
Care Redesign and Population Health



MARYLAND

Care Redesign Amendment

- ▶ At stakeholder request, we asked CMS to approve an amendment to our All-Payer Model (Model) to obtain comprehensive patient level Medicare data to support care coordination, to allow hospitals to share resources with non-hospital providers, and to allow hospitals to share savings with non-hospital providers.
- ▶ Joint CMMI-HSCRC-CRISP-MHA Webinar I, October 21st from 1:00-2:00pm EST. You can register here: <https://attendee.gotowebinar.com/register/8666939266781516804> and direct questions to hscrc.care-redesign@maryland.gov.
- ▶ More information on implementation of the Care Redesign Programs is available on HSCRC's website: <http://www.hscrc.maryland.gov/care-redesign.cfm>

Amendment: Care Redesign Programs

Hospital Care Improvement Program (HCIP)

- **Who?** For hospitals and providers practicing at hospitals
- **What?** Facilitates improvements in hospital care that result in care improvements and efficiency

Complex and Chronic Care Improvement Program (CCIP)

- **Who?** For hospitals and community providers and practitioners
- **What?** Facilitates high-value activities focused on high needs patients with complex and rising needs, such as multiple chronic conditions
- Leverages Medicare Chronic Care Management (CCM) fee*

- ▶ Hospitals can select which program(s) to participate in
- ▶ Through these voluntary programs, hospitals will be able to obtain data, share resources with providers, and offer optional incentive payments
- ▶ *Maryland will modify program as needed to adapt to Medicare's CPC+ program

All-Payer Amendment Language- Population Health Plan

- ▶ Working towards this goal, the State will submit a **Population Health Plan** to CMS by June 30, 2017. The Population Health Plan will describe a transformation to value-based payments for selected population health measures. This plan will include:
 - ▶ Identifying measures that will be incorporated into the State's Appendix 7 measure reporting to CMS, as described in the Model Agreement;
 - ▶ Identifying at least three priority improvement measures for improving the State's population health;
 - ▶ Proposing potential interventions to improve population health in these priority areas, including those that promote collaboration among State entities, public health agencies, and providers;
 - ▶ Proposing outcomes-based measures that assess progress on population health improvement; and
 - ▶ Describing pathways to transition to population-based, hospital payments.

All-Payer Amendment Language- Value-Based Payment Plan

- ▶ The State will describe at least three of the identified priority improvement measures to be incorporated into the State’s value-based, hospital payment methodologies, as described in the **Value-Based Payment Plan** (“VBP Plan”), which the State will submit to CMS by January 1, 2018. The VBP Plan describes:
 - ▶ Priority improvement measures, including improvement targets and value-based scale that can be applied;
 - ▶ Associated data sources and measurement approaches;
 - ▶ Potential interventions; and
 - ▶ Testing approach

Draft Population Health Timeline

| Due Date | Description |
|-----------------|--|
| June 30, 2017 | State submits a Population Health Plan to CMS. |
| August 31, 2017 | CMS target date to send comments on the submitted Population Health Plan to the State (requested within 60 calendar days of receiving the State's Population Health Plan). State works with CMS to incorporate CMS comments in the Population Health Plan. |
| January 1, 2018 | State submits to CMS the Value Based Payment Plan ("VBP Plan"). |
| July 1, 2018 | State begins tracking proposed value-based program measures for each hospital. |
| March 31, 2019 | Based on the State's testing, the State submits any modifications to the VBP Plan to CMS for review and comment. |
| May 31, 2019 | CMS target date to send comments on the submitted VBP Plan to the State (requested within 60 calendar days of receiving the State's VBP Plan). State works with CMS to incorporate CMS comments and modifications in the VBP Plan. |
| July 1, 2019 | State incorporates the VBP Plan Measures into its payment methodologies. |



CENTER FOR POPULATION HEALTH
INFORMATION TECHNOLOGY

Maryland SIM Planning Grant Contract: CPHIT/ CRISP Population Health Measurement Development

