Financing MH Care through PH Benefits:

Unifying the Health System

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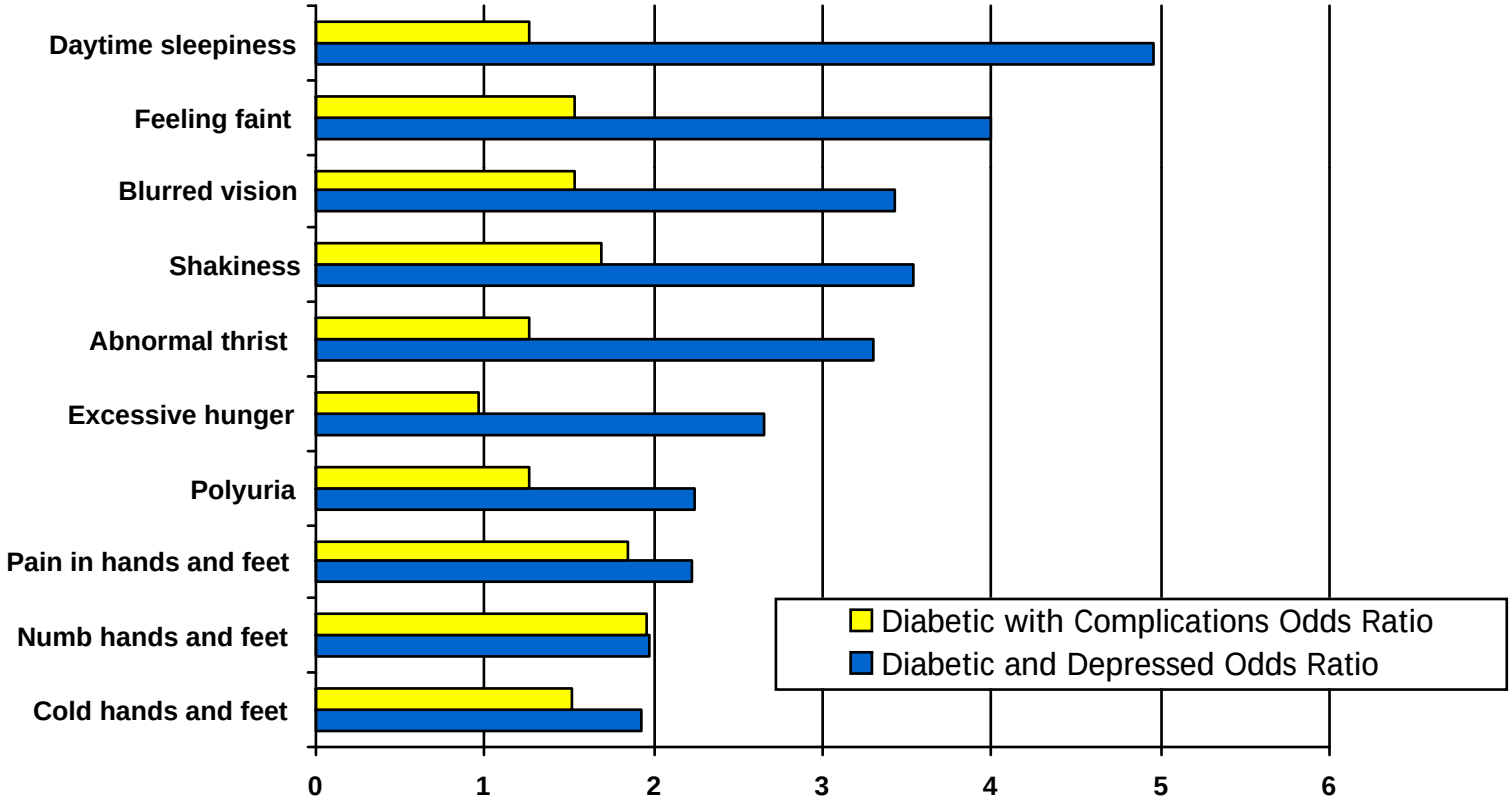
Physical Health & MH/SUD

