

## CQPI

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

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
- 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
- Ability to assess the physical environment for patient safety associated issues
- Give examples of physical environment issues and patient safety
- Improve workload management
- Identify human characteristics, capabilities and limitations
- Recognize challenges to the application of HFE and Patient Safety
- Attain skills in usability of HIT
- Understand impact of HIT on Patient Care Processes
- Promote human factors for implementing HIT

## Schedule

| <b>SEIPS PART I – The Basics of HFE and Patient Safety</b>         |  | <b>Monday 8-18-08</b>                        |
|--|--|--|
| 7:00-8:00am  | <b>Breakfast and Registration</b>  |  |
| 8:00-8:45am  | <b>Overview and Course Objectives</b>  | Dr. Pascale Carayon                          |
| 8:45-10:15am   | <b>What is Human Factors Engineering, What is an Error and What is a System-1</b>  | Dr. Ben-Tzion Karsh                          |
| 10:15-10:30am  | <i>Break</i>   |  |
| 10:30am-12:30pm  | <b>What is Human Factors Engineering, What is an Error and What is a System-2</b>  | Dr. Ben-Tzion Karsh                          |
| 12:30-1:30pm   | <i>Lunch</i>   |  |
| 1:30-2:45pm  | <b>Overview of Human Factors Engineering in Healthcare</b>                         | Dr. Sue M. Bosely                            |
| 2:45-3:00pm  | <i>Break</i>   |  |
| 3:00-5:00pm  | <b>The Physical Environment and Ergonomics</b>                                     | Dr. Carla J. Alvarado                        |
| 5:00-6:30pm  | <i>Reception</i>   | Attendees and Faculty                        |
| <b>Tuesday 8-19-08</b>   |  |  |
| 7:00-8:00am  | <b>Breakfast and Conversation</b>  |  |
| 8:00-10:00am   | <b>Cognitive Ergonomics</b>  | Dr. Douglas A. Wiegmann                      |
| 10:00-10:15am  | <i>Break</i>   |  |
| 10:15am-12:00pm  | <b>Organizational /Job Design and Workload</b>                                     | Dr. Pascale Carayon                          |
| 12:00-1:00pm   | <i>Lunch</i>   |  |
| 1:00-2:45pm  | <b>Technology Design and Usability-1</b>   | Dr. John W. Gosbee                           |
| 2:45-3:00pm  | <i>Break</i>   |  |
| 3:00-4:00pm  | <b>Technology Design and Usability-2</b>   | Dr. John W. Gosbee                           |
| 4:00-5:00pm  | <b>Case Study Analysis</b>   | Attendees and Faculty                        |
| <b>Wednesday 8-20-08</b>   |  |  |
| 7:00-8:00am  | <b>Breakfast and Conversation</b>  |  |
| 8:00-10:00am   | <b>Organizational Issues and the Role of the Healthcare Provider</b>               | Dr. Robert L. Wears                          |
| 10:00-10:15am  | <i>Break</i>   |  |
| 10:15-11:45am  | <b>Team Activity and Poster Session</b>  | Attendees and Faculty                        |
| 11:30am-12:00pm  | <b>Wrap-up and Evaluations</b>   | Faculty                                      |
| 12:00pm  | <i>Lunch</i>   |  |
| <b>SEIPS PART II – HFE &amp; Healthcare Information Technology</b> |  | <b>Wednesday 8-20-08</b>                     |
| 12:00-1:00pm   | <b>Lunch and Registration</b>  |  |
| 1:00-1:15pm  | <b>Overview and Course Objectives</b>  | Dr. Pascale Carayon                          |
| 1:15-2:15pm  | <b>Overview of Human Factors Engineering and Healthcare Information Technology</b> | Dr. Robert L. Wears                          |
| 2:15-3:15pm  | <b>Human Factors Engineering Principles of HIT Design</b>                          | Dr. Ben-Tzion Karsh                          |
| 3:15-3:30pm  | <i>Break</i>   |  |
| 3:30-4:30pm  | <b>Human Factors Engineering Principles of HIT Design</b>                          | Dr. Ben-Tzion Karsh                          |
| 4:30-5:30pm  | <b>Usability Principles and Methods</b>  | Dr. Ann Schoofs Hundt                        |
| 5:30-6:30pm  | <i>Reception</i>   | Attendees and Faculty                        |
| <b>Thursday 8-21-08</b>  |  |  |
| 7:00-8:00am  | <b>Breakfast and Conversation</b>  |  |
| 8:00-9:45am  | <b>The Road to EHR Implementation</b>  | Dr. James M. Walker                          |
| 9:45-10:00am   | <i>Break</i>   |  |
| 10:00am-12:00pm  | <b>Usability of HIT - Practical Experience</b>                                     | Dr. Ann Schoofs Hundt<br>Dr. Pascale Carayon |
| 12:00-1:00pm   | <i>Lunch</i>   |  |
| 1:00-2:45pm  | <b>Impact of HIT on Patient Care Processes and Tasks</b>                           | Dr. Pascale Carayon<br>Dr. Carla J. Alvarado |
| 2:45-3:00pm  | <i>Break</i>   |  |
| 3:00-5:00pm  | <b>Impact of HIT on Patient Care Processes and Tasks</b>                           | Dr. Pascale Carayon<br>Dr. Carla J. Alvarado |
| <b>Friday 8-22-08</b>  |  |  |
| 7:00-8:00am  | <b>Breakfast and Conversation</b>  |  |
| 8:00-10:00am   | <b>Human Factors of Implementing HIT</b>   | Dr. Ben-Tzion Karsh                          |
| 10:00-10:15am  | <i>Break</i>   |  |
| 10:15am-12:00pm  | <b>Human Factors of Implementing HIT</b>   | Dr. Ben-Tzion Karsh                          |
| 12:00-2:00pm   | <b>A Provider's Conversion Experience</b><br><i>Box lunch available</i>            | Dr. Matthew C. Scanlon                       |
| 2:00-2:30pm  | <b>Wrap-up and Evaluations</b>   | Dr. Pascale Carayon<br>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, CIC**  
Research Scientist, CQPI and  
SEIPS Short Course Coordinator  
University of Wisconsin-Madison,  
Madison, WI



