DMICE Tracks

From the Chair

The lead article of this issue recapitulates the accomplishments of the Department of Medical Informatics & Clinical Epidemiology (DMICE) during the American Recovery & Reinvestment Act of 2009 (ARRA, also known as the stimulus bill) period. All of this funding has kept the department quite busy for the last year, and will continue to do so in the next year. At least in DMICE, ARRA has achieved its intended effect of job creation, as can be seen from the number of new faculty and staff who have joined the department to work on these programs.

One person who would be proud to see how the investment in DMICE has paid off so handsomely recently passed away, Sen. Mark Hatfield (1922-2011). Sen. Hatfield was a tireless crusader for health, especially biomedical research. His "earmark" to OHSU in the mid-1980s established what would become the Biomedical Information Communication Center (BICC) and led to the formation of DMICE. The investment in that earmark has been recouped, both scientifically

Yes We Did! DMICE Stimulus Funding Accomplishments and Future Challenges

President Barack Obama campaigned on the slogan of "Yes we can!" and his economic stimulus bill has been very good for both the biomedical informatics and clinical epidemiology sides of the Department of Medical Informatics and Clinical Epidemiology (DMICE). Most of the "stimulus" projects we were awarded over the past two years are now well along, and some have even been completed.

The informatics side of the department has been buoyed mainly by the Health Information Technology for Economic and Clinical Health (HITECH) Act, the portion of American Recovery & Reinvestment Act of 2009 (ARRA) that funds up to $29 billion to provide incentives for the "meaningful use" of electronic health records (EHRs). About $2 billion of that funding was designated for developing the health information technology (HIT) infrastructure, including research and workforce development.

DMICE fared particularly well in the workforce development pro-

grams. Of course, it did not hurt to be a national and outspoken leader in this area before the programs were launched. As reported last year, the department was rewarded with two grants, totaling $5.8 million, to train 148 graduate students as well as lead curriculum development for a much larger training program in 82 community colleges around the country. The curricular materials have now been released to all institutions of higher education and can be accessed at www.onc-ntdc.info.

The department also fared well in other HITECH funding, such as the Regional Extension Center (REC) program that funded 62 centers to provide support for physicians and hospitals adopting EHRs and achieving their meaningful use. Led by DMICE associate professor David Dorr, M.D., M.S., the department is a partner with OCHIN, Inc. in the Oregon HIT Extension Center (OHITEC).

Additional stimulus funding was

OREGON HEALTH & SCIENCE UNIVERSITY

OHSU

Shannon McWeeney Receives School of Medicine Faculty Excellence Award

Shannon K. McWeeney, Ph.D.

Shannon K. McWeeney, Ph.D., associate professor and head of the Division of Bioinformatics and Computational Biology within DMICE, has received a Faculty Excellence Award from the OHSU School of Medicine.

Nine faculty were honored at a luncheon in November 2010 for their outstanding contributions to the education mission in the School of Medicine. Recipients of the award were nominated by their School of Medicine colleagues.

Welcoming everyone in attendance, Dean Richardson said, "It's remarkable how much impact teachers have on their students and the indelible impression they leave with everyone." He added that teaching is the "essential purpose" of the School and expressed gratitude for faculty members who have chosen a career in education. "All of you could be practicing medicine or pursuing your research passion elsewhere, but you chose OHSU so that you can participate in the education mission. This is an enormous contribution to the future of health care."

The recipients of the 2010 Faculty Excellence Awards were nominated and selected without reservation by their colleagues.

McWeeney explains *Why I Teach* in a feature on the School of Medicine Web site.

In DMICE, she teaches Bioinformatics and Computational Biology I: Algorithms and Bioinformatics and Computational Biology II: Statistical Methods.

McWeeney's primary appointment is in the Department of Public Health & Preventive Medicine. She also serves as the director of both OHSU Knight Bioinformatics and the Oregon Clinical and Translational Research Institute Translational Bioinformatics Program. ∎

DMICE Adds Research, Educational and Administrative Staff

The Department of Medical Informatics & Clinical Epidemiology recently added staff in several research, education and administrative areas.

Working on projects related to DMICE funding from the Office of the National Coordinator for Health Information Technology (ONC) are **Kelly Jones-Weir** as business data analyst, **Virginia Lankes** as career coordinator, and **Tru Chatelein** as internship coordinator, as part of the University-based Training Project. **Nathan Skidmore** is an administrative coordinator with the ONC-funded curriculum development project.

Joining the Oregon Evidence-based Practice Center are **Robin Paynter** as a research librarian, **Arpita Tiwari** and **Ngoc Wasson** as research associates, **Basmah Rahman** and **Jesse Wagner** as research assistants, and **Mary Bryant** as a program technician

Elin McIllhattan is a senior research assistant working with Dr. Jeanne-Marie Guise on comparative effectiveness research career development grants.

Don Young, as research associate, and **Jennifer Marcoe**, as senior research assistant, are working with Dr. Holly Jimison on her research.

Camber Hansen-Karr rejoins the departmental after several years of summer work as a student. She works with Dr. Mark Helfand and Lauren Saxton on *Medical Decision Making*.

Liz Williams joins the departmental administrative group as a grants/contracts coordinator, doing both pre-award and post-award work, while **Alicia Nam** is now Office Manager and **Derek Ellis** has started as a computer user support analyst, serving as the primary department information technology contact and telephone counselor. ∎

Six DMICE Fellows Present at Annual National Library of Medicine Meeting in June

As DMICE ended the 19th year of its National Library of Medicine (NLM)-sponsored biomedical informatics training program, this year's trainees met with those from 17 other sites for the 2011 Informatics Training Conference. Held at NLM in Bethesda, MD, June 28-30, the conference included oral presentations and posters from six OHSU fellows.

Pre-doctoral fellow James McCormack presented his qualitative study of multiple perspectives on electronic patient data used for clinical decision support in hospitals and clinics while pre-doc David Gibbs discussed his research on reducing variability in co-expression network construction.

In an Open Mic Session, pre-doc Ted Laderas presented his work building and analyzing a dynamic model to prioritize combination drug therapies in a cancer signaling pathway.

Another predoctoral trainee, James "Zephy" McKanna, discussed his research on clinical validation of computer game play as an unobtrusive and continuous measure of divided attention in the elderly.

At the poster sessions, pre-doc Kyle Ambert had a poster on novel approaches to using text-mining for optimizing community-curated neuroscience database workflows. Post-doc Shahim Essaid's poster featured an ontological exploration of medication prepositions in clinical records.

Another poster was on mapping neural response to alcohol using optical imaging techniques by pre-doctoral trainee Rosemary "Tracie" Nettleton.

DMICE professor Joan Ash, Ph.D., participated in the 175th NLM Anniversary Informatics Careers Panel as a former trainee, where she discussed all the hats she has worn in her career, complete with props. ∎

At the NLM Fellows Meeting, James "Zephy" McKanna (above) gave an oral presentation explaining his work on clinical validation of computer game play as an unobtrusive and continuous measure of divided attention in the elderly while Essaid Shahim (left) had a poster about his research on an ontological exploration of medication prepositions in clinical records.

