



Suicide Risk Assessment in Primary Care

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VALUES | EDUCATION | SERVICE

Disclosures

- None

Objectives

- Understand the epidemiology of suicide prevalence and risk assessment.
- Be able to identify and use evidenced based tools for screening depression and suicide risk.
- Understand one model, the collaborative care initiative, for managing depression and suicide risk in primary care.

Epidemiology of Suicide

TABLE 1. **Prevalence of Suicidal Thoughts and Behavior in US Adults**

	Percentage	No.
Serious thoughts	3.7	8.3 Million
Made plan	1.0	2.3 Million
Suicide attempt	0.5	1.1 Million
Suicide deaths ^a	0.01	34,598

^aData for suicide deaths are for 2007 and are from the Centers for Disease Control and Prevention.¹

Adapted from the 2008 National Survey on Drug Use and Health Report: Suicidal Thoughts and Behaviors among Adults.⁶

Anna McDowell, et al., "Practical Suicide-Risk Management for the Busy Primary Care Physician," Mayo Clin Proc. 2011 Aug; 86(8): 792–800.

Table 1. Relative Risk of Suicide in Patients With Specific Physical Illnesses: Main Effects^a

Physical Illnesses	No. (%)		Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI) ^b	Median Age, y ^c
	Cases (n = 873)	Controls (n = 17 460)			
None of the illnesses	535 (61.3)	11 002 (63.0)	1.00 [Reference]	1.00 [Reference]	43
Any of the illnesses	338 (38.7)	6458 (37.0)	1.10 (0.94-1.29)	0.89 (0.75-1.04)	62
Specific illnesses					
Cancer	30 (3.4)	561 (3.2)	1.14 (0.77-1.70)	0.96 (0.64-1.45)	70
Coronary heart disease	71 (8.1)	1035 (5.9)	1.53 (1.14-2.04)	1.09 (0.81-1.46)	74
Hypertension	132 (15.1)	2828 (16.2)	0.97 (0.77-1.21)	0.80 (0.64-1.01)	70
Stroke	34 (3.9)	488 (2.8)	1.54 (1.04-2.28)	1.09 (0.73-1.63)	79
Diabetes mellitus	47 (5.4)	845 (4.8)	1.18 (0.85-1.62)	0.90 (0.65-1.26)	67
Asthma	85 (9.7)	1623 (9.3)	1.09 (0.86-1.38)	0.84 (0.66-1.08)	46
COPD	27 (3.1)	329 (1.9)	1.80 (1.18-2.76)	1.29 (0.83-2.00)	66
Osteoarthritis	76 (8.7)	1688 (9.7)	0.94 (0.72-1.24)	0.68 (0.51-0.91)	76
Osteoporosis	23 (2.6)	222 (1.3)	2.33 (1.46-3.72)	1.62 (0.99-2.63)	77
Back pain	31 (3.6)	548 (3.1)	1.18 (0.81-1.72)	0.85 (0.58-1.25)	48
Epilepsy	10 (1.1)	156 (0.9)	1.33 (0.70-2.55)	1.10 (0.56-2.14)	57.5

Abbreviation: COPD, chronic obstructive pulmonary disease.

^aAll odds ratios listed in this table are adjusted for sex and age by the case-control matching. Statistically significant ($P < .05$) odds ratios are highlighted in bold.

^bMultivariate adjustment for clinical depression.

^cMedian age of cases (and age-matched controls) when case died.

Roger Webb, et al., **Suicide Risk in Primary Care Patients With Major Physical Diseases: A Case-Control Study**, *Arch Gen Psychiatry*. 2012;69(3):256-264. doi:10.1001/archgenpsychiatry.2011.1561

Table 2. Relative Risk of Suicide in Patients With Specific Physical Illnesses: Evidence of Effect Modification by Sex^a

