



Health Care TG News

Volume 20, Issue 1

Winter 2010

News from the Health Care Technical Group

WHAT'S INSIDE

Message from the Chair

1

Review of the Health Care
TG Conference Sessions

2

Featured Research

3

Upcoming Conferences

3

Journal Special Issues

5

Positions Postings

5

Member Announcements

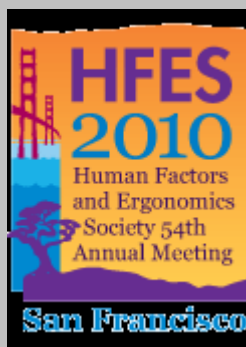
6

Business Meeting Minutes

6

HCTG Website

www.hfes.org/hctg/



54th Annual Meeting

San Francisco,
September 27 –
October 1, 2010

Message from the Chair

Ayşe P. Gurses, PhD

Within the last decade, human factors and ergonomics (HFE) professionals made significant positive contributions in the design and implementation of HFE principles and techniques to the area of patient safety. The efforts of HFE professionals are continuously helping design health information technologies to improve patient safety and guiding interventions aimed at improving the safety of care in various types of care settings and in care transitions. Furthermore, HFE professionals are also working with clinicians and administrators to improve the quality of working life of health care professionals, which in turn positively affects turnover and retention rates in health care settings and patient safety.

HFE professionals have been working in closer collaboration with clinicians to improve patient safety within the last decade. More and more HFE professionals are hired in health care settings in different roles, such as patient safety director, clinical/usability engineer, quality improvement specialist, and risk management specialist. Medical and nursing schools and residency programs are beginning to incorporate lectures or courses on human factors and ergonomics in their curricula. That said, despite the increased involvement of HFE professionals, particularly HFE researchers, in improvement of patient safety within the last decade, the rate of adoption of HFE as an innovation in health care is still lower than expected (Carayon, Applied Ergonomics, forthcoming). There may be many reasons for this slow adoption including the slow changing culture of health care, limited number of high quality studies that clearly indicate the positive impact of HFE interventions on patient outcomes

clinicians not being exposed to systems thinking and human factors concepts during their education, and the complex and time-demanding nature of HFE tools and methods.

We, as HFE professionals, can do a number of things to increase the adoption of HFE as an innovation in health care and patient safety. As an example, we should work on adapting HFE tools and techniques to health care, making them practical and feasible (and still valid) to use in the complex, fast-paced and highly demanding environment of health care. HFE researchers should focus on conducting high quality research that clearly has an impact on improving patient safety and outcomes. We as HFE researchers and professionals should to continue to emphasize the importance of such HFE issues for patient safety and the need for further, high quality research. I therefore encourage all members of the Health Care Technical Group (HCTG) to continue their hard work in the area of human factors and patient safety, and to introduce HFE concepts and tools to clinicians and health care administrators who are not familiar with these concepts and tools.

I am personally very proud of the significant growth of the HCTG within the last decade and of our members' significant contributions to human factors in patient safety. We are the fourth largest Technical Group within HFES, with 507 members. The HCTG program in the Annual Meeting in San Antonio was a great success. We had 9 sessions (5 lecture sessions, 4 discussion panels) and 5 poster presentations on various exciting topics including health IT, human factors in surgery, human factors in ambulatory care, interruptions in health care, and role of human factors in patient centered care.

In addition, the program included two co-sponsored sessions, one with MacroErgonomics and the other one with the Student Forum. We also had an exciting group meeting on the topic of “10 years after the Institute of Medicine’s Report.”

We look forward to similar success at the 54th Annual Meeting in San Francisco. Finally, I would also like to extend a warm thank you to F. Jacob Seagull for leadership over the past two years as TG chair, and as program chair the two years previous. Jake’s leadership has significantly strengthened the already solid foundation in the TG. I would like to welcome our new officers Stephanie Guerlain as the Program Chair, Jenna Marquard as the Newsletter Editor and Adam Shames as the Website Master. Most important of all, I wish to thank you, our valuable TG members, for your continued commitment to raising the awareness of the role of HFE in health care and working hand-in-hand with clinicians to improve patient safety and quality of working life of care providers.

