



CHESAPEAKE REGIONAL INFORMATION SYSTEM FOR OUR PATIENTS

CRISP: A Regional Health Information Exchange Serving Maryland and D.C.

Regional Partnership Webinar – Transformation Support
October 22, 2015

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Agenda

- **Purpose**
- **Regional Partner Liaisons**
- **CRISP Service Offerings**
- **Integrated Care Network Infrastructure**
 - **Ambulatory**
 - **Data Router**
 - **Reporting & Analytics**
 - **Care Management Software**
 - **3-Year Outlook**



Regional Partnership Liaisons



Scott Afzal

- Regional Planning Community Health Partnership



Brandon
Neiswender

- University of Maryland Upper Chesapeake and Hospital of Cecil County Partnership
- Howard County Regional Partnership for Health System Transformation



Craig Behm

- Bay Area Transformation Partnership
- Southern Maryland Regional Coalition for Health System Transformation
- Nexus Montgomery



Rob Horst

- West Baltimore Collaborative
- Trivergent Health Alliance
- Liaison for non-RP related initiatives with individual hospitals



Integrated Care Network Infrastructure



CRISP Integrated Care Network Infrastructure Workstreams



Calvin
Ho

1. Ambulatory Connectivity: We are connecting with more practices, physicians, long-term-care facilities, and other health providers to the CRISP network.



Ryan
Bramble

2. Routing Data: We are building a data router: including data normalization, patient consent management, patient-provider relationships – for sharing patient-level data.



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3. Clinical Portal Enhancements: CRISP will enhance the existing Clinical Query Portal with a care profile; a provider directory; information on other known patient-provider relationships; and risk scores.



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4. Notification & Alerting: CRISP will create new alerting tools so that notifications happen within the context of a provider's existing workflow.



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5. Reporting & Analytics: We will expand existing CRISP reporting services and make them available to a wider audience of care managers.



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6. Basic Care Management Software: CRISP will support care management efforts throughout the state and region – through data feeds, reports and potentially a shared care management platform.



Cheryl
Jones

7. Practice Transformation: CRISP will help providers to improve care delivery by training them on leveraging CRISP data and service, sharing best practices, and supporting collaborative partnerships.



Ambulatory Integration



Ambulatory Integration

The goal of Ambulatory Integration is to improve Care Coordination by making available clinical data from ambulatory encounters and improving the patient-provider attribution region-wide

- Maryland has 16,490 licensed physicians: 6,023 primary care physicians and 10,467 specialists
 - *Based on Maryland Board of Physicians Licensure Data 2012- 2013*

Prioritization of Ambulatory Practices for Integrations:

- Collaborate with Regional Partnerships to identify (and outreach to) provider practices
- Practices participating/eligible for Medicaid EHR Incentive program as part of CRISP's CQM initiative
- Practices that outreach to CRISP expressing interest to integrate
- Practices utilizing an EMR system from a vendor with whom CRISP has formally collaborated



Ambulatory Integration

Ambulatory Integration Strategy:

1. Collaborate with EMR vendors for global pricing and coordinated integration process
 - Global pricing
 - Coordinated integration efforts
 - Minimize interfaces with cloud-based vendors
2. Collaboration potential with 3rd party integrators (e.g. – EllKay, Caradigm, etc.)
3. Build Administrative networks with clearinghouses and potential payers for 837 claims data that can be translated to ambulatory encounter information
4. Direct to practice integration – work directly with the ambulatory practice and their EMR vendor rep to build integration with CRISP



