California Immunization Registry (CAIR 2) Project Update

OCIC Meeting
7/13/2016

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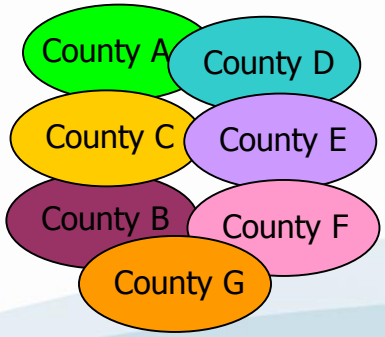
CA IIS History

Counties
1990s



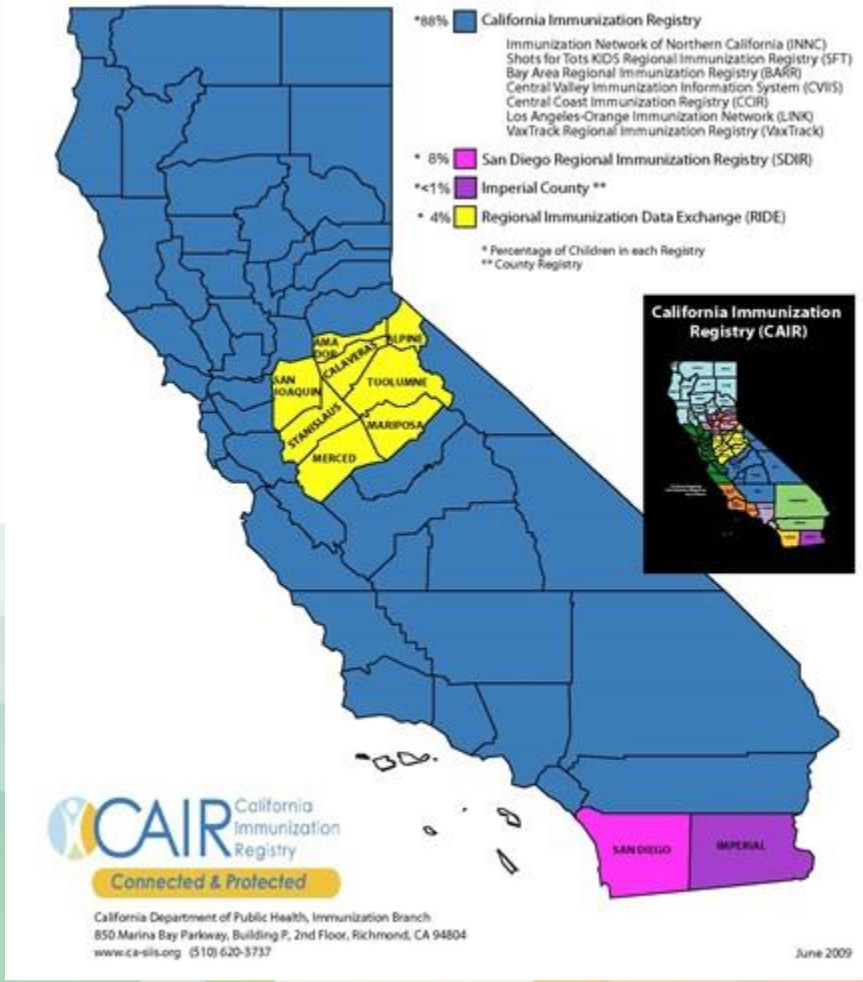
7 of 39 early IIS adopters were CA counties (AKC/RWJ)

10 'Regions'
2000s

1 'CAIR'
2017

The California Immunization Registry (CAIR) System

- Consortium of 10 regional registries – no current data linkage
- 7 of 10 use same ‘CAIR’ software (87% of population; 51 of 61 jurisdictions)
- The ‘CAIR 7’ registries are hosted at UCB and managed by CDPH/IZB staff



CAIR 7 – *Staffing*

- CAIR Technical Team (15)
  - *Hardware/software maintenance*
  - *Data exchange*
  - *Reports, e.g. HEDIS*
- CAIR Central User Support (Help Desk) (5)
  - *Central Help Desk email and phone user support*
  - *Accounts management*
- CAIR Local User Support (LCRs) (11)
  - *User Training*
  - *Local User support*
  - *User recruitment, retention*