Faculty Focus: Roger Chou, M.D.

Looking at healthcare research in a systematic way can help to remove bias and selectiveness in medical diagnosis and treatment, and Roger Chou, M.D., associate professor of medicine and medical informatics & clinical epidemiology, has focused his research career on systematic reviews and their methodology.

A systematic review involves identification and quality appraisal of the biomedical literature on a specific healthcare topic. In Chou's role as Scientific Director of the Oregon Evidence-based Practice Center (EPC), funded by the Agency for Healthcare Research and Quality (AHRQ), he

Roger Chou, M.D., scientific director of the Oregon Evidence-based Practice Center, has run over 50 marathons and ultra-marathons, including the Boston Marathon twice, a 50-mile race, and marathons on back-to-back days.

has worked on numerous systematic reviews and methods papers.

After graduating from Northwestern University Medical School, Chou did his residency in internal medicine at OHSU, finishing in 1998. He then did a Health Services Research and Development Fellowship at the Portland Veterans Affairs Medical Center, which he completed in 2000, and joined the faculty at OHSU in general internal medicine and geriatrics. Chou also holds an appointment in DMICE.

Chou first became involved with the Oregon EPC by working on the

"I think we're all interested in knowing 'the truth' and systematic reviews seem to be the best way to take out so much of the selectiveness and bias in looking at a clinical issue. Though we still struggle a lot of the times to understand what the truth is."
— Roger Chou, M.D.

AHRQ-funded evidence report, Effectiveness and Cost-Effectiveness of Echocardiography and Carotid Imaging in Management of Stroke, published in 2002.

"I became interested in systematic review work because it seemed like so often things that we believed (or thought we believed) weren't actually accurate, once you started looking at things systematically," Chou said.

"I think we're all interested in knowing 'the truth' and systematic reviews seem to be the best way to take out so much of the selectiveness and bias in looking at a clinical issue. Though we still struggle a lot of the times to understand what the truth is."

Since 2004, Chou has been Director of Clinical Guidelines Development for the American Pain Society

(APS). In that role he has led evidence reviews and developed guidelines funded by APS, such as low back pain and use of opioids for non-cancer pain, often in partnership with other groups (such as the American College of Physicians [ACP], the Department of Veterans Affairs /Department of Defense, and the American Academy of Pain Medicine).

"The most satisfying aspects of the APS work," Chou noted, "is that we have been able to bring more scientific rigor to the guideline development process for this area of medicine. The guidelines have gotten a lot of attention and have been widely disseminated and implemented, and we've really followed a multidisciplinary and multi-society model from the beginning."

Chou was first author on a 2007 paper in *Annals of Internal Medicine* paper on guidelines for the diagnosis and treatment of low back pain, which is the second most downloaded paper in *Annals*.

"At last count there were over 250,000 downloads," Chou noted. "I think it speaks to the fact that this is such a common problem and the guidelines are viewed as truly multidisciplinary and evidence-based so it resonates with a lot of clinicians."

Starting around 2008, Chou became the lead investigator at OHSU for work the Oregon EPC does supporting the US Preventive Services Task Force (USPSTF), which creates guidelines for screening and preventive services. The Oregon EPC has produced systematic reviews to inform USPSTF decision-making since 1998, with investigators at both OHSU and the Kaiser Permanente Center for Health Research involved.

"We have completed a number of reviews, including bladder cancer screening, hearing screening in adults, vision screening in children, vision

Prize-winning Documentary Features Former DMICE Instructor

Former DMICE instructor Cody Curtis, M.B.A., plays a central role in the prize-winning documentary *How to Die in Oregon*, directed and produced by Peter D. Richardson and sponsored by HBO Documentary Films.

Cody first worked at OHSU from 1989-1992 as the financial analyst for the Biomedical Information Communication Center, including the biomedical informatics research program that was the precursor to DMICE. She later rejoined the department as an instructor in 2004, co-teaching BMI 570 with Kathryn Pyle Krages and working as project coordinator on the POET research team with Dr. Joan Ash. Cody passed away in December 2009.

Oregon became the first state to legalize physician-assisted suicide. Richardson's film examines the lives of some terminally ill Oregonians as they consider options allowed under the state's Death with Dignity Act. Much of the film shows Cody and her family over her last year, including a trip to OHSU to receive a plaque for helping to save the campus swimming pool.

"I'm very proud of my sister," said Justin Fletcher, Ph.D., assistant professor of medical informatics & clinical epidemiology and Cody's brother. "She handled her condition with more grace and dignity than I would have thought possible, and in the process made a contribution to further the cause for terminal patients everywhere."
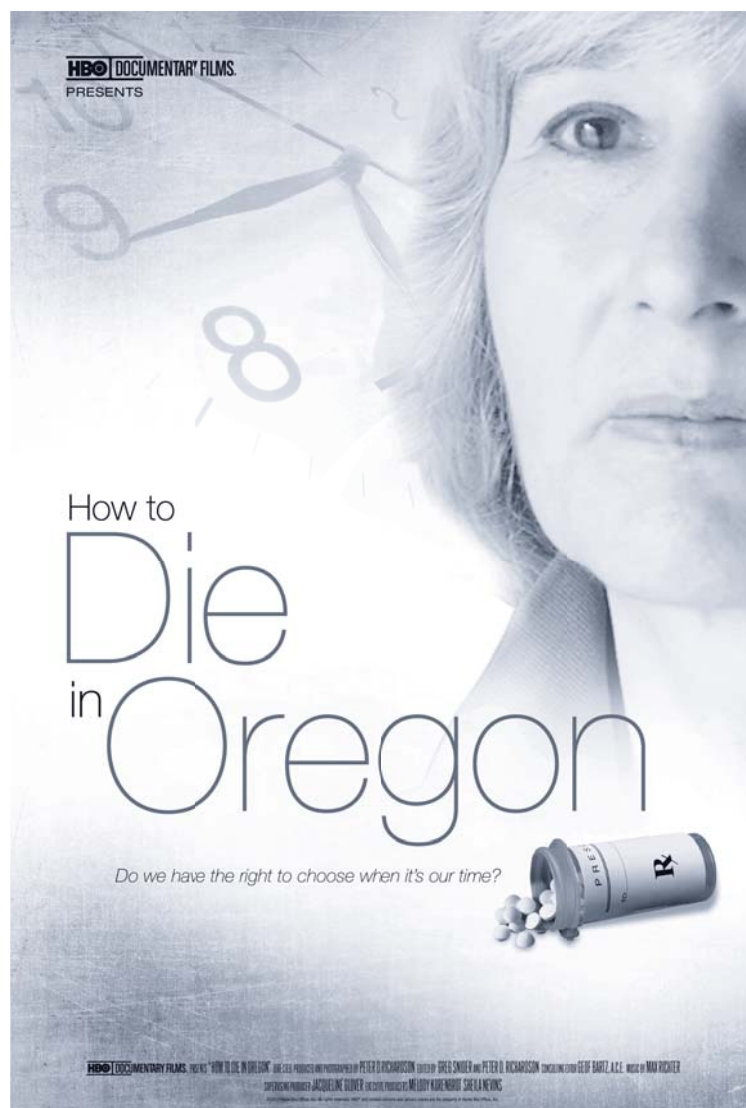
The film premiered at the Sundance Film Festival in Park City, UT in January 2011, where it received the Grand Jury Prize: Documentary. According to the Sundance Website, "*How to Die in Oregon* gently enters the lives of terminally ill Oregonians to illuminate the power of death with dignity."

