SUICIDE

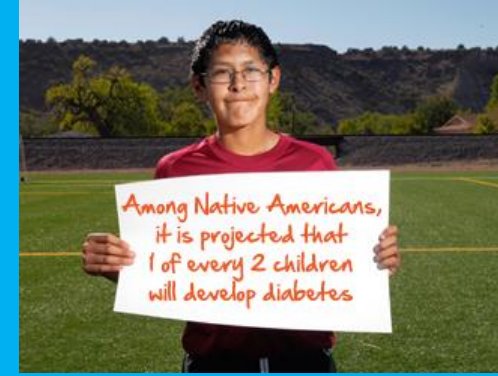Suicide Rates Among Native American Adolescents Have Reached 'Crisis Level': CDC

Mental Health Informatics System Morisky Medication Adherence Protocol Demonstration: Indian Health Services, California
October 14th, 2015

Among Native Americans, it is projected that 1 of every 2 children will develop diabetes

The 2014 CDC report found that suicide was the second leading cause of death (behind unintentional injuries) for Indian youth ages 15-24 residing in IHS service areas and the suicide death rate for this cohort is four times higher than the national average. In 2007, Dr Julie Nivens a scientist in Alaska whose Inuit Alaskan Native population have the highest suicide rates in the nation wrote that screening to assess for the presence of depressive symptomatology and suicide risk, coupled with immediate triage and treatment when such symptoms and evidence of risk are present, has the potential to alleviate unnecessary suffering of those in psychological pain and prevent untimely and unnecessary loss of life.

Diabetes and its often disabling complications are among the most serious chronic health problems faced by Native Americans (NA).Diabetes is twice as common in NA communities as in the general population and it is steadily increasing. Approximately 30 percent of NA more than 55 years old have been diagnosed with diabetes. NA are 2.8 times as likely to die from diabetes as individuals in the general population (IHS 2011a).

Dr. Don Morisky is a Professor at the UCLA School of Public Health. Dr. Morisky created and validated the Morisky Medication Adherence Scale (MMAS-8) that has been endorsed by the American Medical Association to increase survival rates for chronic and infectious disease patients and reduce health care costs.
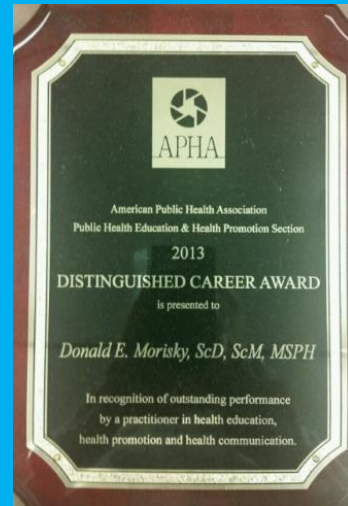
https://www.stepsforward.org/modules/medication-adherence

For his Best Practices Around the World Medication Adherence Protocols,
Dr. Morisky received the Distinguished Career Award from the American Public Health Association in November 2013.

http://newsroom.ucla.edu/dept/faculty/donald-morisky-receives-distinguished-career-award-from-american-public-health-association
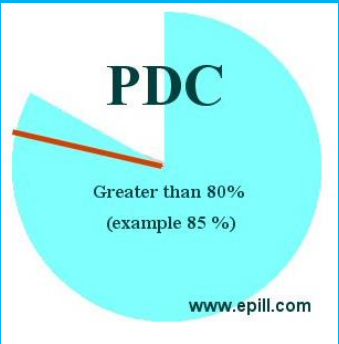
Medication Adherence: WHO Cares?
Dr. Morisky's Medication Adherence Protocols have been validated to improve treatment adherence & prolong life expectancy for Depression, TB, Diabetes, Hypertension, Asthma, & Cardio chronic disease patients, even medically underserved and vulnerable populations in primary care and mental health professional shortage areas.