Presented by: Office of Population Health Improvement
Maryland DHMH &
The Center for Population Health IT (CPHIT)
The Johns Hopkins Bloomberg School of Public Health

Presented to: HSCRC Performance Measurement Workgroup
Date: October 21st, 2016



Intro: Purpose of Today's Discussion

- Introduce DHMH Population Health Measures Project
- Present draft measurement framework and measures
- Obtain feedback from stakeholders on opportunities to improve measurement framework and plans being developed



Intro: Alignment with Health Transformation

Background

- Project
- Partners
 - HSCRC, Medicaid, CRISP
 - CMMI
 - Consultant – JHU-Center for Population Health IT (CPHIT)

Aims

- Integrate with SIM Design Grant from CMMI for system-wide health transformation
- Support the All Payer Model drive for TCOC and population health
- Build on existing innovative measurement systems for prevention and community health including:
 - ACOs, PCMH
 - SHIP
 - Core Measure Set



PROPOSED POPULATION HEALTH MEASUREMENT
FRAMEWORK DEVELOPED BY THE JOHNS HOPKINS
CENTER FOR POPULATION HEALTH IT, IN
COLLABORATION WITH THE DHMH, CRISP AND THE
HSCRC



Project Information

- Project funding: Maryland SIM Planning Grant
- CPHIT contract through CRISP for development of population health measures and data assessment
- CPHIT team
 - Jonathan Weiner, DrPH: Principal Investigator (jweiner1@jhu.edu)
 - Elham Hatef, MD, MPH: Project Lead
 - Elyse Lasser, MS
 - Hadi Kharrazi, MD, PhD
 - Christopher Chute, MD, DrPH



Project Background

- In Maryland and on a national level the implementation of ACA has brought increased attention to the population health among healthcare professionals and policy makers.
- Despite ongoing discussions on broad goals for population health there is lack of consensus on its specific definition, related indices, and how to measure the current status of health in a population as well as its improvement within and across different subpopulations.
- This highlights the importance of identifying a framework and set of measures for the population health.



Project Goals

- Develop a proposed population health measurement framework for the State of Maryland
- Develop and Propose population health specific measures based on the framework, the current environment and future progress in the state of Maryland
- To be completed:
 - Understand current and future data environment for the proposed population health measures
 - Propose plans for measures to evolve from process to outcome measures as data and information becomes more available (deployment plans)