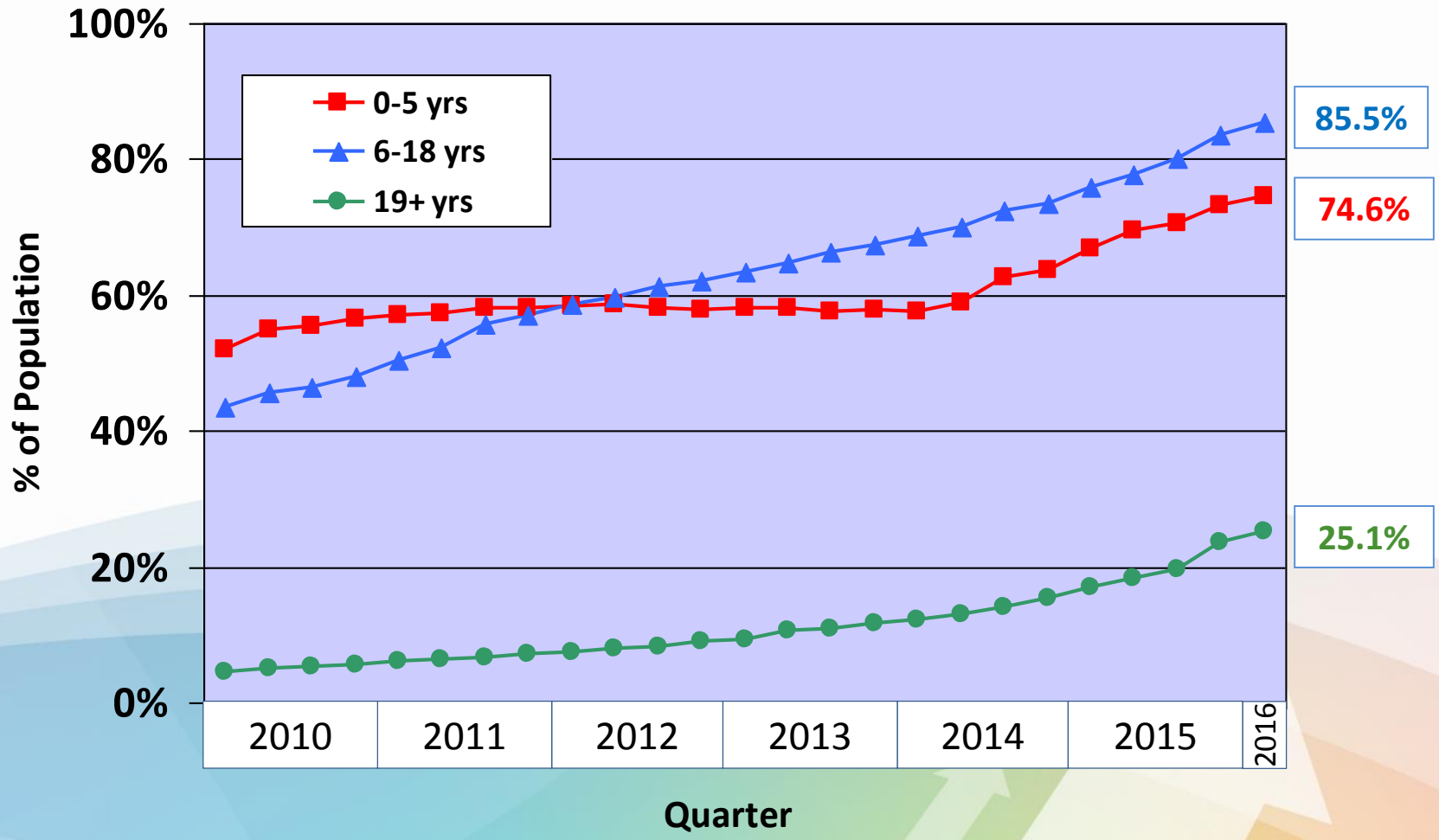
CAIR 7 – *Local CAIR Reps*

VFC /CAIR Old Names	Senior Reps	Local CAIR Reps
NorCal (INNC, SFT)	Cindy Klaisle	Jennifer Toten
Bay Area (BARR)	Brenton Louie	Marcia Santillan
		Jeanette Chapman
Cent. Valley (CVIIS, CCIR)	Souk Mouanoutoua	Giselle Garcia
		Monica Hernandez
LA (LINK minus Orange)	Laurel Fowler	Monique Crespo
		Janet Ajao
		TBN
SoCal (IE, Orange)	Colleen Mallen	Heather Murphy
		Twila Crook

CAIR – *5 Year Change*

Measure	Q1 2011	Q1 2016	5-YR Change
Total Doses	112M	216M	2.0X
Patients	11M	26M	2.4x
0-5 yrs w/ ≥ 2 doses	57.1%	74.5%	+17.4%
Total Clinical Sites	4,710	9,344	2x
Read-only Sites	1,203	4,489	3.7x
New Doses/Q	5.4M	9.5M	1.8x
New DX Doses/Q	0.6M	7.3M	12.2x
DX Doses as % of New	11%	77%	7X

CAIR – Patients w/ 2 or more doses



CAIR 7 – *Data Exchange**

Site Type	All Sites	Data Submission Status	
		# Testing	# 'Production'
EHR ⟶ CAIR	999	851	148
EHR → HIE → CAIR	5,756	1,066	4,690
Totals	6,755	1,917	4,838