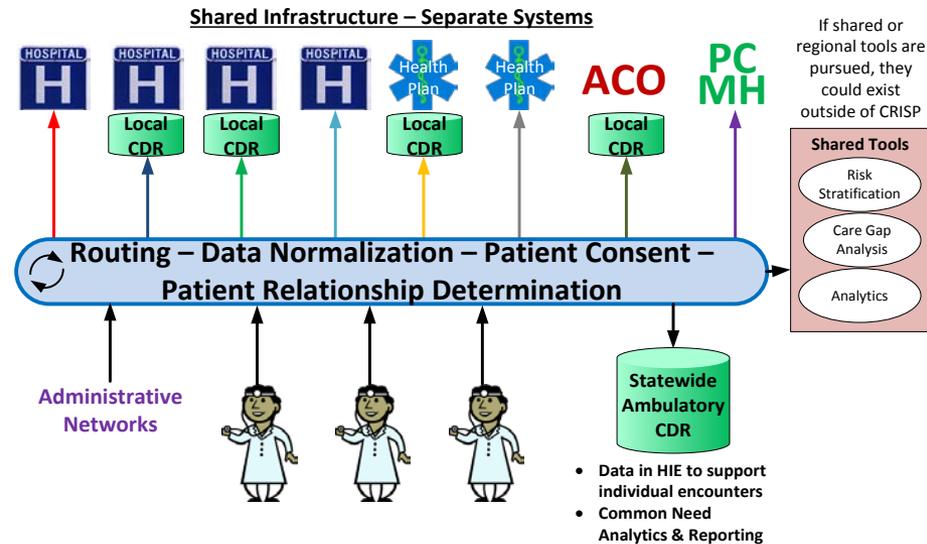
Data Router



What is the Data Router?

Key Functions include:

- Consent management
- Data normalization
- Data routing
- Patient-provider relationships determination and management



Data Router - The router is a service that includes key functionality to support connectivity, consent management, data routing to other services or data consumers, and determine patient-provider relationships. These approaches may rely on connectivity through a health system, through a hosted EHR, directly to the practice, or via an administrative network.



Router Continued

- **Connectivity and Routing** – inclusive of a range of connectivity approaches including connections to practice through health systems, direct connectivity to EHRs, hosted EHR connectivity, and administrative network connections.
- **Data Normalization** – applications of message transformation and vocabulary mapping services to inbound data.
- **Relationship Determination** – patient to provider relationships could be established and maintained through a range of data types flowing through CRISP, for example by using administrative claim data and ENS subscription panels. Other tools to enable management of those relationships are also planned in order to facilitate program enrollment (and consent), such as CCM.
- **Consent Engine** – Engage patients and give them more granular choices on the flow of their data. The consent engine will serve as a gateway to determine if consent preferences should not allow a message to continue to flow or if the message should be sent to additional downstream systems.



Status of Data Router Implementation

- Architecture has been documented and agreed upon
- Development teams have been identified
- Final sign-off on router approach to be made by 10/24
- First phase will be to implement granular consent required for care coordination
 - Goal: 1/1/16



2015 CQ4 Router Goals

- Routing data from 40 total ambulatory practices to 2 care management programs
- Opt out for ambulatory data is more granular
- Opt out for ambulatory data submission is working
- 1,000 providers sending administrative data
- 500 ambulatory providers sending clinical data

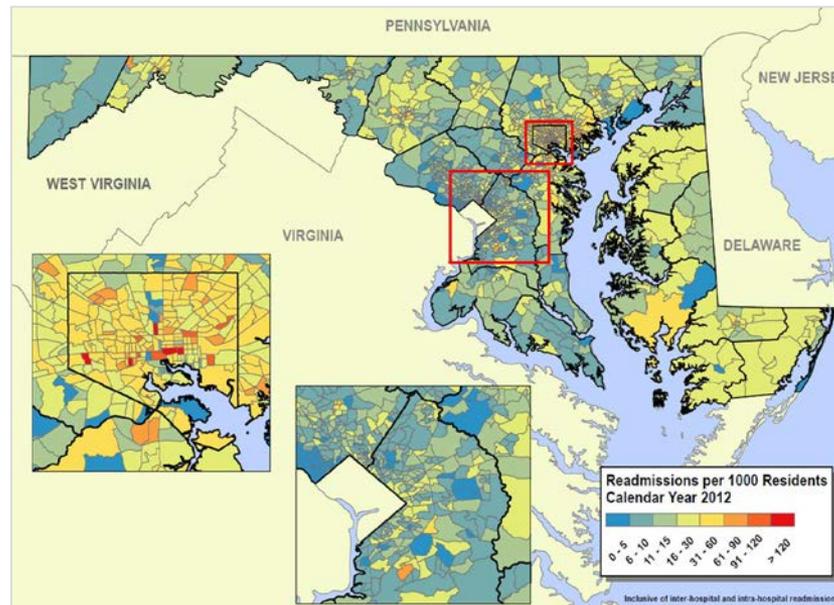


Reporting & Analytics



CRISP Reporting Services (CRS)

- Reports generated from a collection of data sources to support quality improvement, strategic planning, financial modeling, and other activities.
- Primarily focused on hospitals, but expanding to public health departments, regional partnerships, and ambulatory providers.
- Allowable data use varies based on the amount of detail included; for example, patient-level detail in new Patient Hospital Utilization Dashboard (PaTH) is only permitted to be used for care coordination activities.