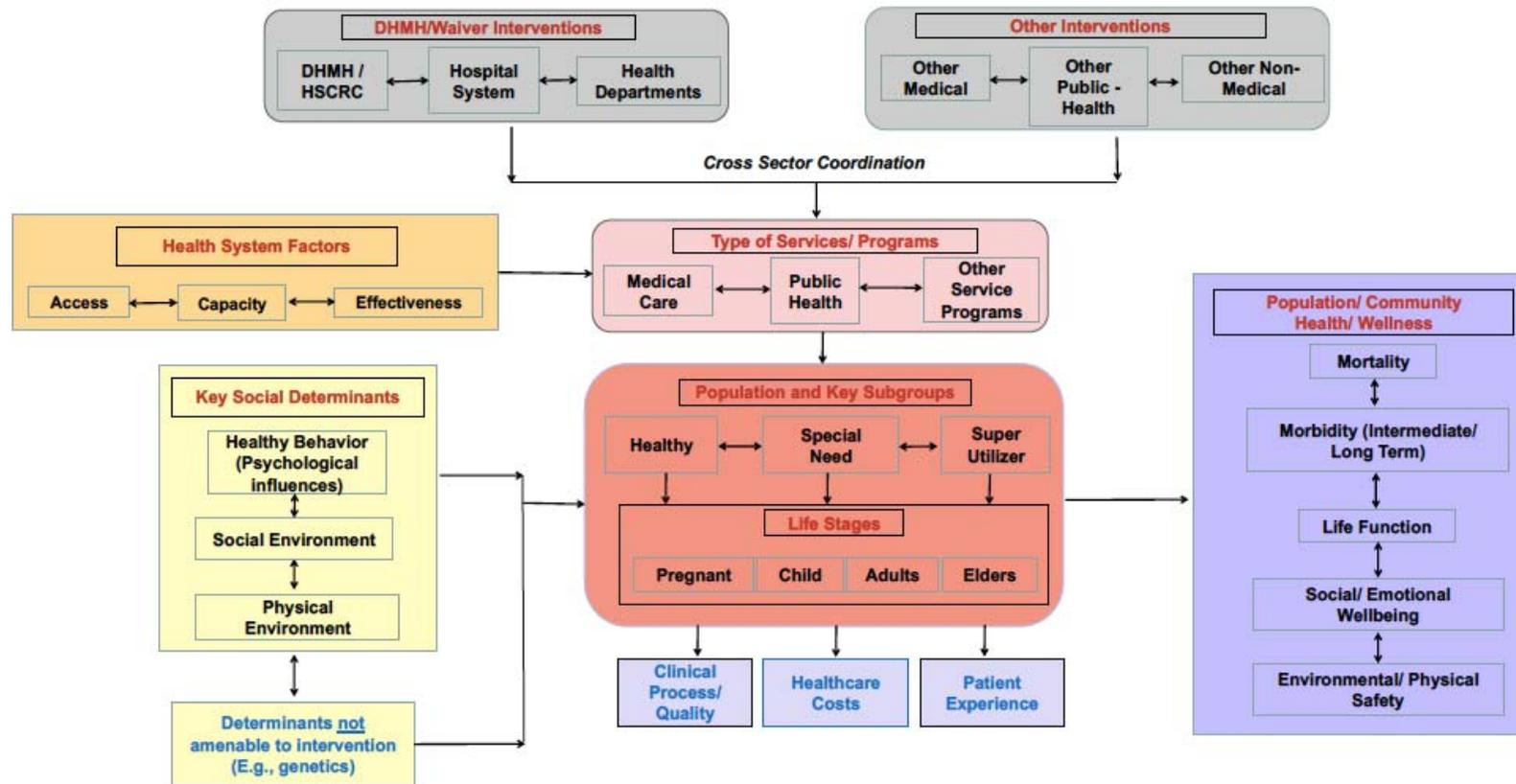


Project Process

- Identify existing population health frameworks and measures
- Extensive search of peer-reviewed and other expert-authored literature, as well as an environmental scan including gray literature, those lacking formal peer review.
- Scan current population health and public health measures at
 - DHMH and similar state as well as local public health agencies
 - CMS
 - IOM
 - NQF
 - IHI
 - CDC
 - AHRQ
 - WHO
- Perform a semi-structured analysis to identify common themes and topics related to population health as already defined, and then developing a comprehensive list of available population health measures.



Proposed Population Health Framework for Maryland



Selection Criteria for Population Health Measures

1. Population/Community Focused: measures that are relevant to one or more of the three population level perspectives (aka the three CDC pop health "buckets"):

- Relevant to community level interventions (e.g., for entire state or county or special target population across region)
- Health system interventions (e.g., a hospital system, Accountable Care Organization or provider consortia)
- Bringing population issues into clinical services (e.g., primary care physician or care manager/ outreach nurse)

2. Importance/Applicability for use as:

- Population based performance measures
- Population level factors that are important to take into account for clinical/public health intervention



