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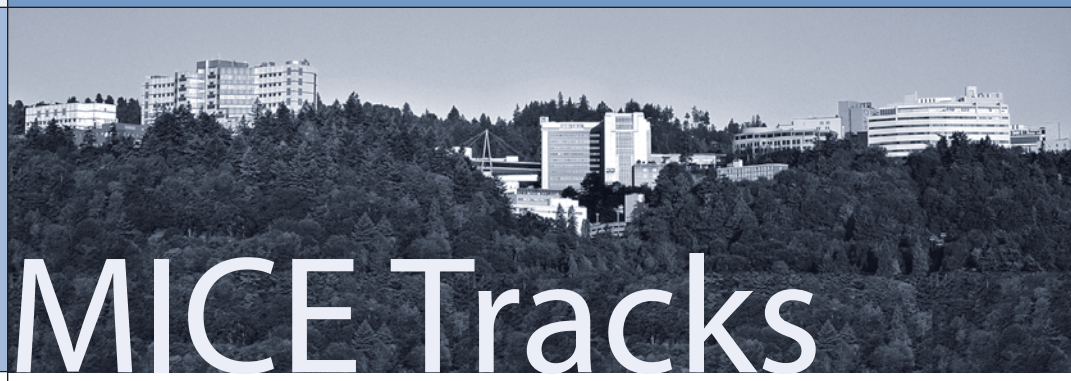
Newsletter of the Department of Medical Informatics and Clinical Epidemiology



DMICE Tracks

From the Chair

Welcome to Issue 9 of DMICE Tracks, the newsletter of the Department of Medical Informatics & Clinical Epidemiology. There are plenty of new and ongoing initiatives to see in this issue. I am delighted to report that the biomedical informatics graduate program has surpassed 200 graduates. We have awarded 214 degrees and certificates since 1998. The 10x10 program in collaboration with the American Medical Informatics Association continues to grow and will approach 600 graduates by the end of 2008.

Our students and fellows continue to achieve great things. At the annual meeting for informatics trainees funded by the National Library of Medicine and Veteran's Administration, held in Bethesda, MD, three fellows gave well-received plenary presentations while two others presented posters. Next June, DMICE will be hosting this meeting in Portland.

The past months have been exciting for me personally. In April, I presented some research findings on Capitol Hill, noting the need

Continued on Page 10

Informatics Shared Resource Helps Investigators Collect Research Data

Need help collecting data for your research study? The Department of Medical Informatics & Clinical Epidemiology offers a service to help investigators with data collection and management. For the past four years, the Biomedical Informatics Shared Resource (BMISR), headed by Judy Logan, M.D., M.S., associate professor, has supported clinical investigators with data collection in a variety of formats.

"Most of our work is with clinical investigators, creating data collection instruments for their studies," Logan said. "We use scannable paper forms, electronic forms, desktop database applications and custom applications to do this."

While other groups at OHSU, such as the Oregon Cancer Institute and Oregon Clinical and Translational Research Institute (OCTRI), provide similar services to investigators meeting their support criteria, many

Continued on Page 10

Project manager Michelle Hribar, Ph.D., (left) and director Judy Logan, M.D., M.S., run the Biomedical Informatics Shared Resource, based in DMICE.

OREGON HEALTH & SCIENCE UNIVERSITY

26 Students Receive Biomedical Informatics Degrees

On June 3, 2008, OHSU awarded 26 advanced degrees in biomedical informatics, the 11th year such degrees have been awarded. This academic year three students received doctoral degrees while 23 received master's degrees or advanced certificates. With the addition of these degrees, OHSU has now awarded 214 degrees to 203 people in the biomedical informatics program since 1998.

Front row (left to right): T.J. Michael, M.B.I.; Ken Guappone, M.D., Ph.D., Jianji Yang, Ph.D., Sapna Sharma, M.B.I. Back row: Ron Stevenson, M.D., M.B.I.; Carlo Pearson, M.S.; Daniela Young, M.S.

