# Cinical Informatics & Patient-Centered Technologies

## UNIVERSITY of WASHINGTON

Bi-Annual Newsletter Spring 2014



## CIPCT Welcome Message - Dr. George Demiris

This is our second newsletter and it is hard to believe that half of this academic year has already passed. Clinical Informatics continues to be at the forefront of national and international trends in health care. Federal agencies and the private industry have recognized the potential for "big data" to help us re-design and improve health care services and outcomes. The vast amounts of data sets collected by health care

systems, facilities and sites can be used to accurately predict health care needs, re-admissions and the cost of managing symptoms of disease across regions and states. Predictive intelligence has a great role to play in improving the finances of our health care system. As consumers themselves generate their own personal health data through wearable monitoring



devices tracking activity, sleep, heart rate, caloric consumption and so much more, we have new opportunities and challenges in integrating clinical and personal health data sets and making efficient use of data to improve personal and public health. These trends and developments are reflected in new research funding announcements by the federal government and large initiatives by the private sector. We also integrate these concepts in our curriculum to ensure that the future generation of clinical informaticists are poised to tackle these challenges. In this issue, we hear from alumni of our program, Marjorie Kelley and Angie Mendoza, and Dr. David Masuda, a faculty member who has been teaching in the CIPCT program since its inception. We are looking forward to a productive Spring and Summer Quarter!

Conference

April 9-12, Seattle, WA www.winursing.org

2014 American Telemedicine Association Conference May 17-20, Baltimore, MD www.americantelemed.org

## **Alumni Spotlight**

A brief look at some of our recent graduates!





#### Angie Mendoza, MS, BSN, RN-BC, CPHIMS — San Diego, CA

I started my nursing career in Women's Health working as a postpartum/ newborn nurse. After 15 years, I was working as a Clinical Informatics Specialist at Sharp HealthCare in San Diego. I was nervous to go back to school in 2011. After all, it had been a long time since I last was in school! However, the CIPCT program was wonderful supporting my needs as a working adult. There was flexibility when I needed it for work or personal issues, the staff and faculty were supportive and helped me overcome struggles as they arose, and the program succeeded in teaching me how much there is to learn in Informatics, healthcare organizations, Healthcare IT, data management, and more. In my current role as a Sr. Systems Analyst, CIPCT's variety of clinical and technical areas of study both strengthened my nursing background as well as taught me many skills related to computer science and healthcare systems. This combination gave me the expertise necessary to positively affect quality patient care, support process improvement, enable our clinicians in their use of technology, and enhance the EMR in our organization.

My best advice to those preparing to enter the CIPCT program is to get to know your instructors. They are excellent resources and are there to help you succeed! In addition, participate in all the learning opportunities offered, get involved with research opportunities that you know nothing about so you can expand your learning, get to know your group work team members so you can learn from each other (I treasure the relationships I developed), embrace the spirit of UW and its commitments, and most of all HAVE FUN! The work you do in CIPCT will make you better and more valuable!

Informatics has exploded over the last five years, so I am anxious to see what it will do in the next five years! I envision there will be more dollars put toward informatics as the realized benefit of our expertise expands beyond clinical support in a hospital. The need for informaticists is growing by leaps and bounds in areas such as self-care, home health, hospice care, primary care, software development, and so many others. The Informatics train is steaming full speed ahead. Get on board and enjoy the ride!

#### Marjorie Kelley, RN, MS — Columbus, OH

Like many CIPCT students, I had a different experience than most on-campus graduate students, as I was a distance learner; I "commuted" from Columbus, OH. I flew in for orientation days at the beginning of each year, but for the rest of the year I attended classes virtually. I didn't feel I missed much and the other students were more than willing to work with me via Skype, Google plus, or DropBox. Even the instructors were helpful and flexible in that regard. I loved the course content, and as a nurse I felt even more excited when we stepped out of our domain and into the computer science and database worlds.

Because of the vast array of experiences, and the training in collaboration, over distance, I was more than prepared to take a position in research in informatics. I am also currently taking classes for my PhD and was happy to discover how well prepared I was for research. The building blocks I gained from UW were important from a technical, QI and research standpoint. The field is changing so rapidly, and whether you work in translational informatics, clinical informatics, re-



search informatics or somewhere in between, the skills acquired through your work at UW are transferable and transformative. The skills overlap in every area of healthcare and are always needed. Currently I work on projects as varied as cytogenetics parsers, app development for EMRs, and even help with rare disease registry construction. The UW program prepared me to be a part of all these varied processes because informatics is the glue that holds it all together.

