MESSAGE FROM THE DIRECTOR

Hopefully by the time you read this, the hurricane and tornado season of 2004 will be over, and we will be enjoying some blissfully cool, crisp autumn weather. This summer, in the Midwest and along the East Coast, tornadoes and hurricanes repeatedly ravaged towns, cities, and the countryside, destroying homes and buildings, and wrecking property by their damaging winds. Day after day, news stations flashed updated estimates of damages to various communities and showed bold rescue attempts for victims of these natural disasters. Television cameras focused not only on the devastation but also on the presence of Red Cross and other disaster relief teams—providing food and shelter to the homeless, emergency medical help, dispensing ice to those without electric power, and offering sympathetic words of support to the suffering.

Throughout the newscasts, true to form, I could not help but think about nursing history and nurses’ response to disasters of the past. One event in particular, the massive 1927 Mississippi Flood, came to mind and I began a small investigation by first contacting a colleague to borrow a photograph of the disaster I had recalled seeing in her collection. I also reviewed the 1927 American Journal of Nursing to see if the monthly Red Cross column carried information on the event that I might share with you.

Clara Noyes, Director of the Nursing Service Section of the American Red Cross provided the information I was seeking. She reported that at the peak of the disaster, the Red Cross was maintaining 138 camps with a population of approximately 600,000 homeless. Speaking to the role of nurses involved in relief activities, Noyes noted:

Each boat-load increased the burden which the nurses carried. There were old people shaken by their terrible experiences, sick folks, and mothers with newly-born babies… children with measles and whooping cough and the danger of typhoid, malaria and other epidemics. Literally tons of quinine was administered in an effort to prevent malaria and thousands were inoculated daily against smallpox and typhoid.

… Nurses frequently went from house to house in boats, caring for those who

Scene from the 1927 Mississippi Flood, Courtesy Jeanette Waits.
were marooned on second and third stories. One nurse went her rounds in hip boots! Another reported that she wore out her hypodermic needles during the rush of inoculations, and not being able to secure more, kept her eyes alert for the first grindstone that appeared about the water, salvaged it and sharpened them to continue her work. …

Noyes stated that the Red Cross was supported in their disaster relief work by local hospitals, health departments and visiting nurses associations. As in war time, make-shift hospitals were created in schools, a community spirit pervaded, and life went on. (In less than a month, fifty babies were born in the two hospitals established in local school buildings.)

Protective health measures were also initiated. According to one nurse: “I gave 75 ounces of quinine in little paper sacks and capsules, as long as it lasted, to more than 300 people a day. Many were suffering from chills and fevers.”

Today, nurses involved in disaster relief have disposable syringes, prepackaged medicines, bottled water and numerous high tech interventions to assist them in caring for victims of floods, earthquakes, and other disasters. What has remained constant, for over a century, is that nurses quickly step forward to volunteer to aid victims of disasters whether in the U.S. or in foreign lands. For those seeking to identify “enduring issues” in nursing, perhaps disaster nursing should be considered.

1Noyes, C. Department of Red Cross Nursing, American Journal of Nursing. October 1927, XXVII, (10): 857 2IBID, p.857 3IBID, p. 858 4IBID, p. 859

Arlene Keeling received the American Association for the History of Nursing’s prestigious Lavinia L. Dock Award for Exemplary Historical Research and Writing at their 21st annual conference held in Charleston on October 1, 2004. The award acknowledged the quality and originality of Dr. Keeling’s scholarly article: *Blurring the Boundaries between Medicine and Nursing: Coronary Care Nursing, circa the 1960s* which appeared in the (2004) *Nursing History Review.*
THE CENTER’S
CALENDAR OF EVENTS

SPRING 2005
HISTORY FORUMS
McLeod Hall Room 5044
12:00 - 1:00 PM

November 16, 2004
Patricia D’Antonio RN, PhD
Adjunct Associate Professor of Nursing
University of Pennsylvania
American Nursing: Neighborhood Work and National Mission

January 25, 2005
John Kirshgessner, MSN, PNP, Doctoral
Candidate, Assistant Professor,
UVa School of Nursing
A Herculean Task: Staffing the University of Virginia Hospital

February 22, 2005
Joy Buck, MSN, RN
UVa School of Nursing

THE 12TH ANNUAL
AGNES DILLON RANDOLPH AWARD/LECTURE

Darlene Clark Hine, the Board of Trustees Professor of History at Northwestern University, will be the recipient of the 2005 Agnes Randolph Award. A pioneer and prolific scholar of African American women's history, Dr. Hine was selected because of her seminal, scholarly and eminently readable Black Women in White: Racial Conflict and Cooperation in the Nursing Profession, 1890-1950.

