*
Coffee & Danish Breakfast *Heublein Hall*
- 8:00 A.M. WELCOME**
Joan MacRae, RNC, MS
Co-Chairperson, Planning Committee
- 8:05 A.M. OPENING REMARKS & INTRODUCTION OF KEYNOTE SPEAKER**
Laura Caramanica, RN, Ph.D.
Vice President Nursing, Hartford Hospital
- 8:15 A.M. KEYNOTE: HOW CLEAN SHOULD WE BE?**
Elaine Larson, RN, Ph.D., FAAN, CIC
- 9:15 A.M. COFFEE BREAK** *Heublein Hall*
POSTER EXHIBITS VIEWING *Formal Lounge*
FLORENCE NIGHTINGALE EXHIBIT* *Room 123*
BOOK EXHIBIT *ERC Lobby*
- 9:45 A.M. SKILL BUILDING PRESENTATIONS**
- PRESENTATION A** *Room 217*
CRITIQUING QUANTITATIVE RESEARCH: HOW TO KNOW WHAT YOU ARE COUNTING, COUNTS.
Sheryl Horowitz, BA, Ph.D.
Research Analyst, Hartford Hospital
- PRESENTATION B** *Robinson Library*
SEARCHING THE RESEARCH LITERATURE.
Arlene Freed, MLS, AHRP
Ellen MacNaughton, MLS
Health Sciences Library, Hartford Hospital
- CONCURRENT ABSTRACT PRESENTATIONS**
- PRESENTATION A** *Room 218*
SURVEILLANCE OF HEMODIALYSIS-ASSOCIATED PRIMARY BLOODSTREAM INFECTIONS: THE EXPERIENCE OF TEN HOSPITAL CENTERS.
Susan Malo-Schlegel, RN, MPH, CIC
Epidemiology Clinician, Hartford Hospital
- MRSA AND BARRIER PRECAUTIONS IN A CRITICAL CARE UNIT.**
Diane Baranowsky, RN, BS, MS, CIC
Nurse Epidemiologist, Stamford Hospital
- PRESENTATION B** *Room 221*
CULTURAL CARING IN NURSING PRACTICE:
A META-SYNTHESIS OF QUALITATIVE RESEARCH.
Maren Coffman, RN, MSN
Assistant Professor of Nursing, St. Joseph College
- FAMILY DECISION MAKING AT THE END OF LIFE**
Gary Bouley, RN, MS, CS
Yale New Haven Hospital
- PRESENTATION C** *Heublein Hall*
THE ROLE OF LEARNING COMMUNITIES.
Sherry Bassi, RN, Ed.D., CS
Assistant Professor, University of Connecticut
Carol Polifroni, RN, Ed.D., CNAA
Assistant Professor, University of Connecticut
- 11:00 A.M. SKILL BUILDING PRESENTATIONS**
- PRESENTATION C** *Room 217*
QUALITATIVE RESEARCH: BEYOND THE STATS.
Maria Tackett, RN, MSN, CCRN, CEN
Nurse Director, Hartford Hospital
- PRESENTATION D** *Robinson Library*
SEARCHING THE RESEARCH LITERATURE.
Arlene Freed, MLS, AHRP
Ellen MacNaughton, MLS
Health Sciences Library, Hartford Hospital
- CONCURRENT ABSTRACT PRESENTATIONS**
- PRESENTATION D** *Room 218*
USE OF HYDROTHERAPY FOR PAIN RELIEF DURING LABOR.
Denise Bourassa, RN, BS
Staff Nurse, Labor and Delivery, Hartford Hospital
- FACTORS EFFECTING LEARNING DURING HEALTH EDUCATION SESSIONS**
Marjorie Wiczorek, RN, MS candidate
Deborah Hoover, RN, MS candidate
Gail Kulesza, RN, MS candidate
Aimee Stefanski, RN, MS candidate
University of Connecticut
- PRESENTATION E** *Room 221*
ADVANCED ORGAN SUPPORT AND TRANSPLANTATION.
Irene Wood, RN
Staff Nurse, Transplant Unit, Hartford Hospital
- CRITICAL INQUIRY FOR NURSING PRACTICE.**
Joyce Fontana, RN, MSN, Doctoral Student
Assistant Professor, St. Joseph College
- 12:30 P.M. LUNCHEON** *Heublein Hall*
Musical Entertainment: N'style
POSTER AWARDS
- 1:15 P.M. PLENARY ADDRESS** *Heublein Hall*
FLORENCE NIGHTINGALE AND THE ORIGINS OF HOME HEALTH CARE.
Marylouise Welch, RN, Ph.D.
Associate Professor, St. Joseph College
- 2:15 P.M. CONFERENCE WRAP UP** *Heublein Hall*
Summary, Evaluation and Book Giveaways.

