

Behavioral Screening and Intervention (BSI): A Huge Step Toward the Triple Aim



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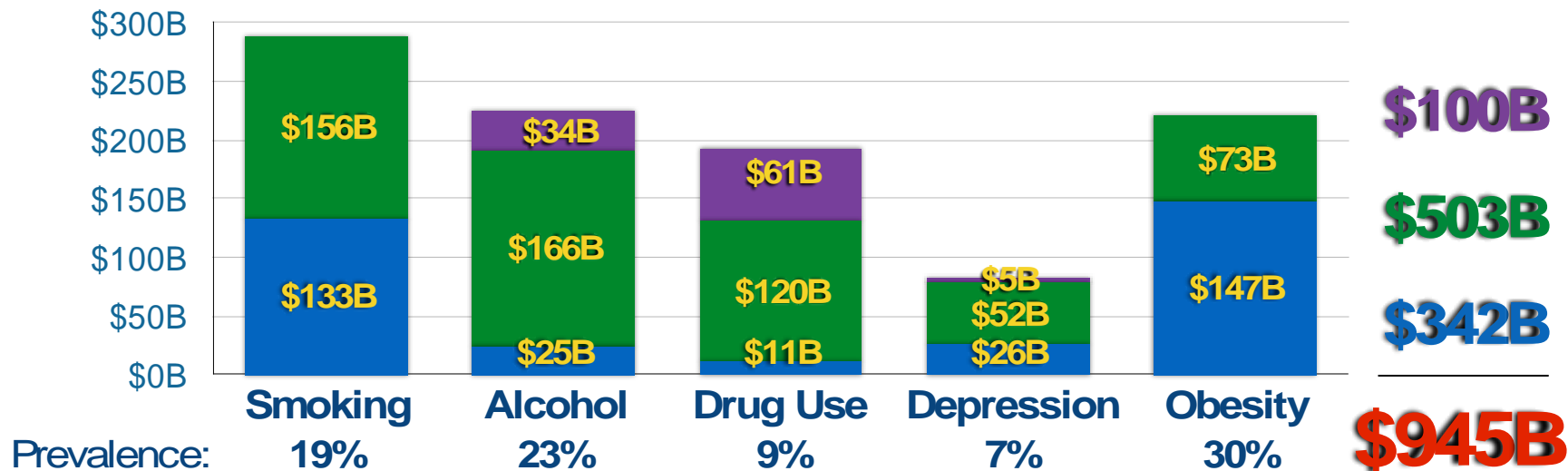
Founder and CEO, Wellsys LLC (wellsys.biz)

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Costs of Behavioral Risks and Disorders

