Nursing Informatics Led Optimization Program

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CNIO
UCLA Health
UCLA Health

4 hospitals

952 Inpatient beds

~60,000 hospital encounters

250+ outpatient practices

1.5 mil outpatient annual visits
UCLA Health EHR Implementation

- **March 2013**: Big-bang go-live; full functionality across health system
- **June 2013 – July 2014**: Ambulatory launch to 250+ practices in 5 waves
- **February 2014**: Oncology goes live
- **February 2015**: Double upgrade
- **September 2015**: Laboratory, Transplant go-live scheduled

- **18,000+ Users**
  - Faculty
  - Clinical Volunteers
  - Residents/Fellows
  - Therapists, Technicians, Clerical and Other Staff

- **Stabilization** (6 months)
- **Optimization**
Optimization Goals & Objectives

- Develop governance structure to approve & prioritize optimization requests
- Ensure coordination & collaboration between IT & Department of Nursing
- Create process to effectively manage IT resources
- Improve engagement with front-line clinical nurses
What is Optimization?

Our definition...

Optimization is the continuous improvement of processes that help to enhance patient care, improve outcomes and create efficiency.

Basically, everything except break-fix!
REQUESTS COME FROM ALL DIRECTIONS

Bottom Up

Top Down

Strategic Initiatives
Optimization Workflow

- Is it worth pursuing? Is it possible?
- NI to create proposal & develop specs
- Present to governance group for approval & prioritization
- Submit to Application Team for build
- Coordinate communications & training
Nursing leader proposes an initiative

Leader develops proposal & obtains consensus

• Standardization
• Nursing Informatics team can assist with proposal

Presented to workgroup as ‘informational’

• No nursing related changes are put into production without workgroup notification
Strategic Initiatives Road Map

- IT Initiatives
- Strategic Decision Drivers
- Business Owner Initiatives

Run/Grow/Transform  Business Categorization  Budgeting and Funds Flow
Management is doing things right; leadership is doing the right things.

Peter Drucker
GOVERNANCE
“When everything is a priority, then nothing is a priority”

Simon Fulleringer, IT professional
Key Guiding Principles

• Decisions will be made based upon the best interests of the patients.
• We will focus on the best approach for the overall UCLA organization, while considering and balancing the needs of individual departments.
Governance Structure

Executive Committee

- Inpatient Advisory
- Ambulatory Advisory
- Revenue Cycle Advisory

Workgroups & Task Forces
Governance

Workgroup
‘Local’ impact
70%

Advisory Group
Wide impact
20%

Executive Group
System Impact
10%
Nursing Workgroups

- Nursing prioritization - M/S & ICU
- Mother - baby
- Emergency Department
- Perioperative
- Psychiatric Nursing
- Pediatrics
- Ambulatory
- Medication Administration
- Patient Education

Most groups meet monthly

Chaired by Nursing Informatics

Striving for 50% Clinical Nurse participation
Task Forces - examples

- Handover Reports
- Discharge Instructions
- Code blue documentation
- Admission assessment
- Laboratory order management
- Sepsis
- Blood administration

Task forces make recommendations to applicable workgroups

Task Forces are formed around specific topics

Short term
(most 2-4 meetings)
Strategic Initiatives Road Map

- IT Initiatives
- Business Owner Initiatives
- Strategic Decision Drivers

Run/Grow/Transform  Business Categorization  Budgeting and Funds Flow
DEFINITIONS

• Run (65% benchmark):
  – Cost of doing business/continuing operations
  – *Example: Infrastructure upgrades, software upgrades/patching*

• Grow (20% benchmark):
  – Enhancing products, services or experiences.
  – *Example: Software replacements, data center growth/expansion*

• Transform (15% benchmark):
  – New products, new business models, or new markets.
  – *Example: Mobile technologies, Epic Bedside, Innovations*
| Strategic Initiative Drivers | Aligns with Education Mission | Aligns with Research Mission | Aligns with Community Mission | Aligns with Clinical Care Mission | Improves Quality/Safety | Ensures Business Continuity | Improves Customer Experience | Regulatory/Compliance/Contractual | Increase Revenue/Decreases costs | Improves Operational Efficiency |
Using the scoring criteria below, we identified to what extent and manner did [a given project] impact each of the requirements below:

<table>
<thead>
<tr>
<th>Aligns with Clinical Care Mission</th>
<th>Aligns with Community Mission</th>
<th>Aligns with Education Mission</th>
<th>Aligns with Research Mission</th>
<th>Ensures Business Continuity</th>
<th>Improves customer experience</th>
<th>Improves quality/safety</th>
<th>Increases revenue/ decreases costs</th>
<th>Operational efficiency</th>
<th>Regulatory/ Compliance/ Contractual</th>
</tr>
</thead>
</table>

This project negatively impacts this Decision Driver to a great degree.
This project negatively impacts this Decision Driver.
This Decision Driver does not apply to this project.
This project positively impacts this Decision Driver to a limited extent.
This project positively impacts this Decision Driver to a moderate extent.
This project positively impacts this Decision Driver to a significant extent.
This project positively impacts this Decision Driver to a considerable extent.
This project positively impacts this Decision Driver to the greatest degree possible.