I hope to see you all in the San Francisco Annual Meeting!

Ayse

Chair, Healthcare Technical Group
Human Factors and Ergonomics Society
Assistant professor
Johns Hopkins University School of Medicine
Department of Anesthesiology and Critical Care
Quality and Safety Research Group

Thank You 2008-2009 Officers

I would like to extend a special thank you to our 2008-2009 officers who graciously served the Health Care TG in a variety of capacities.

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Review of the 2009 Conference Sessions

Thank you to 2009 Program Chair Ayse Gurses and all those who reviewed conference submissions, presented at the HC-TG sessions, and chaired sessions. The sessions were diverse and engaging, and spurred a variety of important discussions in our field. I encourage you to promote our field by reviewing and citing papers from these presentations in your relevant manuscripts.

HC1 Health Information Technologies
HC2 Medical Informatics
HC3 Human Factors in Surgery I
HC4 Ambulatory/Outpatient Care
HC5 User-Created Cognitive Artifacts
HC6 HF in Patient-Centered Care
HC7 Human Factors in Surgery – II
HC8 Health Care Potpourri
HC9 Interruptions in Health Care

Incoming 2009 – 2010 Officers

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Featured Research

Supporting Hand-Off of Care: What is the value of verbal sign-out?

Ellen Bass, Ted Perez, Sharon Meth, Justin DeVoge, Kim Brantley, Systems and Information Engineering, *University of Virginia*

Adam Helms, Luther Bartelt, Margaret Plews-Ogan, George Hoke, Internal Medicine, *University of Virginia*

Hand-off of care is the transfer of information, responsibility, and/or authority from one set of caregivers to another. With respect to procedure, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) has stressed verbal sign-out in the hand-off of care process. At the time of face-to-face physician-to-physician hand-off, physicians assuming the care of a patient should be given the information necessary to care for patients, including covering “just in case” (or contingency) information.

UVA’s Department of Medicine has been collaborating with systems engineers to analyze the value of resident verbal sign-out. The Medicine wards employ a late afternoon cross-cover sign-out where one of the day teams stays late and then sign-out all patients to a night team. Sign-out sessions are audio taped and reviewed by two independent clinician reviewers and one systems engineer. Modifications to our sign-out support tool, sign-out observation software and surveys support the collection and analysis of baseline sign-out process data in Medicine. Data are in the process of being collected and analyzed in order to provide a baseline for future interventions

Our initial analyses focus on the value of verbal sign-out with respect to patient factors (are sign-outs longer for more acute patients and those with new problems), shift schedule (will a resident going off-shift and scheduled to care for the patient the next day shorten the verbal sign-out), and whether the resident going off-shift

at the cross-cover provides more information than the cross-cover team can provide to the night team.

Preliminary results show that residents discuss patients with higher acuity and with new problems for a longer period of time. Also residents discuss patients for the same amount of time regardless as to whether they will care for the patient the next day. Those results were positive. However, a preliminary analysis of the role of the resident going off-shift as the primary care provider had a significant impact on verbal sign-out. An analysis compared 101 patient sign-outs from the cross-cover to the night-float for the same patients on the same day. The results show that the cross-cover sign-outs were longer than night-float ($U=6918.5$, $p<0.001$, $\mu_{\text{cross-cover}}=77.5$ sec, $\sigma_{\text{cross-cover}} = 45.8$, $\mu_{\text{night-float}} = 52.7$, $\sigma_{\text{night-float}} = 32.2$) and that the team staying for the cross-cover had little to add beyond what was recorded by the day team in the sign-out tool. These results point to the need for redesigning resident shifts to avoid cross-cover.

If you want your research featured here, please send an email to Jenna Marquard at jmarquard@ecs.umass.edu

Announcements and Member News

Upcoming Conferences

Don’t forget to submit your proposals for the 54th annual HFES Conference in San Francisco!