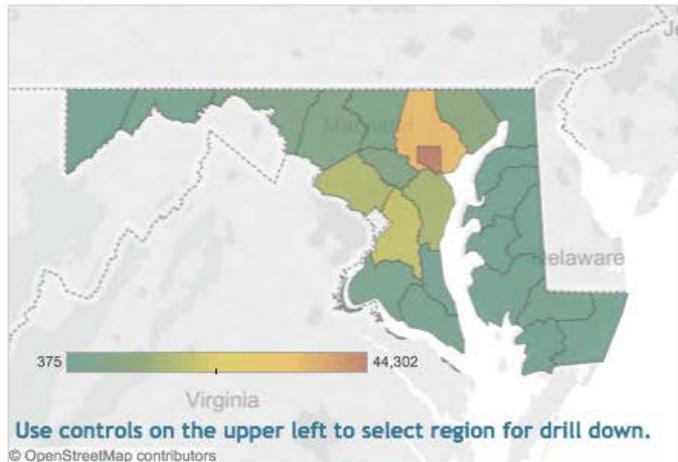
Population Health Dashboards

Disease View Disease Map Medical Area by Zip Notes



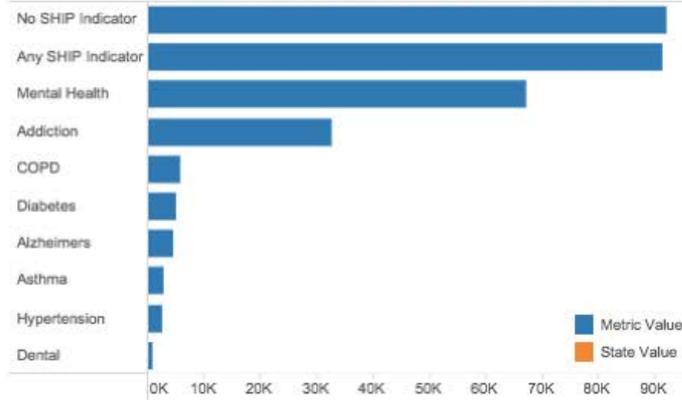
Hospitalizations by County with SHIP Disease Indicators - High Utilizers: 3 or More Visits

Total Hospitalizations for All Population
Payer: All Payer

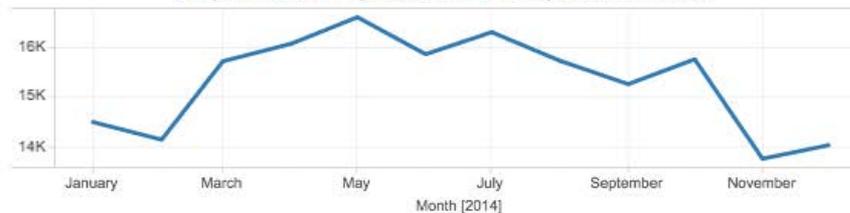


Patients with Comparison to State
Select County or Regional Partnership to Display

SHIP Disease Indicators with Comparison to State



Hospitalizations by Month with Comparison to State



Measure Type
Hospitalizations

Patient Measure Type
Patients

Population Selection
High Utilizers: 3 or More Visits

Zip or County
County

Regional Partnership
 Bay Area
 Howard County
 Johns Hopkins
 NexuaMontgomery
 Southern MD
 Trivergent
 University of MD Medical Center
 Upper Chesapeake & Union Hospitals
 None

Primary Payer Selection
All Payer

Calendar Year
2014

SHIP Disease Selection (Map On...)
 All Population
 Any SHIP Indicator

Top 10 Medical Areas - Select for Diagnoses (APR-DRG) Detail

Pulmonology

Top 10 Diagnoses (APR-DRG)

HEART FAILURE



Patient Total Hospitalizations (PaTH)

