

The Bronx RHIO and FQHCs: Population Management and Analytic Tools



What I'll Cover...

- Bronx RHIO Basics
- Some Key RHIO Functions for FQHCs
 - Subscriptions for Registration Alerts
 - Referral Routing
 - Data Availability Flags
 - Single Sign-On
 - Analytics
 - Health Home Support

BRONX RHIO Vision

Improving the health of the residents of the Bronx, and helping to eliminate healthcare disparities through health information exchange.

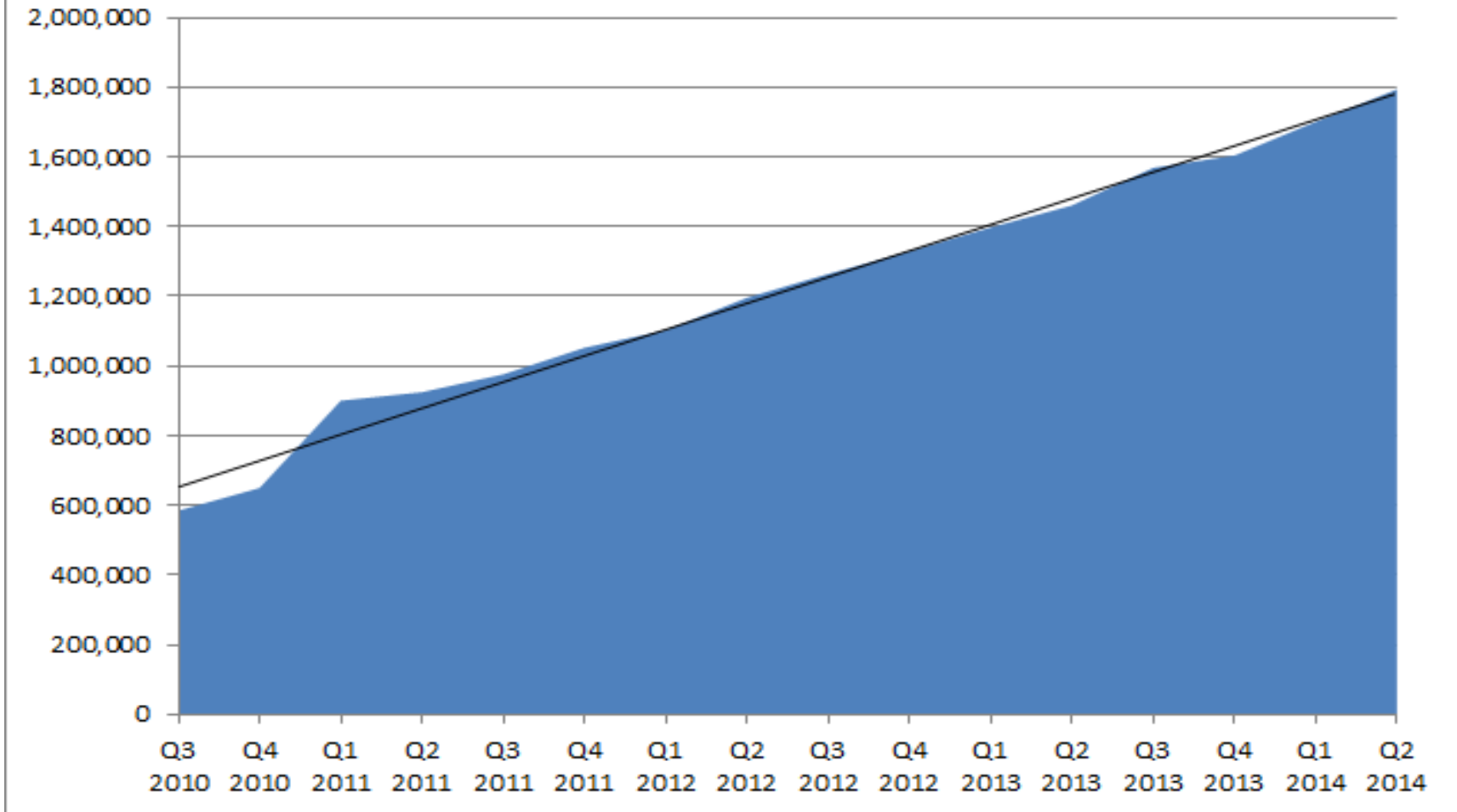
Current RHIO Data Feeds

	Demographics	Encounter Level Data	Procedures	Consent	Laboratory	Text Reports	Inpatient Reports	Outpatient Meds	Diagnoses	Comments
Acacia	✓	✓	✓	✓				✓		Includes BCHN Sites
Boom!Health (BAS)	✓	✓		✓		✓		✓		
Bronx Lebanon Hospital Center (w MLK)	✓	✓	✓	✓	✓	✓	✓	✓		Send problem list
Children of Zion Pediatrics	✓			✓						
FEGS - Case Management	✓	✓		✓				✓		
Anil Gupta, MD	✓			✓						
Sindhu Gupta, MD	✓			✓						
Hebrew Home -CHHA	✓	✓		✓				✓		
Hebrew Home -Home Care	✓	✓		✓				✓		
Hebrew Home -LHCSA	✓	✓		✓				✓		
Housing Works	✓	✓		✓						
Institute for Family Health	✓	✓	✓	✓		✓		✓		
Jewish Home Lifecare	✓	✓		✓				✓		
Medalliance	✓	✓		✓						
MJHS - Hospice	✓	✓		✓				✓		
MJHS - Palliative Care	✓	✓	✓	✓				✓		
Montefiore Medical Center	✓	✓	✓	✓	✓		✓	✓		Includes BCHN Sites
Montefiore Behavioral Health (SVTN)	✓	✓	✓	✓				✓		
Morris Heights Health Center	✓	✓	✓	✓				✓		
New York Associates in Gastro	✓			✓						
NY GI Center	✓			✓		✓				
Optimum Family Medicine	✓			✓						
Olive Osborne, MD	✓			✓						
Perry Ave. Family Medicine	✓			✓						
Riverdale Family Practice	✓			✓						
Salud Medical	✓			✓						
SBH Health System	✓	✓	✓	✓	✓			✓		
Union Community Health Center	✓	✓		✓	✓			✓		
Urban Health Plan	✓			✓						
Visiting Nurse Service of NY	✓	✓	✓	✓	✓	✓		✓	✓	

