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

**SEIPS PART I – The Basics of HFE and Patient Safety**  
**Monday 8-18-08**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00-8:00am</td>
<td>Breakfast and Registration</td>
<td>Dr. Pascale Carayon</td>
</tr>
<tr>
<td>8:00-8:45am</td>
<td>Overview and Course Objectives</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>8:45-10:15am</td>
<td>What is Human Factors Engineering, What is an Error and What is a System-1</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>10:15-10:30am</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:30am-12:30pm</td>
<td>What is Human Factors Engineering, What is an Error and What is a System-2</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>12:30-1:30pm</td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>1:30-2:45pm</td>
<td>Overview of Human Factors Engineering in Healthcare</td>
<td>Dr. Sue M. Bosely</td>
</tr>
<tr>
<td>2:45-3:00pm</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:00-5:00pm</td>
<td>The Physical Environment and Ergonomics</td>
<td>Dr. Carla J. Alvarado</td>
</tr>
<tr>
<td>5:00-6:30pm</td>
<td>Reception</td>
<td>Attendees and Faculty</td>
</tr>
</tbody>
</table>

**Tuesday 8-19-08**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:00-8:00am</td>
<td>Breakfast and Conversation</td>
<td>Dr. Douglas A. Wegmann</td>
</tr>
<tr>
<td>8:00-10:00am</td>
<td>Cognitive Ergonomics</td>
<td>Dr. Pascale Carayon</td>
</tr>
<tr>
<td>10:00-10:15am</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:15am-12:00pm</td>
<td>Organizational /Job Design and Workload</td>
<td>Dr. Pascale Carayon</td>
</tr>
<tr>
<td>12:00-1:00pm</td>
<td>Lunch</td>
<td>Dr. John W. Gosbee</td>
</tr>
<tr>
<td>1:00-2:45pm</td>
<td>Technology Design and Usability-1</td>
<td>Dr. John W. Gosbee</td>
</tr>
<tr>
<td>2:45-3:00pm</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:00-4:00pm</td>
<td>Technology Design and Usability-2</td>
<td>Dr. John W. Gosbee</td>
</tr>
<tr>
<td>4:00-5:00pm</td>
<td>Case Study Analysis</td>
<td>Attendees and Faculty</td>
</tr>
</tbody>
</table>

**Wednesday 8-20-08**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Presenter</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:00-1:00pm</td>
<td>Lunch and Registration</td>
<td>Dr. Pascale Carayon</td>
</tr>
<tr>
<td>1:00-1:15pm</td>
<td>Overview and Course Objectives</td>
<td>Dr. Robert L. Wears</td>
</tr>
<tr>
<td>1:15-2:15pm</td>
<td>Overview of Human Factors Engineering and Healthcare Information Technology</td>
<td>Dr. Robert L. Wears</td>
</tr>
<tr>
<td>2:15-3:15pm</td>
<td>Human Factors Engineering Principles of HIT Design</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>3:15-3:30pm</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>3:30-4:30pm</td>
<td>Human Factors Engineering Principles of HIT Design</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>4:30-5:30pm</td>
<td>Usability Principles and Methods</td>
<td>Dr. Ann Schoofs Hundt</td>
</tr>
<tr>
<td>5:30-6:30pm</td>
<td>Reception</td>
<td>Attendees and Faculty</td>
</tr>
</tbody>
</table>

**SEIPS PART II – HFE & Healthcare Information Technology**  
**Wednesday 8-20-08**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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<tbody>
<tr>
<td>7:00-8:00am</td>
<td>Breakfast and Conversation</td>
<td>Dr. James M. Walker</td>
</tr>
<tr>
<td>8:00-9:45am</td>
<td>The Road to EHR Implementation</td>
<td>Dr. Robert L. Wears</td>
</tr>
<tr>
<td>9:45-10:00am</td>
<td>Lunch</td>
<td>Dr. Pascale Carayon</td>
</tr>
<tr>
<td>10:00am-12:00pm</td>
<td>Usability of HIT - Practical Experience</td>
<td>Dr. Ann Schoofs Hundt</td>
</tr>
<tr>
<td>12:00-1:00pm</td>
<td>Lunch</td>
<td>Dr. Carla J. Alvarado</td>
</tr>
<tr>
<td>1:00-2:45pm</td>
<td>Impact of HIT on Patient Care Processes and Tasks</td>
<td>Dr. Pascale Carayon</td>
</tr>
<tr>
<td>2:45-3:00pm</td>
<td>Break</td>
<td>Dr. Carla J. Alvarado</td>
</tr>
<tr>
<td>3:00-5:00pm</td>
<td>Impact of HIT on Patient Care Processes and Tasks</td>
<td>Dr. Pascale Carayon</td>
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**Thursday 8-21-08**

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
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</thead>
<tbody>
<tr>
<td>7:00-8:00am</td>
<td>Breakfast and Conversation</td>
<td>Dr. Matthew C. Scanlon</td>
</tr>
<tr>
<td>8:00-10:00am</td>
<td>Human Factors of Implementing HIT</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>10:00-10:15am</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:15am-12:00pm</td>
<td>Human Factors of Implementing HIT</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>12:00-2:00pm</td>
<td>A Provider’s Conversion Experience</td>
<td>Dr. Matthew C. Scanlon</td>
</tr>
<tr>
<td>2:00-2:30pm</td>
<td>Wrap-up and Evaluations</td>
<td>Dr. Pascale Carayon</td>
</tr>
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</table>

**Friday 8-22-08**

<table>
<thead>
<tr>
<th>Time</th>
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</thead>
<tbody>
<tr>
<td>7:00-8:00am</td>
<td>Breakfast and Conversation</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>8:00-10:00am</td>
<td>Human Factors of Implementing HIT</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>10:00-10:15am</td>
<td>Break</td>
<td></td>
</tr>
<tr>
<td>10:15am-12:00pm</td>
<td>Human Factors of Implementing HIT</td>
<td>Dr. Ben-Tzion Karsh</td>
</tr>
<tr>
<td>12:00-2:00pm</td>
<td>A Provider’s Conversion Experience</td>
<td>Dr. Matthew C. Scanlon</td>
</tr>
<tr>
<td>2:00-2:30pm</td>
<td>Wrap-up and Evaluations</td>
<td>Dr. Pascale Carayon</td>
</tr>
</tbody>
</table>
**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 Informatics 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  
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  
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 confirmations 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: 608/240-2150, fax: 608/240-6040  
  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™. 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.
Registration Form

SEIPS Short Course on Human Factors Engineering and Patient Safety
• Part I and Part II
Part I: August 18-20, 2008 • Part II: August 20-22, 2008

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:
☐ $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 - Past SEIPS 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

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.
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

Jointly sponsored by the University of Wisconsin Center for Quality and Productivity Improvement (CQPI) and the University of Wisconsin School of Medicine and Public Health, Office of Continuing Professional Development in Medicine and Public Health