

Alaska Native Tribal Health Consortium Health Information and Technology

Thomas D. East, Ph.D.

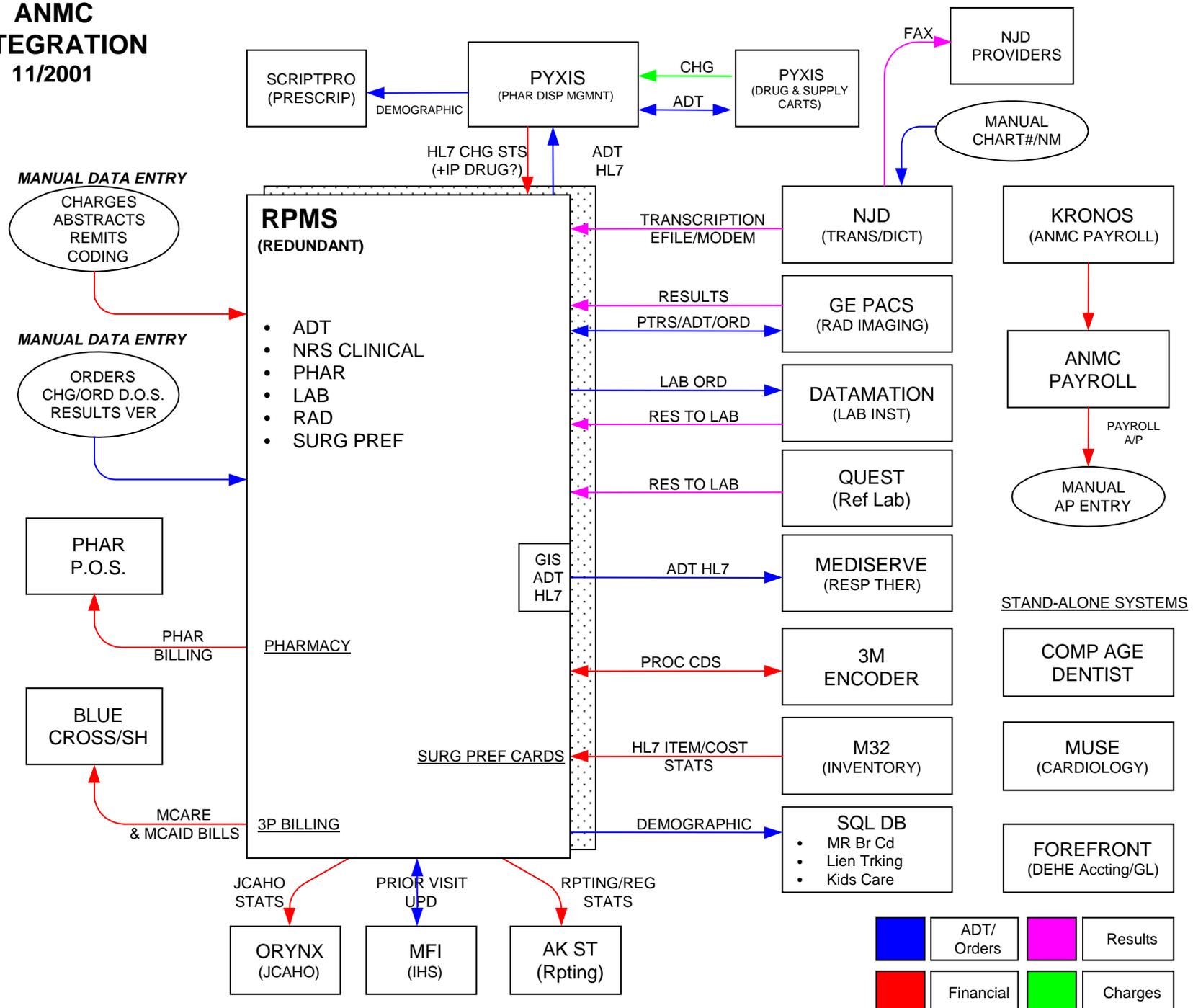
CIO

ANTHC

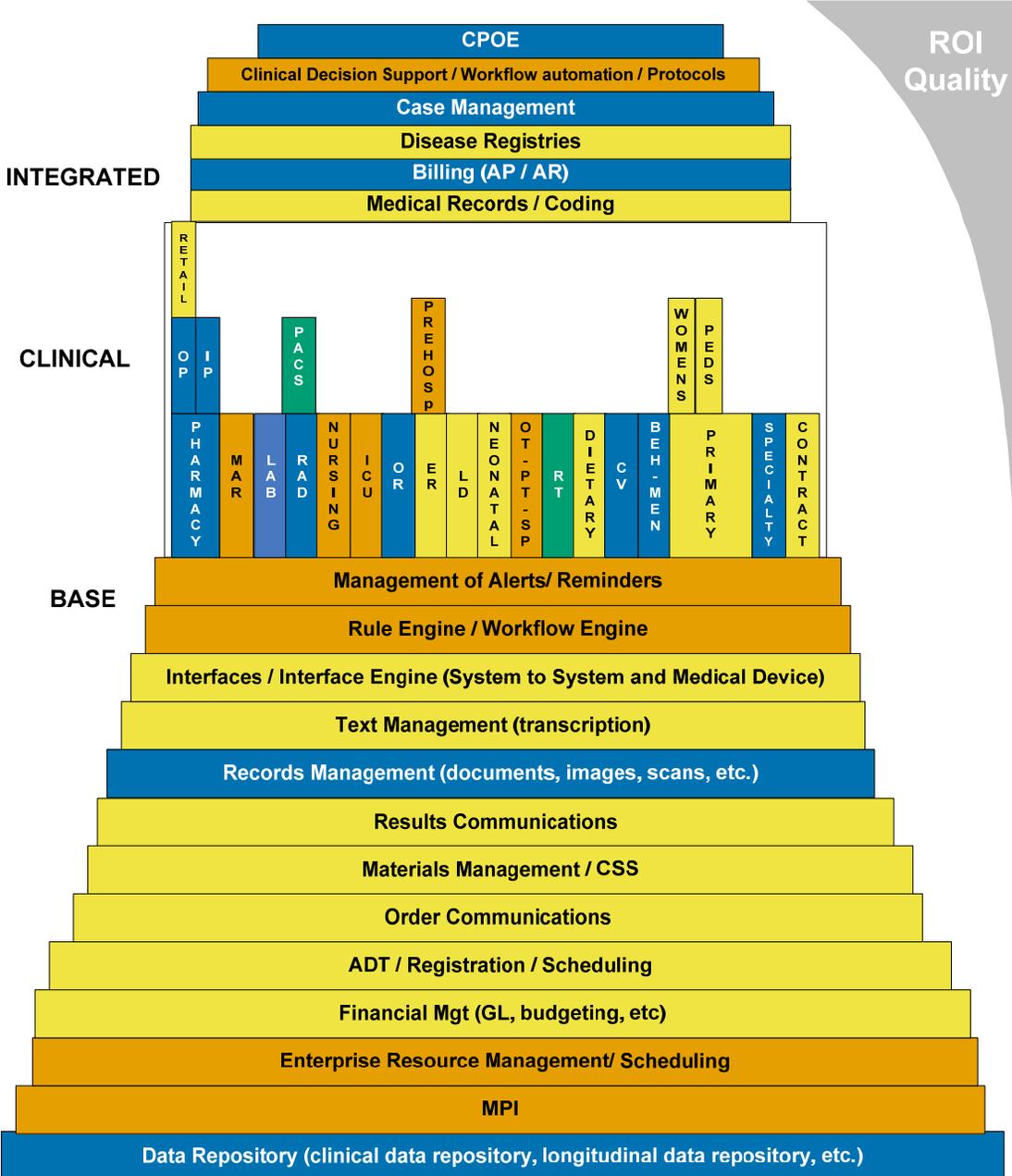


ANMC INTEGRATION

11/2001



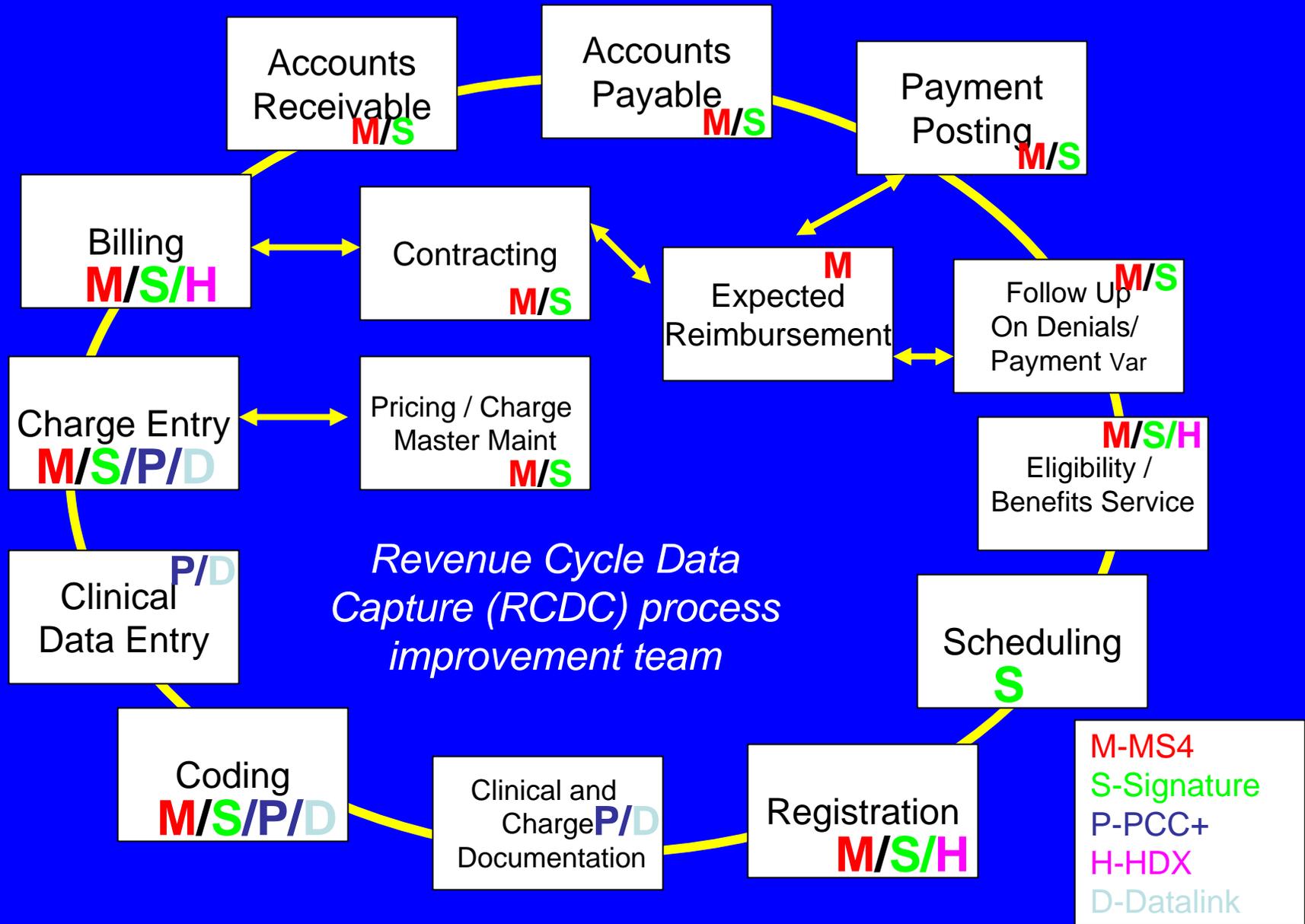
ANMC EMR 2000



ROI
Quality

Our existing systems did not meet our needs

ANMC Revenue Cycle Improvements 2000-2005



Accounts Receivable
M/S

Accounts Payable
M/S

Payment Posting
M/S

Billing
M/S/H

Contracting
M/S

Expected Reimbursement
M

Follow Up On Denials/
Payment Var
M/S

Charge Entry
M/S/P/D

Pricing / Charge Master Maint
M/S

Eligibility / Benefits Service
M/S/H

Clinical Data Entry
P/D

Revenue Cycle Data Capture (RCDC) process improvement team

Scheduling
S

Coding
M/S/P/D

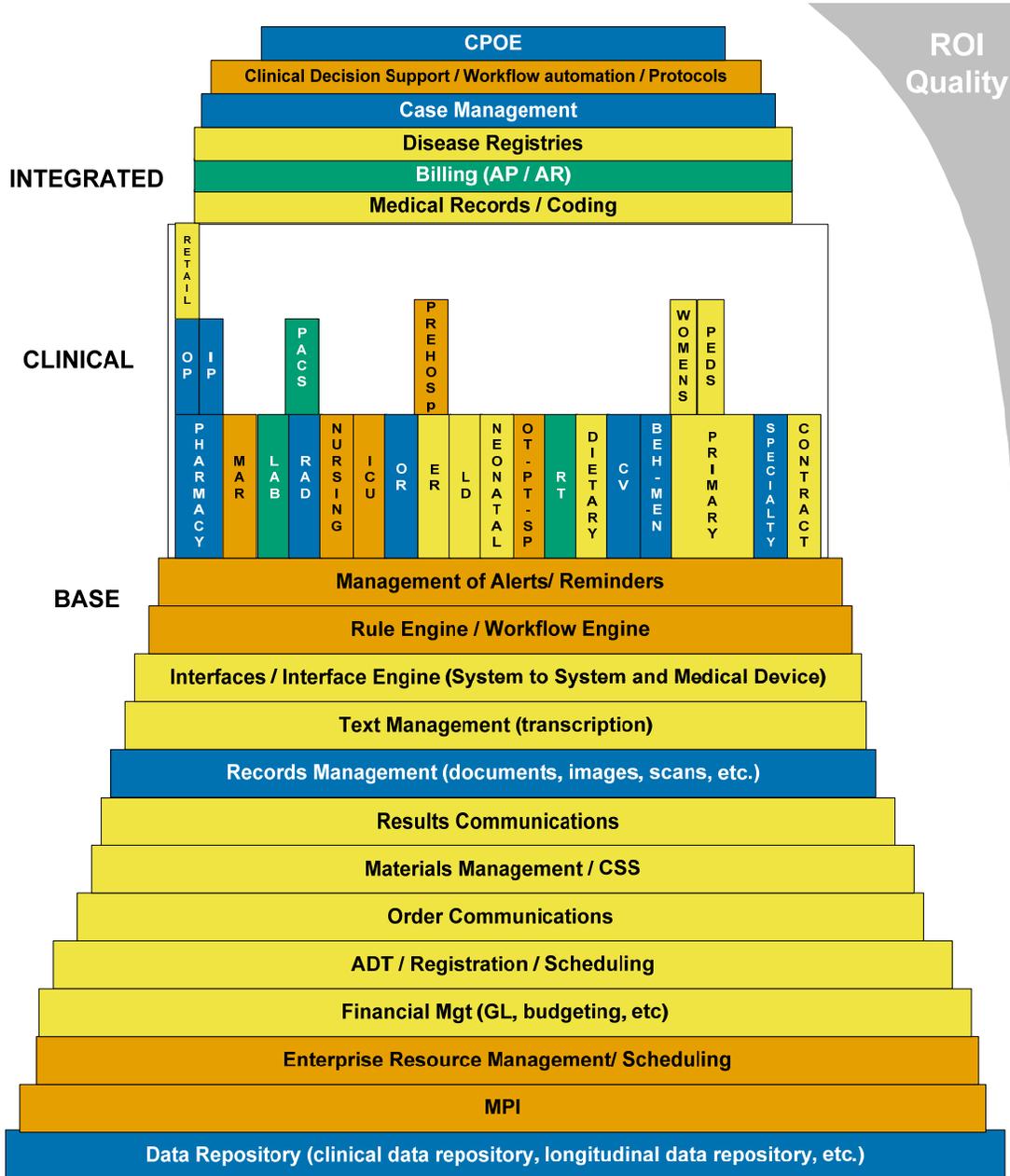
Clinical and Charge Documentation
P/D

Registration
M/S/H

M-MS4
S-Signature
P-PCC+
H-HDX
D-Datalink

90-100%
50-89%
10-49%
0-9%

ANMC EMR TODAY



ROI
Quality

**Revenue Cycle
is OK but not
optimized**

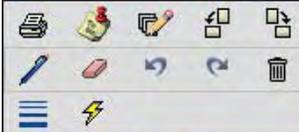
**Many clinical
systems still
do not meet
our needs...
Now it is time
to fix it!**

ANTHC HIT FY08 Initiatives

- Paperless revenue cycle records management / *Registration Process Redesign and increase effectiveness of revenue cycle*
- Improved Accounts Receivable Management / *Improve revenue capture*
- Integrated HIPAA compliant enterprise reports management / *Improve decision support*
- Intelligent demand based Nurse Scheduling / *Reduce operating expenses and increase effectiveness*
- Perioperative Information System / *OR Six Sigma Process Improvement and improved OR revenue capture*
- Integrated inpatient plan of care / *Improve quality of care and patient safety*
- Provider web portal to provide an integrated suite of services for clinicians / *Increase provider effectiveness, quality and safety of care*
- ITIL Implementation / *Optimize utilization of HIT resources and improve HIT customer satisfaction*
- EHR and HIE planning for both ANMC and ATHS

Datalink Records Management and Workflow Automation

- PCC+ forms bar coded
- All forms scanned and available immediately for clinical use
- Routed electronically to coding, data entry, charge entry, billing
- All workflow related to returns is supported
- Full audit logs
- Extensive reports on revenue cycle process



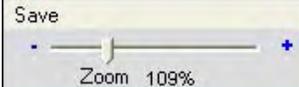
Document Navigation

Page **1** of 3

Auto Scroll



Zoom



User Presets

Setup

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15

Setup Mode
HARRY KO

Accounts in queue: 129

Submit Return Skip

Recal Skipped Stop

Account #..... 607409141
 Chart #..... 153499
 DOV..... 12/6/2006
 TOV..... 8:55 AM
 Service..... FAM

DataLink Records Management and Workflow Automation

BLOOD PRESSURE Last 10/27/06 10:26:08

WEIGHT Last 11/06 10/27/07
 PAP SMEAR Last 03/24/03 Repeat PAP (by 11/30/2006)
 PELVIC EXAM Last 06/30/06 05/15/07
 BREAST EXAM Last 05/01/06 Clinical Breast Exam (by 05/30/2007)
 MAMMOGRAM Clinical breast Exam (by 05/30/2007)
 PHYSICAL EXAM MAY BE DUE NOW
 SCREEN FOR ALCOHOL USE MAY BE DUE NOW
 SCREEN FOR TOBACCO USE Last 10/27/06 10/27/07
 PRIME MD SCORE Last 07/05/06 MAY BE DUE NOW (WAS DUE 08/02/06)
 SBIRT SCORE Last 05/01/06 05/01/07



Contact Number:
 Home Phone: (907) 748-5792

PCP: HARRY SKO

CMS Registries

Temp	Pulse	Resp	BP	Weight	Height	Pain (pt)	G.	P.	LC		
98.8	90	16	121/64	70.9 kg	5'6" 2	7					
Key For Notation (blank) Not done <input checked="" type="checkbox"/> N = Normal <input checked="" type="checkbox"/> A = Abnormal			Glucose	Vision	o Corr	o Uncorr	BMI	Prime MD	SBIRT score	SBIRT w/ DRUGS	PF BE