FQHCs are highlighted in Yellow

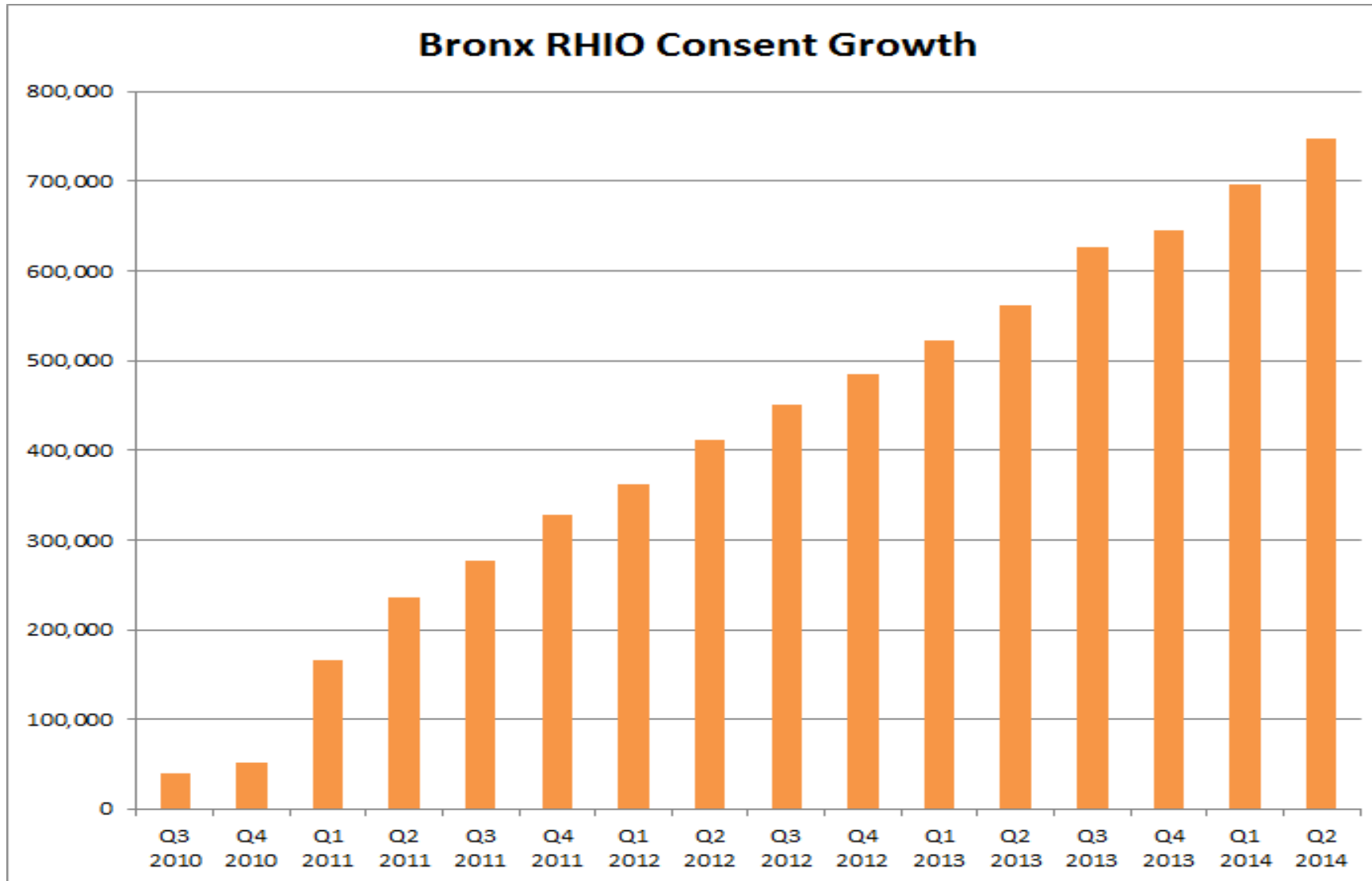
As of: September 24, 2014

Bronx RHIO MPI Growth



Bronx RHIO Patient Consent Process

- Each facility collects facility-specific consent from patient
- Facilities with Registration/EMR and Data Feed to RHIO:
 - Enter consent value of E, N, or Y into designated consent field in site system
 - Consent message is sent to RHIO automatically and updates RHIO immediately upon receipt
- Facilities without data feed to RHIO:
 - Enter consent into front end of RHIO system Virtual Health Record, OR
 - Send RHIO a flat file with demographic, MRN and other matching information with consent value. RHIO feeds this into the system via an internally created HL7 message



Some Key RHIO Functions for FQHCs

- Subscriptions for Registration Alerts
- Referral Routing
- Data Availability Flags
- Single Sign-On
- Analytics
- Health Home Support

Registration Alerts

Subscriptions- An immediate benefit from the HIE

- A subscription proactively establishes a relationship between a provider and patient and automatically triggers notification to the provider based on specific healthcare related events.
- A Subscription for Registration Alerts notifies the subscription holder whenever the patient is admitted to or discharged from an ED or Inpatient setting.
- Consent is not required to establish a subscription, but is required to receive the notification alert.