Selection Criteria for Population Health Measures

3. Helps to complete a “balanced score card” of population health:

- Measures not only related to medical care (i.e., more social)
- Focuses on population facets of medical care (i.e., the full denominator in need not just those getting care.)
- Focusing on interplay between public health interventions and medical care
- A type of structure oriented quality improvement measure that will serve as a motivator to help build new infrastructure for data collection for population health (e.g., a metric assessing the collection of socioeconomic status data in electronic health records)
- Tools that will support not just the current Maryland's all-payer model, but also future innovations (e.g., as described in the state innovation model grant)
- Relevant to small areas, i.e. when defining communities, we can go beyond just county or large zip codes.
- Range of temporality. I.e., some measure address short term outcomes, other longer term. (Some of the outcomes will require being in it for the long haul)



Selection Criteria for Population Health Measures

4. Overall practicality / strategic value

- Measurement areas not previously addressed by HSCRC/ DHMH or measures already identified, but further work is needed
- Could be accomplished with limited resources (i.e., not a new major community survey)
- Fills a gap in the framework

5. Scientific Evidence / Measures Attributes

- Evidence that measures matter for health and welfare
- Preliminary measurement work exists
- Previous validation of accuracy / feasibility desirable
- Previous measure standards / certification



Selection Criteria for Population Health Measures

6. Data Feasibility / supports and expands digital infrastructure

- CRISP/ Admission-Discharge-Transfer
- Maryland Health Care Commission All payer/Medicare claims
- Claims and administrative data (CRISP/HSCRC/MHCC)
- Census and other regularly collected geo data
- Vital records / DHMH/ public health data available but not yet used
- EMRs (in and out of CRISP's current possession)
- Innovative social/non-medical big data currently available



Review - What Makes Our Proposed Measures Unique?

- **The Types of Measures We Recommend:**

- Existing, validated measures (e.g., NQF, CMS) that until now have been used for a health plan/provider defined “denominator”
- Existing public health / community health measures used to date mainly for needs assessment at State or County level
- Innovative measures (from IOM and others) addressing broader definitions of pop health and newly expanded digital data sources

- **Some Unique Features of our Measures;**

- Denominator/ “populations” are defined more broadly:
 - *Geographic or pop-subgroup defined cohort without regard to provider*
- Makes use of expanded data sources:
 - *Electronic health records and expanded social/geo data sources*
 - *Proposed a phased near-term/long term deployment based on data system progression*
- Moves beyond the “clinical/medical” model to address “social/environmental” factors known to have larger impact on health.



Proposed Community/Population Level Measures

1. Diabetes-related emergency department visits for community/population (A1/A2)
2. Asthma-related emergency department visits for community (A1/A2)
3. Body Mass Index (BMI) screening and follow-up for community/ population (A3/ C2/PQ) (PQ= process quality)
4. Screening for high blood pressure and follow-up for community/population (A3/ /C2 /PQ)
5. Food – nutrition; fruit and vegetable consumption for population (B1)
6. Counseling on Physical Activity in the Population (B1)
7. Current adult smoking within population (B1)
8. Median household income within population (B2)
9. Levels of housing affordability and availability (B2/B3)
10. Age-adjusted mortality rate from heart disease for population (C1)
11. Addiction-related emergency department visits (A1/C2)
12. Falls; Fall-related injury rate (A4/B3/C1/C2/C3)
13. Social connections and isolation (B2)
14. Functional Outcome Assessment (B1/C2)
15. Self-Reported Health Status (C2)



Mapping The Proposed Population Health Measures onto Our Recommended Population Health Framework

