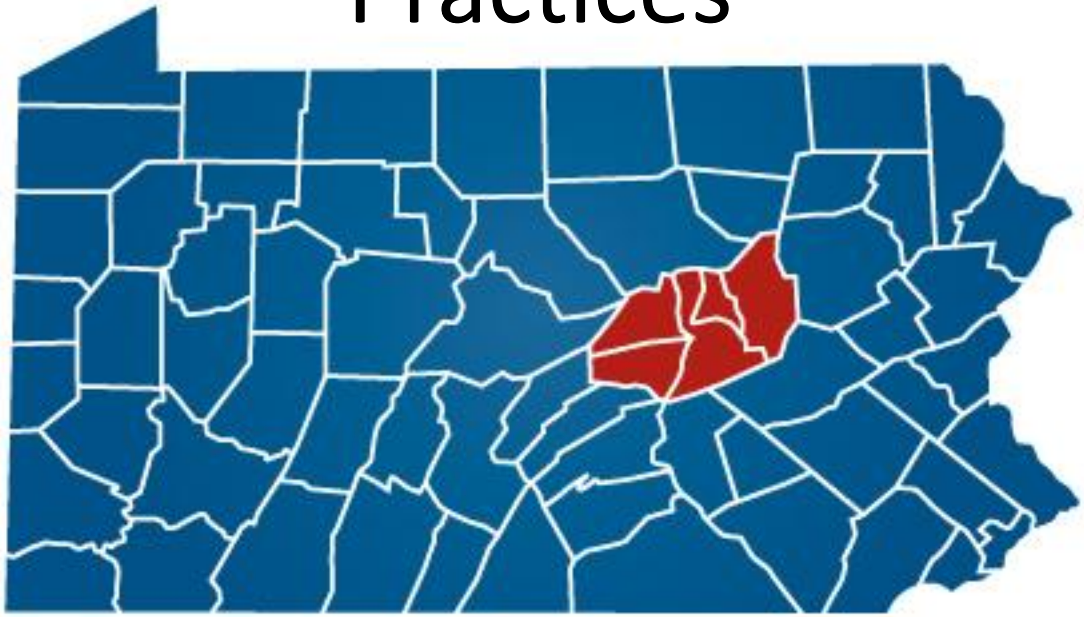
Keystone Beacon Community

Beacon Initiatives: Best Practices



Janet Tomcavage, RN, MSN

Chief Administrative Officer,

Geisinger Insurance Operations

Keystone Beacon Community

Learning Objectives

1. Describe the Keystone Beacon care management model.
2. Highlight the most common care gaps identified.
3. Discuss the analytical challenges faced in a multi-payor, multi-provider initiative.

Keystone Beacon Community

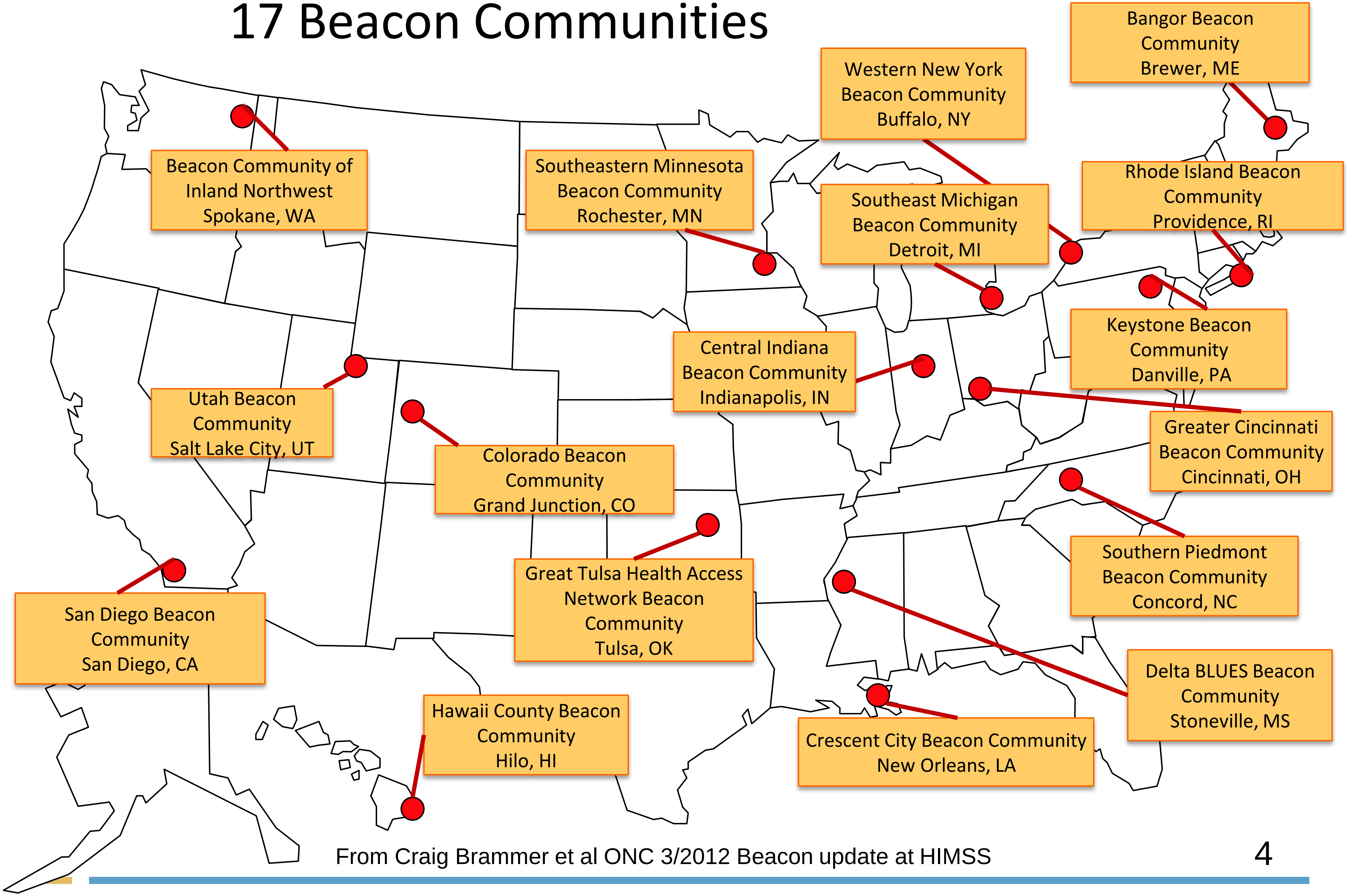
HealthIT.gov

What is the Beacon Award?

- $16 million 3-year award from ONC
- Leveraging care innovation and information technology to improve care coordination and reduce costs
- 17 awards across the nation
- Started in April 2010 and runs thru March 2013