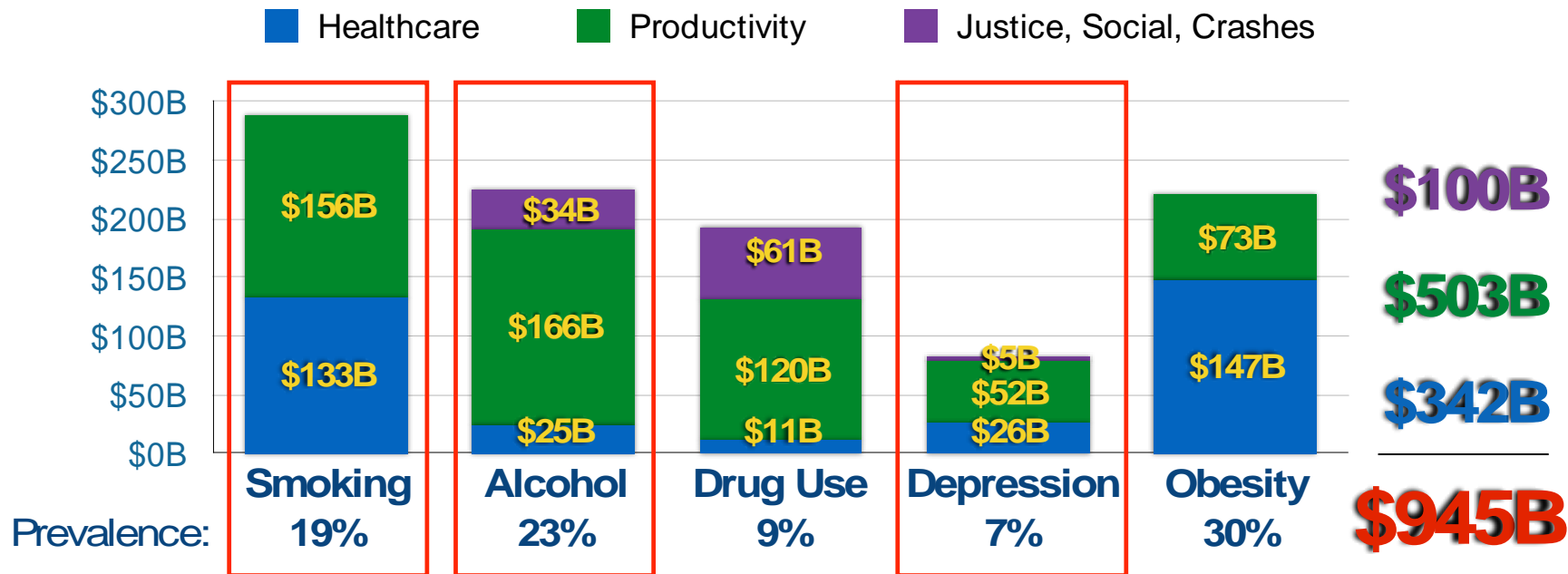
– United States –

■ Healthcare ■ Productivity ■ Justice, Social, Crashes



Costs of Behavioral Risks and Disorders

– United States –



Greatest change, improvement in outcomes and ROI

Behavioral issues — ↓ Outcomes + ↑ Costs

Smoking

- At one hospital, prevalence is 3 times that for the general population
- 753 VA patients with CHF - 82% increase in odds for **1-year readmission**
- Higher **30-day readmission** rates for
 - Myocardial infarction
 - H. flu pneumonia + COPD
 - Schizophrenia
 - Hysterectomy
 - Arthroscopic meniscectomy
 - Lower extremity arterial bypass
 - Ventral hernia repair

Behavioral issues — \downarrow Outcomes + \uparrow Costs

Smoking and surgical complications

- For 82,304 smoking vs. 82,304 non-smoking surgical pts, \uparrow Odds of:
 - Pneumonia (109%)
 - MI (80%)
 - Infections (30% - 42%)
 - Unplanned intubation (87%)
 - Stroke (73%)
 - Cardiac arrest (57%)
 - Septic shock (55%)
 - Mechanical ventilation (53%)
 - Death (38%)
- Hip arthroplasty
 - 3.71 x \uparrow risk of deep infection
 - 3.05 x \uparrow risk of aseptic prosthesis loosening
 - 2.58 x \uparrow risk of revisions

Behavioral issues — ↓ outcomes + ↑ costs

Alcohol

- Same number of **hospitalizations** as for myocardial infarctions
- Inner city hospital: 20% of **ICU admissions** - higher rate of uninsured
- Among pneumonia patients, higher **charges**, more **ICU admissions**
- 160,000 admissions for CHF, MI & pneumonia in 11 healthcare systems:
↑24% in **30-day readmissions**
- VA patients admitted for CHF: 6-fold higher **1-year readmission** rates
- Trauma center: 150% higher chance of **repeat trauma admission**, twice the risk of **complications** from pneumonia and other infections
- 9,000 VA surgeries: **Complication** rates increased from 5.6% to 14.0% in a dose-response manner with heavier drinking

Behavioral issues — ↓ Outcomes + ↑ Costs

Depression

- ≥69-year-old men at home:
↑22% in hospital admissions, ↑5% in hospital days
- 160,000 admissions for CHF, MI & pneumonia in 11 healthcare systems:
↑40% in 30-day readmissions

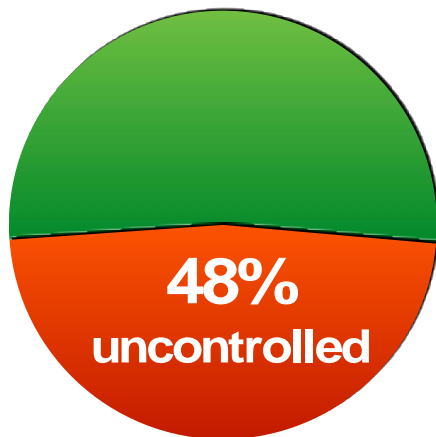
- 1,418 Boston hospital inpatients

Depression symptoms	None (63%)	12.6%	19.6%	21.1%	30-day readmission rates
	Mild (16%)				
	Mod. to severe (24%)				

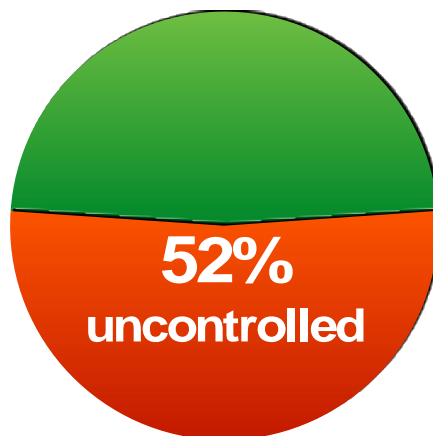
- 64% increased risk of revision for hip arthroplasty
(Largest risk factor of 29 conditions studied)