| Overview of Population Health Measurements | | | | | | | | | | | | | | | |
|--|--|-----------------------|----------|---------------|-------------------------|--------------------|----------------------|-----------|--|-----------|---------------|---------------------------|-----------------|--------------------|-----------------------------|
| Target Population | Life Courses | Health System Factors | | | Key Social Determinants | | | Outcomes | | | | | | | |
| | | Access | Capacity | Effectiveness | Healthy Behavior | Social Environment | Physical Environment | Mortality | Population/ Community Health/ Wellness | | | Clinical Process/ Quality | Healthcare Cost | Patient Experience | |
| | | | | | | | | | Intermediate | Long Term | Life Function | | | | Social/ Emotional Wellbeing |
| Healthy | Across Target Populations & Life Courses | A1 | A2 | A3 | B1 | B2 | B3 | C1 | C2 | C3 | | | | | |
| | Pregnant | | | | | | | | | | | | | | |
| | Child/ Adolescent | | | | | | | | | | | | | | |
| | Adult | | | | | | | | | | | | | | |
| | Elderly | | | | | | | | | | | | | | |
| Special Needs | Across Target Populations & Life Courses | A1 | A2 | A3 & A4 | B1 | B2 | B3 | C1 | C2 | C3 | | | | | |
| | Pregnant | | | | | | | | | | | | | | |
| | Child/ Adolescent | | | | | | | | | | | | | | |
| | Adult | | | | | | | | | | | | | | |
| | Elderly | | | | | | | | | | | | | | |
| Super Utilizers | Across Target Populations & Life Courses | A1 | A2 | A3 & A4 | B1 | B2 | B3 | C1 | C2 | C3 | | | | | |
| | Pregnant | | | | | | | | | | | | | | |
| | Child/ Adolescent | | | | | | | | | | | | | | |
| | Adult | | | | | | | | | | | | | | |
| | Elderly | | | | | | | | | | | | | | |

(See measure mapping codes on previous slide)



Subset of Measure Suggested as Priority for Md.

| Measure # | Domain | Title | Target Population | Possible Sources of Data |
|-----------|--|---|--------------------|---|
| 3 | System Effectiveness/ Process Quality/ Morbidity | BMI Screening/ Follow-up | Adult (& Children) | EHR & Claims |
| 4 | System Effectiveness/ Process Quality/ Morbidity | Hypertension Screening & Follow-up | Adult | EHR & Claims |
| 6 | Healthy Behavior/ Determinant | Physical Activity | Adult (& Children) | EHR or BRFSS / Survey-Pt. Portal |
| 7 | Healthy Behavior/ Determinant | Smoking | Adult | EHR or BRFSS / Survey /Patient Portal |
| 12 | Morbidity/Mortality Physical Environment/ Safety | Falls related acute utilization | Adult / Elders | HSCRC/ Claims/ EHR Vital records (optional) |
| 15 | Morbidity | Self-Reported Health Status - Fair or Poor | Adult | BRFSS /Survey or EHR / Patient portal |



Next Steps

- Data assessment: Assess feasibility of current EHR type data being collected at an HIE level
- Data Infrastructure development plan and strategic plan to capture the broader 15 measures of population health
- Develop Measure Deployment Progression Plan for 4 of the 6 Priority Population Health Measures (BMI, HTN, Smoking, Falls-Dual Eligible)
 - Detail the transition from process to outcome measures for capturing and measuring population health
 - E.g. BMI
 - Near-term Measure: 6 months to two years
 - Mid/Long-term Measure: 3 to 5 years



Initial Assessment of Alternative Data Sources For Each Measure

Summary of Potential Data Sources Contributing to Recommended Population Health Measures and The Expected level of Available Geographic Details

| Summary of Data Likely Sources For Each Measure | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| Measure by number: | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
| EHR | x | x | x | x | x | x | x | x | | x | x | x | x | x | x |
| HSCRC | x | x | x | | | x | x | | | x | x | x | | | |
| MHCC | x | x | x | | | x | x | | | x | x | x | | | |
| BRFSS | | | | | x | x | x | | | | | | x | | x |
| CRISP | | x | | | | x | | | | | x | x | | | |
| Census | | | | | x | | | x | x | | | | x | | x |
| Vital Records | | | | | | | | | | x | | | | | |
| Medicaid | x | x | | x | | x | | | | x | x | x | | | |
| MDP | | | | | | | | x | x | | | | | | |
| BHA | | | | | x | | | | | | | | x | x | x |
| YRBSS | | | | | x | x | | | | | | | | | |
| Mobile Health Vans | | | x | x | | | x | | | | | | | | x |
| School Health Clinics | | | x | x | x | x | | | | | | | x | x | x |
| Community Health Fairs | | | x | x | x | x | | | x | | | | x | x | x |
| Community Outreach | | | x | x | x | x | x | x | x | | | x | x | x | x |
| Medicare Health Outcomes Survey | | | | | | x | | | | | | | | | |



