

Using Intranet Web Applications to Meet Security Needs



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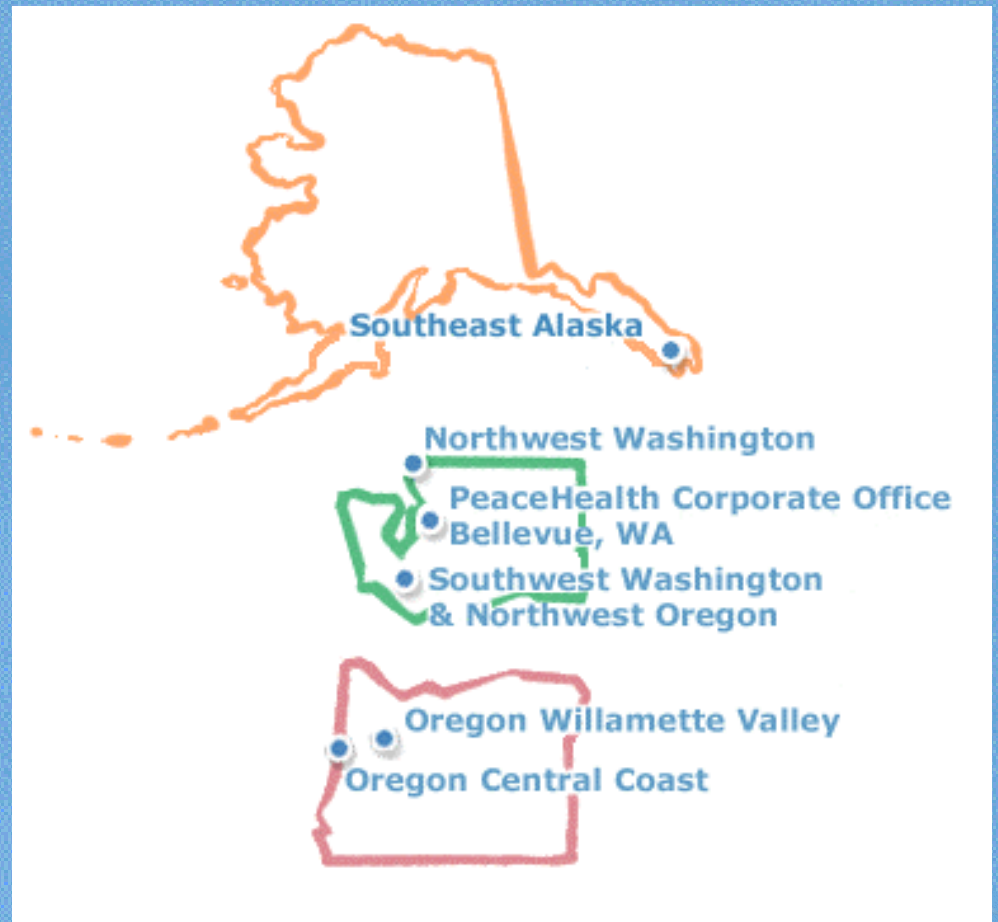
Two Sections:

- Implementing an Online System for Executing and Renewing Confidentiality Agreements
- Organizing and Centralizing the Access-granting Process for Multiple Information Systems Containing PHI



Background on PeaceHealth

- Sponsored by the Catholic Sisters of St. Joseph of Peace
- 6 hospitals, 200+ physician practices, 3 home health agencies in 5 regions, 3 states
- 8,500 employees
- 12,000 info system users



Background on PeaceHealth

info systems that link our entities together:

- “Community Health Record”
 - IDX LastWord
 - IDXtend
- Organization-wide Intranet – “Crossroads”
- Other organization-wide systems
 - ESI (materials mgmt, surgery)
 - Infinium (HR)
 - Applix (Corporate Help Desk)
 - Etc.



Part 1

Online Confidentiality Agreements

Mandate:

- Create a system to capture annual renewals of confidentiality agreements electronically for all PeaceHealth information system users
- Block access to information systems for all users who fail to renew their agreements.



Narrowing the Scope

(issues)

- Requirement for annual renewal was a new concept for some PeaceHealth Regions
- No uniform policy requiring annual renewal
- Separate systems track “Users” vs. “Employees.”
 - Despite significant overlap, interconnectivity between the two is inadequate
- Majority of non-employee users are Providers and their office staff
 - Require special handling



Narrowed Scope for First Year (2001)

- Limited to PeaceHealth employees
- No concrete consequences for failure to renew
- Scope to be expanded in subsequent years



Technical Design

- Data resides in Applix (Help Desk) caller database
 - Network user ID
 - SSN as entered by user
 - SSN as stored in Applix Caller table
 - Date stamp
- “Signature” captured via intranet web page linked to Applix DB
- Detailed reports available to Region Coordinators online
- Nightly download sends data to Infinium HR system
- Managers able to view compliance data for their employees via HR “Manager Dashboard.”




