Welcome to Issue 4 of *DMICE Tracks*, the newsletter of the OHSU Department of Medical Informatics and Clinical Epidemiology. We are off to another successful academic year for DMICE, and continue to have record enrollment in our educational programs as well as strong accomplishment and continued funding with our research.

The success of our department continues to be quite gratifying personally. It also reflects the dedication and talent of our faculty, students, and support staff. I know that my own personal success would not be possible without them.

Speaking of personal accomplishment, I am also proud of several recent happenings. First, as reported on page 3, I was instrumental in launching the AMIA 10x10 Program to educate health care professionals in informatics and was honored with a Leadership Award from the organization in October. Second, I have been appointed to serve as the Chair of the Scientific Program Committee of the AMIA Spring Congress that will take place in May 2006, in Phoenix, Arizona. Finally, as also reported elsewhere in this issue, I

**NIH Renews OHSU Clinical Research Training Program**

This fall the K30 Clinical Research Curriculum Award that funds OHSU’s Human Investigations Program (HIP) was renewed for another five years. Directed by Cynthia Morris, Ph.D., M.P.H., professor of medical informatics and clinical epidemiology, medicine, and public health and preventive medicine, the HIP program, funded by the National Center for Research Resources at NIH, trains clinicians to conduct patient-oriented research.

Since the first cohort was admitted in 2001, HIP has trained 220 OHSU faculty and fellows; 37 have received a Certificate in Human Investigations and the first three Masters of Clinical Research degrees were awarded last June.

HIP has three educational tracks: a two-year certificate track offering didactic and experiential teaching in the basic skills and knowledge necessary to conduct clinical research. Core courses include clinical research design, biostatistics, translational research and molecular biology, ethical conduct of human research, evidence-based medicine, and outcomes research. Building upon the certificate track, HIP also offers a Masters of Clinical Research program, as of 2004. The MCR offers a more in-depth education and can be tailored to the student’s learning needs with a choice to concentrate in biostatistics and epidemiology or in biomedical informatics. Both tracks require a mentored capstone project, culminating in a NIH grant application or manuscript from

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was fortunate to be able to visit Europe twice this fall to take part in meetings related to my research collaboration in image retrieval.

I am also pleased to announce the second DMICE annual giving campaign. Our first campaign was modestly successful, but we hope that this year’s campaign will be even better. You may ask why we are launching a fund-raising drive at a time of unprecedented success of our grant funding and educational programs. The reasons are many.

Despite our success in obtaining grant revenue and tuition, these monies are earmarked for specific expenses of the research projects and educational programs, respectively. Grant funding, while a cornerstone of our departmental revenue, is also fiscally challenging. Most of our grants come from federal sources (e.g., NIH, NLM, and AHRQ), which have very explicit regulations on allowable expenses. Furthermore, these grants are time-limited, so that the money must be spent in a specific period and returned if unspent. In addition, the lead time for applying for a grant, having it reviewed, and receiving the award can be up to a year. Grant funding is also highly competitive, with most programs funding only 10-25% of applications received. Although we get funded at a rate higher than the average, we still write many high-quality proposals that do not get funded. The amount of time it takes to put together proposals, plus the long waiting time for their review, puts an additional strain on our resources.

So although our grants and tuition revenues fund the key activities of the department, they are very restrictive in how the money can be spent and provide little money for investment in the future. For example, faculty occasionally wish to pursue new areas of research, which usually requires learning new techniques or generating preliminary data. Or the department may wish to invest in new educational programs. An example of this is our recent work with leaders in the health information management field (the individuals who run medical records departments in health care organizations), where we hope to develop joint course and degree offerings.

Another use for gift funds will be for our students. Having money for things such as student travel to scientific meetings and career development activities will improve their education and increase their competitiveness in the job market, which will in turn attract more students. We also hope to raise funds for student scholarships that will allow us to attract more high-achieving students, especially those who have been offered scholarships elsewhere and may not otherwise attend OHSU.