I would encourage all students to work hard, read as much as you possibly can, think deeply on some of the real world issues given to you as assignments, read outside of your classwork about areas that interest you, and find a good mentor to discuss current issues in informatics... someone that shares your passion. Challenge yourself and your fellow students and you will find the process much more rewarding in the long run.

Good luck with your studies... and hurry up, we need more glue!

#### **Faculty Spotlight**

A bit about our faculty

## CIPCT Clinical Informatics & Patient-Centered Technologies

#### David L. Masuda, MD

I've been a teacher at UW for just about 15 years now... but I came to this role in a roundabout way. I started my professional career as a physician, practicing rural medicine in Idaho. After a decade of practice I returned to school to complete a Master's in Administrative Medicine because I had become fascinated by the potential of leadership as a physician executive. After completing the Master's I spend five years as president of a small, start-up integrated delivery system in Idaho. It was here that I first began to see the future of IT in health care, and so I came to UW to complete a post-doc fellowship in informatics. As the fellowship drew to a close, I was asked to stay on an teach — a career path I never planned for — but I fell entirely in love with it. And I've been at it ever since. I now teach in five graduate programs in the schools of medicine, nursing and public health at UW.



#### Q: What courses do you typically teach in the CIPCT program?

A: Currently I lead the course "Introduction to Informatics," a survey course in the first quarter of the CIPCT program. In the past I've also led the course on IT Project Management.

#### Q: Would you tell us a little about your research interests?

A: In my faculty role as a lecturer, I don't typically do primary research in biomedical informatics. However this doesn't mean I am disinterested in research per se. I do my best to follow the current research that helps us better design and deliver the best courses we can. This means keeping up with what is known about adult learning theory, active learning and online learning, to name a few.

## Q: How do you see information technology impacting the health care 'world' in the near future?

A: As you ask that, I'll admit the first thing that comes to mind is from Dickens! "It was the best of times, it was the worst of times." I have no doubt that IT will continue to have a major impact in health and health care in the coming decade. Everyone will feel this. The issue for me is the need for those of us who work in this domain to realize that not all the impacts will be positive, at least in the near term. Arthur C. Clarke once noted, "Any sufficiently advanced technology is indistinguishable from magic." I feel that we have too often seen health IT in this way. It's not magic; it is just a tool. So we have to be wise about how and when to use the tool judiciously. And as informaticians we have to help our clinical and administrative colleagues to see the strengths — and limitations of HIT. In short, we need to be "technorealists."

## Q: What can our students do to best position themselves for a career in informatics?

A: This is a great question. On the one hand, I firmly believe health informatics will be a major growth industry for at least the coming decade. On the other hand, the employers who are — and will be — in need of a skilled workforce in informatics don't entirely know what it is they need. I often tell our students, "If you graduate with an MBA, employers will know what you can do. With an MS in CIPCT, employers may be a bit more perplexed. It's a new domain for them." So my advice is to be proactive with your training. The degree will be necessary, but not entirely sufficient. You'll need to be able to demonstrate the knowledge and skills you have mastered.

## Q: What advice would you give to a student enrolling in CIPCT this autumn?

A: I'd say two things are central to succeeding in CIPCT. First, distance learning is simply not the same as the traditional classroom. It can be as good, and in fact better than the traditional models - the research supports this. However to be better requires the learner to approach the program differently. In my experience the best students are the ones who are willing to take ownership of their learning. They are selfdirected and they are great time managers. They balance school, work and life. Second, the best students demand a lot from us, the instructors! They do the assigned work, but they don't stop there. They develop professional networks. They actively think about what specific areas of informatics careers most interest them. And they constantly ask our advice on how to get there.