Technical Design: Online Agreement

Security Agreement - Microsoft Internet Explorer provided by Crossroads

File Edit View Favorites Tools Help

Back Forward Stop Refresh Home Search Favorites Media History Print

Address <http://shmcsq11/apps/helpdesk/SecurityAgreement/> Go

 **Statement and Agreement
Regarding PeaceHealth Information**

As a user of PeaceHealth information, you may develop, utilize or maintain patient information, employment information, or business information hereinafter referred to as "PeaceHealth Information". PeaceHealth Information from any source in any form (including paper records, oral communication, audio recordings, and electronic displays) is **strictly** confidential. Access to PeaceHealth Information is permitted only on a *need-to-know* basis.

All users of PeaceHealth Information shall comply with PeaceHealth's policies and procedures to respect and preserve the privacy, security, and confidentiality of PeaceHealth Information.

Violations of PeaceHealth's policies and procedures may include, but are not limited to:

- Accessing information that is not within the scope of your job or responsibilities to PeaceHealth.
- Leaving patient medical records or charts in an unsecured place or leaving a secured application unattended while signed on.
- Misusing, disclosing without proper authorization, or altering PeaceHealth Information.
- Disclosing your sign-on code and/or password or using another person's sign-on code and/or password for accessing electronic or computerized records.
- Discussing patient, employment and/or business information in a public place (e.g. elevator, cafeteria).

Violation of PeaceHealth policies and procedures by any user of PeaceHealth Information may constitute grounds for corrective action, up to and including termination of employment or loss of medical staff privileges, in accordance with applicable Medical Staff Bylaws, Rules, and Regulations. Violation of PeaceHealth policies and procedures by students may constitute grounds for corrective action in accordance with applicable PeaceHealth or educational institution procedures. Violation of PeaceHealth policies and procedures by third parties, such as vendors, may constitute grounds for termination of the contract or other terms of affiliation. Violation of PeaceHealth policies and procedures may also result in civil and/or criminal liabilities and penalties.

I agree to comply with the terms of the above statement and have also read and agree to comply with PeaceHealth Information Systems Security, and Communications [Policies](#). I understand that the obligations set forth in this statement and agreement continue beyond the end of my relationship with PeaceHealth.

Network/E-mail Logon Name: Social Security #:

Done Local intranet

Technical Design: Online Administrative Reports

Security Agreement Reports - Microsoft Internet Explorer provided by Crossroads

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Address <http://shmcsq11/apps/helpdesk/securityagreement/reports.asp> Go

[Crossroads](#) Security Agreement Reports

- [Who has signed](#)
- [Who hasn't signed \(HR\)](#)
- [Who hasn't signed \(Applix\)](#)
- [SSNs don't match](#)
- [Department manager maintenance](#)

[Crossroads](#) Who Has Signed

[Back to reports](#)

Taken between: 8/20/01 and

NT Logon:

Region: (Applix)

Company: Whatcom (HR)

Department: (HR)

NT Logon	SSN Given	SSN Lookup	Name	Department	Datestamp
L	JD		ANC	JUNISH	PHARMACY SERVICES 2/19/02
T	RM		ARN		PEDIATRICS 8/22/01
R	TH		ATH		MATERNAL CHILD SERVICES 10/29/01
T	IG		BIGI	RELL	ENVIRONMENTAL SVCS 9/26/01
M	DU		BOL		HINET 10/1/01
O	JC		BUC	FREY	EMERGENCY SERVICES 12/5/01
S	JT		BUT		MEDICAL CARE UNIT 1/23/02
L	AB		CAR		PHARMACY SERVICES 2/17/02
H	HR		CHR		INTENSIVE CARE 1/15/02
D	AH		DAF		SOCIAL DETOX 1/24/02
S	RD		ERD		MATERIALS MANAGEMENT 2/14/02
K	AR		FAR		RECOVERY CENTER NURSING 2/7/02
E	AN		HAN		ENVIRONMENTAL SVCS 10/29/01

Done

Technical Design; Manager Dashboard

http://sis400:3030/phnet/corp.d2w/validate - Microsoft Internet Explorer provided by Crossroads

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Address http://sis400:3030/phnet/corp.d2w/validate Go

Crossroads

Welcome to the Manager Dashboard

► **Department and Employee Information** *(for direct reports)*

- [Basic Employee Information](#)
- [Job & Salary Range Report](#)
- [PTO Report](#)

► **Service Line Information** ~ *View basic info, ranges*

- [By Department](#)
- [By Manager](#)

► **Training Participation Information**

- [By Employee](#)
- [By Course](#)

► **Other Reports**

- [HID Applix Dashboard](#)
- [Job Posting Request](#)

Crossroads

Course Warnings

RED: Course has NOT been taken.

PINK: Course date has expired.

YELLOW: Course EXPIRES in less than 60 days.