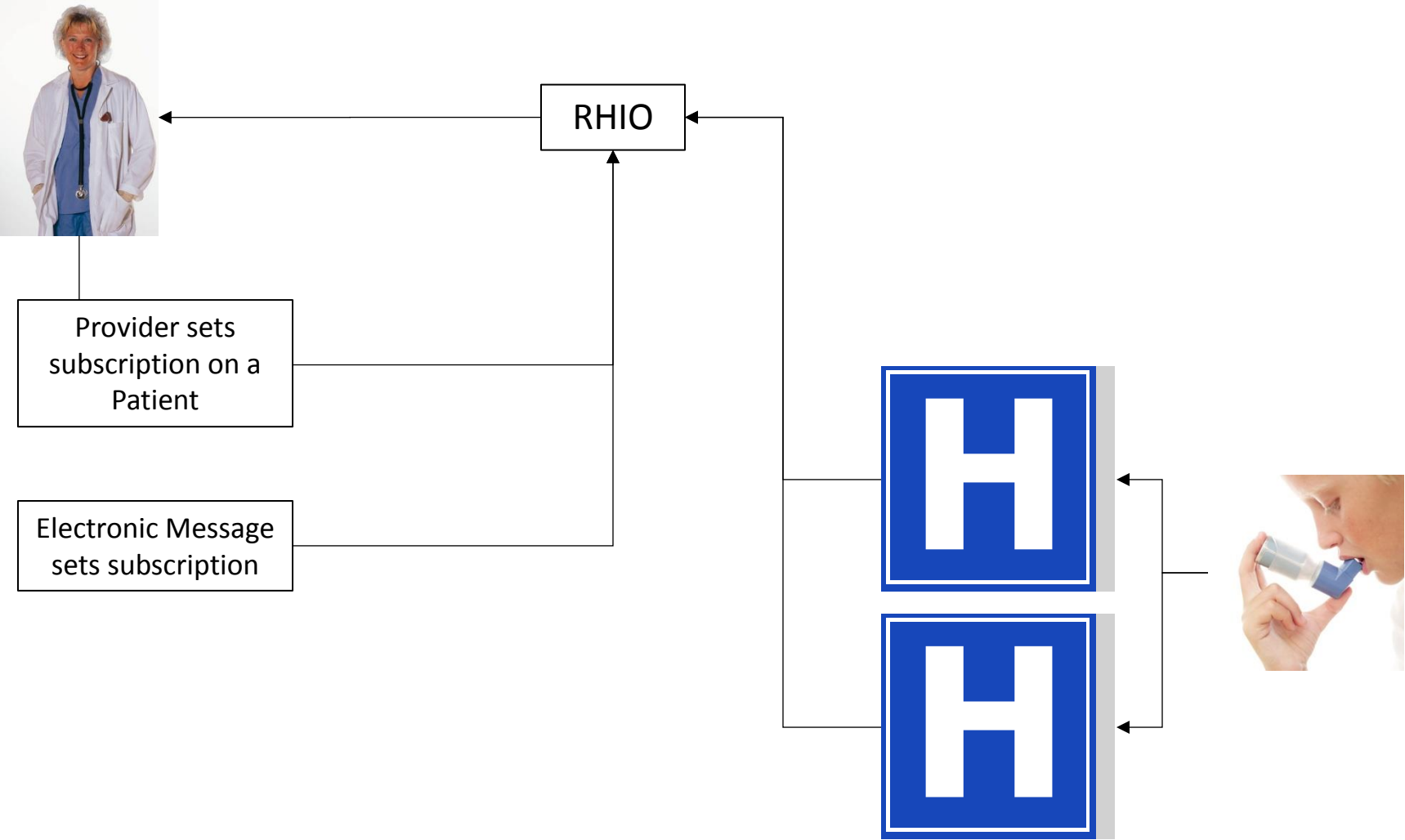
Ways to turn ON/OFF a subscription

- Front end – RHIO portal
 - Manual, one by one
 - Provider/User requires appropriate credentials
- Admit transaction (A04)
 - Covers entire patient population
 - Allows only 1 subscription type for all patients, although can use differentiator like location to set multiple subscriptions
- Order Message (ORM)
 - “Order” a subscription