Dr. Hine will present The Long Struggle: Health, Education, and Social Welfare Professionals in the South, 1930-1955

Claude Moore Health Sciences Library — History Collections, 4-5:30 p.m,
All are invited! — Reception to Follow

2003 Brodie Research Fellow
Dr. D’Antonio’s study examines the history of early 20th century nursing through the eyes of nurses who also worked as wives, mothers, and neighbors in communities across the United States. After examining archives in Boston, Philadelphia, Salt Lake City, San Francisco, and Chapel Hill, North Carolina, she is able to place these early nurses within the social fabric of their families and communities, and explore their experiences, choices, contributions, and some of the opportunities the nursing profession provided to them.
CENTER ACTIVITIES

2004 STAFF PRESENTATIONS/ PUBLICATIONS

Brodie, B. (May) “Virtue and Good Works are Healing Medicine.” Sigma Theta Tau, Beta Kappa Chapter’s Community Service Award ceremony: given to the University of Virginia Hospital Auxiliary. Charlottesville, Virginia.


STUDENT PRESENTATIONS/ PUBLICATIONS

Bernier, F. (April) “They Did the Best They Could”: Army Nurses Serving in the Pacific in WWII. Nursing History Forum, University of Virginia School of Nursing.

Buck, J. (May) Weaving the Tapestry of Care: The Role of Nurses in Palliative Care. Marsh McCullough Palliative Care Conference. Martinsburg Veterans’ Administration Medical Center. Shepherdstown, WV.

Buck, J. (May) Multidisciplinary Palliative Care in a Rural Setting. Marsh McCullough Palliative Care Conference. Martinsburg Veteran’s Administration Medical Center. Shepherdstown, WV.


Buck, J. (October) Nursing Care at the End of Life: A Historical Perspective. End of Life Nursing Education Consortium. Prince George’s Medical Center, Cheverly, MD.

Buck, J. (October) Achieving Quality Care at the End of Life: Role of Nursing in Health Policy. End of Life Education Consortium. Prince George’s Medical Center. Cheverly, MD.

Casavant, J. (September) University of Virginia’s Base Hospital 41 in France: WWI. Nursing History Forum, University of Virginia School of Nursing.
**Center Activities and Awards**

**Casavant, J.** (October) “Soldiers of the Cross”: The Role of Nurses in Base Hospital 41, WWI”. American Association for the History of Nursing’s Annual Conference. Charleston, South Carolina.

**Rose, K.** (October) “What Can We Do for the Elderly?”: Home Nursing Care for the Elderly 1900-1929. Nursing History Forum, University of Virginia School of Nursing.

**Weierbach, F.** (September) “More Efficient and Effective”: Combining the IVNA and Richmond City Health Department 1953-1966.” American Association for the History of Nursing’s Annual Conference. Charleston, South Carolina.

**Weierbach, F.** (October) “Joining Forces for the Improvement of Patient Care”: Merging the IVNA and the Richmond City Health Department 1953-1966. Nursing History Forum, University of Virginia School of Nursing.

**POSTER**


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**Meet Our New Archivist**

We are pleased to announce that Anne McKeithen was appointed as the Center’s new archivist on October 5, 2004. Anne holds a Master’s degree in Library Science from the University of North Carolina and has worked as at medical, research and public libraries. Anne is also a published author with articles appearing in the New York Times Book Review, Washington Post, and Country Home. Recently she completed a book-length manuscript based on her research into the nature of race in the small North Carolina town (Aberdeen) where she grew up.