All Employees are required to take annually:

- Body Mechanics
- Electrical Safety
- Emergency Preparedness
- Fire Safety
- Hazard Communications

All Employees with patient contact are required to take annually:

- CPR (Either CPR review or CPR Basic Life Support for SHMC only)
- Infection Control
- Age-Specific Training

Nursing employees at SHMC are required to take annually:

Course Warnings for Confidentiality Agreement

Click on Employee Name to view complete History

Employee	Date	Class
DUCK, FIGHTING L	N/A	Confidentiality Agreement

Click on Employee Name to view complete History

1 Total Employees

1 Employees have not taken this course or course has expired.

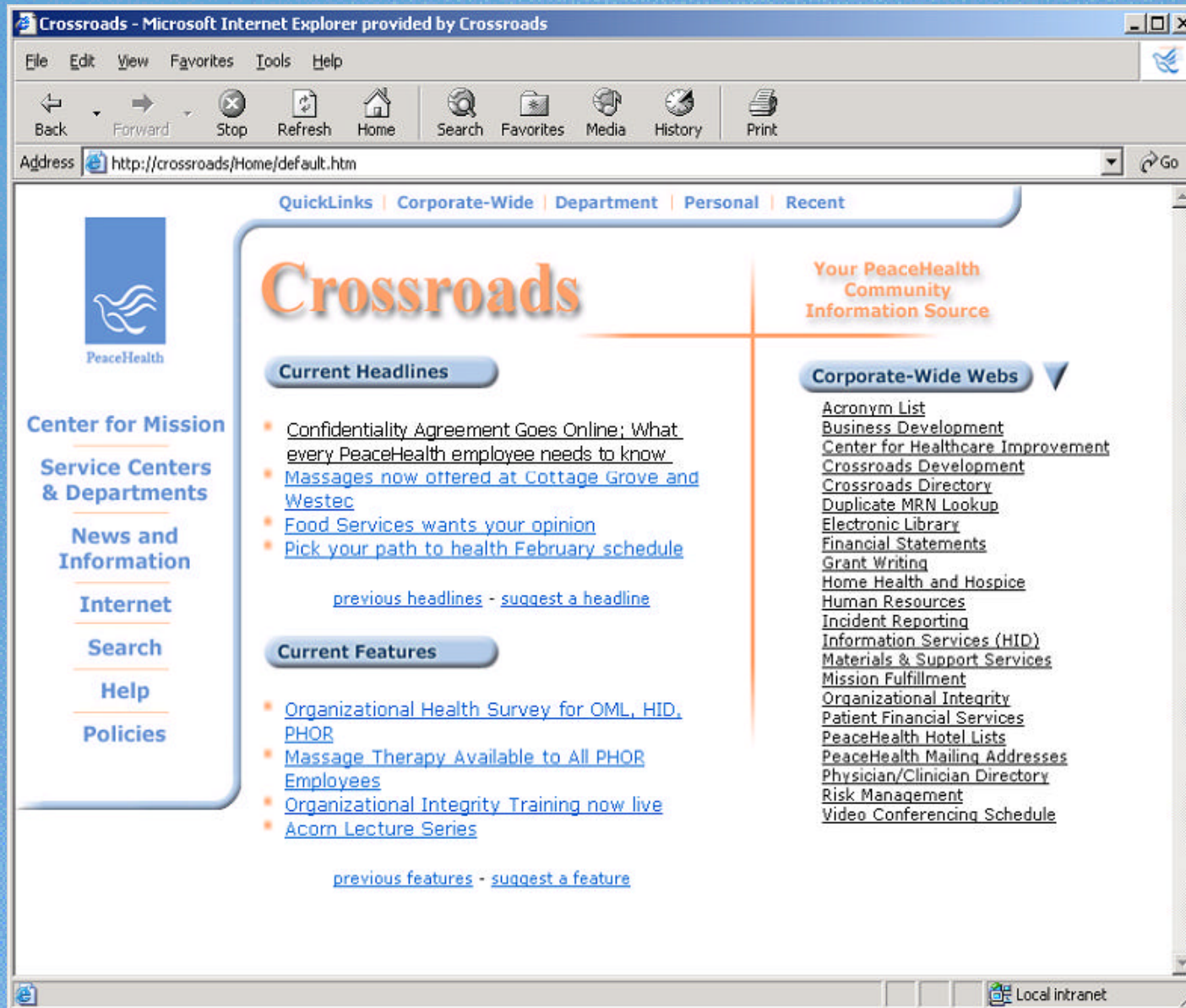
Participation: 0%

Communications

- Announcements made in regional management meetings
- E-mail announcement to all management
- Announcements in regional employee newsletters
- Bulletin board posters
- “Headline” article on intranet home page
- Reminder e-mails



Communications: Intranet Homepage




Communications: Instructions & Link to Agreement

Service Center - Microsoft Internet Explorer provided by Crossroads

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Address http://crossroads/SC_OI_Corp/DispMenu/ Go

 **Confidentiality Agreements go Online**

Date: April 16, 2001
To: All PeaceHealth Employees
From: Security and Privacy Oversight Committee
Re: Organizational Integrity Task Force
Sign Agreements on-line

What EVERY PeaceHealth Employee Needs to Know

If you are a PeaceHealth employee, this information is for YOU. Starting this year, all PeaceHealth employees will be required to renew their Confidentiality Agreements online. With our ever-increasing electronic capability at PeaceHealth, this annual task will be automated for all employees whether you work in a clinic, the hospital, or another location. And the great news—it isn't difficult. In fact, it takes only a few minutes.