HBO premiered the film on television on May 26, 2011. It was also shown at the Portland Film Festival in February 2011, where it won the audience award for best documentary.

Other awards include the Duke University Center for Documentary Studies Filmmaker Award and Kathleen Bryan Edwards Award for Human Rights, both at the Full Frame Documentary Film Festival in Durham, NC; the Karen Schmeer Award for Excellence in Documentary Editing at the Independent Film Festival of Boston; Best Documentary at the Ashland Independent Film Festival; and Top Ten Audience Favourites at Hot Docs 2011 in Canada.

The film has also been featured at the Sydney Film Festival, Melbourne International Film Festival New Zealand Film Festival, Seattle International Film Festival, and Jerusalem Film Festival. The official film Web site is www.howtodieinoregon.com/

"Cody was a beautiful, intelligent, caring person who brightened the lives of those of us who had the privilege of working with her," said Joan Ash. "How to Die in Oregon portrays her nobility and courage, allowing others to benefit from her wisdom as well." ∎

HBO DOCUMENTARY FILMS.
PRESENTS

How to
Die
in
Oregon

Do we have the right to choose when it's our time?

Fifty Students Receive Biomedical Informatics Degrees in 2010-2011 Academic Year

On June 6, 2011, the OHSU School of Medicine held its combined hooding and graduation ceremony. This academic year of 2010-2011, 50 students received biomedical informatics degrees.

Six students received a Ph.D. degree (listed with their dissertation topic):

Steven Bedrick, Portland, OR
Dissertation: *"Increasing access to medical knowledge using multilingual search interfaces"*

Ravi Teja Bhupatiraju, Bhimavaram, India
Dissertation: *"Understanding medication management activities in long term geriatric care"*

Suzanne Sabine Fei, Coquille, OR
Dissertation: *"Integrating genetics and proteomics to study alcohol-drinking behaviors"*

Michael Andrew Mooney, Costa Mesa, CA
Dissertation: *"A computational method for detecting multi-locus associations: an application to bipolar disorder"*

Joshua Edwin Richardson, Portland, OR
Dissertation: *"A clinical decision support needs analysis among community-based physicians"*

Hollis J. Wright, Portland, OR
Dissertation: *"Evaluation of the extensibility and impact occupancy prediction of transcription factor binding sites"*

Two students received a master of science degree (listed with their thesis topic)

Pavana Anur Venkatachahalapthy, Bangalore, India
Thesis: *"Identification of candidate genes in atherosclerotic cardiovascular disease, a systems biology approach"*

DMICE faculty celebrate with 2011 graduates at the annual banquet on June 5, 2011. Graduates received an OHSU cap and coffee mug. Left to right: Tom Durkin, certificate '11, Larry Bannister, M.B.I. '11, Seana Zagar, certificate '11, Kathryn Pyle Krages, A.M.L.S., M.A., Karen Eden, Ph.D., Justin Fletcher, Ph.D., William Hersh, M.D., Steven Bedrick, PhD. '11, Judy Logan, M.D., M.S. '98, Aaron Cohen, M.D., M.S. '05, Ravi Teja Bhupatiraju, Ph.D. '11, Suzi Fei, Ph.D. '11, Nathan Skidmore, certificate '11, JoAnna Vanderhoef, M.B.I. '11.

Charles Frederick Murchison, Lake Oswego, OR
Thesis: *"The assessment and analysis of genes expressed in colorectal cancer via Wnt/Beta-Catenin signaling"*

Ten students received a master of biomedical informatics degree (listed with their capstone project):

Thomas P. Agresta, Burlington, CT
Capstone: *"Development and delivery of a medical informatics educational workshop for family medicine faculty"*

Larry A. Bannister, Dundee, OR
Capstone: *"An investigation into various aspects of interoperability"*

Andrew Jordan Collins, Oshkosh, WI
Capstone: *"The use of lean quality improvement methods in healthcare: improving performance on a quality metric"*

Jeffery Timon Emoch, Portland, OR
Capstone: *"Can the use of electronic tools improve the coding of patient problem list to the SNOMED CT terminology?"*

Gregory C. Griffin, Wilmington, DE
Capstone: *"An evaluation of the process of chemotherapy ordering and delivery from the perspective of practitioners, nurses and pharmacists at a children's hospital"*

Vandana Kapoor, Portland, OR
Capstone: *"A tool to integrate multiple clinical trials"*

Daniel Wofa Li, Republic of Singapore
Capstone: *"Clinician decision aid for patients with hip fractures"*

Jeffrey D. Merrill, Berkeley, CA
Capstone: *"Incorporation of uncertainty into a medical decision model of erythropoietin use in premature infants at risk for red cell transfusion"*

JoAnna Marie Vanderhoef, Brooklyn, NY
Capstone: *"International partnerships in building capacity among eHealth workers in developing countries: Characteristics of successful collaborations"*

Chia-Hua Yu, Oakland, OR
Capstone: *"Evaluation of remote usability techniques in an elderly cohort"*

In addition, 32 students completed graduate certificates in biomedical informatics, a 24-credit-hour program to provide knowledge and skills in the application of information technology in health care:

Yossi Bahagon, Jerusalem, Israel

Mark Alan Binstock, Bentleyville, OH

Thomas John Durkin, Portland, OR

David Keith English, Oakland, CA

Masoud Faraji, Lake Oswego, OR

Justin J. Fossum, Aloha, OR

Eric Karl Gebhardt, La Center, WA

Vincent Paul Gibbons, Albany, NY

Amy J. Goodwin, Beaverton, OR

Kimberly Miller Granath, Missoula, MT

Timothy P. Hickman, Kansas City, MO

Gregg Eugene Hoshovsky, Bend, OR

Amr A. Jamal, Riyadh, Saudi Arabia

William Russell Jennings, Jr., Columbia, SC

Alexis Leah Kalman, Woodland, CA

Joel. D. Lafleur, Camden, ME

Daniel Wofa Li, Republic of Singapore

Darren SongCheng Lim, Republic of Singapore

Susan Elizabeth Millea, Austin, TX

Gwendolyn B. Moscoe, Vancouver, WA

Peter Nielsen, Chicago, IL

Chitra S. Pathiavadi, Durham, NC

Diana Nobumi Pennington, Sherwood, OR

Danielle I. Prychodzin, Denver, CO

DMICE Faculty, Students and Alumni Well Represented at 2010 AMIA Symposium

William Hersh, M.D., professor and chair, received the 2010 AMIA Chairwoman's Award. Left to right: Rob Rader, director of AMIA Member Services, Nancy Lorenzi, Ph.D., chair of the AMIA Board of Directors, Dr. Hersh, and Catherine Catherine Craven, chair of the AMIA Membership Committee.

