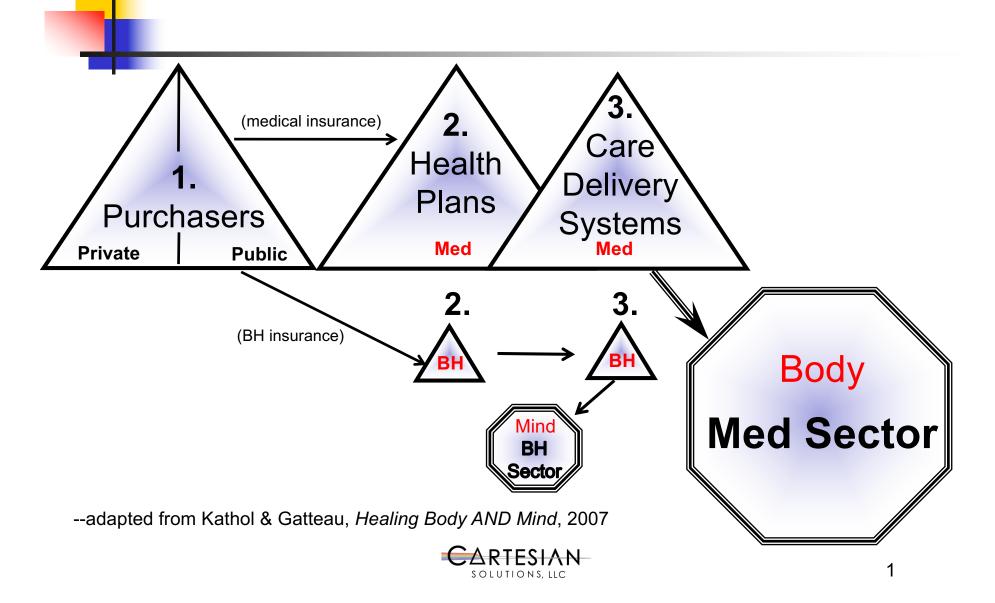
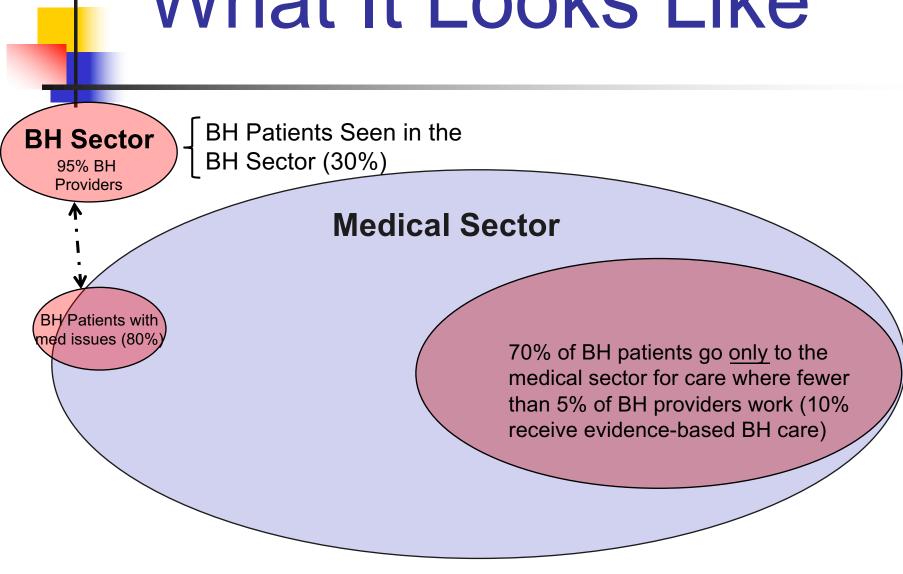
Current US Health System