Scoring Criteria and Decision Drivers

0 1 2 3 4 5 6 7 8 9 10

did [a given project] impact each of the requirements below:
## Sample Budget Table with Budget Markers

<table>
<thead>
<tr>
<th>Score</th>
<th>Proposal Name</th>
<th>2014 Budget</th>
<th>2015 Budget</th>
<th>2016 Budget</th>
<th>2017 Budget</th>
<th>2018 Budget</th>
<th>Cumulative Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>547</td>
<td>OPP Datacenter Network Switch Replacement</td>
<td></td>
<td>$440,000</td>
<td></td>
<td></td>
<td></td>
<td>$440</td>
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<tr>
<td>580</td>
<td>Internet traffic sniffer replacement</td>
<td></td>
<td>$120,000</td>
<td></td>
<td></td>
<td></td>
<td>$560</td>
</tr>
<tr>
<td>460</td>
<td>OPP Row 8 Data Center Expansion</td>
<td></td>
<td>$424,958</td>
<td></td>
<td></td>
<td></td>
<td>$985</td>
</tr>
<tr>
<td>780</td>
<td>OPP chiller replacement</td>
<td></td>
<td>$900,000</td>
<td></td>
<td></td>
<td></td>
<td>$1,885</td>
</tr>
<tr>
<td>607</td>
<td>Servers Refresh</td>
<td></td>
<td>$850,000</td>
<td></td>
<td></td>
<td></td>
<td>$2,735</td>
</tr>
<tr>
<td>636</td>
<td>Print Cluster Upgrade</td>
<td></td>
<td>$75,000</td>
<td></td>
<td></td>
<td></td>
<td>$2,810</td>
</tr>
<tr>
<td>568</td>
<td>Pager Refresh</td>
<td></td>
<td>$98,000</td>
<td></td>
<td></td>
<td></td>
<td>$2,908</td>
</tr>
<tr>
<td>0</td>
<td>DNS Server Hardware Refresh</td>
<td>$200,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$3,108</td>
</tr>
<tr>
<td>0</td>
<td>MP200 Paging Cabling Upgrade</td>
<td>$100,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$3,208</td>
</tr>
<tr>
<td>738</td>
<td>Network Wilshire Center Infrastructure Refresh</td>
<td></td>
<td>$585,000</td>
<td>$585,000</td>
<td></td>
<td></td>
<td>$3,793</td>
</tr>
<tr>
<td>0</td>
<td>SDSC Cabinet Expansion</td>
<td></td>
<td>$207,000</td>
<td></td>
<td></td>
<td></td>
<td>$4,000</td>
</tr>
</tbody>
</table>

$4M | Budgeted: $4m | Band Total: $4m | Allocation: 100% | Cumulative Total: $44m

| 706   | WOW Refresh                                                                  | $1,050,867  | $1,050,867  | $1,050,867  | $1,050,867  |             | $5,051          |
| 628   | Computer Hardware Refresh - PCs and Printers                                   |             | $2,107,655  |             |             |             | $7,159          |
| 622   | E-Fax Service Upgrade                                                         |             | $115,000    |             |             |             | $7,274          |
| 702   | Enterprise Storage Consolidation and Expansion                                |             | $500,000    |             |             |             | $7,774          |

$8M | Budgeted: $8m | Band Total: $3.8m | Allocation: 97% | Cumulative Total: $7.8m

| 722   | UPS IDF Replacement                                                           |             | $240,000    |             |             |             | $8,014          |
| 629   | Paging Transmitter Disaster Recovery Equipment                               |             | $16,000     |             |             |             | $8,030          |
| 471   | System Center Refresh (SCCM & SCOM)                                          |             | $207,000    |             |             |             | $8,237          |
| 573   | Desktop VoIP refresh                                                         |             | $1,100,000  |             |             |             | $9,337          |
| 548   | Check Point (Pointsec) Encryption Upgrade                                    |             | $75,000     |             |             |             | $9,412          |
| 518   | Virtual Private Network Upgrade and Redesign                                  |             | $75,000     |             |             |             | $9,487          |

$10M | Budgeted: $10m | Band Total: $1.7m | Allocation: 95% | Cumulative Total: $9.5m
FY2016 PROJECTS BETWEEN 5.5% AND 6.0% LIMIT
FY2016 Spend by Type

- Transform
- Grow
- Run
FY2016 Spend by Category

- Business
- CareConnect
- Clinical
- Data & Analytics
- Infrastructure

< 5.5%
< 6.0%
< 6.5%
ALLOCATING RESOURCES
Prioritization

Effort < 40 hours

- Service Request
- Prioritized by workgroup or advisory group

Effort > 40 hours

- Project
- Follows PMO processes

Date: 4/27/15
Allocating resources

- **30%** Quick wins, innovation <40 hour projects
- **30%** New business, complex projects > 40 hour projects
- **40%** General maintenance / administrative / Break-fix (non-optimization)
### Decision Point: Define who can change an Inpatient Name

#### Background/Context:
- Concerns have been raised about the medical necessity for positively associating a patient with their legal name. Epic’s strong recommendation is to utilize the “Alias” field for the legal name, then update or merge (if existing MRN) after discharge.
- Alias does not print on wristband.
- There are >200 Templates in CareConnect that can change the Inpatient names and name and this is occurring without coordination of the Nurse and downstream systems such as Blood Bank, Lab and Pharmacy.