* 'CAIR 7' only. As of 7/5/2016

CAIR 7 – *DX: Top 25 EHRs*

Rank	EHR	# of Sites	% of All Sites	Cumulative %
1	Epic	1,079	26.6%	26.6%
2	NextGen	675	16.7%	43.3%
3	Allscripts	381	9.4%	52.7%
4	eClinicalWorks	336	8.3%	61.0%
5	Practice Fusion	332	8.2%	69.2%
6	Office Ally	208	5.1%	74.3%
7	Athenahealth	189	4.7%	79.0%
8	Cerner	176	4.3%	83.3%
9	e-MDs	61	1.5%	84.8%
10	Elation EMR	55	1.4%	86.2%
11	McKesson	50	1.2%	87.4%
12	Meditech	47	1.2%	88.6%
13	Falcon	37	0.9%	89.5%
14	GE	27	0.7%	90.2%
15	Amazing Charts	25	0.6%	90.8%
16	Adaptamed EMR	23	0.6%	91.4%
17	ChoiceOne EHR Inc.	23	0.6%	91.9%
18	Office Practicum	23	0.6%	92.5%
19	Optum	22	0.5%	93.0%
20	CSPI	18	0.4%	93.5%
21	Meditab	18	0.4%	93.9%
22	SuccessEHS	17	0.4%	94.3%
23	CARE360	16	0.4%	94.7%
24	Greenway	15	0.4%	95.1%
25	InSync	14	0.3%	95.5%

CAIR2 Project Info?

What is the CAIR2 Project?

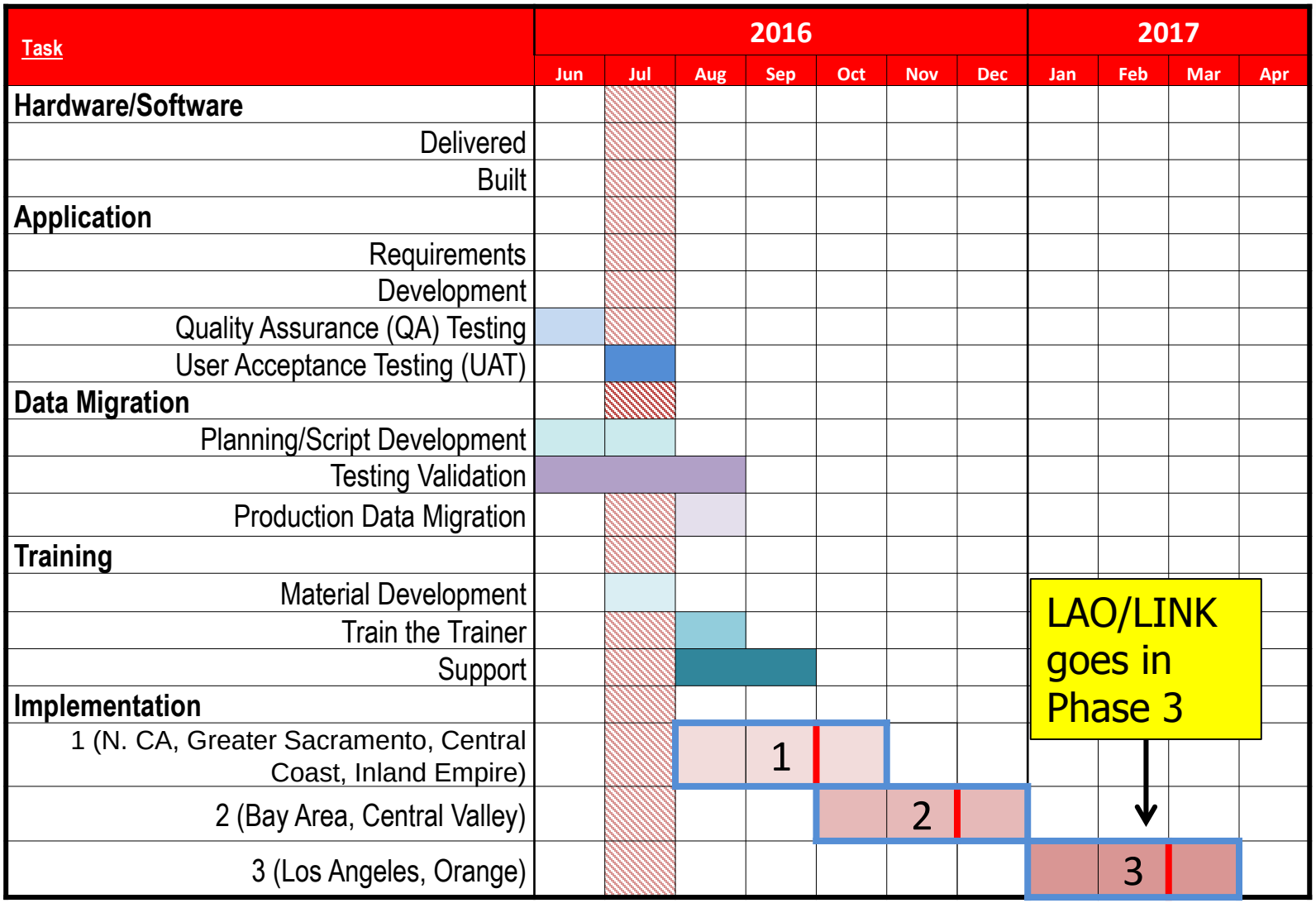
- Project Goals
  - Merge ‘CAIR 7’ regional registries into a single state registry ‘hub’ called CAIR2
  - Replace current legacy software with new SW (Wisconsin Immunization Registry, used in 17 other states, including NY and TX) that is state-IT compliant and supports the ‘meaningful use’ EHR Incentive Program (HL7)
  - Data share with the 3 ‘independent’ CAIR registries (SD, SJ, Imp) to allow statewide patient search and record retrieval