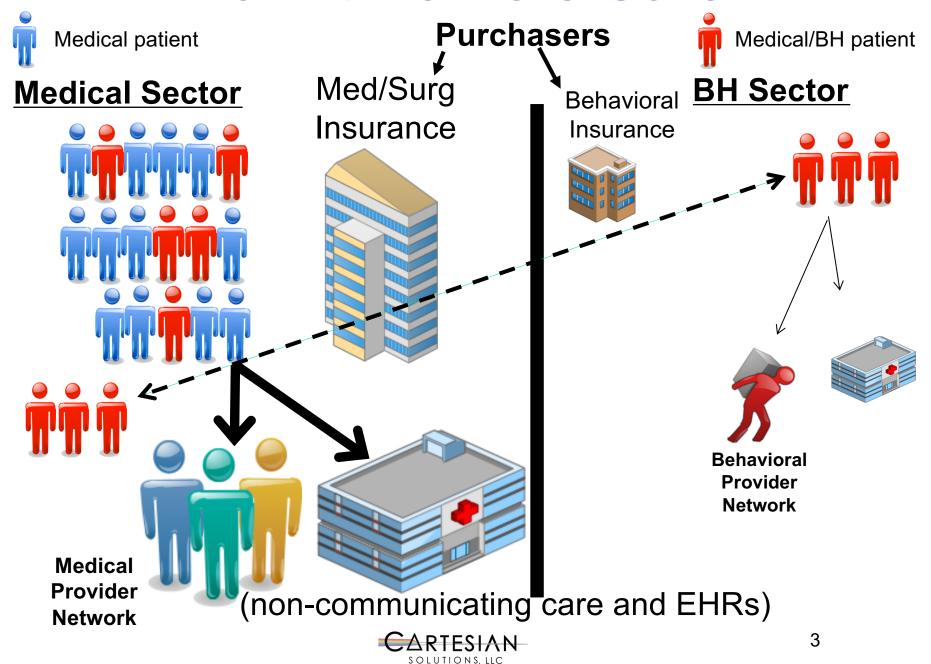


What It Looks Like





How It Delivers Care

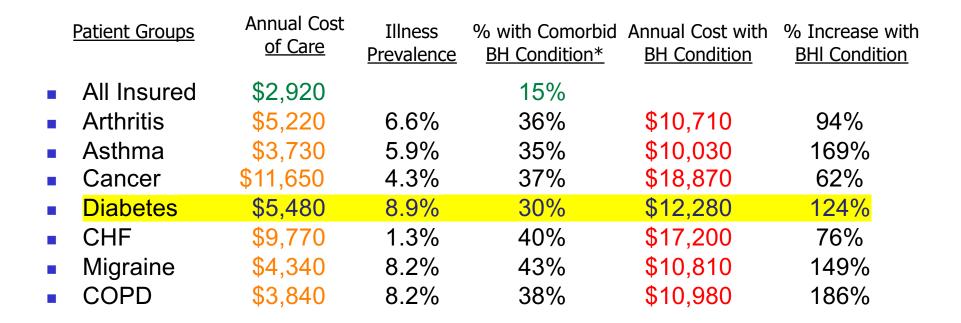


Integrated Care Cannot Be Delivered in the Current Divided Medical and BH System?

- BH providers are not paid in medical settings where 70% of BH patients only go for care
- Synchronous and coordinated medical and BH service delivery is logistically impossible
- Medical and BH providers rarely communicate, if even possible; nonconnected EHRs