Physical Illnesses	No. (%)		Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI) ^b	Median Age, y ^c
	Cases (n = 873)	Controls (n = 17 460)			
Any of the illnesses					
Men	227/658 (34.5)	4504/13 160 (34.2)	1.02 (0.84-1.23)	0.82 (0.68-1.00)^d	61
Women	111/215 (51.6)	1954/4300 (45.4)	1.39 (1.01-1.90)	1.10 (0.80-1.52)	64
χ^2_e			2.8	2.2	
P value			.10	.14	
Cancer					
Men	12/658 (1.8)	360/13 160 (2.7)	0.66 (0.36-1.21)	0.56 (0.30-1.04)	76.5
Women	18/215 (8.4)	201/4300 (4.7)	2.23 (1.28-3.86)	1.85 (1.04-3.26)	69.5
χ^2_e			8.5	7.6	
P value			.004	.006	
Coronary heart disease					
Men	47/658 (7.1)	817/13 160 (6.2)	1.19 (0.84-1.68)	0.87 (0.61-1.24)	74
Women	24/215 (11.2)	218/4300 (5.1)	3.10 (1.81-5.29)	2.04 (1.18-3.55)	74
χ^2_e			8.7	6.3	
P value			.003	.01	
COPD					
Men	17/658 (2.6)	249/13 160 (1.9)	1.41 (0.83-2.39)	1.09 (0.63-1.88)	66
Women	10/215 (4.7)	80/4300 (1.9)	3.23 (1.57-6.66)	1.90 (0.89-4.06)	63
χ^2_e			3.3	1.3	
P value			.07	.26	

Abbreviation: COPD, chronic obstructive pulmonary disease.

^aEffects with a statistically significant ($P < .05$) or borderline significant ($P > .05$, $P < .10$) sex interaction; all Table 1 main effects were refitted with a sex interaction term added to each conditional logistic regression model. All statistically significant sex-specific odds ratios are highlighted in bold.

^bMultivariate adjustment for clinical depression.

^cMedian age of cases (and age-matched controls) when case died.

^dThis effect was statistically significant (ie, upper confidence limit = 0.995).

^eInteraction test.

Roger Webb, et al., **Suicide Risk in Primary Care Patients With Major Physical Diseases: A Case-Control Study**, *Arch Gen Psychiatry*. 2012;69(3):256-264. doi:10.1001/archgenpsychiatry.2011.1561

Epidemiology of PCP Risk Assessment

- Data from the study revealed that physician-participants inquired about suicide 36% of the time.
- A random effects logistic model indicated that several factors were predictive of physicians' intention to conduct a suicide assessment:
- patient's comorbidity status (odds ratio (OR) = 0.61; 95% confidence interval (CI) = 0.37–1.00),
- physicians' age (OR = 0.67; 95% CI = 0.49–0.92),
- physicians' race (OR = 1.84; 95% CI = 1.08–3.13),
- and how depressed the physician perceived the virtual patient to be (OR = 0.58; 95% CI = 0.39–0.87).

Lisa Hooper, et al., "Predictors of Primary Care Physicians' Self-reported Intention to Conduct Suicide Risk Assessments," *J Behav Health Serv Res.* 2012 Apr; 39(2): 103–115.

Patients Dying by Suicide^a

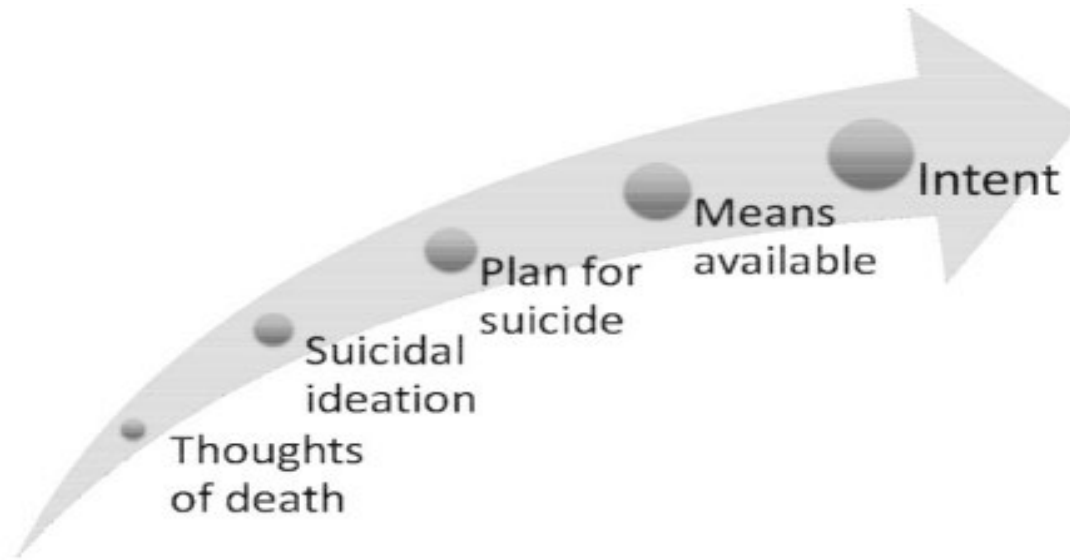
Provider Action	Final Visit with Mental Health Provider (n=68)		Final Visit with Primary Care Provider (n=84)		Final Visit with Other Non-Mental Health Provider (n=59)		P Value ^e
	N	%	N	%	N	%	
Assessed for Suicidal Ideation	41	60.3	11	13.1	6	10.2	<0.0001