 - Provides Flexibility (trigger, multiple subscription settings)

Receiving Notifications:

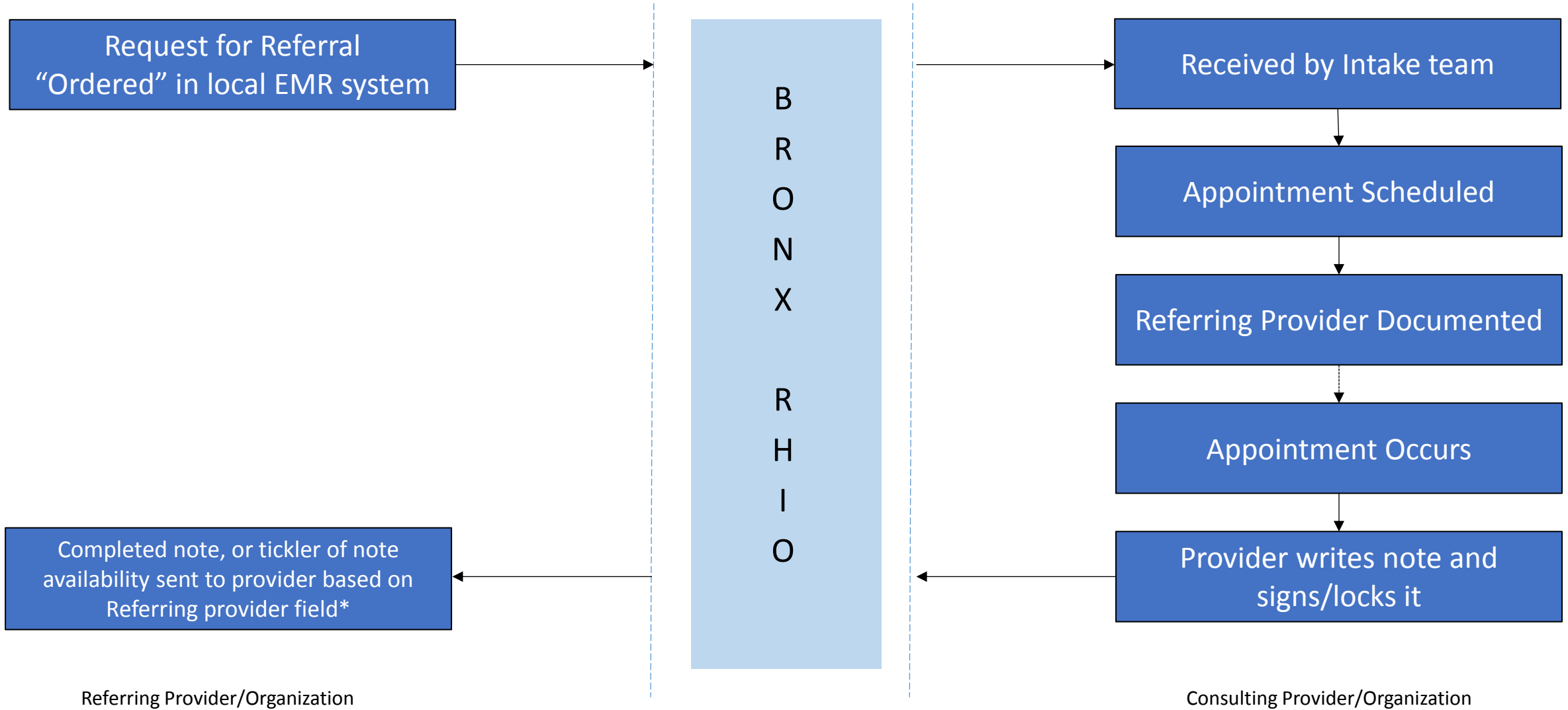
- RHIO portal
 - Requires appropriate user credentials- out of workflow
 - This option will be replaced by Direct Messaging in the near future
- Local EMR
 - Requires ability of local system to receive HL7 messages
 - RHIO can provide local MRN when known

