**Rotation Contacts and Scheduling Details**

**Rotation Director:** Chris Longhurst, MD, MS, FAAP  
*Clinical Assistant Professor of Pediatrics, Stanford University School of Medicine*  
*Medical Director, Clinical Informatics, Lucile Packard Children’s Hospital*

clonghurst@lpch.org,  
Office phone: 650.736.7492  
Office Address: 1520 Page Mill Road

**Administrative Assistant:** Roberta Alleman  
ralleman@lpch.org  
Office phone: 650.736.2590

**To set up elective:** Contact Chris Longhurst @lpch.org at least one month in advance to arrange the elective.

**Positions Available:** 2 residents

**Length of Rotation:** Please note this is a 2-week elective but may be spread over 4 weeks when combined with another 2-week elective.

**Preferred Level of Training:** No preference. This elective may be repeated during subsequent years to further develop one’s project/research or tackle a new project.

**Months Rotation Offered:** Dr. Longhurst must be available to facilitate the rotation; contact him directly to confirm the elective is offered during your desired dates.

**Introduction**

Providing safe and high quality health care extends beyond direct patient care to the technology supporting this care. As the health care system and medicine itself has become increasingly complex, the role technology plays in streamlining efficiencies and providing safeguards has grown.

LPCH is a leader in the field of clinical informatics. With the implementation of the electronic medical record, computerized physician order entry, order sets, and medication safety measures, outcomes have improved in multiple areas including clinical, regulatory, financial, research, and operations.

This elective provides residents an opportunity to explore the integration of medicine and information technologies in an experiential manner by developing and completing a unique IT project. In doing so, residents will gain an understanding of the field of clinical informatics and the role it plays in the national effort to improve quality of care and eliminate medical errors. Additionally, residents will be exposed to topics including:

- Electronic medical record
- Computerized physician order entry (CPOE)
- Clinical decision support (CDS) systems
- Role of health IT in patient safety
- Standardization of care using order sets) as well as:
- Case-based learning on the web
- Medical terminologies
- Public health informatics
- Bioinformatics
- Personal health records (PHR)

Past projects have included:

- Critical care informatics at LPCH (Francis Kim, 2009)
- Role of hospitalists in EMR implementations (Michael Tracy, 2009)
- Role of IT in facilitating medical education (Lucy Lee, 2009)
- Oncology informatics issues (Karen Effinger, 2008, and Alex Abrams, 2009)

Last updated 8/26/09
Other potential ideas include but are not limited to:

- Researching, creating, and submitting evidence-based general pediatric order sets
- Literature review of a topic in clinical informatics with subsequent presentation at morning report
- Implementing and evaluating evidence-based hyperlinks in electronic order sets

**Weekly Schedule**

The resident will be expected to attend morning report, noon conference, continuity clinic and Pediatric Grand Rounds as usual. In addition, the resident will meet at least weekly with Dr. Longhurst to discuss the field of medical informatics, review pertinent literature, and plan a small project. The resident may also be expected to attend various other meetings.

**Rotation Specifics**

**Orientation**

Chris Longhurst will orient the resident at the beginning of the rotation. Contact him via email one week prior to the rotation to set up a specific time and date for this meeting. Specific project details and goals will be discussed.

To prepare for this rotation, the resident should review the rotation summary and conceptualize projects of interest.

**Call Schedule**

There are no call responsibilities associated with this elective. Residents should communicate any cross cover or jeopardy responsibilities to Dr. Longhurst at the beginning of the rotation.

**Resident Roles and Responsibilities**

- Roles and responsibilities will be determined based on one’s project and own clinical interest through collaboration with Dr. Longhurst at the beginning of the rotation.
- Responsibilities include but are not limited to:
  - Attend QI committee meeting (7-9am, 3rd Tuesday of month, Cancer Center, 3rd floor conference room)
  - Attend Patient Safety committee meeting (1-2:30, 2nd and 4th Monday of the month, LPCH Boardroom)

**Evaluation and Feedback**

At the completion of the rotation, Dr. Longhurst will provide verbal feedback as well as written feedback in the form of a Medhub evaluation of a resident.

Residents are expected to complete the Evaluation of the Rotation and Evaluation of Faculty involved in the rotation. Residents on this rotation will automatically be assigned evaluations for Dr. Longhurst. If you work with additional faculty, please submit their names to Michelle Rennels, mrennels@lpch.org, by the beginning of the 2nd week of the rotation.

**References/Recommended Readings**

### Competency-based Goals and Objectives

#### Goal 1. To gain a basic understanding of the field of clinical informatics and the role it plays in the national effort to improve quality of care and eliminate medical errors

<table>
<thead>
<tr>
<th>Resident Objectives:</th>
<th>Instructional Strategies</th>
<th>Evaluation</th>
<th>ACGME Competency Goals</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Review 3 to 5 recent related articles in peer review journals.</td>
<td>- Critically read and study articles.</td>
<td>- Discussion of articles with Dr. Longhurst.</td>
<td>MK – Demonstrate sufficient knowledge of information technology, a supportive science for pediatrics. PBLI – use information technology to manage information and support their own education.</td>
</tr>
</tbody>
</table>
| 2. Explain the role of quality and patient safety committees. | - Attend Quality Improvement Committee Meeting  
- Attend Patient Safety Committee Meeting | - Reflect on and discuss meetings with Dr. Longhurst | PBLI – systematically analyze practice using quality improvement methods, and implement changes with the goal of practice management.  
P – demonstrate accountability to patients, society, and the profession.  
P – demonstrate a commitment to ethical principles  
SBP – advocate for quality patient care and assist patient in dealing with system complexities  
SBP – work in inter-professional teams to enhance patient safety and improve patient care |

#### Goal 2. Understand the importance of process and workflow in the design and implementation of clinical information systems

<table>
<thead>
<tr>
<th>Resident Objectives:</th>
<th>Instructional Strategies</th>
<th>Evaluation</th>
<th>ACGME Competency Goals</th>
</tr>
</thead>
</table>
| 1. Design and implement a QI project that aligns with resident career interests and present summary of project | - Attend conferences on informatics when schedule permits  
- Become familiar with survey center at Stanford  
- Appraise peer-reviewed journal articles related to project | - Abstract in peer reviewed journal or poster presentation at relevant conference.  
- Medhub evaluation will include assessment of project.  
- Inclusion of project in resident’s portfolio (resident must submit to program office). | PBLI – use information technology to manage information and support their own education.  
PBLI- systematically analyze practice using quality improvement methods, and implement changes with the goal of practice management.  
PBLI – use information technology to optimize learning.  
ICS – use effective listening skills and elicit and provide information using effective nonverbal, explanatory, questioning and writing skills  
ICS – work effectively with others as a member of a health care team or other professional group  
SBP – participate in identifying system errors and implementing potential systems solutions. |
| 2. Attend relevant strategic meetings with hospital leadership (schedule subject to availability) | - Meetings | - Attendance at meetings, post-meeting debriefing with Dr. Longhurst. | ICS – work effectively with others as a member of a health care team or other professional group  
SBP – participate in identifying system errors and implementing potential systems solutions. |
PBLI = practice based learning and improvement
ICS = interpersonal and communication skills
P= professionalism
MK= medical knowledge
PC= patient care
SBP = systems based practice