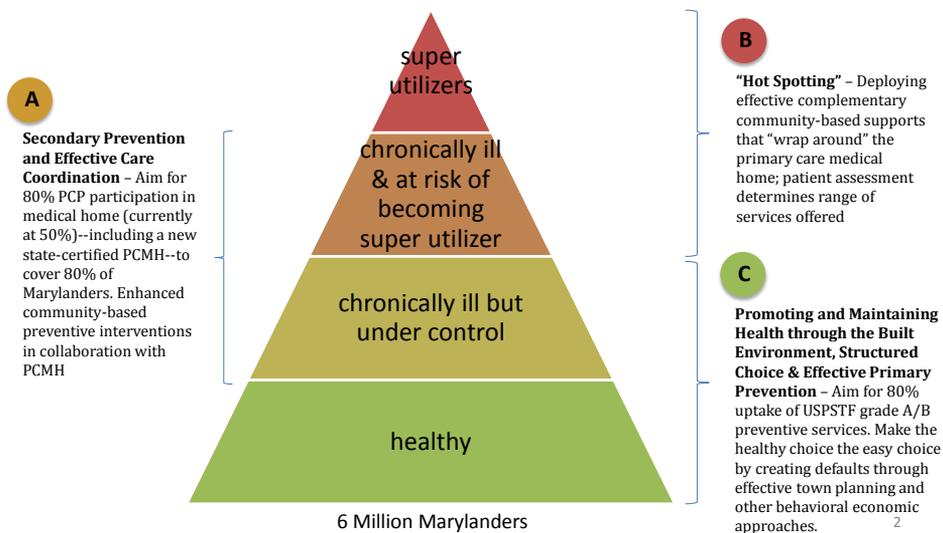


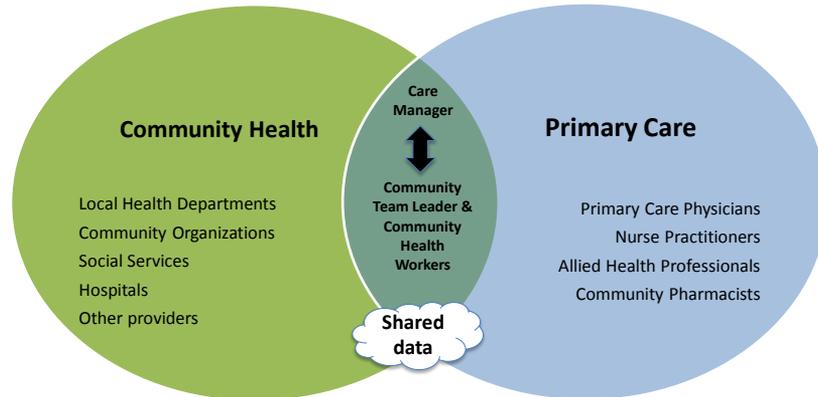
Maryland's SIM State Health Innovation Plan

Version 1.0

Population Health Improvement at All Levels of Health Need

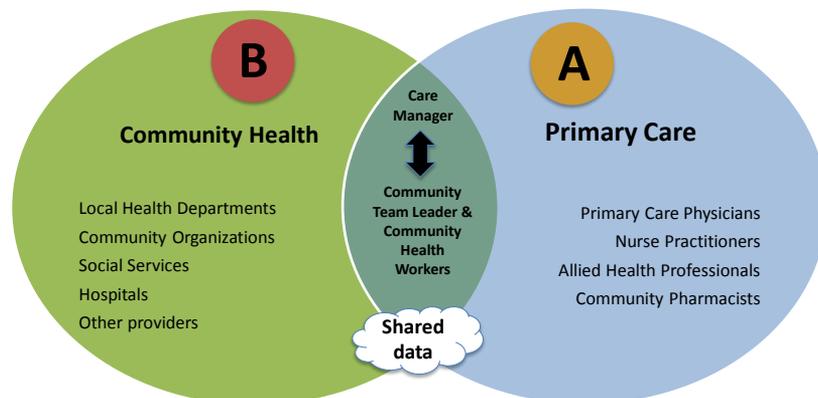


Community-Integrated Medical Home



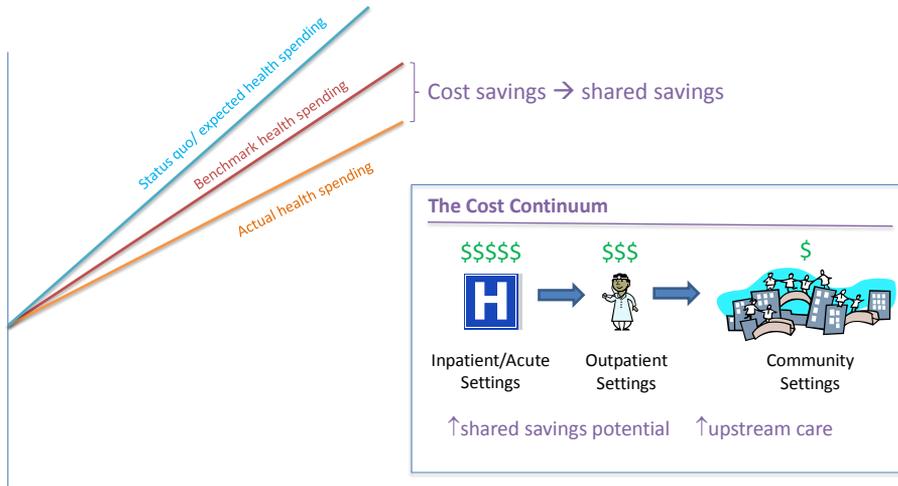
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Community-Integrated Medical Home