Subscription Data Flow



Referral Routing and Reporting

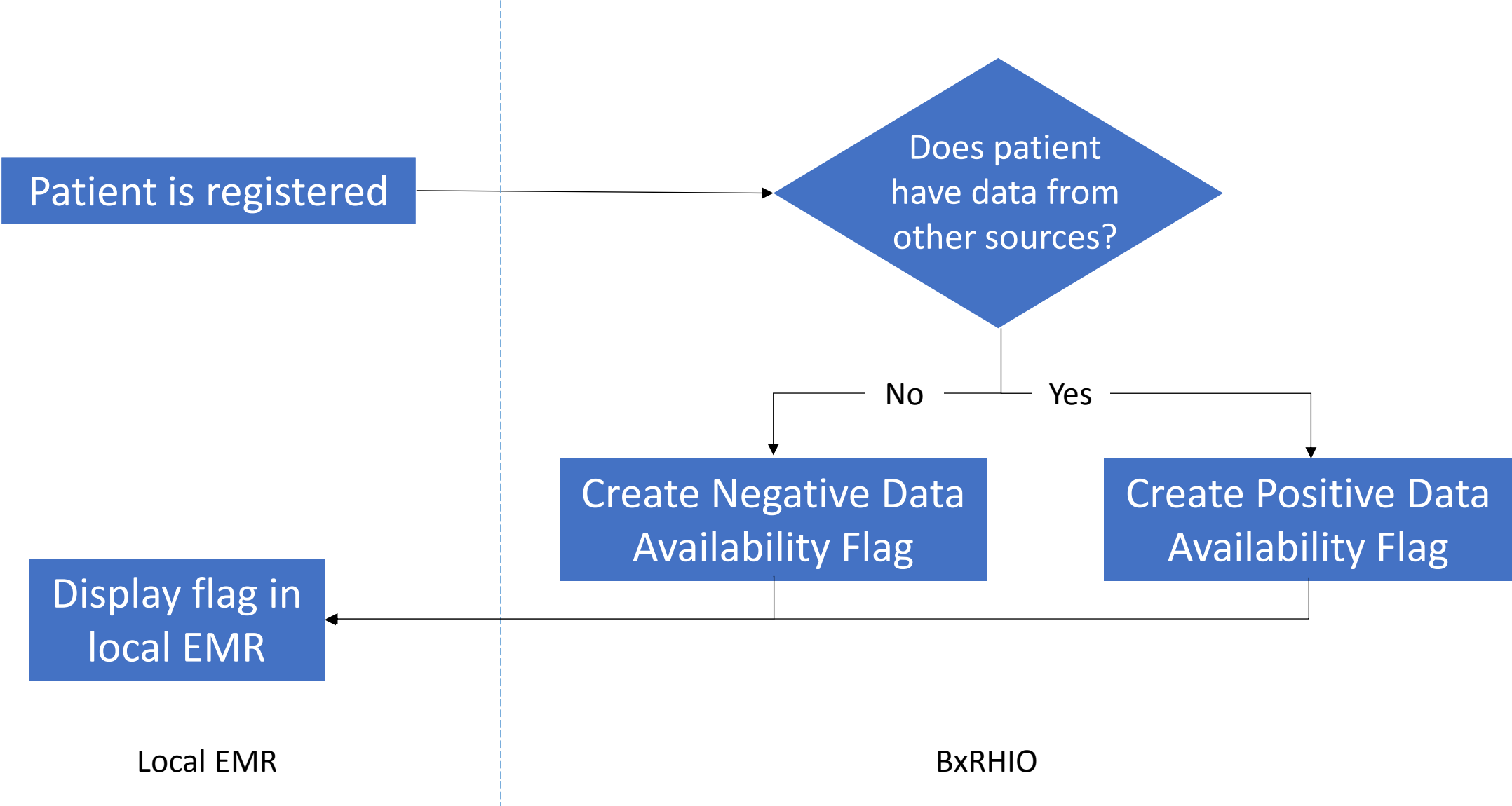
Electronic Referral Loop



* Note all reports with referring provider listed are routed

Data Availability Flags

Data Availability Flags



Single Sign-on

From Allscripts, go to a patient chart and select the patient from the Patient List
Click on the BxRHIO tab (in these test screens it's labeled RHIO Tab)

The screenshot shows the Allscripts Gateway interface for a patient chart. The breadcrumb trail is "My Applications > Acute Care > Patient List". The patient information displayed is for "RHIO_Rhiotest", an Adult ED patient with ID 1027-7574 / 105-189-936, born 01-Jan-1974, male, and admitted on 07-Mar-2013. A red circle highlights the "RHIO TAB" in the navigation bar. Below the navigation bar, there is a "Current List" dropdown set to "RHIO Test" and a "Select All Patients" button. A table below shows the patient's details:

Patient Name	Patient ID / Visit Number	Birthdate	RHIO Notification	Current Location	Visit Status	Admit Date	Admit Time	Provider	To Sign	To Verify	Unack Alerts	Flag New	New Alerts
RHIO, RHIOTest	1027-7574/105-189-936	01-Jan-1...	Available	Adult ED	ADM	07-Mar-...	11:18	0					

While user credentials are verified, and the RHIO looks up the record of the patient in Allscripts, users will see this screen:

The screenshot shows the Allscripts Gateway interface for a patient chart, similar to the previous one, but with a loading message at the bottom: "Please wait till the Authentication and Patient Details Show Up...". The breadcrumb trail is "My Applications > Acute Care > RHIO TAB". The patient information displayed is for "RHIO_Rhiotest", an Adult ED patient with ID 1027-7574 / 105-189-936, born 01-Jan-1974, male, and admitted on 07-Mar-2013. The "RHIO TAB" is highlighted in the navigation bar.