CAIR2 Transition Team

Team leads meeting weekly:

- Project Management – Maria Volk
- Data Cleaning – Mike Powell
- Data Migration – Mike Powell
- Data Exchange – Steve Nickell
- User Acceptance Testing – Cheryl Scott
- Communications – Edgar Ednacot
- Training – Robyn Davis
- Evaluation – Michele Thomas

CAIR2 Project Timeline



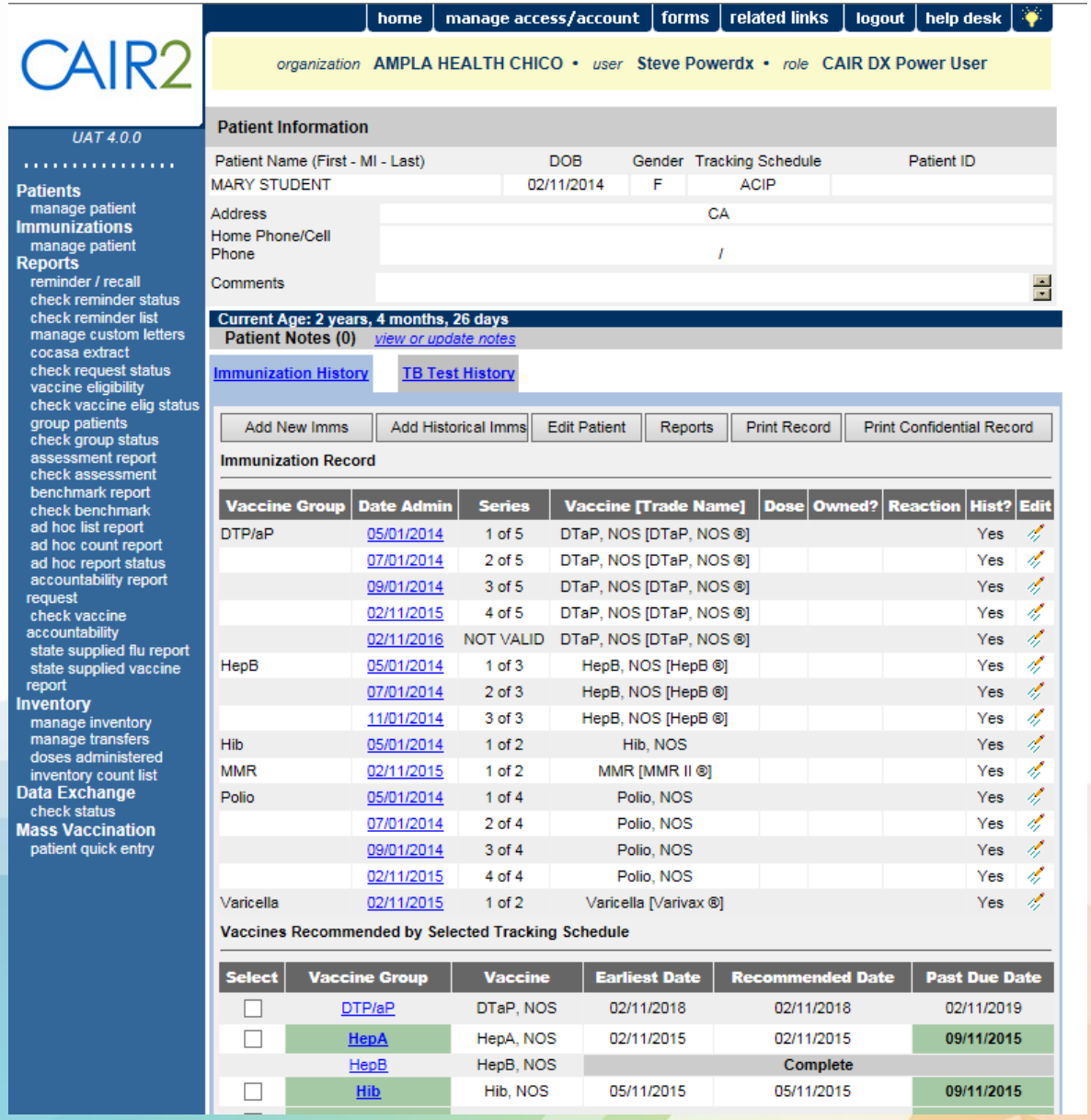
CAIR2 – *Why Phased Rollout?*

- **New software is quite different so training will be required**
- **Large number of Users will need to be trained (>12,000)**
- **Limited training staff**

CAIR2 – *New Features*

- New look, feel!
- Faster, better performance!
  - Real-time access to submitted data, e.g. POS
- More robust, timely reporting!
  - Separate 'Datamart' database for reporting only
  - Push-button Co-CASA-like reports (Assessment, Benchmark)
  - 'Ad hoc' reporting capability
- New user roles!
  - County epi role gets access to all county data; no more need for county-specific specialized exports
  - Health Plan users can upload claims/billing data or directly run HEDIS reports
  - School Users can assemble class list and run grade compliance reports
- DX submitters will be able to run doses admin/ inventory reports
- Real-time, bi-directional HL7 messaging capability
- Access to statewide patient data