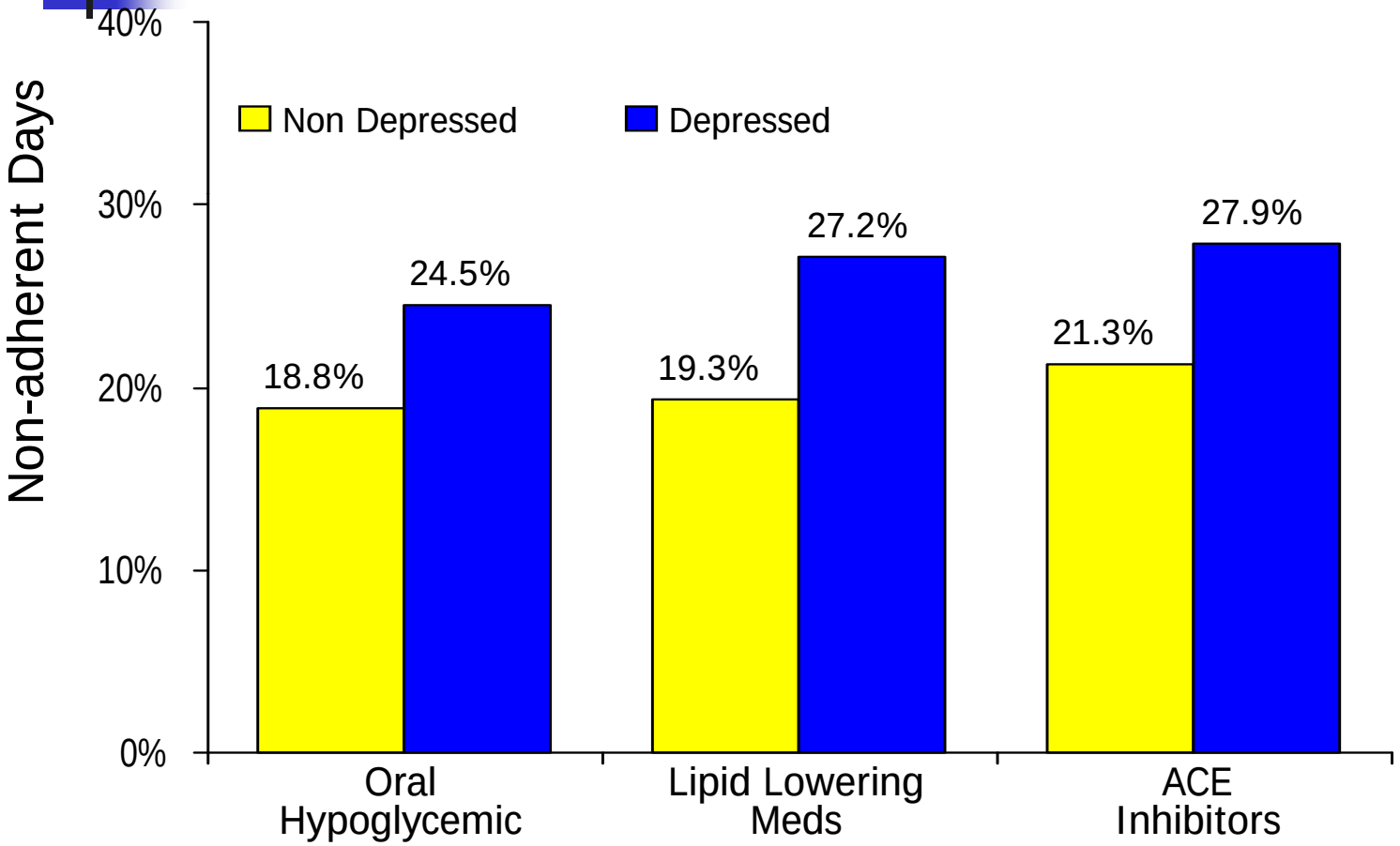
Illness Interaction

Relationship of Depression to Diabetic Symptoms



Ludman et al, Gen Hosp Psychiat 26:430-436, 2004.

Medication Adherence in Patients with Diabetes



Lin et al 2004

Depression Effect on Self-Care in Diabetic Patients

Self-care activities (past 7 days)	No Major depression	Major depression	Odds ratio	95% CI
Healthy eating ≤1 time/week	8.8%	17.2%	2.1	1.59-2.72
5 servings of fruit/vegetables ≤1 time/week	21.1%	32.4%	1.8	1.43-2.17
High fat foods ≥6 times/week	11.9%	15.5%	1.3	1.01-1.73
Physical activity (>30min) ≤1 time/week	27.3	44.1	1.9	1.53-2.27
Specific Exercise Session ≤1 time/week	45.8	62.1	1.7	1.43-2.12
Smoking: Yes	7.7	16.1	1.9	1.42-2.51

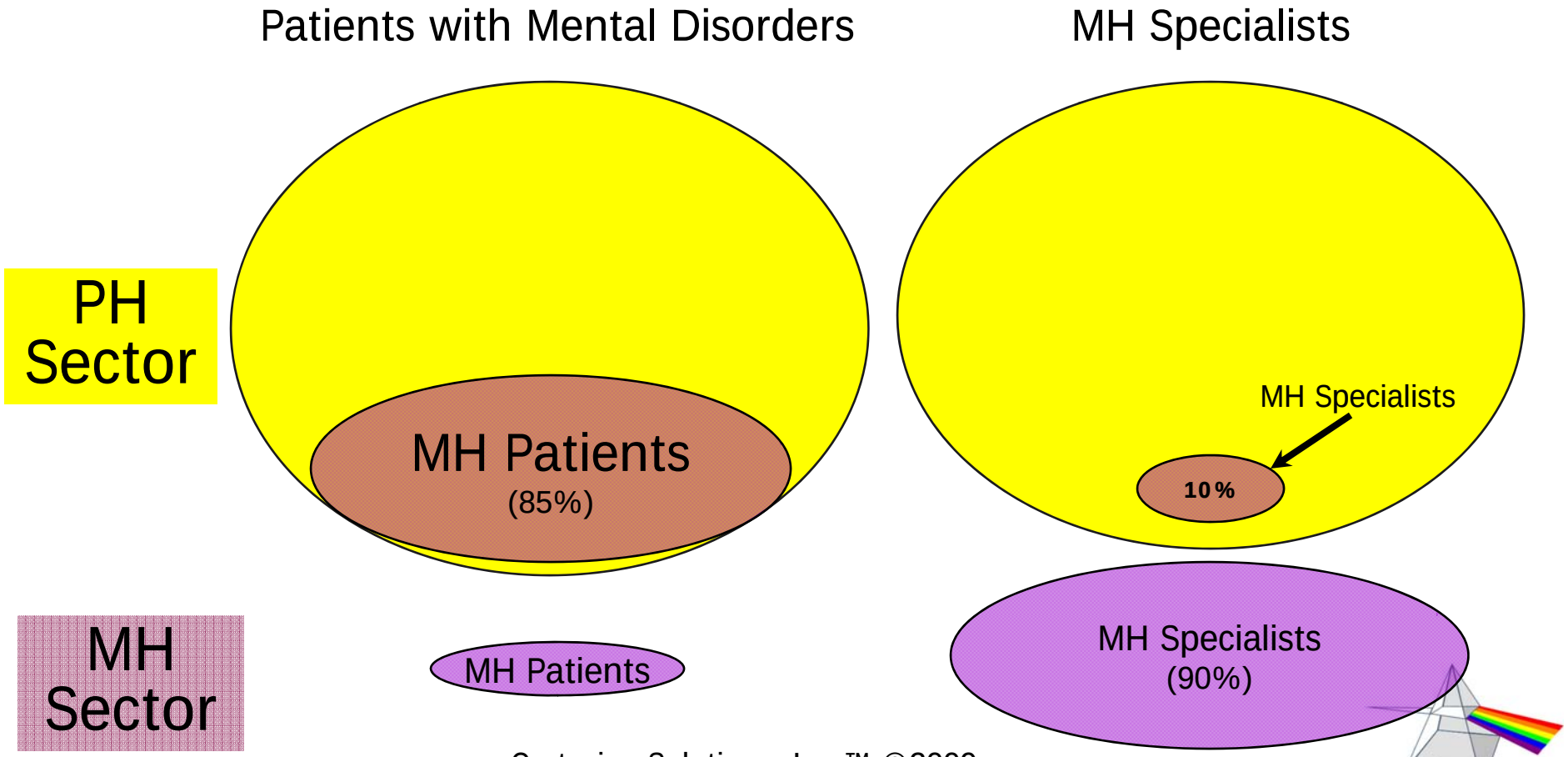
--courtesy of Katon, 2004

Healthcare Utilization in General Medical Patients

	DM, CV, HT, Back Only (N = 1,956)	Depressed Only (N = 312)	Depressed & Ill (N = 100)
Health Care Cost	$3,853	$3,417	$7,407
Sick Days	6.64	8.79	13.48
Per Capita Health & Disability Costs	$4,646	$4,675	$7,906