				L		9					
TOBACCO None 2nd hand Chew Smoke Both											
Currently thinking about quitting? <input checked="" type="checkbox"/>											

History	
Family History	
Social History	
ROS	N A
Gen	
HEENT	
CV	
Resp	
GI	
GU	
MS	
Skin	
Neuro	
Psych/Social	
Endocrine	
Hema/Lymph	
Immunologic	
Physical Exam	N A
Physical	
HEENT	

Chief Complaint & Visit Plan

MEDS REFILLS - EFFEXOR

Here for med ref. Effexor controls depression well. However, still e ongoing lower abd/pelvic pain (B) - prior e UT documented kidney stone. & hematuria & dysuria. Pain controlled e doc. Urinary tract.

PHYS. & NIVIP.

MOS ATORVA LIPID \$
 CV pm
 L CTA (B)
 And (B) AS. & angiotensin

Accounts that Completed Charge Entry using DataLink application - ENT

May 07 Visits Only

Publish Date: 6/6/2007 2:58 PM
 Sort Order: Date Of Visit (asc)

Charged Accounts: 688

Average days for account: Business days: 3.25 Calendar days: 4.76 Business days are Monday to Friday (excluding holidays)

Account	Health Record #	Date of Visit	Date Completed	DOV --> Completion Date		Provider
				Cal. Days	Bus. Days	
608489860	038451	5/1/2007 7:10:00 AM	5/7/2007 6:43:41 PM	6	4	WACHTER
608495065	186359	5/1/2007 7:10:00 AM	5/7/2007 6:44:01 PM	6	4	WACHTER
608493086	018409	5/1/2007 7:42:00 AM	5/4/2007 7:53:47 PM	3	3	PLANT
608491809	132704	5/1/2007 7:59:00 AM	5/4/2007 7:54:35 PM	3	3	PLANT
508089737	121486	5/1/2007 8:11:00 AM	5/4/2007 7:49:14 PM	3	3	KOKESH
608489811	072995	5/1/2007 8:26:00 AM	5/4/2007 7:55:50 PM	3	3	PLANT
508084068	061429	5/1/2007 8:30:00 AM	5/4/2007 7:42:16 PM	3	3	GALER
508093614	172522	5/1/2007 8:43:00 AM	5/4/2007 7:43:06 PM	3	3	GALER
608493987	180469	5/1/2007 8:55:00 AM	5/4/2007 7:50:00 PM	3	3	KOKESH
508085305	017314	5/1/2007 9:06:00 AM	5/4/2007 7:44:10 PM	3	3	GALER
608494795	185548	5/1/2007 9:27:00 AM	5/4/2007 7:50:53 PM	3	3	KOKESH
608488714	016972	5/1/2007 9:58:00 AM	5/4/2007 7:56:29 PM	3	3	PLANT
508093812	182856	5/1/2007 10:01:00 AM	5/4/2007 7:45:23 PM	3	3	GALER
508095429	172810	5/1/2007 10:08:00 AM	5/4/2007 7:46:16 PM	3	3	GALER

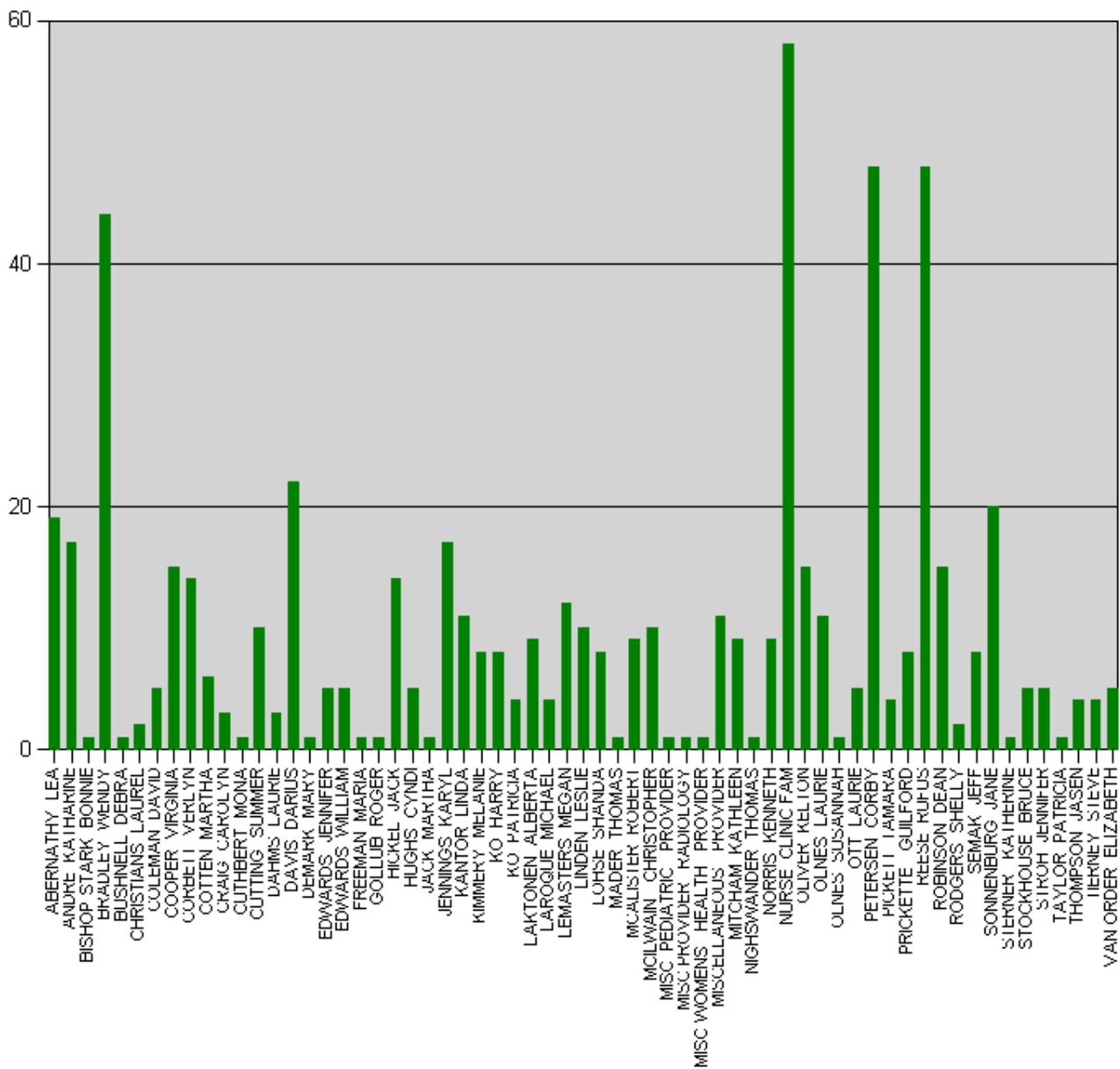
Data Entry Back Log - ENT

Publish Date: 6/6/2007 04:27 PM
 Sort Order: Date Of Visit (asc)

Medical records waiting for data entry: **56**
 Average days for account: Business days: **5.98** Calendar days: **8.75**

Account	Health Record #	Date Available	Available Date Cal. Days	--> Publish Date Bus. Days	Provider	Date of Visit
507916559	188037	5/4/2007 08:21:03 PM	33	22	GALER	4/5/2007 09:01:00 AM
608333274	096361	5/7/2007 11:29:15 AM	30	21	GALER	4/11/2007 08:40:00 AM
508013604	024818	5/16/2007 09:54:37 AM	21	14	ZWACK	4/19/2007 09:30:00 AM
508027695	109221	5/16/2007 09:56:31 AM	21	14	ZWACK	4/20/2007 10:43:00 AM
608426987	131204	5/16/2007 10:26:49 AM	21	14	GALER	4/23/2007 03:32:00 PM
608295416	057511	5/16/2007 11:41:03 AM	21	14	GALER	4/6/2007 03:29:00 PM
508066990	178165	5/16/2007 11:49:49 AM	21	14	GALER	4/26/2007 11:45:00 AM
608496675	075179	5/16/2007 12:09:38 PM	21	14	GALER	5/2/2007 08:07:00 AM
608504379	161620	5/16/2007 12:10:34 PM	21	14	GALER	5/2/2007 08:14:00 AM
608504114	149084	5/16/2007 12:11:10 PM	21	14	GALER	5/2/2007 09:54:00 AM
608575239	176027	5/21/2007 06:20:19 PM	16	11	WACHTER	5/11/2007 03:26:00 PM
608318754	026180	5/25/2007 07:44:19 PM	12	7	ZWACK	4/10/2007 02:24:00 PM
608323119	120713	5/25/2007 07:48:01 PM	12	7	ZWACK	4/10/2007 04:31:00 PM
507936110	098768	5/25/2007 07:56:46 PM	12	7	GALER	4/10/2007 09:12:00 AM
608327136	126209	5/25/2007 08:01:29 PM	12	7	GALER	4/10/2007 11:11:00 AM

Encounters with no documents



Providers



Accuro

Business technology for healthcare.

