Maryland Department of Health Population Health Summit: Innovation Under the Maryland Model

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Hilton BWI Airport
1739 West Nursery Road
Linthicum Heights, MD 21090

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CEO
Lower Shore Clinic
Plenary Session: Population Health Innovations

The Lower Shore Clinic Integrated Model

Lower Shore Clinic is a safety net health and housing provider for the Lower Shore Community serving consumers in **Dorchester, Somerset, Wicomico, and Worcester Counties**. Our target population includes those with behavioral health issues and citizens impacted by the social determinants of health as a result of poverty, disability. & trauma.

Lower Shore Clinic is accredited by the Commission on Accreditation of Rehabilitation Facilities for **Outpatient Mental Health Treatment** (of which 1100 persons are served), **Assertive Community Treatment** (of which 130 persons are served), **Supported Employment** (of which 115 persons are served), **Psychosocial & Residential Rehabilitation Programs (**of which 400 persons are served) **Community Integration & Housing** (of which 200 persons are served**), Crisis Stabilization** (a 4 bed stabilization program), and **Health Home Services** (targeting 350 persons for Medicaid).

We provide **Primary Care** to 2000 persons in the community; 55% Medicaid; 40% Medicare; 5% Commercial/Private Pay. We own 60 properties mostly supervised/supportive housing having over 200 persons in the community living in our properties at any given time.

Our Clinic has integrated **Pharmacy services and LabCorp** for testing combined with Primary Care & Outpatient Behavioral Healthcare in one location.

MARYLAND COMPREHENSIVE PRIMARY CARE REDESIGN PROPOSAL Page 11

Example Scenario A: ***Improved Care Management and Integration with Behavioral Health Services***

For example, the PCH uses ***health information technology*** *to identify their* ***high need patients*** *and develop a comprehensive care plan. In doing so, the PCH identifies a patient with* ***severe depression, anxiety, and asthma*** *who has had* ***several hospital admissions and emergency department visits*** *over the past two years. The patient's provider develops a care plan and uses a* ***team-based approach*** *to care for the patient. The* ***new care plan*** *includes the patient's doctor having a conversation with the patient about their treatment and conducting asthma counseling while a* ***care manager*** *instructs the patient on proper inhaler use. The care manager contacts...****the behavioral health counselor or professional****.... to counsel the patient both through* ***in-person home visits*** *and/or telemedicine, as appropriate, to reduce anxiety and depressive symptoms. The PCH, in conjunction with the ...****integrated clinic psychiatrist,*** *prescribe and coordinate the medication used to treat both the* ***physical and behavioral health*** *needs of the patient to reduce the possibility of adverse drug interactions. A* ***pharmacist*** *is... integrated in the clinic... to consult with the PCH on both medication compliance and reconciliation. Care plan updates are incorporated* ***electronically and available to the team in real time****. The PCH uses* ***quantitative and qualitative data*** *to decide how else to best meet their patient's needs.*

https://hscrc.maryland.gov/documents/md-maphs/pr/Maryland-Comprehensive-Primary-Care-Model-Concept-Paper.pdf

Why is a Focus on Behavioral Health Important?

A small percentage of Medicaid-only enrollees consistently accounted for a large percentage of total Medicaid expenditures for Medicaid-only enrollees. As shown in figure 1, there was little variation across the years we examined. In each fiscal year from 2009 through 2011, • **the most expensive 1 percent of Medicaid-only enrollees in the nation accounted for about one-quarter of the expenditures for Medicaid-only enrollees;** • the most expensive 5 percent accounted for almost half of the expenditures; • the most expensive 25 percent accounted for more than threequarters of the expenditures; • in contrast, the least expensive 50 percent accounted for less than 8 percent of the expenditures;13 • about 12 percent of enrollees had no expenditures.

https://www.gao.gov/assets/680/670112.pdf

Table 1: Percentage of High-Expenditure and All Medicaid-Only Enrollees with Certain Conditions or Services, Fiscal Years 2009 through 2011