Three students received doctor of philosophy (Ph.D.) degrees:

Surendra Dasari, Portland, OR

Title: *"Novel Bioinformatics Methods for Identification and Quantification of Diamidation in Shotgun Proteomics Experiments"*

Current position: Research fellow in biomedical informatics, Vanderbilt University, Nashville, TN

Kenneth P. Guappone, Portland, OR

Title: *"A Cognitive Approach to Understanding Physician Use of CPOE: A Field Usability Evaluation of Community Physicians and Commercial Systems"*

Current position: Physician, Clinical Decision Support, Regional Information Services, Providence Health System, Portland, OR

Jianji J. Yang, Portland, OR

Title: *"Automated Summarization of Mouse Gene Information for Microarray Analysis by Functional Gene Clustering and Ranking of Sentences in MEDLINE Abstracts"*

Current position: Program Analyst, Portland VA Medical Center, Portland, OR

One student received the master of science degree:

Carlo Axel Pearson, Portland, OR

Title: "*Linking Health Outcomes with Environmental Exposures: Asthma and Air Quality"*

Current position: Research associate, Clinical Outcomes Research Initiative, Oregon Health & Science University, Portland, OR

Eight students received a master of biomedical informatics degrees (listed with their capstone project):

W. Jason Atkins, Austin, TX

Capstone Project: *"Evaluating the Feasibility of Automated Data Capture at Oregon Immunization Alert"*

Current position: Product Manager, Clinical Applications, Opus Healthcare Solutions, Austin, TX

Farhad Chavoshian, Vancouver, WA

Capstone Project: *"Factors Influencing the Usage and Effectiveness of Clinical Content Tools of EpicCare at Kaiser Permanente Northwest"*

Current position: Systems/Application Analyst, ITG, Oregon Health & Science University, Portland, OR

Bimal Ramesh Desai, Phildelphia, PA

Capstone Project: "*Design and Evaluation of an Algorithmic Parser for Free-Text Prescription Data in an Ambulatory Electronic Health Record"*

Current position: Pediatrician and Director of Applied Informatics, Children's Hospital of Philadelphia, PA

Kristel Hackett Dobratz, Derry, NH

Capstone Project: "*Designing and XML Schema Representation for Terminological Mapping: The Minimal Standard Terminology and SNOMED Clinical Terms"*

Current position: Biomedical Terminology Engineer, GulfStream Bioinformatics, Lexington, MA

Misbah Keen, Seattle, WA

Capstone Project: "*Evidence Based Medicine Competencies"*

Current position: Assistant professor of family medicine, University of Washington School of Medicine, Seattle, WA

Thomas J. Michael, Annadale, VA

Capstone Project: "*Availability Assessment and Content Analysis of Implementation Guidelines for Elec-*

tronic Medical Records in Primary Care Settings"

Currently working on electronic data systems

Hari Krishna V. Rekapalli, Portland, OR

Capstone Project: "*Engineering and Evaluating EZChemo: An Electronic Chemotherapy Ordering System*"

Current position: IT Consultant, Hematology and Medical Oncology, Oregon Health & Science University, Portland, OR

Tungamirirai Simbini, Harare, Zimbabwe

Capstone Project: "*Installing and Supporting Open Medical Record System (OpenMRS), an Open-Source Medical Record System, in an Opportunistic Infections Clinic: Lessons Learnt and Possible Evaluation Strategies*"

Current position: Principal investigator, Open Architecture Standards and Information Systems, College of Heath Sciences, University of Zimbabwe, Harare, Zimbabwe

In addition, 14 students completed graduate certificates in biomedical informatics, a 24-credit-hour program to provide knowledge and skills in the application of information technology to health care.

Pejman Azarmina, Tehran, Iran
Maria T. Britto, Cincinnati, OH
Jennifer Hornung Garvin, Chalfont, PA
Randal Lee Hamric, Springfield, MO
Glenn Edgar Irwin, Jr., Lewis Run, PA
Teresa J. Mason, Tucson, AZ
Shakti K. Matta, Richland, WA
Vishnu Mohan, Portland, OR
John Robert Norris, Albany, OR
Beshia L. Popescu, Battle Ground, WA
Mohamed A. Rehman, Bryn Mawr, PA
David Brian Ross, Silver Spring, MD
David Louis Schanding, Des Plaines, IL
Randall F. Stewart, Albuquerque, NM

Yackel Appointed Chief Health Information Officer at OHSU

Assistant professor Tom Yackel, M.D., M.P.H., M.S., has been appointed OHSU Chief Health Information Officer. Roy Magnusson, M.D., Chief Medical Officer of OHSU Healthcare, and Bridget Haggerty, OHSU Chief Information Officer, made the announcement in August 2008.