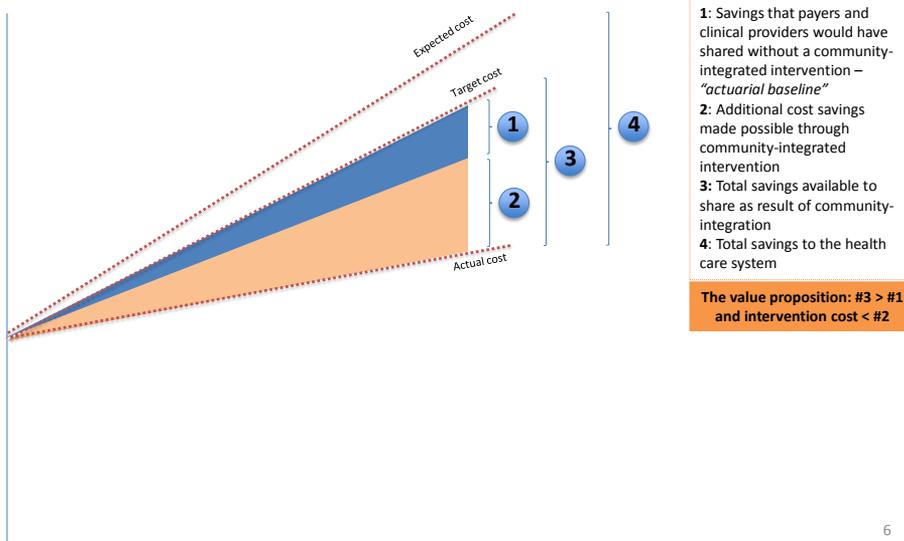
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Community-Clinical Linkages to Advance Delivery and Payment Reform



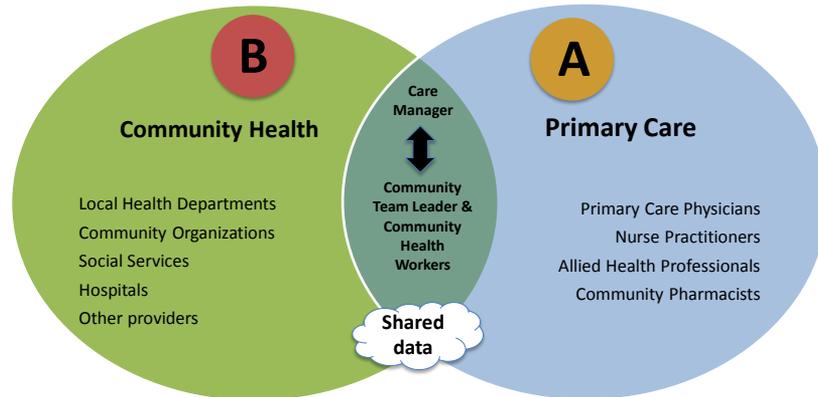
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The Value Proposition



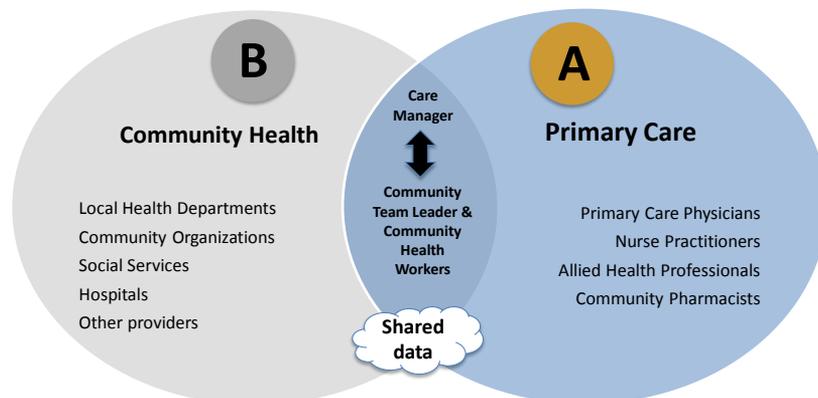
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Community-Integrated Medical Home



7

Community-Integrated Medical Home



8

A

80% PCP & All-Payer Participation in PCMH

Flexibility

- Multiple Entry Points/Inclusion Criteria with minimum shared standards
 - State-Certified PCMHs
 - Carrier-specific PCMHs
 - Multi-Payer PCMHs
 - Medicare ACOs
 - FQHCs
 - Medicaid Health Homes
- Provider Contracting & Payment
 - Payment methodology, amount, and frequency
 - Bonus amounts
- Patient Attribution Methodology (rests with payer on the basis of claims)
- Care manager: office- and/or community-based

Standardized/Centralized

- Performance reporting and bonuses
 - CIMH Core Measures Set
 - Provider performance reports based on entire patient panel
 - PCP receipt of bonus based on performance across practices within an LHIC
- Minimum standards for payers (including State Health Plan), to include:
 - PCPs can participate in multiple PCMH programs
 - Patient attribution results shared with public utility
 - Data sharing for care coordination and reporting
 - Integrated evaluation of all PCMH models to learn from variation
- Minimum standards for participating practices, to include:
 - Enhanced access to care and care continuity
 - Data sharing for care coordination and reporting
 - Collaboration with community-health professionals
 - Metrics: core set consistently defined
 - Integrated evaluation of all PCMH models to learn from variation
- Roles and responsibilities of care manager and community health professionals ⁹

A

Reporting Requirements: CIMH Core Measure Set

- Minimum measure set upon which CIMH performance (and performance bonuses) are based
- Criteria for Selection
 - Widely used in multiple national and statewide programs to reduce administrative burden and facilitate state-federal alignment
 - Medicare ACO
 - Meaningful Use
 - Million Hearts
 - CHIPRA
 - Health Choice
 - HEDIS/UDS
 - Maryland PCMH initiatives
 - Endorsed by national consensus organization (e.g. NCQA, NQF)
 - Linked to evidence tying metrics to improvements in health outcomes and lower cost, particularly for those conditions that carry highest mortality and morbidity in Maryland