**James M. Walker, MD, FACP**  
Chief Medical Information Officer  
Geisinger Health System  
Danville, PA



**Sue M. Bosley, PharmD**  
Medication Safety Pharmacist  
Saint Elizabeth Regional  
Medical Center  
Lincoln, Nebraska



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



**Ann Schoofs Hundt, PhD**  
Research Scientist, CQPI  
University of Wisconsin-Madison  
Madison, WI



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



**Matthew C. Scanlon, MD**  
Associate Medical Director of The  
Pediatric Intensive Care Unit and  
Assistant Professor of Pediatrics  
Medical College of Wisconsin  
Milwaukee, 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:** August 18-22, 2008

**Place:** Memorial Union  
800 Langdon Street  
Madison, WI 53706

**Phone:** 608/262-2511

**Fax:** 608/265-8299

### Conference Housing

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

### DoubleTree® Hotel – Madison

525 West Johnson Street, Madison, WI 53703

Phone: 608/251-5511 or 800.222.8733

[www.doubletreemadison.com](http://www.doubletreemadison.com)

Rates: \$159

Reservations must be made prior to July 18, 2008

Please reference CME-SEIPS

### The Edgewater Hotel

666 Wisconsin Avenue, Madison, WI 53703

phone: 800.922.5512

[www.theedgewater.com](http://www.theedgewater.com)

Rates: \$129

Reservations must be made prior to July 17, 2008

Please reference ZZ0000

### Conference Fees

- \$1,500 **Part I only** - First Registrant from an Organization
- \$1,000 **Part I only** - Each Additional Registrant from the Same Organization
- \$1,500 **Part II only** - First Registrant from an Organization
- \$1,000 **Part II only** - Each Additional Registrant from the Same Organization
- \$1,250 **Part II only** - 2004-2007 Part I Short Course Attendees
- \$2,200 **Part I and Part II** - First Registrant from an Organization
- \$2,000 **Part I and Part II** - 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/>

### 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 WARE, 610 Walnut Street  
Madison, WI 53726; phone 608/263-2678 or  
608/263-2520; [calvarado@cqpi.engr.wisc.edu](mailto: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: 608/240-2150, fax: 608/240-6040  
[ameyer3@wisc.edu](mailto: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 37 *AMA PRA Category 1 Credits*<sup>™</sup>. 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 3.7 continuing education units (CEUs) or 37 hours.

**Policy on Faculty and Sponsor Disclosure** As a sponsor accredited by the ACCME, it is the policy of the University of Wisconsin School of Medicine and Public Health to require the disclosure of the existence of any significant financial interest or any other relationship a faculty member or a sponsor has with either the commercial supporter(s) of this activity or the manufacturer(s) of any commercial product(s) discussed in an educational presentation. Detailed disclosure will be made in the course handout materials.



**Systems Engineering Initiative for  
Patient Safety (SEIPS) Short Course  
on Human Factors Engineering and  
Patient Safety ■ Part I and Part II**

*Please Route to:*

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

**THE UNIVERSITY OF WISCONSIN-MADISON**



**August 18-22, 2008**  
Memorial Union, University of Wisconsin-Madison ■ Madison, WI

**Systems Engineering Initiative for Patient Safety (SEIPS)  
SEIPS Short Course on Human Factors  
Engineering and Patient Safety  
Part I and Part II on HIT (New 2008)**

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

**Part I: The Basics of HFE & Patient Safety**

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

**Part II: HFE & Healthcare Information Technology (HIT)**

- Usability of HIT
- Impact of HIT on Patient Care Processes
- Human Factors of Implementing HIT
- And more...

For short course schedule and registration information go to: **[www.fpm.wisc.edu/seips](http://www.fpm.wisc.edu/seips)**