Assessment of Level of Geographic “Granularity” for Alternative Data Sources

The Expected level of Geographic Details By Type/Source of Data

| <u>Data Type</u> | <u>Individual</u> | <u>Zip code /Track</u> | <u>County</u> | <u>State</u> | <u>National</u> |
|-----------------------|-------------------|------------------------|----------------------------|--------------|-----------------|
| Clinical | EHR | | | | |
| Administrative | CRISP | HSCRC, MHCC/ Claims | | Medicaid | |
| Survey | | Census MDP | BRFSS | YRBSS BHA | YRBSS |
| Vital Records | | | Birth, Death, Mortality | | |



Preliminary EHR Data Assessment:

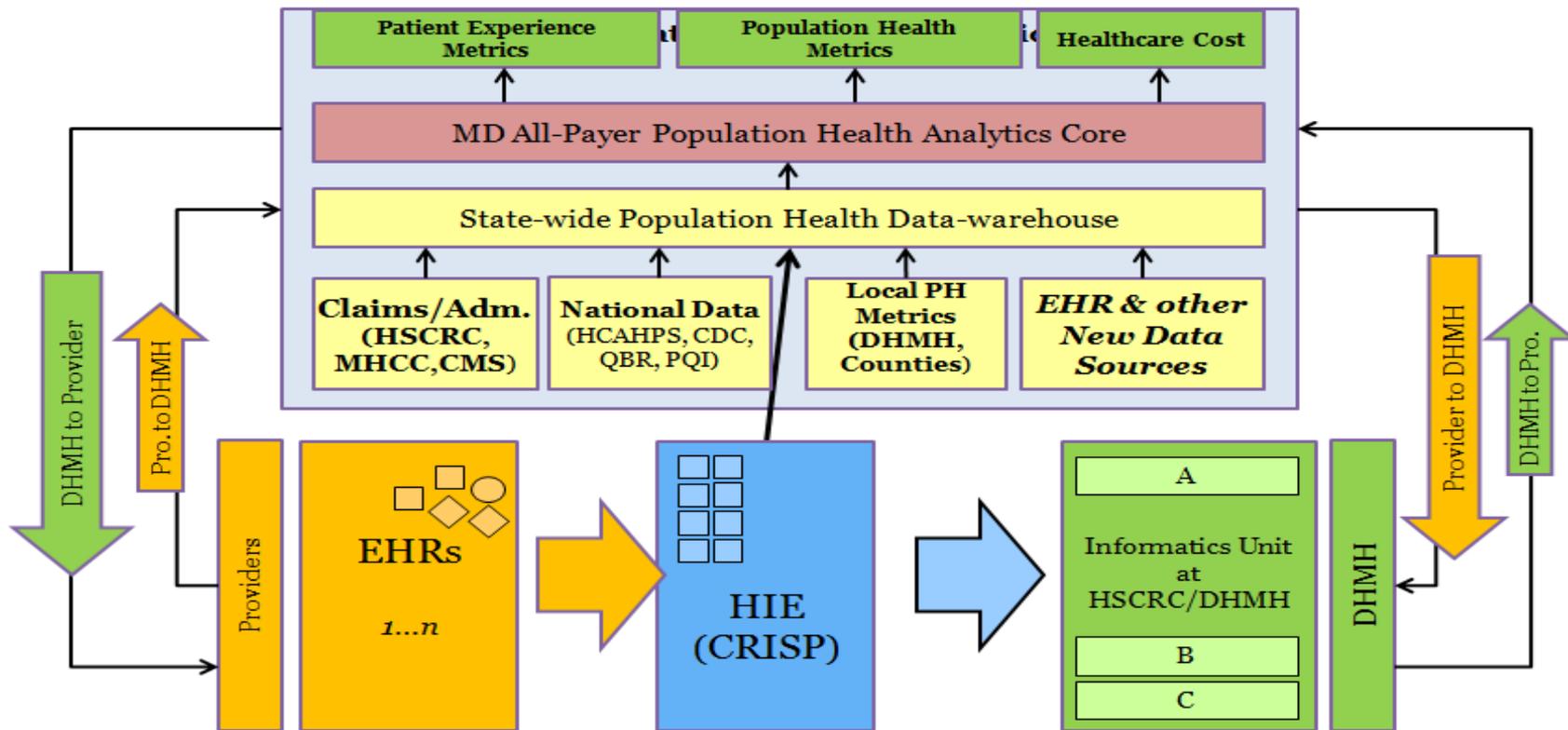
For the BMI and Falls Measures

| DHMH # | CMS ID # | Measure Title | QDM Data Types Needed | Data Available in EHR-CCDA Summary Record |
|------------|----------|---|-----------------------------------|---|
| Measure 3 | CMS69 | Preventive Care and Screening: BMI Screening and Follow-Up Plan | Diagnosis, Active | Yes |
| | | | Encounter, Performed | Likely |
| | | | Intervention, Order | No |
| | | | Medication, Order | More Analysis Needed |
| | | | Physical Exam, Performed | Yes |
| | | | Procedure, Order | No |
| | | | Attribute: Reason | Yes |
| Measure 12 | CMS139 | Falls: Screening for Future Fall Risk | Encounter, Performed | Likely |
| | | | Risk Category Assessment | Possible |
| | | | Risk Category Assessment not done | No |



Building on Maryland's Developing HIT Infrastructure A Future Vision

Conceptual model for the "Maryland Population Health Information Network" (M-PHIN) in Support of the "All Payer" and Other Community Level Initiatives



Sketch of a Possible Measurement Deployment Plan (**BMI as an Example**): Time Frame Dimensions, Possible Next Stage Metrics and New Data Sources