Dozens of DMICE faculty, current fellows and students, and alumni attended the 34th Annual Symposium on Biomedical and Health Informatics in Washington, D.C., November 13-17, 2010. The meeting is sponsored by the American Medical Informatics Association (AMIA).

At the meeting DMICE professor and chair **William Hersh, M.D.,** received the AMIA Chairwoman's Award for all the AMIA members who have joined from the 10x10 program.

OHSU alumnus **Adam Wright, Ph.D. '07** received the AMIA New Investigator Award in recognition of his scholarly contributions, scientific merit and research excellence in informatics. Wright is a research scientist in the Division of Gen-

eral Medicine at the Brigham and Women's Hospital, Boston, and an Instructor in Medicine at Harvard Medical School. His research focuses on clinical decision support systems and data mining.

Professor **Joan Ash. Ph.D.,** served on the scientific program committee, as did **Adam Wright, Ph.D. '07. Ash** also chaired a session of presentations on Informatics in clinical education.

Peter Embi, M.D., M.S. '02, led a tutorial on clinical research informatics: theory, methods, and best practices. **Embi** also taught a workshop on policy and ethical issues: Should AMIA enforce its Code of Ethics? Or at least be transparent?

Associate professor **David Dorr, M.D., M.S.,** participated in a panel on Primary Care Management and

AMIA Symposium

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Medical Homes: How to Better Leverage Informatics to Achieve Great Outcomes.

Oral presentations included: Understanding Inter-rater Disagreement: A Mixed Methods Approach, by **Emily Campbell, Ph.D. '10**, Dean Sittig, W Chapman, Brian Hazelhurst and **Aaron Cohen, M.D., M.S. '05**.

Is an EHR More Like a Pair of Pants or a Bridge? Customization vs. Standardization to Promote Adoption, by R Hsiung, K Unertl, **William Hersh, M.D.,** and David Bates.

Multinational, Multi-institutional Clinical Decision Support Using a Common Decision Support Service, by D Lobach, K Kawamoto, G Del Fiol and **Damian Borbolla, M.D**.

Behavioral Science and Informatics: Synergy for Improving Implementation, Research & Outcomes by Vimla Patel, R Kukafka, **Susan Woods, M.D.,** D Ahern and AR Shaikh.

The HITECH National Effort to Develop a Skilled HIT Workforce, by R Kukafka, Chuck Friedman, N Morganti, P Abbott and **William Hersh, M.D.**

Informatics Education and Workforce Development, by M Mirza, **James McCormack**, N Smith, Y Owolabi, J Ancker and M Wyatt.

A Prospective Evaluation of an Automated Classification System to Support Evidence-based Medicine and Systematic Review, by **Aaron Cohen, M.D., M.S. '05, Kyle Ambert** and **Marian McDonagh, Pharm.D**.

The Training and Support Needs of Faculty and Students Using a Health Information Technology System were Significant: A Case Study in a Dental School, by **Heather Hill, D.D.S., M.B.I. '09,** D. Stewart and **Joan Ash, Ph.D.**

Target Conour Testing/Instructional Computer Software (TaCTICS): A Novel Training and Evaluation Platform for Radiotherapy Target Delineation, by **Jayashree Kalpathy-**

Adam Wright, Ph.D. '07 receives congratulations as the AMIA 2010 New Investigator from William Hersh, M.D., DMICE professor and chair.

Cramer, Ph.D., M.S. '09.

Improving Quality in Cancer Screening: The Excellence Report for Colonoscopy, by **Judy Logan, M.D., M.S. '98,** J Holub and A Brandstater.

Unobtrusive Monitoring of Divided Attention in a Cognitive Health Coaching Intervention for the Elderly, by **James "Zephy" McKanna, Holly Jimison, Ph,D.** and Misha Pavel.

Multiple Perspectives on the Meaning of Clinical Decision Support, **by Joshua Richardson, Ph.D. '11 Joan Ash, Ph.D., Dean Sittig, Adam Wright, Ph.D. '07,** and **Richard Dykstra, M.D., M.S. '06.**

Parametric Survival Models for Predicting the Benefit of Adjuvant Chemoradiotherapy in Gallbladder Cancer, by S. Wang, **Jayashree Kalpathy-Cramer, Ph.D., M.S. '09,** C Fuller and C Thomas, Jr.

Poster presentations included: Using PubMed Clinical Queries for Test Collection Development, by **Steven Bedrick, Ph.D. '11** and **Aaron Cohen. M.D., M.S. '05.**

Effect of Monitor Placement on Patient Satisfaction, by **Justin Fletcher, Ph.D. and Judy Logan, M.D.,**

M.S. '98.

Decision Support to Ensure Proper Follow-up of High-risk Test Results, by G Zucotti, L Sato and **Adam Wright, Ph.D. '07**. ■

Students Receive Degrees

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Trever Rohm, Rio Rancho, NM

Nathan Reed Skidmore, Portland, OR

Donald Charles Spencer, Durham, NC

Henry Philip Stalker, Birmingham, AL

Minakshi Tikoo, West Simsbury, CT

Erin Stelzenmueller Watson, Portland, OR

Martin Michael Yadrick, Jr., Los Angeles, CA

Seana Michelle Zagar, Corvallis, OR ■

Faculty/Staff Update

Awards and achievements

Congratulations to **Tom Yackel, M.D., M.P.H., M.S.,** who has been promoted to associate professor of medical informatics & clinical epidemiology while **Nancy Carney, Ph.D.,** is now research associate professor of medical informatics & clinical epidemiology.

Jayashree Kalpathy-Cramer, Ph.D., M.S. '09, has accepted a position as an assistant informatician at Massachusetts General Hospital in Boston, with the Athinoula A. Martinos Center for Biomedical Imaging. She will also have an appointment as an assistant professor at Harvard Medical School. She will continue her affiliation with DMICE as an adjunct assistant professor.

Associate professor **Paul Gorman, M.D.,** received a Faculty Recognition Award from the OHSU Student Council on May 19, 2011. Assistant professor **Joanne Valerius, M.P.H.,** was also nominated for the award. Recognition is awarded to all faculty members who have been role models in the community or internationally, or whose attitude and actions produce superior patient care or learning environment.

Diane Doctor, educational programs coordinator, was awarded a National Library of Medicine fellowship to attend a week-long course in biomedical informatics technology at the Marine Biological Laboratory in Woods Hole, MA, September 19-23. The course is held every year in both the fall and spring for 30 participants per session.

Doctor also received several scholarships recently. She was awarded an American Association of University Women (AAUW) Career Development Grant for the 2010-2011 academic year toward her work in the Master of Library and Information Science (MLIS) program at the University of Washington. In addition, **Doctor** has been named as the recipient of the Oregon Library Association Scholarship for the 2011-2012 academic year. The Oregon Library Association awards a scholarship each year to a student enrolled in graduate study toward the Master of Library Science.

Funding received

Amand Bankhead, Ph.D., assistant professor, received a one-year Medical Research Foundation grant for a project using interactome knowledge to identify androgen independent survival pathways and guide prostate cancer treatment.