--Druss et al, Am J Psych 157:1274-1278, 2000

MH Specialist-MH Patient Mismatch



Practitioners' Perception of Patients

PH Sector Responsibility

MH Sector Responsibility

PH Clinician

Body

Mind

MH Clinician

Body

Mind

Health Complexity

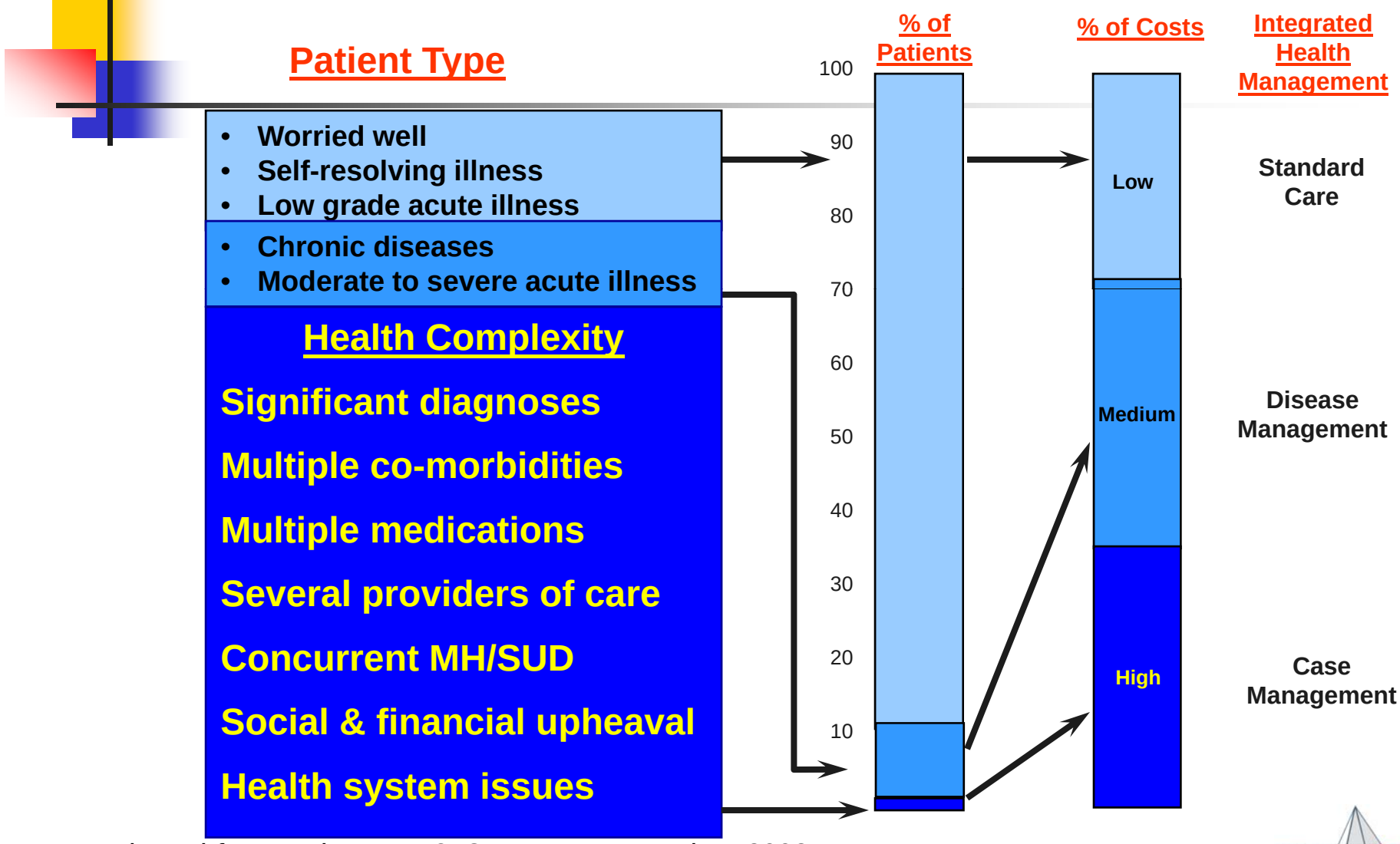
(interaction of biopsychosocial and health system factors that create barriers to clinical and financial improvement)