ACCURO **RECEIVABLES MANAGER**

**Powerful Receivables Management for
Business Offices**



"We reduced A/R days from 65 to 59 over a three-month period. One day in A/R equals \$13 million for the nine hospitals in our region."

Margie Souza
Regional Central Business Office Director
Sutter Health
Sacramento, CA

KEY BENEFITS

Accuro Receivables Manager is a powerful tool designed to help professionals in business offices see receivables in their entirety while pinpointing areas of improvement for patient representatives. Accuro Receivables Manager also brings everyone together on the same page in revenue cycle management, providing a common tool for many different roles. CFOs, PFS directors, team supervisors, collectors or billers can:

- Allocate individual accountability and measure performance based on results to reduce A/R days, increase cash collections and minimize bad debt
- Replace strictly operational management with processes to create strategies to increase and measure revenue cycle success
- Realize ROI within the first few days of implementation

REDWOOD®

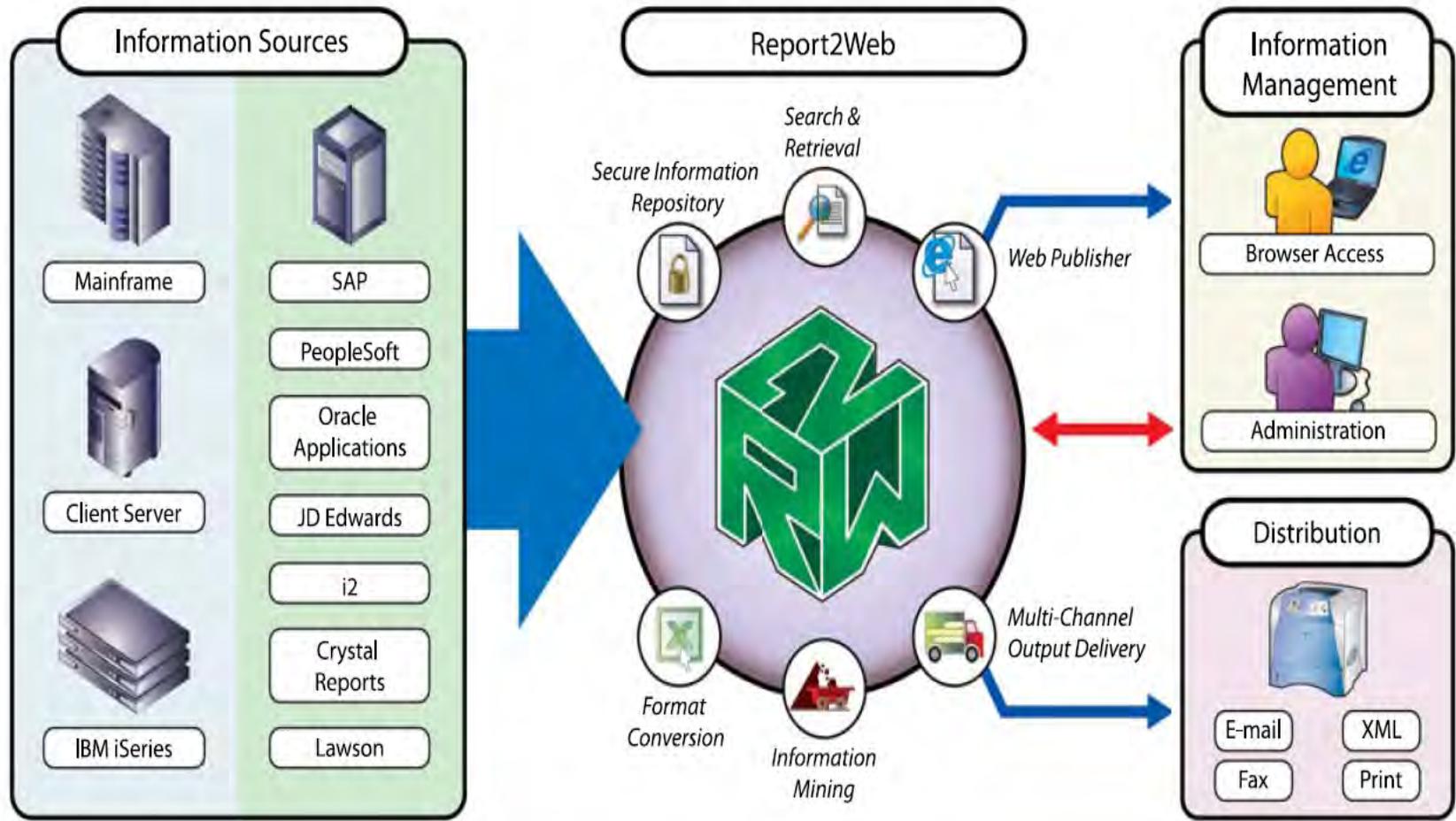


Report2Web™

Making web-based report distribution a reality.

A Web-based report distribution solution, enabling internal and external users to benefit from rapid and secure access to any report from any system across the enterprise.

Report2Web Architecture



Folders

Catalog

- Business Development
- Competitor Info
- Corporate Info
 - Collateral
 - Style Guide
 - Template
- Finance
- Human Resources
- Marketing
- News Letters
- Partner Info
- Personal
- Phonebook
- Product Development
- Product Info
- Product Marketing
- Professional Services
- Public
- Report2Web
- Report2Web for Healthcare
- Sales
- Sales Administration

Categories

Publishing

Security

Settings

Catalog Admin

Portal

Raleigh - Rep...

Training Docu...

Introduction...

Filter

Title	Name	Author	Date
05 Getting data into R2W	05 Getting data into R2W	allen.wyke@redwood.com	19 Aug 2005 01:45 PM EDT
3.0.1-Wachabe-FeatureMap	3.0.1-Wachabe-FeatureMap	allen.wyke@redwood.com	19 Aug 2005 01:47 PM EDT
Enhancements	Enhancements	allen.wyke@redwood.com	19 Aug 2005 01:46 PM EDT
Introduction to R2W 4.0	Int...		19 Aug 2005 02:06 PM EDT
Phase 1 Deliverables	Ph...		19 Aug 2005 01:49 PM EDT
Portal Integration Customization Scope - FINAL	Pe...	Jerry.Levin@redwood.com	19 Aug 2005 01:49 PM EDT
Portal Integration Design	Pe...	Jerry.Levin@redwood.com	19 Aug 2005 01:50 PM EDT
Public Beta Customer Priorities	Pub...	Jerry.Levin@redwood.com	19 Aug 2005 01:50 PM EDT
R2W 2.6 Tech Overview	R2...	allen.wyke@redwood.com	19 Aug 2005 01:47 PM EDT
R2w26-38_newFeatures	R2...	allen.wyke@redwood.com	19 Aug 2005 01:47 PM EDT
RC1 Planning	RC...	Jerry.Levin@redwood.com	19 Aug 2005 01:50 PM EDT
Report2Web 4.0 - Enabling the Next Generation of Report Distribution	Report2Web 4.0 - Enabling the Next Generation of Report Distribution	Jerry.Levin@redwood.com	19 Aug 2005 01:51 PM EDT
Training Documentation	Training Documentation	Jerry.Levin@redwood.com	19 Aug 2005 02:14 PM EDT
URL API	URL API	allen.wyke@redwood.com	19 Aug 2005 01:51 PM EDT
Wachabe Data Schema Discussion	Wachabe Data Schema Discussion	allen.wyke@redwood.com	19 Aug 2005 01:52 PM EDT



ClairVia® Staff Manager

ClairVia Staff Manager facilitates daily scheduling and staffing, and ensures that staffing resources are managed and aligned based on the patient-specific tracking, demand prediction and assessments achieved by [ClairVia Demand Manager](#) and [ClairVia Outcomes-Driven Patient Acuity](#).

ClairVia Staff Manager incorporates:

Personalized Dashboard Technology

ClairVia Staff Manager provides customizable Web portals that give all critical staff a single, "front-and-center" information point for scheduling and staffing processes. Developed in three role-centric versions, the dashboards offer real-time status indicators and user-specific, proactive alerts whenever targeted thresholds are triggered.

Employee Dashboard

Manager/Staffing Office Dashboard

Centralized Enterprise Dashboard

Enterprise Staff Scheduling & Management

ClairVia Staff Manager offers centralized control for managing enterprise-wide staffing coverage and resources, and for delivering advanced, employee-centric functionality.

Flexible, Rules-Based Scheduling Generation

Daily Staffing

Real-time Decision-Support and Conflict-Checking

Staffing Reports

Best-Practice Protocols

Productivity Management

On-Demand Reports

Employee Self-Service

Request Management

Self-Scheduling

Shift-Swapping

Shift Opportunities



CareSuite Perioperative



**Delivering total perioperative
automation today**

OR Manager

OR Schedule Viewer < Last loaded 9:09:56 am >

May 2003

EV_01 05/30/2003	EV_02 05/30/2003	EV_03 05/30/2003	EV_04 05/30/2003	EV_05 05/30/2003	EV_06 05/30/2003	EV_07 05/30/2003	EV_08 05/30/2003
0700 Setup	Setup	dr. aarons	Setup	Setup	Setup	Setup	Setup
0715 BURST H	BILIMOR C	dr. aarons	MEYER R	AARONS N	MAIZE M	Setup	KARASA
0730 COLECTOMY	ORIF ANKLE	dr. aarons	THORACOTMY	TAH	CYSTOABLPO	MADDAN J	COLECT
0745 Boru, Brian	Rogers, Mary	dr. aarons	Howard, Maureen	Smith, Mary	Wilson, Mary	TOT HIP	Franklin,
0800 39	42	dr. aarons	55	57	Teardown	Smith, John	
0815		dr. aarons				92	
0830	Teardown	dr. aarons					
0845	Setup	dr. aarons		Teardown			
0900 Teardown	AGINSON H	dr. aarons					Teardown
0915 Setup	CYSTE PART	dr. aarons					Setup
0930 BRESS S	Lewis, Edward	dr. aarons					BIRDIE C
0945 ARTH HAND	78	dr. aarons	Teardown				AICD
1000 Geddes, Michelle		dr. aarons	Setup			Teardown	Burke, Br
1015 28		dr. aarons	CAMP B			Teardown	40
1030		dr. aarons	KERATOPLST				
1045		dr. aarons	Jones, Bill				
1100 Teardown		dr. aarons	94				Teardown
1115		dr. aarons					Setup
1130	Teardown	dr. aarons	Teardown				KEHOE T
1145		dr. aarons					AMP FIN
1200		dr. aarons					Brothers,
1215		dr. aarons					31
1230		dr. aarons					Teardown
1245		dr. aarons					Setup
1300		dr. aarons					KARASA
1315		dr. aarons					COLECT
1330		dr. aarons					Aldridge,
1345		dr. aarons					92
1400		dr. aarons					
1415		dr. aarons					

24 selected of 24

EV_01 (EV)
 EV_02 (EV)
 EV_03 (EV)
 EV_04 (EV)
 EV_05 (EV)

Specific Selection By: Facility Room Group

of Days: 1 Retrieve Print

Column Width: 400 Auto Width Apply Settings Row Height: 64

Rearrange Close

Pre Operative Manager



- Quick Menu
- Patient ID
- Patient Data
- Allergies and Precautions
- Diagnoses and Procedures
- Medical Team
- Surgical History
- Copy Forward
- Current Medications
- Review of Systems
- Physical Exam
- Tests and Results
- Cardiac Risk Assessment
- Anesthesia Plan
- Preop Instructions
- Record Status
- Addenda
- Signatures

Rina Birdsong 001305664742921060010

Rina Birdsong Patient ID 1: 001305664742921060010 - Gender: Female - 19 Years - Date of Birth: 10/2/1985

• Evaluation Date: 6/23/2005 • Scheduled Surgery Date: 6/23/2005

Procedures

• TOT HIP, Arthroplasty Total Hip ; **Clinical Priority** Primary ; **Functional Type** Pre-Op ; **Date** 6/23/2005 ; **Time** 1:00:00 PM ; **Performed by** Aarons,Nathan

Patient ID

• **Address** Unknown • **Marital Status:** Unknown • **Current Location:** Unknown
• **Admission Type:** Unknown • **Religion:** Unknown
• **VIP No** • **Ethnic Group:** Unknown

Patient Data

• **Blood Type** Unknown
• **Ambulatory Status:** Unknown

Allergies and Precautions

Medication Allergies

• No known medication allergies

Other Allergies

Precautions

Diagnoses and Procedures

Medical Team

Team Members

• **Clinical Role** Scheduled Surgeon ; Aarons,Nathan ; **Attending Type** Surgeon

Surgical History

• **Tonsillectomy** - **When:**Childhood , **Anesthesia:**General Anesthesia, **Complications:**No known complications