A CIMH Core Measure Set: Adults

utilization	Use of Imaging for Low Back Pain
	Preventable Hospitalizations – AHRQ PQI Composite Measure
screening & prevention	Body Mass Index (BMI) Screening and Follow-Up
	Influenza Immunization
	Pneumococcal Vaccination for Patients 65 Years and Older
	Breast Cancer Screening
	Colorectal Cancer Screening
	Tobacco Use Assessment & Tobacco Cessation Intervention
cardiovascular conditions	Coronary Artery Disease Composite: ACE Inhibitor or ARB Therapy - Diabetes or Left Ventricular Systolic Dysfunction
	Coronary Artery Disease: Oral Antiplatelet Therapy Prescribed for Patients with CAD
	Coronary Artery Disease Composite: Lipid Control
	Heart Failure: ACE Inhibitor or ARB Therapy for Left Ventricular Systolic Dysfunction
	Heart Failure: Beta-Blocker Therapy for Left Ventricular Systolic Dysfunction
ischemic vascular disease	Ischemic Vascular Disease: Use of Aspirin or Another Antithrombotic
	Ischemic Vascular Disease: Complete Lipid Panel and LDL Control
diabetes	Diabetes: Eye Exam
	Diabetes: Foot Exam
	Diabetes: Blood Pressure Management
	Diabetes: LDL Management
	Diabetes: HbA1c Control
hypertension	Hypertension: Controlling High Blood Pressure
asthma	Use of Appropriate Medications for People with Asthma
mental health and substance abuse	Antidepressant Medication Management
	Screening for Clinical Depression and Follow-Up Plan
	Initiation and engagement of alcohol and other drug dependence treatment

11

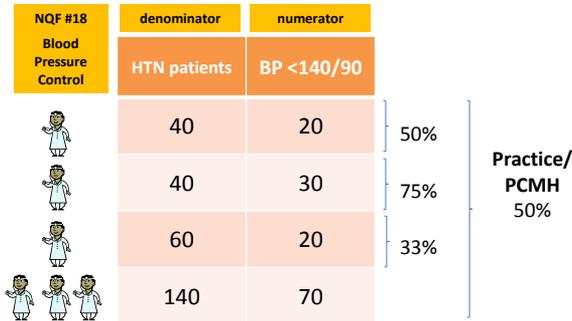
A CIMH Core Measure Set: Children

Utilization	Appropriate Treatment of Children with Upper Respiratory Infection (URI)
	Preventable Hospitalizations: AHRQ PDI
	Appropriate Testing for Children with Pharyngitis
prevention and screening	Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents
	Childhood Immunization Status
	6+ Well Child Visits, 0-15 months
	Preventive Care & Screening: Tobacco Use Assessment
	Preventive Care & Screening: Tobacco Cessation Intervention
asthma	Asthma Assessment
	Use of Appropriate Medications for People with Asthma
mental health	ADHD: Follow-up Care for Children Prescribed ADHD Medication

12

A Reporting Requirements: Performance Reports and Bonuses

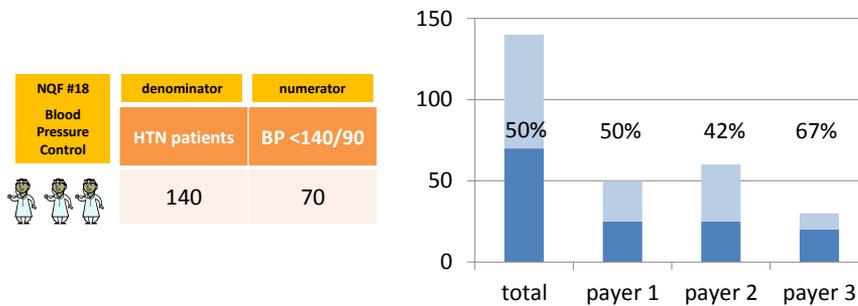
- Performance reports will be provided by the Public Utility to participating PCMHs at the practice and individual physician levels on a quarterly basis



13

A Reporting Requirements: Performance Reports and Bonuses

- Performance information will be provided for the entire patient population as well as disaggregated by payer



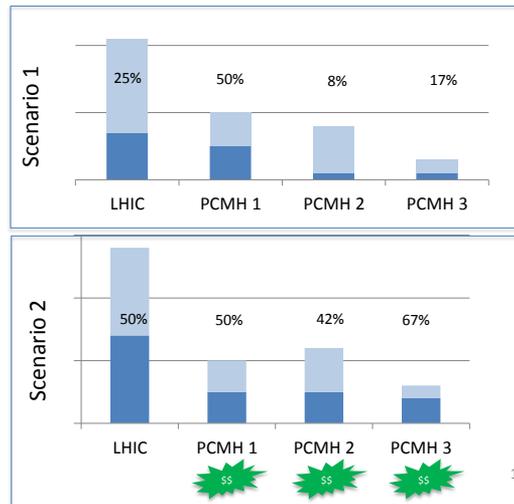
14

A

Reporting Requirements: Performance Reports and Bonuses

- Practices will be eligible for annual performance bonuses based on some blend of practice-level performance and their collective performance at the LHIC level over time, to support community-wide health improvement and to improve sample sizes
- Practices will be assigned to an LHIC based on zip code
- Bonus amounts will be set by the payer and can be provided upfront with the possibility of take-back for unsatisfactory performance

Example: target = >50% of hypertensives in LHIC have BP <140/90



A

Minimum Standards for Payers

- PCPs can participate in multiple PCMH programs: exclusivity provisions will no longer be allowed
- Patient attribution *results* shared with public utility so that all patients can be accounted for; however, patient attribution *methodology* need not be shared
- Data sharing for care coordination and reporting (e.g. provision of claims to all-payer claims database)
- Participation in integrated evaluation of all PCMH models to learn from variation