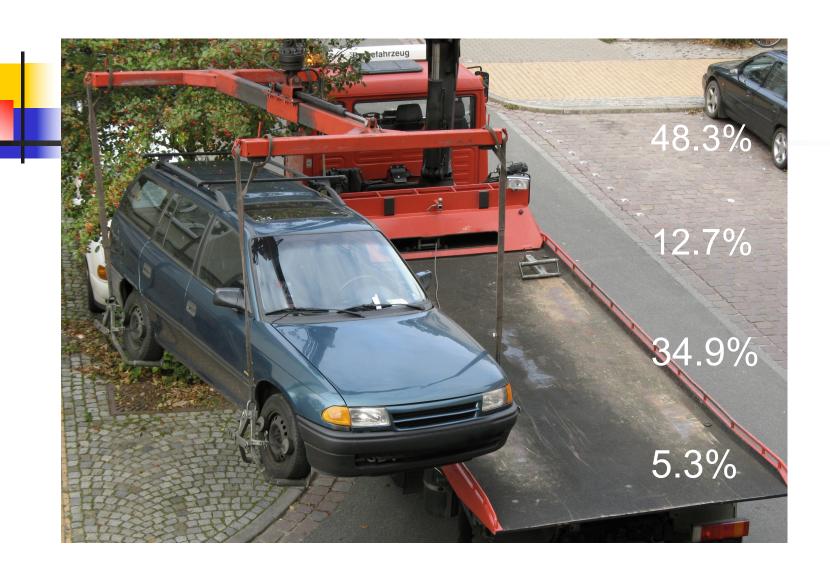


Effect of Medical and BH Segregation on Total Health Care Cost

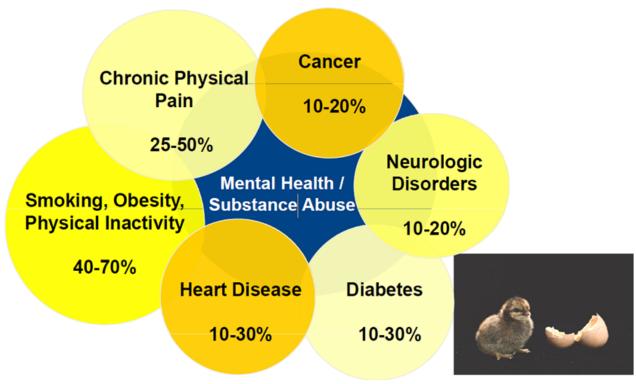


Cartesian/Milliman data, 2014





Prevalence of Co-morbidities



Unützer, Jürgen. Integrated Behavioral Health Care. Powerpoint Presentation. Seattle, Washington. May 2, 2011.







Findings from an Analysis of Comorbid Chronic Medical & Behavioral Conditions in Insured Populations

- Basis for analysis was detailed claim and membership files for Commercial, Medicare and Medicaid populations
- Commercial and Medicare populations were divided into 4 cohorts:
 - 1. No MH/SUD
 - 2. Non-SPMI MH
 - 3. SPMI
 - 4. SUD
- Total spending and per member per month (PMPM) costs were separated between Medical, Medical Rx, Behavioral, and Behavioral Rx

Findings from an Analysis of Comorbid Chronic Medical & Behavioral Conditions in Insured Populations (source: Potential Economic Impact of Integrated Medical-Behavioral Healthcare; Melek et.al.)

	•			
Impact of Behavioral Comorbidities, Commercial	l Population - 20	17 Total PN	IPM Costs	
Medical Condition	No MH/SUD	SPMI	Non-SPMI	SUD
Anemia	\$2,292	\$3,757	\$3,534	\$4,455
Arthritis	\$1,024	\$2,230	\$1,922	\$2,296
Asthma	\$817	\$2,047	\$1,886	\$2,307
Cancer	\$1,778	\$3,183	\$2,882	\$3,507
Chronic Kidney Disease	\$4,598	\$5,691	\$6,169	\$6,359
Congestive Heart Failure	\$1,713	\$3,149	\$2,479	\$3,660
Chronic Obstructive Pulmonary Disease	\$1,446	\$3,270	\$2,671	\$2,584
Chronic Pain	\$1,609	\$2,698	\$2,156	\$2,641
Back Pain	\$1,942	\$3,482	\$2,793	\$3,131
Headache	\$1,989	\$3,402	\$2,709	\$3,201
Diabetes (without complications)	\$1,004	\$2,036	\$1,566	\$2,117
Diabetes (with complications)	\$2,061	\$3,636	\$3,041	\$3,836
Endocrine/Metabolic Disorders	\$1,043	\$2,146	\$1,673	\$2,287
Epilepsy	\$1,553	\$3,649	\$3,054	\$3,688
Hypercholesterolemia (without complications)	\$855	\$1,800	\$1,354	\$1,812
Hypercholesterolemia (with complications)	\$1,811	\$3,447	\$2,633	\$3,137
Hypertension (without complications)	\$894	\$1,936	\$1,444	\$1,833
Hypertension (with complications)	\$1,993	\$3,657	\$2,844	\$3,339
Ischemic Heart Disease	\$1,852	\$3,621	\$2,824	\$2,837
Liver Disease	\$2,411	\$4,158	\$3,640	\$4,571
Pulmonary Heart Disease	\$3,204	\$5,249	\$4,801	\$4,133
Other Heart Disease	\$1,811	\$3,430	\$2,834	\$3,001
Osteoporosis	\$1,232	\$3,190	\$2,235	\$3,139
Stroke	\$2,028	\$3,674	\$3,038	\$3,026
No Medical Condition	\$247	\$653	\$562	\$817
Any Medical Condition	\$894	\$1,858	\$1,519	\$1,934
Total	\$426	\$1,155	\$1,109	\$1,419

Findings from an Analysis of Comorbid Chronic Medical & Behavioral Conditions in Insured Populations (source: Potential Economic Impact of Integrated Medical-Behavioral Healthcare; Melek et.al.)