Keystone Beacon Community

17 Beacon Communities



Bangor Beacon Community
Brewer, ME

Western New York Beacon Community
Buffalo, NY

Beacon Community of Inland Northwest
Spokane, WA

Southeastern Minnesota Beacon Community
Rochester, MN

Southeast Michigan Beacon Community
Detroit, MI

Rhode Island Beacon Community
Providence, RI

Keystone Beacon Community
Danville, PA

Central Indiana Beacon Community
Indianapolis, IN

Utah Beacon Community
Salt Lake City, UT

Colorado Beacon Community
Grand Junction, CO

Greater Cincinnati Beacon Community
Cincinnati, OH

Southern Piedmont Beacon Community
Concord, NC

San Diego Beacon Community
San Diego, CA

Great Tulsa Health Access Network Beacon Community
Tulsa, OK

Hawaii County Beacon Community
Hilo, HI

Delta BLUES Beacon Community
Stoneville, MS

Crescent City Beacon Community
New Orleans, LA

From Craig Brammer et al ONC 3/2012 Beacon update at HIMSS

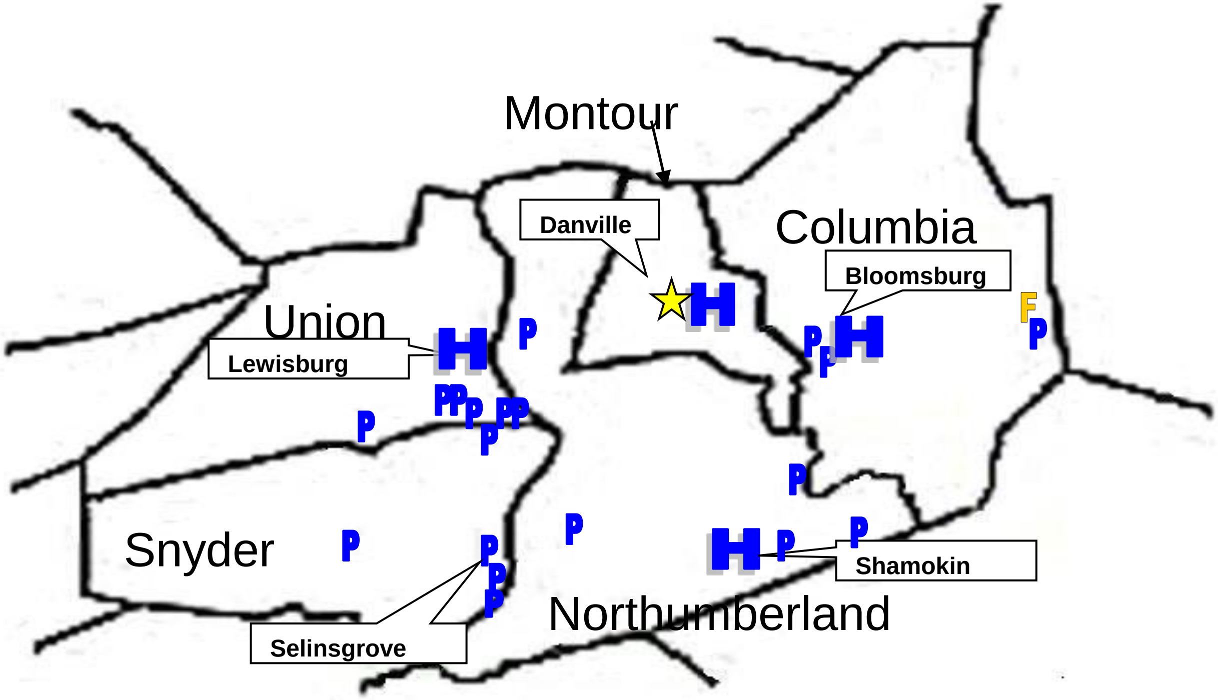
Care Management Model

Coordination Across the Care Continuum

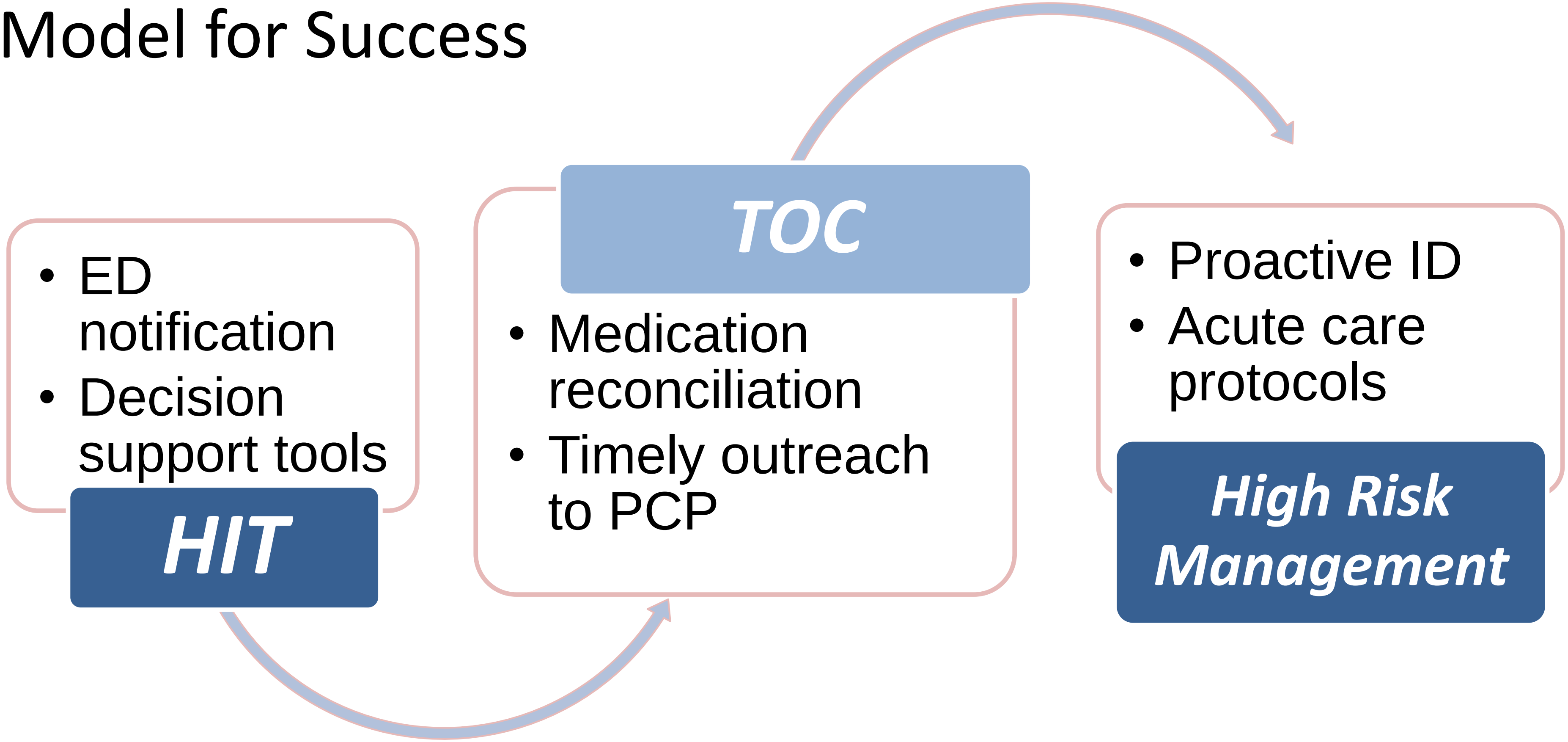
Keystone Beacon Community

Patient-focused, evidence-based, community-wide care coordination supported by Health IT

HF and COPD in 5 counties in rural Pennsylvania
24 organizations over 60 locations across the care continuum


Montour
Danville
Columbia
Bloomsburg
Union
Lewisburg
Snyder
Selinsgrove
Northumberland
Shamokin
H
P
F

Developing a Care Coordination Model for Success



- ED notification
- Decision support tools

HIT

TOC

- Medication reconciliation
- Timely outreach to PCP

- Proactive ID
- Acute care protocols

High Risk Management

Aligning the Community to one standard of care

Expanding Nursing’s Role

- Inpatient Discharge Liaison
  - Medications & condition management
  - “Teach back”
  - Hand off to outpatient teams
- Transitions of Care Call Center
  - 30 day follow-up
  - Medications, safety and “action plans”
- Outpatient medical homes
  - Proactive identification of HF & COPD
  - Medication management, SMAPs for acute exacerbation management

Developing new case management functions

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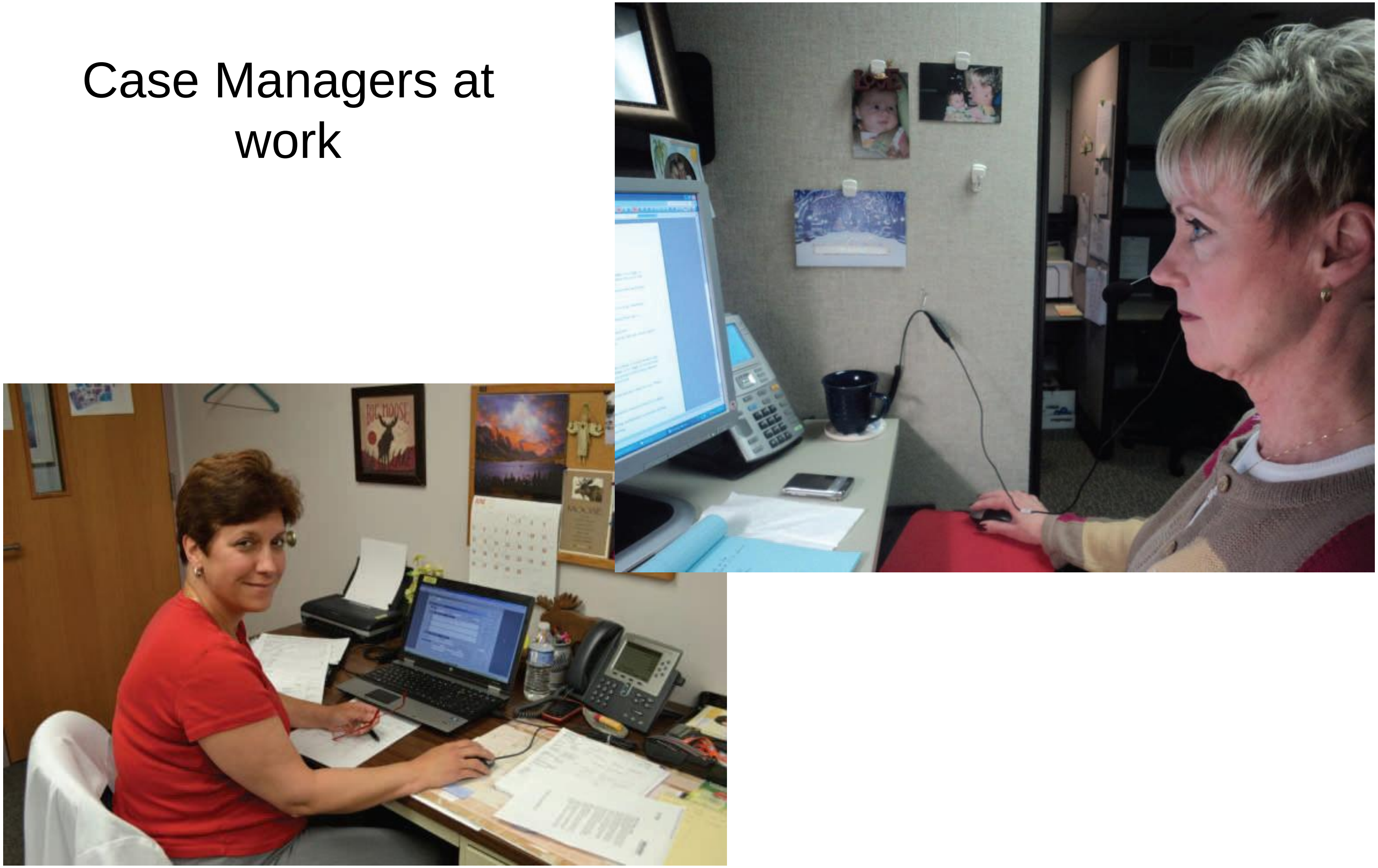
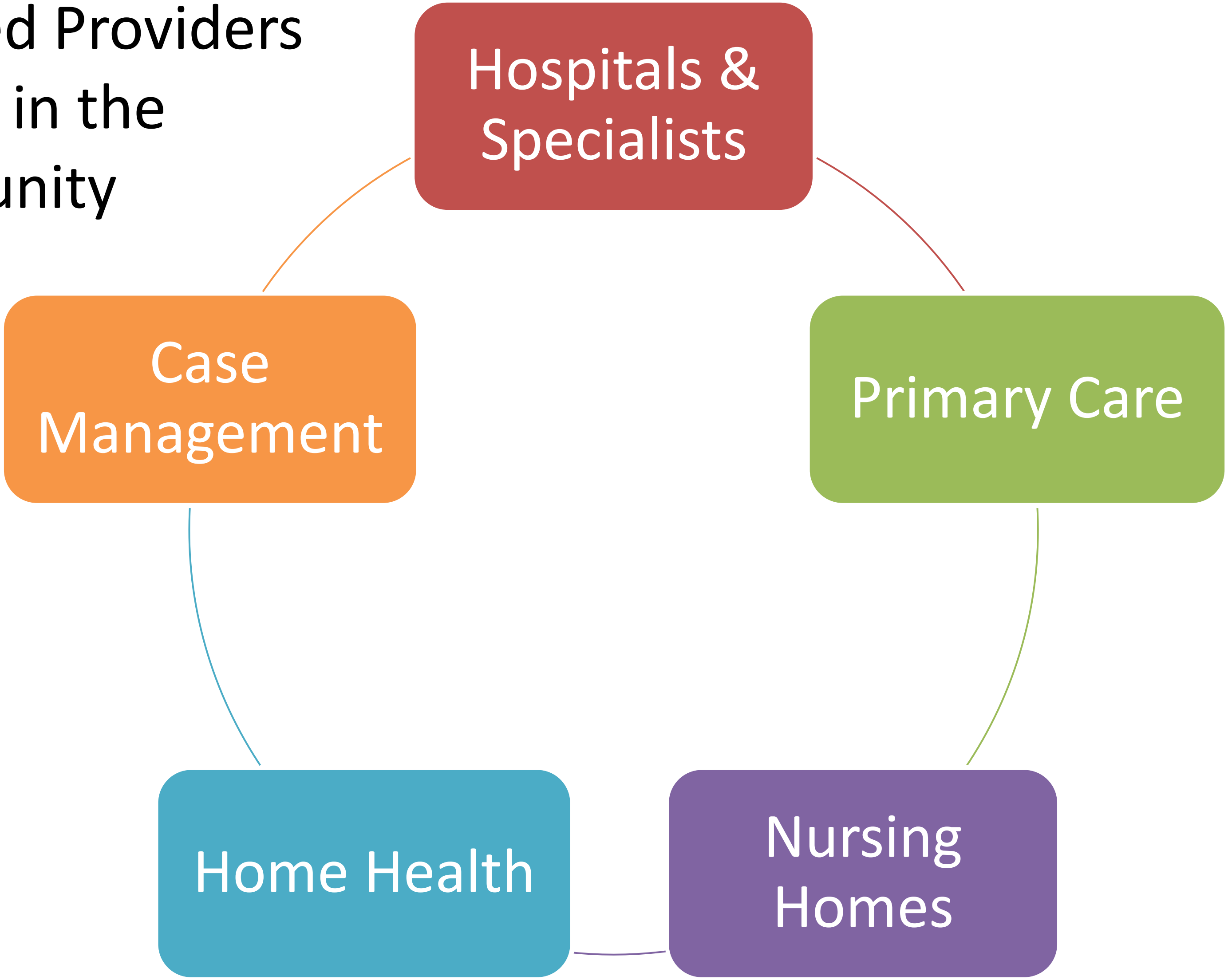
Case Managers at work



