From the Chair

Welcome to another issue of DMICE Tracks, our occasional newsletter about happenings in the Department of Medical Informatics & Clinical Epidemiology (DMICE). I am pleased to report that all aspects of DMICE are doing well. Our research programs are well-funded and productive, our educational programs continue to attract bright and motivated students, and the department is increasingly involved in larger roles around the university. The latter include teaching in the medical school curriculum and other programs as well as contributing to the OHSU clinical enterprise that provides the foundational funding for the rest of the activities of the university.

The department continues to do well, both from an academic and a financial standpoint. New students continue to enroll, and those graduating have been able to find challenging and well-paying jobs to start new rewarding careers. As noted in the column to the right, we have received some new grants from the National Institutes of Health (NIH) Big Data to Knowledge (BD2K) Program. In addition, DMICE was awarded an additional grant in collaboration with Mayo Clinic that makes use of Big Data from electronic health records (EHRs) for the purpose of identifying patients who might be eligible for clinical research studies.

In October 2014, NIH awarded a total of $32 million for 38 grants in the areas of enabling data utilization, developing analysis methods and software, enhancing training, and establishing centers of excellence. The two DMICE grants total about $1 million over three years and were among nine grants awarded for development of open educational resources and courses. Eight other institutions in addition to OHSU received more than one grant.

NIH launched the BD2K initiative in 2012 when it was recognized that an increasingly important aspect of biomedical research was to leverage data from clinical and biological sources. Its mission is to enable biomedical scientists to use big data effectively and appropriately to enhance reproducible research.

The two OHSU BD2K grants are

Continued on Page 7
Facility and Students Present at Annual AMIA Symposium in Washington, D.C.

Faculty and students in the Department of Medical Informatics & Clinical Epidemiology participated in the 2014 American Medical Informatics Association Annual Symposium in Washington, D.C., November 15-19, through workshops, presentations and posters.

A highlight of the conference was the OHSU team winning the 2014 Student Design Challenge for their project, Drawn Together: Enhancing Patient Engagement and Improving Diagnostic Tools through Electronic Draw-and-Tell Conversation (see article on page 3).

Associate professor and vice chair David Dorr, M.D., M.S., was elected a Fellow of the American College of Medical Informatics, a college of elected fellows who have made significant and sustained contributions to the field of biomedical informatics.

In addition, Dian Chase, Ph.D. ’14, was a finalist in the AMIA student paper competition: The EHR’s Roles in Collaboration between Providers: A Qualitative Study, Dian A. Chase; Joan S. Ash; Deborah J. Cohen; Jennifer D. Hall; Gary M. Olson; David A. Dorr.

Other oral presentations included:

Data Analytics in Patient-Centered Care, Denise Goldsmith; Patricia Abbott; Suzanne Bakken; Holly B. Jimison; Sally Okun; Bonnie L. Westra; Sunmoo Yoon

Multiple Perspectives on Clinical Decision Support: A Qualitative Study of Fifteen Clinical and Vendor Organizations, Joan S. Ash; Dean F. Sittig; Carmit K. McMullen; Adam Wright; Arwen Bunce; Vishnu Mohan; Deborah J. Cohen; Blackford Middleton

Innovative Approaches to Medication Reconciliation within the Veterans Health Administration: Designing the ‘Magic Pill’, Blake J. Lesselroth; Kathleen G. Adams; Steven R. Simon; Kenneth Boockvar; Peter Kaboli

Informatics without Borders: International Outreach of US-based Training Programs, Lucila Ohno-Machado; William R. Hersh; Cynthia Gadd; Gerald P. Douglas

Layered Spaces for Clinical Information Retrieval, Stephen Wu; Dingcheng Li; James Masanz; Hongfang Liu

Automated Identification of Unsuspected Lung Nodule Findings in Radiology Reports with Natural Language Processing and Text Classification, Ryan Wise; Jonathan Duckart; Jianji Yang

Evolving Career Landscapes in Biomedical and Health Informatics, Rui Zhang; William R. Hersh; Genevieve B. Melton; Yang Huang; Laura K. Wiley; Julie Doberne; Nawanan Theera-Ampornpunt

How Safe are Users of Consumer Health Informatics?, Thomas Wetter; Mary Czerwinski; George Demiris; Robert Hsiung; Holly B. Jimison

A Mobile/Web App for Long Distance Caregivers of Older Adults: Functional Requirements and Design Implications from a User Centered Design Process, Steven S. Williamson; Paul N. Gorman; Holly B. Jimison

Year in Review 2, William R. Hersh; Joan S. Ash

Development and Evaluation of Reference Standards for Image-based Telemedicine Diagnosis and Clinical Research Studies in Ophthalmology, Michael C. Ryan; Susan Ostmo; Karyn
Informatics Students Win AMIA Student Design Challenge

Six students in the OHSU biomedical informatics graduate program won the second annual student design challenge at the American Medical Informatics Association (AMIA) annual symposium November 19, 2014. The team created a prototype of a mobile app that can capture children’s drawings and accompanying narratives to better facilitate child-provider communication and engage children in healthcare.