Here is the **Step-by-step Procedure** for online renewal of the Confidentiality Agreements.

<p>After reading the instructions to the right, click here to renew your agreement on-line.</p>	<ol style="list-style-type: none">1. If you have not logged on to the PeaceHealth Network within the last 90 days, please call the Help Desk before proceeding. You will need to have your Network Password reset. You can contact the Help Desk from most facilities by dialing extension 6464. If you are unable to use the above extension, please call (541) 686-6464, or 1-800-452-1425.2. Read the Statement and Agreement Regarding PeaceHealth Information. If you would like more information regarding PeaceHealth's Information Security Policies, click here.3. When you are ready to renew your agreement, type your personal NT Network logon name (343) in the first box at the bottom of the agreement page. Next, type your Social Security Number, without dashes, in the second box. Network/E-mail Logon name: <input type="text"/> Social Security #: <input type="text"/> <input type="button" value="I AGREE"/> Example: The Network Logon for John Hill is JHILL The Network Logon for Kathy Robison is KATROB22 Note: Do not include dashes in the SSN.4. Click the <I AGREE> button.5. Close Crossroads.6. If you are finished using the computer, log off.
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For a list of Frequently Asked Questions, continue reading below.

[Home](#) | [OI Home](#) | [OITF](#) | [HIPAA/SPOC](#) | [Plans](#) | [Policies](#) | [Education](#) | [Contact Us](#)

Done Local intranet


Renewal Month – Process

- Started with e-mail announcement (with link to instructions) to all employees
- Weekly reports to managers
- Weekly e-mail reminders sent to those who had not yet renewed (auto-generated distribution list)
- Troubleshooting, assisting, responding to questions and issues



Renewal month; Weekly Reports to Managers

(also available via Manager Dashboard)

 Who Hasn't Signed (HR)		
Back to reports		
Report for Corporate, ORGANIZATIONAL INTEGRITY department.		
Name	Title	SSN
BA	HIPAA PROJECT LEADER	C 10
BE	AA ORGANIZATIONAL INTEGRITY	E 51
CH	RET DIR IS SECURITY	4 23
HA	DIR CORP CMU CQS HI	E 52
JC	V REG COORD, SECURITY & PRIVACY	E 39
RA	REG COORD, SECURITY & PRIVACY	E 23
SH	LE REG COORD, SECURITY & PRIVACY	E 11
VA	NE CORPORATE INTERNAL AUDITOR	1 30

Renewal month; Reminder e-mail

From: Johnston, Kevin
Sent: Wednesday, May 02, 2001 1:58 PM
To: DL:SJH-Unsigned Security Agreement
Subject: Re-Sign On-Line

Re-Sign On-Line!

This is the month for you to renew your confidentiality agreement with PeaceHealth.

As part of our efforts at PeaceHealth to be diligent about confidentiality and security of private information, we have automated our annual confidentiality agreement renewal process. An electronic renewal form is now available on Crossroads, and it takes only a few minutes to complete.

Renewal is required for all PeaceHealth employees, so don't delay! Renew your confidentiality agreement today.

To learn more about the Online Confidentiality Agreement, click on:
http://phcinet1/News_CorporateCenter/Agreement.htm

To go directly to the online confidentiality agreement, click on:
<http://shmcsq11/apps/helpdesk/SecurityAgreement/>

If you have any questions about renewing your confidentiality agreement online, please contact Tonya Ramsay, your Regional Coordinator for Security and Privacy at (360) 738-6300, ext. 2265.

Thank you!



Renewal month: Issues encountered

- New hires
 - Newly hired employees signed a paper agreement, but show up in the system as not having renewed.
- Social Security Number
 - Some employees uncomfortable with entering SSN online



Solutions – New hires

- Decided that, if hired > 6 months prior, not required to renew
- Communicated this repeatedly
- Some managers had new hires renew anyway to “clean up” data on Manager Dashboard



Solutions – SSN

- Provided information on actual confidentiality of SSN
- Provided information on our use of SSN
- Came up with a “witness” process for those who absolutely refused to enter SSN



Results from first year

- Over 95% of PeaceHealth employees renewed their agreements
- Some regions began to use online renewal system to capture original signatures, not just renewals



Planning for Year 2

- Policy requiring annual renewals of confidentiality agreement needed
- Desire to expand scope to:
 - include non-employees
 - block access for those who fail to renew
- Eliminate problems with new hires and SSN



Year 2

Expanded Scope & Improvements

1. Require independent providers and their office staff who have access to our info systems to renew agreements annually
2. Block access to information systems for most users who fail to renew their agreements.
3. Eliminate use of SSN
4. Account for new hires



1. Include independent providers and their office staff

- Identification: Independent providers are registered in our systems no differently than employed providers
- Not all are set up as Network users – required for online agreement renewal
- Deactivation of independent providers a sensitive issue