Keystone Beacon Community

Targeted Providers of Care in the Community



Hospitals & Specialists

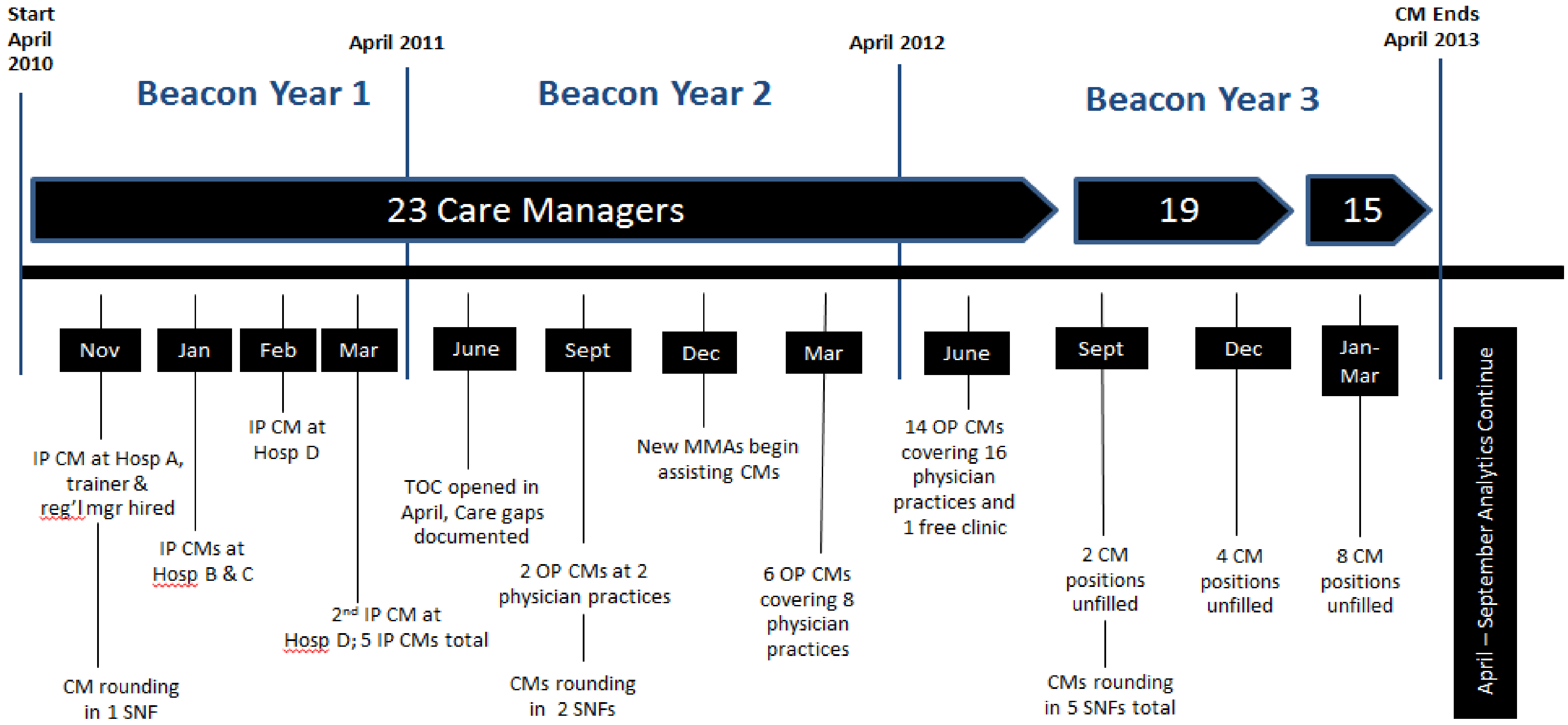
Primary Care

Nursing Homes

Home Health

Case Management

Keystone Beacon Care Management Timeline



Start April 2010

April 2011

April 2012

CM Ends April 2013

Beacon Year 1

Beacon Year 2

Beacon Year 3

23 Care Managers

19

15

Nov

IP CM at Hosp A, trainer & reg'l mgr hired

CM rounding in 1 SNF

Jan

IP CMs at Hosp B & C

Feb

IP CM at Hosp D

Mar

2nd IP CM at Hosp D; 5 IP CMs total

June

TOC opened in April, Care gaps documented

Sept

2 OP CMs at 2 physician practices

CMs rounding in 2 SNFs

Dec

New MMAs begin assisting CMs

Mar

6 OP CMs covering 8 physician practices

June

14 OP CMs covering 16 physician practices and 1 free clinic

Sept

2 CM positions unfilled

CMs rounding in 5 SNFs total

Dec

4 CM positions unfilled

Jan-Mar

8 CM positions unfilled

April – September Analytics Continue

CM = Care Manager
MMA = Medical Management Associate
TOCC = Transitions of Care Center

* Between the time periods of May 2012 and January 2013 several care managers left the project and others shifted assignments to cover as many of the participating facilities and ambulatory practices as possible, albeit at smaller volumes in some settings.

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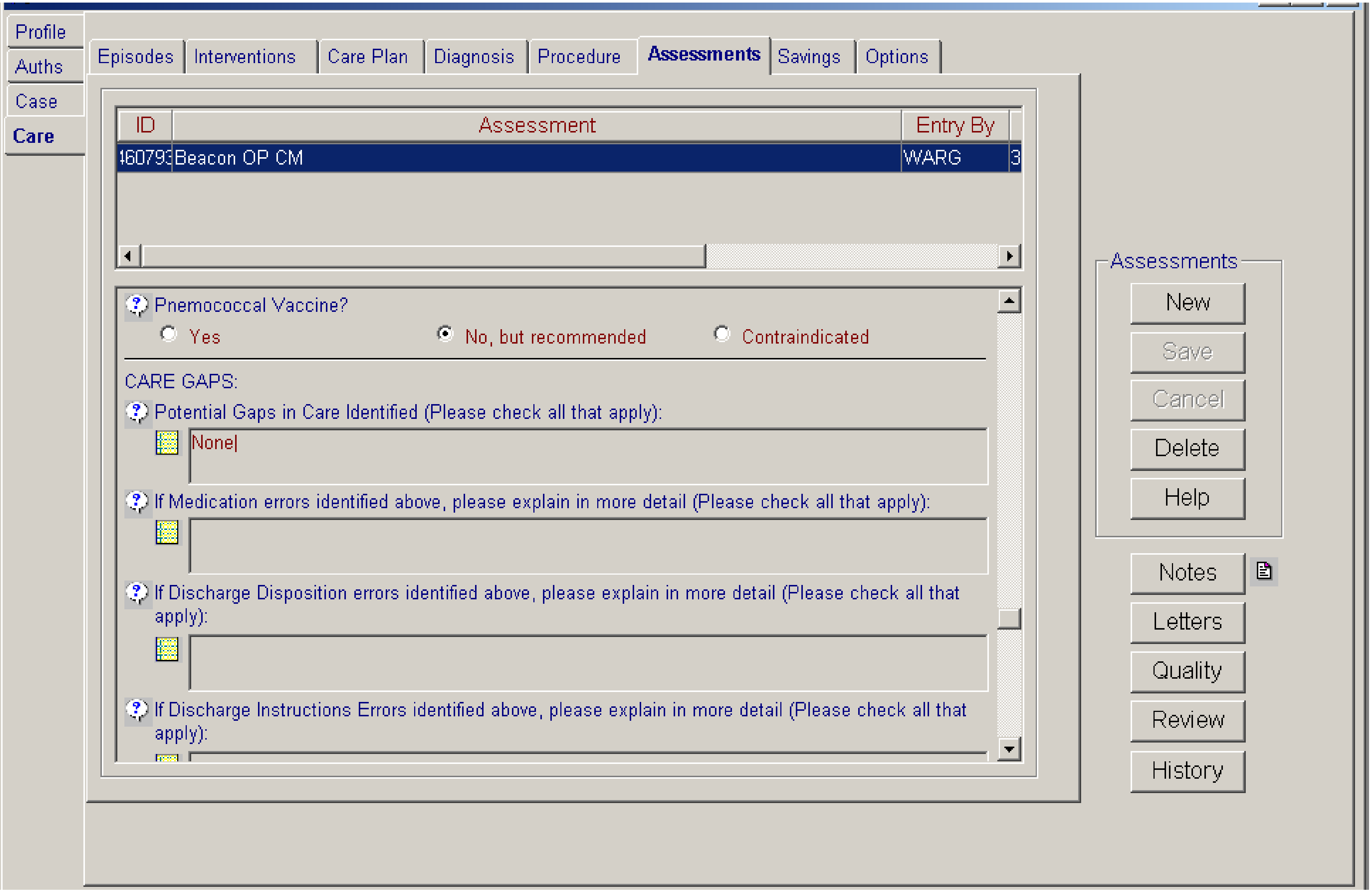
Profile
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Episodes
Interventions
Care Plan
Diagnosis
Procedure
Assessments
Savings
Options
Assessments
New
Save
Cancel
Delete
Help
Notes
Letters
Quality
Review
History

ID	Assessment	Entry By
60793	Beacon OP CM	WARG

Pnemococcal Vaccine?