Deborah Woodcock, M.B.A., M.S. student; Steven Williamson, Ph.D. student; Dana Womack, M.S., Ph.D. student; Kimberley Gray, biomedical informatics graduate certificate ’14; Kate Fultz Hollis, M.S., M.B.I. student; and Michelle Hribar, Ph.D., post-doctoral fellow, comprised the team that responded to the 2014 challenge theme: “Beyond Patient Portals: Engaging Patients with their Healthcare Providers.”

The app they created, Drawn Together, is based on Draw and Tell Conversations, a technique where children draw and explain their problems/symptoms in their own words. For use in clinical settings or at home with parents, the application allows young children to articulate their own problems during health care encounters. Typically parents and providers talk directly to one another, while the child listens; this program provides a unique communication tool for the child, provider and parents.

Drawn Together supports touch screen drawing as well as image scanning of paper drawings. Drawings can be annotated with text, tags and diagnoses and can be shared through email, electronic health record upload, and syncing between two devices with Drawn Together. The app is based on research by School of Nursing associate professor Martha Driessnack, Ph.D., P.N.P.-B.C, who developed the Draw and Tell Conversation.

The AMIA Student Design Challenge selects eight teams to present posters at the annual symposium. Of these, four teams are chosen to give an oral presentation at the meeting, and the winners are announced on the last day of the symposium.

Six students in the OHSU biomedical informatics graduate program won the second annual student design challenge at the American Medical Informatics Association (AMIA) annual symposium November 19, 2014. The team created a prototype of a mobile app that can capture children’s drawings and accompanying narratives to better facilitate child-provider communication and engage children in healthcare.

Deborah Woodcock, M.B.A., M.S. student; Steven Williamson, Ph.D. student; Dana Womack, M.S., Ph.D. student; Kimberley Gray, biomedical informatics graduate certificate ’14; Kate Fultz Hollis, M.S., M.B.I. student; and Michelle Hribar, Ph.D., post-doctoral fellow, comprised the team that responded to the 2014 challenge theme: “Beyond Patient Portals: Engaging Patients with their Healthcare Providers.”

The app they created, Drawn Together, is based on Draw and Tell Conversations, a technique where children draw and explain their problems/symptoms in their own words. For use in clinical settings or at home with parents, the application allows young children to articulate their own problems during health care encounters. Typically parents and providers talk directly to one another, while the child listens; this program provides a unique communication tool for the child, provider and parents.

Drawn Together supports touch screen drawing as well as image scanning of paper drawings. Drawings can be annotated with text, tags and diagnoses and can be shared through email, electronic health record upload, and syncing between two devices with Drawn Together. The app is based on research by School of Nursing associate professor Martha Driessnack, Ph.D., P.N.P.-B.C, who developed the Draw and Tell Conversation.

The AMIA Student Design Challenge selects eight teams to present posters at the annual symposium. Of these, four teams are chosen to give an oral presentation at the meeting, and the winners are announced on the last day of the symposium.
Fifty-five Students Receive Biomedical Informatics Degrees in 2013-14

Fifty-five students in the biomedical informatics graduate program received degrees in the 2013-14 academic year, as the OHSU School of Medicine held its commencement ceremony on June 2, 2014, bringing the total number of DMICE alumni to 605 since informatics degrees were first awarded in 1998.

Three students received a doctor of philosophy degree (listed with their dissertation topic):

Dian A. Chase, Portland, OR
Dissertation: The Electronic Health Record: Effects on collaboration between providers

Ted Glenn Laderas, Portland, OR
Dissertation: Connecting genotypes to drug sensitivity in HER2 positive cancer cell lines

James L. McCormack, Buzzards Bay, MA
Dissertation: Handling external clinical information in independent primary care practices: a cognitive work analysis

Seven students received a master of science in biomedical informatics (listed with their thesis topic):

Sonia Elizabeth Benitez, Buenos Aires, Argentina
Thesis: Cross-cultural adaption and validation of a score for evaluating quality of inpatient clinical notes

Christopher Richard Betzing, Lake Oswego, OR
Thesis: Identification of critical pathways altered by radiation exposure and drug target analysis

Mark Allen Dane, Hood River, OR
Thesis: Automated analysis of cell spot microarray experiments

Tracy Edinger, Portland, OR
Thesis: Evaluation of clinical text segmentation to facilitate cohort retrieval

Samuel M. Higgins, Portland, OR
Thesis: Drug sensitivities in the context of genomic aberrations: applications to cancer

Carlos Martin Otero, Buenos Aires, Argentina
Thesis: Improving the granularity in the electronic health record problem list

Maryan Zirkle, Portland, OR
Thesis: Developing a manually annotated corpus of VA Electronic Medical Record notes of post-traumatic stress disorder natural language processing tasks

Twenty-one students received a master of biomedical informatics (listed with their capstone or internship project):

Paul Bruce Baker, Arlington, VA
Capstone: Quantitative benchmarking of electronic health record (EHR) software