Professor and chair **William Hersh, M.D.,** received a five-year, R25 grant from the National Library of Medicine to support summer research internships for college undergraduates.

Hersh also received a grant from the National Institute for Standards and Technology to lead topic development and relevance judgments for a new TREC (Text Retrieval Conference) track that focuses on electronic health records (EHR).

The Oregon Evidence-based Practice Center has received additional funding for their projects as the Scientific Resource Center for Effective Health Care (principal investigator: **Mark Helfand, M.D., M.P.H., M.S.,** professor) and technical support of the US Preventive Services Task Force (principal investigator: **Roger Chou, M.D.**, associate professor).

The OHSU Foundation Board of Trustees designated funds to Care Management Plus from both the Elizabeth N. Gray Fund of the Oregon Community Foundation and the Leon and Esther Feldstein Fund of the OCF. These funds will support further the development of Care Management Plus, led by **David Dorr, M.D., M.S.,** associate professor. This mission of Care Management Plus is to improve the quality of care for seniors and patients with chronic illnesses using care managers and information systems.

Presentations and posters

Michael Chiang, M.D., M.A., professor, was invited to testify before an ONC Health Information Technology Policy Committee's Meaningful Use Workgroup hearing on May 13, 2011. This workgroup is chaired by Dr. Paul Tang (Palo Alto Medical Foundation) and co-chaired by Dr. George Hripcsak (Columbia University). The purpose of the hearing was to provide feedback about applications of EHRs for care coordination among specialists, primary care physicians, patients, and public health agencies. Chang spoke about meaningful use of EHRs by specialists and about standards for exchange of image-based medical data.

Associate professor **Holly Jimison, Ph.D.,** and researchers from the Oregon Center for Aging & Technology were interviewed by the *New York Times* (published February 5, 2011) and by CBS News (aired March 6, 2011 on CBS Sunday Morning) for a story about the aging baby boomer generation.

Jimison also presented a talk on a Utility and Context Based Framework for Addressing the Machine Learning Challenges of Detecting Rare but Important Clinical Events at the Neural Information Processing Systems Conference in Whistler, BC, in December 2010, as well as a talk on Models of Cognitive Performance Based on Home Monitoring Data at the Engineering in Medicine & Biology Conference in Buenos Aires, Argentina, in September 2010.

William Hersh, M.D., professor and chair, was on a panel at the Academy Health National Health Policy Conference on February 7, 2011 in Washington, D.C., focused on health care workforce issues. Hersh spoke about informatics issues, describing

Faculty/Staff Update

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OHSU's role in the national Health IT Workforce Program as well as informatics competencies for modern physicians and medical students.

Hersh also participated in a panel at the Healthcare Information Management Systems Society (HIMSS) Annual Conference in Orlando, FL February 22, 2011 where he discussed the Health IT Curriculum Development Centers Program. OHSU serves not only as one of the five Curriculum Development Centers but also the National Training & Dissemination Center, tasked with disseminating the curricular materials via a Web site and training community college faculty in their use.

At the HIMSS meeting, **Hersh** was interviewed by two media outlets. First, he talked with *Modern Healthcare* about meeting the healthcare industry's growing demand for an informatics-savvy workforce. He also talked with *CMIO Magazine,* focusing on the role of formal informatics instruction for physicians.

Aaron Cohen, M.D., M.S. '05, associate professor, presented on Evidence-Based Medicine, the Essential Role of Systematic Reviews and the Need for Automated Text Mining Tools at the first ACM Internation Health Informatics Symposium in Arlington, VA, in November 2010.

Publications

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Wright A, Sittig DF, **Ash JS**, Bates DW, Feblowitz J, Fraser G, Maviglia SM, McMullen C, Nichol WP, Pang JE, Starmer J, Middleton B. Governance for clinical decision support: case studies and recommended practices from leading institutions. *Journal of the American Medical Informatics Association*. 2011;18 (2):187-94.

Wright A, Sittig DF, **Ash JS**, Feblowitz J, Meltzer S, McMullen C, Guappone K, Carpenter J, Richardson J, Simonaitis L, Evans RS, Nichol WP, Middleton B. Development and evaluation of a comprehensive clinical decision support taxonomy: comparison of front-end tools in commercial and internally developed electronic health record systems. *Journal of the American Medical Informatics Association*. 2011;2011 17. ∎

Biomedical Informatics, OHSU School of Medicine Graduation, June 6, 2011

Ravi Teja Bhupatiraju receives his Ph.D. at the ceremony.

Pavana Anur Venkatachahalapthy received a Master of Science degree.

Professor and chair William Hersh, M.D., poses with Steven Bedrick, Ph.D. '11.

Michael Mooney was one of six students to receive his Ph.D. in biomedical informatics this year.

Charles Murchison is hooded as he receives his M.S. Degree.

Suzi Fei, Ph.D. '11, receives her doctoral hood.

DMICE faculty had a strong showing at the June 6th School of Medicine commencement ceremony, including Drs. Karen Eden and William Hersh.

Steven Bedrick is congratulated by associate dean Allison Fryer.

Steve Bedrick, who received his Ph.D. at the ceremony, poses with faculty member Dr. Paul Gorman.
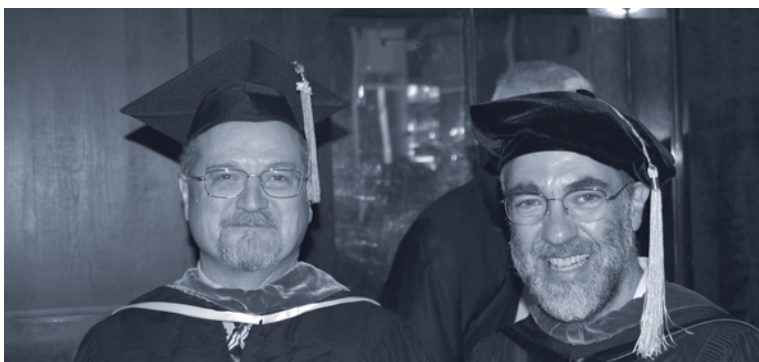
Larry Bannister, M.B.I. '11, and DMICE professor and chair William Hersh, M.D., enjoy the post-graduation reception.


DMICE faculty pose in their regalia after commencement. Left to right: Judy Logan, M.D., M.S., Cindy Morris, Ph.D., M.P.H., Karen Eden, Ph.D., William Hersh, M.D., Shannon McWeeney, Ph.D., Beth Wilmot, Ph.D., Paul Gorman, M.D., and Justin Fletcher, Ph.D.

Suzi Fei, Ph.D., celebrates with her husband, Yiyang Fei, and daughter, Belle, after receiving her doctoral degree.