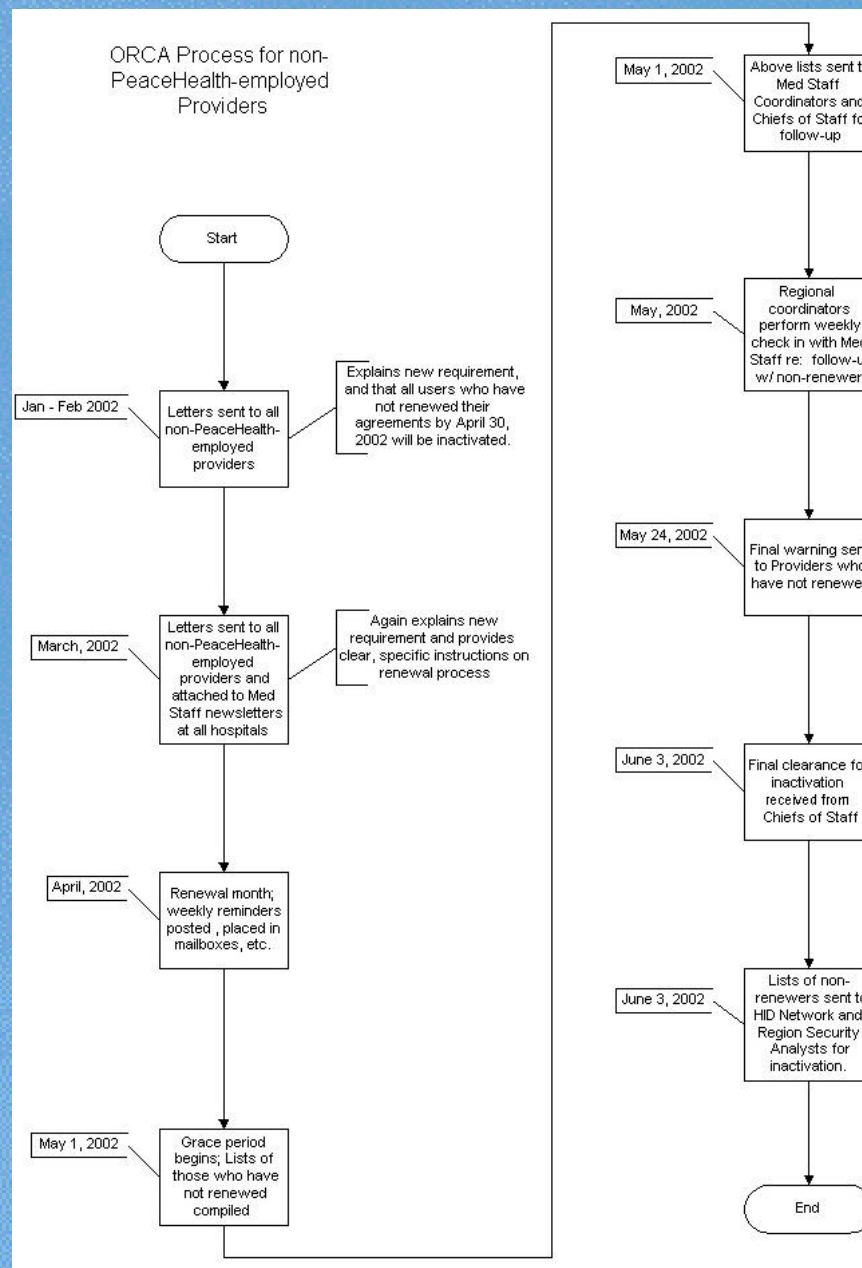


2. Block access to information systems for most users who fail to renew their agreements

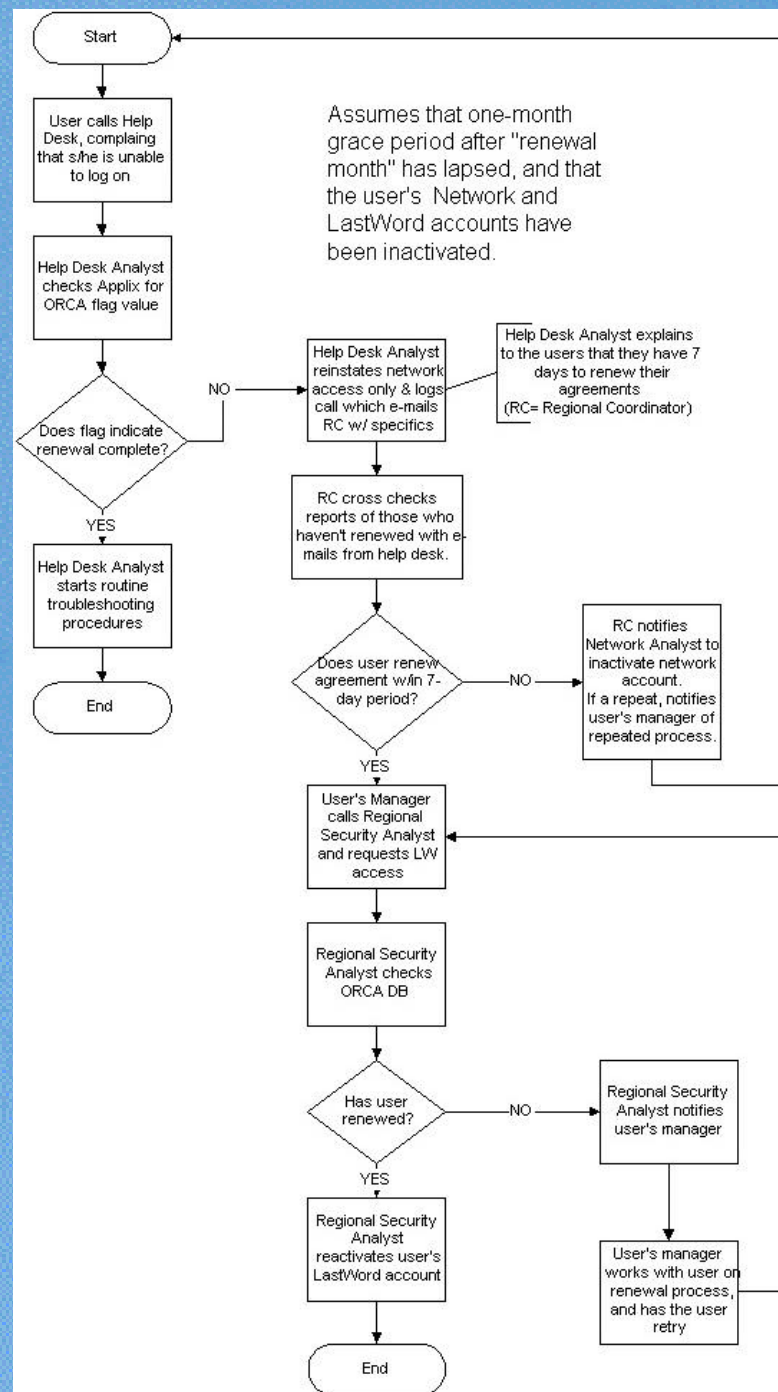
- Politically charged; inactivated personnel will be unable to work
- Requires parallel processes; significant applications (LastWord, IDXtend, etc.) don't require network login for access
- Reactivation process complex and involves many players



Deactivation Process (Independent Providers)



Reactivation Process (LastWord)



3. Eliminate use of SSN

- SSN was used only to link renewal record with user's HR record
- HR system now stores network ID for each employee
- Programming change enacted to transfer renewal record to HR system using network ID as link instead of SSN



4. Account for new hires

- Some regions are having new hires sign agreement electronically
- New policy requires that, when signed on paper, HR must enter record of agreement in electronic system
- Manager Dashboard now correctly reflects new hire signatures

Renewal Month Process; Year 2

- Communicate re: potential loss of access for failure to renew
 - Letters to independent providers
 - Announcements to management
 - Announcements in employee newsletters
- Weekly reports to managers
- Weekly e-mail reminders sent to those who have not yet renewed (auto-generated distribution list)
- Troubleshooting, assisting, responding to questions and issues



Planning for the future

- Include all other systems users
 - Students
 - Vendors
 - Volunteers
- Technical possibilities
 - Integrate with other systems better
 - Systems access database?
 - Automate deactivations?



Part 2

Organizing the Access-granting Process for Multiple Information Systems Containing PHI