vs.□

Illness Acuity/Severity

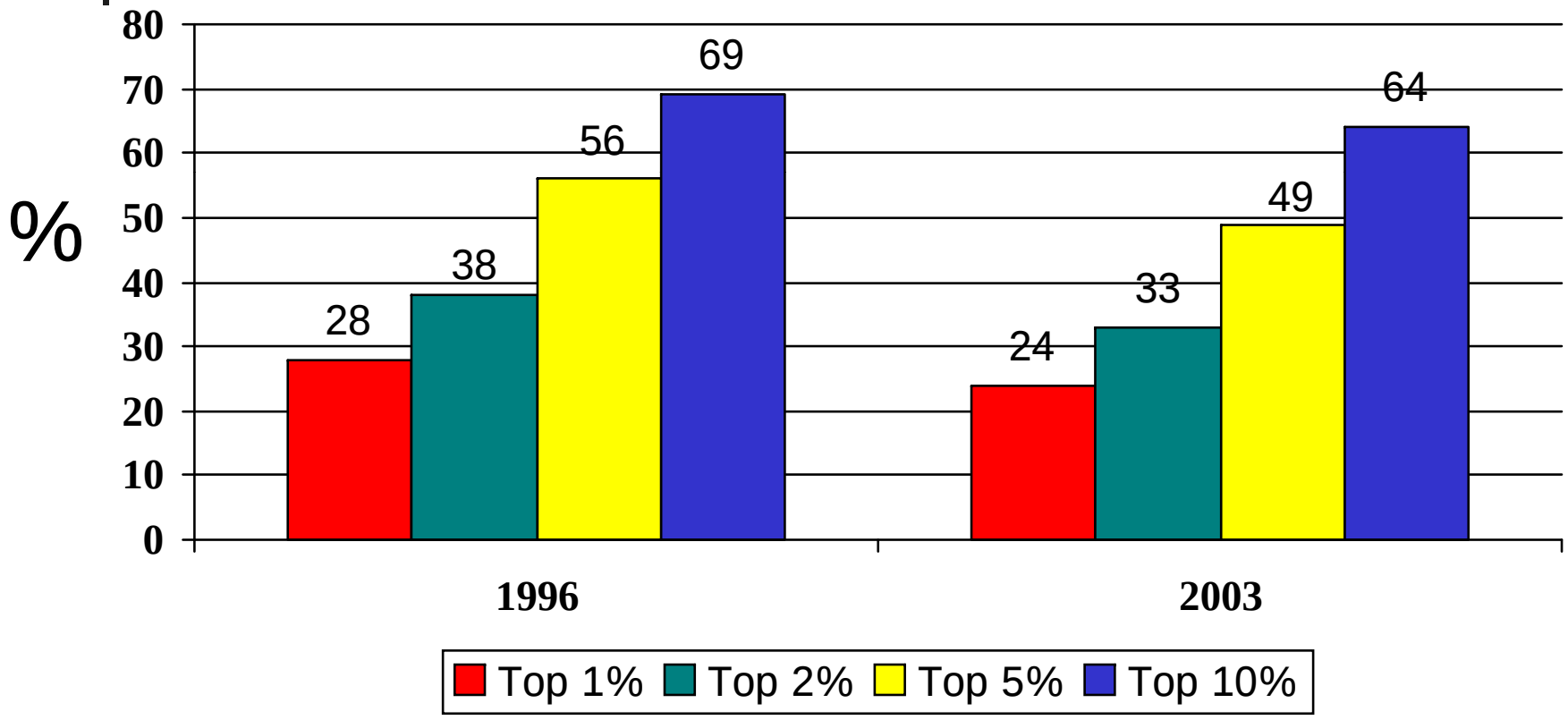
(intensity of general medical and/or psychiatric symptoms and/or direct clinical service needs; component of health complexity)

Patients with Health Complexity Require Physical Health (PH) and MH/SUD Care Integration for Outcome Change



---adapted from Meier DE, BCBS Assoc Presentation, 2002

Percent of Health Care Costs Used by Patients with Health Complex



Zuvekas & Cohen, Health Affairs 26: 249-257, 2007

INTERMED-Complexity Assessment Grid

(IM-CAG)

	Historical	Current	Vulnerability
Biological	Chronicity	Severity	Complications & Life Threat
	Dx Dilemma	Dx/Rx Challenge	
Psychological	Coping	Resistance	Mental Health Threat
	Dysfunction	Symptoms	
Social	Job & Leisure	Residential Stability	Social Vulnerability
	Dysfunction	Network	
Health System	Access	Availability	Impediments
	Experiences	Coordination	

Cost Shift for MH/SUD Patients

--Behavioral to Medical--

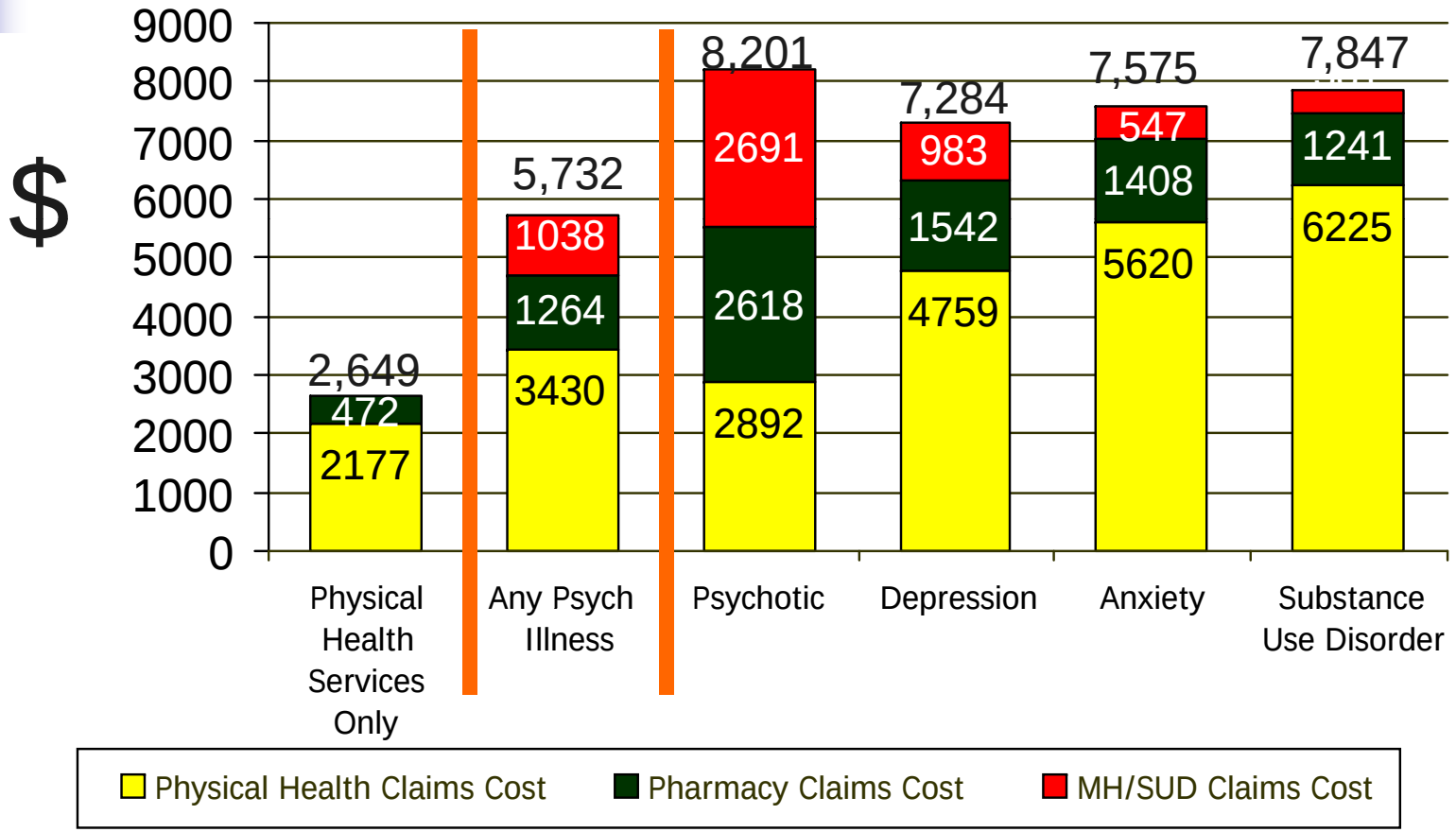
Traditional MH/SUD Management* Shifts MH/SUD Costs to Physical Health (PH) Benefits