Need for More Effective Chronic Disease Management

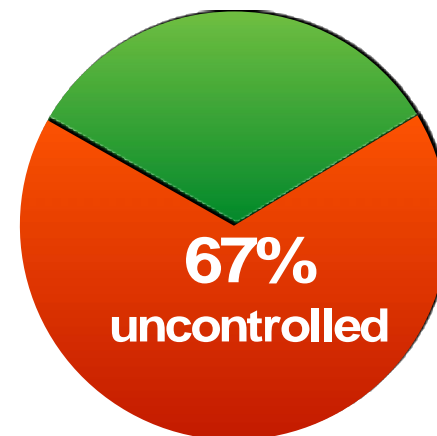
Patients with Diagnosed
Hypertension



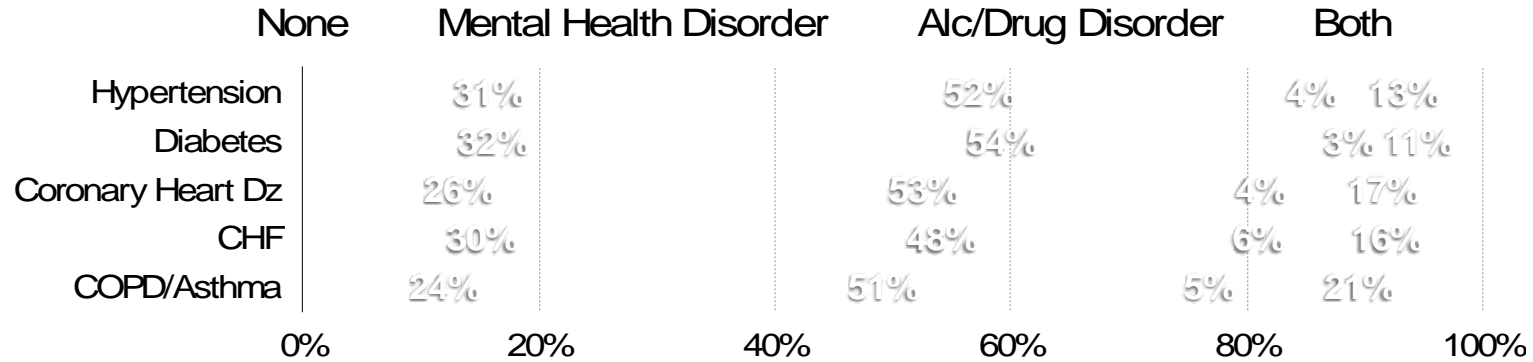
Patients with Diagnosed
Type 2 Diabetes



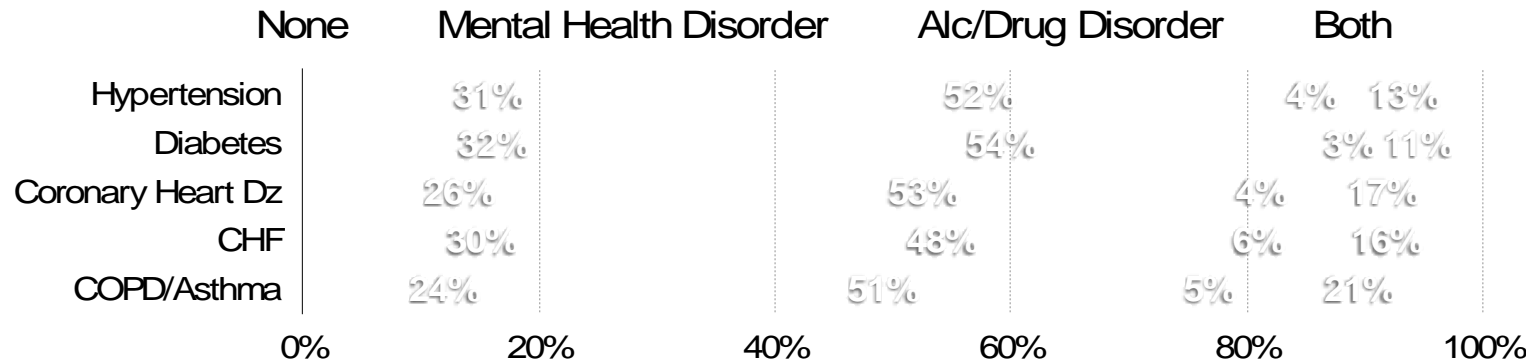
Patients with Diagnosed
Hyperlipidemia



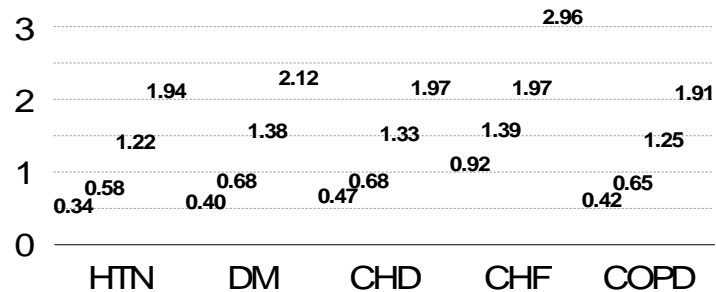
Co-morbidity in Dual-Eligibles



Co-morbidity in Dual-Eligibles

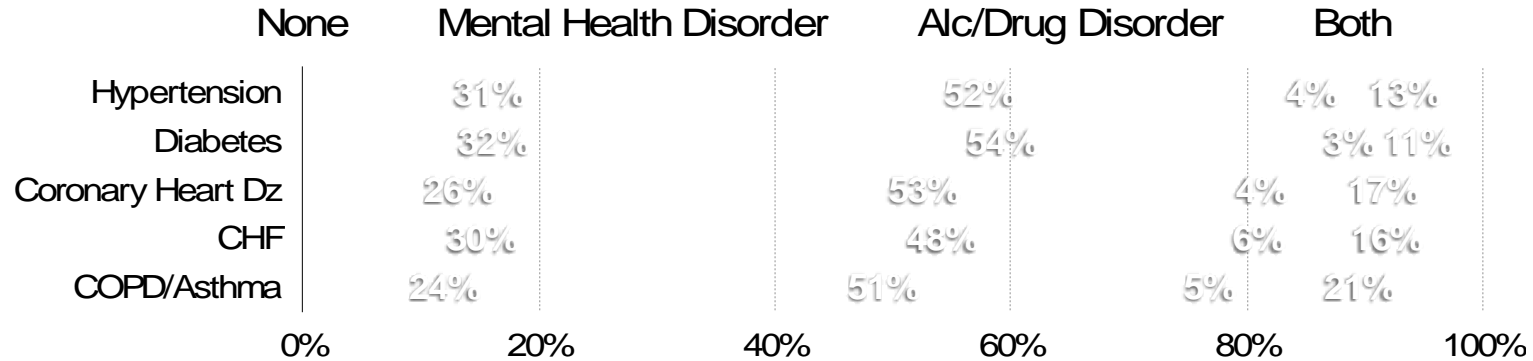


Hospitalizations Per Pt Per Year

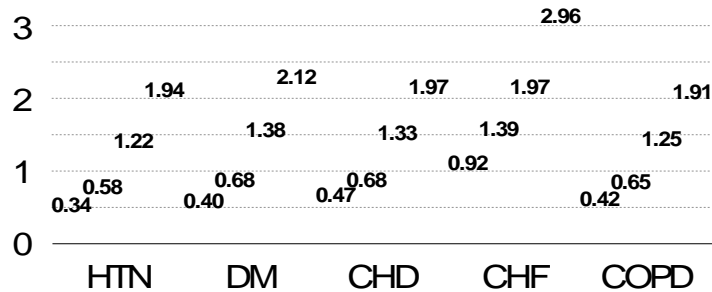


3 to 6 x hospitalizations

Co-morbidity in Dual-Eligibles

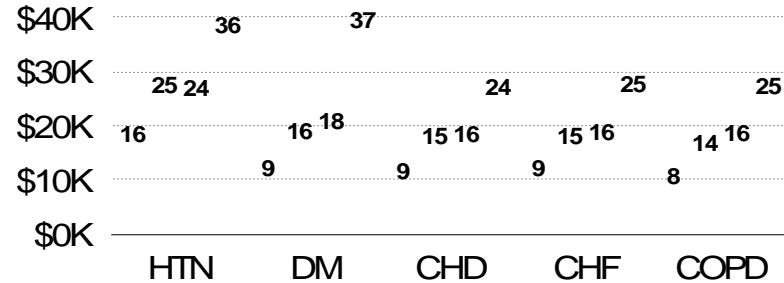


Hospitalizations Per Pt Per Year



3 to 6 x hospitalizations

Total Cost of Care Per Pt Per Year



2 to 4 x total cost of care

Costs to Employers – Per Employee Per Year

(Excess Healthcare Cost and Productivity Loss)



\$5,816



\$621



\$3,000 - \$4,000



A close-up photograph of a spider web against a blurred green and brown background. The web is the central focus, with several terms written in a blue, sans-serif font on its spiral and radial threads. The terms are arranged in a roughly circular pattern around the center of the web. The text is: Smoking, Binge drinking, Depression, Poor self-care, Addiction, and Other mental health disorders.