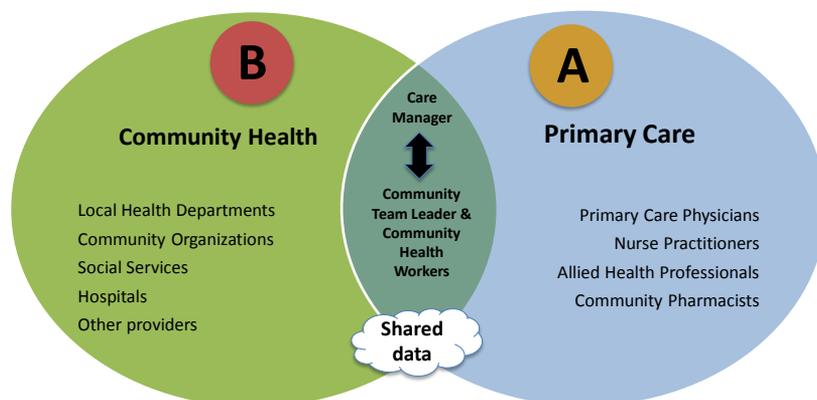
A Minimum Standards for Practices

Dimension	Maryland minimum standards for primary care practices to be a participating provider in a CIMH
Enhance access and continuity	<ul style="list-style-type: none"> • Accept Medicaid and Medicare enrollees, to constitute at least x% of total patient panel • Focus is on team-based care with trained staff
Plan and manage care, including tracking and coordinating care	<ul style="list-style-type: none"> • Collection and sharing of data for population management • Active engagement in formulating and executing patient care plan • Active engagement in tracking and coordinating tests, referrals, and care at other facilities • Active engagement in managing care transitions • Collaborate with CIMH Community Team Leader, CHWs, and LHIC
Provide self-care support and community resources	<ul style="list-style-type: none"> • Participate in CIMH • Assist in providing or arranging for mental health/substance abuse treatment • Assist in counseling patients on healthy behaviors • Assist in identifying candidates for wrap-around service • Collaborate with CIMH Community Team Leader, CHWs, and LHIC
Measure and improve performance for entire patient population	<ul style="list-style-type: none"> • Participate in CIMH • Use performance data (e.g. CRISP ENS/ERS) to monitor utilization and performance and continuously improve • Agree to use of common performance metrics • Participation in integrated evaluation

* Most PCMH recognition programs (NCQA, AAHC, URAC, TransformED) meet or exceed the Maryland state standard. CIMH-specific standards are identified in boldface

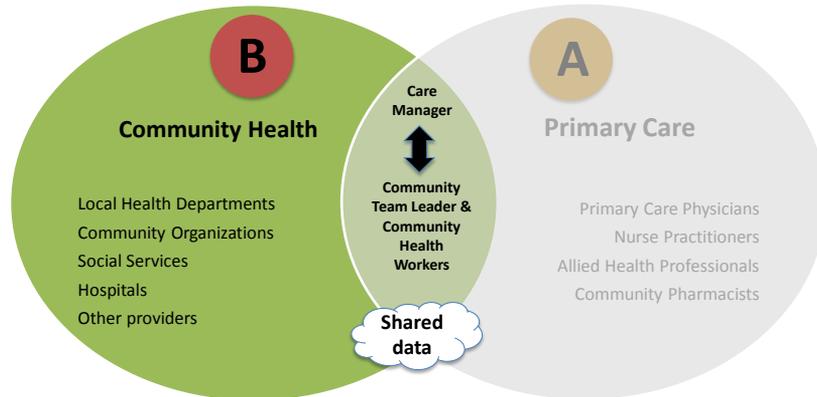
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Community-Integrated Medical Home



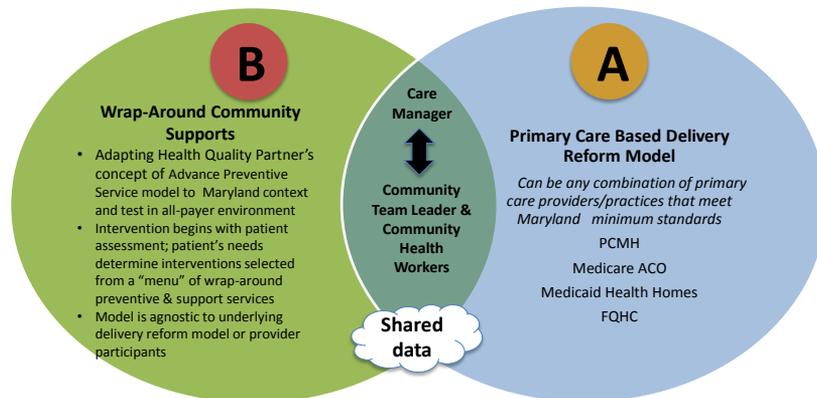
18

Community-Integrated Medical Home



19

B Community-Based & Clinically-Integrated Hot Spotting Model



Benefits of agnostic/community model include:

- Model does not rely on PCMH practice transformation, for which ROI is unclear and can take 2-3 years
- Reduced demand on practice by high need patients
- Potential for greater payer/provider buy-in: does not "interfere" with existing models; lots of upside, little downside

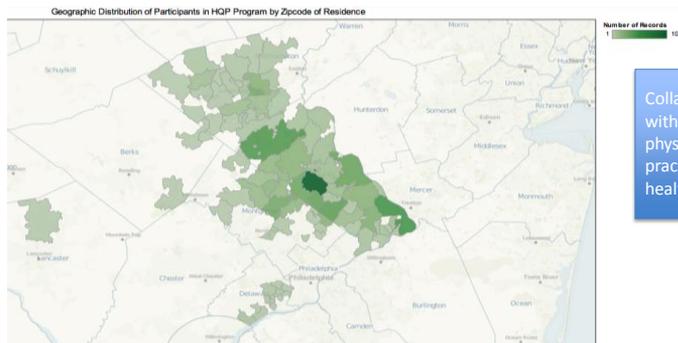
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B Adapting HQP's Advance Preventive Service Model to Maryland Context

- Review of the HQP APS Model
 - Population Served
 - Care team composition
 - Mode and frequency of contacts
 - Use of technology
- Considerations for designing community intervention models for Maryland
- Scaling and adapting the model in Maryland
- Estimates of magnitude

B HQP's APS Model: Population Served

- Traditional Medicare and Medicare Advantage
- Chronically ill with heart failure, coronary heart disease, diabetes, chronic lung disease
 - Other risks as well; prior admission or high risk score
 - Median age 81 years



B HQP's APS Model: Care team composition and locus

- RN's deliver the care (currently n=16)
- Program is freestanding and delivered throughout the community (home, doc offices, hospital, rehab, community centers, program office)
 - Touchdown space provided by major health system partners
- Significant administrative, management, data, and analytical support – commensurate with HQP's R&D mission
 - Medical Director, CEO (MD)
 - SVP, Program Architect (MSW)
 - Director of Operations
 - Senior Clinical Lead (NP)
 - Director of Care Management (RN)
 - Chief of Finance and Analytics (MBA)
 - Chief of Information Technologies
 - Administrative, Data Collection, and Outreach Support staff