○ Yes ● No, but recommended ○ Contraindicated

CARE GAPS:

Potential Gaps in Care Identified (Please check all that apply):

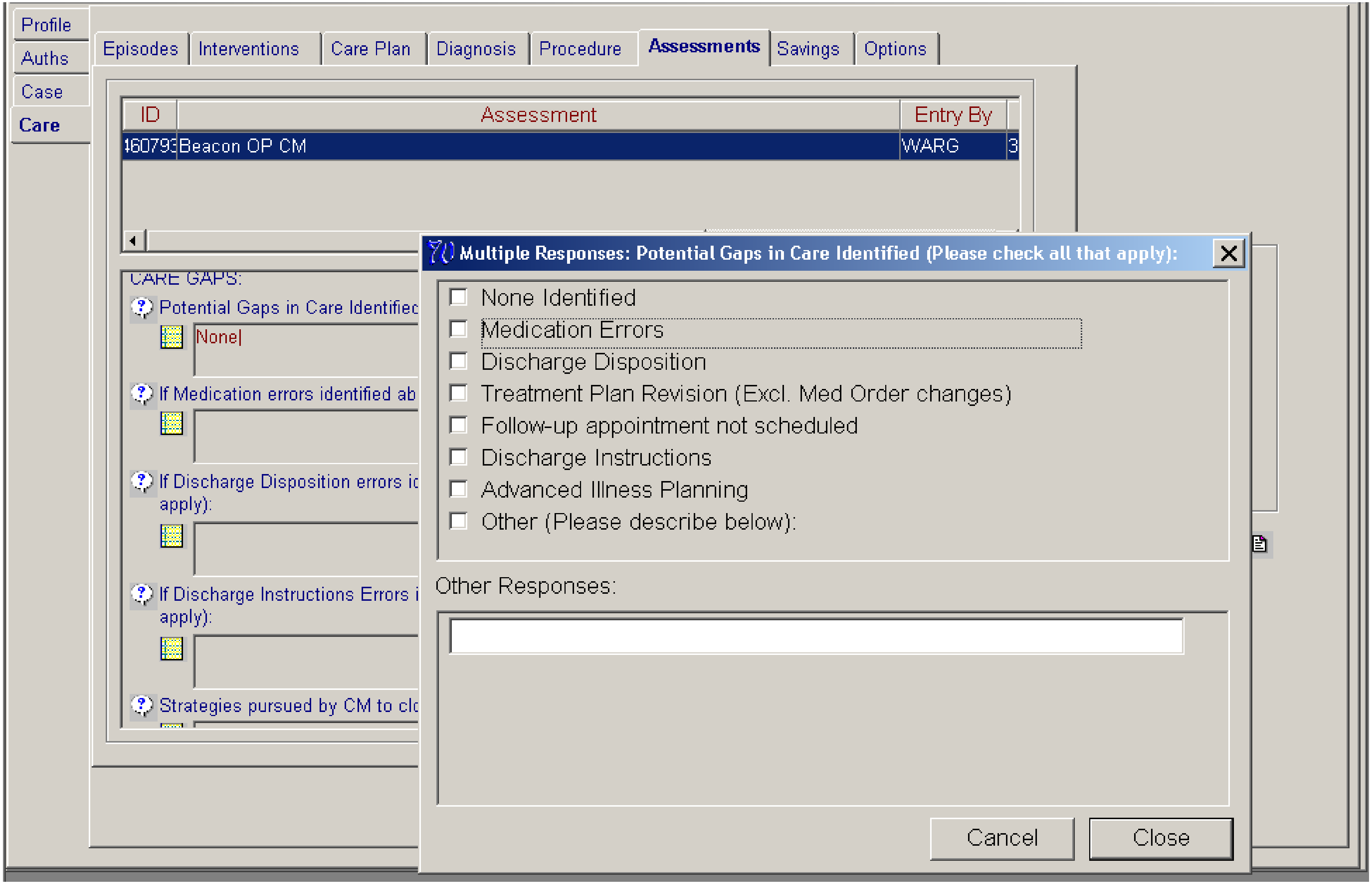
None

If Medication errors identified above, please explain in more detail (Please check all that apply):

If Discharge Disposition errors identified above, please explain in more detail (Please check all that apply):

If Discharge Instructions Errors identified above, please explain in more detail (Please check all that apply):

Keystone Beacon Community


Profile
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Care
Episodes
Interventions
Care Plan
Diagnosis
Procedure
Assessments
Savings
Options
Cancel
Close

ID	Assessment	Entry By
160793	Beacon OP CM	WARG

CARE GAPS:

Potential Gaps in Care Identified

None|

If Medication errors identified ab

If Discharge Disposition errors ic apply):

If Discharge Instructions Errors i apply):

Strategies pursued by CM to clc

Multiple Responses: Potential Gaps in Care Identified (Please check all that apply):

- ☐ None Identified
- ☐ Medication Errors
- ☐ Discharge Disposition
- ☐ Treatment Plan Revision (Excl. Med Order changes)
- ☐ Follow-up appointment not scheduled
- ☐ Discharge Instructions
- ☐ Advanced Illness Planning
- ☐ Other (Please describe below):

Other Responses:

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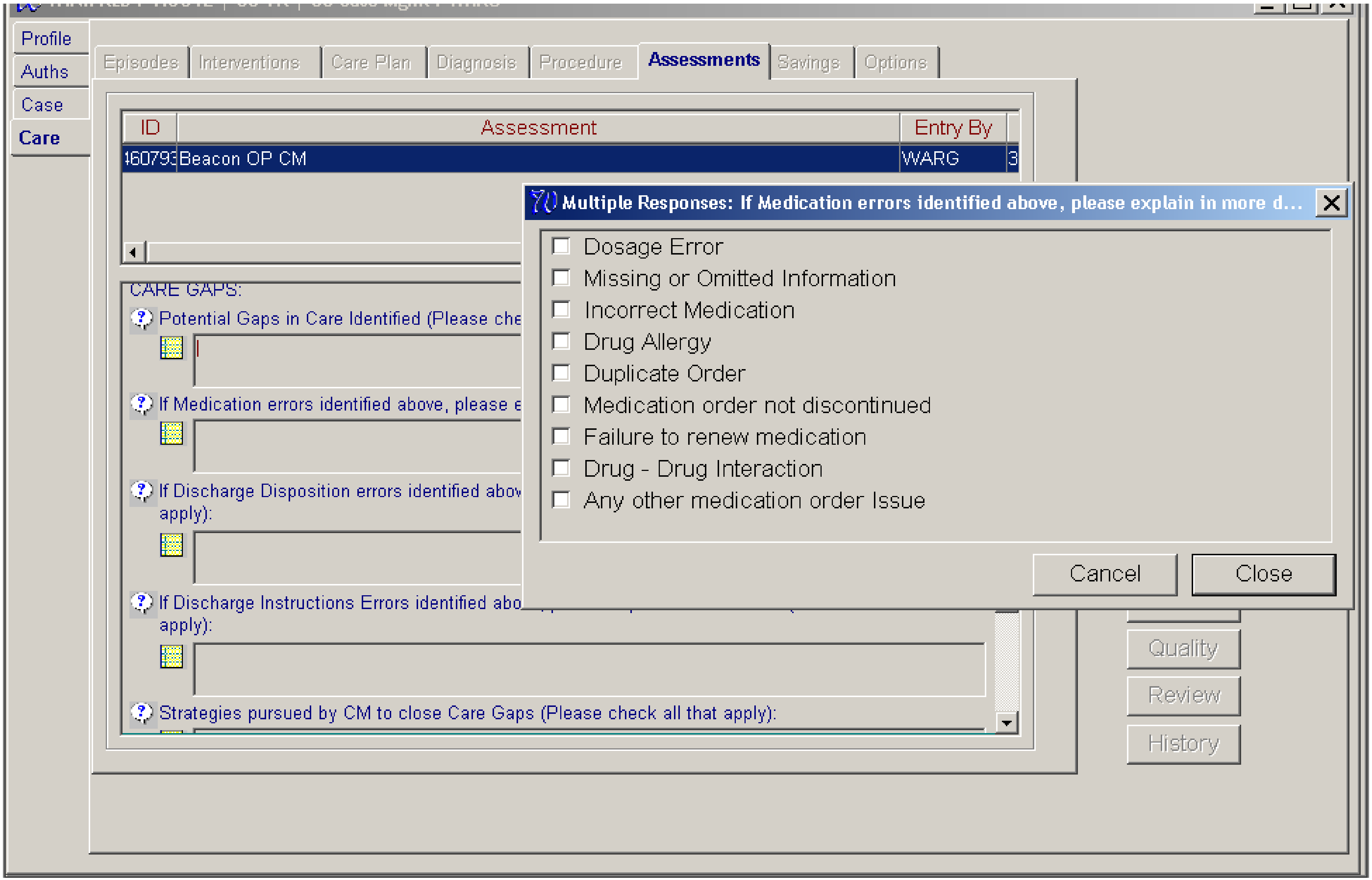
Profile
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Case
Care
Episodes
Interventions
Care Plan
Diagnosis
Procedure
Assessments
Savings
Options
Quality
Review
History

ID	Assessment	Entry By	
160793	Beacon OP CM	WARG	3

CARE GAPS:

Potential Gaps in Care Identified (Please che

If Medication errors identified above, please e

If Discharge Disposition errors identified abov apply):

If Discharge Instructions Errors identified abo apply):

Strategies pursued by CM to close Care Gaps (Please check all that apply):

Multiple Responses: If Medication errors identified above, please explain in more d...

- ☐ Dosage Error
- ☐ Missing or Omitted Information
- ☐ Incorrect Medication
- ☐ Drug Allergy
- ☐ Duplicate Order
- ☐ Medication order not discontinued
- ☐ Failure to renew medication
- ☐ Drug - Drug Interaction
- ☐ Any other medication order Issue

Cancel
Close

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	Medication Errors	Treatment Plan Revision (Excluding Medications)	Follow-Up Appointments Not Scheduled	Unsafe Discharge Disposition	Inadequate Discharge Instructions	Incomplete Advanced Illness Planning	Other	Total Care Opportunities Addressed
Jul-11	3	37	105	17	0	0	0	162
Aug-11	7	45	129	6	0	0	0	187
Sep-11	4	51	108	12	0	0	0	175
Oct-11	10	24	117	15	1	1	0	168
Nov-11	42	7	135	21	24	11	15	255
Dec-11	61	5	135	12	36	3	28	280
Jan-12	64	9	194	14	38	6	33	358
Feb-12	44	11	177	20	39	10	31	332
Mar-12	58	12	193	29	35	5	41	373
Apr-12	54	22	199	28	17	20	32	372
May-12	64	15	194	15	28	18	41	375
Jun-12	62	12	108	19	37	28	29	295
Jul-12	63	24	155	25	69	27	40	403
Aug-12	74	28	191	39	107	38	61	538
Sep-12	97	26	155	36	120	61	87	582
Oct-12	120	29	194	27	116	77	116	679
Nov-12	71	53	125	29	77	41	132	528
Grand Total	898	410	2614	364	744	346	686	6062