In this role Dr. Yackel will work with OHSU Healthcare and Information Technology Group (ITG) leadership to deliver the best possible informatics support to the clinical enterprise.

"OHSU has taken a leadership role in creating a 'chief health information officer' position, recognizing the multidisciplinary aspect of an effective health information system," Yackel said. "With an integrated system, input and organization is required of all members of the healthcare team – not just the medical staff. It is the CHIO's job to solicit this input and shape the workflows in the electronic system to provide the quality benefits possible with an EHR."

Previously, Yackel was the Associate Medical Information Officer, working with ITG on developing informatics strategies and implementing key programs for the health system. Most recently he has been the physician lead on our Epic implementation.

"Our EHR implementation was a great success – challenging to be sure, but ultimately a process that caused us to address a lot of long-standing problems. In so doing, we've created a better, safer, more efficient system," Yackel said.

Yackel has been on the faculty of DMICE since 2002 after completing his Master of Science in Biomedical Informatics degree here as an National Library of Medicine post-doctoral fellow. He earned his M.D. and M.P.H. degrees at George Washington School of Medicine and Health Sciences where he also completed his residency training in Internal Medicine and was their Chief Resident in Medicine. Yackel also has an appointment in general internal medicine.

"I was very lucky to have the opportunity to study medical informatics at OHSU, and I apply the skills I've learned on a daily basis," he noted. "It is becoming increasingly important to have individuals with well-rounded talents in technology, clinical care, and organizational behavior to deliver the benefits of and electronic health system to the enterprise – this is just the kind of training the OHSU-DMICE program provides."

"Tom has arguably one of the most important jobs at OHSU, managing our transition to an electronic health record," professor and chair William Hersh, M.D., commented. "His success exemplifies one of the missions of our educational program, which is to train leaders in the successful application of information technology to improve the quality and safety of health care delivery."

Six College Interns Spend Summer Working with DMICE Faculty on Research Projects

Now in its second year, the DMICE internship program allowed six undergraduate students or recent graduates to spend this past summer working with department faculty on research projects.

Estela Vasquez, who returned for a second year as a DMICE intern working with assistant professor David Dorr, M.D., M.S., received funding this past summer through the National Library of Medicine Short Term Training Position program. Vasquez, a junior majoring in sociology at Whitman College, worked with Dorr's Care Management Plus (CMP) team, conducting research to understand the effects of working with a care manager on chronically ill patients' communication and information needs. Vasquez conducted patient interviews and worked with the CMP team on data collection and analysis.

Melissa Allen, now a sophomore at Cornell University studying biological engineering, worked with mentor Paul Gorman, M.D., associate professor, on the RxSafe project. Allen studied the meaningful presentation of medication lists with the goal of increasing the cognitive performance of clinicians in medication management tasks.

Also working with Dr. Gorman was Bjorn Vanberg, who recently graduated from Lewis and Clark College as a biochemistry and molecular biology major/computer science minor. Vanberg's role on the Rx Safe project was to work with a medication name parser, creating a standard set of tests to determine the effectiveness of parsers.

Johns Hopkins University senior Thai Le, a biomedical engineering major, worked with associate professor Holly Jimison, Ph.D., on an approach to cognitive health monitoring through computer word games. "This was a great opportunity to not only work with faculty on novel research but also to gain firsthand experience in the field of academia," Le said.

David Gibbs, who begins the biomedical informatics master's program this fall, worked with Aaron Cohen, M.D., M.S., assistant professor, in the area of text mining, doing programming in Python and focusing on automatic document retrieval and automatic document classification. Gibbs has a degree in chemistry from Reed College.

Portland State University student Bill Hatt, a biology major, worked with professor and chair William Hersh, MD, this summer on image retrieval research, assisting with development of a test collection of images for comparison of search algorithms.

The six interns presented their research work at two separate DMICE informatics seminars in August.