All sessions will be held in the Education and Resource Center at Hartford Hospital. The Robinson Library is located on the 3rd floor.

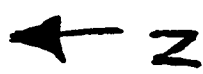
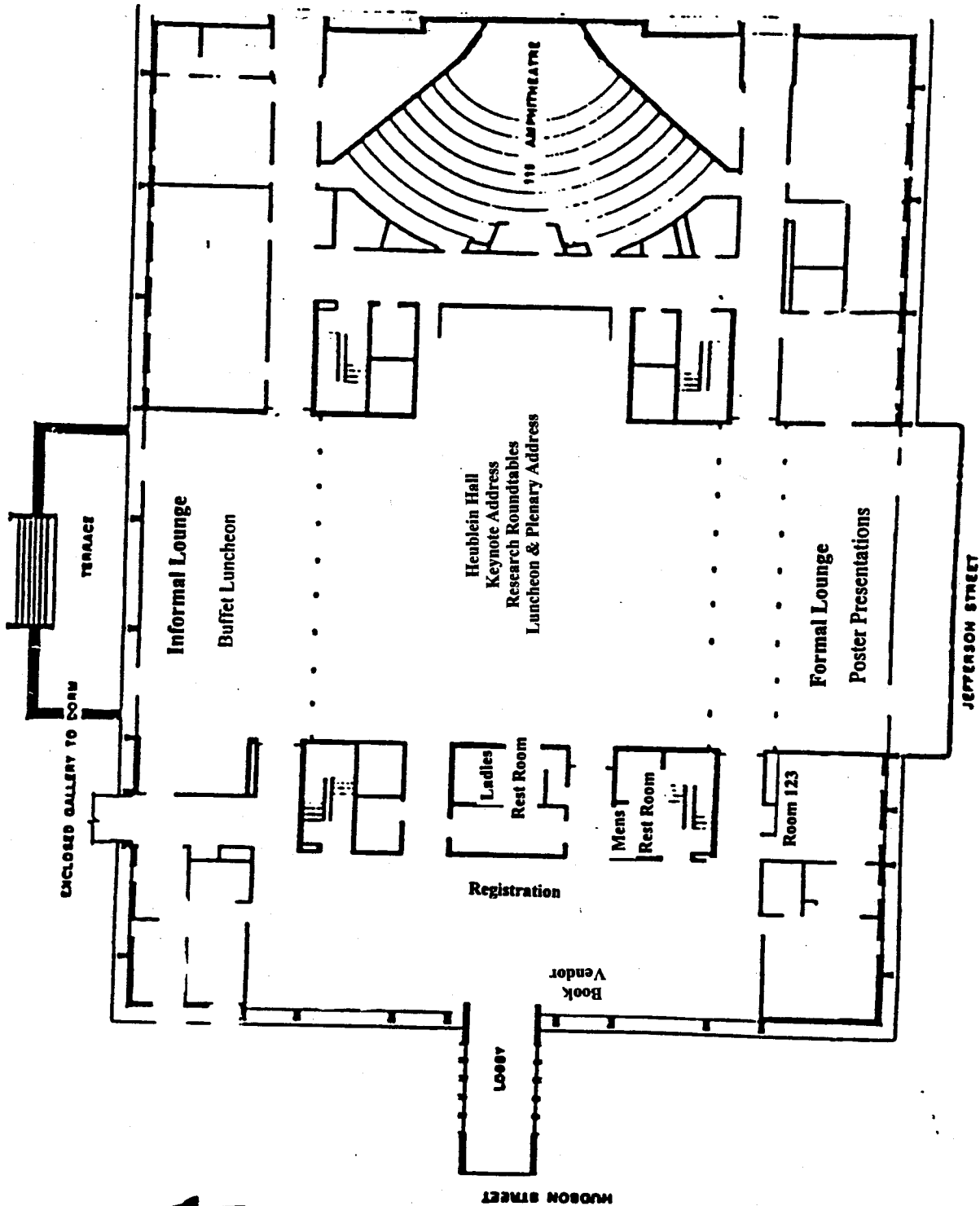
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**MAP OF EDUCATION &
RESOURCE CENTER**