Fiscal year	Asthma	Diabetes	HIV/AIDS	Mental health conditions	Substance abuse	Delivery or childbirth	Long-term care residence	None of these conditions or services
Percentage of high-expenditure Medicaid-only enrollees								
2011	14.20	18.79	3.10	52.64	19.87	9.95	8.35	22.23
2010	14.42	18.50	3.27	51.13	19.21	10.45	8.15	22.65
2009	14.08	18.13	3.24	50.13	18.48	10.79	8.48	23.49
Percentage of all Medicaid-only enrollees								
2011	5.74	2.98	0.27	13.61	4.02	6.16	1.01	73.13
2010	5.88	2.86	0.29	12.72	3.72	6.26	0.86	73.88
2009	5.41	2.81	0.29	12.00	3.50	6.52	1.07	74.60

Source: GAO analysis of data from the Centers for Medicare & Medicaid Services. | GAO-15-460

Table 2: Percentage of High-Expenditure and All Medicaid-Only Enrollees with Certain Co-Occurring Conditions or Services in Fiscal Year 2011

	Percentage of high-expenditure Medicaid-only enrollees with this condition or service who also had . . .							
Condition or service	**Asthma**	**Diabetes**	**HIV/AIDS**	**Mental health conditions**	**Substance abuse**	**Delivery or childbirth**	**Long-term care residence**	**None of the other conditions or services**
Asthma	—	24.46	3.90	65.11	29.14	6.50	7.37	17.05
Diabetes	18.49	—	2.57	52.41	23.86	3.15	12.70	29.67
HIV/AIDS	17.89	15.57	—	48.13	39.43	2.12	7.52	28.95
Mental health conditions	17.57	18.71	2.83	—	26.73	4.02	11.85	42.94
Substance abuse	20.84	22.57	6.14	70.83	—	4.52	10.23	15.56
Delivery or childbirth	9.28	5.94	0.66	21.29	9.03	—	0.48	66.04
Long-term care residence	12.53	28.59	2.79	74.71	24.35	0.57	—	14.14
	Percentage of all Medicaid-only enrollees with this condition or service who also had . . .							
	Asthma	**Diabetes**	**HIV/AIDS**	**Mental health conditions**	**Substance abuse**	**Delivery or childbirth**	**Long-term care residence**	**None of the other conditions or services**
Asthma	—	6.08	0.67	28.28	9.04	5.69	1.32	61.37
Diabetes	11.69	—	1.10	32.06	14.13	3.82	6.28	51.95
HIV/AIDS	14.35	12.31	—	38.77	31.97	3.39	6.10	37.76
Mental health conditions	11.92	7.03	0.76	—	15.20	3.81	4.06	65.92
Substance abuse	12.90	10.48	2.12	51.41	—	5.14	3.83	37.35
Delivery or childbirth	5.30	1.85	0.15	8.41	3.36	—	0.10	84.47
Long-term care residence	7.48	18.58	1.61	54.75	15.27	0.64	—	35.24

Source: GAO analysis of data from the Centers for Medicare & Medicaid Services. | GAO-15-460

Behavioral Health Conditions and Health Care Expenditures of Adults Aged 18 to 64 Dually Eligible for Medicaid and Medicare

- Approximately 2.5 million adults aged 18 to 64 were eligible for both Medicaid and Medicare (dual eligible) during any given year from 2008 to 2011.
- Approximately **49 percent of dual eligible adults aged 18 to 64 were identified as having any mental illness or substance use disorder (behavioral health conditions)** within the past year, compared with 14 percent among adults who were not dually eligible.
- The average annual total health care expenditures for dual eligible adults aged 18 to 64 were $15,203, compared with $3,540 for adults who were not dually eligible.
- The average yearly health care expenditures for dual eligible adults aged 18 to 64 who received treatment for their behavioral health conditions were **$16,803; this was twice as high as average health care expenditures among adults who were not dually eligible and received treatment for behavioral health conditions ($7,860).**

- https://www.samhsa.gov/data/sites/default/files/SR180/sr180-dual-eligibles-2014.pdf

An Analysis of Selected Mental Health Conditions among Maryland Full-Benefit Dual-Eligible Beneficiaries

https://www.hilltopinstitute.org/wp-content/uploads/publications/AnalysisOfSelectedMentalHealthConditionsAmongMDDuals-Feb2016.pdf

Over one-third of Maryland's 87,728 full-benefit dual-eligible beneficiaries identified in the CY 2012 Medicare and Medicaid eligibility files had at least **one** Medicare claim with a mental health diagnosis.