CAIR2


CAIR2
UAT 4.0.0
home
manage access/account
forms
related links
logout
help desk
organization AMPLA HEALTH CHICO • user Steve Powerdx • role CAIR DX Power User
Patients
manage patient
Immunizations
manage patient
Reports
reminder / recall
check reminder status
check reminder list
manage custom letters
cocasa extract
check request status
vaccine eligibility
check vaccine elig status
group patients
check group status
assessment report
check assessment
benchmark report
check benchmark
ad hoc list report
ad hoc count report
ad hoc report status
accountability report request
check vaccine accountability
state supplied flu report
state supplied vaccine report
Inventory
manage inventory
manage transfers
doses administered
inventory count list
Data Exchange
check status
Mass Vaccination
patient quick entry
Patient Information
Patient Name (First - MI - Last) DOB Gender Tracking Schedule Patient ID
MARY STUDENT 02/11/2014 F ACIP
Address CA
Home Phone/Cell Phone /
Comments
Current Age: 2 years, 4 months, 26 days
Patient Notes (0) view or update notes
Immunization History
TB Test History
Add New Imms
Add Historical Imms
Edit Patient
Reports
Print Record
Print Confidential Record
Immunization Record
Vaccine Group Date Admin Series Vaccine [Trade Name] Dose Owned? Reaction Hist? Edit
DTP/aP 05/01/2014 1 of 5 DTaP, NOS [DTaP, NOS ®] Yes
07/01/2014 2 of 5 DTaP, NOS [DTaP, NOS ®] Yes
09/01/2014 3 of 5 DTaP, NOS [DTaP, NOS ®] Yes
02/11/2015 4 of 5 DTaP, NOS [DTaP, NOS ®] Yes
02/11/2016 NOT VALID DTaP, NOS [DTaP, NOS ®] Yes
HepB 05/01/2014 1 of 3 HepB, NOS [HepB ®] Yes
07/01/2014 2 of 3 HepB, NOS [HepB ®] Yes
11/01/2014 3 of 3 HepB, NOS [HepB ®] Yes
Hib 05/01/2014 1 of 2 Hib, NOS Yes
MMR 02/11/2015 1 of 2 MMR [MMR II ®] Yes
Polio 05/01/2014 1 of 4 Polio, NOS Yes
07/01/2014 2 of 4 Polio, NOS Yes
09/01/2014 3 of 4 Polio, NOS Yes
02/11/2015 4 of 4 Polio, NOS Yes
Varicella 02/11/2015 1 of 2 Varicella [Varivax ®] Yes
Vaccines Recommended by Selected Tracking Schedule
Select Vaccine Group Vaccine Earliest Date Recommended Date Past Due Date
DTP/aP DTaP, NOS 02/11/2018 02/11/2018 02/11/2019
HepA HepA, NOS 02/11/2015 02/11/2015 09/11/2015
HepB HepB, NOS Complete
Hib Hib, NOS 05/11/2015 05/11/2015 09/11/2015

CAIR2– *Maintain Linkage to External Apps*

CAIR Acct Management
- New Enrollment
- Account Update

CAIR IZ Portal (DX)
- Registration

CATS User Training Management

VFC Vaccine Ordering

Future enhancement

CAIR2 – *What's Next?*

- Imperial County will likely move to CAIR 2.0!
- AFIX Integration- no more Co-CASA
- ?Direct parent/patient access to immunization record
- ?Automatic entry of VFC shipments
- ?Population of *myVFCvaccines* ordering form with CAIR inventory data
- ?'Dashboard' reports for providers
- ?2D bar code integration
- ?USPS address standardization
- ?Geocoding of addresses
- ?????

? = may require additional funding

CAIR2 – *Data Exchange (DX) Sites*

- All DX sites will begin submission to CAIR2 on the Phase 1 switchover date (October 3, 2016)
- DX sites in Phase 2 and 3 regions (BA, CV, LAO):
  - Will continue to access their submitted patient data in CAIR1 until they transition to CAIR2
  - Existing users will receive training as scheduled for their specific regions

CAIR2 – *Changes for DX Sites*

Component	CAIR2 Change	Solution
HL7 message specifications	Updating to HL7 2.5.1, Release 1.5 Specifications (2014)	• Add *MSH-22* ('Sending Responsible Organization') field to messages • Place *RXA-11.4* CAIR Site ID in *MSH-22*
SOAP Transport	CAIR2 will have new URL/web address	• Replace CAIR1 WSDL with CAIR2 WSDL

Changes will need to be implemented for any data submission on or after Phase 1 switchover on October 3, 2016

CAIR2 - *HL7 Message Change*

MSH|^~\&|EPICCARE|SF-000013|EGATE|CAIRBA|20160707170415|S34567|VXU^V04|7670871_fc25f8c8-d9bf-4b9d-b57f-5fabf0446a34|P|2.3.1||||AL

PID|1||12345678^^^^MR||JONES^JUDITH||20150703|F|||100 SMITH AVENUE^^SOUTH SAN FRANCISCO^CA^94080^USA^P^^SAN MATEO|SAN MATEO|(415)555-1212^P^7|||SINGLE|CATHOLIC||||JONES^JANE^S|||N|1|||||N