The Summer Biomedical Informatics Internship is a 10-week program for college freshmen, sophomores, juniors and seniors who work with faculty mentors on their research projects. The goals of the program are to introduce students to research projects in biomedical informatics, facilitate interactions with DMICE faculty, and to increase awareness among undergraduates about this field. ■

Student interns worked with several DMICE faculty this summer. Front row (left to right): Bill Hatt, Bjorn Vanberg, David Gibbs. Back row: assistant professor Aaron Cohen, M.D., M.S.; associate professor Holly Jimison, Ph.D.; assistant professor David Dorr, M.D., M.S.; Thai Le.

Faculty Profile: Judith R. Logan, M.D., M.S.

One of the first four students to receive the M.S. degree in biomedical informatics from OHSU, Judy Logan, M.D., M.S., in 10 years, has gone from DMICE student to associate professor, a core member of the educational program, and an investigator examining the use of healthcare data for quality improvement.

When Logan entered the biomedical informatics program in 1996 as one of its first students, she was already an experienced physician. After a family practice residency at Ventura County (CA) Medical Center and a private practice in Sandpoint, Idaho, Logan spent much of her clinical career as an emergency physician. With board certifications in both family practice and emergency medicine, she worked in emergency departments (EDs) in Ojai, California; Coeur d'Alene, Idaho; and at Legacy Good Samaritan Hospital in Portland.

In the mid-1990s, Logan learned about the National Library of Medicine fellowship offered by DMICE. While on a selection committee for an ED information system at Legacy, she became interested in medical informatics and saw it as a way to specialize within her own specialty. Instead of joining the NLM program, Logan became part of the very first class of students in the M.S. program in the fall of 1996.

After receiving her M.S. in biomedical informatics in 1998, Logan joined the faculty where she currently teaches BMI 544, the computer science course on databases. In addition, she is an instructor in BMI 548, Human-Computer Interaction in Biomedicine. Logan also teaches the Introduction to Programming course, which is a prerequisite for the master's program. Advising 11 master's and doctoral students and serving as chair of the DMICE Professional Conduct Committee round out Logan's work as an educator.

"I am most interested in the secondary use of healthcare data for research or quality improvement."

– Judith R. Logan, M.D., M.S.

As a researcher, Logan said, "I am most interested in the secondary use of healthcare data for research or quality improvement." Currently she works with the Clinical Outcomes Research Initiative (CORI), led by professor of medicine David Lieberman, M.D. This research group has created a specialty electronic health record (EHR) for documentation of gastrointestinal (GI) endoscopic procedures, used by over 80 sites across the United States. Data from these procedures are collected into a data warehouse and can be used for outcomes research or to identify subjects for prospective research. Logan's role is as director of the CORI development group, and she also works on projects related to terminology, imaging, and the quality of electronic reporting.

A year ago Logan became principal investigator of a CORI-related research project funded by the Agency for Healthcare Research and Quality, Improving Quality in Cancer Screening: The Excellence Report for Colonoscopy. As part of the CORI project, participating clinicians receive monthly quality measure reports. "My team will be evaluating the effect of these reports both quantitatively and qualitatively," Logan said. "In addition, we are working with standards organizations, vendors of endoscopy reporting systems, and GI specialty societies to help establish national standards for quality measure specification, interoperability and reporting."

On other research projects, Logan has worked with investigators outside OHSU and with informatics students. "In collaboration with Portland State University's Lois Delcambre, Ph.D., and James Terwilliger, we explored a method of integrating data from multiple EHRs," Logan said. "The conceptual framework and prototypes that were developed for what we call 'dynamic data integration' can be used to increase sample size in outcomes research." In a project with a current informatics student, Denny Lee, Logan is exploring the application of an algorithm that adds "noise" to healthcare data to prevent identification of individuals.

Logan hopes to continue her work with quality measures in the future. "There are many unanswered questions as to their use and usefulness as well as ways to create, represent, propagate and implement quality measures," she noted. In addition, she plans on augmenting the recently developed CORI endoscopic image library and exploring incorporation of these images into teaching and clinical tools. ■

Faculty/Staff Update

Awards and achievements

Marian McDonagh, Pharm.D., was promoted to associate professor of medical informatics & clinical epidemiology this summer. Faculty with secondary appointments in DMICE who received promotions include **Shannon McWeeney, Ph.D.,** to associate professor of public health and preventive medicine and **Robert Lowe, M.D., M.P.H.,** to professor of emergency medicine.