If a Patient has signed a Yes consent, users will be brought directly to the patient chart in the Virtual Health Record:

The screenshot displays the BronxRHIO patient chart interface. At the top, the breadcrumb trail reads "My Applications > Acute Care > RHIO TAB". Below this is a navigation bar with icons for various functions. The patient information header shows "RHIO_Rhiotest", "Adult ID", "1027-7574 / 105-189-936", "39y (01-Jan-1974)", and "Male". It also indicates "Unreviewed Allergies" and "0". Below the header, there are tabs for "Patient List", "Orders", "Results", "Patient Info", "Documents", "Flowsheets", "Clinical Summary", "STRM-IT Tab", "Data Viewer", "SPNS", "QARR", "iSironaGUI Tab", "HealthFirst Info", and "RHIO TAB". The main content area features the BronxRHIO logo and navigation links: "VHR Home", "Support Request", "Change Password", "Home", "Links", "Help", and "Log Out". A "Patient Lookup" button and a welcome message "Welcome, Siva Sista - Thursday, May 2" are also present. A search bar is visible with "RHIO, RHIOtest - 01/01/1974 M" and filters for "Visit", "Facility", "From: 5/1/2008", and "To". Below the search bar are tabs for "All", "Summary", "Cumulative Lab", "Lab", "Radiology", "Reports", "Encounters", "IP Meds", "OP Meds", "Patient Info", "Open Report", "Medicaid", and "External Tab". The "Consent to Access" section is highlighted with a red circle, showing "Yes For Bronx Lebanon Hospital Workgroup". Below this, it says "Updated By: Consent Workgroup" and "Consent Workgroup" on "05/08/2013 03:20:04 PM EST". The "Basic" section contains patient details: Name: RHIO, RHIOtest; Gender: M; Age: 39 Years; Address: 1700 Grand Concourse 232 BRONX, NY 10457; Home: (343) 434-3444; Email: ; MRN or ID: 10277574 [BXLEB] and 000348916230 [Elysium].

If a Patient has signed a No consent, users will be denied access to the patient chart:

The screenshot shows a medical software interface with a menu bar at the top containing 'File', 'Registration', 'Pharmacy', 'Surgery', 'View', 'GoTo', 'Preferences', and 'Tools'. Below the menu is a toolbar with various icons. The patient information section displays 'RHIO_Rhiotest' (Adult ED), ID '1027-7574 / 105-189-936', age '39y (01-Jan-1974)', and gender 'Male'. It also shows 'Unreviewed Allergies' with a count of '0'. Below this, it lists 'HT: cm BSA: BMI: Language: English' and 'Admit Date: 07-Mar-2013'. A navigation bar contains tabs for 'Patient List', 'Orders', 'Results', 'Patient Info', 'Documents', 'Flowsheets', 'Clinical Summary', 'STRM-IT Tab', 'Data Viewer', 'SPNS', 'QARR', 'iSironaGUI Tab', 'HealthFirst Info', and 'RHIO TAB'. The main content area has a heading 'CONSENT REQUIRED FOR ACCESS' and displays patient details: 'Name: RHIO, RHIOtest Age: 39 Years Bom: 01 Jan 1974 Sex: M Elysium ID: 000348916230'. A red circle highlights the text 'No For Bronx Lebanon Hospital Workgroup' under the 'Consent to Access' section. Below this, a message states: 'This patient has either never signed a Bronx RHIO consent, has opted out of sharing PHI through the RHIO VHR or is between the age of 10 and 17 and therefore their data is not accessible. If you believe the above consent value is incorrect it must be fixed in your local system based on the most recent consent signed by the patient.' An 'OK' button is located at the bottom left of the message box.

If a Patient has signed an Emergency Only consent, depending on credentials users will see one of two screens:

A non-Break the Glass user:



A Break the Glass user:

Allows Break the Glass access



If a Patient has never signed a consent, depending on credentials users will see one of two screens:

A non-Break the Glass user:



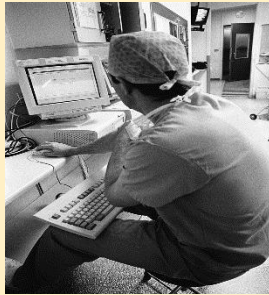
A Break the Glass user:

Allows Break the Glass access



Analytics

**RHIO:
User with Individual
Patient Focus**



RHIO VHR Views
Alerts
Subscriptions

**RHIO Members
Patient Care Users and
Data Sources:**

Hospital Inpatient
Emergency
Hospital Outpatient
Community OP
Community MD
Nursing Home
Home Care
Community Agency
Health Home