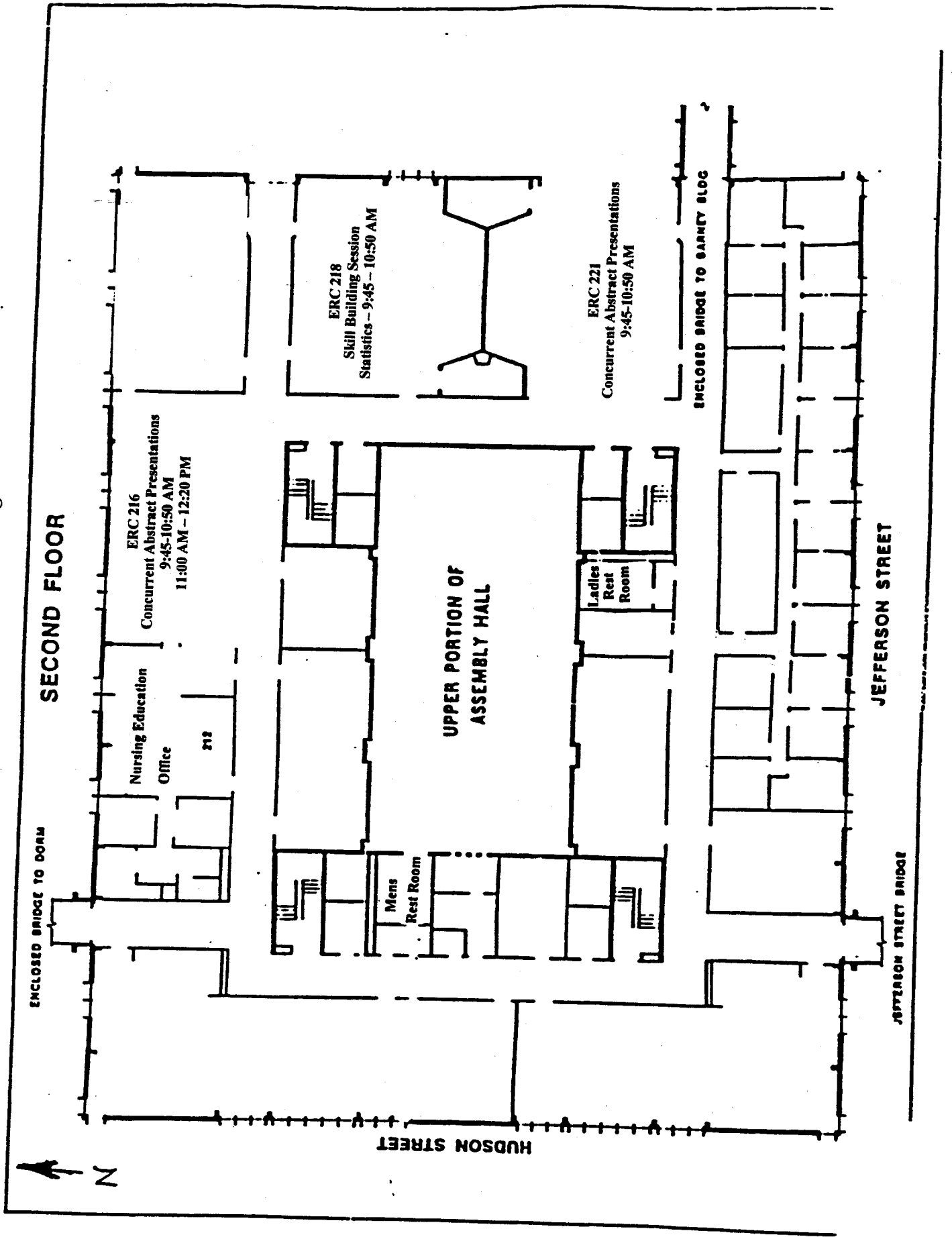
Education & Resource Building

FIRST FLOOR



Education & Resource Building

SECOND FLOOR



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ACKNOWLEDGEMENTS

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ACKNOWLEDGEMENTS

SPONSORSHIP OF KEYNOTE SPEAKER, ELAINE LARSON, RN, Ph.D., PROVIDED BY AN EDUCATIONAL GRANT COURTESY OF *Abbott Laboratories*.