Organizations adopting (rather than developing) the program need less infrastructure:

but strong management and clinical support still important

B HQP's APS Model: Mode and frequency of contacts with patients

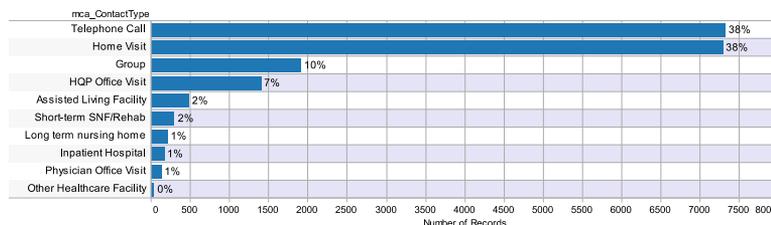
In one year (1/22/2012-1/23/2013):

With approx. 660 active patients

Contacts = 19,240 contacts, avg 29/person/yr

In-person = 11,926 (62%)

At-home = 7,289 (38%)

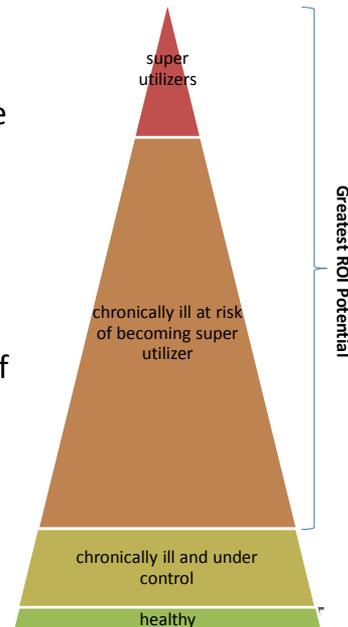


B HQP's APS Model: Use of Technology

- Population health impact possible with minimal external data feeds
 - BIGGER impacts are possible WITH external data feeds (if well analyzed)
- Advanced Preventive Service Platform
 - First generation fully in use at HQP 10/2012
 - Secure, privately-hosted 'cloud' service
 - Scalable, resilient, adaptable
 - Mobile devices with cellular internet connect
 - Capture service data from field (near real-time) and provide decision support
ESSENTIAL FOR RELIABILITY
 - Also includes Advanced Analytics, Policy Management, Staff Training and Patient Education Curriculum Management and Distribution
 - Available to others in late 2013

B Designing Community Intervention Models for Maryland

- Best ROI opportunities appears to be among
 - “super-utilizers” (needs further operational definition)
 - chronically ill at higher-risk
- Assess, understand, and care for the whole person, addressing all types of risk to health
 - Customize intervention plan based on assessment and participant needs, preferences, and values
 - Mindset is longitudinal not episodic



B Intervention Support Needs

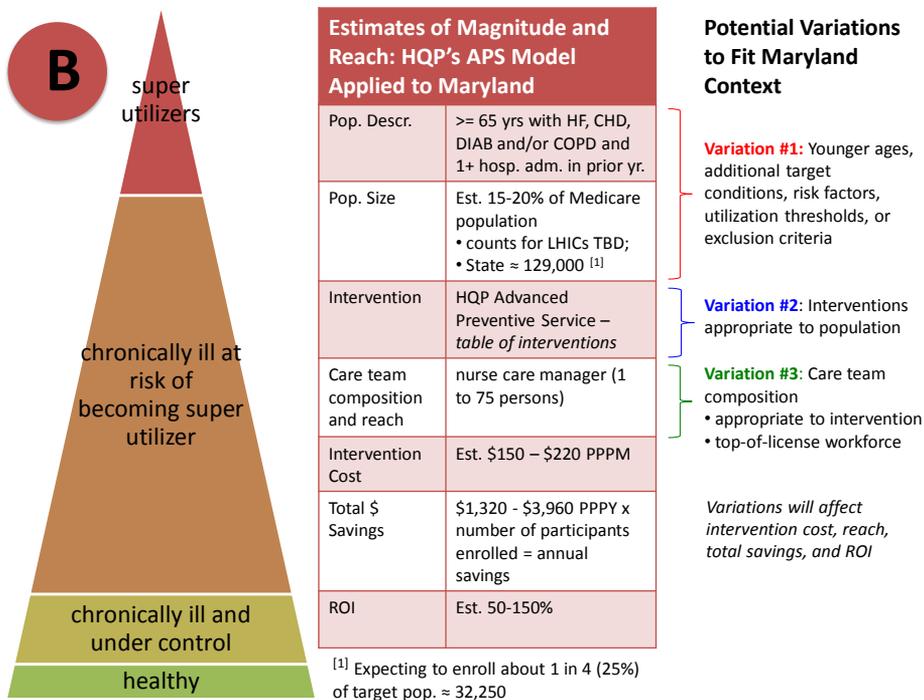
- Oversight
 - Intervention selection and approval (Main, Variations, Experiments)
 - Operational standards
 - Operational management
- IT Support
 - Data capture, retrieval, and decision support from the field using mobile devices; customized to support each intervention
- Data Analytics
 - Program performance, process reliability and variation
 - Outcomes
 - Participant satisfaction / experience
- Training
- Learning Center
 - Insight through analysis of variation and outcomes and narrative reports
 - Evidence-based plan for spread and scale up

DRAFT

B Scaling and Adapting the Model to the Maryland Context

Balance: Replication vs. Experimentation

- 1 Main Intervention for each major target group
 - Available to all LHICs
- Few (1-3) additional Variations may also be adopted
 - Available to all LHICs
- Experimental Interventions (significantly different from Main Interventions)
 - Will be negotiated based on existing evidence, experimental plan, and predicted ROI



B Potential Demand for Services

	A	B	C	D	E	F
County	Population* (2012)	% >=65 yrs* (2011)	Super users (@2%)	HQP population	HQP population all ages**	Total population to serve
		$A \times B$	$2\% \times A$	$17.5\% \times B$	$D \times 2$	$C + E$
Garrett	29,854	17.7% 5284	597	925	1,849	2,447
Worcester	51,578	23.6% 12,172	1,032	2,130	4,260	5,292
Prince George's	881,138	9.8% 70,491	17,623	15,112	30,223	47,846
Maryland	5,884,563	12.5% 735,570	117,691	128,725	257,450	375,141

