

To rise to the challenge of the international quality revolution, the Center for Quality and Productivity Improvement (CQPI), a research center, was founded in October of 1985. Since its inception, CQPI has been at the forefront in the development of new techniques for improving the quality of products and processes.

Today, CQPI's Systems Engineering Initiative for Patient Safety (SEIPS) is the foremost leader in a comprehensive application of Human Factors and Systems Engineering to the patient safety challenge. CQPI/SEIPS is the recipient of multiple Federal, foundation, and industry supported research projects for patient safety, quality of healthcare processes, quality of working life and human factors approaches for improved technology implementation. The various project teams on these studies are multidisciplinary, including investigators and partners in Human Factors and Systems Engineering, Nursing, Medicine and Pharmacy.

Statement of Need and Scope of Practice

This short course is designed to provide an understanding of human factors and systems engineering and how this approach to patient safety can improve performance, prevent harm when error does occur, help systems recover from error, and mitigate further harm.

Intended Audience

This educational activity is designed for all physicians, nurses, physician assistants, pharmacists, engineers, patient safety officers, and other professionals interested in human factors engineering and patient safety.

Specific Learning Objectives

At the conclusion of this activity, participants should be able to:

- Identify the objectives of human factors engineering
- Promote the use of human factors engineering to minimize patient related error
- Recognize the difference between micro and macro human factors engineering approaches
- Summarize what a system is, and what are the implications for its design
- Target and evaluate medical device design and usability issues for patient safety
- Identify cognitive ergonomics issues, such as information processing and human error
- Understand organizational issues related to patient safety (e.g., transitions of care, communication, teamwork, process analysis)
- Assess the physical environment for patient safety associated issues
- Give examples of physical environment issues and patient safety
- Improve situational awareness
- Improve workload management
- Identify human characteristics, capabilities and limitations
- Recognize interfaces between job, person and environment
- Recognize challenges to the application of HFE and Patient Safety

SEIPS Extended Part I - Human Factors and Sociotechnical Systems Engineering		
MONDAY, JULY 13, 2009		
AM		
7:00-8:00	Breakfast and Registration	
8:00-9:00	Overview and Course Objectives	Pascale Carayon
9:00-10:30	Complex Sociotechnical Systems	Ben-Tzion Karsh
10:30-10:45	Break	
10:45-12:15	What is Human Factors Engineering, What is an Error and What is a System – Part I	Ben-Tzion Karsh
PM		
12:15-1:15	Lunch	
1:15-2:15	The Physical Environment	Carla J. Alvarado
2:15-2:30	Break	
2:30-3:30	The Physical Environment (cont.)	Carla J. Alvarado
3:30-4:30	The Human in Human Factors - Who Will Be in the Health Care Workforce of the Future?	Carla J. Alvarado
4:30-5:00	Introduction to the Case Study Analysis	Pascale Carayon and Faculty
5:00-6:30	Reception	Attendees and Faculty
TUESDAY, JULY 14, 2009		
AM		
7:00-8:00	Breakfast and Conversation	Pascale Carayon
8:00-10:00	What is Human Factors Engineering, What is an Error and What is a System – Part II	Ben-Tzion Karsh
10:00-10:15	Break	
10:15-12:00	The Physical Environment and Evaluation of Ergonomics	Carla J. Alvarado Mary E. Sesto
PM		
12:00-1:00	Lunch	
1:00-2:45	Organizational/Job Design and Workload	Pascale Carayon
2:45-3:00	Break	
3:00-5:00	Management of Sociotechnical Change	Pascale Carayon
WEDNESDAY, JULY 15, 2009		
AM		
7:00-8:00	Breakfast and Conversation	
8:00-10:00	Cognitive Ergonomics	Douglas A. Wiegmann
10:00-10:15	Break	
10:15-12:15	Cognitive Ergonomics (cont.)	Douglas A. Wiegmann
PM		
12:15-1:15	Lunch	
1:15-2:15	Technology Design and Usability	John W. Gosbee
2:15-2:30	Break	
2:30-3:30	Technology Design and Usability (cont.)	John W. Gosbee
3:30-5:00	Case Study Analysis and Poster Preparation	Pascale Carayon and Faculty
THURSDAY, JULY 16, 2009		
AM		
7:00-8:00	Breakfast and Conversation	
8:00-10:00	Organizational Issues and the Role of Healthcare Provider	Robert L. Wears
10:00-10:15	Break	
10:15-12:00	Teamwork	Douglas A. Wiegmann Robert L. Wears Shawna Perry
PM		
12:00-1:00	Lunch	
1:00-2:30	Poster Session	Pascale Carayon and Faculty
2:30-2:45	Break	
2:45-4:30	Human Factors Engineering in Healthcare - A Provider's Experience	Shawna Perry
4:30-5:00	Wrap-up and Evaluations	Pascale Carayon and Faculty