Systems and Applications in use at PeaceHealth

(a partial list)

- Network/E-mail
- IDX LastWord (Clinical/ HIS)
- IDXtend (Practice Mgmt.)
- Antrim (LIS)
- Lanier Transcription Services
- ESI (Materials Mgmt; Surgery)
- Enterprise View (Clinical Data Warehouse)
- Applix (Help Desk; User database)
- Infinium (HR, Training/ Education tracking)
- Morrissey (Med Staff Mgmt.)
- Cascade (Inpatient coding)
- HcM (Financial Decision Support)
- Pyxis (Pharmacy)



Current Processes involve in various combinations:

- Managers
- Desktop Support Analysts
- Systems Administrators
- Data Stewards
- Security Analysts

Defining the need

- Define “access”
- Comply with HIPAA rules (Privacy & Security)
- Centralize access-granting, modification, and termination processes
- Facilitate manager involvement
- Make it auditable



Defining the Need: What is “Access?”

- Noun: the ability or right to enter or use
 - (a non-material possession)
- Verb: to make contact with or gain access to
 - (an action)

Defining the Need: Levels of Access

- Level 1: everything up to, and including, general access to an information resource; one can “open the door”
- Level 2: once you're “in the door” of the information resource, what “rooms” you can get into
- Level 3: once you are “in the room,” what you actually do (behavior)



Defining the Need: Comply with HIPAA Rules

Privacy § 164.514(d)(2)(i) re: Minimum
Necessary

A covered entity must identify:

- (A) Those persons or classes of persons, as appropriate, in its workforce who need access to protected health information to carry out their duties; and
- (B) For each such person or class of persons, the category or categories of protected health information to which access is needed and any conditions appropriate to such access.