New graduates pose with DMICE faculty. Left to right: Larry Bannister, M.B.I. '11, Aaron Cohen, M.D., M.S. '05, Joanne Valerius, M.P.H., Kathryn Pyle Krages, A.M.L.S., M.A., Paul Gorman, M.D., William Hersh, M.D., Steven Bedrick, Ph.D. '11, Vandana Kapoor, M.B.I. '11, Karen Eden, Ph.D.
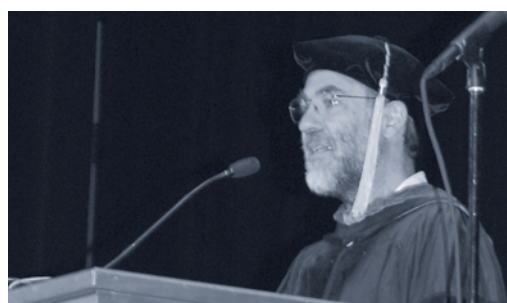
DMICE professor and chair William Hersh, M.D., was a faculty speaker at the School of Medicine commencement this year.

Student/Alumni News

Recognition

Congratulations to post-doctoral fellow **Paula Scariati, D.O.,** who has been named an ASQ-Certified Six Sigma Green Belt, recognized by the Certification Board of ASQ (American Society for Quality). According to ASQ, a Green Belt is someone with at least three years of work experience who wants to demonstrate her knowledge of Six Sigma tools and processes. Six Sigma relates to quality improvement methods.

Jobs/career changes/promotions

Jorge J. Scheirer, M.D., certificate student, has been named Vice President and Chief Medical Information Officer at The Reading Hospital and Medical Center in West Reading, PA. In this newly created position, Dr. Scheirer will be responsible for supporting the development of clinical information systems that assist clinicians in the delivery of high quality patient care. During the last several years, Dr. Scheirer has provided his expertise in support of the Hospital-wide implementation of computerized physician order entry and assisted in the design of both its electronic medication reconciliation and discharge management applications.

Mary H. Stanfill, M.B.I. '09, R.H.I.A., C.C.S., C.C.S.-P., F.A.H.I.M.A., has been appointed Vice President of Health Management Services for United Audit Systems, Inc. In this role, Stanfill will be responsible for the senior management of the HIM division of UASI and specifically responsible for managing the senior coding consultants and client engagements. Additionally, she will be an integral member of the management team heading up the development of the ICD-10 strategic plan for staff and clients.

M.B.I. student **Bradley Howard, M.D.,** is now Senior Vice President and Chief Medical Informatics Officer for Resurrection Health Care in Chicago, IL.

Mary Gerard, certificate '02, is now an independent contractor for Kaiser Permanente, working as a terminology /subject matter expert with the CMT team. The group is working on revising and reviewing the current KP interface terminology in EPIC, adding in new terms based on the migration to ICD10 and mapping the end result into SNOMED.

M.B.I. student **Eli Lourie, M.D.,** will be the Medical Director of Outpatient Information Services at the Crozer/Keystone Health Network in Southeastern Pennsylvania, beginning in October 2011. The position includes overseeing implementation and optimization of the outpatient EHR systems, designing a 3-5 year strategic plan for the outpatient clinical systems, and teaching residents twice a week.

Greg Sicard, M.D., M.B.I. '06, is currently working at McKesson as a Physician Content Analyst (remotely) and working as an internist for Legacy Health Systems (one day a week) in Oregon.

Tom Durkin, certificate '11, is now Outreach Coordinator for O-HITEC, the ONC Regional Extension Center for Oregon. Durkin did his practicum with the REC and continued working there after graduation, where he is involved with enrolling Oregon clinics who are ONC grant eligible.

Vandana Kapoor, M.B.I. '11, is now an applications engineer at Cayuse, Inc., a Beavertion, Oreogn-based company that provides Web-based solutions for research organizations.

Certificate student **Steven R. Daviss, M.D.,** was reappointed as co-chair for CCHIT's Behavioral Health Work Group and appointed to serve on the statewide HIE Policy Board

under the Maryland Health Care Commission. Davis is chair of psychiatry at the Baltimore Washington Medical Center.

M.B.I. student **Gray Winkler** joined OHSU in the Division of General Internal Medicine and Geriatrics as a Data Analyst.

Doctoral student **Kyle Ambert** is one of eight bloggers on the OHSU StudentSpeak blog: www.ohsu.edu/blogs/studentspeak/

Presentations and posters

Suzi Fei, Ph.D. '11, presented a paper at the Research in Computational Molecular Biology Satellite Conference on Computational Proteomics (RECOMB-CP) in San Diego, CA in March 2011. The talk was "Protein Database and Quantitative Analysis Considerations when Integrating Genetics and Proteomics to Compare Mouse Strains."

Gray Winkler, an M.B.I. student**,** gave a presentation at the 2011 HIMSS conference in Orlando, FL, in February 2011, on Using EHR Data in Lean Process Improvement Efforts.

NLM fellow **Dian Chase, M.S.N. A.R.N.P.,** gave an oral presentation on nurses, change, and computers at the 2011 OHSU Student Research Forum May 13, 2011. Also at the Student Research Forum, doctoral student **Kyle Ambert** presented a poster on Text-mining Tools for Optimizing Community Database Curation Workflows in Neuroscience on May 13.

Ambert also presented at the Fourth i2b2/VA Shared-Task and Workshop Challenges in Natural Language Processing for Clinical Data in Washington, D.C., in November 2010. Cohen AM, **Ambert KH**, Yang J, Felder R, Sproat R, Roark B, Hollingshead K, Baker K. OHSU/Portland VAMC Team Participation in the 2010 i2b2/VA Challenge Tasks." In: i2b2 2010 NLP Challenge Task; 2010; Washington, D.C.

DMICE Hosts 12 Undergraduates as Summer Research Interns

ARRA funding has played a role in obtaining new grant funding. DMICE recently received a three-year, R25 grant from National Library of Medicine for summer research internships after two years of ARRA-funded internships. This year's interns include (left to right) Katrina Burch, Dr. Karen Eden (faculty), Jamie Slonaker, Sean O'Hallaron, Kristen Ethier, Marie Perrone, Gabe Buckmaster, Eleni Skaperdas, Ana Stanescu, Jon Childs, and Dr. Bill Hersh (faculty). Not pictured: Sarah Read-Brown.

With funding from the National Library of Medicine, DMICE continues to offer summer research opportunities for undergraduate students. In 2011, 12 college students spent the summer conducting research with DMICE faculty.

Jon Childs and Sarah Read-Brown, both Reed College students from Portland, worked with professor Michael Chiang, M.D., M.A. Childs did research on the development of an image analysis system for the purpose of diagnosing retinopathy of prematurity while Read-Brown worked on implementation of electronic health record systems in ophthalmology.

Associate professor David Dorr, M.D., M.S., had two interns. Kristin Ethier, a student at University of California, Davis, and resident of Pleasanton, CA, studied usability of a care coordination Web tool. Marie Perrone, a Portland resident attending the Massachusetts Institute of Technology, studied data quality and analysis for Care Management+.

A student at Washington State University at Vancouver, Katrina Burch worked with associate professor Karen Eden, Ph.D., on pilot testing and data management of an adolescent and young adult fertility preservation explorer.

Jamie Slonaker, from Bainbridge Island, WA, attends Willamette University. He spent the summer working with associate professor Paul Gorman, M.D., on health information technology, ownership and office size in primary care practices and their relation to patient safety.