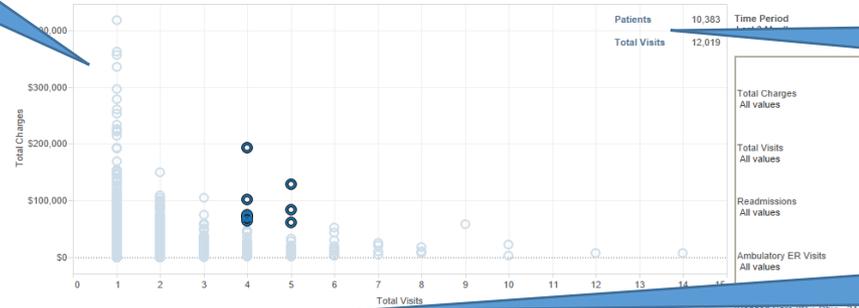
Bubble chart plots each patient by charges and visits at the user's hospitals

Filters pane limits the population shows in the bubble chart. Filters are the same as on the Summary tab.



Patent Total Hospitalizations Dashboard - Patients by Visits and Charges All Population

Last 3 Months Patients by Visits and Charges
Select one or more bubbles to view patient details



Conditions	
Asthma	All
Chronic Kidney Disease	All
Diabetes	All
Heart Failure	All
Hyperlipidemia	All
Hypertension	All
Stroke/Transient Ischemic Attack	All
Other	All

Total number of patient and visits shown on bubble chart

Patient Details table shows the visits and charges totals for selected patients

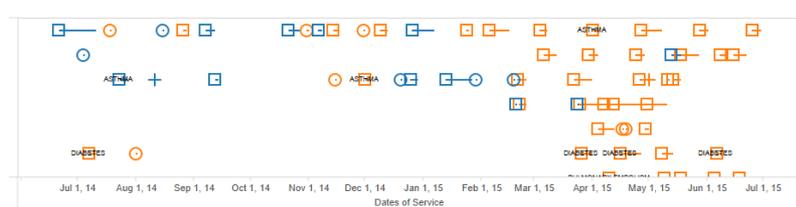
Last 12 Months Patient Details:

EID	Current Hospital							All Hospitals Total		
	Total Charges	Total Visits	Visits IP	Visits OBV	Visits ER	Bedded Care	Age	Total Charges	Total Visits	Total Hospitals
\$158,466	13	10	0	3	10	50	\$253,788	19	2	
\$157,889	6	6	0	0	6	72	\$167,693	8	2	
\$86,705	8	6	1	1	7	53	\$147,757	16	3	
\$78,282	5	5	0	0	5	57	\$86,052	7	2	
\$70,551	4	2	0	2	2	23	\$70,551	4	1	
\$82,609	6	5	0	1	5	58	\$82,609	6	1	
\$83,505	5	5	0	0	5	29	\$83,505	5	1	
\$192,912	4	3	0	1	3	24	\$358,551	6	2	
\$102,064	4	3	0	1	3	25	\$102,064	4	1	

Totals at the user's hospital on the Patient Details table

Timeline view shows the progression of care for each patient by visit type and length of stay

Last 12 Months Patient Hospital Utilization Timeline Across All Hospitals
Select EID to view hospitalizations details



Totals for all hospitals on the Patient Details table

Link to additional notes

HSCRC, 2015. Tableau dashboards developed by CRISP. - Data source: HSCRC Inpatient and Outpatient Case Mix Data with CRISP EID. Data from calendar years 2014 - 2015.

Click here for extended notes



Cross-Facility Patient-Level Data

Main table displays a list of visits for selected patient with detailed information for each visit

Filter and sort options show visits by Admit Date, Visit Type or Hospital

More link provides diagnoses descriptions

Conditions view lists all conditions for the patient

Patient Total at This Hospital summarizes patient visits at the user's hospital

Patient Total at All Hospitals summarizes patient visits at all the hospitals

Primary and secondary payers on the most recent visit



Patient Total Hospitalizations - Patient Detail Sorted by Admit Date
Inpatient, Observation, and Emergency Department Services at All Hospitals