Current Medications

Review of Systems

• The following required data is missing: Anesthesia history; Airway and Neck; Cardiovascular System

Physical Exam

• The following required data is missing: Airway and Neck; Cardiovascular System

Smart Track Patient Tracking System

SmartTrack

File Tools Maintenance Pref Card/Inventory SmartTrack Reports Window Help

Everett Surgical Center

Grease Board Control Desk Census Family PreOp IntraOp PACU Administrative

Grease Board

Sch Time	Procedure	Patient Name	GI	POp	PtR	InR	SuO	Surgeon	Scrub Nurse	Next Checkpoint	Next Chec
EV 01											
<input type="checkbox"/> 08:30	Myringotomy With Tub	Walters, Eric						Cozzens, Felix			
<input type="checkbox"/> 08:45	ORIF Wrist	Jones, Gene						Allenson, Norman			
<input type="checkbox"/> 09:15	Appendectomy	Howard, Maureen						Pessill, Darren		Patient Discharged	151
<input type="checkbox"/> 10:15	Amputation Toe	Joyal, Susan						Birde, Christopher	Aceve, Kim RN	Patient Discharged	211
<input type="checkbox"/> 11:15	Amputation Toe	Souza, Susan						Birde, Christopher		Surgery Complete	161
<input type="checkbox"/> 12:15	Abdominal Aortic Aneu	Lemmer, Theresa						Dolcen, Patricia		Patient In Room	181
<input type="checkbox"/> 14:15	CABG with Valve Repla	Weston, Cheryl						Gansh, Paul	Caller, Mary RN	Patient Ready for Procedure	291
<input type="checkbox"/> 21:00	AICD Battery Change	Jones, Mary						Ford, Harold		Patient in Pre-Op	656
EV 02											
<input type="checkbox"/> 12:15	Abdominal Aortic Aneu	Lewis, Edward						Almona, R. Stanley	Duffyman, Martha RN	Patient in Registration	111
EV 03											
<input type="checkbox"/> 09:15	Sinus Endoscopy and S	Jensen, Andrew						Aarons, Nathan	Almassen, Katie RN		
<input type="checkbox"/> 10:00	Histel Hemiorrhaphy	Starkey, Sean						Aarons, Nathan		Surgery Complete	146
<input type="checkbox"/> 13:45	Evacuation Hematoma	Sherman, John						Aarons, Nathan	Brygideer, Linda RN	Patient Ready for Procedure	261
EV 04											
<input type="checkbox"/> 09:15	ORIF Ankle	Rogers, Mary						Blimor, Chad		Patient Discharged	161
<input type="checkbox"/> 10:45	Arthroscopy and ORIF	Sherman, John						Adson, Ronald	Caller, Mary RN	Patient In Room	91
<input type="checkbox"/> 12:15	Arthroplasty Total Hip	Jones, Bill						Krafts, Bernard		Check In	49
EV 05											
<input type="checkbox"/> 08:45	Cholecystectomy, Lapa	Conley, James						Bennigan, Barrett	Berma, Kim RN	Surgery Complete	72
<input type="checkbox"/> 14:00	Arthroplasty Total Hip	Bishop, Patricia						Randall, Christopher	Brygideer, Linda RN	Patient Ready for Procedure	276
EV 07											
<input type="checkbox"/> 08:15	Replacement Aortic/Mi	Jacobs, Sarah						Randall, Christopher	Berma, Kim RN	Surgery Complete	42

Booking Status

- Add On
- Checkedin
- Done
- In PreOp
- NoStatus
- Operation in Progress
- Patient in PACU
- Ready for Operation
- Reg
- No Status

5-13-2003 9:03:18

Anesthesia Manager

Anesthesia Manager - Patient: Martha Warrenton - 001181531905429032010 - User: KBARNEY - Station: Rm4

File-ADT Insert/View Demographics Flowsheets Configuration Orders Screen Layouts Timers Macros Add-Ins Window Help



Martha Warrenton

Gender: Female, 1 hr(s) LOS

Medication allergies: Iodine Derivatives
 Other allergies:
 Precautions: Difficult Airway



Flowsheets

- Device Data
- Medications
- Fluids
- Lab Results
- Anes Summary**
- Anes Gases
- Vent Settings
- Invasive Monitoring
- Fluids and Meds
- Trends
- Anesthesia View
- Assessments

Demographics

Resolution: 5 minutes

Show only rows with data

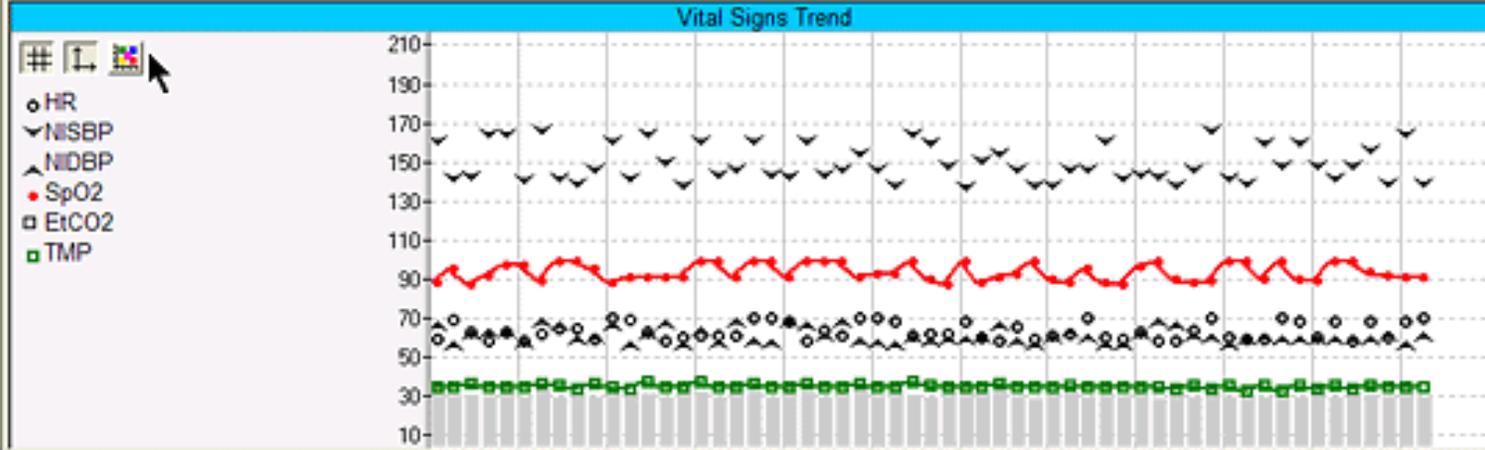
Show subheadings

Anes Summary

OR Encounter (General Anesthesia)											
7/20/2005											
16:00	16:05	16:10	16:15	16:20	16:25	16:30	16:35	16:40	16:45	16:50	16:55

Anesthesia Record

Real-Time Variables	16:00	16:05	16:10	16:15	16:20	16:25	16:30	16:35	16:40	16:45	16:50	16:55
O2 FGF	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
N2O FGF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fluids IN												
Dopamine (mL/h) 3-15 mcg/kg/min 40..	12	12	12	12	12	12	12	12	12	12	12	12
Lactated ringers 1000 mL Continuou..												
Propofol (mL/h) 5-300 mcg/kg/min 500.	2	2	2	2	2	2	2	2	2	2	2	2
Fluids OUT												
Est. Blood Loss OR Measurement PRN				75								
Urine OR Measurement PRN						80						
Medications												
Midazolam 1-3 mg Intravenous IVP ..					3							



Interval

PACU Respiratory Record

Anesthesia Manager - Patient: Helen Tucker - TA5717 - User: PICIS - Station: EV2

File-ADT Insert/View Demographics Flowsheets Configuration Orders Screen Layouts Timers Window Help

Helen Tucker
75 years, Gender:Female, Kg:72.7, Cm:165.1, BSA:1.80, 2 h(s) L05

Medication allergies: No known medication allergies
Other allergies: Latex
Precautions: Difficult Intubation

Respiratory Therapy Kardex
Critical Care (ICU)
8/5/2003

Resolution: 30 minutes

Show only rows with data
 Show subheadings

	08:30	09:00	09:30	10:00	10:30	11:00	11:30	12:00	12:30	13:00	13:30	14:00
Ventilator Settings and ABG's												
Real-Time Variables												
Respiratory mode												
Vent Resp Rate/min Setting	10	11	10	10	9	9	9					
Vent Resp Rate/min (total)	14	13	13	13	13	13	14					
Inspired Oxygen %	42.01	47.18	43.42	44.52	46.68	46.69	47.18					
Tidal Volume Setting	808	731	792	735	735	851	761					
Inspiratory Tidal Volume	801	792	761	730	849	761	792					
Expiratory Tidal Volume	652	547	563	551	571	551	569					
Peak Inspiratory Pressure	24	27	25	26	27	27	27					
Positive End Expiratory Pressure	5	5	5	5	5	5	5					
Pulse Art. O2 Saturation	88	100	95	95	98	89	100					
Laboratory Results												
pH		7.35	7.45									
pO2		98	96L									
O2 Sat		98	96L									
HCO3		22	23									
Base excess		1	1									
pCO2		35	45H									
Respiratory Treatments												
Assessments												
ABG Draw Adverse Effects qod		<	None									
ABG Draw Allens Test qod		<	WNL									
ABG Draw Attempts qod		<	1									
ABG Draw Site qod		<	RRad									
Respiratory												
Ventilator Check q1h		<	✓									
Laboratory and Diagnostic Tests												
ABG qod		<	✓									

Interval 5 min

Web Based Interdisciplinary Careplan

Date Discharged: *N/A*
Problems: **Total Knee Replacement**
Levines: **2 out of 4**
Levines Needed: **Personal, Social**

View in: ([Word 2003](#))

Active Plans of Care

Nursing

Total Knee Replacement <i>Setup by: pbarnett</i>	
Date: 11/30/2005	Levine: Energy
Intervention (1400) Pain Management	Goal (2101) Pain: Disruptive Effects
Activities: Notify physician if measures are unsuccessful or if current complaint is a significant change from patient's past experience of pain	Outcomes: 210113 - Impaired physical mobility

Total Knee Replacement <i>Setup by: pbarnett</i>	
Date: 11/30/2005	Levine: Structural
Intervention (3440) Incision Site Care	Goal (1102) Wound Healing: Primary Intention
Activities: Teach the patient and/or the family how to care for the incision, including signs and symptoms of infection	Outcomes: 110201 - Skin approximation 110203 - Serous drainage

Nursing

Total Knee Replacement <i>Setup by: pbarnett</i>	
Date: 11/30/2005	Levine: Structural
Intervention (3440) Incision Site Care	Goal (1102) Wound Healing: Primary Intention
Activities: Teach the patient and/or the family how to care for the incision, including signs and symptoms of infection	Outcomes: 110201 - Skin approximation 110203 - Serous drainage

Completed Plans of Care

[Start Over](#)

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ANMC Provider Web Portal

Search Patients
'LASTNAME,FIRSTNAME' or Chart No: Or
[View Inpatients](#) or DOB or SS:

>> [Tools](#) << >> [References](#) << >> [Telemedicine](#) <<



Welcome to the ANMC Provider Portal

This site is designed as a gateway into ANMC patient health summaries. To search for a patient, enter the appropriate search term into the form at the top of this page, and click the "Go" button.

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NEW [NIH/Online Journals](#) **NEW**
[Online Medical Reference](#)
[Clinical Guidelines](#)
[Micromedix](#)

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>> Tools << >> References << >> Telemedicine <<

- [Google Search](#)
- [BMX Window](#)
- [SoftWeb](#)
- [Signature](#)
- [RPMS](#)
- [MS4](#)
- [TIU Notes](#)
- [GE PACS](#)
- [Tracemaster EKG](#)
- [Mediserve RT](#)
- [IPPC](#)

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ANMC Provider Web Portal

[Search Patients](#)

'LASTNAME,FIRSTNAME' or Chart No: Or
 DOB or SS: ?

ANMC Clinical Guidelines



Patient Data for Chart Number 999999 (DEMO,MICHAEL) [Print style](#)

- General
- Appointments
- Health History
- Visit History
- Radiology
- RPMS Lab
- Immunizations
- Meds
- Diabetes
- CarePlans
- Dictation
- Summary

General Information

Name DEMO,MICHAEL
 Gender M
 DOB 8/18/1971

----- DEMOGRAPHIC DATA -----

DEMO,MICHAEL DOB: AUG 18,1971 34 YRS MALE no blood type
 NON-INDIAN BENEFICIARY SSN: 531-80-7658
 MOTHER'S MAIDEN NAME: DEMO,MOTHER
 (907) 427-7335 (W) (907) 729-4227 FATHER'S NAME: DEMO,FATHER
 ANCHORAGE (P.O. BOX 37113,TOOKSOOK BAY,AK,99637)

LAST UPDATED: JUL 14,2006 ELIGIBILITY: CHS & DIRECT

NOTICE OF PRIVACY PRACTICES REC'D BY PATIENT?
 DATE RECEIVED BY PATIENT:
 WAS ACKNOWLEDGEMENT SIGNED?