Per Member Per Month (PMPM) Healthcare Costs by Population and Presence of Behavioral Conditions - 2017 Costs							
Population	Behavioral Health Diagnosis	Member Months	Medical	Behavioral	Medical Rx	Behavioral Rx	Total
Commercial	No MH/SUD	1,674,000,000	\$327	\$3	\$90	\$6	\$426
	Non-SPMI MH	246,000,000	\$765	\$33	\$246	\$65	\$1,109
	SPMI	85,000,000	\$700	\$119	\$176	\$159	\$1,154
	SUD	30,000,000	\$980	\$153	\$214	\$73	\$1,420
	Total	2,021,000,000	\$399	\$12	\$113	\$19	\$543
Medicare	No MH/SUD	597,000,000	\$736	\$4	N/A*	N/A*	\$740
	Non-SPMI MH	23,000,000	\$1,899	\$52	N/A*	N/A*	\$1,951
	SPMI	31,000,000	\$1,872	\$219	N/A*	N/A*	\$2,091
	SUD	11,000,000	\$1,943	\$242	N/A*	N/A*	\$2,185
	Total	656,000,000	\$839	\$16	N/A*	N/A*	\$855
Medicaid	No MH/SUD	577,000,000	\$391	\$6	\$90	\$7	\$494
	MH/SUD	144,000,000	\$957	\$380	\$243	\$128	\$1,708
	Total	721,000,000	\$504	\$81	\$121	\$31	\$737
Total	No MH/SUD	2,848,000,000	\$425	\$4	\$90	\$6	\$525
	MH/SUD	551,000,000	\$923	\$149	\$230	\$98	\$1,400
	Total	3,399,000,000 0.162106502	\$506	\$28	\$115	\$22	\$671

Findings from an Analysis of Comorbid Chronic Medical & Behavioral Conditions in Insured Populations (source: Potential Economic Impact of Integrated Medical-Behavioral Healthcare; Melek et.al.)

Behavioral Health							
Population		Medical	Behavioral	Medical Rx	Behavioral Rx	Total	
-	Diagnosis						
Commercial	No MH/SUD	\$546,567	\$5,723	\$151,010	\$9,210	\$712,510	
	Non-SPMI MH	\$188,311	\$8,054	\$60,595	\$16,020	\$272,980	
	SPMI	\$59,185	\$10,093	\$14,907	\$13,442	\$97,627	
	SUD	\$29,157	\$4,540	\$6,362	\$2,164	\$42,223	
	Total	\$805,447	\$24,795	\$228,992	\$38,959	\$1,098,193	
Medicare	No MH/SUD	\$439,163	\$2,145	N/A	N/A	\$441,308	
	Non-SPMI MH	\$42,859	\$1,165	N/A	N/A	\$44,024	
	SPMI	\$58,535	\$6,865	N/A	N/A	\$65,400	
	SUD	\$20,882	\$2,602	N/A	N/A	\$23,484	
	Total	\$550,751	\$10,455	N/A	N/A	\$561,206	
Medicaid	No MH/SUD	\$225,370	\$3,442	\$51,839	\$4,270	\$284,921	
	MH/SUD	\$138,067	\$54,820	\$35,093	\$18,422	\$246,402	
	Total	\$363,437	\$58,263	\$86,932	\$22,692	\$531,324	
Total	No MH/SUD	\$1,211,100	\$11,310	\$202,849	\$13,480	\$1,438,739	
	MH/SUD	\$508,535	\$82,203	\$113,075	\$48,171	\$751,984	
	Total	\$1,719,635	\$93,513	\$315,924	\$61,651	\$2,190,723	

Findings from an Analysis of Comorbid Chronic Medical & Behavioral Conditions in Insured Populations (source: Potential Economic Impact of Integrated Medical-Behavioral Healthcare; Melek et.al.)