http://www.pubfacts.com/detail/17978868/Adherence-to-antiretroviral-medication-regimens:-a-test-of-a-psychosocial-model.
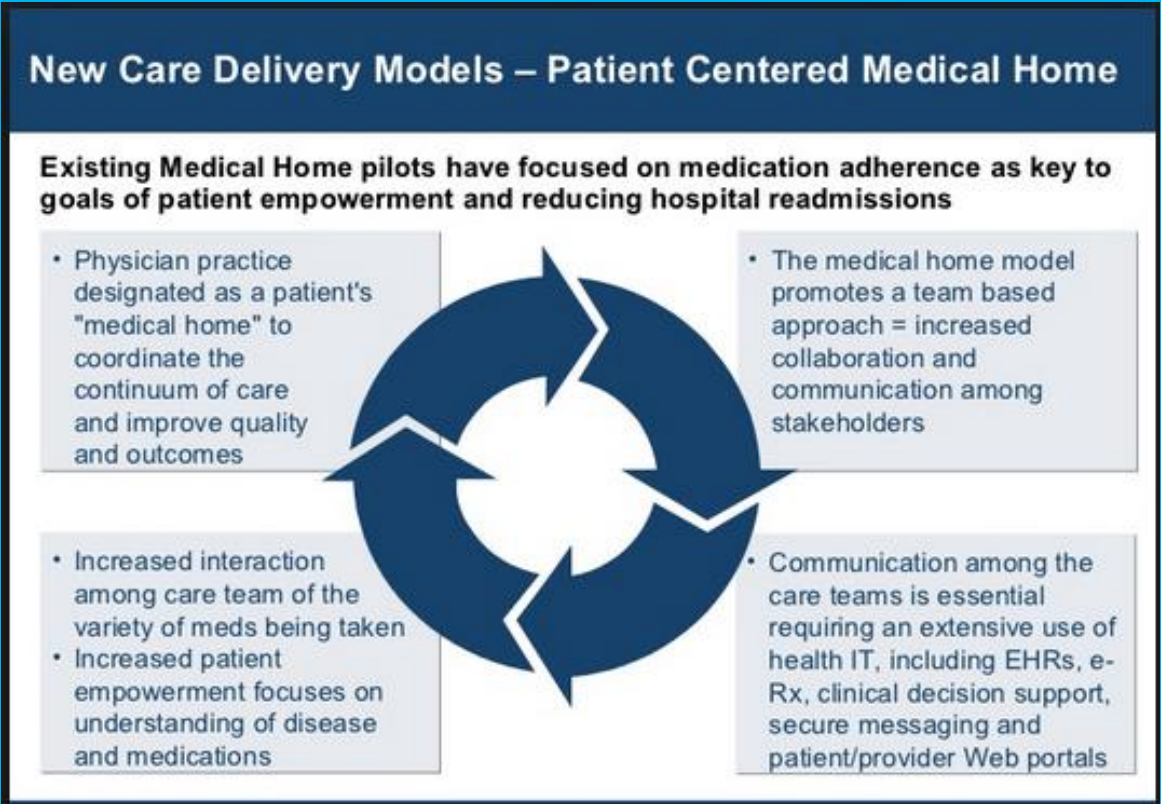
The Passive PDC Ratio that IHS uses to measure adherence is not the best way to assess and improve medication-taking behavior in a Patient Centered Medical Model.

PDC
Greater than 80%
(example 85 %)
www.epill.com

ACTIVE PASSIVE

Medication Adherence (MMAS-8)
SCORE
1.5

1. We do not know if patients actually took the medication; we only know that the medication was refilled.

2. Patients do not always have their prescriptions refilled at the same pharmacy.

3. The PDC is a passive way of assessing adherence and there is no patient empowerment, communication, or interaction between the Patient and Provider as is required in the Patient Centered Medical Model.

4. The Active MMAS-8 empowers the Patients to self report on their own medication taking behavior directly to the Provider to identify why the patient is not taking their medicine, whether the nonadherence is intentional and tailor interventions that empower the patient for Self-Management of Medications in the lived experience of chronic illness.

New Care Delivery Models – Patient Centered Medical Home

Existing Medical Home pilots have focused on medication adherence as key to goals of patient empowerment and reducing hospital readmissions

- Physician practice designated as a patient's "medical home" to coordinate the continuum of care and improve quality and outcomes

- The medical home model promotes a team based approach = increased collaboration and communication among stakeholders

- Increased interaction among care team of the variety of meds being taken
- Increased patient empowerment focuses on understanding of disease and medications

- Communication among the care teams is essential requiring an extensive use of health IT, including EHRs, e-Rx, clinical decision support, secure messaging and patient/provider Web portals

![Diabetes Self-Management]

Treatment adherence is essential to optimize diabetes outcomes and control health care costs.