(Result: higher total healthcare cost; more absenteeism)

Introduced MH/SUD Management Practices	MH/SUD Service Users (Test Group)	PH Only Service Users (Control Group)
MH/SUD Expenditures	Decreased 38% ($1,912 to $1,192	--
PH Expenditures	Increased 36.6% ($2,325 to $3,175)	Increased 1.4% ($1,297 to $1,315)
Net Total Cost of Care	Increased $130/employee ($4,241 to $4,369)	Increased $18/employee ($1,297 to $1,315)
Days Absent from Work	Increased 21.9% (6.4 to 8.7)	Decreased 10.8% (4.0 to 3.6)

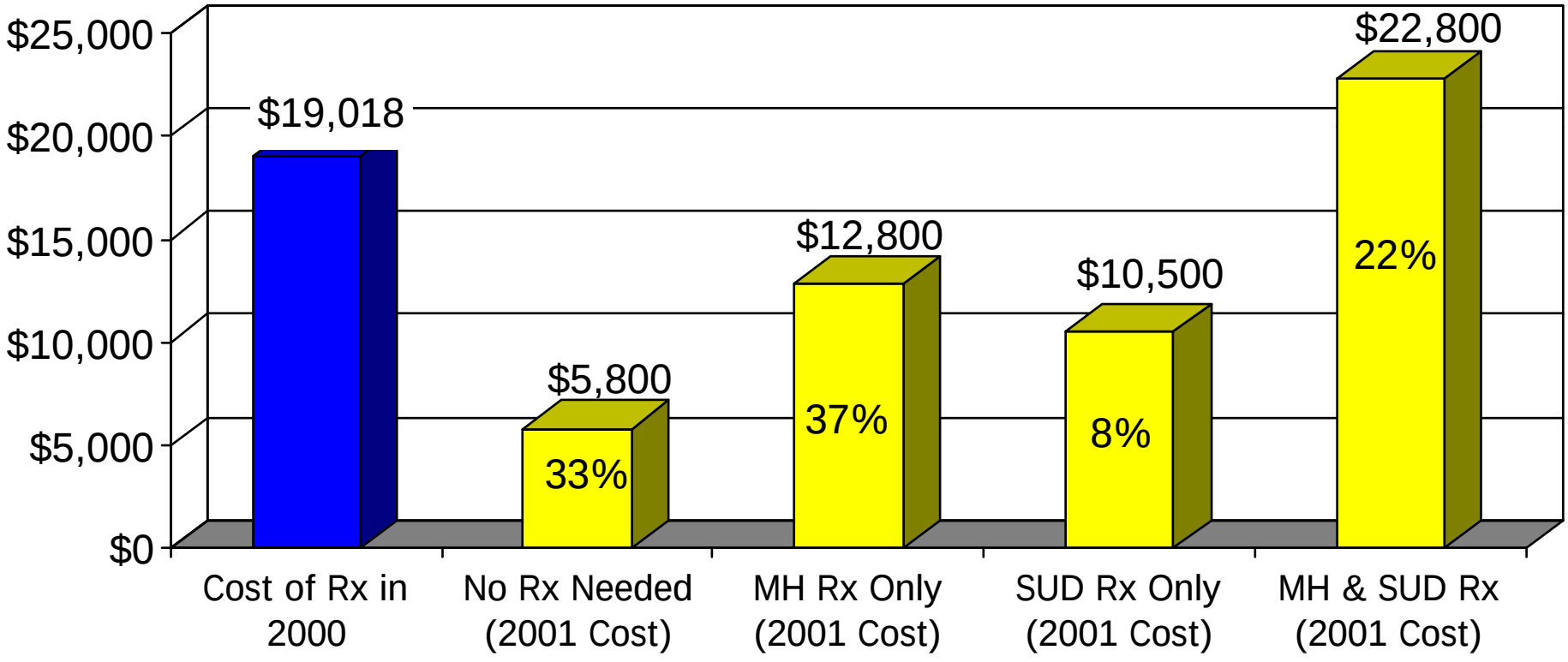
Rosenheck et al Health Aff 18:193-203, 1999 *managed behavioral health organizations (MBHOs)

Claims Expenditures for 6,500 Medicaid Patients With and Without MH/SUD Service Use



– Thomas et al, Psych Serv 56:1394-1401, 2005

Effect of Improved Health on Total Health Care Cost in Year 2 for Patients with Documented Dual Diagnoses in Preceding Year