Other Future Data Sources:

Pharmacy Dispensing Data
Insurance Claims
Other TBD

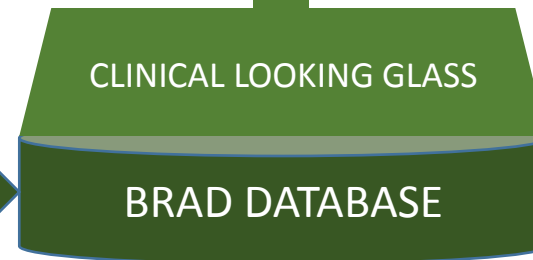
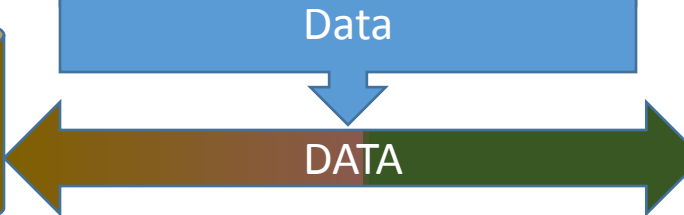
**BRIC Users with
Focus on Groups of
Patients**



BRIC Analysts

CLINICAL LOOKING GLASS

BRAD DATABASE



Data for Analytics

Data we have today:

- Unique individuals: almost 2,000,000
- Inpatient admissions by facility: 517,965
- Outpatient visits: 10,657,647
- ER visits by facility: 1,953,465
- Lab results by facility: 185,695,676
- Medication orders: 11,436,853
- Text reports: 7,664,311
- Insurance data on most patients
- Health Home/ACO assignments

Data pending:

- Claims files
- Nursing Home ADT
- Scheduling system data
- Vital Signs
- Care Management Plans
- CCDs & CCDAs

RHIO-Member Type

Home Health Agency

Hospital

Nursing Home

FQHC/Outpatient Clinic

Care Management/
Health Home

ACO

Analytics
Database

Uses for Analytics

See where *ELSE* your patients get care!

Identify High Risk Patients:

- Key clinical indicators
- Applied to multi-facility data
- = More complete list of patients at risk

Create & Manage Patient Registries:

- Identify patients
- Obtain key patient activity data
- Track clinical progress

Obtain more complete data for QARR and HEDIS reporting!

Health Home and Population Management Program Support

Patient Identification

- RHIO can be sent lists of patients in data feed, or
- RHIO can be sent lists in Excel format through secure email
- Lists must include:
 - Patient demographics
 - Patient consent indicator is YES
 - Assigned care management site &/or care manager

Sample Weekly Report to Site A: Patients with Activity in Report Period

Facility A - CHF Patients- Weekly Report -06/09/2014 thru 06/15/2014

Active Patient	Intervention	Address	ER Utilization	IP Utilization	OP Utilization	Labs	Inactive Patient
Facility MRN	Last Name	First Name	Date of Birth	Age	Gender		
000000A1	Patient1	A1	07/25/1941	74	FEMALE		
000000A2	Patient2	A2	12/22/1948	66	MALE		
000000A3	Patient3	A3	03/27/1952	63	MALE		
000000A4	Patient4	A4	10/18/1926	89	MALE		
000000A5	Patient5	A5	11/25/1953	61	FEMALE		
000000A6	Patient6	A6	06/18/1926	89	MALE		
000000A7	Patient7	A7	12/22/1919	95	MALE		
000000A8	Patient8	A8	10/17/1941	74	MALE		
000000A9	Patient9	A9	02/20/1953	62	MALE		
000000A10	Patient10	A10	03/05/1948	67	MALE		

Sample Report: ER Activity

Facility A - CHF Patients- Weekly Report -06/09/2014 thru 06/15/2014

Active Patient	ER Utilization	OP Utilization	Labs	Inactive Patient	MRN	Last ER Facility	ER Admit Date	ER Discharge Date	ER Admit Diagnosis	ER Discharge Disposition	Serial/ Multiple ER Use	Prior ER Visit Date	Days Since Last ER Visit	>= 4 ER visits past year
00	PaMMC	06/18/2014	06/19/2014	NO Diagnosis four	ADMITTED TO H	Serial	04/29/2014	50	Yes					
00	Pa SBH	06/19/2014		HND NO FNGR AL	UNKNOWN	Multiple	05/06/2014	44	Yes					
00	PaMMC	06/16/2014	06/16/2014	NO Diagnosis four	ADMITTED TO H	Serial	05/22/2014	25	Yes					
00	PaMMC	06/21/2014		NO Diagnosis four	UNKNOWN	Serial	12/20/2013	183						
00	PaMMC	06/19/2014	06/19/2014	OTHER MALAISE	DISCHARGED TO	Serial	05/15/2014	35	Yes					