Working with professor David Hickam, M.D., M.P.H., was Eleni Skaperdas, a Reed College student from Portland, who worked on a needs assessment of patients with congestive heart failure as part of the Portland VAMC Patient Aligned Care Teams implementation.

Ana Stanescu worked with professor Joan Ash, Ph.D. on an oral history or medical informatics. Stanescu, a student at Reed College, is from Santa Clara, CA.

Several interns returned for a second summer, working with Judy Logan, M.D., M.S., associate professor. Gabe Buckmaster, from Tualatin, OR, who attends Santa Clara University, looked at searching medical databases using data entry applications as search interfaces. Sean O'Hollaren, a University of Denver student from Portland, worked on user interface and usability for the Clinical Outcomes Research Initiative.

Two Lewis & Clark College students, Christopher Anderson and Joey Chastain, worked with assistant professor Armand Bankhead, Ph.D., on leveraging pathway knowledge for cancer treatment. The students were funded by a Howard Hughes Medical Institute Undergraduate Science Education Grant awarded to Lewis & Clark. ∎

Student/Alumni News

Continued from Page 14

On March 24, M.B.I. student **Bradley Howard, M.D.,** presented with Dr. John Kontor to the Health Management Academy on "Meaningful Use, Is it worth the Transformational Bet." The following day, he presented to the same group, "Informatics Leadership: Does the Enterprise CMIO Need Local CMIO Leadership?"

Howard also presented at the Virginia HIMSS and CHIME Legislative Advocacy Day in February 2011. His presentation highlighted the improved Clinical Outcomes metrics experienced by Bon Secours St. Francis Health System after out implementation of an inpatient electronic health record. In addition, **Howard** presented to the Virginia HIMSS chapter January 31, 2011, at their Legislative Advocacy Sessions in Richmond, Virginia.

Post-doctoral fellow **Yves Vimegnon** presented a poster at the 2010 Oregon Innovation Showcase entitled "A software application prototype to address functional health literacy-related non-adherence to medication regimens."

Publications

Kyle Ambert was an author of several publications: Jimison HB, McKanna J, **Ambert K**, Hagler S, Hatt WJ, Pavel M. Models of Cognitive Performance Based on Home Monitoring Data. *IEEE Engineering in Medicine and Biology Conference*. 2010.

Ambert KH, Cohen AM. k-Information Gain Scaled Nearest Neighbors: A Novel Approach to Classifying Protein-Protein Interactions in Free-Text. *IEEE/ACM Transactions on Computational Biology and Bioinformatics*. 2011 Feb 16. (Epub ahead of print)

Bikram Day, M.S. '98, was author of: Day B. Standards for medical device interoperability and integra-

tion. Patient Safety & Quality Healthcare. January/February 2011,20-23.

Peter Embi, M.D., M.S. '02 was author of a paper: Hersh W, Jacko JA, Greenes R, Tan J, Janies D, **Embi PJ**, Payne PR. Health-care hit or miss? *Nature*. 2011;470 (7334):327-9.

M.B.I. student **Meryl Bloomrosen** was first author of: **Bloomrosen M**, Starren J, Lorenzi NM, Ash JS, Patel VL, Shortliffe EH. Anticipating and addressing the unintended consequences of health IT and policy: a report from the AMIA 2009 Health Policy Meeting. *Journal of the American Medical Informatics Association*. 2011;18 (1):82-90.

Susan Millea, certificate '11 was co-author in an article: Sage WM, Balthazar M, Kelder S, **Millea S,** Pont S, Rao M. Mapping data shape community responses to childhood obesity. *Health Affairs*. 29(3):498-502, 2010 Mar-Apr.

Alumna **Mary H. Stanfill, M.B.I. '09, R.H.I.A., C.C.S., C.C.S.-P., F.A.H.I.M.A.,** was first author of: **Stanfill MH**, Williams M, Fenton SH, Jenders RA, Hersh WR. A systematic literature review of automated clinical coding and classification systems. *Journal of the American Medical Informatics Association*. 2010;17 (6):646-51.

Post-doctoral fellow **Yves Vimegnon** has a publication: Pavel M, Jimison H, Hayes T, Larimer N, Hagler S, **Vimegnon Y**, Leen T, Ozertem U. Optimizing medication reminders using a decision-theoretic framework. *Medinfo 2010: Proceedings of the 15th World Congress on Health (Medical) Informatics,* September 2010.

Alumnus **Adam Wright, Ph.D. '07,** had several articles with the POET research team, led by Dr. Joan Ash.

Sittig DF, **Wright A,** Meltzer S, Simonaitis L, Evans RS, Nichol WP,

In Memoriam: Heather K. Hill, D.D.S., M.B.I.

September 10, 1973 – April 30, 2011

Heather Hill, D.D.S., M.B.I. '09, passed away April 30, 2011. Heather had been a post-doctoral fellow in the National Library of Medicine (NLM) biomedical informatics training program from 2006-09.

She received her D.D.S. from the University of Minnesota in 2000 and then did a general practice dental residency at OHSU. She received her Master of Biomedical Informatics degree from OHSU during her NLM fellowship.

During her informatics fellowship, working with Dr. Joan Ash, Heather conducted qualitative research on the impact of health

information technology systems in dental school users. The study was published in the *Journal of Dental Education* in April 2010.

In 2010, she and her husband, Dan Pihlstrom, D.D.S., taught an evidence-based dentistry course at OHSU.

Heather had twin daughters, Raquel and Kira, who were born during her fellowship.

A charitable gift fund has been established to support the work, causes and values that Hill believed in. Contributions may be made payable to the *Dr. Heather K. Hill Memorial Fund* and mailed to 40 Churchill Downs, Lake Oswego, OR 97035.

"She was a remarkable person," said Ash. ∎

Ash JS, Middleton B. Comparison of clinical knowledge management capabilities of commercially-available and leading internally-developed electronic health records. *BMC Medical Informatics and Decision Making*. 2011;11 (13):13.

McMullen CK, Ash JS, Sittig DF, Bunce A, Guappone K, Dykstra R, Carpenter J, Richardson J, **Wright A**. Rapid assessment of clinical information systems in the healthcare setting. An efficient method for time-pressed evaluation. *Methods of Information in Medicine*. 2010;50 (2):2.

Wright A, Sittig DF, **Ash JS**, Bates DW, Feblowitz J, Fraser G, Maviglia SM, McMullen C, Nichol WP, Pang JE, Starmer J, Middleton B. Governance for clinical decision support: case studies and recommended practices from leading institutions. *Journal of the American Medical Informatics Association*. 2011;18 (2):187-94.

Wright A, Sittig DF, **Ash JS**, Feblowitz J, Meltzer S, McMullen C, Guappone K, Carpenter J, Richardson J, Simonaitis L, Evans RS, Nichol WP, Middleton B. Development and evaluation of a comprehensive clinical decision support taxonomy: comparison of front-end tools in commercial and internally developed electronic health record systems. *Journal of the American Medical Informatics Association*. 2011;2011 17. ■

From the Chair

and financially, many times over. Sen. Hatfield is gratefully acknowledged and will be sorely missed.