We are delighted that Anne has joined us in the Center. She looks forward to meeting and helping the many people who contact the Center seeking information on nursing history.

She can be reached at the Center by phone at (434) 924 0083 or by e-mail: alm3x@virginia.edu

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**Barbara Brodie Nursing History Fellow 2005-2006**

The Center for Nursing Historical Inquiry Barbara Brodie Nursing History Fellowship, a postdoctoral award, is open to nurses engaged in historical scholarship that advances the field of nursing history. Applications for the $3000 award are due October 15, 2005, and the recipient will be announced in December, 2005. The new Barbara Brodie Nursing History Fellow will present a paper from their study in the Center’s History Forum series.

Selection of the fellow will be based on the scholarly quality of the investigator’s project including: the clarity of the project’s purpose, its rationale and significance, the rigor of its methodology and questions posed, and its potential contributions to the field of nursing.

The application and a curriculum vitae should be sent to Dr. Arlene Keeling, Director, Center for Nursing Historical Inquiry, University of Virginia School of Nursing, PO Box 800782, McLeod Hall, Charlottesville, Virginia 22908. Applications are available on the Center’s Web site, at http://www.nursing.virginia.edu/centers/cnhi/hrfellowship.html.
In 1941, in war-torn England, a 43 year old Oxford
constable, Albert Alexander, lay dying from an
overwhelming infection from scratches on his face
from tending his beloved roses. The ravaging
infection had already caused the removal of his left
eye, and his body now oozed pus, and purulent
phlegm was coming from his lungs. Massive doses
of sulfa had been used to stem the infection but it
failed and death was imminent. In desperation, his
physician and he agreed to try an experimental
drug that had proven effective in an Oxford
laboratory in curing infections in mice. The name
of the drug was penicillin. Albert’s first dose was
200 mg of intravenous penicillin. This was
followed by three more 100mg doses, given three
hours apart. Within 24 hours Albert’s condition
dramatically improved: his temperature began to
return to normal, his scalp ceased oozing pus, and
his appetite reappeared. To extend the small
supply of experimental penicillin, the constable’s
urine was collected after each dose. Researchers
then extracted the voided unused penicillin so that
they might re-use it. Five days after his first dose
of penicillin he was more active and the swelling
of his face and right eye had nearly disappeared.

Over the next ten days Albert’s condition steadily
improved, and it appeared that he would fully
recover. Unfortunately, the stabilization of his
condition coincided with the depletion of the
supply of penicillin. When signs of the infection
returned on the 16th day there was nothing anyone
could do but watch the septicemia return, sweep
through Albert’s’ body, and on the 21st day, take
his life. Although the researchers could not claim
that penicillin had conquered Albert’s
staphylococci infection, they had seen it
temporarily reversed the course of his infection,
and it had not been toxic to him. (1) This small
success was a necessary step in a long journey
towards producing an important class of drugs,
antimicrobials, drugs that many believe added
years to man’s life span.

The first step in the discovery of penicillin begins
with the work of Arthur Fleming, a graduate of
London’s St. Mary Medical school and pioneer
microbiologist. A curious and inventive
researcher, he was involved in work on molds
and bacteria when, in 1928, he noted an
interesting mold on a staphylococci seeded
culture plate. The mold covered a large portion
of the plate but the surrounding areas were
devoid of any evidence of staphylococci.
Recognizing that this was evidence of the
antibacterial power of the mold, *Penicillium
notatum*, Fleming began to experiment with ways
to grow and understand how it worked. After
discovering it produced an antimicrobial agent
that acted against staphylococcal and
streptococcal organisms, he named it penicillin,
and published a paper on his results in 1929. He
worked intermittently on penicillin until 1932
when, because of its unstableness and lack of
proven therapeutic application, he turned his
attention to studying vaccines and sulfa drugs.
Many of his research colleagues had read or
heard of Fleming’s work on penicillin, but for the
most part, most considered it a curiosity. (2)