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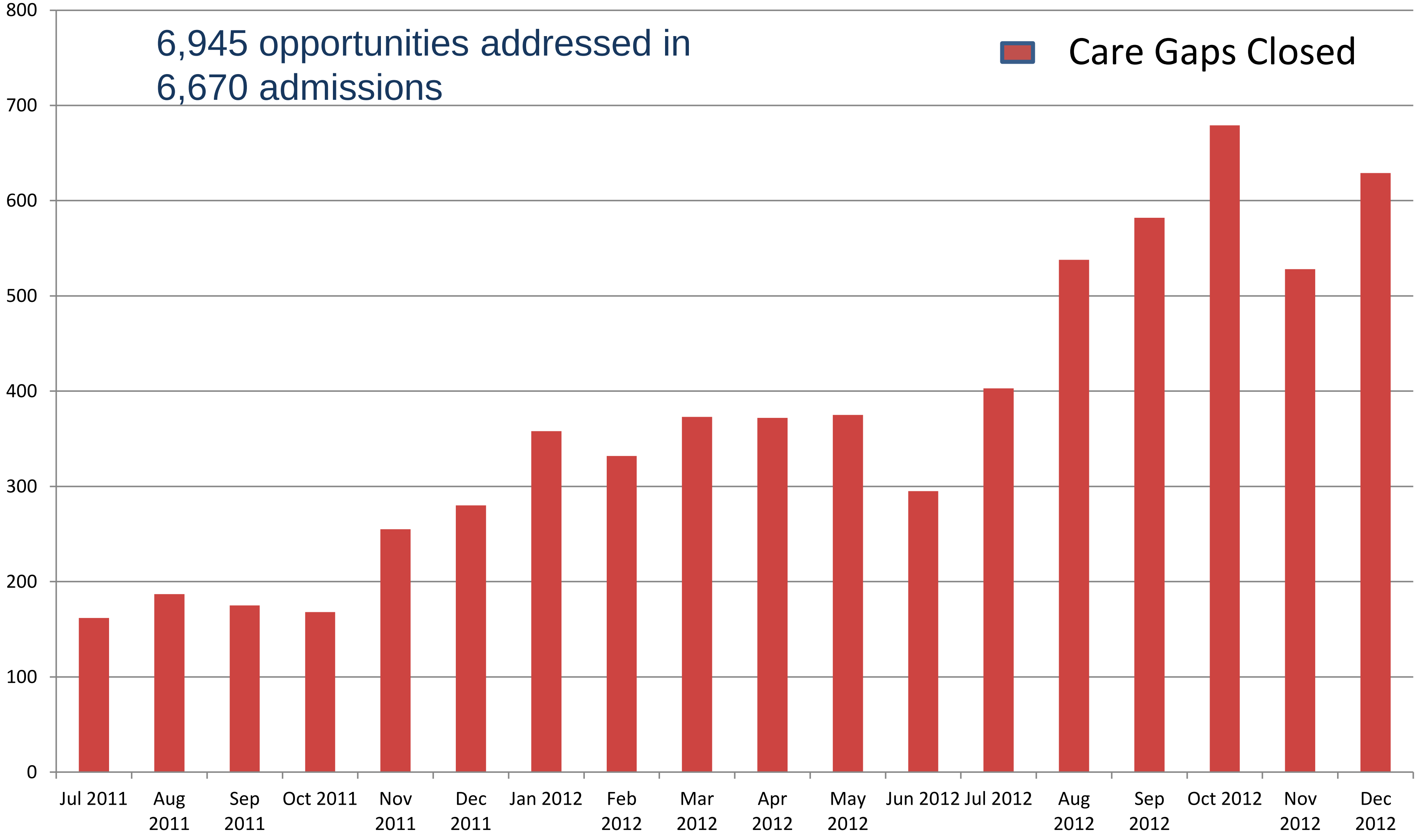
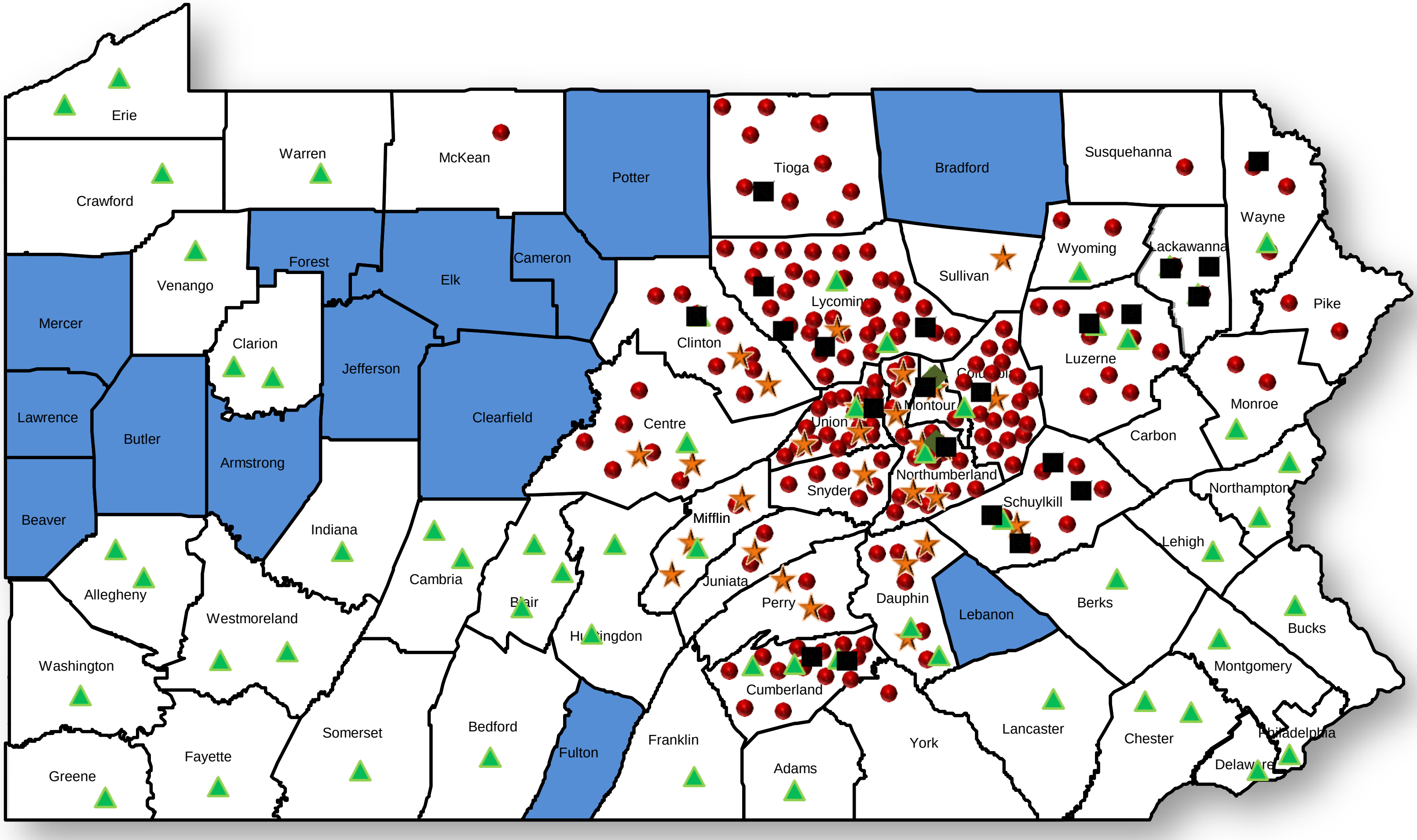

6,945 opportunities addressed in 6,670 admissions

Health Information Technology

Enhancing Connectivity

Keystone Beacon Community

Keystone Health Information Exchange®


Erie
Warren
McKean
Potter
Tioga
Bradford
Susquehanna
Wayne
Crawford
Forest
Elk
Cameron
Wyoming
Lackawanna
Venango
Mercer
Clarion
Jefferson
Clinton
Lycoming
Sullivan
Pike
Luzerne
Lawrence
Butler
Armstrong
Clearfield
Centre
Union
Montour
Columbia
Monroe
Carbon
Northumberland
Snyder
Beaver
Indiana
Mifflin
Schuylkill
Northampton
Lehigh
Allegheny
Cambria
Blair
Juniata
Perry
Dauphin
Lebanon
Berks
Bucks
Westmoreland
Huntingdon
Washington
Cumberland
Montgomery
Somerset
Bedford
Fulton
Franklin
Adams
York
Lancaster
Chester
Philadelphia
Delaware
Fayette
Greene

36 Unique Healthcare Companies

■ 22 Hospitals	● 173 Physician Practices	★ 28 Home Health locations	▲ 61 Long Term Care Facilities

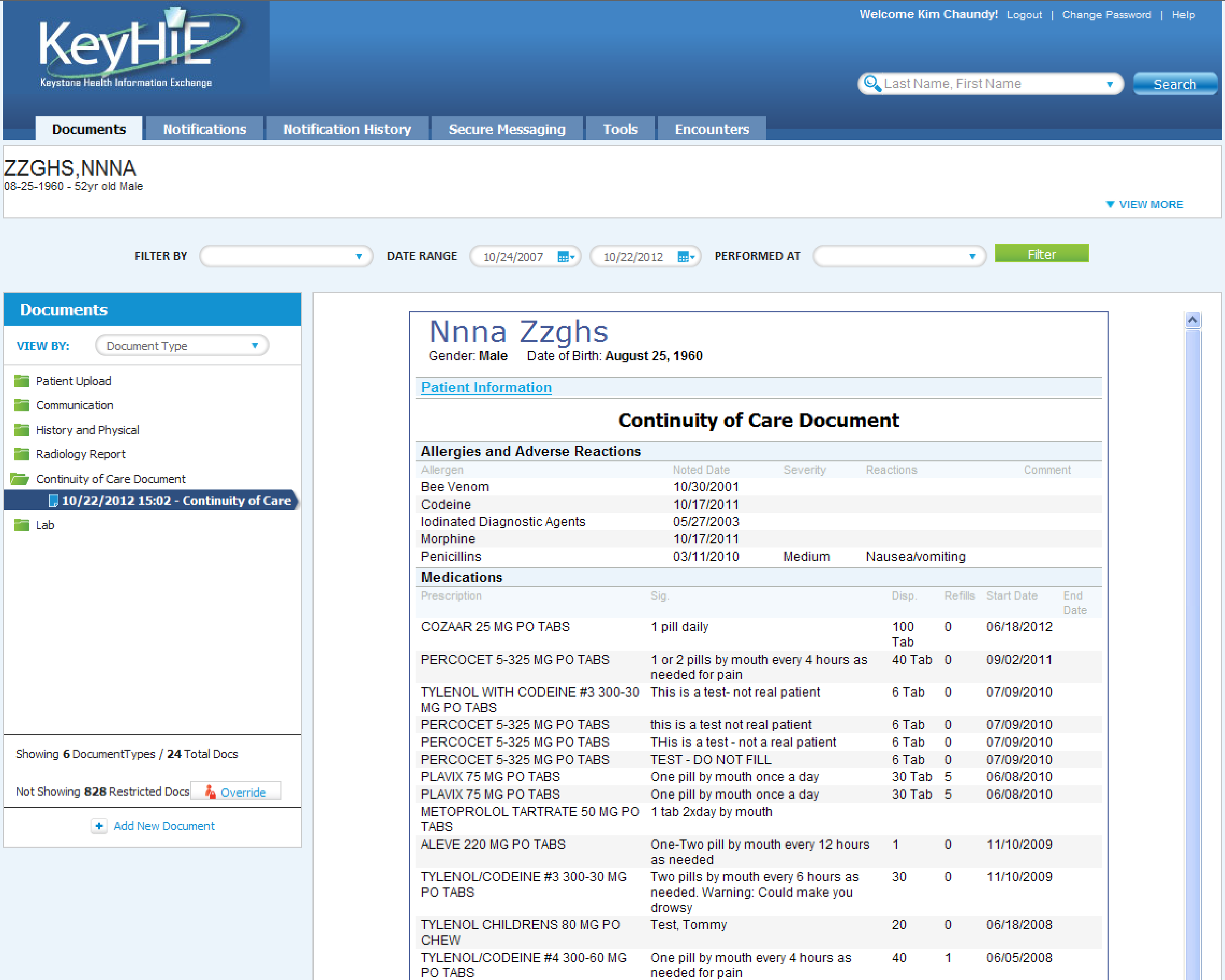
◆ 1 Pharmacy and 1 LTACH

Updated 9/7/12

Keystone Beacon Community

New features for Clinician Viewer:

- Alerts/Notification
- Secure Messaging (DIRECT)
- View Continuity Care Documents “CCD”
- Upload paper documents


KeyHIE
Keystone Health Information Exchange
Welcome Kim Chaundy! Logout | Change Password | Help
Last Name, First Name
Search
Documents
Notifications
Notification History
Secure Messaging
Tools
Encounters
VIEW MORE
Filter
Documents
Override
Add New Document

ZZGHS,NNNA
08-25-1960 - 52yr old Male

FILTER BY: (blank) DATE RANGE: 10/24/2007 – 10/22/2012 PERFORMED AT: (blank)

VIEW BY: Document Type

- Patient Upload
- Communication
- History and Physical
- Radiology Report
- Continuity of Care Document
  - 10/22/2012 15:02 - Continuity of Care
- Lab

Showing **6** DocumentTypes / **24** Total Docs

Not Showing **828** Restricted Docs

Nnna Zzghs

Gender: **Male** Date of Birth: **August 25, 1960**

Patient Information

Continuity of Care Document

Allergies and Adverse Reactions

Allergen	Noted Date	Severity	Reactions	Comment
Bee Venom	10/30/2001			
Codeine	10/17/2011			
Iodinated Diagnostic Agents	05/27/2003			
Morphine	10/17/2011			
Penicillins	03/11/2010	Medium	Nausea/vomiting	

Medications

Prescription	Sig.	Disp.	Refills	Start Date	End Date
COZAAR 25 MG PO TABS	1 pill daily	100 Tab	0	06/18/2012	
PERCOCET 5-325 MG PO TABS	1 or 2 pills by mouth every 4 hours as needed for pain	40 Tab	0	09/02/2011	
TYLENOL WITH CODEINE #3 300-30 MG PO TABS	This is a test- not real patient	6 Tab	0	07/09/2010	
PERCOCET 5-325 MG PO TABS	this is a test not real patient	6 Tab	0	07/09/2010	
PERCOCET 5-325 MG PO TABS	THis is a test - not a real patient	6 Tab	0	07/09/2010	
PERCOCET 5-325 MG PO TABS	TEST - DO NOT FILL	6 Tab	0	07/09/2010	
PLAVIX 75 MG PO TABS	One pill by mouth once a day	30 Tab	5	06/08/2010	
PLAVIX 75 MG PO TABS	One pill by mouth once a day	30 Tab	5	06/08/2010	
METOPROLOL TARTRATE 50 MG PO TABS	1 tab 2xday by mouth				
ALEVE 220 MG PO TABS	One-Two pill by mouth every 12 hours as needed	1	0	11/10/2009	
TYLENOL/CODEINE #3 300-30 MG PO TABS	Two pills by mouth every 6 hours as needed. Warning: Could make you drowsy	30	0	11/10/2009	
TYLENOL CHILDRENS 80 MG PO CHEW	Test, Tommy	20	0	06/18/2008	
TYLENOL/CODEINE #4 300-60 MG PO TABS	One pill by mouth every 4 hours as needed for pain	40	1	06/05/2008	

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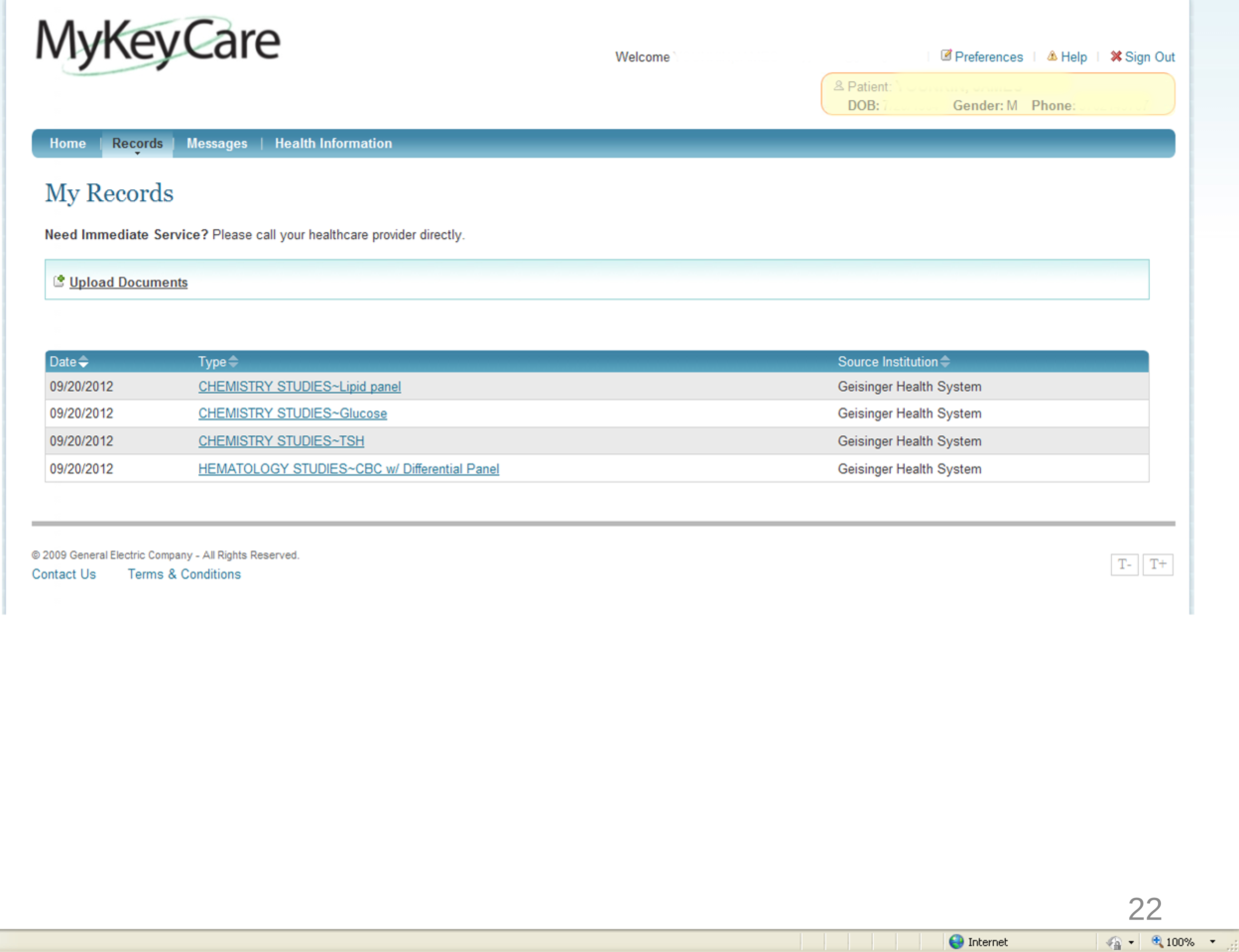
- Web-based personal health record (PHR)
- View personal records in KeyHIE®
- Automatic flu-shot reminder
- Exchange secure e-mail with care team
- Upload paper records ("3-ring binder")
- Validated health information (Medline Plus)

** One health system and two colleges participating*

MyKeyCare


MyKeyCare
Welcome [redacted]
Preferences | Help | Sign Out

Patient: [redacted]
DOB: [redacted] Gender: M Phone: [redacted]

Home | Records | Messages | Health Information

My Records

Need Immediate Service? Please call your healthcare provider directly.

Upload Documents

Date	Type	Source Institution
09/20/2012	CHEMISTRY STUDIES~Lipid panel	Geisinger Health System
09/20/2012	CHEMISTRY STUDIES~Glucose	Geisinger Health System
09/20/2012	CHEMISTRY STUDIES~TSH	Geisinger Health System
09/20/2012	HEMATOLOGY STUDIES~CBC w/ Differential Panel	Geisinger Health System

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Long-term Care and Home Health

- 15,000+ Nursing Homes are Medicare certified
- 12,000+ Home health agencies are Medicare certified
- Few of these with EHRs can produce a CCD

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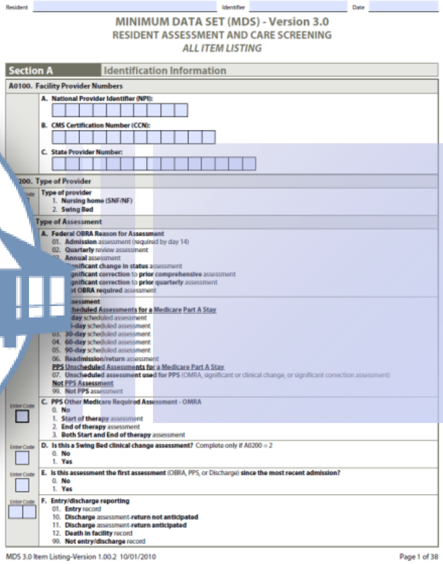
The “Gobbler”



Resident Identifier Date

MINIMUM DATA SET (MDS) - Version 3.0
RESIDENT ASSESSMENT AND CARE SCREENING
ALL ITEM LISTING

Section A Identification Information

A0100. Facility Provider Numbers

A. National Provider Identifier (NPI):

B. CMS Certification Number (CCN):

C. State Provider Number:

200. Type of Provider

Type of provider
1. Nursing home (SNF/NF)
2. Swing Bed

Type of Assessment

A. Federal OBRA Reason for Assessment
01. **Admission** assessment (required by day 14)
02. **Quarterly** review assessment
Annual assessment
nificant change in status assessment
gnificant correction to **prior comprehensive** assessment
gnificant correction to **prior quarterly** assessment
ot OBRA required assessment

sessment
heduled Assessments for a Medicare Part A Stay
day scheduled assessment
-day scheduled assessment
30-day scheduled assessment
04. **60-day** scheduled assessment
05. **90-day** scheduled assessment
06. **Readmission/return** assessment
PPS Unscheduled Assessments for a Medicare Part A Stay
07. **Unscheduled assessment used for PPS** (OMRA, significant or clinical change, or significant correction assessment)
Not PPS Assessment
99. **Not PPS** assessment