Kathol et al, *JGIM* 20; 160-167, 2005

System Costs

of□

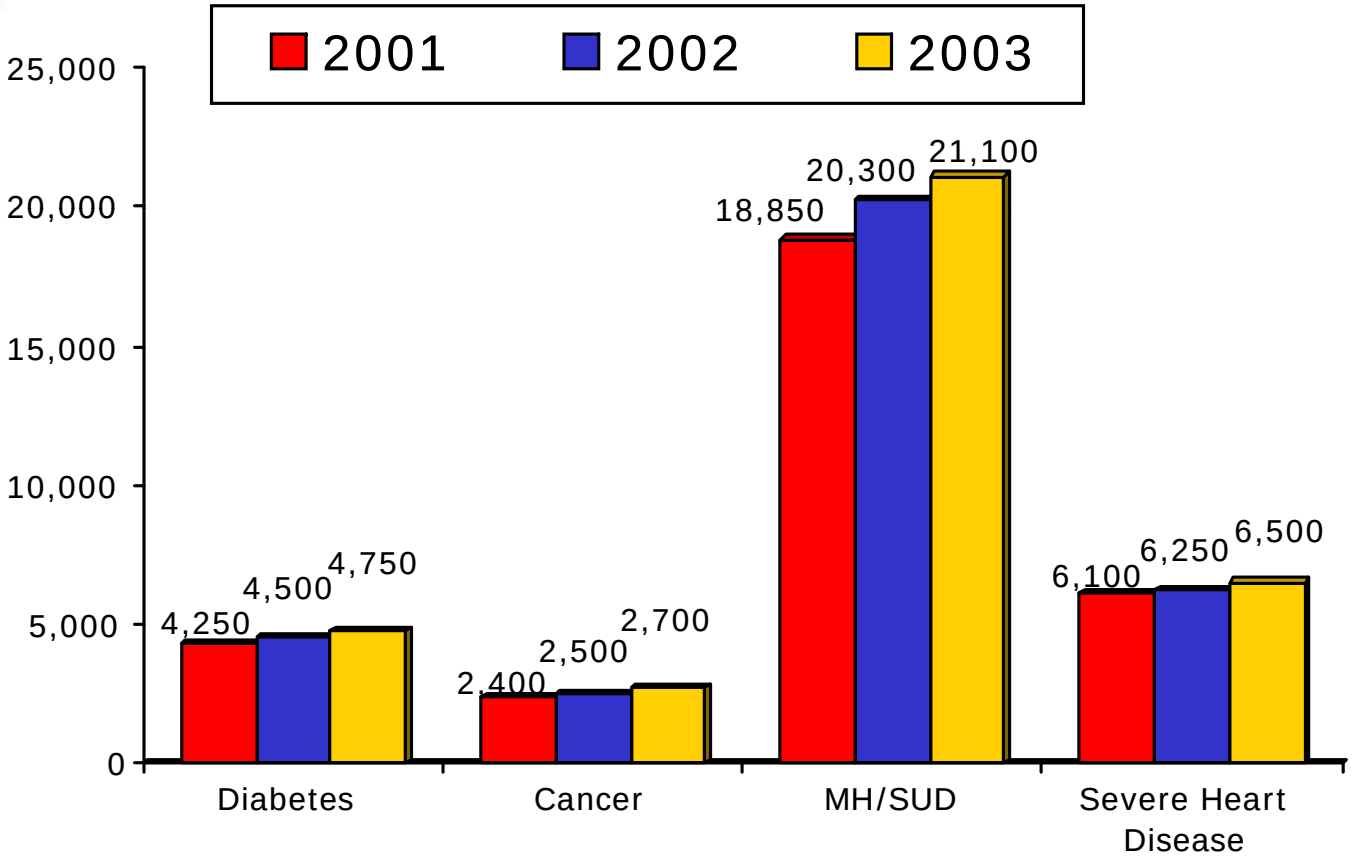
Mental Illness in the Medical Setting

Contribution of MH/SUDs to Cost Excess in 100,000 Patients with Chronic Medical Conditions

	Annual Cost of Care without MH/SUD	Illness Prevalence	% Comorbid MH/SUD	% Cost Increase in those with MH/SUD	Annual Excess Cost in those with MH/SUD
Arthritis	$5,220	6.6%	36%	94%	$11.7M
Asthma	$3,730	5.9%	35%	169%	$13.0M
Cancer	$11,650	4.3%	37%	62%	$11.5M
Diabetes	$5,480	8.9%	30%	124%	$18.1M
CHF	$9,770	1.3%	40%	76%	$3.9M
Migraine	$4,340	8.2%	43%	149%	$22.8M
COPD	$3,840	8.2%	38%	186%	$22.3M

Cartesian Solutions, Inc.™--consolidated data

Comparative Annual Number of Employees with High Cost Conditions



Cartesian client, 2004

Mental Health

Treatment Location

MH/SUD Stays in Community Hospitals

	Community Hospitals		Specialty Psychiatric Hospitals
	All Adult Stays	Adult MH/SUD Stays* (% of All Adult)	
Number of Hospitals	4,919	4,821 (98%)	476
Number of inpatient stays in millions	32M	8M (24%)	0.8M
Number of inpatient days in millions	155M	44M (28%)	27M
Length of stay (days)	4.8	5.8	33

AHRQ, HCUP Fact Book #10, 2007

*90% of MH/SUD stays; 62% of MH/SUD days (majority of acute psychiatric [non-SPMI] need)

Psychiatric Comorbidity in Medical Admissions (12.3%)

No Psychiatric Illness	Comorbid Psychiatric Illness
N = 83,327	N = 8,116
LOS—5.15 days	LOS--7 days

(Cartesian client: 2007 University Hospital—41% of admissions; 1.05 day difference)

--claims data from 7 general hospitals (NY, GA, IN, MO, MI, CA, VA)

General Medical Admissions with & without MH/SUD Comorbidity

	Hospital I	Hospital II	Total
Admissions--MH/SUD	7025	825	7850
LOS	6.4	5.1	6.3
% Admissions	21	22	22
Annual Savings Opportunity with better MH/SUD Care	$5.25 million (reduced loss)	$750,000 (increased income)	$6 million (net)
Admissions--No MH/SUD	26125	2850	28975
LOS	5.6	4.5	4.6
Admissions--All Cases	33150	3675	36826
LOS	5.8	4.6	5.7

Consolidated Cartesian data, 2008

Length of Stay

General Medical Admissions with MH/SUD Comorbidity

	Hospital I LOS = 5.8 Admissions = 33,200	**Hospital II** LOS = 4.56 Admissions = 3,700	**Total** LOS = 5.68 Admissions = 36,900
1 to 6 days			
Cases	5025	600	
LOS	2.9	2.4	
7 to 9 days			
Cases	800	75	875
LOS	7.8	6.8	
10 to 13 days			
Cases	525	75	600
LOS	11.7	10.9	
> 14 days			
Cases	675	75	750
LOS	27.3	20.4	
Any Admission Length			
Cases (Patient Opportunities)	7025	825	(2,225)
LOS	6.4	5.1	