Michael Richard Berman, Woodbridge, CT
Capstone: A personal prenatal health record for a culturally diverse, urban community

Meryl Bloomrosen, Silver Spring, MD
Capstone: Public policy considerations for mobile health using cell/smartphones in the United States

Matthew J. Cook, Simsbury, CT
Capstone: Internship: Planning and implementation of an Electronic Health Record upgrade in a family medicine practice

Katherine Cox, Hillsboro, OR
Capstone: Internship: The well visit planner: Integrating practice-based quality improvement into existing systems

Latha R. Kalaga, Aurora, CO
Capstone: Qualitative data analysis – Making choices about breast cancer screening
Faiza Jawad Khan, Portland, OR  
**Capstone:** Implementing business intelligence and analytics in healthcare: The path to better outcomes

Eli Matthew Lourie, Media, PA  
**Capstone:** The effect of a clinical decision support tool on the identification of pediatric hypertension

Rosemary Tracie Nettleton, Portland, OR  
**Capstone:** Informatics in super resolution optical imaging: characterization of mitochondria in cochlear hair cells

Jenny Ng, Singapore  
**Capstone:** The impact of a decision support system on pharmacy interventions in emergency departments

Purabi Panigrahy, Portland, OR  
**Capstone:** Designing the user interface of a sleep management system for an elderly population

Benjamin Paul Rosenbaum, Cleveland, OH  
**Capstone:** Modeling disparities in clinician-ordered test results

Usanisa Setboonsarng, Bangkok, Thailand  
**Capstone:** Exploring high-level themes in primary care team collaboration

Jamie M. Slonaker, Bainbridge Island, WA  
**Capstone:** Internship: Internship at University of Western States: Epic implementation

Henry Philip Stalker, Durango, CO  
**Capstone:** Critical success factors for physician adoption of electronic health records: Reconciling systematic and heuristic knowledge

Jerry Michael Stultz, Coon Rapids, MN  
**Capstone:** Reinventing pediatric medication preference lists

Giacomo V. Vinces, Middletown, NY  
**Capstone:** Revisiting CDS implementation failure: the physician’s perspective

Lisa Karstens Vingara, Portland, OR  
**Capstone:** Automated segmentation of 7 Tesla Magnetic Resonance Images (MRI)

Jeffrey Mark Weinfeld, Silver Spring, MD  
**Capstone:** Can targeting preventive care reminders to primary care providers seeing their own patients improve clinical decision support?

Martin Michael Yadrick, Jr., Los Angeles, CA  
**Capstone:** Feasibility and validity of the Academy of Nutrition and Dietetics Health Informatics Infrastructure

Ya-ju Yang, Seattle, WA  
**Capstone:** Internship: Standardize CORI with doses of ICD-10 and CDA

Twenty-four students received a graduate certificate in biomedical informatics, a 24-credit-hour program to provide knowledge and skills in the application of information technology in health care:

- Abdallah Abdallah, Beaverton, OR
- Susan Jane Bliss, Hillsboro, OR
- Matthew Hayden Brush, Portland, OR
- Dan Lee Collier, Vancouver, WA
- Ajay Dhawan, Fort Wayne, Indiana
- Sabrina Rose Gaspar, Lexington KY
- Lisa Anne Gleason, San Diego, CA
- Lawrance Ham, Los Angeles, CA
- Yazan Jabr, Syria
- Julie Hsiao-Wen Lin, Charlotte, VT
- Cara Blythe Litvin, Charleston, SC
- Cassius T. Lockett, Rocklin, CA
- Sara Marinucci-Seevers, Portland, OR
- Phuong T. Nguyen, Portland, OR
- Okunola O. Oluola, Kansas City, MO

Continued on Page 9
The election of David A. Dorr, M.D., M.S., to the American College of Medical Informatics in November 2014 is a timely tribute to Dorr’s ten years as a DMICE faculty member and his research and teaching career here.

An associate professor and vice chair for clinical informatics, Dorr focuses his research and teaching on quality informatics, systems of healthcare and how to improve efficiency and effectiveness, care management, and population-based health information technology tools.

After receiving his B.A. and M.D. from Washington University in St. Louis, MO, Dorr did a three-year residency in internal medicine at OHSU. He then went to the University of Utah as a National Library of Medicine (NLM)-funded fellow in medical informatics and there received an M.S. in medical informatics and health services administration.

While at Utah, Dorr also worked as an investigator with the Intermountain Healthcare Medical Group on a grant funded by The John A. Hartford Foundation looking at geriatric interdisciplinary teams in practice. This research continued after Dorr joined DMICE as an assistant professor in January 2005, and several years later, Dorr received additional funding from the Hartford Foundation for dissemination of the Care Management Plus (CM+) system.

An innovative, evidence-based model for older adults with chronic illnesses, CM+ is currently available at cost to medical practices and offers care management technology software including a care manager tracking database, a patient summary sheet, and messaging systems to help clinicians access care plans, receive reminders about best practices, and facilitate communication among health care teams. The grant has led to the creation of an Integrated Care Coordination Information System, which integrates the population management tools with electronic health record data and provides risk prediction, quality measurement, and monitors team-based improvement.