Table 1. Maryland's Full-Benefit Dual-Eligible Beneficiaries with Mental Health Conditions, CY 2012

Category	Number	Percentage
Total	**33,289**	**38%**
Under 65	18,493	56%
Age 65 and Older	14,796	44%
Female	21,731	65%
Male	11,557	35%
Asian	1,062	3%
Black	11,416	34%
White	17,243	52%
Hispanic	645	2%
Native American/Pacific Islands/Alaskan	89	<1%
Unknown	2,833	9%

(cont.) As Table 2 shows, individuals in the study population were more likely to have **multiple mental health conditions** than to have a single condition. The prevalence of anxiety disorders and bipolar disorder were relatively similar across age groups. However, **over half of the beneficiaries under the age of 65 had more than one mental health condition**, while less than one-third of their older counterparts had more than one condition. Depression was the most prevalent mental health condition among beneficiaries aged 65 and older.

Table 2. Full-Benefit Dual-Eligible Beneficiaries with Mental Health Conditions, by Condition Type and Age Group, CY 2012

Condition	All Ages		Under 65		65 and Older	
	N	%	N	%	N	%
Anxiety Disorders	3,206	10%	1,624	9%	1,582	11%
Bipolar Disorder	4,147	12%	1,794	10%	2,353	16%
Depression	11,573	35%	5,386	29%	6,187	42%
Multiple Conditions	14,363	43%	9,689	52%	4,674	31%
Total	**33,289**	**100%**	**18,493**	**100%**	**14,796**	**100%**

https://www.hilltopinstitute.org/wp-content/uploads/publications/AnalysisOfSelectedMentalHealthConditionsAmongMDDuals-Feb2016.pdf

(cont) Table 6 shows, for those full-benefit dual-eligible beneficiaries with a single mental health condition, there was little or no difference in the percentage of individuals with an ED visit when compared by age group, regardless of the mental health condition. However, **beneficiaries under the age of 65 with multiple mental health conditions were twice as likely to have six or more ED visits** as their older counterparts.

Table 6. Emergency Department Visits by Full-Benefit Dual-Eligible Beneficiaries with a Mental Health Condition, by Condition and Age Group, CY 2012

ED Visits	Anxiety Disorders				Bipolar Disorder				Depression				Multiple Conditions			
	Under 65		65 and Older		Under 65		65 and Older		Under 65		65 and Older		Under 65		65 and Older	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
None	817	50%	810	51%	964	54%	1,177	50%	2,675	50%	3,435	56%	3,772	39%	2,198	47%
1	329	20%	324	20%	361	20%	499	21%	1,112	21%	1,243	20%	1,855	19%	953	20%
2-3	242	15%	265	17%	281	16%	444	19%	923	17%	994	16%	1,926	20%	936	20%
4-5	106	7%	99	6%	111	6%	153	7%	357	7%	296	5%	907	9%	309	7%
6+	130	8%	84	5%	77	4%	80	3%	319	6%	219	4%	1,229	13%	278	6%
Total	**1,624**	**100%**	**1,582**	**100%**	**1,794**	**100%**	**2,353**	**100%**	**5,386**	**100%**	**6,187**	**100%**	**9,689**	**100%**	**4,674**	**100%**

https://www.hilltopinstitute.org/wp-content/uploads/publications/AnalysisOfSelectedMentalHealthConditionsAmongMDDuals-Feb2016.pdf

(cont) Medicare and Medicaid expenditures for full-benefit dual eligibles with one or more mental health conditions totaled $1.6 billion in CY 2012 (Table 7). Individuals with a single diagnosis of bipolar disorder were—on average—far more costly per person than those with other conditions or multiple conditions. Additionally, individuals aged 65 and older incurred significantly higher costs, with the average annual per person cost for individuals aged 65 and older being **54 percent higher** than for individuals under age 65 ($61,320 compared to $39,780). **For bipolar disorder, the per-person cost was 51.3 percent higher for those aged 65 and older; for multiple conditions, the per-person cost was 76.1 percent higher.**

Table 7. Total Medicare and Medicaid Expenditures for Full-Benefit Dual-Eligible Beneficiaries with Mental Health Conditions, by Age Group and Condition, CY 2012