Consolidated Cartesian data, 2008

Constant Observation

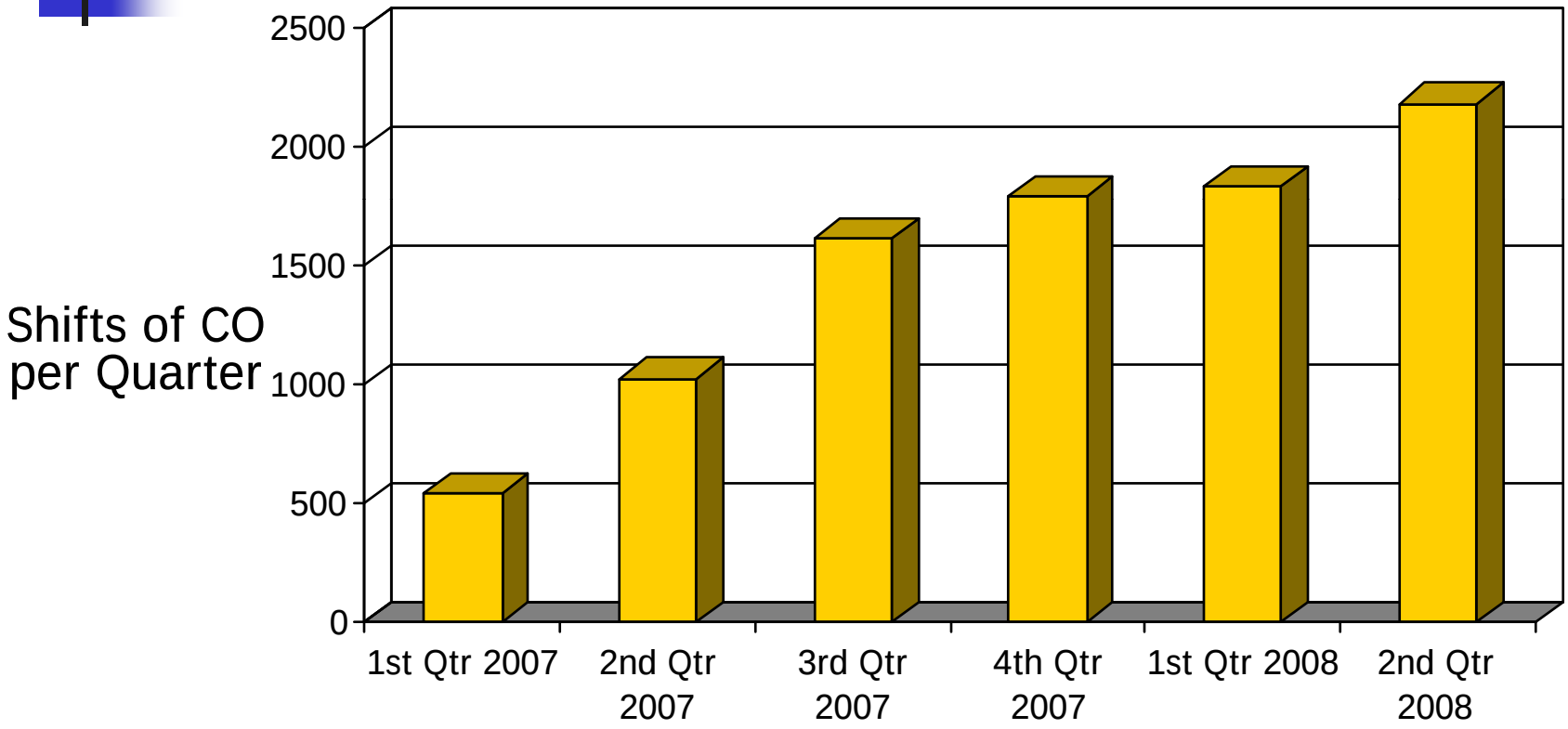
(one-on-one nursing for unstable patients)

- Needed in ~0.6% of admissions
- Cost $3,415/patient for an average observation of 14 days[1]
- $512,000/year for 600 bed hospital[1]
- Cost range: $4,000 to $565,000 (1997$)[2]
- Hospitals cannot charge extra for services[2]

(Cartesian client: 2007 University Hospital--$1M @ $20/nurse-hour, $2.7M @ $55/nurse-hr, not counting ICU use)

1. Blumenfield et al, Psychosomatics 41:289-293, 2000
2. Worley et al, Psychosomatics 41:301-310, 2000

Constant Observation (CO) Experience



Estimated annual cost 2008 = $1.2 M
(~30,000 admissions)

Cartesian Solutions client, 2008

Mental Health as a part of Physical Health

Integration Era

- Physical health services in the MH/SUD setting; MH/SUD services in the physical health setting
- Common and consistent MH/SUD & physical health reimbursement procedures from one payment pool, e.g. same codes, etc.
- Single health record and documentation system
- Communication among and co-location of unified network of MH/SUD and PH specialists
- Co-management as the means to deal with complex clinical problems

Critical Components for Successful Integration

- The development of personal/professional *relationships* between participating PH and MH/SUD leaders and staff
- Adequate training in the value of and how to provide integrated services, especially for complex patients – in PH for MH/SUD professionals and in MH/SUDs for PH professionals
- Consistent longitudinal program champions (preferably from both PH and MH/SUD disciplines)
- PH and MH/SUD staff co-location with active and sustained interaction
- Consolidated PH and MH/SUD clinical records (preferably electronic)
- Professional staff in PH and MH/SUD respected each other

Butler et al, AHRQ Publication 09-E003, 2008

Barriers to Patient and/or Practitioner Participation

- Integration sponsored by a health plan (rather than with involvement of practitioners)
- Focus on a single mental health condition
- Focus on a subset of patients in a practitioner's clinical practice, e.g. Medicaid patients only
- Top down program development without clinician participation
- Conflicting payment and coverage policies across payors

Butler et al, AHRQ Publication 09-E003, 2008

Factors Associated with Integrated Program Sustainability

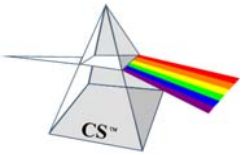
- Financial--segregation of payment pools for MH/SUD and PH services (uniform and pervasive)
- Non-Financial
  - Poor relationship between PH and MH/SUD leadership and/or staff
  - Too rapid expansion of program without attention to implementation of critical components (see above)
  - Difficulty in recruiting MH/SUD staff willing to adjust practice style for use in the medical setting
  - Loss or change of program champion(s)