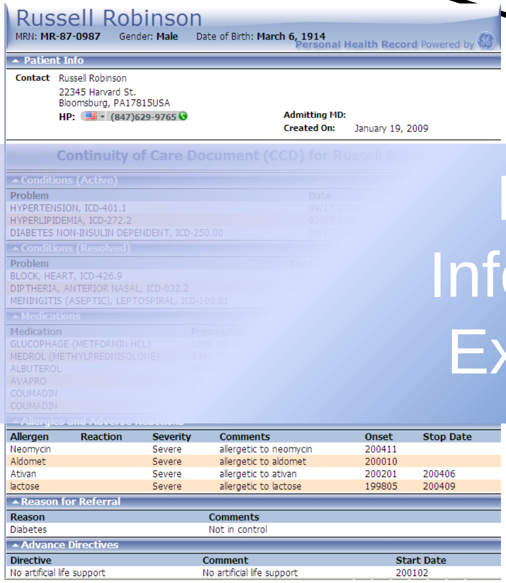
Enter Code ☐ C. PPS Other Medicare Required Assessment - OMRA
0. No
1. **Start of therapy** assessment
2. **End of therapy** assessment
3. **Both Start and End of therapy** assessment

Enter Code ☐ D. **Is this a Swing Bed clinical change assessment?** Complete only if A0200 = 2
0. No
1. Yes

Enter Code ☐ E. **Is this assessment the first assessment** (OBRA, PPS, or Discharge) **since the most recent admission?**
0. No
1. Yes

Enter Code ☐☐ F. **Entry/discharge reporting**
01. **Entry** record
10. **Discharge** assessment-**return not anticipated**
11. **Discharge** assessment-**return anticipated**
12. **Death in facility** record
99. **Not entry/discharge** record

MDS 3.0 Item Listing-Version 1.00.2 10/01/2010 Page 1 of 38



Russell Robinson

MRN: **MR-87-0987** Gender: **Male** Date of Birth: **March 6, 1914**

Patient Info

Contact Russell Robinson
22345 Harvard St.
Bloomsburg, PA17815USA
HP: (847)629-9765

Admitting MD:
Created On: January 19, 2009

Continuity of Care Document (CCD) for Russell Rob

Conditions (Active)

Problem	Date
HYPERTENSION, ICD-401.1	09/17/2004
HYPERLIPIDEMIA, ICD-272.2	02/07/200
DIABETES NON-INSULIN DEPENDENT, ICD-250.00	09/17/20

Conditions (Resolved)

Problem	Date
BLOCK, HEART, ICD-426.9	
DIPTHERIA, ANTERIOR NASAL, ICD-032.2	
MENINGITIS (ASEPTIC), LEPTOSPIRAL, ICD-100.81	

Medications

Medication	Prescription
GLUCOPHAGE (METFORMIN HCL)	1000 MG TA
MEDROL (METHYLPREDNISOLONE)	4 MG TA
ALBUTEROL	90 M
AVAPRO	15
COUMADIN	
COUMADIN	

Allergies and Adverse Reactions

Allergen	Reaction	Severity	Comments	Onset	Stop Date
Neomycin		Severe	allergetic to neomycin	200411	
Aldomet		Severe	allergetic to aldomet	200010	
Ativan		Severe	allergetic to ativan	200201	200406
lactose		Severe	allergetic to lactose	199805	200409

Reason for Referral

Reason	Comments
Diabetes	Not in control

Advance Directives

Directive	Comment	Start Date
No artificial life support	No artificial life support	200102

Health
Information
Exchange

MDS 3.0 or OASIS

Medical
Summary

Long-term care & home health “get in the game”

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Keystone Beacon Community

Remote Patient Tele-monitoring

- Current vendor Advanced Monitored Caregiving
- Benefits of telemonitoring:
  - Extends care manager reach
  - Helps prioritize the patients to focus on
  - Provides that daily “touch” with the nurse for the patient
  - Provides early warning signs

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- Current Case Management Telemonitoring Programs:
  - Bluetooth scales and/or IVR for Heart Failure
  - Post D/C – IVR post discharge
  - HTN: Bluetooth BP cuffs with nephrology
- Future (in development):
  - Diabetes
  - COPD
  - Kiosks
  - In-home video monitoring

Developing Meaningful Analytics

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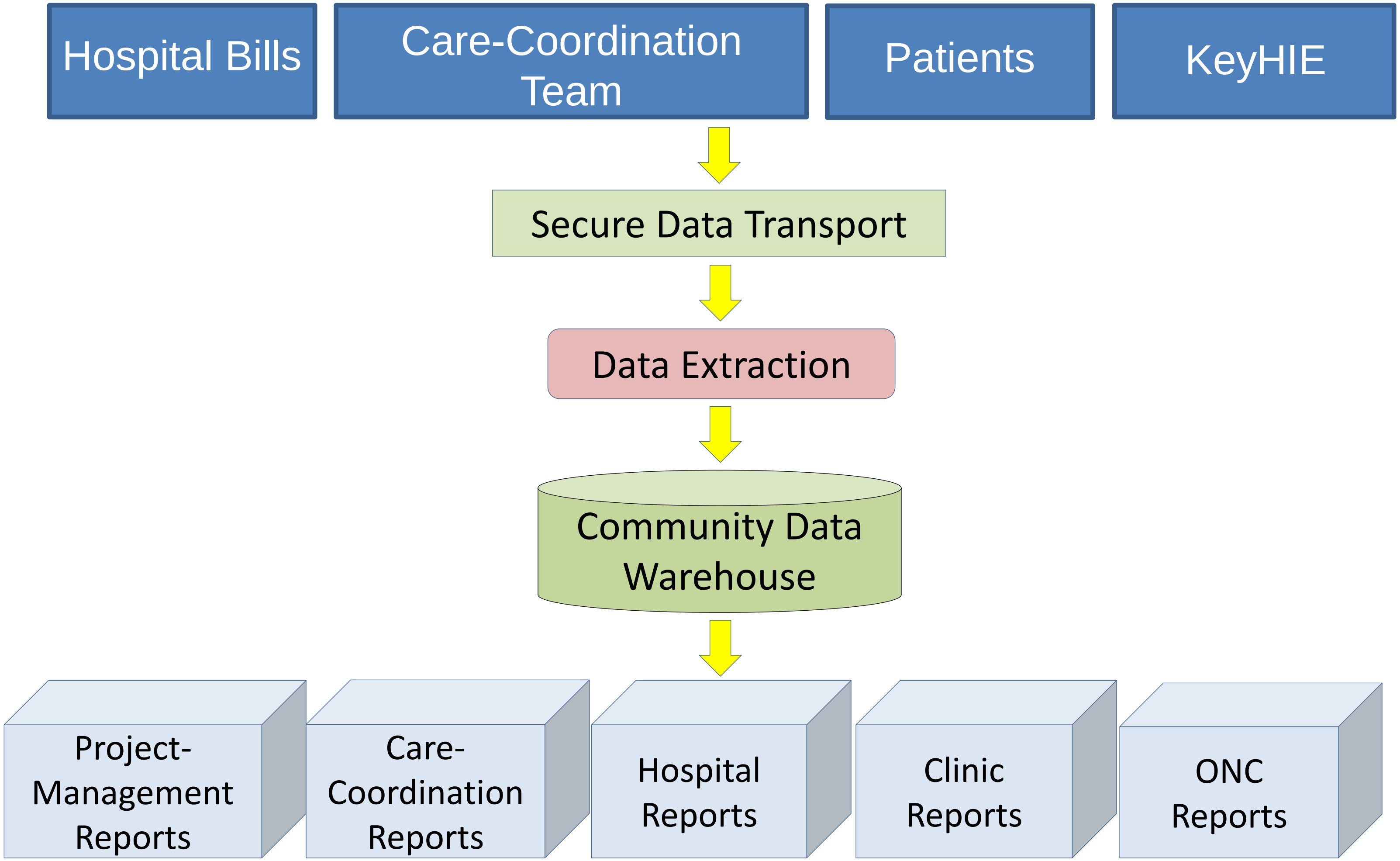
Data Warehouse & Analytics



Hospital Bills

Care-Coordination Team

Patients

KeyHIE

Secure Data Transport

Data Extraction

Community Data Warehouse

Project-Management Reports

Care-Coordination Reports

Hospital Reports

Clinic Reports

ONC Reports

Analytic Challenges

- Staffing
- Understanding need & execution of data agreements
- Lack of trust regarding appropriate use of data
- Clear communication of data needs
- Technical abilities of source data resources
- Depth of data available
- Lack of financial incentives for hospitals
- Providing meaningful data back to hospitals

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- **Community Data Warehouse**
    - Secure IT infrastructure with appropriate security levels
    - Secure data transmission (FTP)
    - Searchable Care-Coordination information
- **Custom Reports (dashboards)**
    - Care Coordination
        - Provides both high level and patient detail information. The majority of the information provided within here is updated weekly and used to identify patients that can be targeted for KBC Care Management.
    - Hospitals
        - Monthly reports to all KBC participants with new readmission and care management information.
    - (Clinics) – In Development
- **Automated data feeds**
    - Hospitals, Care-management software, KeyHIE
- **Data Access Policy (aggregated data)**
    - Task-appropriate access