With care managers at the heart of the CM+ program, Dorr’s team provides in person and online training to these care managers, including special issues on geriatric syndromes and concepts.

“Care Management Plus is a flexible system focused on at-risk patients and their caregivers,” Dorr said. “It has enabled more than 400 clinics to provide better care, earn incentives, and help these patients stay in their homes and out of the hospital.”

An expert in data quality and measurement issues as well as standards and vocabularies and data integration, Dorr has also served as principal investigator (PI) or investigator on grants and contracts related to care coordination funded by the Agency for Healthcare Research and Quality and the National Institutes of Health (NIH) as well as private foundations. Currently he is PI of a four-year grant from The Gordon and Betty Moore Foundation that supports enhancement, implementation, and evaluation of an improved model for delivering improved primary care to high-risk older adults through the use of health information technology tools. In September, Dorr received an NIH grant to create an analytics and data skills course (see story on page 1).

“With the increasing amount of data in health care and research, we intend to use our BD2K Skills Course to train students at all levels to discover new knowledge through data and informatics,” Dorr said.

Another hat Dorr wears is as principal investigator of the NLM-funded summer internship program for college undergraduates, which funds eight students each year. He has had several interns work on his own research projects as well as short-term trainees from the NLM informatics training program.

In his role as vice chair, Dorr is part of the team overseeing the clinical informatics track in DMICE’s graduate program. He also teaches BMI 537, Health Care Quality, each spring and this past summer taught a hybrid course on data analytics.

Continuing to practice medicine, Dorr works a half day per week at the OHSU chronic illness management clinic, attending to patients with complex health care needs.

“When I left Utah to come back to my home state of Oregon, I was very pleased that we had one of the top informatics programs in the country,” Dorr stated. “It has provided me a place to continue to try to make real change for people in health care.”
Joanne Valerius Wins AHIMA Educator Award

Joanne Valerius, Ph.D., M.P.H., R.H.I.A., assistant professor, received the 2014 Educator Triumph Award from AHIMA, the American Health Information Management Association. The award is presented to those who demonstrate excellence in preparing the next generation of professionals for their career in health information management. Valerius was honored at the 2014 AHIMA Convention, held in San Diego September 27-October 2, 2014.

According to AHIMA, Valerius “…is a supportive coach and mentor who has been a dynamic, highly visible member of the HIM profession for over 41 years. She values the diverse viewpoints of students and continuously strives to improve her knowledge and skills to impart to others.”

Valerius joined the DMICE faculty in 2007 after directing the health information management (HIM) program at St. Catherine University in Saint Paul, MN. She directs the HIM track in the OHSU biomedical informatics program and teaches four BMI courses.

Valerius served as a co-investigator on the grant, funded by the Office of the National Coordinator for Health Information Technology, to develop curriculum used by many community colleges, and has published on topics of curriculum and importance of graduate education to advance the HIM profession.

A national and international speaker on educational topics about diversity, human resource management, and current HIM educator issues, she currently serves on the Graduate Resource Alliance of the Foundation of AHIMA. Her international work includes current committee membership of the World Health Organization Functioning and Disability Reference Group for the International Health Information Management Association.

Joanne Valerius, Ph.D., M.P.H., R.H.I.A., with Bob Mohle, certificate ’13, R.H.I.A., (left) and William Watkins, R.H.I.A., OrHIMA president (right).

DMICE Joins the Big Data Era

Continued from Page 1

R25 educational grants. Although national in scope, they will also have important local benefits for OHSU, Oregon, and the rest of the Pacific Northwest. One of the R25 grants will develop open educational resources (OERs) that can be adapted for a variety of educational programs, from the undergraduate to graduate and professional levels. The materials will use the same format as the Office of the National Coordinator for Health IT (ONC) curricular materials developed from 2010-13.

The other R25 grant will develop a big data skills course that will make available curricula and data sets to provide training in methods for basic, clinical and translational researchers as well as clinicians, librarians, and others. All researchers, especially graduate students, will be eligible to take the skills course and hone their skills in data.

DMICE plans to incorporate the materials from both grants in its own courses in its biomedical informatics graduate program, while the OHSU Library will utilize the materials via its educational outreach efforts. The OERs will also join the existing ONC curriculum materials on the American Medical Informatics Association (AMIA) Web site.

The OER project will be led by three principal investigators (PIs) who are DMICE faculty: William Hersh, M.D., professor and chair; Shannon McWeeney, Ph.D., professor and vice chair; and Melissa Haendel, Ph.D., assistant professor. The skills development course will be led by David Dorr, M.D., M.S., associate professor and vice chair, and Drs. McWeeney and Haendel, with Dr. Hersh as a co-investigator. These four OHSU faculty will also become part of the BD2K national community that NIH is establishing to widely

Continued on Page 20
MICE faculty, students and staff made a strong showing at the annual OHSU Research Week events, held May 5–8, 2014. Eighteen faculty, twelve fellows/students, three staff members, and two alumni contributed to presentations, posters and panels during the week.