Annual Value Opportunity - Commercial I	Population - Tot	al 2017 Dollars	(millions)	
Medical Condition	SPMI	Non-SPMI	SUD	Total
Anemia	\$2,702	\$8,399	\$1,817	\$11,541
Arthritis	\$12,379	\$33,542	\$6,059	\$47,133
Asthma	\$6,754	\$15,467	\$3,232	\$23,272
Cancer	\$3,577	\$14,551	\$2,048	\$18,671
Chronic Kidney Disease	\$582	\$3,053	\$440	\$3,638
Congestive Heart Failure	\$3,322	\$9,055	\$2,023	\$12,622
Chronic Obstructive Pulmonary Disease	\$2,606	\$6,400	\$2,168	\$10,088
Chronic Pain	\$1,100	\$3,292	\$671	\$4,251
Back Pain	\$2,340	\$5,170	\$1,649	\$7,963
Headache	\$203	\$376	\$101	\$587
Diabetes (without complications)	\$3,158	\$8,907	\$1,135	\$11,774
Diabetes (with complications)	\$3,143	\$9,540	\$1,402	\$12,565
Endocrine/Metabolic Disorders	\$21,976	\$53,573	\$10,404	\$76,555
Epilepsy	\$2,080	\$1,954	\$574	\$4,167
Hypercholesterolemia (without	\$6,480	\$18,523	\$2,927	\$24,918
Hypercholesterolemia (with complication	s) \$1,961	\$5,667	\$1,154	\$7,806
Hypertension (without complications)	\$7,664	\$22,296	\$4,332	\$30,599
Hypertension (with complications)	\$2,516	\$7,148	\$1,483	\$9,975
Ischemic Heart Disease	\$1,432	\$4,513	\$844	\$6,175
Liver Disease	\$786	\$2,152	\$863	\$3,245
Pulmonary Heart Disease	\$396	\$1,165	\$115	\$1,561
Other Heart Disease	\$2,489	\$6,649	\$1,214	\$9,424
Osteoporosis	\$617	\$1,564	\$240	\$2,197
Stroke	\$589	\$1,321	\$285	\$2,016
No Medical Condition	\$20,036	\$33,205	\$7,821	\$54,994
Any Medical Condition	\$33,913	\$87,871	\$16,666	\$124,251
Total	\$53,948	\$121,076	\$24,487	\$179,245

What IMBH Programs have worked?

- Multifaceted Diabetes and Depression Program (MDDP) medical savings of \$39 PMPM observed over 18 months
- Pathways program for diabetes & depression \$46 PMPM saved, or about 5% over 2 years
- IMPACT program for depression among the elderly \$70
 PMPM saved over 4-year period, or about 10%
- Missouri CMHC health homes in 2012 independent living increased by 33%, vocational activity increased by 44%, overall healthcare costs decreased by 8%
- Observed savings of between 9% and 16% of value opportunity

Findings from an Analysis of Comorbid Chronic Medical & Behavioral Conditions in Insured Populations (source: Potential Economic Impact of Integrated Medical-Behavioral Healthcare; Melek et.al.)

Projected Healthcare Cost Savings Through Effective Integration (National, 2017)				
Payer Type	Annual Cost Impact of Integration			
Commercial	\$19.3-\$38.6 Billion			
Medicare	\$6.0-\$12.0 Billion			
Medicaid	\$12.3-\$17.2 Billion			
Total	\$37.6-\$67.8 Billion			



- Fee-for-Service will not work, the incentives just are not aligned for Triple Aim Objectives
- Primary Care practices do not have the funds to pursue integrated care under the current fee-forservice model
- There is an administrative burden to just adding more fee-for-service codes
- New payment models must incorporate Triple Aim objectives
- Good data is a requirement financial and clinical
- Buy-in from all parties is necessary



Payment Model Reform Ideas

- Primary Care Capitation, including primary physical and behavioral healthcare services, and also care coordination/management
- Cap rates must be population specific and risk adjusted
- Options in Cap Rate for the addition of different levels of behavioral service responsibilities
- Risk Sharing or Gain Sharing of non-primary care services
- Requires setting risk adjusted targets PMPM for different member populations (commercial, Medicaid, Medicare) for IP facility, OP facility, other physician specialists, Rx and all other services.