Defining the Need: Comply with HIPAA Rules

Security (proposed) § 142.308(a) re:
Administrative Procedures; Information Access
Control

- Access authorization policies and procedures
- Access establishment policies and procedures
- Access modification policies and procedures



Defining the Need: Comply with HIPAA Rules

Security (proposed) § 142.308(c) re: Technical
Security Services; Access Control

- Context-based access
- Role-based access
- User-based access



Defining the Need:

Centralize the access granting, modification, and termination processes

- Eliminate questions about who controls access to what
- Create a place for “one-stop shopping” for access control



Defining the Need:

Facilitate manager involvement

- Managers are typically the ones to request access for staff
- Managers are typically most knowledgeable about what their staff people do and need access to
- Managers typically have front line accountability for staff behavior



Defining the Need: Make it auditable

- We should be able to monitor our compliance with our policies and with HIPAA rules

Envisioning a Solution

Q: What can we realistically control centrally?

A: Level 1 Access, some Level 2 Access



Envisioning a Solution: Different Needs

- New hires
- Job/responsibility changes
- Terminations
 - voluntary
 - involuntary



Envisioning a Solution: Different Systems

- Different attributes define a user in each system
- Different user name/ID conventions
- Some systems have less than complete user data (SSN)
- Different people manage systems – in some cases, different cultures

Envisioning a Solution: Putting it all Together

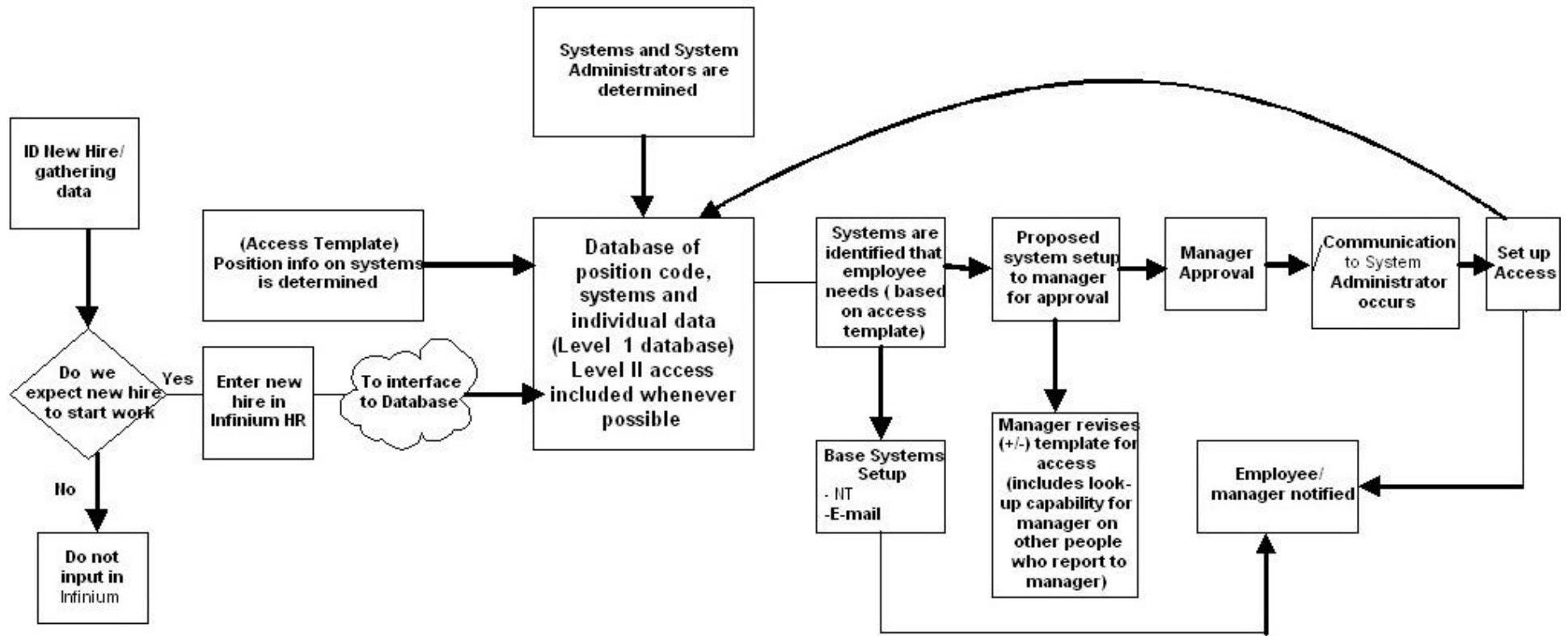
- Find ways to interface with the user file/table in each system
- Gather data
- Combine user data with employee data (job classes)
- Create User Access Templates
- Create system/processes that use, update, and reinforce templates



Putting it all Together, cont.