Oxford Group
In 1938 three additional key figures in the
discovery of penicillin appeared: physician/
physiologist Howard Florey, and biochemists
Ernst Chain and Norman Heatley. All were
young, eager researchers and interested in
Fleming’s work on penicillin. They formed a
research team in Florey’s Oxford’s laboratory to
investigate penicillin as a microbial antagonist.
Their research took on new importance in 1939 when it was discovered that penicillin possessed a chemotherapeutic potential to cure infections, and Great Britain was drawn into WWII. (3)

Over the next two years the team struggled to unravel the mysteries of penicillin so that they could produce, establish its potency, and test it in vitro. Growing an adequate supply of penicillin on cultural plates so that they could extract and purify it proved complex, costly, and involved tremendous resources. But without enough purified penicillin, the researchers’ ability to test it in animals and humans could not go forward. War demands on British pharmaceutical firms plus the bombing of their factories prevented English drug companies from being able to produce large quantities of penicillin. (4) This obstacle, plus the threat of invasion by the Germans, drove the team to more creative ways to produce and protect penicillin. Fearing that they might suddenly have to evacuate their laboratory, Florey smeared penicillin mold on the inside of his coat so that he could be assured that, should he have to quickly leave the country, it would be with him.(5)

**U.S. Participation**

In June of 1941, Florey and Heatley journeyed to the U.S. to share their research with American scientists and pharmaceutical companies with the hope that their involvement would lead to mass production of penicillin, and a sharing of the some of the drug with the Oxford research group. American physicians and pharmaceutical firms were aware of Florey’s research team’s work and Merck Laboratory, and several physicians, had already produced small quantities of penicillin and begun experimentation. In addition, because of America’s belief that it would soon be involved in the spreading world war, the federal government became very interested in the potential of penicillin to treat war wounds in its military forces. To this end the federal Office of Scientific Research and Development (OSRD) endorsed the efforts of Florey and Heatley to gain American cooperation in producing and testing penicillin.(6)

Within the first month Florey and Heatley visited most of the country’s penicillin researchers and commercial pharmaceutical firms (Merck, Squibb, and Pfizer), and traveled to the U.S. Department of Agriculture’s new Northern Research Laboratory (NRRL) in Peoria, Illinois. The challenge faced by the Americans was to find an effective way to manufacture vast amounts of purified penicillin. The NRRL, with its knowledge and capability of fermentation (necessary for the growth of penicillin), was seen as a logical place to find new strains of penicillin that would grow, not on flat surfaces, but immersed in large vats of fermentation liquid. Soil samples from across the globe were tested but the sample that proved most valuable was uncovered by Mary Hunt, an employee at NRRL. On a routine trip to Peoria food markets to search for interesting molds on fruits, Mary, known by her co-workers as “Moldy Mary,” discovered a rotting moldy cantaloupe. After testing this mold it was found that it was a new organism, *Penicillium chrysogenum*. In addition, the mold was easily grown in deep fermentation and it yielded a higher amount of
penicillin than Fleming’s strain of *Penicillium notatum*. (7)

The entry of American into the war in December, 1941 intensified the search for an effective production of penicillin. Joining forces, Squibb and Merck agreed to mutually devote their resources to producing penicillin and share their results with the government and other interested firms. By spring of 1942, American commercial firms were producing enough of the drug for research testing. The Committee on Medical Research, of the OSRD, soon began to distribute it to research clinical testing sites.

Florey and Heatley returned to England in 1942 to continue their work on the production and testing of penicillin among the military and civilian population. Although they were unable to reap fully the benefit of America’s ability to manufacture penicillin, they did continue to work with American scientists in making significant advances in standardizing the quality and effectiveness of both kinds of penicillin.

The first American to be treated with industrially manufactured penicillin was Mrs. Ogden Miller, wife of the athletic director at Yale University. Mrs. Miller, because of a miscarriage, had been seriously ill for four weeks with streptococcal septicemia. Despite massive doses of sulfonamides her temperature ranged from 103 to 106.5 degrees, and she was listless and unresponsive. Given permission by the Research Committee to give her penicillin, the nearby Merck plant sent a supply of it to her physician on March 14, 1942. The first intravenous dose of penicillin was given at 3:30 pm on Saturday, and by 4 am Sunday morning Mrs. Miller’s temperature had dropped from 105 degrees to 98.6 degrees. By Monday morning her blood cultures were devoid of bacterial growth and she was alert and requesting food. Within twelve days she was well enough to be discharged. The “miraculous” result of penicillin that Florey had claimed was dramatically made visible with her recovery. (8)