PD1||||||||||01|Y|20160707|||A|20150703

NK1|1|||100 SMITH Avenue^^SOUTH SAN FRANCISCO^CA^94080^USA|||EC

ORC|RE

RXA|0|999|20160707|20160707|52^HEPATITIS A^CVX||||00||26111^^^**DE-000798**^^^^^PMMP PEDS BUR CTR|||||||||CP|A

RXA-11.4

CAIR2 - *HL7 Message Change*

MSH|^~\&|EPICCARE|SF-000013|EGATE|CAIRBA|20160707170415|S34567|VXU^V04|7670871_fc25f8c8-d9bf-4b9d-b57f-5fabf0446a34|P|2.3.1||||AL||||||**DE-000798**|

PID|1||12345678^^^^MR||JONES^JUDITH||20150703|F|||100 SMITH AV
FRANCISCO^CA^94080^USA^P^^SAN MATEO|SAN MATEO|(415)555
1212^P^7|||SINGLE|CATHOLIC||||JONES^JANE^S|||N|1|||||N

PD1||||||||||01|Y|20160707|||A|20150703

NK1|1|||100 SMITH Avenue^^SOUTH SAN FRANCISCO^CA^94080^USA|||EC

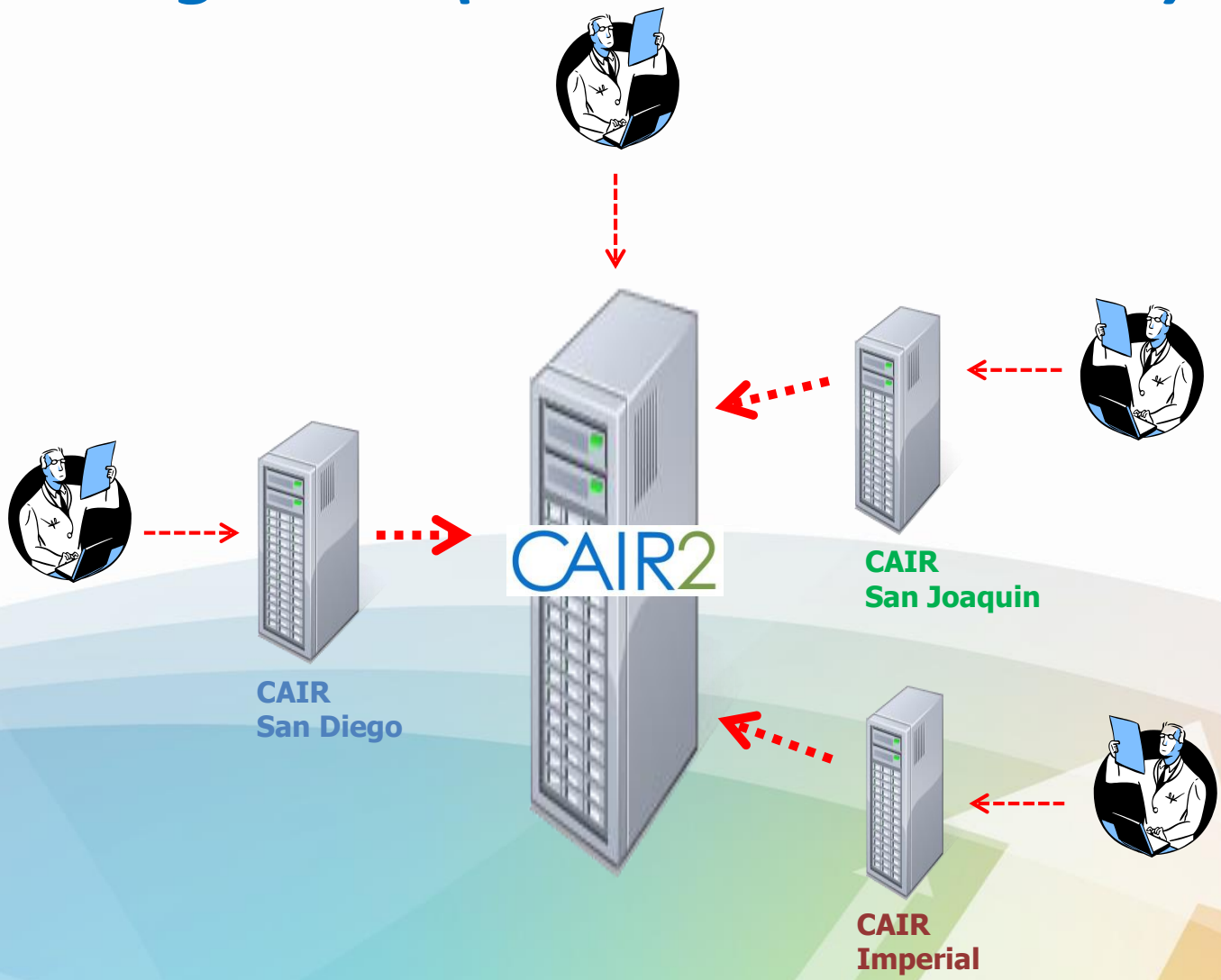
ORC|RE

RXA|0|999|20160707|20160707|52^HEPATITIS A^CVX||||00||26111^^^**DE-000798**^^^^^PMMP PEDS BUR CTR|||||||||CP|A

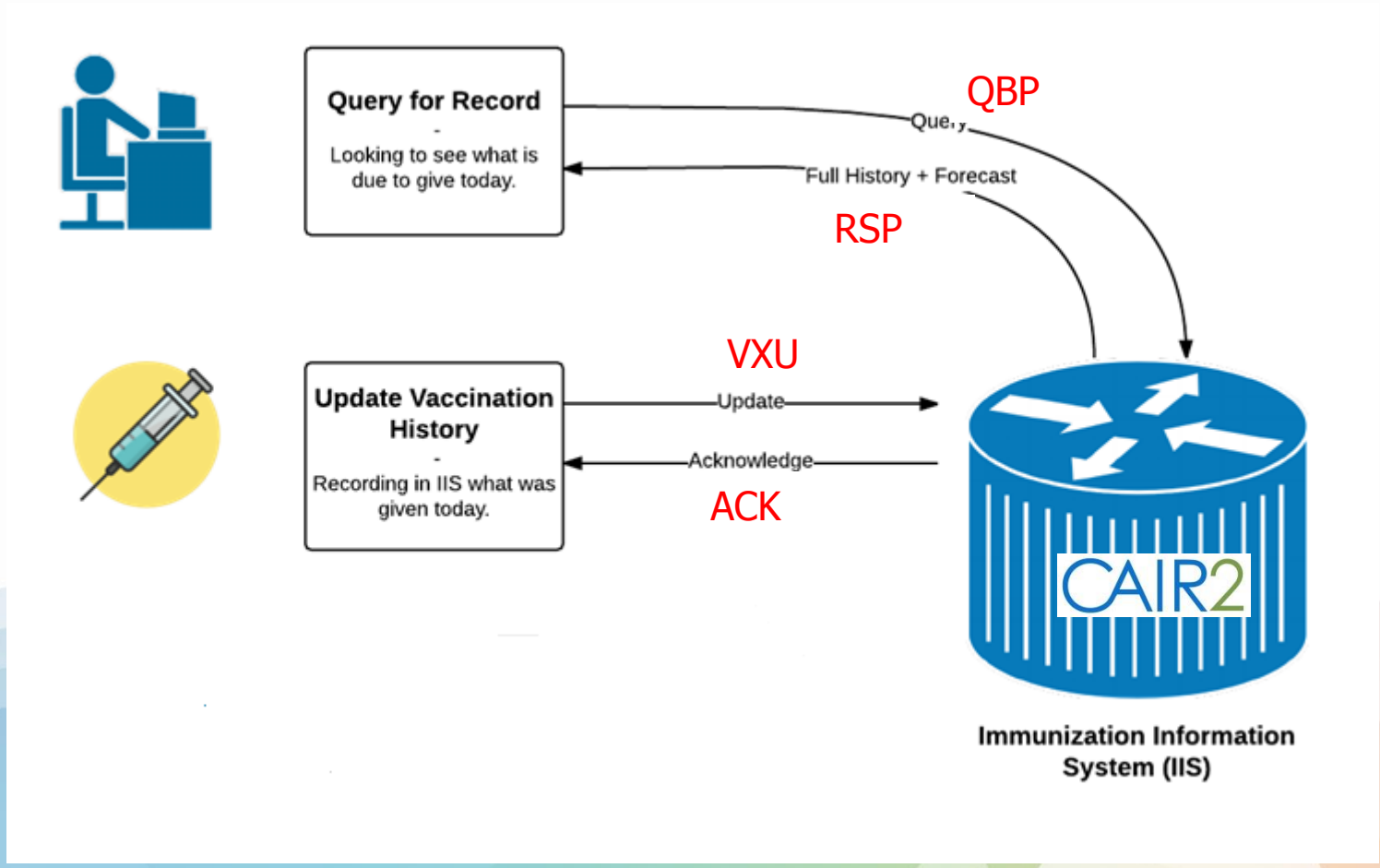
New MSH-22 = **CAIR ID** in *RXA-11.4*

RXA-11.4

CAIR2– *Data Sharing with 3 'Independent' CAIR Registries (Summer-Fall 2016?)*



CAIR2 – *Bidirectional Data exchange (BiDX)*



CAIR2 – *BiDX Timeline*

- **Nov-Dec 2016**
  - 'Beta' test – handful of sites (large), monitor system performance
  - Require interested Sites to complete online *BiDX Interest/Readiness Survey*
- **April 2017**
  - Begin BiDX 'testing' as self-directed process using dummy patients in CAIR2
  - Approve sites for BiDX when sites confirm that EHR has accurately displayed returned patient data

Training

User Training Plan

Active Existing Power and Regular users: Will be required to attend training. Register via new training registration system.

- Sufficient trainings will be scheduled to ensure that all Active users can attend training before the switchover date.
- Will offer up to 2 simultaneous trainings 3-4 times per day (webinar/live; some early mornings, evenings and Saturdays).