Smoking

**Binge
drinking**

Depression

Poor self-care

**Other mental
health disorders**

Addiction

Hospitalizations

Smoking

Readmissions

Binge drinking

Other mental health disorders

Complications

Addiction

Poor quality performance

Depression

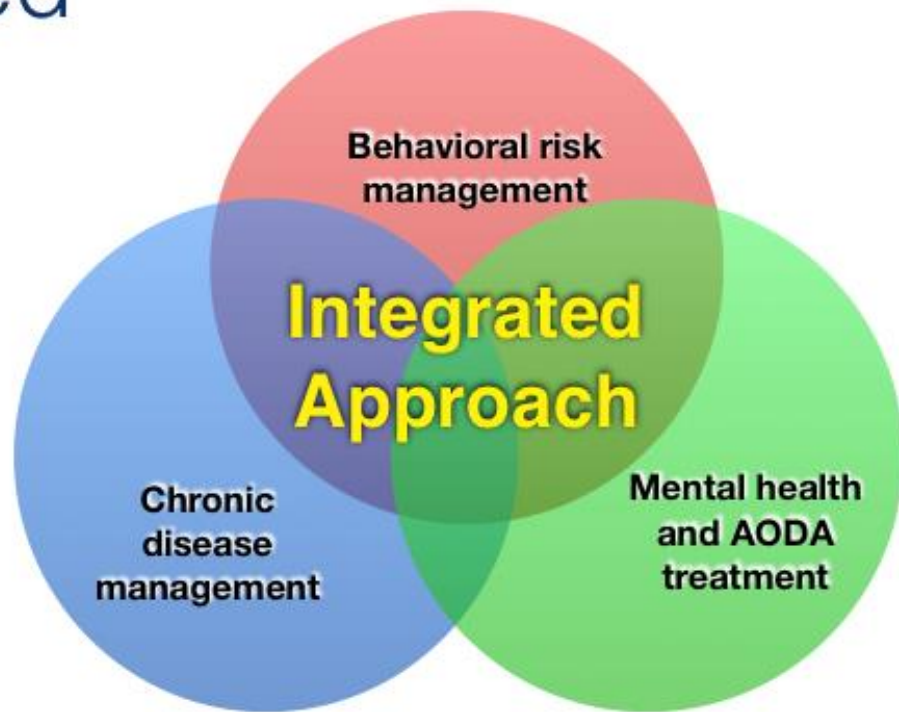
Poor self-care

Higher costs

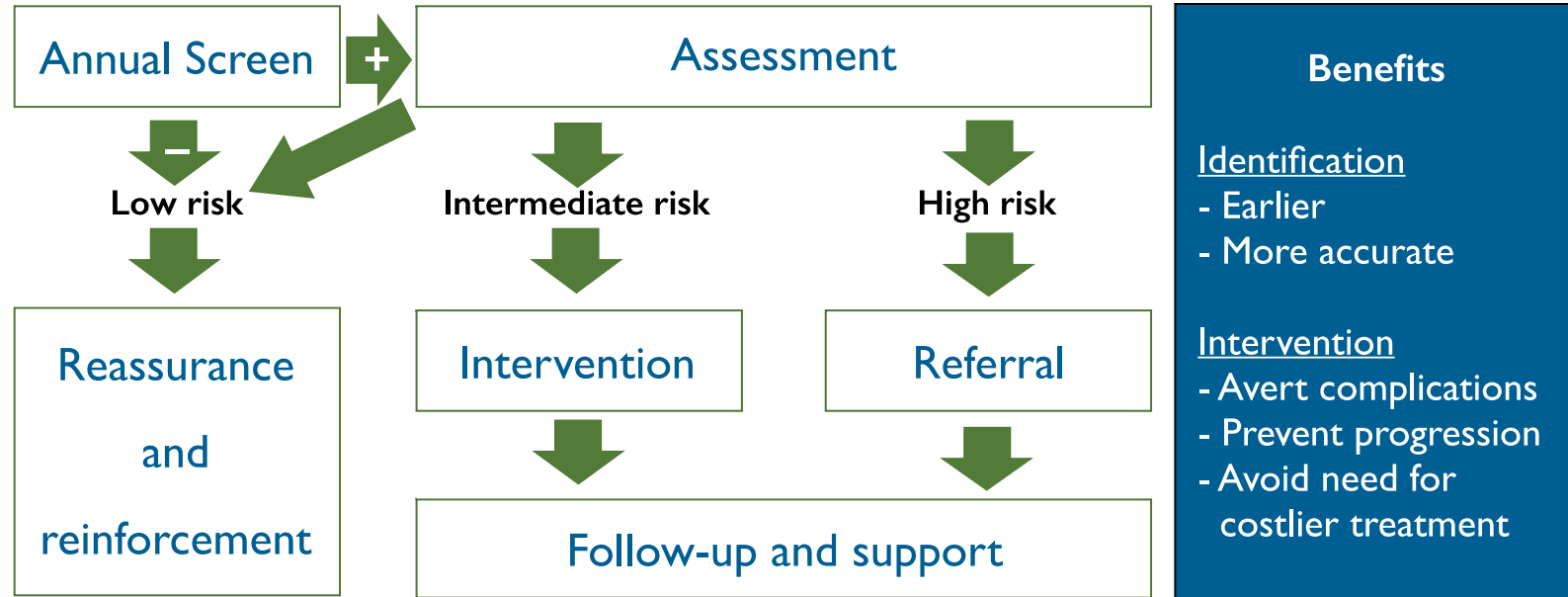
Worse outcomes

What's Needed

- Many patients need multiple services
- Their behavioral issues are usually interrelated