**Oral presentations included:**
- A Review of Methods for Measuring Distributed Situational Awareness in Medication Reconciliation Tasks. Nathan Bahr
- An approach to building a mixed architecture surgical residents log. Jeffery Emch
- An informatics approach to building a surgical residents log. Michael Grove
- Solving the maximum influence problem using information flow models and ant optimization for biological pathway analysis. David Gibbs, Ilya Shmulevich
- Information Technology Tools For Long Distance Caregivers: A Needs Assessment. Steven Williamson, Paul Gorman, Holly Jimison
- Emergency Department Visits for Non-Traumatic Dental Problems in Oregon State. Benjamin Sun, Eli Schwarz, Robert Lowe, Susan Malveau, Benjamin Chan, Annick Yagapen
- Implementation of electronic health record systems in pediatric ophthalmology: impact on productivity and efficiency at an academic medical center. Travis Redd, Sarah Read-Brown, Dongseok Choi, Thomas Yackel, Daniel Tu, Michael Chiang
- Functional Connectivity in Women with Urinary Urgency Incontinence. Lisa Vingara, Chris Krisky, Sam Carpenter, Corrine Stevens, Kamari Aykes, Damien Fair, Rahel Nardos

**Posters presented at the event included:**
- Evidence Review of Strategies to Improve Rates of Screening Mammography and Its Translation into a Practical Guide for Communities. Lisa Domenico, Paul Gorman, Frances Lin, Venus Fromwiller, Nancy Magathan, Sharon Vail
- Lessons About Risk Presentation from Developing a Mammography Decision Aid. Krystal Klein, Michelle Hribar, Lindsey Watson, Karen Eden
- Requirements Gathering for Building a Post-Traumatic Stress Disorder (PTSD) Ontology. Bryan Travis Gamble

Woodcock, William Hersh, Judith Logan, Vishnu Mohan, Robert Schuff, Shannon McWeeney
- Creating Realism for ‘in-situ’ Simulation Research & Training (in the field). Caitlin Dickinson, Jesika Gavilanes, Jeanne-Marie Guise, James McNulty
- LAVA Flow: Distribution and variation of LAVA elements within and between species of gibbons. Thomas Joshua Meyer, Eisa Mahyari, Christopher Whelan, Larry Wilhelm, Elizabeth Terhune, Kimberly Nevonen, Lucia Carbone
- The Monarch Initiative: leveraging the cross-species phenome for clinical diagnosis of rare disease. Matt Brush, Nicole Vasilevsky, Bryan Laraway, Melissa Haendel
- Author Contacts to Obtain Additional Data for a Systematic Review of Diagnostic Tests for Hepatic Fibrosis or Cirrhosis in Patients with Hepatitis C Virus Infection. Alexander Ginsburg, Shelley Selph, Roger Chou
- Computing a Meaningful Use II Quality Measure Using MIMIC: A case study. Olubumi Akiwumi
- Do It Yourself Workflow Assessment Primary Care: What do Primary Care Practices Require to Assess Workflows and Improve Practice? Paul Gorman, Lyle J. Fagnan, LeAnn Michaels, Sonya Howk
- On the Reproducibility of Science: At the Root of the Problem. Nicole Vasilevsky, Matthew Brush, Melissa Haendel
- Characterizing the Effects of CSF1R Inhibition in Acute Myeloid Leukemia with RUNX1 Abnormalities. David Edwards V, Matthew Siegel, Jill Peters, Anupriya Agarwal, Alyssa Carey, Melissa L Abel, Shannon K McWeeney, Jeffrey W Tyner
- Texting for Sexual Health to American Indian/Alaska Native Teens & Young Adults. Patricia Yao, Stephanie Craig Rushing, David Stephens, Karen Eden

In addition, faculty members Cynthia Morris, Ph.D., M.P.H., and Karen Eden, Ph.D., participated in a workshop on how to establish and manage a mentoring relationship.

Degrees 2013-14
Continued from Page 5
Maria Suzanne Parmer, Eagle Point, OR
Carlos J. Perez, San Francisco, CA
Wouter Jan Rietsema, Plattsburgh, NY
Edith Rutledge, Bellvue, WA
Cody Ray Schindeldecker, Troutdale, OR
Jonathan M. Sternlieb, Horsham, PA
Sara Lee Thomas, Corvallis, OR
Ericka Weeks, Sunland, CA
Everett L. Weiss, Chicago, IL

Degrees 2013-14
Continued from Page 5

Distance students Paul Baker, M.D., M.B.I. ’14, (left) and Michael Berman, M.D., M.B.I. ’14, (right) celebrate their new degrees with William Hersh, M.D.