Comparison Patients^b

Provider Action	Final Visit with Mental Health Provider (n=60)		Final Visit with Primary Care Provider (n=86)		Final Visit with Other Non-Mental Health Provider (n=86)		P Value ^e
	N	%	N	%	N	%	
Assessed for Suicidal Ideation	34	56.7	7	8.1	4	4.7	<.0001

Eric Smith, et al., "Suicide Risk Assessment Received Prior to Suicide Death by Veterans Health Administration Patients with a History of Depression," *J Clin Psychiatry*. 2013 Mar; 74(3): 226-232. doi: [10.4088/JCP.12m07853](https://doi.org/10.4088/JCP.12m07853)

Course of Suicidal Behavior



Anna McDowell, et al., "Practical Suicide-Risk Management for the Busy Primary Care Physician," Mayo Clin Proc. 2011 Aug; 86(8): 792–800.

TABLE 2. **Warning Signs vs Risk Factors for Suicide**

	Warning signs	Risk factors
Relationship to suicide	Proximal	Distal
Evidence basis	Clinically derived	Empirical research
Applicable group	Individuals	Populations
Clinical implications	Intervene to resolve	Limited ability to address
Time basis	Transient	Often static
Examples	Threats to harm self	White
	Planning for suicide	Male
	Talking or writing about suicide	History of a suicide attempt
	Hopelessness	Family history of suicide
	Rage, anger, seeking revenge	Psychiatric diagnosis
	Impulsive or reckless actions	Smoker
	Feeling trapped	Firearms access
	Increasing alcohol or drug use	Physicians
	Withdrawing from others	Prisoners
	Anxiety or agitation	History of sexual abuse
Increased or decreased sleep	History of psychiatric admission	
Dramatic mood changes	Increasing age	
No purpose or reason for living	Divorced	

Adapted from *Suicide and Life Threat Behav*,³⁶ with permission.
Data from *J Clin Psychiatry*.³⁷

PHQ-9

Audit-C

SAFE-T

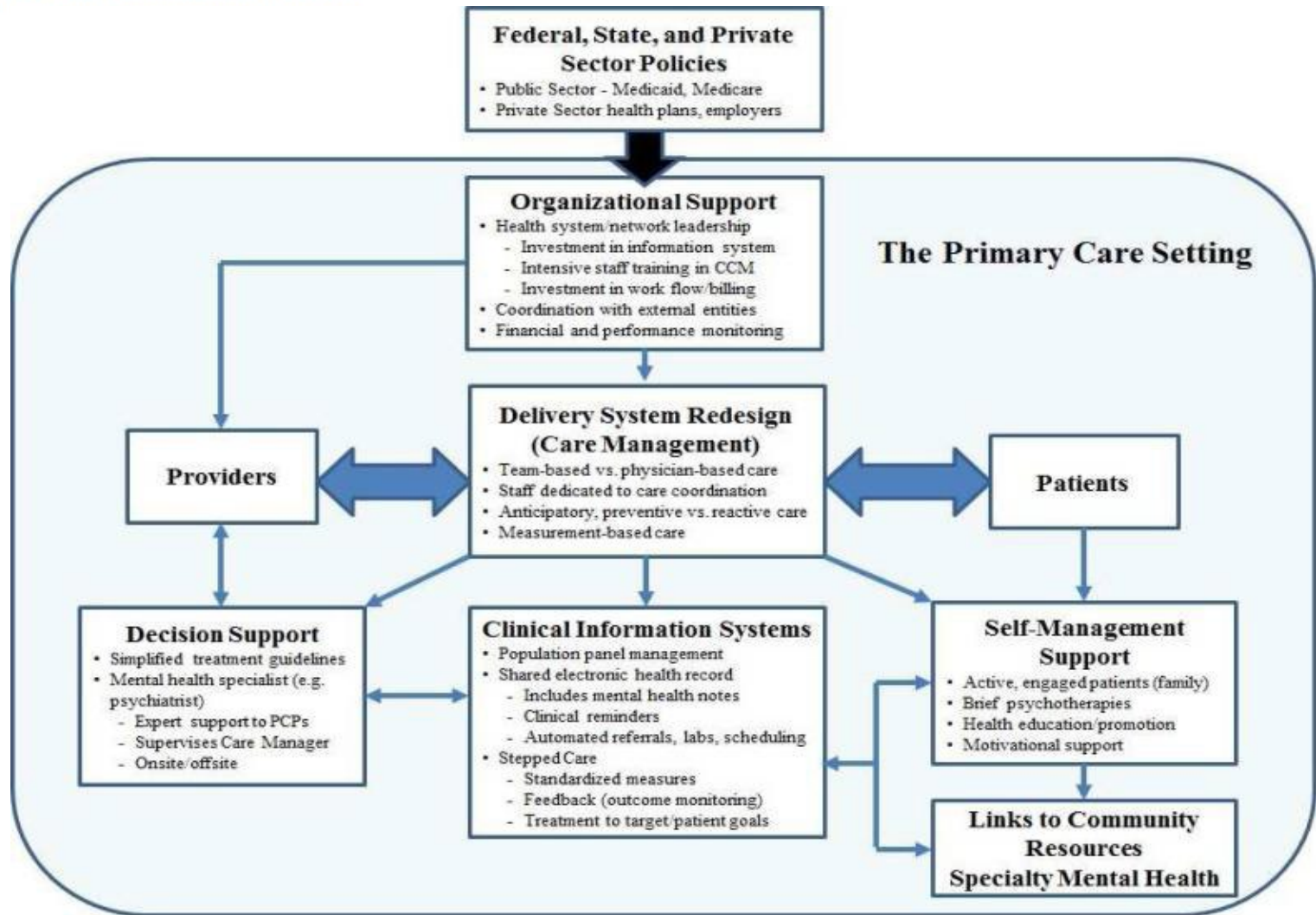
- SAFE-T Integration with the Columbia Suicide Risk Assessment