September 27-October 1, 2010

<http://www.hfes.org/web/HFESMeetings/2010annualmeeting.html>

Submission Deadline: February 19th

Society for Health Systems / American Society for Quality Conference

February 25-28, 2010

Atlanta, GA

<http://www.ienet.org/shs/conference/>

Email Mickey Patrick if you are interested in preparing and presenting an SHS webinar sometime during the year. (mpatrick@amerisourcebergen.com)

Ergonomics Roundtable of Sacramento’s Roundtable on home visitation safety, safe patient handling for home healthcare providers, and home modifications

March 9, 2010

<http://www.ergort.org/>

Human Factors Engineering & Medical Device Workshop

April 20-21, 2010
Ann Arbor, Michigan

<http://www.redforestconsulting.com/>

IEEE Systems and Information Engineering Design Symposium (SIEDS'10)

April 23, 2010
University of Virginia

<http://www.sys.virginia.edu/sieds10/>

200-500 word Abstract Due: February 15

SIEDS'10 is a student-focused international forum for applied research, development, and design in Systems and Information Engineering. The Symposium is the leading showcase for undergraduate and Master's graduate design projects, such as those from capstone design courses or from baccalaureate, honors, or design-oriented graduate theses. Papers analyzing the decision-making context in health care are encouraged. Papers about the design, development, and evaluation of systems to support human performance in the health care setting are also encouraged. Student travel scholarships are available on a limited basis. Faculty, industry, and government project advisors are welcome coauthors. See for more details.

Institute of Industrial Engineers Annual Conference

June 5-9, 2010
Cancún, Mexico

<http://www.iienet.org/annual2/>

2010 Systems Engineering Initiative in Patient Safety (SEIPS) Short Course

July 26-30, 2010
Madison, WI

http://cqpi.engr.wisc.edu/shortcourse_home

This two-part, five day course is designed to provide clinicians, engineers and other professionals an understanding of human factors and systems engineering and how this approach to patient safety can improve patient safety, performance and prevent harm and/or recover from error and mitigate further harm. At the end of our short course, the participants will have developed skills in human factors; they will have a good understanding of the basics of HF; therefore, they can better use the many different techniques and tools available.

Mayo Clinic Conference on Systems Engineering & Operations Research in Health Care

August 18-20, 2010
Rochester, MN

<http://www.mayo.edu/pmts/mc8000-mc8099/mc8019-03.pdf>

International Conference on Commercial Driver Health and Wellness

November 8-10, 2010
Baltimore, MD

www.TRB.org/Conferences/HealthWellness2010.aspx

Submission Deadline: April 9th

American Medical Informatics Association Annual Meeting

November 13-17, 2010
Washington, DC

<https://www.amia.org/meetings/upcoming.asp>

2010 Summer Research Institute for the Science of Socio-Technical Systems:

13-17 June, 2009
Skamania Lodge, Stevenson, WA

We are seeking 30 scholars to join the outstanding set of mentors for this year's Summer Research Institute. If you are an advanced doctoral student, post-doctoral scholar or pre-tenure faculty at a US-based institution, you are eligible to participate. Application screening begins 1 March, 2010 with notification by early April, 2010.

To support the multi-disciplinary science of socio-technical systems, the Consortium for the Science of Socio-Technical Systems (CSST, see <http://sociotech.net>) was established in 2007 as an organization devoted to advocating for this intellectual movement. The CSST will, with generous support by the National Science Foundation, be organizing a summer research institute. A primary goal of the institute is to build a trans-disciplinary cohort of scholars who examine the complex interplay among the technical and the social across all levels of analysis: individuals, groups, organizations, cultures, and society.

The institute will be conducted as a residential program at Skamania Lodge (www.skamania.com) with a combination of small group sessions devoted to providing feedback on participants' research and larger group sessions consisting of panels and presentations led by the institute mentors. These sessions will cover research topics and career development, how to obtain funding,

and publication strategies. Time will be reserved for informal recreational activities. Costs of participation, including travel, food and accommodations, are covered thanks to the funding provided by the NSF. The application process requires two parts:

1. *A 350 word response to the question: "How will your research contribute to advancing our scientific understanding of socio-technical systems?"*

In your response, please also explain what you mean by socio-technical. You may also want to include a core or defining reference that guides your work in this area.