Proposed Colorado CMMI Cost Savings & ROI – Projections from Application

Estimated 3rd year and 4th year Return on Investment From Model Intervention							
Assumed Grant Amount	\$86,928,656			Sav	ings	ROI-Gross	Restated ROI
Actual Grant Amount	\$65,000,000	•	Year 3	\$	126,587,853	1.46	1.95
			Year 4	\$	211,609,607	2.43	3.26

Milliman

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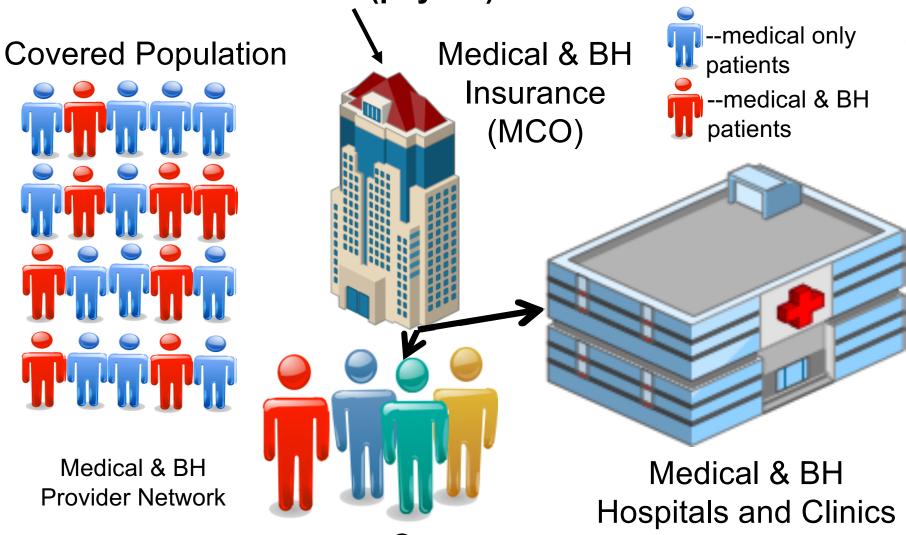
- Healthcare utilization and cost <u>reductions</u>: Inpatient Physical, Inpatient Behavioral, Emergency Services, Ambulance, SNF
- Healthcare utilization and cost <u>increases</u>: primary and specialty medical professional, behavioral professional, diagnostic testing, imaging (noncomplex), labs, prescription drugs – medical and behavioral
- Projected Savings: \$17.3M (yr. 1), \$42.2M (yr. 2), \$67.1M (yr. 3) for a total of \$126.6M
- Calculated Savings: \$20.7M (yr. 1), -\$10.0M (yr. 2), \$115.2M (yr. 3) for a total of \$125.9M

Integrated Care Delivery

--The Future----Vendors --Organizations -Regulators **Fund Providers** Distributors Purchasers Med/BH Med/BH Public **Private Body/Mind Med Home**

A Simple Integrated System

DOH/DHS (payors)



Value-Added Integrated Medical & BH Services to Consider

- Medical Setting
 - Inpatient, e.g., proactive psychiatric consultation, delirium prevention and treatment, routine "sitter" review, complexity intervention units (CIUs)
 - Outpatient, e.g., TEAMcare/Collaborative Care, medication assisted treatment (MAT) in substance use disorder clinics, complexity clinics, long term care facilities & nursing home settings supported by medical and behavioral health (BH) coverage, targeted BH interventions in medical setting, medical and BH prevention
 - Emergency room (ER), e.g., medical and BH services co-evaluate patients in "medical" ERs (sunset psych ERs)
 - Across Treatment Platform, e.g., value-based integrated case management (VB-ICM) for complex adults and children
- Specialty BH Setting, e.g., specialty sector services, as with other medical specialties



Evidence for Value-Based Integrated Care with ROI

Integrated Model	Туре	ROI
Value-Based Integrated Care Management	CM	9:1
Collaborative Care/TeamCare	OP	6:1
MAT for AUD	OP	2-39:1
MAT for OUD	OP	4-18:1
SBIRT	ER	42:1
SBIRT	OP	10:1
Proactive Psych Consultation	IP	2:1
BH Sitter Review	IP	6:1
Delirium Prevention	IP	48:1

- Med Psych Unit/CIU: ~\$2M savings for 350 admissions (<ALOS)
- BH assessments in medical ER: 25% lower cost (fewer admissions, > ER bed availability)

CS LLC/Milliman Assistance

- Assesses the organization's current clinical and cost situation (focal or broad-based)
- Works with the organizations to create an integrated care implementation plan
- Assists the organization during implementation and in the measurement of health and cost impact



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