Sample Report: Inpatient Activity

Facility A - CHF Patients- Weekly Report -06/09/2014 thru 06/15/2014

Active Patient Facility MRN	Last Patient Disposition	IP Utilization IP Facility	OP Utilization IP Admit Date	Labs IP Discharge Date	Inactive Patient IP Length of Stay (Days)	IP Admit Diagnosis	Prior IP Admission Date	Days between readmits	30 Days Readmit?	IP Discharge Disposition	IP Discharge in Last 2 weeks
00	Pa	MMC	06/19/2014	06/19/2014	1	SYNCOPE AND COLLAPSE	04/30/2014	50		DISCHARGED TO HOME WITH HOME CARE/HHA	1
00	Pa	SBH	06/19/2014		Not disch as of report	CELLULITIS&ABSC HAND NO	05/06/2014	44		UNKNOWN	
00	Pa	MMC	06/16/2014		Not disch as of report	OTH SPEC NONINFLAM	05/23/2014	24	Yes	UNKNOWN	
00	Pa	MMC	06/17/2014	06/21/2014	4	ASTHMA W/EXACERBAT	06/04/2014	13	Yes	DISCHARGED TO HOME OR SELF CARE	2
00	Pa	MMC	06/20/2014		Not disch as of report	No Diagnosis found	04/07/2014	74		UNKNOWN	
00	Pa	BXLEB	06/18/2014		Not disch as of report	UNSPECIFIED ANEMIA	05/19/2014	30	Yes	UNKNOWN	

Sample Report: Outpatient Activity

Facility A - CHF Patients- Weekly Report -06/09/2014 thru 06/15/2014

Patient ID	Organization	OP Utilization	Labs	Inactive Patient	
Number of Chronic Conditions	List of Chronic Conditions	Number OP visits in last year	Last OP Visit Date		
1000tier		3	CHF, CAD, HTN	21	04/28/2014
1000tier		5	Mental Health, Diabetes, CHF, CAD, HTN	30	05/25/2014
1000tier		6	Mental Health, Asthma, Diabetes, CHF, CAD, HTN	9	05/21/2014
1000tier		4	Diabetes, CHF, CAD, HTN	1	01/23/2014
1000tier		5	Mental Health, Diabetes, Arthritis, CHF, HTN	5	05/09/2014
1000tier		2	CHF, HTN	14	05/28/2014
1000tier		6	Mental Health, Asthma, Diabetes, CHF, CAD, HTN	12	06/06/2014

Sample Report: Laboratory Activity

Facility A - CHF Patients- Weekly Report -06/09/2014 thru 06/15/2014

Active Patient	venti	Address	ER Utilization	IP Utilization	OP Utilization	Labs	Inactive Patient
Facility	on	Last Name	First Name	Number of labs in last 30 days	Lab Test <small>(Click on each cell below to activate drop down menu)</small>	Lab Numeric Value	Abnormal/ Normal
00	00	00	A7	106	1-GLUCOSE-GLUCOSE	144.00	ABOVE HIGH NORMAL-H
00	00	00	A8	344	1-HEMATOCRIT- HEMATOCRIT	22.30	BELOW LOW NORMAL-L
00	00	00	A9	251	1-HEMATOCRIT- HEMATOCRIT	26.00	BELOW LOW NORMAL-L

Sample Report: Laboratory Activity

Excel ribbon: Paste, Format Painter, Clipboard, Font, Alignment, Number, Styles (Neutral, Calculation, Check Cell, Explanatory...), Insert, Delete, Format, Cells.

Formula bar: F12, 1-GLUCOSE-GLUCOSE

Facility A - CHF Patients- Weekly Report -06/09/2014 thru 06/15/2014

Active Patient	venti	Address	ER Utilization	IP Utilization	OP Utilization	Labs	Inactive Patient	
Facility	Last Name	First Name	Number of labs in last 30 days	Lab Test (Click on each cell below to activate drop down menu)			Lab Numeric Value	Abnormal/ Normal
000000A	Patient9	A7	106	1-GLUCOSE-GLUCOSE			144.00	ABOVE HIGH NORMAL-H
000000A	Patient10	A8	344	1-GLUCOSE-GLUCOSE 2-BASO %-BASO % 3-POTASSIUM-POTASSIUM 4-CHLORIDE-CHLORIDE 5-EGFR-AFRICAN AMERICAN-EGFR-AFRICAN AMERICAN 6-CO2-CO2 7-MCV-MCV 8-GRAN COUNT-GRAN COUNT			22.30	BELOW LOW NORMAL-L
000000A	Patient11	A9	251	1-HEMATOCRIT-HEMATOCRIT			26.00	BELOW LOW NORMAL-L
000000A	Patient10	A10	226	5-MPV-MPV			9.80	UNKNOWN-UNKNOWN
000000C	Patient11	A11	307	1-BASO %-BASO %			0.00	NORMAL (APPLIES TO NON-NUMERIC RESULTS)-N
000000A	Patient12	A12	122	1-CODIUM-CODIUM			132.00	BELOW LOW-NORMAL-L