2. *A current curriculum vitae.*

Please email your application materials as attachments (in PDF or in a common word processing format) to csst2010@syr.edu with the email subject line being "CSST 2010 Application"

News

January 29, 2010

The National Institute for Standards and Technology (NIST) plans to develop standards to help evaluate the ease-of-use of healthcare IT systems

<http://www.healthcareitnews.com/news/government-test-ease-use-health-it-systems>

<https://www.fbo.gov/index?s=opportunity&mode=form&id=9a64d99691f54a9948ca65442c5fe6a7&tab=core&view=0&cck=1&au=&ck=>

Journal Special Issues

Special Issue of the International Journal of Medical Informatics on *Supporting Collaboration in Healthcare Settings*

Due: March 31, 2010

<http://faculty.ist.psu.edu/reddy/IJMI.htm>

Special Issue of Work on *Health Care Work in the Home*

Due: June 1, 2010

<http://people.umass.edu/marquard/>

Special Issue of the Journal of Experimental Psychology: Applied on *Human Performance in Health Care*

Due: September 1, 2010

<http://www.apa.org/pubs/journals/xap/call-for-papers.aspx>

Position Postings

The University of Virginia Department of Systems & Information Engineering has openings for those interested in pursuing a Ph.D. in medical informatics. The area of research can be related to human factors, optimization and control, simulation, training or other areas of interest to the department, as applied to health care. Students receive an annual stipend, health insurance, and tuition coverage. Ideal applicants will have a B.S. or M.S. in engineering or computer science and be a U.S. citizen. Please see www.sys.virginia.edu/healthcare for more information.

The VA Center of Excellence on Implementing Evidence-Based Practice (CIEBP) in Indianapolis, IN has four post-doctoral fellowships for U.S. Citizens that may be of interest:

1. Associated Health Postdoctoral Fellowship (2yr)
2. Physician Post Resident Fellowship (2yr)
3. Medical Informatics Fellowship (2yr)
4. Patient Safety Fellowship (1yr)

The CIEBP is a multidisciplinary research environment in the Roudebush VA Medical Center and has on-going collaborations with Regenstrief Institute, an organization known for its ground-breaking work in informatics. Human factors researchers Jason Saleem, PhD and Alissa Russ, PhD are Research Faculty with the CIEBP.

Please see the following link for additional information on the fellowships:

http://www.ciebp.research.va.gov/CIEBP_Fellowship_opportunities.asp

Applications are reviewed on a quarterly basis. Interested applicants are encouraged to apply. Please direct application requests and questions to Neale Chumbler, PhD (Neale.chumbler@va.gov).

Job Title: Research Support Coordinator

Location: Miami, FL

Pay Range: \$45,000

The William Lehman Injury Research Center, University of Miami Miller School of Medicine has an opportunity available for a Research Support Coordinator. This individual will be an informatics coordinator to assist the Human Factors psychologist the evaluation of human factors and systems analysis in clinical documentation,

mobile learning and telemedicine. This individual will help coordinate efforts for data collection and analysis in the trauma and critical care unit, coordinate research studies, recruit subjects, assist in data collection tools, conduct literature searches and write literature reviews. Additionally, this individual will assist in IRB submissions and be responsible for data collection and entry for these research projects. Bachelor's Degree in Psychology, Human Factors or Medical Informatics and one year minimum of related experience, is required. Must have a basic understanding of human factors and medical informatics principles for this position, and an interest in technology in the areas of telemedicine, medical informatics and mobile learning.