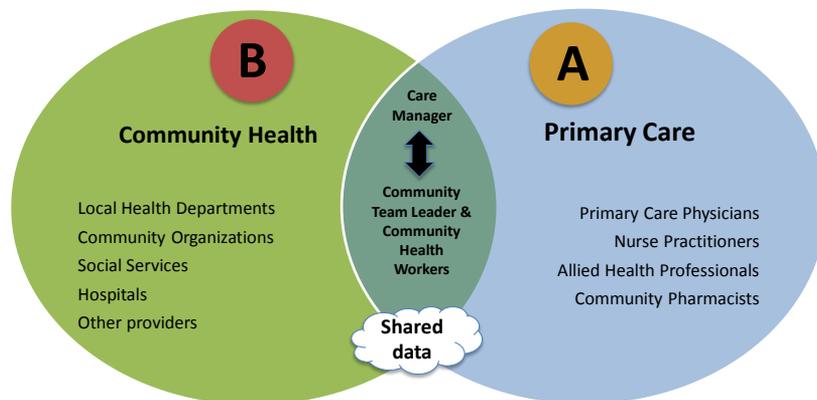
* <http://quickfacts.census.gov>

**See <http://www.cdc.gov/nchs/data/databriefs/db100.htm>

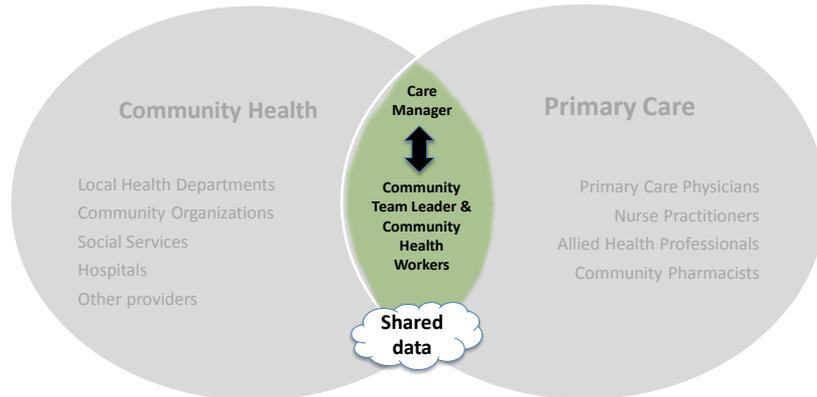
B Defining Interventions: Next Steps

- Analysis of HSCRC data to identify the super-utilizers and determine age, geography, payer mix, and diagnostic profiles
- Determine target populations based on opportunities for health improvement and cost reduction
- Develop list of evidence-based interventions appropriate to target populations based on selection criteria
- Determine appropriate care team composition for the intervention
- Determine ROI based on cost savings relative to cost of interventions and estimate magnitude of population health improvement

Community-Integrated Medical Home



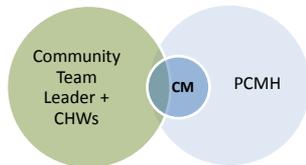
Community-Integrated Medical Home



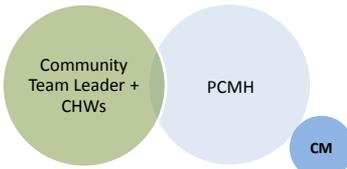
33

Roles/Responsibilities for Care Managers & Community Health Professionals

PCMH **with** office-based care manager(s)



PCMH **without** office-based care manager(s)



Community Health Team: Composition & Training

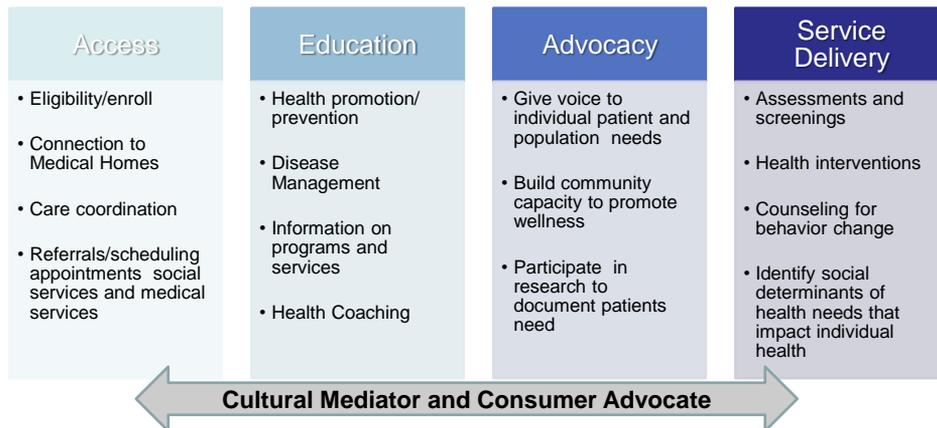
- Community Team Leader (nurse) will lead a team of CHWs
- CHWs will be trained on core competencies
- Training and protocols will be developed for team members with ongoing role-specific monitoring to ensure fidelity to the protocols and provide quality assurance

Community-Clinical Integration

- Community Team Leader will interface with CMs whether they are office-based or virtual, or directly with the PCP where there is no CM
- Little overlap between Community Team Leader and existing CMs is expected and will be easily identified by practices/plans because duties of Community Team Leader will be specified in detail.
- Where there is overlap in responsibilities, roles and responsibilities can be negotiated to ensure one master plan tailored to the needs of each patient while minimizing duplication of effort.