| | <u>Time Frame</u> | <u>Process and Output Measures</u> | | | <u>Outcomes Measures</u> | <u>Impact</u> | |
|----------------------------|---|--|--|---|---|--|---------------------|
| | | <u>Short Term (Current)</u> | <u>Near Term (6 months to 2 years)</u> | | <u>Mid to Long Term (3 to 5 years)</u> | <u>Longer Term (5 to 10 yrs)</u> | |
| | | <u>Geographic Level</u> | County | Individual/ Community | | EHR/ Individ/ Comm. | EHR/ Individ/ Comm. |
| | | <u>Data Sources</u> | BRFSS | E.H.R | CRISP | | |
| Cost of Care | TBD | | | | | | |
| Population Health | Body Mass Index (BMI) screening and follow-up for community/ population (NQF#0421 and CMS#69) | BMI score based on self-reported weight and height of a representative sample (12,369 people) for the state of Maryland | BMI score based on measured height a and weight in C-CDA | BMI screening is possible with C-CDA. intervention and are not available, which is necessary to calculate f/u visits. | Adults who are a healthy weight Children and adolescents who are obese | Obesity surveillance in a specific catchment area using E.H.R data | |
| Patient Experience of Care | TBD | | | | | | |



Feedback?

- Please provide your impressions.
- Questions to think about:
 - Given the current speed of health transformation in the State and the priorities under the All Payer Model, does the combination of process and outcome measures by domain seem appropriate?
 - Are there opportunities for improvement?
 - Sourcing of data
 - Major areas of omission when measuring community health
 - Additional partners
 - When can we expect improvements in the proposed measures?
 - How can we leverage E.H.R. and other timely data sources to capture population health?
 - Other comments?



Contact Information

To provide additional comments, please contact:

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