Gift monies will allow us to pursue other opportunities, such as recruiting new faculty and advancing the career development of those already here. They will also allow us to bring in distinguished leaders in the field, who often benefit the entire community by participating in our academia-industry dinners. (We are hoping to have the next dinner in early 2006.)

I hope you will consider investing in DMICE. A form for giving is printed this newsletter, or you can make your gift online at http://www.ohsu.edu/dmice/giving. Putting my money where my mouth is, I myself have been giving to the department each month for almost a year.

In closing, I want to express my gratitude for the support DMICE has received from faculty, staff, students, the OHSU leadership, and the community. I hope we can continue our mutually beneficial relationship with all of you, providing leadership and value in our respective fields and being a program you can be proud to be a part of.

DMICE Welcomes 21 New Informatics Students this Fall

The fall of 2005 marks our tenth year providing graduate programs in biomedical informatics at OHSU. The incoming cohort of students comes with quite varied backgrounds and educational and life/work experiences that will enhance our current student body. Please join us in welcoming our newly admitted group of students, which includes both on campus and online master’s students and three new doctoral students.

**Master’s Students**

Lysa Bezemek  
Donald Crawford  
Denise Dinulescu  
Justin Fletcher  
Laura Fochtmann  
Neal Goldstein  
Heather Hill  
Jayashree Kalpathy-Cramer  
Misbah Keen

**Ph.D. Students**

Steven Bedrick  
Hollis Wright  
Christian Olsen  
Joshua Richardson  
Raul Sala  
Tunga Simbini  
Glen Stream  
Daniel Teibel  
Revari Venkatesh  
Kevin Watkins  
Daniela Young  
Hari Krishna Rekapalli
AMIA Co-chair Joan Ash Welcomes National HIT Czar

AMIA conference co-chair Joan Ash, Ph.D., associate professor of medical informatics and clinical epidemiology, thanks David Brailer, M.D., Ph.D., National Coordinator for Health Information Technology, for his talk on the role of the federal government in promoting health information technology adoption. Dr. Brailer was a plenary session speaker at the American Medical Informatics Association conference on October 24 in Washington, D.C.

William Hersh, M.D., professor and chair of the Department of Medical Informatics and Clinical Epidemiology, received a Leadership Award from the American Medical Informatics Association (AMIA) for his successful launching of the association’s 10x10 program, which aims to educate 10,000 health-care professionals in biomedical informatics by the year 2010.

Hersh conceptualized the 10x10 program in early 2005 when the AMIA leadership had expressed an interest in offering online learning to a broad audience in the field. OHSU already had its well-established graduate program in place, offering courses leading to the Graduate Certificate and Master of Biomedical Informatics. Hersh proposed the notion of adapting his introductory course in the program (BMI 510 - Introduction to Biomedical Informatics) to a broader audience, in essence repackaging it with an in-person component at the end. Those who completed the course and met the qualifications could then enroll in the graduate program and receive credit for the introductory course.

The AMIA Board of Directors worked with Hersh to fashion a program that would allow other institutions to offer 10x10 courses, with OHSU designated as the first partner. For this work, AMIA honored Hersh with a Leadership Award at its Leadership Dinner on October 22, 2005 in Washington, D.C.

Also at the AMIA meeting this fall was the in-person session of the first offering of the 10x10 course. A total of 44 individuals completed the first offering. A second offering, co-sponsored by the California Health Care Foundation, began in November with an addition 12 participants. Another AMIA offering of the course will start in February 2006.

More information about the 10x10 program is available on the AMIA Web site at www.amia.org/10x10/.

NIH Renews Program

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research the student has proposed, conducted and analyzed.

HIP also offers a non-degree track for students wishing to take only a few classes in clinical research. The HIP Buffet, held biweekly, provides a forum in which trainees can learn about practical topics in research and is open to all faculty and fellows interested in a clinical research career.