With the increase in penicillin production and testing during 1942, incidents of startling success against a variety of bacterial infections began to be reported. In 1943, the U.S. War Production Board assigned, behind the development of the atomic bomb, the manufacturing of penicillin as the nation’s second highest priority. From 1943 to 1945, 85% of the nation’s penicillin was reserved for military use in American and Allied troops. The remainder was distributed among 2700 research physicians for use in civilians with severe infections. (9)

In 1945, at the end of the war, Robert Coghill, Head of the Fermentation division at Peoria visited a Pfizer penicillin plant. After viewing several giant fermentation tanks, each capable of producing 10,000 gallons of crude broth, and observing a penicillin assembly line, he summed up the battle that had been fought and won for penicillin: “I stood at the end of the production line and saw 100,000 units vials of penicillin come off quicker than I could count them. It has been a long road from Fleming’s Petri dish to the finished vials, [now] ready for the physicians’ hands”. (9)

In physicians’ hands, penicillin continued to profoundly affect mortality and mortality rates from bacterial infections. Physicians now had successful treatment for patients with staphylococcal infections, puerperal sepsis, pneumococcal pneumonia, otitis media, bacterial meningitis, gonorrhea, and syphilis. Not only were they able to successfully treat these infections but they could do so in their offices rather than in hospitals. The variations of penicillin that became increasing available after 1950 also led to advances in major surgery, including: organ transplants, cardiac and thoracic surgery, and the management of serious burns.

*Continued on Page 11...*
AMERICAN ASSOCIATION FOR THE HISTORY OF MEDICINE
ANNUAL CONFERENCE

The AAHM’s annual conference will be held in Birmingham, Alabama from April 7-10, 2005. Additional information on the program and registration information can be obtained from the AAHM’s website:

http://www.histmed.org/meetings.htm

AMERICAN ASSOCIATION FOR THE HISTORY OF NURSING
ANNUAL CONFERENCE

The conference will be held September 23-25, 2005 in Atlanta, Georgia.

Call for Abstracts. Please submit six copies of your abstract. One copy must state complete title, author(s), address, institutional affiliation, phone number/e-mail address/fax number, and indicate whether it is for a paper, poster or panel presentation. If more than one author is listed, indicate which one is the contact person. Abstracts will be selected on the basis of merit through blind review.

Abstracts must include purpose of the study, rationale and significance, description of methodology, identification of major primary and secondary sources, findings and conclusions. Each section of the abstract should be clearly identified.

Abstracts are to be received no later than January 15, 2005. For electronic submission, see http://www.aahn.org/abstract.html.

Mail to:
Barbara Brodie RN, PhD, FAAN
Chair, Abstract Review Committee
103 Surrey Road
Charlottesville VA 22901-2223
bb9w@virginia.edu

CANADIAN ASSOCIATION FOR THE HISTORY OF NURSING

The annual meeting of CAHN will be held June 16-19, 2005 in Ottawa at the Library and Archives of Canada in conjunction with the opening of the Museum of Civilization’s exhibit: Nursing: The Caring Profession. The key note speaker will be Dr. Margarete Sandelowski, University of North Carolina, Chapel Hill.

A Call for Abstracts is currently underway and specific abstract information may be obtained from the Canadian Association for the History of Nursing’s webpage.
http://www.ualberta.ca/~jhibberd/CAHN_ACHN

Abstracts must be received before January 21, 2005 and must be submitted by e-mail to Judith Young (judithy@primus.ca).

SOUTHERN ASSOCIATION FOR THE HISTORY OF MEDICINE AND SCIENCE

The Southern Association for History of Medicine and Science (SAHMS) is hosting its seventh annual meeting February 25-26, 2005 in Augusta, Georgia.

The meeting will be hosted by the Medical College of Georgia and the Center for the Study of Georgia History at Augusta State University. Professor Michael Bliss of the University of Toronto will be the featured speaker.