Faculty



Pascale Carayon, PhD
Director CQPI, Procter & Gamble
Bascom Professor in Total Quality
Industrial and Systems Engineering
University of Wisconsin-Madison
Madison, WI



Carla J. Alvarado, PhD
Research Scientist, CQPI and
SEIPS Short Course Coordinator
University of Wisconsin-Madison,
Madison, WI



John W. Gosbee, MD, MS
Human Factors Engineering and
Healthcare Specialist
Michigan Health Systems
Ann Arbor, MI



Ben-Tzion Karsh, PhD
Associate Professor, Industrial and
Systems Engineering
University of Wisconsin-Madison
Madison, WI



Shawna Perry, MD
Director for Patient Safety Systems
Engineering, Associate Professor
and Associate Chair
Department of Emergency
Medicine VCU Health Systems



Mary E. Sesto, PhD
Assistant Professor
School of Medicine and Public
Health and Industrial and
Systems Engineering
University of Wisconsin-Madison
Madison, WI



Robert L. Wears, MD
Professor, Emergency Medicine
and Director of Medical
Informatics University of Florida
College of Medicine
Jacksonville, FL



Douglas A. Wiegmann, PhD
Associate Professor, Industrial
and Systems Engineering
University of Wisconsin-Madison
Madison, WI

General Information

Dates: July 13-16, 2009
Place: Lowell Center
610 Langdon Street
Madison, WI 53703
Phone: 608/256-2621
Fax: 608/262-5445

Conference Housing

Blocks of rooms are reserved at the following hotels. Please call or write to the hotels directly to reserve your accommodation.

The Edgewater Hotel
666 Wisconsin Avenue
Madison, WI 53703
phone: 800.922.5512
www.theedgewater.com

Rates: \$70-\$90
Reservations must be made prior
to June 12, 2009
Please reference F40000

Conference Fees

- \$2,000 - First Registrant
from an Organization
- \$1,500 - Each Additional
Registrant from the Same Organization

The conference fee includes the cost of tuition, materials, an opening reception, breakfasts, refreshment breaks, lunches, and a nonrefundable registration fee of \$50. Should you cancel your registration up to 72 hours prior to the conference; you will be refunded the entire conference fee except the \$50 nonrefundable portion. No refunds will be made after that time.

Four Easy Ways To Register

- By Mail:** Return your completed registration form and payment (Step 5 registration form)
- By Phone:** 608/262-1397.
Please call and give your billing information or pay by MasterCard, VISA, or American Express
- By Fax:** 1-800/741-7416
(in Madison Fax 265-3163)
- On Line:** <http://www.ocpd.wisc.edu>
Click on course catalog

Confirmations

All registrations are confirmed in writing. If you do not receive a confirmation, please call 608/262-1397.

Conference Attire

Since meeting room temperatures and personal comfort levels vary, it is recommended that you bring a sweater or jacket.

For Further Information

Dr. Carla J. Alvarado
CQPI, 575 WARF, 610 Walnut Street
Madison, WI 53726; phone 608/263-2678 or
608/263-2520; calvarado@cqpi.engr.wisc.edu

Amy Meyer
Office of Continuing Professional
Development in Medicine and Public Health
2701 International Lane, Suite 208
Madison, WI 53704; phone/fax: 303.362.1867
email: ameyer3@wisc.edu

Accreditation Statement

This activity has been planned and implemented in accordance with the Essential Areas and policies of the Accreditation Council for Continuing Medical Education through the joint sponsorship of the University of Wisconsin School of Medicine and Public Health and the University of Wisconsin-Madison, Center for Quality and Productivity Improvement (CQPI). The University of Wisconsin School of Medicine and Public Health is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians.