Physicians from Buenos Aires, Argentina, Sonia Benetiz, M.D. M.S. ’14, (left) and Carlos Otero, M.D., M.S. ’14, (right), whose training was funded by an NIH Fogarty Center grant, pose with William Hersh, M.D., the principal investigator of the grant.
OHSU to Offer Clinical Informatics Fellowship for Physicians

Oregon Health & Science University has been approved by the Accreditation Council for Graduate Medical Education (ACGME) to offer a Clinical Informatics Fellowship for physicians. OHSU was the third institution in the country to receive accreditation for this program.

The fellowship is affiliated with the OHSU Department of Medicine, with additional administrative support provided by the Department of Medical Informatics & Clinical Epidemiology. This fellowship is an addition to the suite of informatics educational offerings by DMICE and does not replace any existing programs. DMICE will continue to have its graduate program (graduate certificate, two master’s degrees, and PhD degree) as well as its other research fellowships, including the flagship training program funded by the National Library of Medicine.

Professor and chair William Hersh, M.D., is program director, with Vishnu Mohan, M.D., M.B.I., assistant professor, and chief health information officer and associate professor Thomas Yackel, M.D., M.P.H., M.S., serving as associate program directors.

As defined by ACGME, clinical informatics is “the subspecialty of all medical specialties that transforms health care by analyzing, designing, implementing, and evaluating information and communication systems to improve patient care, enhance access to care, advance individual and population health outcomes, and strengthen the clinician-patient relationship.” The new specialty was launched in 2013, with physicians already working in the field able to sit for the certification exam by meeting prior practice requirements. Starting in 2018, this “grandfathering” pathway will go away, and only those completing an ACGME-accredited fellowship will be board-eligible. Last year, seven OHSU faculty physicians became board-certified in the new clinical informatics subspecialty, including the three program directors named above.

“We are excited to be part of this new subspecialty and new pathway for training future leaders in clinical informatics,” said Dr. Hersh.

With recruitment underway, two physicians will be appointed as clinical informatics fellows in 2015-16. The fellowship will provide physicians with training in clinical informatics that will enable them to achieve board certification in the new subspecialty of clinical informatics, and will follow the format of the guidelines published by the ACGME.

Fellows will work through various rotations in different clinical informatics operational settings, not only at OHSU Hospital but also at the Portland VA Medical Center.

Fellows will also take classes in the OHSU Graduate Certificate Program that will provide them the knowledge base of the field and prepare them for the board certification exam at the end of their fellowship. Fellows will also continue their clinical practice in their primary specialty.

Several other programs are also in the process of seeking accreditation, and a number of them will be using OHSU distance learning course materials for the didactic portion of their programs. This summer, the first two fellows in the Stanford Packard Children’s Hospital fellowship program took the introductory biomedical informatics course from OHSU.

Awards and achievements

Congratulations to Roger Chou, M.D., Marian McDonagh, Pharm.D., Shannon McWeeny, Ph.D., and Paul Gorman, M.D., who were all promoted to the rank of professor, as of July 1, 2014.

Shelley Selph, M.D., M.P.H., has joined the faculty as an assistant professor. Selph had been a post-doctoral fellow with the Pacific Northwest Evidence-based Practice Center for the past three years.

Stephen Wu, Ph.D., has been appointed adjunct assistant professor. He is also a natural language processing scientist at Trapit, Inc.

Joan Ash, Ph.D., professor and vice chair, was named one of the World’s Most Influential Scientific Minds 2014. The list, published by Thomson Reuters, is a selection of authors publishing high-impact papers on groundbreaking and influential research. Ash was one of five recipients from OHSU.

Mark Helfand, M.D., M.P.H., M.S., professor, has been named director of the west coast branch of the US Cochrane Center, one of 14 centers around the world that facilitate the work of the Cochrane Collaboration, which produces and disseminates systematic reviews of healthcare interventions. Known as US Cochrane West, the branch is housed at OHSU. Professor Jeanne-Marie Guise, M.D., M.P.H., is serving as an associate director of US Cochrane West.

Congratulations to Mark Helfand, M.D., M.P.H., M.S., professor, who is president-elect of the Society for Medical Decision Making.

Associate professor and vice chair David Dorr, M.D., M.S., was elected...
a Fellow of the American College of Medical Informatics.

Michael Chiang, M.D., professor, received a 2014 Secretariat Award from the American Academy of Ophthalmology. Chiang also received the Faculty Award at the 9th Annual OHSU Student Volunteer Recognition and Awards Ceremony, presented by the OHSU All-Hill Student Council. He has been appointed to the editorial boards of *Ophthalmology* and *EyeNet*.

**Grants**

The Pacific Northwest Evidence-based Practice Center has received several recent task orders from the Agency for Healthcare Research and Quality (AHRQ) to produce systematic reviews. Professor and EPC director Roger Chou, M.D., is principal investigator (PI) of Non Invasive Treatments for Low Back Pain. Marian McDonagh, Pharm.D., professor and EPC associate director, is PI of two orders: Non Invasive Testing for Coronary Artery Disease (CAD) and Use of Point of Care Tests to Improve Appropriate Antibiotic Use for Acute Respiratory Tract Infections. Annette Totten, Ph.D., assistant professor, is PI of Home-based Primary Care Interventions.