Inactive Existing Power and Regular users: Accounts will be deactivated. Required to obtain a new User Account and attend New User Training. Register via existing registration system.

Training – Monitoring and Support

During the Transition, we will:

- Monitor registration and add trainings as needed.
- Have a user feedback process to modify training curricula, materials and schedule as needed.
- Offer a weekly ‘Ask The Trainer’ webinar for users to ask questions post-training.
- Have user guides, videos, and on-screen Help Pages.

Three Training Phases

Phase/Regions	Training Registration begins	Training begins	Launch CAIR 2
1. Northern CA, Greater Sacramento, Central Coast, Inland Empire	Aug 1, 2016	Sept 1, 2016	Oct 3, 2016
2. Bay Area, Central Valley	Oct 1, 2016	Nov 1, 2016	Dec 5, 2016
3. Los Angeles-Orange	Jan 1, 2017	Feb 1, 2017	Mar 6, 2017

CAIR2 Training Timeline

Phase	Software	2016							2017			
		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
1 CCIR, IE INNC, SFT	CAIR 2			CAIR2 Training Registration	CAIR2 E Training	CAIR2 E CAIR2 N	CAIR2 E CAIR2 N	CAIR2 N	CAIR2 N	CAIR2 N	CAIR2 N	CAIR2 N
	CAIR 1	CAIR1 N	CAIR1 N	CAIR1 N								
2 BARR, CVIIS	CAIR 2					CAIR2 Training Registration	CAIR2 E Training	CAIR2 E CAIR2 N	CAIR2 E CAIR2 N	CAIR2 N	CAIR2 N	CAIR2 N
	CAIR 1			CAIR1 N	CAIR1 N	CAIR1 N						
3 LINK	CAIR 2								CAIR2 Training Registration	CAIR2 E Training	CAIR2 E CAIR2 N	CAIR2 E CAIR2 N
	CAIR 1					CAIR1 N	CAIR1 N	CAIR1 N				

CAIR1 N = CAIR1 trainings for new regional users still on CAIR 1
CAIR2 E = CAIR2 trainings for existing regional users migrating to CAIR 2
CAIR2 N = CAIR 2 trainings for new users migrating to CAIR 2
Red vertical lines designate the proposed dates for switchover to CAIR 2.

CDPH

CDPH California Department of PublicHealth

Post-Transition Training

After the Transition, we will:

- Continue Regular and Power user trainings for New Users.
- Create additional Guides and Cheat-sheets as needed (e.g., Reminder/Recall, Special Reports)
- Implement new User role trainings and additional Special Topics trainings as needed (e.g., Health Plan User, County User, Reminder/Recall, Special Reports)

Board of Pharmacy - Pending Regulations

- Under review by Dept. of Consumer Affairs: Approval expected early 2017
- Establishes training, continuing education, notification and recordkeeping requirements for pharmacists who administer vaccinations.
  - Improve provision of ACIP-recommended vaccines.
  - Requires timely communication with the primary care provider (and prenatal care provider, if pregnant).
  - Requires reporting immunizations administered into the state and/or local immunization registry and informing patient/guardian of immunization record sharing preferences.
  - Notifications must take place within 14 days of vaccine administration.

Draft text - http://www.pharmacy.ca.gov/laws_regs/regulations.shtml (go to "Pending Regulations" under title "Vaccinations")

CAIR - Doses Submitted by Pharmacies*

Pharmacy Type	# of Sites	0-18 Yrs Doses	19+ Yrs Doses
Chain	2,087	2,081	50,479
Mass Merchandiser	520	203	6,521
Supermarket/Grocery Store	391	242	5,776
Independent Pharmacy	4	-	-
All	3,002	2,526	62,776

*CAIR 7 regions only, Q1 2016

CAIR - Adult Doses Submitted by Pharmacies - selected vaccines*

Pharmacy Type	Flu	HAV	HAV-HBV	HBV	HPV	MCV4	Meng B	MMR	PCV13	PPV23	Tdap	Zoster
Chain	27,034	597	228	470	85	255	132	492	5,182	1,146	10,071	6,437
Mass Merchandiser	2,949	86	51	133	18	30	3	87	868	314	1,169	960
Supermarket/ Grocery Store	2,708	116	59	39	16	42	2	54	958	173	991	806
All	**32,691**	**799**	**338**	**642**	**119**	**327**	**137**	**633**	**7,008**	**1,633**	**12,231**	**8,203**

*CAIR 7 regions only, Q1 2016

CDPH Adult IZ Grant - Pharmacies

- Expand pharmacist role in adult immunization
  - Establish a Statewide Pharmacy Task Force
  - Survey pharmacists about current IZ activities and support needed
  - Identify best practices and develop a 'Toolkit' for expanding and supporting pharmacies adult IZ activities and use of CAIR
- CAIR-specific activities
  - Survey other states that have registry mandates for pharmacies
  - Educate pharmacies about the new CA IZ Registry mandate
  - Develop a landing page on CAIRWEB.org
  - Dedicate a staff member to support data submission by pharmacies
  - Enroll, train and and provide ongoing support for pharmacies using CAIR

Questions?

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- rdavis@ph.lacounty.gov