HEALTH RECORD NUMBERS: 999999 ANCH MED CTR
 DESIGNATED PROVIDER:

WOMEN'S HEALTH DESIGNATED PROVIDER: FMC,BLUE
 REMARKS: PT BORN AT ANMC;PT MOTHER HAS PROOF ON FILE 9-15-98 CW-ADT
 PT MOTHER SIGNED PRIV ACT 9-15-98 CW-ADT [more]

CHRONIC PAIN REGISTRY STATUS: ACTIVE No Opioid Agreement
 ON CMS REGISTER(S): ANMC DIABETES REGISTRY

----- INSURANCE INFORMATION -----

INSURANCE	NUMBER	SUFF COV	EL DATE	SIG DATE	END DATE

----- MEASUREMENT PANELS (max 5 visits) -----

	HT	WT	BP	BMI	%RW	O2SAT	PF
10/14/05		216	120/70	36.0	162%		
01/01/03		6		1.0	4%		

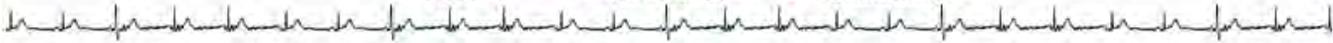
Health Summary :: In Development - Microsoft Internet Explorer provided by ANMC

Address <https://home.anmc.org/medsumm/index.cfm?fuseaction=home.general>

ANMC Provider Web Portal

Search Patients
'LASTNAME,FIRSTNAME' or Chart No: Or
[View Inpatients](#) or DOB or SS: 2

>> Tools << >> References << >> Telemedicine <<



Patient Data for Chart Number : [Print style](#)

Health Alert: VRE ** Contact Isolation Req!

General | **Appointments** | **Health History** | **Visit History** | **Radiology** | **RPMS Lab** | **Immunizations** | **Meds** | **Diabetes** | **CarePlans** | **Dictation** | **WHP**

General Information

Name _____ Designated Provider _____
Gender _____
DOB _____

----- DEMOGRAPHIC DATA -----

Alert automatically displays if patient fits specific criteria

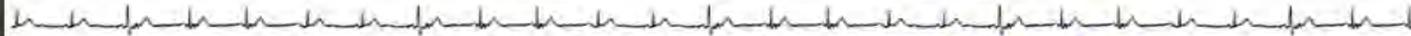
Done Local intranet

View Future Appointments

ANMC Provider Web Portal Demo

Search Patients

'LASTNAME,FIRSTNAME' or Chart No: Or
DOB or SS: 2



Patient Data for Chart Number 999998 (DEMO,PATIENT) [Print style](#)

[General](#) | [Appointments](#) | [Health History](#) | [Visit History](#) | [Radiology](#) | [Old Lab](#) | [Immunizations](#) | [Medications](#) | [Diabetes](#) | [CarePlans](#) | [TIU](#) | [Summary](#)

Patient Scheduling

Currently, only Signature scheduling data is included. Soon we will be adding scheduled surgical appointments, and will be trying to incorporate dental appointments.

Patient Appointments (Signature)

Date	Start Time	Duration	Type	Location	Doctor
04-10-2006	800	15	BLOOD DRAW	BLOOD	NURSE1

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Review Dictated Notes

ANMC Provider Web Portal

Search Patients

'LASTNAME,FIRSTNAME' or Chart No: Or
DOB or SS: [?](#)

ANMC Clinical Guidelines



Patient Data for Chart Number 999999 (DEMO, MICHAEL) [Print style](#)

[General](#) [Appointments](#) [Health History](#) [Visit History](#) [Radiology](#) [RPMS Lab](#) [Immunizations](#) [Meds](#) [Diabetes](#) [CarePlans](#) [Dictation](#) [Summary](#)
[Clinic Notes](#) [Consults](#) [Diagnostics](#) [Discharge Notes](#) [Field Notes](#) [History & Physical](#) [Procedure](#) [All Notes](#)

Discharge Notes Summary

Note	Date	Status
IMCM DISCHARGE PLAN	03/01/2005	COMPLETED
IMCM DISCHARGE PLAN	02/12/2001	COMPLETED
PHR DISCHARGE COUNSELING	05/05/1999	COMPLETED
PHR DISCHARGE COUNSELING	08/05/1998	COMPLETED

[Start Over](#)

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ITIL® - Information Technology Infrastructure Library

- A set of best practices and guidelines that define an integrated, process-based approach for managing information technology services

ITIL® aligns IT with the needs of the business

- Improving service quality
- Decreasing the costs of IT service delivery and support

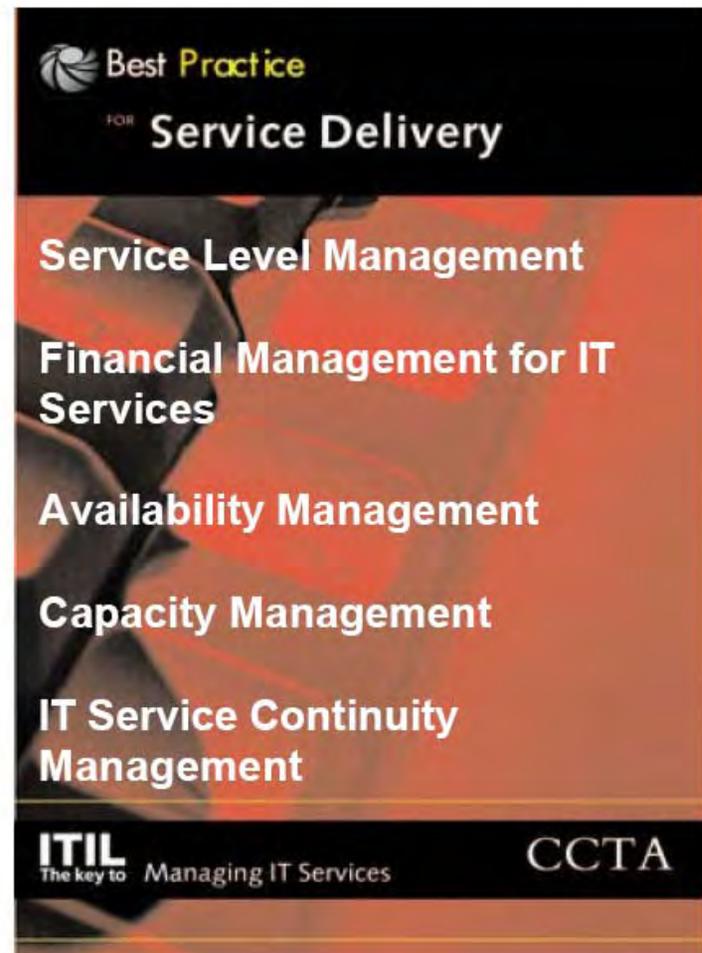
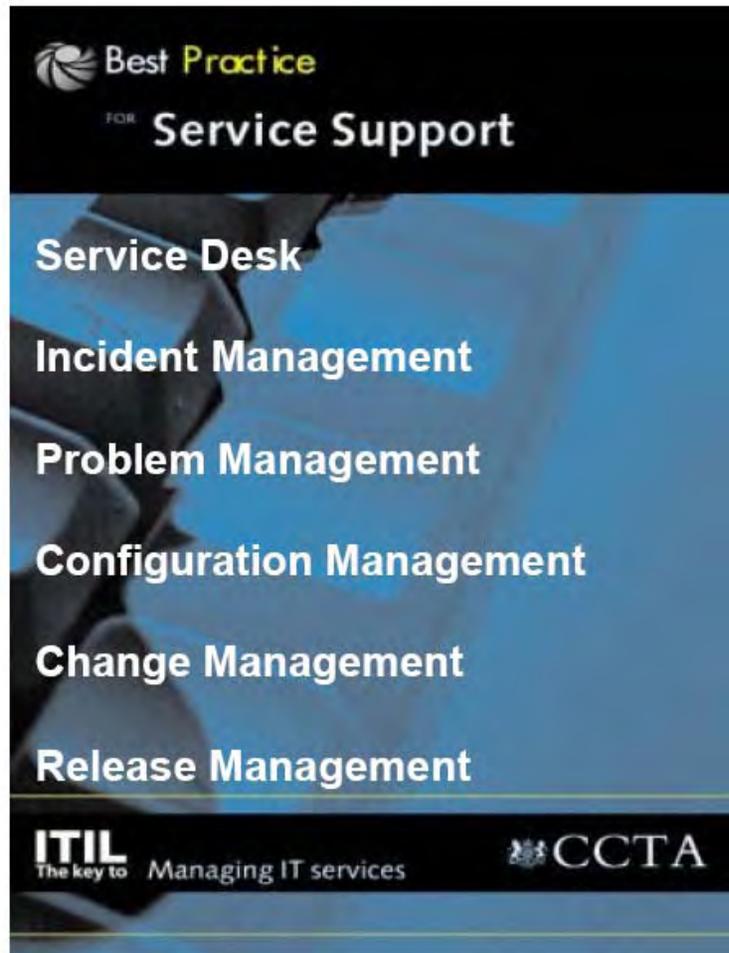
Built on best practices that came were observed around the world and compiled by British Government's IT organization (OGC).

ITIL® is a Framework, not a Methodology, that provides best practices guidelines for a set of IT Service Management (ITSM) processes

“ITIL is guidance for the wise and rules for the foolish”

Brian Johnson

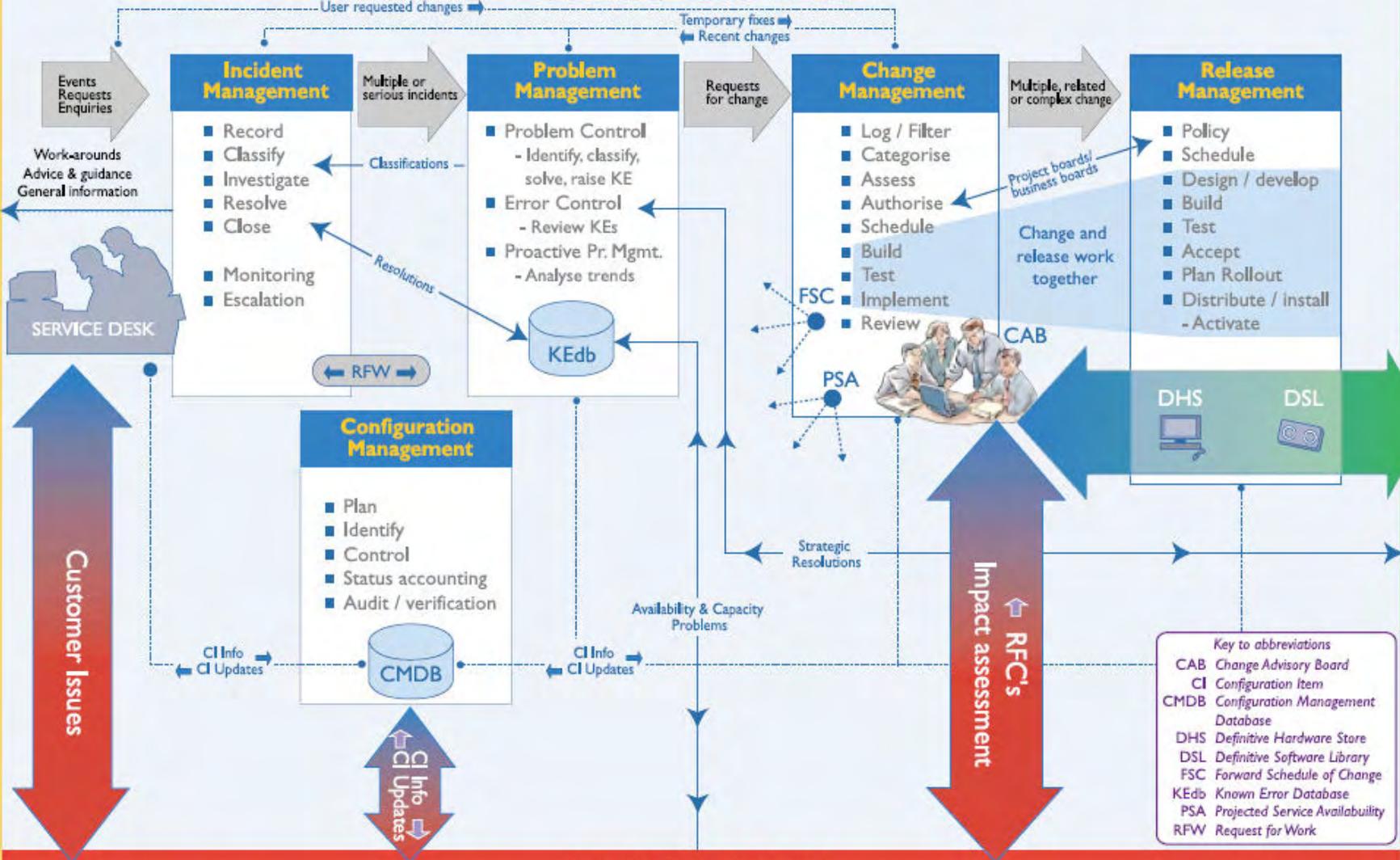
- ISO 20000 is based upon ITIL
- Canadian Federal Government mandate
- US Federal & State Governments include it as part of their IT project gating / funding criteria
- At the 9th Annual International IT Service Management Conference in February '05, a survey of 1000 US IT managers and executives from more than 70 organizations found that:
 - 75% of survey respondents planned budgeted ITIL / ITSM projects within 0 to 6 months
 - 37% planned to initiate an ITIL / ITSM project within 7 to 12 months