Associate professor **Paul Gorman, M.D.,** has been appointed by Governor Ted Kulongoski to the Oregon Health Information Infrastructure Advisory Council. The mission of the Committee is to develop a strategy for the implementation of an Oregon health information system, including reviewing obstacles to such implementation, outlining the role of the State, recommending standards and interoperability requirements, identifying partnership models, and recommending a plan for the creation of a health information infrastructure that preserves the privacy and security of Oregonians' health information.

Gorman has also been appointed to an expert panel on integrated clinical guidelines for cardiovascular risk reduction and a cross-cutting workgroup, the Implementation Work Group, as part of the National Heart, Lung and Blood Institute's (NHLBI) Clinical Guidelines program. Assistant professor **Susan Norris, M.D., M.P.H., M.Sc.,** is working as a methodologist for the NHLBI Clinical Guidelines program

Department director **Anne Chisholm, M.B.A.,** married Rod Marshall on June 21, 2008. She now goes by the name Anne Marshall and her email is marshala@ohsu.edu.

Funding received

Professor **Cindy Morris, Ph.D., M.P.H.,** received a T32 training grant in health services research from the Agency for Healthcare Research and Quality. The five-year grant will fund training for pre- and post-doctoral fellows who will be able to obtain master's degrees in medical informatics, public health or clinical research.

Professor and chair **William Hersh, M.D.,** received an $80,000 award from Google Research for a project entitled Understanding and Improving Image Retrieval in Medicine, a grant to assess users of medical image retrieval systems.

Associate professor **Holly Jimison, Ph.D.,** received an award from the Alzheimer's Assocation. Her project on cognitive health coaching for elders in a home environment is part of their Everyday Technologies for Alzheimer's Care consortium.

Susan Norris, M.D., M.P.H., M.Sc., assistant professor, has received additional funding from the American Urological Association to complete systematic reviews on vasectomy and on benign prostatic hyperplasia.

Norris also received funding from the Centers for Disease Control and Prevention to produced a systematic review on health-related quality of life among persons with diabetes

As an Oregon Evidence-based Practice Center project, associate professor **Jeanne-Marie Guise, M.D., M.P.H.,** is principal investigator of an evidence report update on vaginal birth after cesarean. Guise served as PI of the original evidence report, published in 2003.

David Dorr, M.D., M.S., assistant professor, has received a $1.15 million grant from the Agency for Healthcare Research and Quality: Enhancing Complex Care through an Integrated Care Coordination Information System.

Presentations and posters

Assistant professor **Susan Norris, M.D., M.P.H., M.Sc.,** presented "Approaches to Grading Clinical Practice Guidelines" to the Society of Genital-Urinary Surgeons on September 13, 2008 in Portland.

Paul Gorman, M.D., associate professor, presented at the American Medical Informatics Association Academic Forum on development of biomedical and health informatics competencies in Rockville, MD on July 10, 2008.

Gorman also presented a poster, "RxSafe: Shared Medication Management and Decision Support for Rural Clinicians," at the annual Practice-based Rural Network Research Conference in June 2008, in Bethesda, MD. The program is sponsored by the Agency for Healthcare Research and Quality.

Publications

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Continued on Page 8

Doctoral student Kenneth Guappone, M.D., presented his dissertation defense on June 12, 2008. He is the fourth student to receive a Ph.D. from the biomedical informatics program. Guappone's dissertation was entitled "A Cognitive Approach to Understanding Physician Use of CPOE: A Field Usability Evaluation of Community Physicians and Commercial System."

Guappone and his doctoral committee members (left to right): Richard Appleyard, Ph.D., clinical assistant professor; Dean F. Sittig, Ph.D., adjunct associate professor; Ken Guappone, M.D.; Joan Ash, Ph.D., associate professor and committee chair; Brian Hazlehurt, Ph.D., adjunct assistant professor and senior investigator, Kaiser Center for Health Research; Richard Gibson, M.D., Ph.D., M.B.A., affiliate assistant professor and senior vice president and chief information office, Legacy Health System.