David Dorr, M.D., M.S., associate professor and vice chair, received a grant from AHRQ on refinement in study design and analysis for health reform to address multiple chronic conditions. Dorr has also received an award from the Commonwealth Fund for his project on Improving Implementation of Risk Prediction in Primary Care. In addition, Dorr is serving as a co-investigator and OHSU PI of an R01 grant from AHRQ, made to Brigham & Women’s Hospital in Boston, entitled Improving Quality by Maintaining Accurate Problem Lists in the EHR (IQ-MAPLE).

Associate professor Karen Eden, Ph.D., is a co-investigator and OHSU PI of an R01 grant from the National Institutes of Mental Health to Johns Hopkins University, Effectiveness of a Safety Intervention for Dating Violence.

Professor Jeanne-Marie Guise, M.D., M.P.H., received funding from AHRQ for the Oregon Patient Centered Outcomes Research K12 Program.

With funding from the National Institute of Standards and Technology, professor and chair William Hersh, M.D., is performing relevance assessment work for the Text Retrieval Conference (TREC) 2014 Clinical Decision Support Track.

**Presentations and posters**

Michael Chiang, M.D., professor, gave nine recent presentations:

- Invited speaker (2 sessions), World Ophthalmology Congress, Tokyo, Japan, April 2014.
- Speaker, American Ophthalmological Society annual meeting, New York, NY, May 2014.
- Invited keynote speaker (3 sessions), Mexican Congress of Ophthalmology, Cancun, Mexico, June 2014.
- Invited speaker, Pacific Coast Oto-Ophthalmological Society annual meeting, San Diego, CA, June 2014.
- Invited speaker, American Eye Study Club annual meeting, Vail, CO, July 2014.
- International keynote speaker, Brazilian Congress of Ophthalmology annual meeting, Recife, Brazil, September 2014.

Invited speaker, PEDIG Advisor’s Meeting, Tampa, FL, October 2014.

Invited speaker on quality improvement in electronic health records, American Academy of Ophthalmology annual meeting, Chicago, IL, October 2014.

Assistant professor Blake Lesselroth, M.D., M.B.I., and the Portland Patient Safety Center of Inquiry (PSCI) were involved in recent presentations:

- How Do You Successfully Implement and Sustain MR Processes?, Medication Use Crisis Meeting, hosted by the VA Medication Reconciliation Initiative in conjunction with VHA Program Offices, Department of Defense, and Indian Health Service, July, 2014.

Portland Informatics Center & Patient Safety Center of Inquiry: Kiosk Medication and Allergy Review Module, poster presentation Portland

Continued on Page 12
Faculty/Staff Update
Continued from Page 11
VA Medical Center Research Poster Fair, Portland, Oregon, May 2014.

Publications


Arao RF, Rosenberg KD, McWeeny S, Hedberg K. Influenza vaccination of pregnant women: attitudes and behaviors of Oregon physician prenatal care providers. Matern Child Health J. 2014 Jul 18. [Epub ahead of print]


Evidence-based Practice Center Receives Fifth Master Contract from the Agency for Healthcare Research and Quality

The Pacific Northwest Evidence-based Practice Center (EPC) has received a contract to be an EPC for another five years, from December 2014 to November 2019.

Under the EPC-V contract with the Agency for Healthcare Research and Quality (AHRQ), Roger Chou, M.D., professor, continues as EPC director with professor Marian McDonagh, Pharm.D. as associate director and Elaine Graham, M.L.S. as program manager.

Based at Oregon Health & Science University, the EPC partners with the University of Washington CHASE Alliance and Spectrum Research, Inc. OHSU has been designated as an EPC since 1997.

“We are excited to continue our work as the Pacific Northwest Evidence-based Practice Center,” Chou said. “This award is a testament to the success of our ongoing partnership with the University of Washington’s CHASE Alliance and Spectrum Research. During the last EPC cycle we were extremely successful in securing awards. OHSU is one of the few centers to have been awarded the EPC designation through all five cycles of the program.”

Under the EPC-IV contract, OHSU has had 15 task orders to produce systematic reviews on topics ranging from bladder cancer to home-based primary care to lower back pain to noninvasive testing for coronary artery disease.

Two recent EPC systematic reviews were presented at National Institutes of Health Pathways to Prevention Workshops. Along with Dr. Chou, Judy Turner, Ph.D., professor of psychiatry and behavioral sciences at the University of Washington, presented The Role of Opioids in the Treatment of Chronic Pain on September 29-30, 2014, in Bethesda, MD.

M. Beth Smith, D.O., associate professor of medicine, and research professor Heidi Nelson, M.D., M.P.H., presented Advancing the Research on Myalgic Encephalomyelitis/ Chronic Fatigue Syndrome on December 9-10, 2014, in Bethesda, MD.
Faculty/Staff Update

Continued from Page 13


Deyo RA, Jarvik JG, Chou R. Low back pain in primary care. BMJ. 2014 Jul 16;349:g4266.


did we do, where are we now, where do we go from here? *Ophthalmology.* 2014; 121(9): 1667-9.