#### Link to Guiding Principles:
- Decisions will be made based upon the **best interests of the patients**.
- We will focus on the best approach for the **overall UCLA organization**, while considering and balancing the needs of various constituencies.
- **Workflow process standardization** to drive consistent outcomes will prioritize enterprise-wide objectives versus individual, unit or department-specific objectives.

#### Key Considerations:
ED personnel can update the patient’s name without any downstream implications **until the patient is marked Arrived in the ED**.

If the patient’s name is updated prior to surgery or before transfer to the inpatient bed:
- Significant delays in providing blood products to the patient could occur.
- Every downstream interfaced system must accept the name change.
- Printed armbands, labels, etc. would need to be reprinted for proper patient identification.
- There must be intense coordination among a designated team of CareConnect support and ancillary department personnel to assure downstream systems stay in sync.

#### Risks:
Significant positive and negative testing needs to be completed to determine the full functionality of Security Point-99.

#### Recommendations:
- Remove Security Point-99 in PLY, POC and TST from all Templates with the exception of:
  - ADT UCLA PT Access Supervisor Template
  - ADT UCLA NPH PT Access Template
  - HIM UCLA Coding Director
  - HIM UCLA Chart Correction Analyst
  - HIM UCLA NPH Director
  - HIM UCLA PROJECT MANAGER TEMPLATE
  - HIM UCLA TRANS/ID STAFF TEMPLATE
  - OB Nursing Staff (3040000041 IP UCLA OB Nurse Template)
  - T HIM, ADM
- Once testing is completed and passed by the Testing team migrate the change into production.

#### Process:
When the trauma patient arrives on the nursing unit and the patient does not have blood transfusing/ordered and the patient is not going to OR the RN will:
- Notify Admissions of the name change and MRN.

Admissions will change the name and:
- Print new armband, labels and facesheet and will send them to the Nursing Unit.
- Notify: Communications, Security, Patient Placement, Blood Bank, Clinical Lab and Pharmacy of the MRN and name change.

RN will:
- Discard Trauma armband, labels and facesheet.
- Place new armband on patient and put the labels and facesheet in the chart.
Responsibilities

- **Nursing Informatics**
  - Define specifications (what exactly is needed)
  - Obtain governance approval
  - Assign to application team w/priority indicated
  - Communication back to requestor – status updates
  - Final review with business owners

- **Application Team**
  - Complete feasibility (estimate effort)
  - Design, build, testing
  - Change control & move to production

- **Principal Trainer**
  - Prepare end-user communication
  - Prepare & circulate training materials

- **Super User**
  - Unit based champion for new features
ASSESSMENT & OPPORTUNITIES
# RN Satisfaction Survey Results

<table>
<thead>
<tr>
<th>RN Satisfaction Survey</th>
<th>2014</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHR tools support effective communication</td>
<td>84%</td>
<td>81%</td>
</tr>
<tr>
<td>Overall satisfaction with reporting</td>
<td>81%</td>
<td>70%</td>
</tr>
<tr>
<td>Overall satisfaction with training</td>
<td>90%</td>
<td>79%</td>
</tr>
<tr>
<td>EHR tools are efficient and easy to use</td>
<td>82%</td>
<td>72%</td>
</tr>
</tbody>
</table>
### Opportunities

<table>
<thead>
<tr>
<th>Challenges:</th>
<th>Action:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nursing Informatics structure being separate from Physician Informatics structure</td>
<td>Developed integrated Clinical Optimization Review Council (CORC)</td>
</tr>
<tr>
<td>Analyst perception that they were losing the relationship with the business owner</td>
<td>Ensure analysts are included in planning meetings &amp; recognize the skills set they provide</td>
</tr>
<tr>
<td>Challenging getting clinical nurses to participate on workgroups</td>
<td>Offer money! Still a work in progress</td>
</tr>
<tr>
<td>Changes going into production too frequency; too many emails!</td>
<td>Non-urgent changes put into production twice a month</td>
</tr>
</tbody>
</table>
Clinical Optimization Review Council (CORC)

- **Structure:**
  - Meets weekly
  - Reviews both projects & service requests
  - Includes all clinical informatics teams & application teams

- **Function:**
  - Reviews all ‘wide-reaching’ clinical initiatives to determine:
    - Clinical appropriateness (filter)
    - Appropriate governance structure (approval & prioritization)
    - Applicable clinical & application teams (who’s on first!)