NURSING HISTORIANS:

Christina N Beaudoin, MSN, APRN, CS
Eleanor Krohn Herrmann, Ed.D, RN, FAAN

SPECIAL THANKS TO MEMBERS OF THE CONFERENCE PLANNING COMMITTEE:

Janice Cusino, RN, MSN	Janice Lamb, RN, MSN
Dawn Beland, RN, MSN	Joan MacRae, RN, MSN
Cindy Belonick, APRN	Peg Moynihan, RN, MS
Pam Burris, RN, MSN	Rosanne Papa, RN, BSN
Laura Caramanica, RN, Ph.D.	<i>Hartford Hospital</i>

Sally Strange, RN, MSN *Connecticut Children's Medical Center, Hartford, CT*
Cheryl Tafas, RN, MSN *University of Connecticut Health Center, Farmington, CT*
Kathleen Stolzenberger, RN, MSN *Middlesex Hospital, Middletown, CT*
Kathleen Barta, RN, BC, MS, MSN *MidState Hospital, Meriden, CT*
AnnMarie Diloreto, RN, CNS *New Britain General Hospital, New Britain, CT*
Joanne Anfinson, RN, PhD *Capital Community College, Hartford, CT*
Linda Barile, RN, PhD *Central Connecticut State University, New Britain, CT*
Anne Durkin, RN, PhD *Quinnipiac University, New Haven, CT*
Barbara Aronson, RN, MSN *Southern Connecticut State University, New Haven, CT*
Terry Bosworth, PhD, RN *St. Joseph College, West Hartford, CT*
Mary Beth Mathews, RN, PhD *University of Hartford, West Hartford, CT*
Arthur Engler, RNC, APRN, DNSC *University of Connecticut, Storrs, CT*
Catherine Gilliss, DNSc, RN, FAAN *Yale University, New Haven, CT*

Contact Hours: 5.7 CHs will be awarded to participants attending the full day conference and handing in evaluation form. For those unable to attend the entire day, individual contact hours will be awarded for Keynote Address and Plenary Address.

Hartford Hospital is an approved provider of continuing nursing education by the Connecticut Nurses' Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. Contact hour approval does not imply ANCC Commission on Accreditation/CNA or Hartford Hospital endorsement of any commercial products displayed in conjunction with this conference.

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ADDITIONAL SUPPORT FOR CONFERENCE PROVIDED BY:

3M Corporation

Abbott Laboratories

Kimberly-Clark Corporation

Sacred Heart University

Book Exhibit and Book Raffle Courtesy of Anthony Cantore, Elsevier Science, Publisher

BOOK VENDOR DISPLAY

ERC Lobby

7:30 - 8:00 AM

9:15 - 9:45 AM

12:30 - 1:15 AM

Anthony Cantore, Clinical Sales Representative for Elsevier Sciences Publishers, will be set up in the ERC Lobby with a display of various journals, textbooks and multimedia relating to research utilization and the research process. Samples of publications from W.B.Saunders, C.V. Mosby, Churchill Livingstone and Harcourt Brace will be on display.

Several publications will be given away as door prizes at the end of today's conference. Make sure to fill out your raffle ticket and drop it off in the box at the registration table before we break for lunch.

Stop by the display during the times listed below and check out the diversity of publications available to assist health care professionals in the conduct, dissemination and utilization of research.

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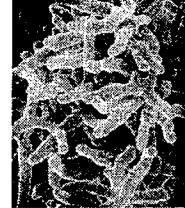
KEYNOTE ADDRESS



How Clean Should We Be? Prevention of Infectious Diseases: The Public Health Nurse in All of Us

Hand Microbial Ecology

Background:
Where Did the
Recommendations
Come From?



Skin As A Barrier

- Stratum corneum composed of ~15 layers of flattened dead cells
- New layer formed daily
- Completely replaced every 2 wks
- Horny protective layer of bricks and mortar



From healthy skin....