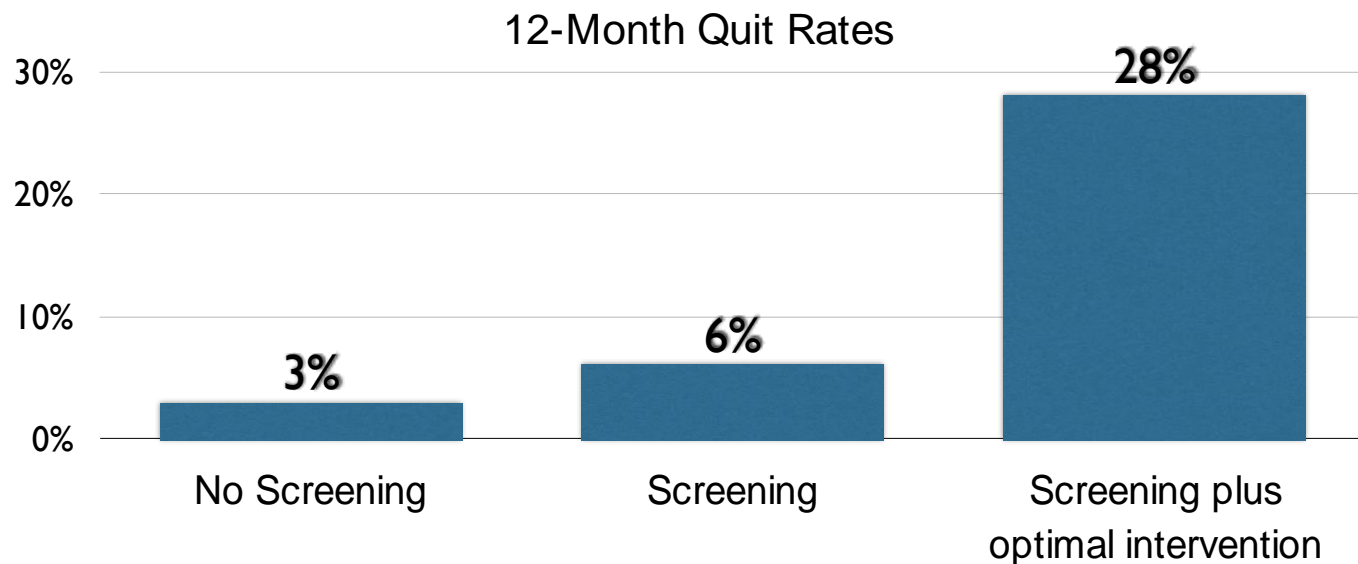


BSI - The Overall Concept



BSI Works for Smoking

– *Candidates: 19% of American adults* –



BSI Works for Binge Drinking

– *Candidates: 23% of American adults* –



ED visits

20%



Injuries

33%



Hospitalizations

37%



Arrests

46%



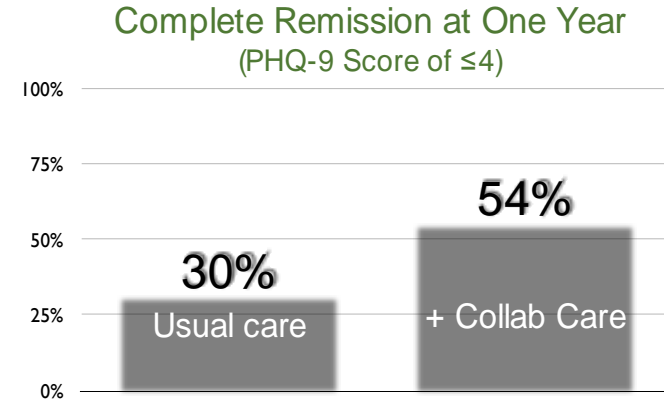
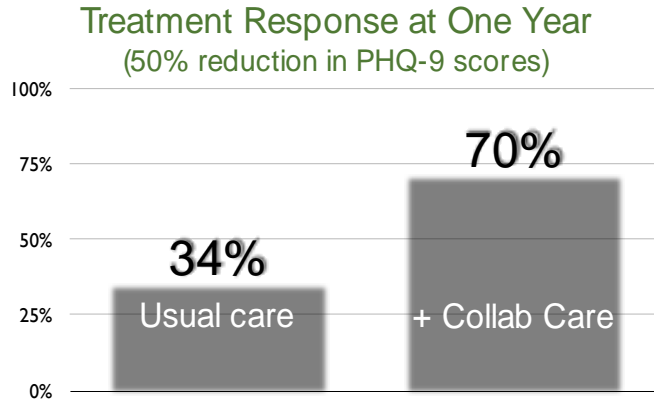
Crashes

50%

BSI Works for Depression

– *Candidates: 7% of American adults* –

- Without screening, 30% to 50% of depressed patients are missed
- 69 RCTs show the effectiveness of collaborative care
- One-year results of BSI for depression



Effective for several other mental health disorders

Cost Savings from BSI: First Year

- 100 employees -

	Alcohol	Depression	Tobacco	Totals
Per ...	Risky drinker	Depressed person	Smoker who quits	
Healthcare	\$523	\$841	\$192	
Productivity	\$1,200	\$991	\$1,897	
Absenteeism	?	\$310	\$479	
Injury	?	?	\$2,013	
Year 1 Savings Per Employee	\$1,723	\$2,142	\$4,581	
Number of Employees	23	7	6	
Healthcare Savings	\$12,029	\$5,887	\$1,152	\$19,068
Other Workplace Savings	\$27,600	\$9,107	\$26,334	\$63,041
Year 1 Savings	\$39,629	\$14,994	\$27,486	\$82,109
Year 1 total savings per person = \$821				

**Year 1 healthcare savings
per person screened = \$191**

Wisconsin Initiative to Promote Healthy Lifestyles



Three federally funded projects:

- \$14M since 2006
- Helped 44 clinics deliver BSI
- Screened >100,000 patients
- Delivered >25,000 interventions



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Results:

Patient satisfaction: 4.3 to 4.9 of 5 points



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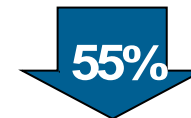
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Binge drinking



Marijuana use



Depression symptoms



Wisconsin Initiative to Promote Healthy Lifestyles



School of Medicine
and Public Health
UNIVERSITY OF WISCONSIN-MADISON



Wisconsin Medical Society
Your Doctor. Your Health.



Wisconsin Department
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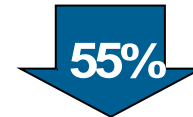
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*Binge
drinking*



*Marijuana
use*



*Depression
symptoms*

Best outcomes: Bachelor's-level coaches



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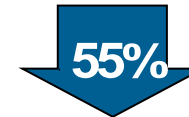
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*Marijuana
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*Depression
symptoms*

Best outcomes: Bachelor's-level coaches

Savings per Medicaid pt screened: \$546/2 yrs



Cardiovascular Prevention Enhancement Program (CPEP)



- Goals: Enhance cardiovascular prevention services for adult outpatients with important risk factors through a team approach
- Targeted patients: Adults with HTN, DM-2, lipid disorders with and without cardiovascular disease
- Screening, intervention and ongoing support