Butler et al, AHRQ Publication 09-E003, 2008

Value-Added Clinical Programs

- Psych Consults
  - Proactive case finding--prevalence-based (INTERMED)
  - MH/SUD team size and constituency determined by population served
  - Early intervention with active follow-up
- Complexity Intervention (Medical Psychiatry) Units
  - High physical health and MH/SUD acuity capabilities
  - Co-attending model
  - Cross-disciplinary trained staff
- Integrated outpatient clinics
  - Collaborative (stepped) care--PH and MH/SUD professional co-location, same day billing
  - Active PH and MH/SUD collaboration with eye on interactive components
  - Common PH and MH/SUD electronic medical record
  - Use of care managers which address both physical and MH/SUD issues
- Unexplained physical complaints--"reframing" training for PCPs
- Substance Use Disorders
  - Brief intervention for alcohol abuse in PCP clinics
  - Use of medications for prevention of substance abuse in medical settings, e.g. buprenorphine, naltrexone
  - Integrated SUD and physical health treatment programs in the medical setting
- Delirium prevention and intervention programs
- Other

Kathol et al, Psychosomatics, in press



Impact of Outcome-Based Intervention

Health Care Delivery-Based Integration

(*Improves Outcomes and Lowers Cost)*

- Depression and diabetes: 2 months fewer days of depression/year; projected $2.9 million/year lower total health costs/100,000 diabetic members[1]
- Panic disorder in PC: 2 months fewer days of anxiety/year; projected $1.7 million/year lower total health costs/100,000 primary care patients[2]
- Substance use disorders with medical compromise: 14% increase in abstinence; $2,050 lower annual health care cost/patient in integrated program[3]
- Delirium prevention programs: 30% lower incidence of delirium; projected $16.5 million/year reduction in IP costs/30,000 admissions[4]
- Unexplained physical complaints: no increase in missed general medical illness or adverse events; 9% to 53% decrease in costs associated with increased healthcare service utilization[5]
- Health Complexity: halved depression prevalence; statistical improvement of quality of life, perceived physical and mental health; 7% reduction in new admissions at 12 months[6]

1. Katon et al, Diab Care 29:265-270, 2006; 2. Katon et al, Psychological Med 36:353-363, 2006; 3. Parthasarathy et al, Med Care 41:257-367, 2003; 4. Inouye et al, Arch Int Med 163:958-964, 2003; 5. summary of 8 experimental/control outcome studies; 6. Stiefel et al, Psychoth Psychosom 77:247, 2008

Quality of Care Associated with Depression Treatment in Primary Care

	Treatment (N = 164)	Usual Care (N = 165)	OR
4 Follow-up Visits	111 (68%)	11 (7%)	29.3
Adequate Dosage			
1st 6 months	94 (57%)	66 (40%)	4.2
2nd 6 months	87 (53%)	63 (38%)	2.9
Adherence (refills)			
Baseline	58 (35%)	72 (44%)	.7
3 months	101 (62%)	76 (46%)	3.2
6 months	99 (60%)	80 (49%)	2.3
12 months	94 (57%)	76 (46%)	2.2

Katon et al, AGP 61:1042-1049, 2004

Aetna Depression Integrated CM:
Clinical Outcomes

Member response to intake and discharge questions:

Mental Health Survey

Condition	Intake	Discharge	Outcome
Depression	79%	44%	35% drop in Depression
Energy Level	49%	75%	26% increase in energy
Work Limitations	63%	29%	34% drop in work limitations
Social Limitations	71%	41%	30% drop in social limitations

Physical Health Survey

Condition	Intake	Discharge	Outcome
General Health	5%	9%	4% increase in General Health
Work Limitations	61%	48%	13% drop in work limitations
Does Less Work	64%	45%	19% increase in work
Bodily Pain	12%	5%	7% decrease in bodily pain

Hyong, Un MD: Aetna--www.academyhealth.org/2006/tuesday/611/unh.ppt

The Transition to Integration of Clinical Services

Step 1: MH/SUD Services Become a Part of PH Benefits

- Purchasers
  - Demand coverage contract in which MH/SUD clinicians are part of general medical provider network
  - MH/SUD claims are paid using PH payment procedures
- Providers
  - PH professionals only contract with MCOs when MH/SUD practitioners are a part of the medical provider networks and paid from PH benefits
  - MH/SUD professional only contract with MCOs (as a part of PH system when aligned)
- Facilities
  - PH facilities only contract with MCOs when MH/SUD clinics, hospital units, etc. are a part of general medical payment system
  - MH/SUD facilities only contract with MCOs (as a part of PH system when aligned)

Step 2: Build Value-Added Integrated Services

- Preparation
  - Education about the interaction of PH and MH/SUDs on clinical, functional, and financial outcomes
  - Training in how to integrated PH and MH/SUD services, e.g. CMSA integrated case management training program, but also for clinical settings
  - Physical space preparation for integrated services--physical space, work flows, administrative structure
  - Consolidate MH/SUD and PH records, maintaining rigid privacy for “all” PHI
  - PH and MH/SUD relationship building
- Implementation
  - Identify clinical and administrative champions
  - Co-location of professionals
  - Physical space re-organization--MH/SUD part of PH settings (reduction in though not elimination of stand alone facilities
  - Finance and initiate programs

Step 3: Phase Out Non-Integrated Programs

- Primary care clinics (medical homes) without standard MH/SUD services and care management capabilities for patients with health complexity
- General hospitals without staffed psychiatric beds and beds with integrated PH and MH/SUD capabilities (Complexity Assessment Units)
- Independently managed and functioning community health centers and community mental health centers
- Other

Step 4: Integrated Care Centers of Excellence

- PH and MH/SUD professionals and facilities paid through PH benefits
- Health delivery system
  - Outpatient integrated care capabilities are the standard of practice
  - General hospitals with staffed psychiatric beds and designated beds for patients with health complexity
  - Public sector support for integration of inpatient and outpatient services
  - Single medical record for all patients within the system