SERVICE SUPPORT

USERS

DEVELOPMENT



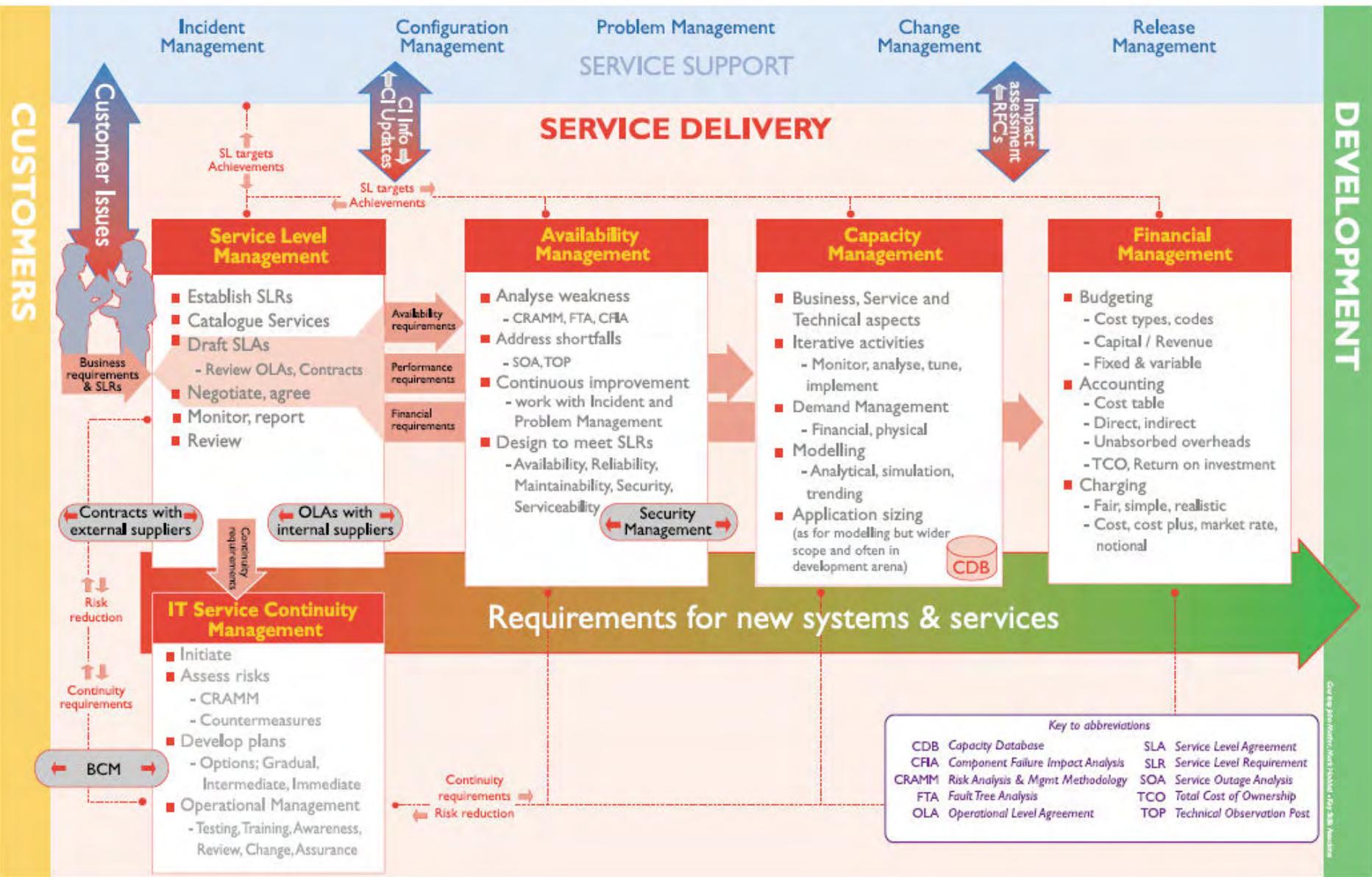
Service Level Management

Availability Management

SERVICE DELIVERY
Capacity Management

IT Service Continuity Management

Financial Management



CUSTOMERS

DEVELOPMENT

Incident Management Configuration Management Problem Management Change Management Release Management

SERVICE SUPPORT

SERVICE DELIVERY

Service Level Management

- Establish SLRs
- Catalogue Services
- Draft SLAs
 - Review OLAs, Contracts
- Negotiate, agree
- Monitor, report
- Review

Availability Management

- Analyse weakness
 - CRAMM, FTA, CFIA
- Address shortfalls
 - SOA, TOP
- Continuous improvement
 - work with Incident and Problem Management
- Design to meet SLRs
 - Availability, Reliability, Maintainability, Security, Serviceability

Capacity Management

- Business, Service and Technical aspects
- Iterative activities
 - Monitor, analyse, tune, implement
- Demand Management
 - Financial, physical
- Modelling
 - Analytical, simulation, trending
- Application sizing
 - (as for modelling but wider scope and often in development arena)

Financial Management

- Budgeting
 - Cost types, codes
 - Capital / Revenue
 - Fixed & variable
- Accounting
 - Cost table
 - Direct, indirect
 - Unabsorbed overheads
 - TCO, Return on investment
- Charging
 - Fair, simple, realistic
 - Cost, cost plus, market rate, notional

IT Service Continuity Management

- Initiate
- Assess risks
 - CRAMM
 - Countermeasures
- Develop plans
 - Options; Gradual, Intermediate, Immediate
- Operational Management
 - Testing, Training, Awareness, Review, Change, Assurance

Requirements for new systems & services

Key to abbreviations

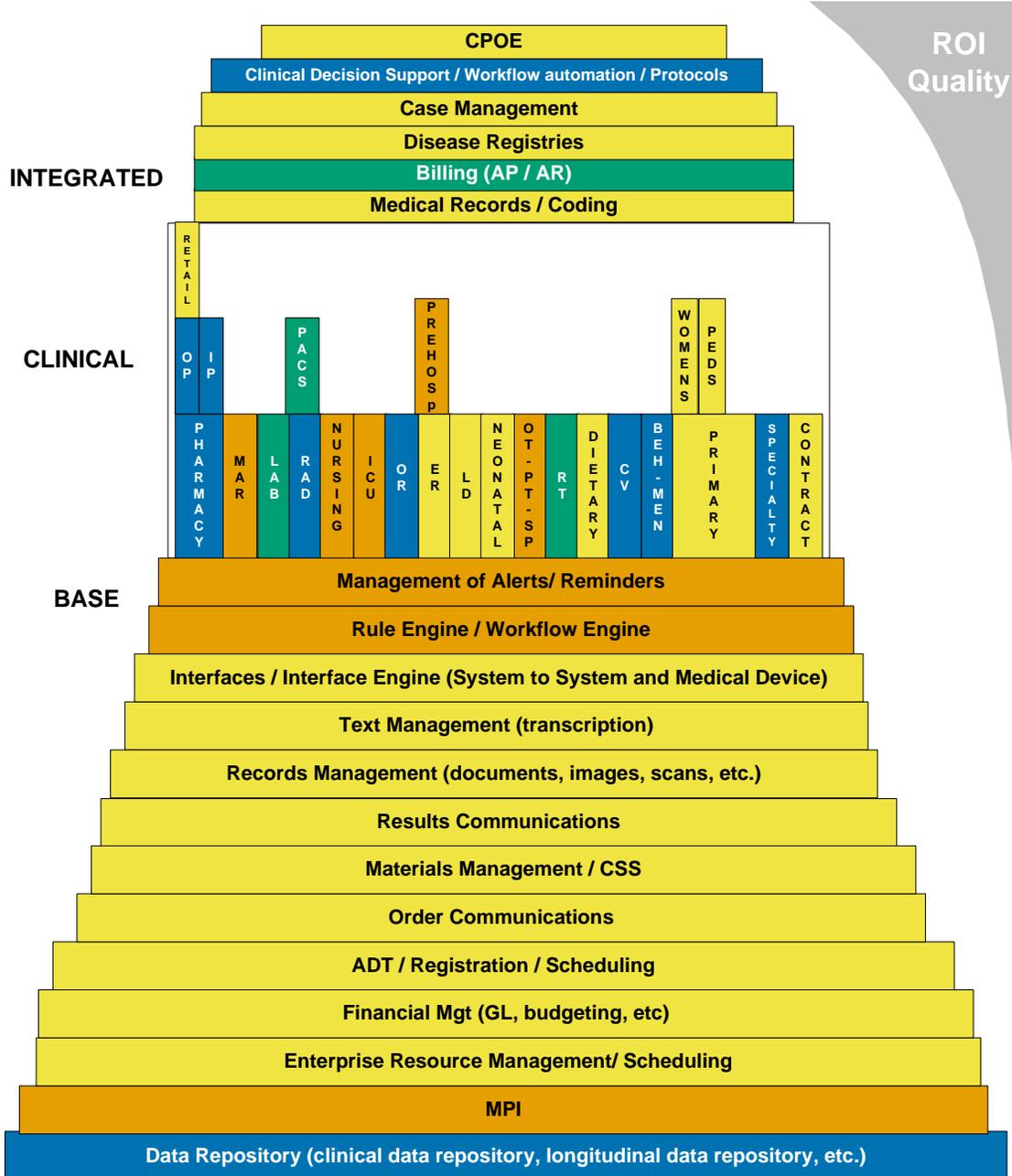
CDB	Capacity Database	SLA	Service Level Agreement
CFIA	Component Failure Impact Analysis	SLR	Service Level Requirement
CRAMM	Risk Analysis & Mgmt Methodology	SOA	Service Outage Analysis
FTA	Fault Tree Analysis	TCO	Total Cost of Ownership
OLA	Operational Level Agreement	TOP	Technical Observation Post

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ANMC and ATHS EHR and HIE Planning



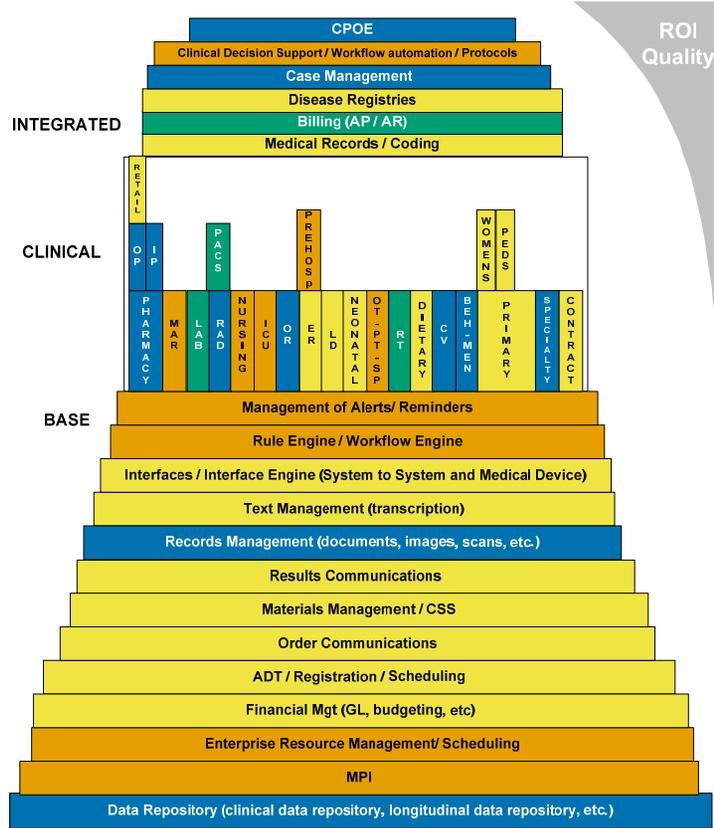
IHS EHR+MS4+Sig+SCC+GE Pacs +Medilinks RT



IHS EHR Solution for ANMC



ANMC EMR TODAY

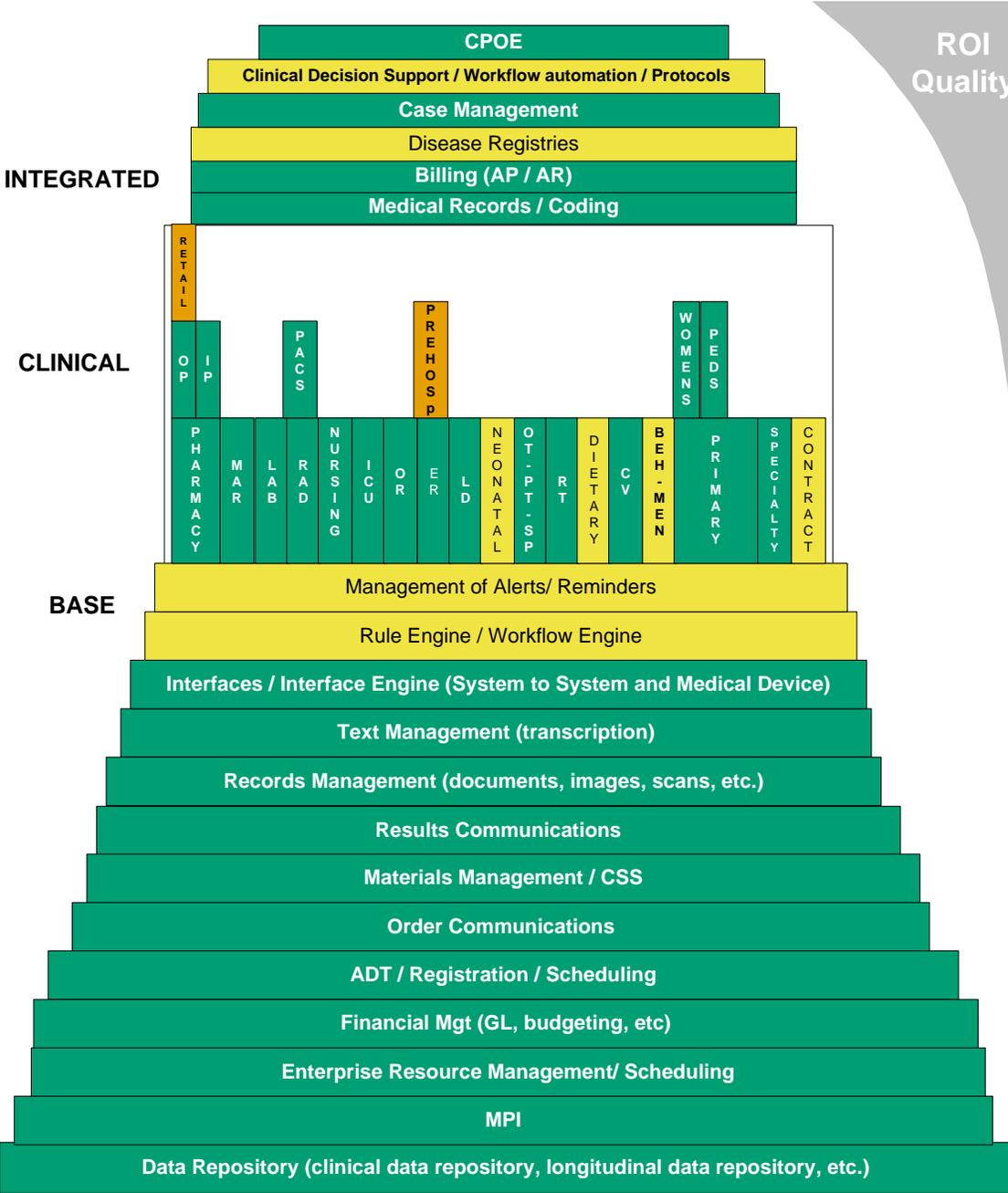


Data Repository (clinical data repository, longitudinal data repository, etc.)