Credit Designation Statement

The University of Wisconsin School of Medicine and Public Health designates this educational activity for a maximum of 30 *AMA PRA Category 1 Credits™*. Physicians should only claim credit commensurate with the extent of their participation in the activity.

Continuing Education Units

The University of Wisconsin-Madison, as a member of the University Continuing Education Association (UCEA), authorizes this program for 3.0 continuing education units (CEUs) or 30 hours.

Policy on Disclosure

It is the policy of the University of Wisconsin School of Medicine and Public Health that the faculty, authors, planners, and other persons who may influence content of this CME activity disclose all relevant financial relationships with commercial interests in order to allow CME staff to identify and resolve any potential conflicts of interest. Faculty must also disclose any planned discussion of unlabeled/unapproved uses of drugs or devices during their presentation(s). Detailed disclosures will be made in the activity handout materials.

Elements of Competence

This CME activity has been designed to change patient care and systems-based practice, two of the six competencies embraced by the American Board of Medical Specialties.

Registration Form

#4029 ame-cqpi

Extended Part I: Human Factors and Sociotechnical Systems Engineering July 13-16, 2009

Please complete Steps 1-5 below in BLOCK letters

Step 1. Participant Information:

Name _____
First MI Last

Professional Degree (for credit & name badge) _____

Company Name _____

Dept. Name or Mail Code _____

Work Address _____

City, State, Zip _____

Day Phone _____

FAX _____

E-mail _____

I request vegetarian options for my meals

Step 2. Confirmation:

Work Address (as provided in Step 1) - or - Home Address

Home Address _____

City, State, Zip _____

Step 3. Registration Fees:

\$2,000 - First Registrant from an Organization

\$1,500 - Each Additional Registrant from the Same Organization

TOTAL FEE REMITTED:

____ PO or check enclosed (payable to University of Wisconsin)

____ Please bill my company

____ Credit Card: MasterCard; VISA; American Express

Cardholder's Name _____

Card Number _____

Expiration Date _____

Step 4. Where did you learn about this short course? *Check all that apply*

Colleague Brochure Advertisement Internet Other _____

Step 5. Please return your payment with this form to:

Kathy Kneebone, The Pyle Center, 702 Langdon Street, Madison, WI 53706
or Fax 1-800/741-7416 (in Madison Fax 265-3163).

Quotes from past course attendees:

"Thanks again for the exceptional experience. The class is really life/mind changing as evidenced by coming back to a potential event and my first thought was not, who messed up, rather I wonder what else was going on, how many lines were running etc, etc!"

"Thanks for all these materials, and thanks again for the wonderful course -I very much enjoyed it. So yes, the course has changed the way I look at things..."

"Thanks again for the great effort you put to organize an excellent course."

"Thank you so much for the wonderful experience! The class has opened my eyes and re-charged my batteries."

"Awesome course! Top-notch organization and instruction. Thank you for a successful and valuable week of learning!"

"This is a tremendous short course. The instruction and resources you provided us are tremendously helpful."

"What a great experience. I felt as though I had returned to college! The beautiful university setting, the outstanding professors...great course!"

The University of Wisconsin provides equal opportunities in employment and programming, including Title IX requirement. The University of Wisconsin School of Medicine and Public Health fully complies with the legal requirements of the ADA and the rules and regulations thereof. If any participant in this educational activity is in need of accommodations, please notify Dr. Carla J. Alvarado in order to receive service. Please call 608/263-2678.

Extended Part I: Human Factors and Sociotechnical Systems Engineering

Please Route to:

- PATIENT SAFETY OFFICER
- QUALITY IMPROVEMENT
- RISK MANAGEMENT
- MEDICAL INFORMATICS/IT
- INFECTION CONTROL

THE UNIVERSITY OF WISCONSIN-MADISON



July 13-16, 2009

Lowell Center, University of Wisconsin Madison

Systems Engineering Initiative for Patient Safety (SEIPS)

Extended Part I: Human Factors and Sociotechnical Systems Engineering

This one-part, four-day course for professionals presents nationally recognized speakers discussing a variety of Patient Safety topics and Human Factors Engineering (HFE) including:

- Human Factors Engineering
- Sociotechnical Systems and Macroergonomic
- Design of the Physical Environment and Ergonomics
- Cognitive ergonomics
- And more...

For short course schedule and registration information go to: http://cqi.engr.wisc.edu/shortcourse_home