#### Recent Publications - 2013 & 2014

Key: Faculty names in bold; CIPCT student names in bold italics



- Albright DL, Kruse RL, Oliver DP, Washington K, Cagle J, **Demiris G**. Testing the Factorial Validity of Scores From the Caregiver Pain Medicine Questionnaire. *J Pain Symptom Manage*. 2013 Nov 15.
- Baldwin PK, Wittenberg-Lyles E, Kruse RL, **Demiris G**, Parker Oliver D. Pain management and the African American hospice caregiver: a case report. *Am J Hosp Palliat Care*. 2013 Dec;30(8):795-8.
- Berry DL, Halpenny B, Hong F, **Wolpin S**, **Lober WB**, Russell KJ, Ellis WJ, Govindarajulu U, Bosco J, Davison BJ, Bennett G, Terris MK, Barsevick A, Lin DW, Yang CC, Swanson G. The Personal Patient Profile-Prostate decision support for men with localized prostate cancer: a multi-center randomized trial. *Urol Oncol*. 2013 Oct;31(7):1012-21.
- Berry DL, Hong F, Halpenny B, Partridge AH, Fann JR, **Wolpin S**, **Lober WB**, Bush NE, Parvathaneni U, Back AL, Amtmann D, Ford R. Electronic self-report assessment for cancer and self-care support: results of a multicenter randomized trial. *J Clin Oncol*. 2014 Jan 20;32(3):199-205.
- Blondon K, Klasnja P, Coleman K, **Pratt W**. An exploration of attitudes toward the use of patient incentives to support diabetes self-management. *Psychol Health*. 2014 May;29(5):552-63.
- Chaudhuri S, Le T, *White C*, Thompson H, Demiris G. Examining health information-seeking behaviors of older adults. *Comput Inform Nurs*. 2013 Nov;31(11):547-53.
- Chaudhuri S, **Thompson H**, **Demiris G**. Fall Detection Devices and Their Use With Older Adults: A Systematic Review. *J Geriatr Phys Ther*. 2014 Jan 8.
- Choe EK, Lee B, Munson S, **Pratt W**, Kientz JA. Persuasive performance feedback: the effect of framing on self-efficacy. *AMIA Annu Symp Proc.* 2013;2013;825-33.
- *Chung J,* **Demiris G**, **Thompson HJ**. Instruments to Assess Mobility Limitation in Community-Dwelling Older Adults: A Systematic Review. *J Aging Phys Act.* 2014 Feb 28.
- Cook DL, Neal ML, Bookstein FL, **Gennari JH**. Ontology of physics for biology: representing physical dependencies as a basis for biological processes. *J Biomed Semantics*. 2013 Dec 2;4(1):41.
- Cuff P, Schmitt M, **Zierler B**, Cox M, De Maeseneer J, Maine LL, Reeves S, Spencer HC, Thibault GE. Interprofessional education for collaborative practice: views from a global forum workshop. *J Interprof Care*. 2014 Jan;28(1):2-4.
- Davidson E, Simpson CR, **Demiris G**, Sheikh A, McKinstry B. Integrating telehealth care-generated data with the family practice electronic medical record: qualitative exploration of the views of primary care staff. *Interact J Med Res.* 2013 Nov 26;2(2):e29.
- **Demiris G**, Parker Oliver D, Capurro D, Wittenberg-Lyles E. Implementation Science: Implications for Intervention Research in Hospice and Palliative Care. *Gerontologist.* 2013 Apr 4.
- **Demiris G**, **Thompson HJ**, Reeder B, Wilamowska K, Zaslavsky O. Using informatics to capture older adults' wellness. *Int J Med Inform*. 2013 Nov;82(11):e232-41.
- Gell NM, Rosenberg DE, **Demiris G**, Lacroix AZ, Patel KV. Patterns of Technology Use Among Older Adults With and Without Disabilities. *Gerontologist*. 2013 Dec 30.
- Huh J, Le T, Reeder B, **Thompson HJ**, **Demiris G**. Perspectives on wellness self-monitoring tools for older adults. *Int J Med Inform*. 6457 Nov;26(5):5436-103.
- Huh J, McDonald DW, Hartzler A, **Pratt W**. Patient moderator interaction in online health communities. *AMIA Annu Symp Proc.* 2013;2013;627-36.
- Huh J, **Yetisgen-Yildiz M**, **Pratt W**. Text classification for assisting moderators in online health communities. *J Biomed Inform*. 6457 Dec;80(0):332-1005.
- Joe J, **Demiris G**. Older adults and mobile phones for health: a review. *J Biomed Inform*. 2013 Oct;46(5):947-54.