If you are interested, please send your cover letter and resume to xfeng@med.miami.edu or jgraygo@med.miami.edu

New Human Factors Associate Editor

Matthew B. Weinger, MD has assumed the role of Associate Editor for Health and Medical Systems for *HUMAN FACTORS*, under its new Editor-in-Chief Bill Marras, Professor of Industrial and Systems Engineering at The Ohio State University. Associate Editors of *HUMAN FACTORS* will have decision authority for articles that are submitted to the journal, in this case, articles dealing with human factors in healthcare. Some of Bill and Matt's goals are to: 1) increase the impact on health and healthcare delivery in the US and abroad of articles that appear in *HUMAN FACTORS*, and 2) to elevate the profile of work in the healthcare domain in *HUMAN FACTORS* and in our specialty more broadly.

The Editors believe that, given the current societal emphasis on healthcare reform and on the role of informatics in healthcare, there will be a tremendous need for human factors expertise in medicine, nursing, pharmacy, dentistry, allied health professions, home health, etc. *HUMAN FACTORS* must be a relevant authoritative and timely voice in the discussions and decisions that will ensue. Therefore, in addition to full research articles that address important healthcare topics and problem, we intend to publish, as appropriate, well-written scholarly review articles, special articles, and other manuscripts that will advance the goals of HFES and our specialty. We will also entertain the creation Special Issues on important topics either focused on healthcare or that include articles from the healthcare domain.

A cornerstone of a great journal is the quality of its reviewers. Therefore, we are always looking for experienced and reliable reviewers for health/healthcare articles in *HUMAN FACTORS*. Reviewers are expected to provide scholarly, thoughtful, constructive, and (especially) timely reviews. If you are qualified and interested, please send an email describing your experience, and your CV, to matt.weinger@vanderbilt.edu.

Member in the News

HCTG Member Yamile C. Jackson, PhD, PE, PMP, the President and Founder of Zakeez, Inc. (www.zakeez.com), recently won the "2009 Outstanding Woman Owned Small Business of the Year Award" from the SCORE Foundation. View the presentation of her award and award press release here:

<http://www.mefedia.com/watch/28070959>

http://www.score.org/newsroom_zakeez_award.html

Minutes of the HC-TG Business Meeting

October 21, 2009 -3:15 to 4:30 pm

- The TG incoming (Ayse P. Gurses) and outgoing Chairs (Jacob Seagull) welcomed everyone.
- The new TG officers were introduced:
 - Chair: Ayse P. Gurses; Program Chair: Stephanie Guerlain; Newsletter editor: Jenna Marquard; Website Master: Adam Shames.
- The incoming TG chair reported that TG budget was increased from \$7,064.05 (12/31/08) to \$8,086.05 (9/29/09). \$450 was spent in 2009. The number of members stayed same with 507 members. The HCTG is the 4th largest TG in HFES with respect to membership.
- Ayse Gurses reported that the 2009 HCTG program included a total of 11 sessions (2 co-sponsored) and 5 poster presentations.
- The 2010 Annual Meeting will be held Sept 27-Oct 1st in San Francisco. We are waiting for your submissions. The incoming Program Chair (Stephanie Guerlain) and Scott Shapell asked members for volunteering to be a reviewer for the 2010 program.

- Mi Zhou from Tufts University won the best student paper award by her paper titled “Vibrotactile feedback improves laparoscopic palpation skills.” Her advisor and co-author on the paper is Caroline Cao.
- Bob North announced the AAMI three-day HFE device regulatory requirements course that will take place in April 2010 in Minnesota.
- A project for developing a “Human Factors Guide for Nurses and Doctors” was briefly described, and a working group was convened to develop a product that can be distributed to care providers. Yan Xiao is the contact for the project.
- Following an interesting discussion on the Listserv, Dave Eibling and Stephanie Guerlain are heading the effort to generate a white paper, conference or other “meeting of the minds” on the topic of “Ten Years since ‘To Err is Human.’” The activities will explore the contribution of Human Factors to healthcare in the wake of the seminal publication by the IOM, which sparked so much interest in patient safety.

**This is a publication of the Health Care
Technical Group of the Human Factors &
Ergonomics Society.**