Hover over More link on the right to view diagnoses descriptions

Time Period
Last 12 Months

Admit Date	Discharge Date	Hospital Name	MRI#	Visit Type	IP Re admit	Pcp	DRG	DRG Description	SOI	Dx1 Description	Dx1	Dx2	Dx3	Dx4	More
2014				IP	Yes	141	ASTHMA		2	"ASTHMA W/ ACUTE EXACERBATION (Begin 2009)"	49392	V462	24000	V8542	More
2014				OBV	Yes					"ASTHMA W/ ACUTE EXACERBATION (Begin 2009)"	49392	V146	V141	V1507	More
2014				IP	Yes	140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE		3	"CH OB ASTHMA W/ACUTE EXACERBATION (Begin 2009)"	49322	40291	V85	4280	More
2014				ED						"ASTHMA W/O STATUS ASTHM"	49390	42731	7224	40291	More
2014				IP	Yes	Yes	141	ASTHMA	2	"ASTHMA W/ ACUTE EXACERBATION (Begin 2009)"	49392	4280	V85	25000	More
2014				ED						"CH OB ASTH W/O STAT ASTH (Begin 1989)"	49320	3364	V12	42731	More
2014				IP	Yes	720	SEPTICEMIA & DISSEMINATED INFECTIONS		2	"STAPH SEPTICEMIA UNSPEC (Begin 1997)"	03610	486	49320	76002	More
2015				IP	Yes	Yes	140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	4	"CH OB ASTHMA W STAT ASTH (Begin 1989)"	49321	5648	4021	9341	More
2015				ED						"PAIN IN LIMB"	7295	4280	406	4019	More
2015				ED						"SCIATICA"	7243	27800	4200	496	More
2015				IP	Yes	347	OTHER BACK & NECK DISORDERS, FRACTURES & INJURIES		2	"PATH FX-VERTEBRAE (Begin 1993)"	73313	4280	V85	2768	More
2015				IP	Yes	721	POST-OPERATIVE, POST-TRAUMATIC, OTHER DEVICE INFECTIONS		4	"INFECT D/T CENT VEN CATH (Begin 2007)"	96933	51881	5045	2760	More
2015				IP	Yes	249	NON-BACTERIAL GASTROENTERITIS, NAUSEA & VOMITING		3	"INFECTIOUS ENTERITIS NOS"	0690	4280	V85	73313	More
2015				OBV						"NONINF GASTROENTERIT NEC"	5589	4280	5990	49320	More
2015				IP	Yes	Yes	140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE	3	"CH OB ASTHMA W/ACUTE EXACERBATION (Begin 2009)"	49322	4280	V462	8054	More
2015				IP	Yes	140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE		3	"CH OB ASTHMA W/ACUTE EXACERBATION (Begin 2009)"	49322	51881	4280	27801	More

Sort By
Admit Date

Hospital Name
Multiple Values

Visit Type
All

Conditions

- Chronic Obstructive Pulmona
- Chronic: Asthma
- Chronic: Chronic Kidney Dise
- Chronic: Diabetes
- Chronic: Heart Failure
- Chronic: Hyperlipidemia
- Chronic: Hypertension
- Mental Health: Depression
- Other: Anemia

Patient Total at This Hospital

Total Charges	\$86,705
Visits IP	8
Visits OBV	1
Visits ER	1
Bedded Care	7
Total Visits	8
Readmissions	5
Age	53

Patient Total at All Hospitals

Total Charges	\$147,757
Total Visits	16
Total Hospitals	3
Zip on Last Visit	20747

Primary Payer
Medicare fee for service
Secondary Payer
Medicaid fee for service

Click here for extended notes

Link to additional notes



Care Alerts



Care Alerts – Communicating Critical Information

- CRISP is working with the Bay Area Transformation Partnership to pilot a concept known as "Care Alerts."
- These are free text alerts presented in the context of a user's work flow that communicate the most critical piece of information on the patient in front of them.



Sample Care Alert

“Mr X is a patient of Dr. Brown. He has frequent CHF exacerbations, often due to missed medication and/or physical exhaustion. If you feel he may be discharged after treatment in the ED (40 mg IV furosemide works well typically), securely text Dr. Brown at (XXXXXXXXXX) to plan follow-up in 1-2 business days.

His care manager is Jill Smith (contact information). If he needs to be admitted, please contact her for coordination of care.

Please note that Mr. X prefers low-cost medications and that his 3 cm RUL lung mass has been evaluated and found to be benign. His daughter Julie is health care POA and can be contacted at XXXXXXXXXXX. His MOLST is on record as is his Care Plan.”