BSI can address MH/SUDs, chronic diseases and more

Patients' age, gender and diagnoses determine what topics are addressed

		Well 15 yo ♀	51 yo ♂ w/HTN & DM	Well 78 yo ♀
Patients' goals		✓	✓	✓
Behavioral issues	Smoking	✓	✓	✓
	Alcohol and drugs	✓	✓	✓
	Healthy diet	✓		✓
	Diabetic diet		✓	
	Sodium intake		✓	
	Physical activity	✓	✓	✓
	Obesity	✓	✓	✓
Mental health	Medication adherence		✓	
	Depression	✓	✓	✓
	Anxiety	✓	✓	✓
Other issues	Safe sex/contraception	✓	✓	✓
	Indication for aspirin		✓	✓
	Cognitive function			✓
	Fall risk			✓

(List is not comprehensive)

BSI Would Help with 16 CMS Quality Metrics

BSI would help ACOs excel on:

- 5 - Health promotion & education
- 13 - Fall screening
- 16 - BMI screening & follow-up
- 17 - Tobacco screening & intervention
- 18 - Depression screening & intervention
- 30 - Ischemic vascular disease: Aspirin use
- 40 - Depression remission

BSI would help ACOs improve on:

- 8 - All condition readmission
- 9 - COPD/asthma readmission
- 10 - Heart failure readmission
- 27 - Diabetes: HgbA1C ≤ 9
- 28 - HTN: BP $< 140/90$
- 29 - IVD: LDL < 100
- 36 - Unplanned admission - diabetes
- 37 - Unplanned admission - CHF
- 38 - Unplanned admission - multiple chronic diseases

BSI: The Front End of PC/BH Integration

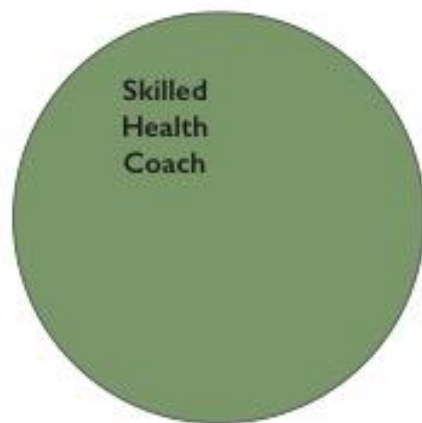
Tier	Unhealthy Behaviors	Mental Health Disorders
1 Health Coach	Screening	
	Brief Assessment	
	Motivational Interviewing	Behavioral Activation
	Change Planning & Support	Collaborative Care
2	Rx – Physician, Psychiatrist, NP/PA	
	Other Specialists, Treatment Programs, Psychotherapy	

Benefits of Tier 1:

- Earlier recognition, less expensive intervention, and fewer costly consequences
- More efficient utilization of scarce and more expensive Tier 2 resources

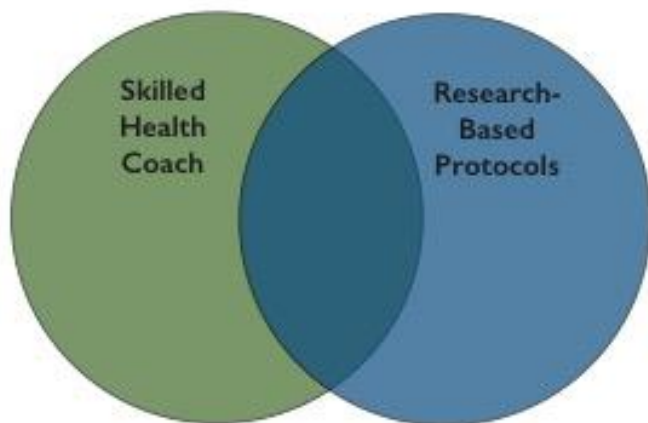
BSI: Components to Ensure Success

- *Warm, empathic*
- *Non-judgmental*
- *Expertly trained*
- *Monitored*
- *Expertly coached*



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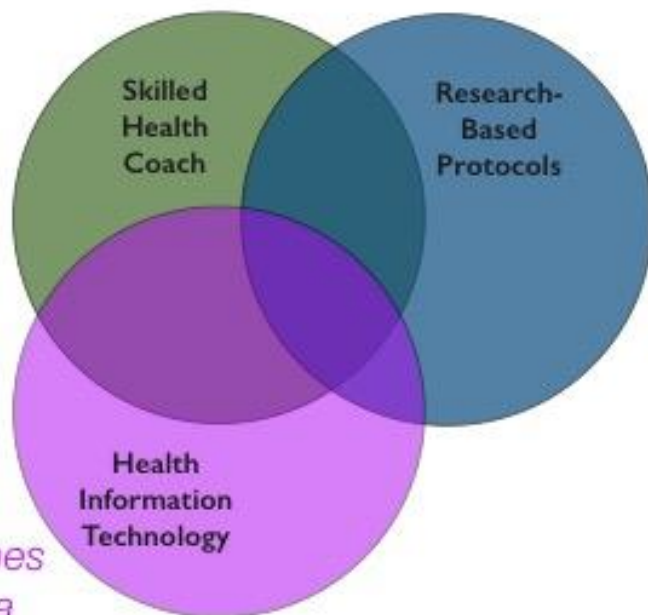


- *Screens*
- *Assessments*
- *Intervention protocols*
- *Referral resources*

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- *Guides service delivery*
- *Engages patients*
- *Prints session summary*
- *Tracks services & outcomes*
- *Generates aggregate data*