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CHW Roles and Responsibilities



Consumer Health Foundation, *Community Health Worker Discussion Paper*, July 2012



CHW Role in Service Delivery Studies

- Maryland: Chronic Disease Care Team Nurse Case Manager and a Community Health Worker (Bone 2009)
 - *Home visits to urban African Americans patients with Type 2 Diabetes where CHWs conducted screenings, education, and identification of household issues interfering with medication adherence.*
- Arkansas: Long Term Care Community Connectors (Felix 2011)
 - *CHWs door-to-door canvassing, community outreach, and referral program to identify Medicaid-eligible, African American adults in a rural area with unmet long-term care needs and connect them to services to avoid the need for nursing home stays.*
- Ohio: Community Health Access Project (CHAP)
 - *CHW conduct risk assessment, care coordination, and linkages to evidence based interventions and medical care using a pathway model that has a measurable outcome.*



CHW Role in CIMH

Adapting or Building on Successful Models - HQP

Examples of HQP Interventions Conducted by Community Based Nurse	Possible CHW Activity
Intake Assessment	
Individualized Plan	
Action Plans	
Ongoing Assessments and Screenings	X
Care Transitions	
Education and Self-Management Training	X
Assessment and counseling for behavior change	X
Stress Management Education and Counseling	X



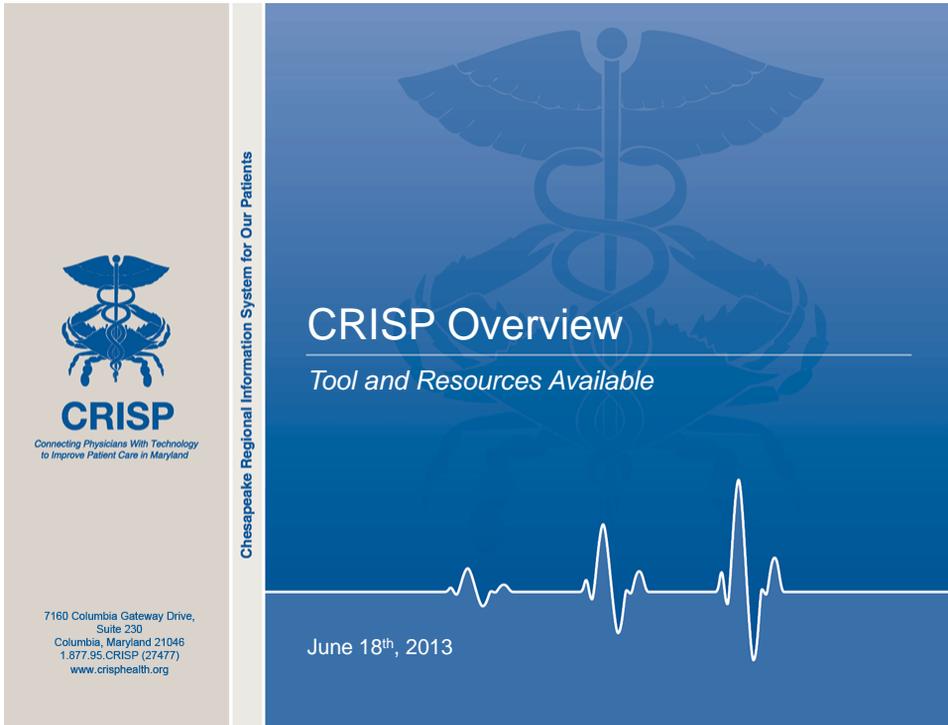
The Role of Local Health Improvement Coalitions

Enhanced Capacity of Local Health Improvement Coalitions (LHICs)

LHIC role as the population health integrator will include core functions:

- Prioritization & identification of target populations
- Selecting appropriate interventions for target populations
- Convening/facilitating partnerships to address population priorities and leverage community resources
- Data analytics and aggregation
- Continuous quality improvement to enable LHIC partners to hit community-level cost and quality targets
- Hiring and deploying CIMH workforce (e.g. CHWs)





CRISP
Connecting Physicians With Technology
to Improve Patient Care in Maryland

7160 Columbia Gateway Drive,
Suite 230
Columbia, Maryland 21046
1.877.95.CRISP (274777)
www.crisphealth.org

Chesapeake Regional Information System for Our Patients

CRISP Overview

Tool and Resources Available

June 18th, 2013



CRISP Background and Status

Chesapeake Regional Information System for Our Patients

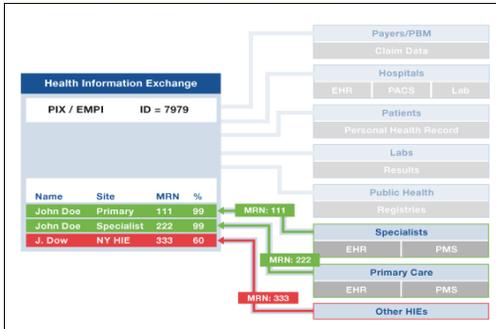
- CRISP is Maryland's State Designated Entity for Health Information Exchange
- CRISP is a non-profit membership corporation

Progress Metric	Result
Live Hospitals	47 (includes All Acute Hospitals)
Live Labs and Radiology Centers (Non-Hospitals)	7
Live Hospital Clinical Data Feeds	100 (lab, rad, clinical document feeds)
Identities in MPI	~5M
Patient Searches (past 30 days)	~12,000
Encounter Alerts Sent	~18,000/month
Lab Results Available	~23M
Radiology Report Available	~ 6M
Clinical Documents Available	~ 3M



Patient Identity Management

Chesapeake Regional Information System for Our Patients

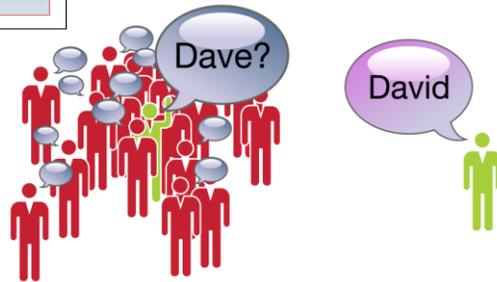


The Challenge:

Accurately and consistently linking identities across multiple facilities to create a single view of a patient.

A near-zero tolerance of a false positive match rate with a low tolerance of a false negative match rate.

Accurate cross-entity patient identity management is a fundamental requirement for population-level measurement, utilization trending, and care coordination.



Encounter Notification Service

Chesapeake Regional Information System for Our Patients



- ENS enables CRISP participants to receive real-time notifications when one of their patients or members is hospitalized.
- The alerts are generated from the "ADT" messages CRISP receives from all Maryland hospitals.
- Participants can only subscribe to "active patient or members"
- If an individual has opted out of the HIE, an alert will not be triggered.
- For CRISP, ENS falls under our care coordination, quality improvement, and quality assessment permitted purpose.
- There are currently over 500,000 patients subscribed to with in ENS resulting in over 600 notifications per day.