Condition	All Ages	Average Annual Cost Per Person	Under 65	Average Annual Cost Per Person	65 and Older	Average Annual Cost Per Person
Anxiety Disorder	$124,532,102	$38,843	$58,751,599	$36,177	$65,744,326	$41,558
Bipolar Disorder	$258,815,559	$62,410	$86,697,842	$48,327	$172,069,391	$73,128
Depression	$564,358,463	$48,765	$214,314,855	$39,791	$350,003,817	$56,571
Multiple Conditions	$695,397,149	$48,416	$375,881,430	$38,795	$319,476,924	$68,352
Total	**$1,642,979,963**	**$49,355**	**$735,645,726**	**$39,780**	**$907,294,457**	**$61,320**

In addition to their mental health diagnosis, **full-benefit dual-eligible beneficiaries are often diagnosed with a myriad of other medical and/or mental health conditions.** As the list of other diagnosed conditions for the study population is exhaustive, Table 12 provides only the top ten conditions, as defined by the total number of individuals assigned a given diagnosis. As shown, **hypertension, anemia, and diabetes** were the most prevalent diagnoses.

Table 12. Full-Benefit Dual-Eligible Beneficiaries with Mental Health Conditions, by Comorbidities, CY 2012

Co-Morbid Conditions	Number of Individuals				
	Total	Depression	Bipolar Disorder	Anxiety Disorder	Multiple Conditions
Hypertension	19,989	7,457	2,521	1,926	8,085
Anemia	12,985	4,611	1,880	1,116	5,378
Diabetes	11,459	4,317	1,484	974	4,684
Hyperlipidemia	11,129	4,096	1,119	1,204	4,710
Rheumatoid Arthritis/Osteoarthritis	10,987	3,882	901	1,127	5,077
Ischemic Heart Disease	10,137	3,719	1,193	1,012	4,213
Alzheimer's Disease and Related Disorders or Senile Dementia	9,554	3,515	1,878	596	3,565
Schizophrenia and Other Psychotic Disorders	7,421	1,696	1,128	385	4,212
Heart Failure	7,322	2,681	1,043	679	2,919
Chronic Kidney Disease	7,296	2,725	1,019	602	2,950

https://www.hilltopinstitute.org/wp-content/uploads/publications/AnalysisOfSelectedMentalHealthConditionsAmongMDDuals-Feb2016.pdf

Figure 1

Social Determinants of Health

Economic Stability	Neighborhood and Physical Environment	Education	Food	Community and Social Context	Health Care System
Employment	Housing	Literacy	Hunger	Social integration	Health coverage
Income	Transportation	Language	Access to healthy options	Support systems	Provider availability
Expenses	Safety	Early childhood education		Community engagement	Provider linguistic and cultural competency
Debt	Parks	Vocational training		Discrimination	Quality of care
Medical bills	Playgrounds	Higher education		Stress	
Support	Walkability				
	Zip code / geography				

Health Outcomes

Mortality, Morbidity, Life Expectancy, Health Care Expenditures, Health Status, Functional Limitations

KFF
HENRY J KAISER FAMILY FOUNDATION

https://www.kff.org/disparities-policy/issue-brief/beyond-health-care-the-role-of-social-determinants-in-promoting-health-and-health-equity/

Spectrum of Care & Social Determinants of Health

- We have a continuum of care with ACT and Crisis Beds at one spectrum and Outpatient Care and Case Management at the other which we use to treat the important conditions referred to as Social Determinants of Health (SDOH). They are defined by the U.S. Department of Health and Human Services Office of Disease Prevention and Health Promotion in Healthy People 2020 (www.healthypeople.gov) as **the conditions in the environment in which people are born, live, work, play, worship, and age that affect a wide range of health, functioning, and quality of life outcomes and risks.** https://health.maryland.gov/mchrc/Documents/MRHA%20social%20determinants%20white%20paper%20Dec%202016.pdf
- SDOH include **transportation; housing or place of residence; access and availability of services; educational attainment; employment; access to material goods; diet; discrimination by social grouping (e.g., race, gender, and class); and social and environmental stressors.** https://health.maryland.gov/mchrc/Documents/MRHA%20social%20determinants%20white%20paper%20Dec%202016.pdf
- I have added **Loneliness** specifically. This is one of the most significant health issues of our day. The world also recognizes this with examples such as Britain appointing its first Minister of Loneliness. A.....survey, conducted by the health insurer Cigna, found widespread loneliness, with nearly half of Americans reporting they feel alone, isolated, or left out at least some of the time. The nation's 75 million millennials (ages 23-37) and Generation Z adults (18-22) are lonelier than any other U.S. demographic and report being in worse health than older generations. "
- "**Loneliness has the same impact on mortality as smoking 15 cigarettes a day, making it even more dangerous than obesity**,"