Faculty/Staff Update

Continued from Page 7

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New Faces

Eleven new staff have joined the Department of Medical Informatics & Clinical Epidemiology in the past six months.

We welcome **Felicity Fields** at the fifth floor front desk as our new DMICE receptionist. **Virginia Howard** is now an administrative coordinator, focusing on departmental personnel work.

In the Oregon Evidence-based Practice Center (EPC), **Rose Campbell, M.L.I.S., M.S.,** is their new librarian while **Howard Balshem, M.S.,** and **Jessica Griffin, M.S.,** join the EPC as research associates. **Julie Haas** is the new administrative assistant for the EPC leadership team. **Vivian Christensen, Ph.D.,** is a postdoctoral research fellow with the EPC.

Now working for Dr. Susan Norris are research associates **Tarra McNally, M.P.H.,** and **Natalie Jacuzzi. M.P.H. Gaye Kazmirski, R.N., M.B.A., M.S.,** is working as a health coach on one of Dr. Holly Jimison's research projects. **Lakshmi Vedantham, M.B.B.S., M.P.H.,** is a new research assistant, also working with Dr. Jimison. ■

Howard Balshem

Rose Campbell

Felicity Fields

Jessica Griffin

Julie Haas

Virginia Howard

Natalie Jacuzzi

Gaye Kazmirski

Tarra McNally

Student/Alumni News

Susan Price, M.D., (M.S. '99) is now working at Microsoft in Redmond, WA as a program manager in the Sql Server group. Price recently received her Ph.D. from the Department of Computer Science at Portland State University. The title of her dissertation was Semantic Components: A Model for Enhancing Retrieval of Domain-Specific Information, and her advisor was Lois Delcambre, Ph.D.

Surendra Dasari (M.S. '05, Ph.D. '08) has become a research fellow in the Department of Biomedical Informatics at Vanderbilt University, where he is working in Dr. David Tabb's lab, which conducts bioinformatics research in field of proteomics and mass spectrometry. Dasari will be developing a novel sequence tag based algorithm to identify unanticipated sequence modifications in human proteins using tandem mass spectrometry.

Pejman Azarmina, M.D., M.Sc. (certificate '08) is now an associate director of medical data development at Pfizer's headquarters in Manhattan, moving from London to New York.

Mary Gerard, M.D., (certificate '02) is now working at the College of American Pathologists as a Physician Terminology Manager within their SNOMED Terminology Solutions division.

Student **Karen Albert, M.L.S., A.H.I.P.,** director of library services at Fox-Chase Cancer Center in Philadelphia, was accepted to the Frye Leadership Institute, whose goal is to develop creative leaders to guide and transform academic information services for higher education in the twenty-first century. Albert, now considered a Frye Fellow, attended the institute June 1-12, 2008, in Atlanta.

Also, **Albert** was awarded the Medical Library Association's Career Development Grant from the Medical Informatics Section at the MLA Meeting in May 2008.

Susan Woods, M.D., M.P.H., a medical informatics fellow at the Portland VAMC, is managing the local testing of secure messaging within the VA's personal health record, MyHealtheVet, which is also being tested in VA medical centers in Seattle, Washington, D.C., and Boston. The project involves 12 providers in Vancouver and Portland, and a total of 45 patients.

Michael Kirshner, D.D.S., M.P.H., (certificate '03) is the Program Director for Health Informatics at Oregon Institute of Technology (OIT), where they launched a Health Informatics B.S. degree program in 2007. OIT also received funding from the Oregon Department of Community College and Workforce Development to develop a Health Informatics Computer Simulation Lab in fall 2008. Kirshner also serves as Assistant Dean of the OIT School of Health Professions.

Ron Jimenez, M.D., (certificate '02) is on the Board of Directors of CalRHIO, the California Regional Health Information Organization. Jimenez is associate medical director for clinical informatics at the Santa Clara Valley Health and Hospital System.

Through his hospital system, distance student **Scott Eccarius, M.D.,** is involved in the national Medicare demonstration project that provides incentive payments to physicians for using certified electronic health records (EHR) to improve the quality of patient care. South Dakota is one of 12 communities involved in the project.