Certificate of Need

Collaborative Care Model

- Education and decision support for primary care clinicians.
- Use of depression care managers, often specially trained primary care nurses or social workers.
- Care managers continuously monitor patient outcomes, provide patient education, encourage and monitor treatment adherence, and facilitate communication among patients, their primary care physicians, and mental health clinicians.

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David Goodrich, et al., "Mental Health Collaborative Care and Its Role in Primary Care Settings," *Curr Psychiatry Rep.* 2013 Aug; 15(8): 383. doi: 10.1007/s11920-013-0383-2

Adopt EMR/electronic registries

- High costs to adopt, build, and maintain.
- Mental health notes separate from medical EMR.
- Barriers to population registries.
- Seek CMS/HITECH EMR funding.

David Goodrich, et al., "Mental Health Collaborative Care and Its Role in Primary Care Settings," *Curr Psychiatry Rep.* 2013 Aug; 15(8): 383. doi: [10.1007/s11920-013-0383-2](https://doi.org/10.1007/s11920-013-0383-2)

Clinical Information System

- Adopt standardized outcome measures.
- Diverse measures and measurement protocols for screening/follow-up.
- Achieving consensus on key mental health and physical tracking measures (embed in EMR).
- Standardize frequency of follow-up contacts

David Goodrich, et al., "Mental Health Collaborative Care and Its Role in Primary Care Settings," [Curr Psychiatry Rep.](#) 2013 Aug; 15(8): 383. doi: [10.1007/s11920-013-0383-2](#)

Delivery System Redesign

- Develop standardized protocols for diagnosis, follow-up measures, stepped-care, referrals
Specify care management protocols.
- Establish blended payments to general and specific care coordination procedures.
- Specify work roles and methods to communicate patient information, referrals, urgent consultations.
- Physical collocation of medical and mental health staff.

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Self Management Support

- Identify brief evidence-based treatments.
- Reimbursement for training/supervision.
- Practice treatment capacity.
- Negotiations for bundled payments for self-management.
- Establish protocol length, visits, & stepped-care protocol.

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Provider Decision Support

- Establish mental health specialist services.
- Undefined role and reimbursement.
- Specify contractual obligations for MH panel and care manager supervision, consultations, facilitating referrals.
- Decide if co-located or offsite.

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Community Linkages

- Creating network of community resources (specialty mental health transportation, housing, wellness, , employment).
- Poor patient uptake of specialty mental health referrals.
- Local practices create network or health “neighborhood” directories of local resources and providers.
- Develop links with local specialty mental health resources/providers for warm hand-offs.

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Build Leadership & Organizational Support

- Create a sustainable business model.
- Unbillable activities for new provider types, services, and processes of care.
- Propose and negotiate a reimbursement model involving neutral 3rd party to move from fee-for-service to bundled payments model that covers costs of CCM redesign.

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References

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