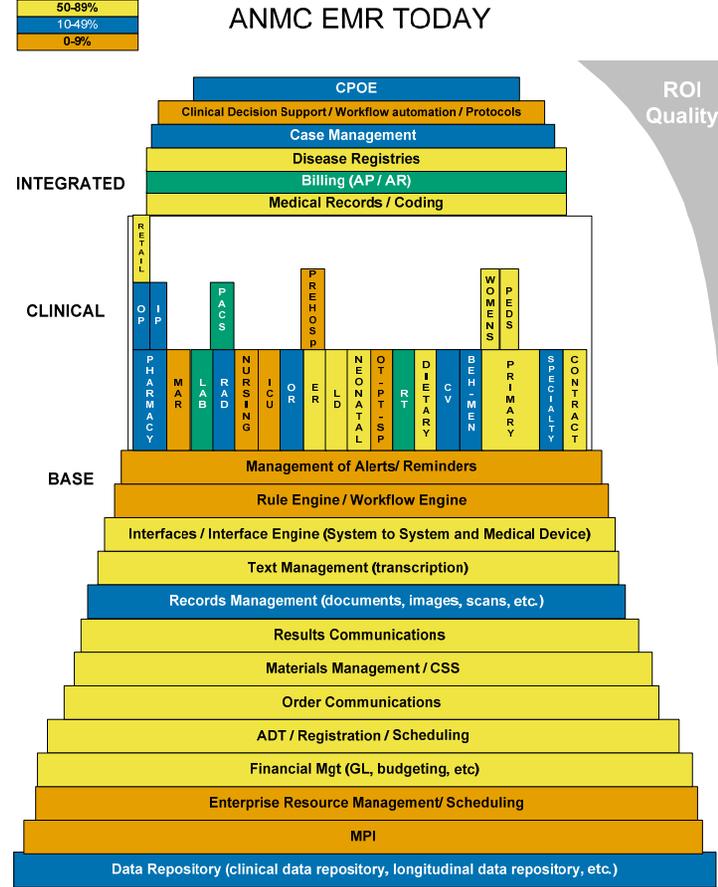
Data Repository (clinical data repository, longitudinal data repository, etc.)



Cerner / Epic / GE



Commercial EHR solution



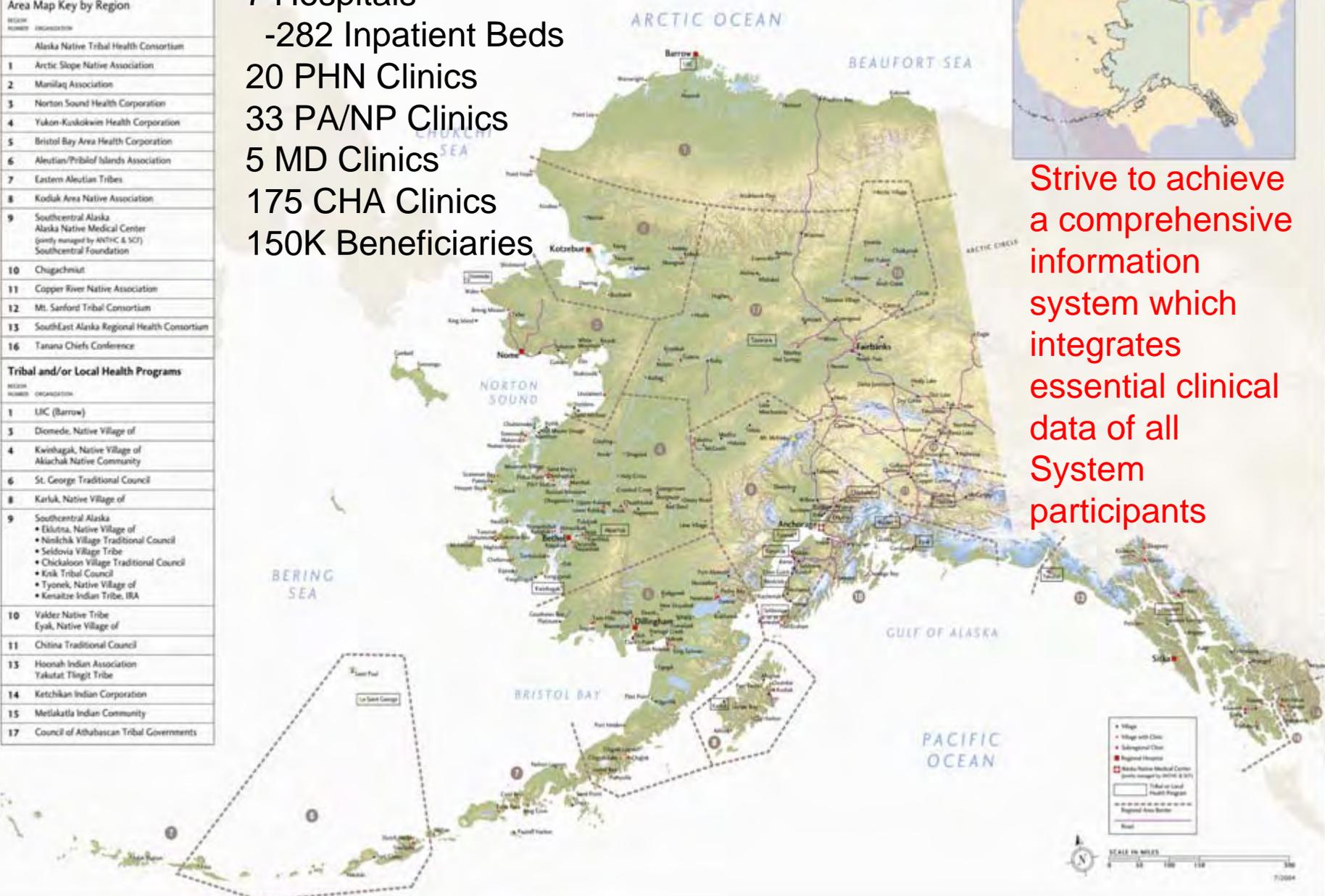
The Alaska Tribal Health System

7 Hospitals
 -282 Inpatient Beds
 20 PHN Clinics
 33 PA/NP Clinics
 5 MD Clinics
 175 CHA Clinics
 150K Beneficiaries



Strive to achieve a comprehensive information system which integrates essential clinical data of all System participants

Alaska Tribal Health System	
Regional Health Consortia	
Area Map Key by Region	
REGION NUMBER	ORGANIZATION
Alaska Native Tribal Health Consortium	
1	Arctic Slope Native Association
2	Mari'iq Association
3	Norton Sound Health Corporation
4	Yukon-Kuskokwim Health Corporation
5	Bristol Bay Area Health Corporation
6	Aleutian/Pribilof Islands Association
7	Eastern Aleutian Tribes
8	Kodiak Area Native Association
9	Southcentral Alaska Alaska Native Medical Center (jointly managed by ANTHC & SOI) Southcentral Foundation
10	Chugachivut
11	Copper River Native Association
12	Mt. Sanford Tribal Consortium
13	SouthEast Alaska Regional Health Consortium
16	Tanana Chiefs Conference
Tribal and/or Local Health Programs	
REGION NUMBER	ORGANIZATION
1	LIIC (Barrow)
3	Diomedes, Native Village of
4	Kwinhagak, Native Village of Akiachuk Native Community
6	St. George Traditional Council
8	Karuk, Native Village of
9	Southcentral Alaska • Eklutna, Native Village of • Ninkichik Village Traditional Council • Seldovia Village Tribe • Chickaloon Village Traditional Council • Krik Tribal Council • Tyonek, Native Village of • Kenaitze Indian Tribe, IRA
10	Valdez Native Tribe Eyak, Native Village of
11	Chitina Traditional Council
13	Hoonah Indian Association Yakutat Tlingit Tribe
14	Ketchikan Indian Corporation
15	Metlakatla Indian Community
17	Council of Athabaskan Tribal Governments