### Recent Publications - 2013 & 2014, Continued

Key: Faculty names in bold; CIPCT student names in bold italics



- Le T, Chaudhuri S, *Chung J*, Thompson HJ, Demiris G. Tree Testing of Hierarchical Menu Structures for Health Applications. *J Biomed Inform*. 2014 Feb 26.
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- Oliver DP, Wittenberg-Lyles E, Washington K, Kruse RL, Albright DL, Baldwin PK, Boxer A, **Demiris G**. Hospice caregivers' experiences with pain management: "I'm not a doctor and I don't know if I helped her go faster or slower." *J Pain Symptom Manage*. 6457 Dec;80(0):280-58.
- Parker Oliver D, Albright DL, Washington K, Wittenberg-Lyles E, Gage A, Mooney M, **Demiris G**. Hospice caregiver depression: the evidence surrounding the greatest pain of all. *J Soc Work End Life Palliat Care*. 2013;9(4):256-71.
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- Washington KT, **Demiris G**, Pike KC, Kruse RL, Oliver DP. Anxiety among informal hospice caregivers: An exploratory study. *Palliat Support Care*. 2014 Feb 13:1-7.
- Wittenberg-Lyles E, Goldsmith J, Oliver DP, **Demiris G**, Kruse RL, Van Stee S. Exploring oral literacy in communication with hospice caregivers. *J Pain Symptom Manage*. 2013 Nov;46(5):731-6.
- Wittenberg-Lyles E, Goldsmith J, Oliver DP, **Demiris G**, Kruse RL, Van Stee S. Using medical words with family caregivers. *J Palliat Med*. 2013 Sep;16(9):1135-9.
- Wittenberg-Lyles E, Kruse RL, Oliver DP, **Demiris G**, Petroski G. Exploring the collective hospice caregiving experience. *J Palliat Med.* 64-58 Jan;51(5):94-5.
- Wittenberg-Lyles E, Washington K, **Demiris G**, Oliver DP, Shaunfield S. Understanding Social Support Burden Among Family Caregivers. *Health Commun*. 2013 Dec 17.
- **Wolpin SE**, Halpenny B, Whitman G, McReynolds J, Stewart M, **Lober WB**, Berry DL. Development and usability testing of a web-based cancer symptom and quality-of-life support intervention. *Health Informatics J*. 2014 Jan 9.
- Zaslavsky O, Cochrane BB, Herting JR, **Thompson HJ**, Woods NF, Lacroix A. Application of person-centered analytic methodology in longitudinal research: exemplars from the Women's Health Initiative Clinical Trial data. Res *Nurs Health*. 64:58 Feb;71(5):97-64.
- Zaslavsky O, Cochrane BB, **Thompson HJ**, Woods NF, Herting JR, LaCroix A. Frailty: a review of the first decade of research. *Biol Res Nurs*. 2013 Oct;15(4):422-32.



#### Connect with UW CIPCT on LinkedIn!

http://www.linkedin.com/groups/UW-Clinical-Informatics-Patient-Centered-3467628



## Healthcare IT Trends

A number of publications exist with information about what's happening in the world if healthcare IT. In this newsletter, we'll present some interesting tidbits to whet your appetite. Take a look at some of these interesting articles from the world of Healthcare IT!

#### Government Health IT: www.govhealthit.com

"Will state health departments embrace IT Big Five?", Feb. 2014

A majority of government organizations are planning to institute technology uber-trends within the next three years. The only thing is: A hefty percentage of them lack the infrastructure to actually do so.

http://www.govhealthit.com/news/will-state-health-depts-embrace-it-big-data-meritalk-cloud-mhealth

"Is HIPAA Working?", Feb. 2014

HIPAA is not doing the trick. Or, rather, many healthcare organizations are not complying with HIPAA, and the main culprit is unencrypted laptops. The pure number of large personal health information breaches in 2013 — the year saw a 138 percent increase — is perhaps all the evidence needed to back up that assertion. But there's more.

http://www.govhealthit.com/news/hipaa-working-breaches-laptops-privacy

#### **Useful Websites**

http://www.himss.org

Healthcare Information and Management Systems Society

HIMSS is a global, cause-based, not-for-profit organization focused on better health through information technology (IT). HIMSS leads efforts to optimize health engagements and care outcomes using information technology.



#### cipct.uw.edu

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#### 2014 CIPCT Calendar Highlights

UW<br/>Academic CalendarInstruction<br/>BeginsQuarter Ends /<br/>Final ExamsSpring Quarter 2014March 31June 9-13Summer Quarter 2014June 23August 22Autumn Quarter 2014September 24December 8-12

http://www.washington.edu/students/reg/1415cal.html

APPLICATION DEADLINE FOR AUTUMN 2014 ADMISSION: MAY 1, 2014

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