Hospital Services Utilization Reporting

Chesapeake Regional Information System for Our Patients

- As encounter messages flow into CRISP, reporting on aggregate hospital services, regional or community utilization, and trending analysis becomes possible.
- By consolidating, correlating, and reporting against real-time encounter data CRISP can produce rapid and comprehensive views of hospital data for purposes such as identifying (to the appropriate entity) “super-utilizers” in targeted geographies.

In-Patient Admissions for January 2013 – All Maryland Hospitals

% Patients	# Patients	# Admits	# Readmits	% Total Admits Admits/Total Admits	% Total Readmits Readmits/Total Readmits	Readmit Rate Readmits/Admits
100%	52,459	57,173	7,027	100%	100%	12%
1%	525	1,643	919	3%	13%	56%
5%	2,623	5,839	2,600	10%	37%	45%
10%	5,246	9,960	3,973	17%	57%	40%
50%	26,230	30,944	5,687	54%	81%	18%



Encounter Reporting Services

Chesapeake Regional Information System for Our Patients

- This report enables hospitals to see inbound and outbound readmissions by patient MRN and account number
- Other reports, such as 72-hour ER bounce back reports are also being produced

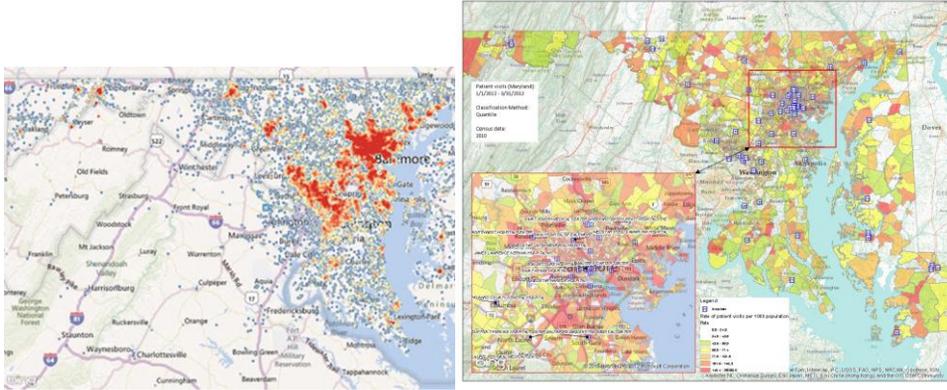
1	2	A	B	C	D	E	F	G	J	M
CRISP Basic 30-Day All-Cause Readmissions From										
Target Hospital										
November 2012										
3	5	776 Total Discharges 11/01/2012 - 11/30/2012								
6	7	86 Outgoing Readmissions								
8	9	63 Outgoing Readmissions Intra-Hospital								
10	11	11.1% Outgoing Readmission Rate								
12	13	8.1% Outgoing Readmission Rate Intra-Hospital								
		Destination/Admit Hospital				# Readmits				
13	14	Target Hospital				63				
15	16	A medium sized hospital less than 15 miles from target hospital				13				
17	18	A large hospital less than 15 miles from target hospital				12				
19	20	A small hospital less than 15 miles from target hospital				10				
21	22	A medium hospital less than 15 miles from target hospital				9				
23	24	A medium hospital less than 15 miles from target hospital				6				
		MRN	Account#	Discharge Time	Admit Time					
25	26	fake7795722	fake2974968420	11/21/2012 16:12	11/21/2012 17:47					
27	28	fake9923067	fake2974953488	11/12/2012 14:00	11/12/2012 14:42					
29	30	fake1512333	fake2974949201	11/14/2012 17:10	11/14/2012 18:04					
31	32	fake2266317	fake2974953583	11/14/2012 18:16	11/14/2012 18:59					
33	34	fake2326067	fake2974960992	11/10/2012 11:00	11/10/2012 12:22					
35	36	fake2689486	fake2974971902	11/29/2012 16:56	11/29/2012 17:56					
37	38	A medium hospital less than 15 miles from target hospital				6				
Readmit Readmit IN Readmit OUT										



GIS Mapping Capability

Chesapeake Regional Information System for Our Patients

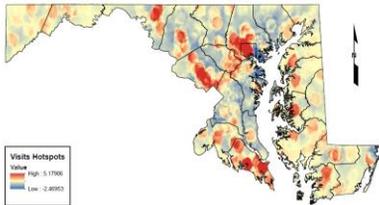
- Based on the indexed utilization information CRISP can produce visualizations of hospital utilization data in near real time.
- CIMH can leverage geographic data to better understand localized use of services and opportunities for the most efficient / targeted interventions.



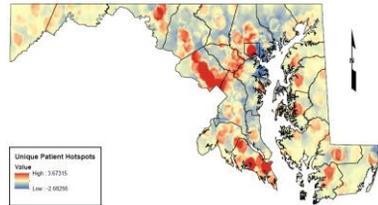
GIS Mapping Capability

Chesapeake Regional Information System for Our Patients

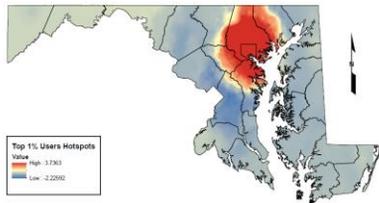
Visits



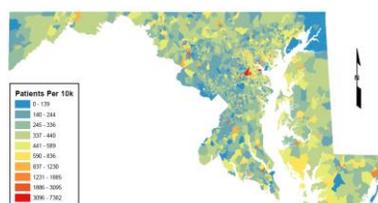
Unique Patients



Top 1% Patients



Unique Patients Normalized by Population

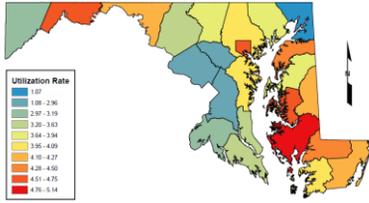




GIS Mapping Capability

Chesapeake Regional Information System for Our Patients

Utilization by County



Visits by Zip code (not normalized)