Funding received

Doctoral student **Suzi Fei** received a $2000 Tartar Trust Fellowship, which she will use it to travel to Amsterdam to obtain training with Guus Smit, a neuroproteomics expert at the Center for Neurogenomics and Cognitive Research at Vrije University.

Presentations and posters

Jinaji Yang (M.S. '04, Ph.D. '08) presented on "Evaluation of a Gene Information Summarization System by Users During the Analysis Process of Actual Research Microarray Datasets" at the 2008 AMIA Summit on Translational Bioinformatics in San Francisco March 10-12, 2008. Her paper was one of 15 nominees for the outstanding paper award.

Andrew James, M.B.Ch.B., (M.B.I. '07) gave a platform presentation on the representation of disorders of the newborn infant by SNOMED CT® at MIE 2008, the European Medical Informatics Society conference, in Göteburg, Sweden in May 2008. Co-author was former DMICE professor Kent Spackman, M.D., Ph.D.

James also presented a poster entitled "Defined representation of clinical care of the newborn infant by SNOMED CT®" at tKR-MED 2008, the AMIA Spring Congress in Phoenix, AZ May 31- June 2, 2008, also co-authored by Dr. Spackman.

Susan Woods, M.D., M.P.H., a medical informatics fellow at the Portland VAMC, presented at the Veterans Health Administration eHealth University conference in Tampa, Florida, July 14-18, 2008. Her presentation, entitled "MyHealtheVet: Finding Common Ground for Providers and Patients," summarized current knowledge about consumers' and health professionals' experience and perspectives related to benefits and challenges of personal health records.

At the annual National Library of Medicine fellows meeting in Bethesda, MD, in July 2008, three OHSU fellows gave plenary presentations. **Jayashree Kalpathy-Cramer, Ph.D.,** gave a talk, "Improving Multimodal Medial Image Retrieval with Query Parsing and Distance Learning," while VA fellow **Susan Woods, M.D., M.P.H.,** presented "My HealtheVet: A Description of Users and Patient Portal Use." **Jenny Abrahamson, M.L.S.,** spoke on modeling the health information behavior of lay information mediaries.

At the meeting NLM fellow **Emily Campbell, R.N., M.S.,** presented a poster: Emily Campbell R.N., M.S., Dorris Mendonca R.N., M.B.A., Larry Donohoe, M.L.S., Brett Shephard, M.D. Using Data Automation and Pre-Population of the NSQIP Data Collection Tool to Reduce Costs, Improve Efficiency, Quality and Accuracy of Clinical Data. Also, NLM fellow **Michael Mooney, M.S.,** presented a poster on integrating clinical and genomic data to predict leukemia progression.

Publications

Andrew James, M.B.Ch.B., (M.B.I. '07) was first author of a paper: James AG, Spackman KA. Representation of disorders of the newborn infant by SNOMED CT®. *Studies in Health Technology and Informatics.* 2008;136:833-8.

Mary Gerard, M.D., (certificate '02) was first author of a paper on use of clinical decision support to increase influenza vaccination: multi-year evolution of the system published as a JAMIA pre-print August 28, 2008. ■

Shared Resource

Continued from Page 1

investigators have projects in need of informatics help that fall outside of their scopes. The BMISR can provide these data collection services as well as other computing and informatics services.

Logan works with project manager Michelle Hribar, Ph.D., while Carlo Pearson, M.S., (a June DMICE graduate), serves as developer. In the past, biomedical informatics students have also been involved with BMISR projects.

The research that BMISR helps support varies in topic and design. One project, the Oregon Women's Study, led by professor Cindy Morris, Ph.D., M.P.H., is a feasibility study looking at prenatal determinants of fetal and early infant growth. "For this study, we created multiple electronic forms which the study personnel can access through a password-protected web site," Logan said.

BMISR staff created a web application for the Hemodynamics and Extravascular Lung Water in Acute Lung Injury (HEAL) trial, directed by assistant professor of medicine Charles Phillips, M.D. The application for this study of goal-directed therapy to improve outcome in patients with acute lung injury contains data collection forms for screening, enrollment and collection of study data. The application also allows randomization of patients to study arms and contains an individualized schedule for data collection and treatment.