CRISP Approach

- These alerts are being shared in standards based ways that CRISP already supports
- It is important to CRISP and the ICN team that we provide as much information as is reasonable directly within the context of a user's workflow
- If there are new types of data we can share through existing CRISP pathways we are eager to work with you on those sooner rather than later.



Care Management Software



Basic Care Management System

Planning phase activities:

- Conduct needs assessment through series of focus groups/interviews
- Conduct marketplace analysis of systems
- Participate in demos of care management systems

Goal:

- Determine if there is a need for CRISP to provide a basic care management system option. If yes...
 - What information/tools are most important?
 - What does the cost model look like?
 - What system(s) or data approaches can serve the identified needs?



CRISP Integrated Care Network Infrastructure Workstreams



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7. Practice Transformation: CRISP will help providers to improve care delivery by training them on leveraging CRISP data and service, sharing best practices, and supporting collaborative partnerships.



Ross
Martin

8. Practice Transformation: CRISP will connect with our ultimate customers through education, outreach and inclusion



3-Year Outlook



Quo Vadimus

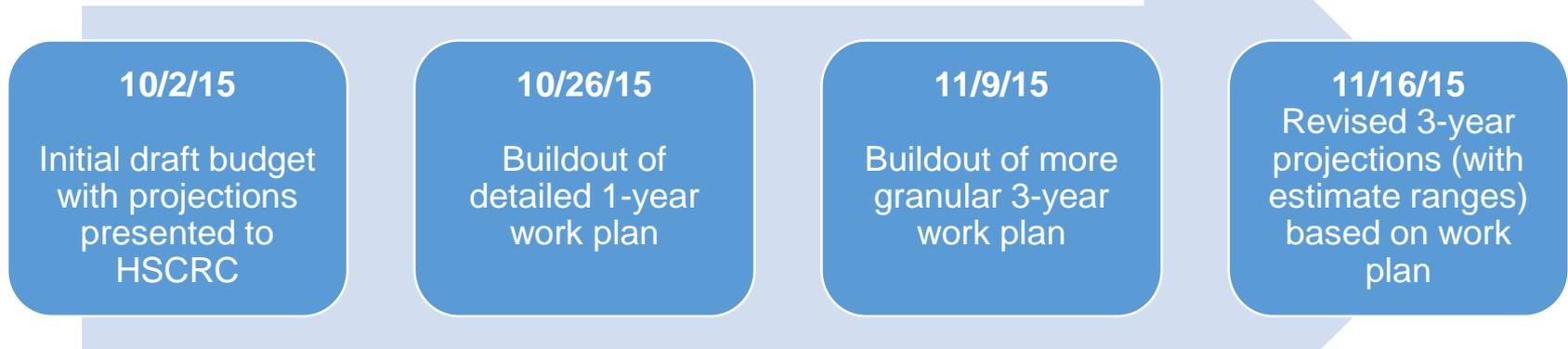
CRISP's ICN Infrastructure long-term (three-year) plan is still emerging, but has some basic characteristics:

- **Build Incrementally** – We will build on current capabilities to deliver additional value (e.g., Reporting & Analytics).
- **Leverage the Network Effect** – We will increase in value to our stakeholders and customers as we grow (e.g., Ambulatory Connectivity).
- **Demonstrate Value, then Scale** – We will pilot early and often to make sure what we deliver has value (e.g., Care Management Software).
- **Listen to the Voice of the Customer** – We will seek every opportunity to solicit feedback from those we serve – from early strategy to iterative enhancements (e.g., adding Patient and Caregiver Engagement).
- **Invest in Outreach** – We will invest in education and training of our customers to give them the best opportunity to effectively use our tools and services (e.g., Practice Transformation).
- **Be Good Stewards** – We will focus on world-class project management to make sure we are using the funds invested in CRISP thoughtfully and transparently.
- **Focus on Stakeholder Success** – We exist to improve healthcare performance and outcomes, not to compete or to pick winners in the healthcare marketplace.



ICNI 3-Year Work Plan and Budget

The CRISP team and advisors are currently developing a three-year work plan and associated budget projections for our seven Integrated Care Network Infrastructure workstreams (plus #8: Patient & Caregiver Engagement).



Regional Partners do not need to build CRISP workstream contributions into their budgets, but should be aware of what we are planning to build and the expected timelines.