- https://www.economist.com/international/2018/09/01/loneliness-is-a-serious-public-health-problem
- https://www.webmd.com/balance/news/20180504/loneliness-rivals-obesity-smoking-as-health-risk
- http://time.com/5248016/tracey-crouch-uk-loneliness-minister/

So How Do We Address Social Determinants of Health?

Transportation- We have a fleet of 60 cars and vans which transport members to their needs.

Housing- We have up to 24 hour supervised housing thru basic supportive drop by housing.

Homelessness- We have a mobile EBP ACT Team capable of providing care on the street and placing persons in a housing situation.

Access and Availability of Service- We have walk in availability for Primary and BH Care. No appointment required. We see regardless of pay initially.

Access to Quality Healthcare- We hire and train all staff in Primary and BH Care choosing persons whom are mission driven and matching character traits required for this difficult population. We have Lab Corp embedded as well as a Pharmacy. Immediate access to medications and lab results through our E H R is used by all services. Health Home Services focus on Population Health Goals for our members.

Educational Attainment- We work with members to obtain their GED and pursue college for free thru an SSI benefit or scholarship. Vocational education also pursued for careers.

Reconnection w/ Families- We work to rebuild bridges lost between families and members.

So How Do We Address Social Determinants of Health?

- *Employment*- We have an Evidenced Based Supported Employment Program to help practice, apply, and support persons in employment. This also increases income and reduces poverty.
- *Diet*- We focus on the most vulnerable having access to healthy foods thru our residential services program and commercial kitchen serving 125 breakfasts and 125 lunches M-F.
- *Access to Material Goods*- We use emergency funds through various resources as well as an average of over $100,000 a year in organization funding to help with anything from furniture, appliances, clothing, and other identified needs.
- *Discrimination by Social Grouping*- We use our Psychosocial Rehab Program to provide social support, reduce stigma of behavioral health in the community, and social events to provide friendships and relationships to occur.
- *Social / Environmental Stressors*- Our programs respond 24 / 7 thru an on call system with three separate individuals paid to respond to any issue at any time in the community.
- *Loneliness*- Just started a volunteer program for members of the community to spend time with members. We also use community services to check on persons, connect them to others, and develop natural supports. Also provide social events on weekends for members to join.

Does it Work?

Invest In Personal Touch For Highest-Use Patients

Peninsula Regional Provides Highest Utilizers With Hands-On Support

High-Touch Navigation Reduces Readmission Risk for Top 25 Patients

- Team of nurse and community health workers meet patient at time of discharge and review discharge instructions together
- Drive patient home to build personal connection, rapport
- Follow-up with patient at home to ensure adherence to discharge instructions for three months post-discharge

66%	$10K	$5-6K
Reduction in hospitalizations within two years	Average cost to readmit patient	Average cost to engage in CareWrap

Case in Brief: Peninsula Regional Medical Center

- 289-bed community hospital located in Salisbury, MD; subsidiary of Peninsula Regional Health System
- Collaborated with Lower Shore Clinic, a community-based outpatient clinic offering behavioral health and primary care services, to launch the CareWrap care management program targeting 20-30 chronically ill super utilizers

Yes!

RURAL HEALTH CHRC GRANTEES

MCHRC
Maryland Community Health Resources Commission

Lower Shore Clinic's CareWrap

- Targeted individuals with behavioral health needs who presented at PRMC ED in high volumes.
- Provided intensive case management services to 63 individuals over 15 months.
- CRISP calculated six-month pre vs six-month post analysis for the patients in the program and concluded that the **CareWrap program achieved $923,594 in cost avoidance** (grant was for $120,000).

A number of state and local elected officials celebrate the launch of the CareWrap program at the Lower Shore Clinic in Salisbury, June 2016.

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