A third study that BMISR supports deals with data collection to evaluate 14 family medicine residencies throughout the United States, with Patty Carney, Ph.D., professor of family medicine as principal investigator. For the Preparing the Personal Physician for Practice (P4) Study, BMISR uses a combination of methods for data collection: a scannable paper form, a web-based application, and an Access application designed for double data entry. Data from the family medicine residencies is collected yearly with the goal of determining the most effective ways to educate outstanding personal physicians.

Here in DMICE, Pearson recently created a database application for informatics students related to their professional and academic background, coursework and research at DMICE, and career interests. "The database will help DMICE align student interests with current and future course offerings, and facilitate internship, research, and career connections, as well as allow students to network with each other," Logan said.

BMISR is part of the group of 12 University Shared Resources, OHSU units that provide services available to all OHSU investigators. These 12 service centers are subject to oversight by the OHSU Core Oversight Committee, part of Research Development & Administration. Logan's group supports the University Shared Resources with Web design and operational systems. "Currently we are creating a web portal where investigators can submit project requests to the cores," she said.

For more information about the Biomedical Informatics Shared Resource, see https://www.ohsu.edu/cbcibm/isr/about.cfm ■

From the Chair

Continued from Page 1

for up to 40,000 additional information technology (IT) workers to implement the agenda of biomedical informatics in improving the quality, safety, and cost of health care. I was introduced by Oregon Congressman David Wu, whose legislation was named after the course I developed. *The 10,000 Trained by 2010 Act* (HR 1467) has passed the House of Representatives and is awaiting action in the Senate. My research also identified a gap in our knowledge on the characterization of the health IT workforce and how it is best educated. The latter issue is of great interest to our department as we strive to deliver the most effective educational programs.

My work and visibility in the health IT workforce issue led the Institute of Medicine (IOM) to ask me to organize a panel at a July workshop about building the infrastructure for comparative effectiveness research (CER). The motivation for CER is to gain better knowledge on the most effective treatments and tests in health care so we can deliver the best health care at the lowest cost. The IOM and others refer to this as the "learning health care system," which uses not only classical clinical trials and systematic reviews to obtain knowledge but also accesses and mines the data of electronic health records, implements and measures adherence to clinical practice guidelines, and pursues more health services research.

Also in July, I participated in a workshop by the Commission on the Accreditation of Health Informatics and Information Management (CAHIIM) an organization that historically has accredited health information management (HIM) programs but is now turning its attention to accreditation of graduate programs in health informatics. Work with CAHIIM is relevant as we are seeking to obtain accreditation of the new HIM track in our biomedical informatics program under the leadership of Joanne Valerius, M.P.H., R.H.I.A.

A separate but similar accreditation effort, led by the American Medical Informatics Association, is to develop a plan for medical board sub-certification of individuals in applied clinical informatics. The first step was to develop the core content for this curriculum, and this national

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From the Chair

Continued from Page 10

committee included DMICE associate professor Joan Ash, Ph.D. The resulting curriculum looks very much like the curriculum in DMICE's medical informatics track, demonstrating how we have been ahead of the curve in meeting the needs of our students. I am involved in a second committee of this effort, to attempt to define the training requirements for this certification process.

My efforts in this area are not limited to within US borders. Also in July, I attended a workshop in Bellagio, Italy devoted to how eHealth can improve global health. The session I attended focused on building the workforce for deploying and disseminating eHealth applications in developing countries. Another international activity included travelling in August with fellow faculty Dean Sittig, Ph.D., to Singapore, to teach in a health informatics course and discuss future educational collaborations there.

Despite the achievements of our department, we continue to face challenging economic times. Although we have been very successful in obtaining grant revenue and tuition, these monies are earmarked for specific expenses of the research projects and educational programs, respectively.

One use for gift funds will be for our students for travel to scientific meetings and career development activities. We also hope to raise funds for student scholarships that will allow us to attract more high-achieving students. I hope you will consider investing in DMICE. A form for giving is printed in this newsletter, or you can make your gift online at http://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 Tracks

DMICE Tracks, the newsletter of the OHSU Department of Medical Informatics & Clinical Epidemiology, is published several times per year.

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