I am gratified in what we have accomplished during this time period, and not all of it can be attributed to stimulus programs. As can be seen in the pages of this issue, DMICE has continued to carry out and publish high-profile research, educate students who have gone on to obtain rewarding jobs and careers, and contribute to the overall mission and operations of Oregon Health & Science University (OHSU).

There are, however, some challenges ahead. The combination of the stimulus projects winding down, uncertainties in the federal budget that funds most of our grants, and a cloudy financial forecast for the university make it imperative that we act strategically to maintain the funding necessary to pursue and advance our mission. An evolving financial model for units at OHSU provides incentive for increasing self-sufficiency, which could be a boon in good times but treacherous in bad times.

DMICE has weathered financial challenges before, and I am confident we will adapt to this one. We have always been successful at carrying our core mission, and like all successful organizations will need to evolve to new realities. To facilitate this process, we are renewing our department strategic planning efforts. Starting this summer, we are working with a consulting firm to update our strategic plan and implement new approaches to diversify our funding while staying true to our mission.

Part of that diversification will involve philanthropy. We hope we can engage our colleagues, friends, and alumni to invest in DMICE. One major use of gift funds will be for our students. We hope to increase the resources for student scholarships and for activities they can undertake, such travel to meetings or career development activities. Gift funds can also provide needed investment in faculty to pursue new research and other areas of work. A form for giving is printed in this newsletter, or you can make your gift online at www.ohsu.edu/dmice/giving.

In closing, I want to express my gratitude for the support DMICE has received from faculty, staff, students, 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. ■

DMICE Alumni Unite

the American Medical Informatics Association (AMIA) Symposium last fall, which will be repeated again this November, with facilitated discussion involving recognized biomedical and health informatics leaders.

If you are alumnus of a DMICE program, we invite you to join your fellow alumni at the upcoming alumni forum networking breakfast at this year's AMIA Annual Symposium in Washington, D.C. on Tuesday morning, October 25, 2011. Watch for an invitation to this and future alumni events from department chair, William Hersh, M.D. For more information or to share ideas on alumni forum activities, please contact Lauren Ludwig at ludwigl@ohsu.edu or 503 494-2252. ■

Stimulus

awarded for education and research. Our National Library of Medicine (NLM) Biomedical Informatics Training Grant was awarded eight additional positions for two years, funding four predoctoral and four postdoctoral trainees. We also received funding for eight undergraduate and two community college faculty per year to take part in our summer internship program in 2009 and 2010. (Even better news on the internship program is that we were recently awarded a non-stimulus R25 grant from NLM to keep the program going for another five years! See page 15 for details.)

Other informatics faculty received stimulus-funded research grants. Professor Joan Ash, Ph.D., was awarded funding from the National Library of Medicine to study Clinical Decision Support in Community Hospitals: Barriers & Facilitators. Judy Logan, M.D., M.S., associate professor, was also funded by NLM to assess Exploiting the User Interface for Data Integration in Effectiveness Research. In addition, associate professor Holly Jimison, Ph.D., received a grant from the National Institutes on Aging to study Cognitive Interventions Delivered to Elders in the Home via Coaching Technology.

Stimulus awards were not limited to informatics. ARRA also invested in comparative effectiveness research (CER), for which the clinical epidemiology side of DMICE, through the Oregon Evidence-Based Practice Center (EPC), was well-qualified to pursue. CER is research that aims to compare "different interventions and strategies to prevent, diagnose, treat and monitor health conditions," according to the Federal Coordinating Council set up by the legislation. The Oregon EPC, with Jeanne-Marie Guise, M.D., M.P.H., associate professor, as principal investigator, was funded for work by the Agency for Healthcare Research & Quality (AHRQ) under the Comprehensive EPC Comparative Effectiveness Reviews for Effective Health Care Program.

Dr. Guise was also awarded ARRA funding by AHRQ for training new investigators in the Oregon Comparative Effectiveness Research K12 Program while she and professor Cynthia Morris, Ph.D., M.P.H., co-direct a KM1 grant from the National Cancer Institute to conduct a yearly research intensive for promising investigators to learn comparative effectiveness research methods from national leaders in this field.

The Oregon EPC was also funded by the Group Health Cooperative for the Statistical Coordinating Center for the Breast Cancer Surveillance Consortium, directed by research professor Heidi Nelson, M.D., M.P.H.

Despite the stimulus funding winding down, the department continues to fare well. We have already been awarded a number of "post-ARRA" grants, while interest in our educational programs shows no signs of waning. There will be challenges ahead, but DMICE is well-positioned to continue its national leadership in research and education in both informatics and clinical epidemiology. ∎

Roger Chou, M.D.

screening in adults, ECG screening, HIV screening, HCV screening, and others," Chou said.

Chou has also been involved with two other Oregon EPC projects; he is an investigator with both the Comparative Effectiveness Research Center (CERC) and also the Scientific Resource Center of the AHRQ Effective Health Care Program.

The CERC, funded by AHRQ with American Recovery and Reinvestment Act of 2009 funding, produces comparative effectiveness reviews on topic areas including care delivery, management and coordination, prevention, and behavioral interventions.

"I am currently leading comparative effectiveness reviews on hepatitis C screening and treatment, and we will soon be starting a CER on pressure ulcer prevention," Chou said.

Chou has also focused on the methodological aspects of systematic reviews, for example, looking at methodological shortcomings when evaluating estimates of harms associated with clinical interventions. With this expertise, he now serves as Scientific Director of the Oregon EPC.

Chou said, "As Scientific Director, some of my roles are to help provide leadership in the EPC, particularly with regard to maintaining the methodological and scientific integrity of our projects, and also to help develop and maintain standards across EPCs."

With the many hats he wears within the Oregon EPC, Chou still has time for his clinical practice. As a staff physician in the Internal Medicine Clinic at OHSU, he sees patients a half day a week.

Dr. Chou is a Fellow of the American College of Physicians, and is a member of the ACP's Clinical Guidelines Committee. He has been an active member of the Cochrane Back Review Group, starting as a member of the Advisory Board in 2007 and being named to the Editorial Board in 2011. ∎

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

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Medical Informatics and Clinical Epidemiology Development
INFJ9K

DMICE Alumni Unite

Those in the biomedical and health informatics field know that there are many, many challenges ahead as we work collectively toward the vision of advancing health information technology, data exchange, and biomedical research computing in the United States. Alumni of the educational programs within the Department of Medical Informatics & Clinical Epidemiology at Oregon Health & Science University are uniting to respond to this challenge. If you are a graduate of a DMICE educational program, we invite you to join us. We have created an alumni forum to:

- Provide alumni with opportunities to exchange ideas, problem-solve, and share success stories

- Promote and enhance the careers of fellow alumni

- Help recruit new and talented students to DMICE educational programs

- Provide feedback to help improve DMICE programs

Since its inception in 2010, the DMICE Alumni Steering Committee has held several virtual forums, allowing alumni to hear the latest on topics such as careers in biomedical and health informatics, informatics competencies, perspectives on executive recruiting from experts, and technical topics, such as case studies on experiences with regional extension centers. Alumni also enjoyed a networking breakfast at

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