Currently there are 67 active trainees in the certificate program, 13 in the MCR program, and 34 participants in the non-degree track. About half of the trainees are junior faculty, half are clinical fellows, and occasionally the more seasoned faculty member seeking a change in career direction participates. The HIP program is remarkable in that it truly crosses all disciplines, with trainees coming from all departments of the Schools of Medicine, Dentistry and Nursing. Participants also come from community programs such as the Legacy Health System and the National College of Naturopathic Medicine.

Over the next five years the HIP program plans to add more experiential learning and leadership training in addition to the didactic component and mentored research project. HIP also hopes to strengthen collaboration between other graduate programs at OHSU. The K30 program will also play critical role in the OHSU application for the Clinical Translational Science Award (CTSA), an NIH Roadmap for Medical Research initiative.
Were it not for a chance glance at a flyer in computer store, Paul N. Gorman, M.D., might not be an associate professor in the Department of Medical Informatics and Clinical Epidemiology today. Back in 1989 Gorman saw a notice about a symposium on information technology in health care, sponsored by the new Biomedical Information Communication Center at OHSU. The practicing internist attended the conference and decided to pursue his interest in informatics through a post-doctoral fellowship at the Portland VA Medical Center, leading to his faculty position at OHSU upon completion of the fellowship.

Sixteen years later, Gorman now has a three-fold professional life: research, education and clinical care. His research in medical informatics has focused on the “people side of the screen,” he says. A research project in the 1990s looked at how primary care clinicians seek information. With funding from the National Library of Medicine, Gorman used ethnographic observation and interview methods to assess the information needs and information seeking behavior of clinicians, including physicians, nurse practitioners, and physician assistants, both rural and urban. He found that these healthcare providers, as they went through their day at their clinic, pursued an average of 47 percent of their questions and found answers to about 77 percent of the questions they pursued. “People prefer people as their information source,” Gorman says of his study. “Then they use whatever is handy” to find information.

Gorman also worked as an investigator with Joan Ash, Ph.D., associate professor of medical informatics and clinical epidemiology, on research related to physician order entry (POE). Using the multiple perspectives model, they analyzed the implementation of POE in several health care systems. Related work by Gorman has focused on patient safety issues, “how clinicians make sure things are done right with the information they’ve got.”

One of Gorman’s current research projects stems from this interest in patient safety. As principal investigator of an AHRQ-funded grant, he is looking at the implementation of an information technology system in Lincoln City, Oregon, that will reconcile the lists of patients’ medications in multiple systems, such as a pharmacy, hospital, nursing home, and doctor’s office. “Most doctors use software to track medications,” Gorman says, “but the systems don’t talk to each other.” The RxSafe project will create a patient-centered medication information system (PCMIS) that will provide access to medication information and reconcile differences in this information in different systems, with the goal of improving the health of frail, chronically ill elders in the Lincoln City area. “This system will help health professionals notice problems,” Gorman says.

Another third of Gorman’s professional life is in the classroom. He teaches several biomedical informatics graduate courses, including The Practice of Health Care (BMI 530/630), which introduces the world of health care to non-medical professionals. In his Design and Evaluation in Health Informatics course (BMI 560/660), Gorman’s students learn the concepts, vocabularies and strategies needed to design and evaluate projects in biomedical informatics. This course is useful to informatics students planning their thesis and capstone projects. For doctoral students, Gorman offers a course on information seeking behavior to help people understand how health care professionals handle information (BMI 629).

For all his involvement in research and education, Gorman continues in the clinical side of medicine, attending on the teaching wards at OHSU Hospital and in the clinic at Providence Medical Center. “Seeing patients keeps me grounded,” he said, “and keeps me current in clinical medicine.”