- 10^7 particles shed daily
- 10% contain viable bacteria
- Acidic pH is antibacterial
- Lipids prevent dehydration



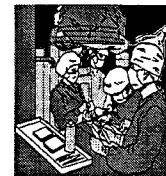
Effects of Soap on Skin

- Increased pH
- Reduced lipids
- Increased transepidermal water loss
- Increased shedding of squamous cells



Effect of Scrubbing on Skin Shedding

- CFU reduced satisfactorily with either surgical scrub or alcohol
- No increase in shedding after alcohol
- 18-fold increase in shedding after scrub



Meers & Yeo, 1978

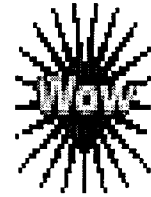
Studies of Hand Flora



Factors affecting skin condition

(Seitz, Newman, AJIC, 1988)

- Nurses in Arizona and Wisconsin
- Winter, northern locale, age >30 yrs increased risk of dry, chapped hands
- Washing only 1-2 times/hour increased severity of dry skin



Survey 1

- To describe prevalence and correlates of skin damage on hands of nurses
- Four hospitals: two in mid-Atlantic, two in northern U.S.
- 410 nurses working 30+ hr/week in acute care

Assessing Skin Damage: Irritant Contact Dermatitis

- Visual exam at 30X magnification by trained investigators
- Self-report questionnaire
- Reliability and validity confirmed with dermatologist assessment
- Diagnosed conditions (eczema, atopic dermatitis, psoriasis) excluded

Results

- Approximately one-fourth (106/410) had measurable, current skin damage
- 85.6% reported ever having problems
- Damage not correlated with age, sex, skin type, soap used at home, duration of handwashing, glove brand

Correlates of Damage

- Type of soap used at work (CHG < plain soap < other antimicrobial soap, $p=.01$)
- Frequency of handwashing ($p=.0003$)
- Frequency of gloving ($p=.008$)
- Study site (both community hospitals < both academic health centers, $p=.009$)

Logistic Regression

- Dependent variable: skin damage
- Independent variables: type of soap, frequency of handwashing and gloving, study site
- Independent correlates of damage:
Soap used at work ($p=.03$)
Frequency of gloving ($p=.01$)

Survey 2

- Compare microbial flora of hands of nurses with healthy and damaged skin
- Examine relationships between hand care practices, skin condition, and skin flora
- Subjects: 20 nurses with healthy skin, 20 nurses with damaged skin

Methods

- Prospective data collection for 3 work weeks over a 3-month time period
- Subjects kept detailed diary of hand care



- Skin condition scored by visual assessment and self-report
- Hands cultured with glove juice technique
- Random visits to subjects to confirm compliance



Microbiologic Methods

- Samples plated on general nutrient medium and six selective media
- Representative colonies gram-stained and identified with API systems or standard techniques
- Antimicrobial susceptibilities tested by disk diffusion

Results: Hand Care Practices

- Mean handwashes/hr: 2.1 (.68-4.8)
- 57.5% used non-antimicrobial soap
- Mean glovings/hr: 1.3 (.25-3.2)
- 87.5% used powdered gloves only
- 97.4% used hand lotion

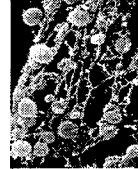


Hand Flora

- Mean CFUs: Undamaged 5.63
 Damaged 5.60 p=.63
- # Species: Undamaged 6.2
 Damaged 8 p=.11
- Colonizers Undamaged 2.6
 Damaged 3.3 p=.03

Hand Flora

- Twice as many with damaged hands were colonized with *S. hominis* (p=.02) and *S. aureus* (p=.11)
- Twice as many carried gram-negative bacteria, enterococci, *Candida*



Comparison with Previous Studies

- 1986, oncology nurses
 Mean CFU: 4.79
- 1992, nurses in Peru
 Mean CFU: 5.74
- 1997, nurses in acute care
 Mean CFU: 5.61

Comparison with Previous Studies: CNS

- Resistant to methicillin

1986 (n=50 isolates)	68.0%
1988 (n=81 isolates)	50.7%
1992 (n=163 isolates)	46.6%
1997 (n=123 isolates)	58.5%

Comparison with Previous Studies: CNS

- Resistant to tetracycline

1986 (n=50 isolates)	23.0%
1988 (n=81 isolates)	30.7%
1992 (n=163 isolates)	47.8%
1997 (n=123 isolates)	10.5%

Antimicrobial Resistance

- 58.5% coagulase-negative staphylococci resistant to methicillin
- No increase in resistance over past decade