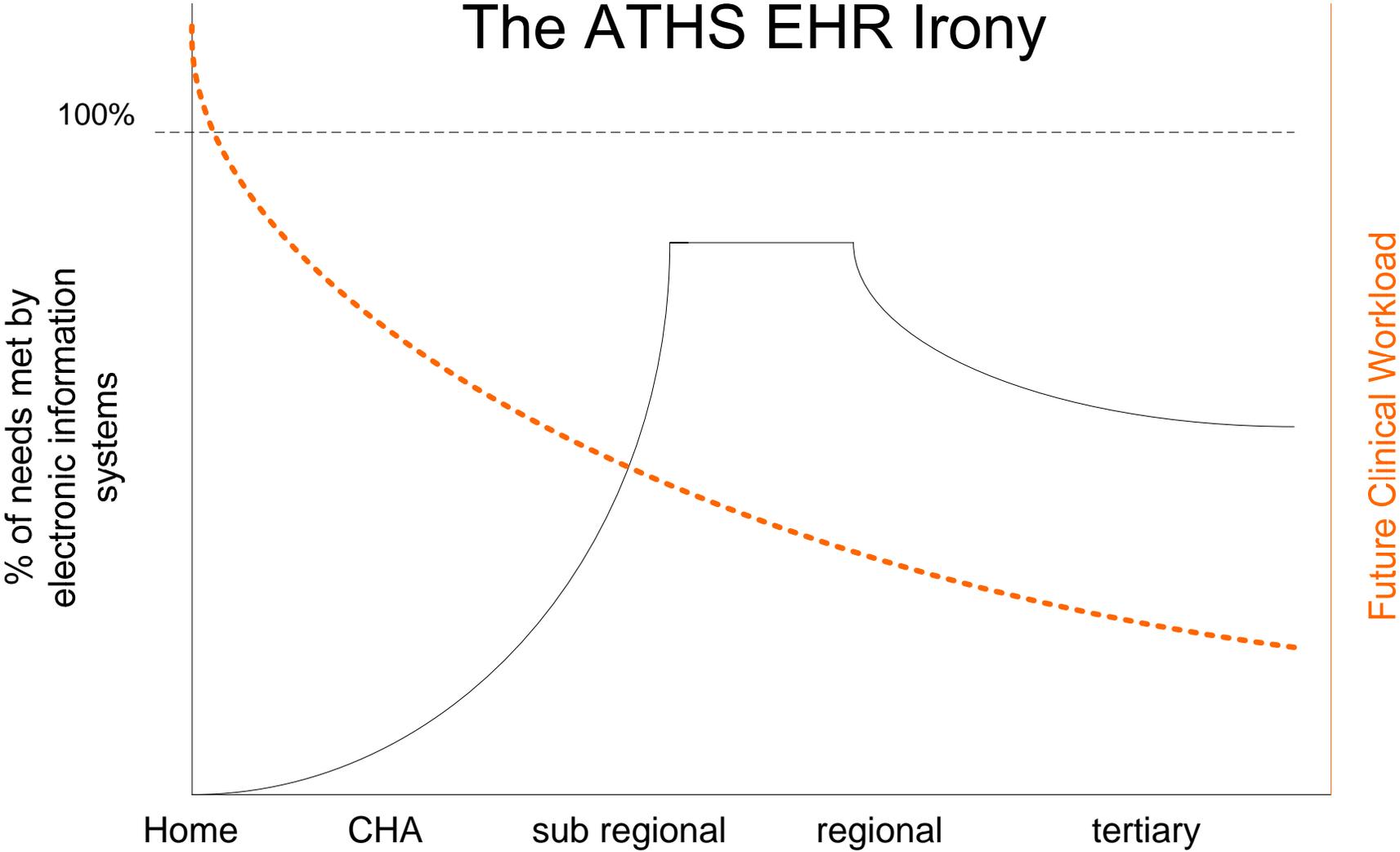


ATHS EHRs Today

9 Billing Systems
8 Clinical Systems

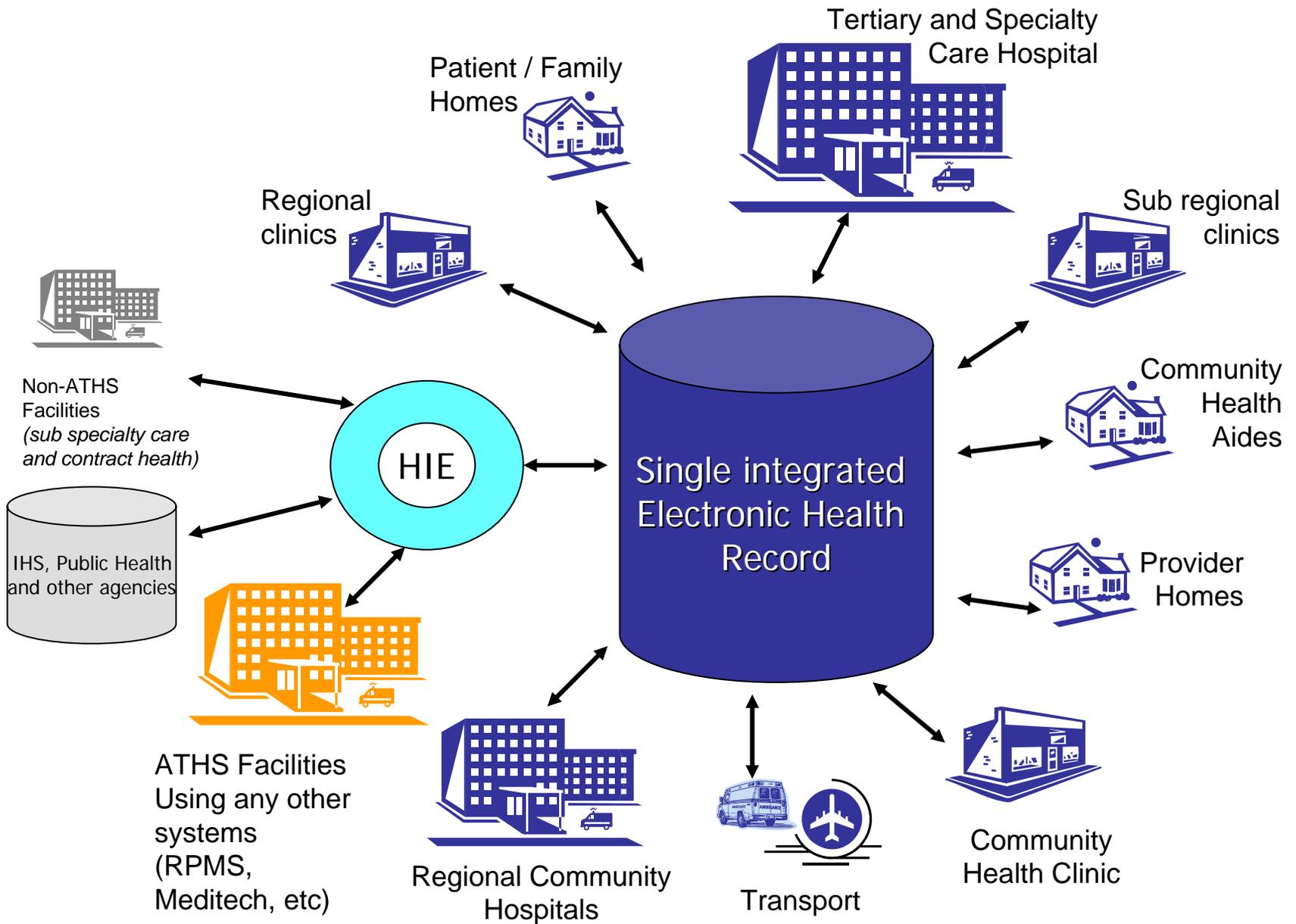
tribe(s)	Clinical	BILLING
ANMC	RPMS, Softlab	Signature, MS4
ASNA	RPMS	Mardon
BBAHC	RPMS, Meditech	Meditech
Maniilaq	IHS-EHR	IHS-EHR
NSHC	Meditech	Meditech
SCF	RPMS, MS4, Signature	Signature, MS4
SEARHC	RPMS	ILC
YKHC	RPMS, Quadramed	MS4
Chugachmiut	RPMS	RPMS
EAT	RPMS	RPMS
Eyak	Group Cast	Group Cast
KANA	RPMS	RPMS, Merlyn
Kenaitze	(Medisoft)	(Medisoft)
KIC	RPMS	ILC
Metlakatla	RPMS	RPMS
SVT	(Medisoft)	(Medisoft)
TCC	IHS-EHR	IHS-EHR, ILC
APIA	RPMS	RPMS, Medisoft
CATG	RPMS	RPMS
Eklutna	(Medisoft)	(Medisoft)
Ninilchick	(Medisoft)	(Medisoft)

The ATHIS EHR Irony



ATHS EHR/HIE/PHR Proposal

- Build on ANMC RFP process to find products that are scaleable and affordable to anyone in ATHS who wants to participate
- Negotiate ANMC contract to lock in expansion options and pricing
- ATHS governed application service provider data centers
- Distribution via thin client or web
- Develop an ATHS HIE to integrate data from all other systems used (RPMS, Meditech, etc).



Alaska Tribal Health System

Regional Health Consortia
Area Map Key by Region

REGION ORGANIZATION

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5	Bristol Bay Area Health Corporation
6	Aleutian/Pribilof Islands Association
7	Eastern Aleutian Tribes
8	Kodiak Area Native Association
9	Southcentral Alaska Alaska Native Medical Center (jointly managed by ANTHC & SOF) Southcentral Foundation
10	Chugachivut
11	Copper River Native Association
12	Mt. Sanford Tribal Consortium
13	SouthEast Alaska Regional Health Consortium
16	Tanana Chiefs Conference

Tribal and/or Local Health Programs

REGION ORGANIZATION

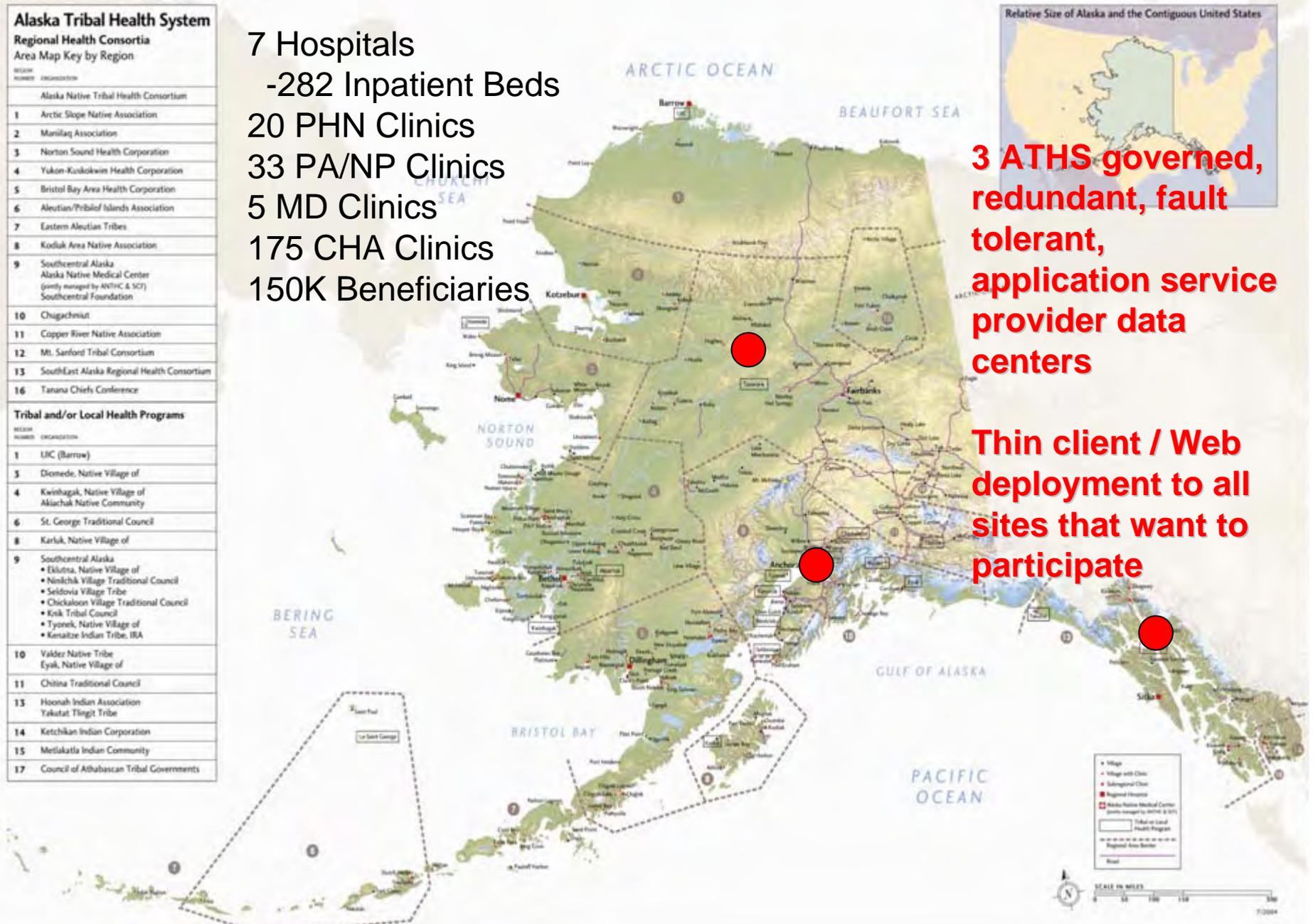
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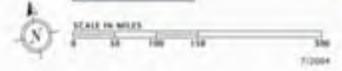


3 ATHS governed, redundant, fault tolerant, application service provider data centers

Thin client / Web deployment to all sites that want to participate



● Village
● Village with Clinic
● Subregional Clinic
● Regional Hospital
■ Alaska Native Medical Center (jointly managed by ANTHC & SOF)
 Tribal or Local Health Program
 Regional Area Border
 Road



The Joys and Sorrows of Health Information Exchange

11/15/07

ATHS HIE Status

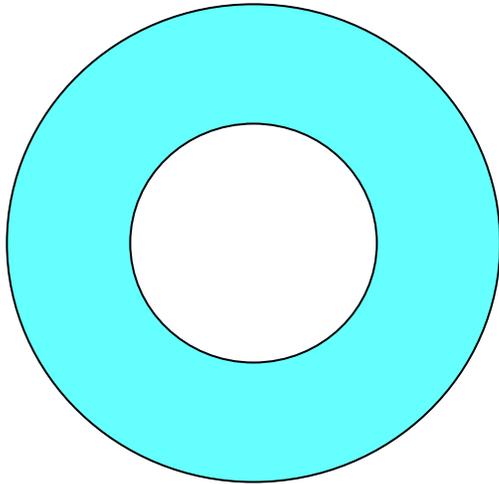
- Charter & Scope approved September 2007
- Next steps to do:
 - Continue to gather documentation including a fall-back option if there is no funding available.
 - Conduct a more thorough cost analysis.
 - Provide educational classes such as webinars on various aspects of HIE/EHR for ATHS staff.
 - Prepare an RFP with a scope that will allow for selection of a complete or partial response.
 - Continue MFI as is until HIE is ready
- Continue coordination

ATHS HIE Major Coordination

- ATHS EHR – sister project
- ATHS Coordinated Care – sister project
- Alaska Chartlink – state & national funds?
- NHIN FHA & HITSP – agreement to support for IHS
- IHS EMPI – duplicative project
- ATHS MFI – transition required

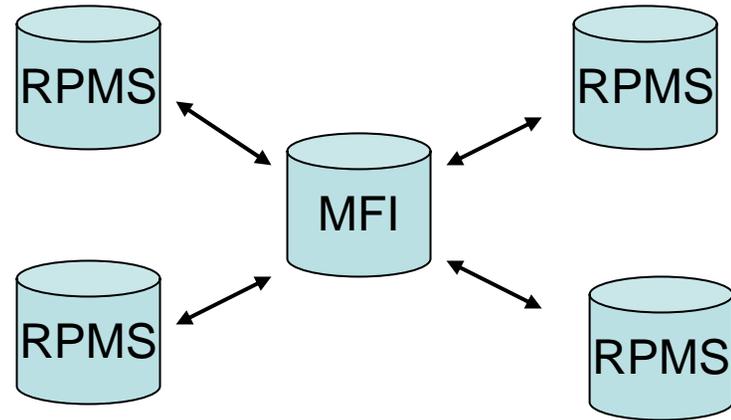
Several Different Health Information Exchange Models

HIE (AK Chartlink)



- Real time, on demand exchange of data
- No data stays in HIE
- Local control of all data
- Does not require an MPI
- Many to Many exchange
- Subject to real time availability of data from local systems

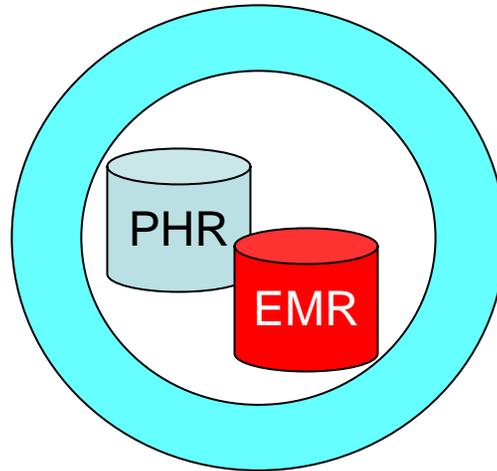
Multi Facility Integration (MFI)



- Periodically a subset of new data from any RPMS system is pushed to all other RPMS systems where the patient exists
- Does not currently include demographics and insurance information

Several Different Health Information Exchange Models... *continued*

HIE with E-Health Trust



- Real time access to data
- A central store of integrated data
- Many to One and One to Many exchange
- MPI required



Personal health record-
patient governed



Integrated Business EMR-
ATHS governed

But

- In October we found out that MFI has been deleting records for 10 years!
- MFI is now totally shut down
- Remediation
 - NDW, RPMS modules, other
- Fix MFI in 6-9 months
 - Deletes
 - Provider classes
 - LOINC
 - National Drug Codes
 - RPMS patient merge

Real HIE Status

- MFI
 - 3 programmers on remediation
 - 6-9 months of fixes
- HIE Funding
 - Chartlink best \$\$ prospect
- Not enough staff, money, or time