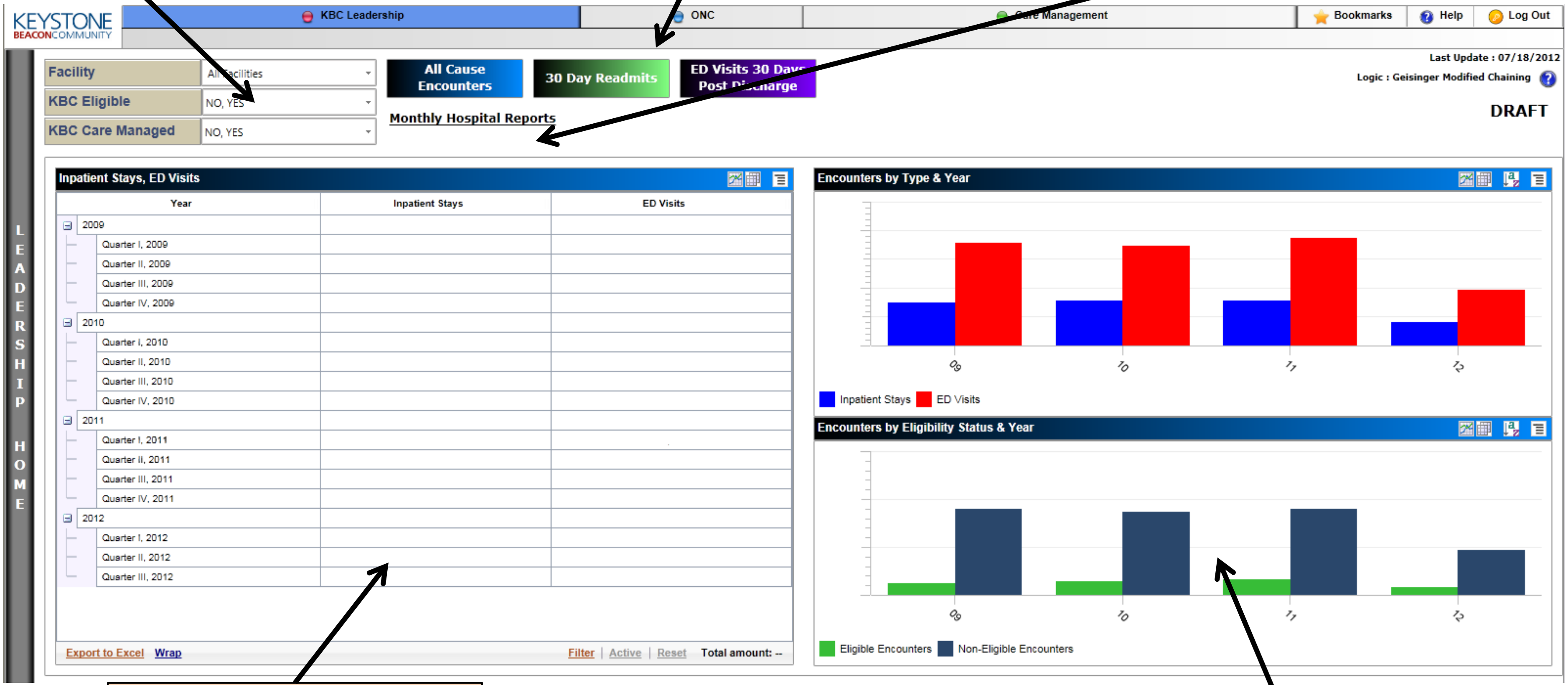
Keystone Beacon Community

CM Dashboard

Filters

Available Metrics

Hospital Reports


KEYSTONE
BEACONCOMMUNITY
KBC Leadership
ONC
Care Management
Bookmarks
Help
Log Out
LEADERSHIP HOME
All Cause Encounters
30 Day Readmits
ED Visits 30 Days Post Discharge
Monthly Hospital Reports
Export to Excel
Wrap
Filter
Active
Reset
Encounters by Type & Year
09
10
11
12
Inpatient Stays
ED Visits
Encounters by Eligibility Status & Year
09
10
11
12
Eligible Encounters
Non-Eligible Encounters

Facility: All Facilities

KBC Eligible: NO, YES

KBC Care Managed: NO, YES

Last Update : 07/18/2012

Logic : Geisinger Modified Chaining

DRAFT

Inpatient Stays, ED Visits

Year	Inpatient Stays	ED Visits
2009		
Quarter I, 2009		
Quarter II, 2009		
Quarter III, 2009		
Quarter IV, 2009		
2010		
Quarter I, 2010		
Quarter II, 2010		
Quarter III, 2010		
Quarter IV, 2010		
2011		
Quarter I, 2011		
Quarter II, 2011		
Quarter III, 2011		
Quarter IV, 2011		
2012		
Quarter I, 2012		
Quarter II, 2012		
Quarter III, 2012		

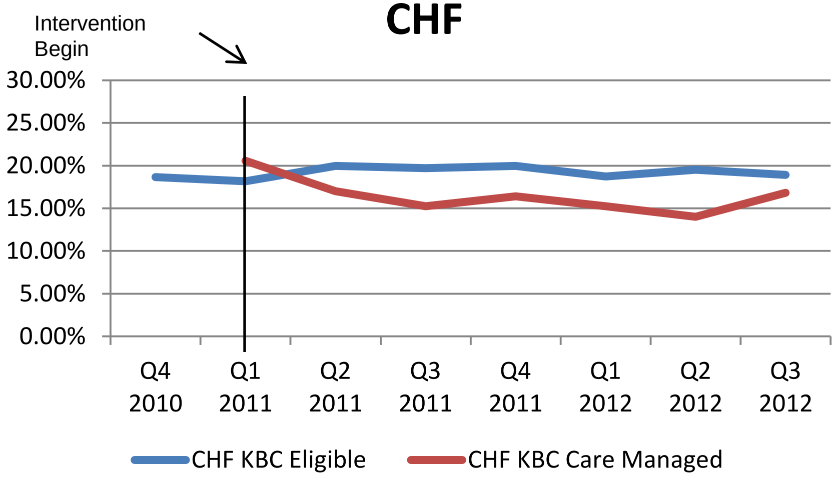
Total amount: --

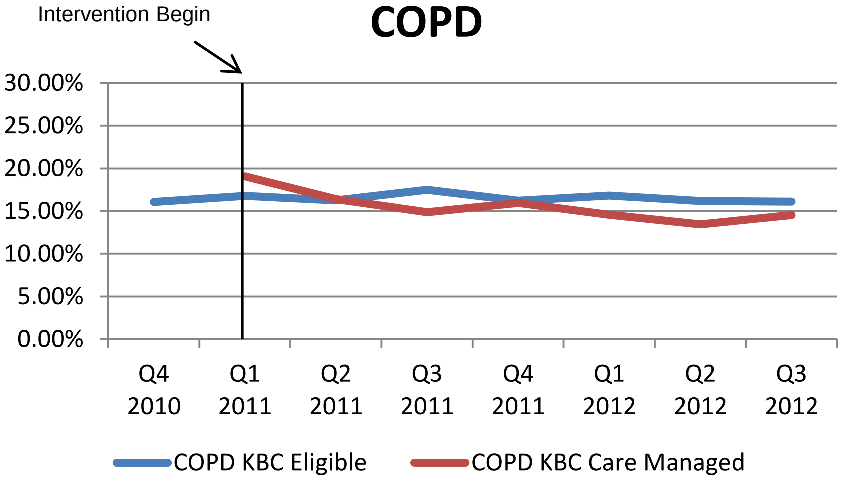
Data Section

Graph / Chart Section

Keystone Beacon Community

30 Day Readmission Rates : KBC Eligible VS KBC Care Managed

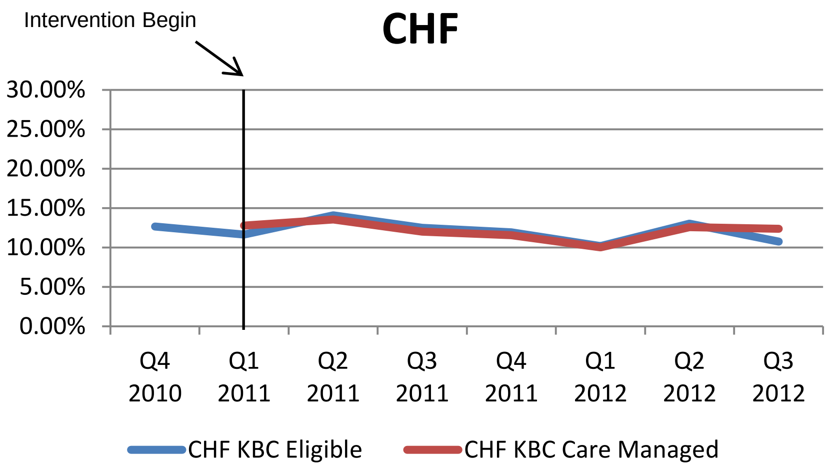


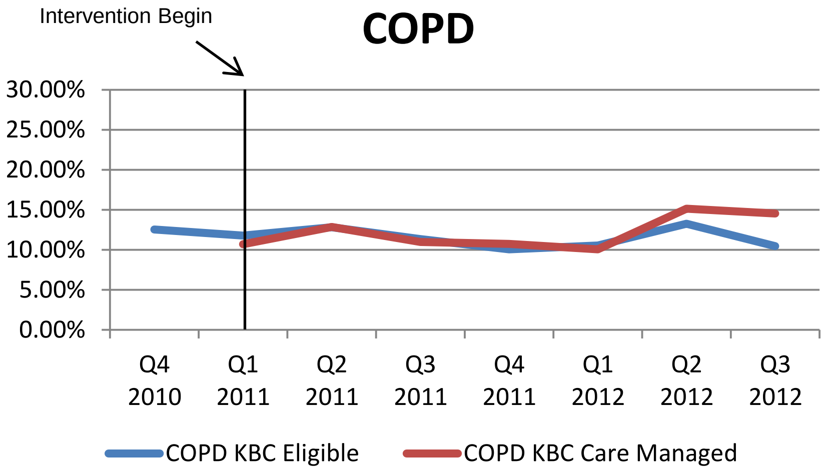


Calendar Quarter	CHF KBC Eligible	CHF KBC Care Managed
Q4 2010	18.64%	
Q1 2011	18.15%	20.57%
Q2 2011	19.95%	17.01%
Q3 2011	19.70%	15.26%
Q4 2011	19.95%	16.40%
Q1 2012	18.74%	15.24%
Q2 2012	19.50%	14.01%
Q3 2012	18.91%	16.83%

Calendar Quarter	COPD KBC Eligible	COPD KBC Care Managed
Q4 2010	16.08%	
Q1 2011	16.79%	19.07%
Q2 2011	16.27%	16.40%
Q3 2011	17.47%	14.89%
Q4 2011	16.21%	15.95%
Q1 2012	16.80%	14.57%
Q2 2012	16.16%	13.43%
Q3 2012	16.10%	14.53%

ED Visits 30 Days Post Discharge : KBC Eligible VS KBC Care Managed


CHF


COPD

Calendar Quarter	CHF KBC Eligible	CHF KBC Care Managed
Q4 2010	12.66%	
Q1 2011	11.64%	12.77%
Q2 2011	14.08%	13.54%
Q3 2011	12.50%	12.01%
Q4 2011	11.90%	11.56%
Q1 2012	10.17%	10.00%
Q2 2012	13.04%	12.59%
Q3 2012	10.76%	12.38%

Calendar Quarter	COPD KBC Eligible	COPD KBC Care Managed
Q4 2010	12.54%	
Q1 2011	11.80%	10.70%
Q2 2011	12.83%	12.86%
Q3 2011	11.33%	11.00%
Q4 2011	10.05%	10.74%
Q1 2012	10.54%	10.05%
Q2 2012	13.27%	15.14%
Q3 2012	10.47%	14.53%

Keystone Beacon Community

Healthcare challenge: Post-surgical patient was having significant side effects that she thought were related to her surgery.

Resolution: Careful assessment led the Keystone Beacon CM to suspect the side effect was related to a medication dose and timing. The CM contacted the patient's physician who recommended changes in the medication dosage and timing, eliminating the side effect as well as a potential emergency room visit.