- Manager interface to allow:
 - Viewing user access templates
 - Per user
 - Per template
 - Adding or deleting selections for a user
 - Automatic reinforcement of user access templates
- Audit capabilities – templates and users

New Hire Process



System progress to date

New Hires - Microsoft Internet Explorer provided by Crossroads

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Address http://shmc_sdl1/apps/appl/wiseurity/

Crossroads
New Hires

[New Hires](#) • [Department Changes](#) • [Position Changes](#) • [Terminations](#)
[Problem SSNs](#) • [Name Changes](#) • [Security Class](#) • [User Lookup](#)

Hired between and LW Status:
 Region:

SSN	Name	Title	Department	HireDate	LastWord #	Suggested Class
55	2 F	TRANSCRIPTIONIST (CG)	SLMG - TRANSCRIPTION	3/11/02	26919 (A)	HDM4TRAN
54	2 T	LICENSED PRACTICAL NURSE	S MAIN - SURGICAL	3/15/02	26872 (A)	NRS01LICENSED
62	2 R	STAFF NURSE	S MAIN - SURGICAL	3/15/02	20246 (A)	NRS01LICENSED
41	2 W	STAFF NURSE	NURSE FLOAT POOL	3/15/02	26873 (A)	NRS01LICENSED
54	2 F	NURSING ASSISTANT (CNA)	MEDICAL (3M)	3/15/02	26874 (A)	NRS01SUPPORT
54	3 E	PHARMACY TECHNICIAN	PHARMACY	3/15/02	26875 (A)	RX01TECH
52	2 T	STAFF NURSE	S MAIN - SURGICAL	3/15/02	26876 (A)	NRS01LICENSED
55	1 C	LICENSED PRACTICAL NURSE	CARDIOPULMONARY UNIT	3/15/02		NRS01LICENSED
50	2 F	HOUSEKEEPER	ENVIRONMENTAL SERVICES	3/15/02		NONE
51	2 J	STAFF NURSE	S MAIN - SURGICAL	3/15/02	23069 (A)	NRS01LICENSED
54	2 T	RESOURCE NURSE	ASK-A-NURSE	3/19/02	13142 (A)	NONE
62	3 F	PHARMACY TECHNICIAN (PHMG)	CLINIC PHARMACY	3/22/02		PH01MGEXCLERK
56	2 F	SECRETARY	ENTEROSTOMAL THERAPY	3/22/02	11156 (I)	NRS01ETNCLERICAL
54	2 J	TRANSCRIPTIONIST (CG)	SLMG - TRANSCRIPTION	3/22/02		HDM4TRAN
54	2 J	NURSING ASSISTANT (CNA)	MEDICAL (3M)	3/22/02		NRS01SUPPORT
56	3 K	MEDICAL STAFF ASSISTANT II	MEDICAL STAFF SERVICES	3/22/02	22948 (A)	add new
11	2 C	MEDICAL SOCIAL WORKER	SHMC MEDICAL SOCIAL WORK	3/22/02	25789 (A)	SS01MSW
57	1 P	REGISTERED NURSE (PHMG)	URGENT CARE	3/22/02		P001CLINICAL
45	2 H	PHYSICIAN	BEHAVIORAL HEALTH	3/22/02	26721 (A)	PS00PSV
52	3 J	MEDICAL STAFF ASSISTANT I	MEDICAL STAFF SERVICES	3/22/02		add new
53	2 C	RADIOLOGIC TECHNOLOGIST (PHMG)	RADIOLOGY	3/22/02		IMG01TECH

http://shmc_sdl1/apps/appl/wiseurity/EditPositionDefault.asp?Company=005&PositionCode=320015&RegionID=4&FirstDate=LastDate=5

Local intranet





[Back](#)

Human Resources Information

SSN	Pref. Name	First Name	Last Name	MI	Cost Center	Gender	Location	Supervisor
	KEVIN	KEVIN	JOHNSTON	B	87160	?		?
Title		Department		2nd Job	2nd Department	Hire Date	Term Date	
REG COORD, SECURITY & PRIVACY		ORGANIZATIONAL INTEGRITY				10/21/85		

LastWord security

User #	First Name	Last Name	MI	DOB	Active	Title	Class	Pointer	Password Change	Last Login
213	KEVIN	JOHNSTON	B	06/01/1956	A	REGN COORD		00038	11/8/01	8/7/00 11:18:10 AM

VMS security

Account #	Name	Status
X213	KEVIN B JOHNSTON	Disuser

IDXTend security

User #	Mnemonic	Name	Profile	Sessions
213	KBJ01	JOHNSTON,KEVIN B		1

System Security

Caller	System	Comments	Date Granted	Date Revoked
kevjoh	NT	PHC - Johnston, Kevin Organizational Integrity - Eugene	1/14/98 11:01:31 PM	
kevjoh	Exchange	Kevin Johnston Corporate Organizational Integrity	3/19/98 10:03:38 AM	
KEVJOH	LastWord	JOHNSTON, KEVIN B	1/1/00	

Applix Information

Caller	Workgroup	Rep	Notes	Access Removed Date	Post Term Access
KEVJOH	PHC_OI_EUG	DAVCRA			N

Plans for the Future

(immediate)

- Provide manager access to systems access database via Manager Dashboard
- Display user access templates
- Suggest Level 1 access template per job class
- Allow manager interaction – selection and/or de-selection of specific systems Level 1 access



Plans for the Future

(long term)

Systems Access database may interact with other systems such as:

- Single Sign-On system
- Online Renewal of Confidentiality Agreements
- Others?



Questions?