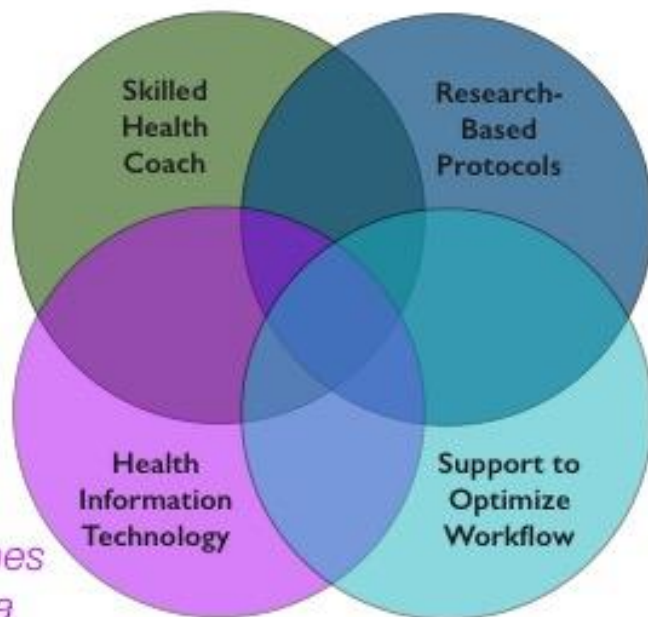


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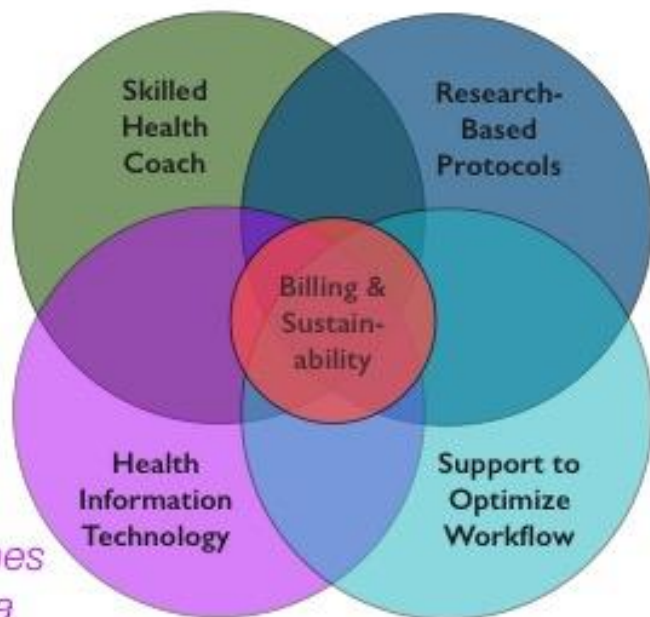
- Screens
- Assessments
- Intervention protocols
- Referral resources

- QI team
- Coaching on best practices
- Quality metrics
- QI framework

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- Screens
- Assessments
- Intervention protocols
- Referral resources

- QI team
- Coaching on best practices
- Quality metrics
- QI framework

- Webinars & consultation

Workflows in Busy Healthcare Settings

Ambulatory Settings



Patients complete screen while waiting



MAs reviews screens



Coaches see patients at that visit

Inpatient Units and Emergency Departments

Coaches introduces themselves and delivers services

Follow-up: Phone, telehealth or transfer to primary care based coach

BSI via Telehealth

Bob B. Barker
Age 30 (2/2/1982)
Interview #1

PathWell

SCREEN RESULTS

Register

Demographic

Screen

Medical History

Nutrition

- 2 days per week with at least 5 servings of fruit or vegetables

Tobacco

- Used in last 3 months

Exercise

Alcohol/Drugs

- Had more than 4 drinks in a day
- Has wanted or needed to cut down

Weight

- Weight: 185 lbs Height: 6 ft, 0 in BMI: 25
Serious health risks begin at 221 pounds
Ideal weight is 184 pounds or less

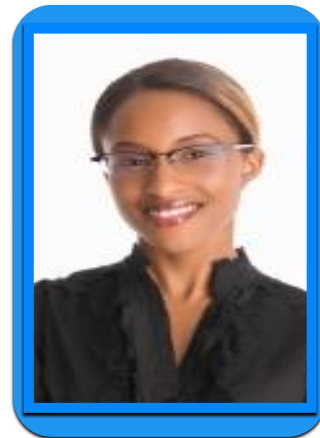
Depression

- Feeling down, depressed, hopeless

Follow-up

Summary

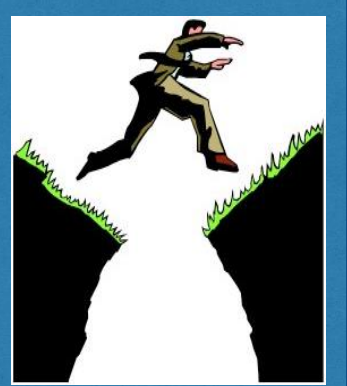
Close Session



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Summary

- 🌱 Behavioral risks and disorders are prevalent, harmful and costly
- 🌱 Ample research: BSI is effective and reduces costs
- 🌱 Few patients receive evidence-based BSI
- 🌱 BSI can be expanded to address chronic disease and mental health disorders, including addictions
- 🌱 BSI can improve quality metric performance, reduce 30-day admissions and increase shared savings



**A huge
step toward
the triple aim**

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