What’s ahead for Dr. Gorman? In November he began work on a research project with investigators from the University of Maryland at Baltimore. With three years of funding from the National Science Foundation, the team, which includes Brian Hazelhurst, Ph.D., assistant clinical professor of medical informatics and clinical epidemiology and an informatics investigator at Kaiser Center for Health Research, will explore “critical discourses,” the transfer of crucial information and responsibility under extreme time pressure. The project involves fieldwork, observing rounds in intensive care units to look at structures of critical discourses and the factors impacting them. A field experiment at the University of Maryland at Baltimore will then use a collaborative display to complement the existing information arena.
Facility Update

Grants and Contracts Awarded

Dave H. Hickam, M.D., M.P.H., professor of medicine and medical informatics and clinical epidemiology, has been named director of the John M. Eisenberg Clinical Decisions and Communications Center, part of the Agency for Healthcare Research and Quality’s Effective Health Care program. According to AHRQ, the Center “will take a systematic approach to translate knowledge about effective health care into understandable, actionable language for all decision makers.” DMICE co-investigators on the contract include Karen Eden, Ph.D., assistant professor of medical informatics and clinical epidemiology; Mark Helfand, M.D., M.P.H., professor of medicine and medical informatics and clinical epidemiology; Roger Chou, M.D., assistant professor of medicine and medical informatics and clinical epidemiology; Marie Guise, M.D., M.P.H., associate professor of obstetrics and gynecology and medical informatics and clinical epidemiology; Susan Severance, M.P.H., will serve as project manager. AHRQ has provided two years of funding, with three additional option years.

William Hersh, M.D., professor and chair of medical informatics and clinical epidemiology, received a six-month contract from National Library of Medicine for $66,264. The aim of the Methods for Reporting Clinical Trials Results project is an assessment of databases for reporting results of clinical trials. Other investigators include Aaron Cohen, M.D., M.S., assistant professor of medical informatics and clinical epidemiology and senior research associate Susan Carson, M.P.H.

Faculty News

Paul Gorman, M.D., associate professor of medical informatics and clinical epidemiology, was elected to a two-year term as Secretary of the American Medical Informatics Association. He will serve as project manager.

T his fall DMICE welcomed a physician from Zimbabwe as an informatics graduate student. Tungamirai Simbini, M.B.Ch.B., spent the term in Portland taking classes on campus. As a student in the Master of Biomedical Informatics dis-

Holly Jimison, Ph.D., and Paul Gorman, M.D., both associate professors of medical informatics and clinical epidemiology, were elected fellows of the American College of Medical Informatics in October. They join fellow DMICE faculty members Kent Spackman, M.D., Ph.D., Joan Ash, Ph.D., Dean Sittig, Ph.D., and William Hersh, M.D., as ACM fellows.

Joan Ash, Ph.D., associate professor of medical informatics and clinical epidemiology was honored by AMIA at the annual meeting in October for her years of service on the AMIA Board.

Presentations

Joan Ash, Ph.D., gave a presentation on ambulatory computerized physician order entry implementation at the American Medical Informatics Association Annual Meeting in Washington D.C. in October.

Joan Ash, Ph.D., presented a paper by Rose Campbell and herself on comparing bedside information tools: a user-centered, task-oriented approach.

The talk was given at the American Medical Informatics Association Annual Meeting in Washington D.C. in October.

Joan Ash, Ph.D., participated in a panel on personal health records: a report from the American College of Medical Informatics at the American Medical Informatics Association Annual Meeting in Washington D.C. in October.

Aaron Cohen, M.D., M.S., presented on unsupervised gene/protein entity normalization using automatically extracted dictionaries at BioLINK 2005 SIG ACL-05/ISMB-05 in Detroit, Michigan in June.

Aaron Cohen, M.D., M.D., presented an Introduction to Biomedical Text Mining at the American Medical Informatics Association Annual Meeting in Washington D.C. in October.

William Hersh, M.D., participated in two European meetings this fall and presented results of research in image retrieval, funded by a grant .

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Faculty Update

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from the National Science Foundation. September 21-23 he participated in the Cross-Language Evaluation Forum in Vienna, Austria, and October 19-21 he attended eChallenges 2005 in Ljubljana, Slovenia.

William Hersh, M.D., presented Grand Challenges for Biomedical Information Retrieval in the 21st Century, the Lazerow Lecture at the University of Kentucky School of Library and Information Science in Lexington on September 8, 2005.