For more information, visit:
http://www.ced.aug.edu/SAHMS.htm

Center Contributors
May 2004 - November 2004

Randolph Society
Lorraine and William Albrecht
Alumni Council
Janice Peacock Bellack
Barbara Bancroft
Becky Bowers
Barbara Brodie
Sue and Dudley Bryant
Janet Colaizzi
Thelma Cook
Linda and George Davies
Virginia Dericks
Pauline Dessertine
Barbara Dunn
Annette Gibbs
John and Doris Harlan
Julie and Cal Howard
Arlene Keeling
John Kirschgessner
Kathleen Koon
Joan Lynaugh
NAPNAP
Joanne Peach
Rita and John Pickler
Doris Schell
Denise Geolot Sherer
Jeanette Waits
Keith and Patricia Woodard

Pember Society
Linda and George Davies*
Janet Fickeissen
Kathleen Kennedy
Sylvia and Jim Rinker*

Beazley Society
Allison Crews**
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In Memoriam
*John Wynbeek
**Nancye Page

The Center for Nursing Historical Inquiry sincerely appreciates your support!

Acquisitions
D. Conway: PHN Nurse’s Cap
R. Ellington: Nursing texts
J. Peach: Purple Heart Medals, WWII
L. Pegan: Letters C.L. Wills
B. Thomas: Cadet & UVA Memorabilia
J. Triplett: Autobiography & books
J. Waits: Paper C. Benoist
The Search for Penicillin
Continued from Page 8.

So impressed was the world with the power of penicillin that in December of 1945 the Nobel Prize for Physiology and Medicine was awarded to Alexander Fleming, Howard Florey, and Ernst Chain “for their joint discovery of penicillin and its curative action in various infectious diseases.” Heatley’s work, although recognized as important, was not deemed an original contribution to the advancement of science. Over the years many honors were bestowed on Fleming, Florey, and Chain but Fleming captured the biggest of the prizes by always being remembered as the “father of penicillin”.

Certainly the original discovery and production of insulin was done in Great Britain but the work of the American pharmaceutical firms was essential to the rapid manufacturing of penicillin. Acting in unison to develop penicillin, they were able to save millions of lives during the war and after it. Thus, the path of modern medicine was indelibly changed by the creation and production of the first of the granddaddy of all microbial drugs—penicillin.

References
7) Wainwright, p.63.
9) Wainwright, p.63.

Snippets from the Past

The Sick Room

“If a child is to have a long illness, like scarlet fever or typhoid, which confines him to one room for any length of time, great care should be taken to see that the room is suitable for him. It should be situated at the top of the house, as germs fly upwards, and it will therefore be much easier to prevent others from taking the disease …. Plenty of sunshine should be admitted to the room and the floor should either be hardwood or linoleum which can be wiped up daily…..

The mother should wear a wash dress and keep her hair covered by a pretty cap while in the sickroom … she should change her dress and cap and wash her face and hands before going to another part of the house. A wet sheet hung at the door (soaked with a solution of carbolic acid) will help keep germs from flying about the entire house.

...after the illness has passed the sickroom must be fumigated with sulphur. The room must be made practically air-tight, all windows closed; cotton batting stuffed into cracks and keyholes or paper pasted over them. All bureau draws, closets and cupboards should be left open to be fumigated. …the room should be sealed for 12 to 24 hours. After fumigation, the walls, floor and furniture should be washed with bichlorid of mercury or with carbolic acid.

The room’s bedding, blankets, and toys, if they can’t be burned, should be steamed, washed or boiled as an added precaution. The room should then be exposed to sun and air for at least 24 hours, or better, for several days [before using it again].”

Membership Application

The Center for Nursing Historical Inquiry

Enclosed is my check for $______

I would like to contribute to The Center:

____ Friends of the Center (up to $49)  ____ Center Supporter ($50-$99)
____ Roy Beazley Society ($100-$249)  ____ Phoebe Pember Society ($250-$499)
____ Agnes Dillon Randolph Society ($500 and above)

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____ Please contact me about named gift opportunities.
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Mail your tax-deductible contribution to: The Center for Nursing Historical Inquiry (CNHI)
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