Sommer A, Taylor HR, Ravilla TD, West S, Lietman T, Keenan J, Thu-Continued on Page 16
Facility/Staff Update

Continued from Page 15


As Manager of Business Intelligence Architecture for Providence Health Plans in Portland OR, Christine Klein, certificate ’09, leads a team of developers/analysts engaged in a partnership between business and IT stakeholders, with the collective goal of improving access to actionable information. Klein oversees the implementation of an enterprise data warehouse, which will consolidate data from disparate sources, including but not limited to claims and EHR data. Klein is also engaged in establishing data governance as additional sources are integrated, as well as ensuring that the Providence IT roadmap continues to align with their business strategy specific to business intelligence.

Chris Tessier, M.D., certificate ’10, is now working as an editor for the Point of Care division of Elsevier. Tessier also served as the panel lead for a white paper on data elements for ambulatory quality measurement through the Physician Consortium for Performance Improvement and as a member of a technical expert panel for a project developing an outcome measure on surgical complications for the Yale School of Medicine Center for Outcomes Research & Evaluation.

Charmydevine Beane, certificate ’13, is now a part-time faculty member at San Jose State University in San Jose, CA, lecturing in the College of Applied Sciences and Arts, Department of Health Science.

Justin Fossum, R.H.I.A., certificate ’10, became an Epic Credentialed Trainer in the Willow Inpatient application for Providence Health & Services in August 2014. Fossum continues to be an Epic Credentialed Trainer for the Ambulatory application as well as a Dragon Voice Recognition trainer for Providence health professionals.

Song Ge, summer intern ’13, has been hired by Epic to do quality assurance for their Willow-Inpatient pharmacy application.

Presentations and posters


Publications


Paul DeMuro, J.D., M.B.A., M.B.I. ’12, post-doctoral fellow, had several recent publications:


DeMuro P. Personalized medicine – can its full benefits be realized if we continue to have access problems? The Lund Report. June 23, 2014.

DeMuro P. The questions is – are we risking our life when we go into the hospital? The Lund Report. August 26, 2014.


Damian Borbolla, M.D., M.S. Continued on Page 18
**Student/Alumni News**

Continued from Page 17


**Other News**

Steve Kassakian, M.D., post-doctoral fellow, was acknowledged as the person who traveled the farthest to participate in the 72nd Annual

Continued on Page 20
Yes! I support the OHSU Department of Medical Informatics and Clinical Epidemiology as a leader in healing, teaching and discovery.

I would like to donate:  ■ $25   ■ $50   ■ $100   ■ $250   ■ $500   ■ Other

I wish to pay by credit card:  ■ Visa   ■ MasterCard   ■ Discover   ■ American Express

Card Number: ___________________________ Expiration Date: ___________________________

I wish to pay by check. Please make checks payable to Oregon Health & Science University Foundation

Please use my donation:

■ In the area of greatest need   ■ for DMICE Student Support   ■ Other ___________________________

Name _______________________________________________________________
Address _______________________________________________________________

City ___________________________ State _________________ Zip _________________
Home Phone ______________________ Business Phone ______________________ E-mail ______________________

My gift is  ■ in memory of  ■ a tribute to

Name _______________________________________________________________

Please send a gift card to (amount of gift will not be included):

Name _______________________________________________________________
Address _______________________________________________________________

City ___________________________ State _________________ Zip _________________

What is the letter recipient's relationship to the person honored or remembered?

Double your gift. Ask your employer about a matching gift program.

Send your completed form and donation to:
Oregon Health & Science University Foundation
1121 SW Salmon St., Suite 201
Portland, OR 97205

Or make your donation to OHSU online. Visit our Web site at www.ohsu.edu/dmice/giving.

For information about the Department of Medical Informatics and Clinical Epidemiology, visit the Web site at www.ohsu.edu/dmice/ or call 503 494-4502.
disseminate knowledge, tools, and educational materials around big data.

The additional R01 grant was funded by the National Library of Medicine, the NIH institute devoted to basic research in biomedical informatics. Dr. Hersh will be collaborating with new DMICE faculty and principal investigator Stephen Wu, Ph.D., adjunct assistant professor, as well as colleagues from Mayo Clinic, led by contact PI, Hongfang Liu, Ph.D. Both institutions will investigate techniques to use data from 100,000 patients each in their EHR systems for the task of cohort discovery, i.e., identifying patients who might be candidates for research studies.

In Memoriam

Leeann Stahn, M.B.I. ’13, R.H.I.A., from Sisters, Oregon passed away on October 21, 2014. She is survived by her husband, Chuck and four sons. Leeann was a Health Information Management (HIM) graduate from Central Oregon Community College (COCC) where she earned her RHIT credential. She became an HIM instructor at COCC and an active volunteer in the Oregon Health Information Management Association. Leeann was in the OHSU biomedical informatics program from 2011-13.