William Hersh, M.D., presented a talk entitled “Think Globally, Act Locally: The National Health Information Infrastructure” at four northwest and international venues this summer and fall. He spoke at the Idaho Medical Association Annual Scientific Conference in Sun Valley July 23, 2005, at the Trends in Respiratory and Acute Care Conference in Troutdale, OR September 30, 2005, and at the Preventing and Managing Chronic Disease in Lincoln County conference in Lincoln City, OR October 7, 2005. Hersh also gave the talk at the Hospital Italiano in Buenos Aires, Argentina August 25, 2005.


William Hersh, M.D., presented the keynote address at Slice of Life 2005 in Portland June 17, 2005. He spoke on Retrieving Images, Educational Content, and Other Digital Objects: Why it is Important and What We Have Learned from Information Retrieval Research.

Image Retrieval in Biomedicine was the topic of two talks by William Hersh, M.D., this fall: one at the University of California Davis Center for Health and Technology in Sacramento, CA, on September 12, 2005, and one at the DMICE weekly research conference November 10, 2005.


Fellow Susan Price, M.D., M.S., gave a presentation at the American Medical Informatics Association Annual Meeting in Washington D.C. in October. The talk was on using concept relations to improve ranking in information retrieval.

Publications


Spackman KA. Rates of change in a large clinical terminology: three years experience with SNOMED Clinical Terms. Proceedings/AMIA Annual Symposium, 2005.


I support the OHSU Department of Medical Informatics and Clinical Epidemiology as a leader in healing, teaching and discovery.

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For information about the Department of Medical Informatics and Clinical Epidemiology, visit the Web site at www.ohsu.edu/dmice/ or call 503 494-4502.
Distance student Marilyn Paterno has been appointed to a new position at Partners HealthCare, based in Boston. Beginning January 1, 2006, she will be a Senior Medical Informatics Specialist, working in Blackford Middleton’s Clinical Informatics Research & Development group. Marilyn will work on terminology services as an informatics and business analyst for projects, implementing these new services, and will also have the opportunity to conduct research in the evaluation of Partners’ systems.


MBI distance student Mary Stanfill, R.H.I.A., C.C.S., C.C.S.-P., presented on automated coding at two association conferences this fall and is slated to present at a third in February.


Doctoral student Adam Wright spent the summer as an intern in the Office of the National Coordinator for Health Information Technology in Washington, D.C.

Doctoral student Adam Wright presented a paper at the American Medical Informatics Association Annual Symposium in Washington D.C. in October. Co-authors of Application of Information-Theoretic Data Mining Techniques in a National Ambulatory Practice Outcomes Research Network were Thomas N. Ricciardi (from GE, but also with an appointment in our department) and Martin Zwick, from Portland State University. (from PSU).

Distance student Eric Rose, M.D., was in a panel on Clinical Decision Support Governance at the AMIA meeting in Washington, DC in October.

Distance student Allen Flynn, Pharm.D., had a paper on the current state of pharmacy informatics education in professional programs at US colleges of pharmacy published in the American Journal of Pharmaceutical Education in August 2005. The paper grew out of his work in the DMICE Introduction to Medical Informatics course.

MBI student Laura Fochtmann has been selected for the Journal of the American Medical Informatics Association (JAMIA) Student Editorial Board.

BMI alumnus Rob Posteraro, M.D., has been invited to be a guest lecturer in the Department of Clinical Practice Management, School of Allied Health at Texas Tech University Health Sciences Center in Lubbock. He will be lecturing on information management in their Strategic Planning course.

Physician from Zimbabwe

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go a long way in his country,” said his advisor, DMICE professor and chair William Hersh, M.D.

Hersh will also be serving on the advisory committee for a planning grant from the US National Institutes of Health Fogarty International Center to develop degree programs in biostatistics, health informatics, and excellence in reporting science training that has been awarded to the University of Zimbabwe. Dr. Hersh will likely visit Zimbabwe next year.