Evidence Based

The Morisky Medication Adherence Scale (MMAS-8) was used to identify medication nonadherence in control and intervention groups.

At 4, 8, and 12 months after the provision of the Morisky Medication Adherence protocol, the intervention group has improved medication adherence significantly.

Medication Adherence (MMAS-8)	NIDA Modified ASSIST
SCORE	+/-
2.5	

Assessment Detail

Assessment ID   oKS180lh

Medication Adherence (mmas-8)	
Score	2.5
Intentional	0
Unintentional	2.5

Table 2 Comparison of medication adherence between control and intervention groups based on three levels of adherence

Medication adherence	Frequency (%)		χ^2 (P-value)
	Control	Intervention	
Baseline	n=121	n=120	1.900 (0.387)
Low adherence	43 (35.5%)	36 (30.0%)	
Medium adherence	43 (35.5%)	53 (44.2%)	
High adherence	35 (28.9%)	31 (25.8%)	
Month 4	n=109	n=115	7.310 (0.026)*
Low adherence	48 (44.0%)	31 (27.0%)	
Medium adherence	35 (32.1%)	52 (44.3%)	
High adherence	26 (23.9%)	33 (28.7%)	
Month 8	n=110	n=102	7.289 (0.026)*
Low adherence	46 (41.8%)	25 (24.5%)	
Medium adherence	33 (30.0%)	37 (36.3%)	
High adherence	31 (28.2%)	40 (39.2%)	
Month 12	n=121	n=120	8.182 (0.017)*
Low adherence	50 (41.3%)	30 (25.0%)	
Medium adherence	41 (33.9%)	45 (37.5%)	
High adherence	30 (24.8%)	45 (37.5%)	

What is CAT-MH?

Computer Adaptive Testing **CAT**

- Computerized Adaptive Testing for Mental Health (CAT-MH)

- CAT-DI – extract the information out of 389 items using an average of 12 adaptively administered items.

- CAD-MDD – screen patients with 4 items but maintain 95% sensitivity (87% specificity) with a 1 hour clinician-based DSM diagnostic interview.

- CAT-ANX – extract the information out of 431 items using an average of 12 adaptively administered items.

- The CAT-MH routinely utilizes the **COLUMBIA-SUICIDE SEVERITY RATING SCALE which** is part of a national and international public health initiative involving the assessment of suicidality, including the US Army, VAs, Schools and Primary Care settings. (among others)

Columbia-Suicide Severity Rating Scale (C-SSRS)
Posner et al, 2007

- Developed by leading experts/evidence-based
- Feasible, low- burden (typical admin time 5 minutes)
- Assesses *both* behavior and ideation.
- Appropriately assesses and tracks suicidal all events
- Uniquely address the need for a summary measure of suicidality
- Lethality of Attempts
- Other Features of Ideation
  - Frequency
  - Duration
  - Controllability
  - Reasons for Ideation
  - Deterrents

American Indian/Alaska Native
NATIONAL SUICIDE PREVENTION
STRATEGIC PLAN
2011 - 2015

Objective 6.2.
Increase the proportion of healthcare providers who conduct screenings for depression, substance abuse, suicide risk, and presence of lethal means during routine primary care in efforts to reduce suicide risk.

Recommended First Screen Tool

INDIAN HEALTH SERVICE · PHS · 1955

- PHQ-2 Scaled Version
  - Patient Health Questionnaire

Template: PHQ2 Depression Screening Exam

```
(View Only Text)
Depression Screening Guidelines
-Screen adults 18 years and older annually.
-Report total score 0-2-NEGATIVE
-Report total score 3-6-POSITIVE.
☑ PHQ-2 DEPRESSION SCREENING:
    Over the past 2 weeks, how often have you been bothered by any of the
    following problems?
    1. Little interest or pleasure in doing things
       Response: Not at all          Value:0▼ .
    2. Feeling down, depressed or hopeless
       Response: Not at all          Value:0▼ .
    TOTAL Score: ___  ⦿ Negative ○ Positive ○ Refused ○ Unable to Screen .
☑ Plan:
    ☐  No action required, negative screen.
    ☐  Refer patient to Mental Health for further evaluation.  Patient agrees
       to counciling.  _____
    ☐  Refer to Alcohol Rehab.  Patient refuses counciling/treaetment.
    ☐ Follow up:  _____
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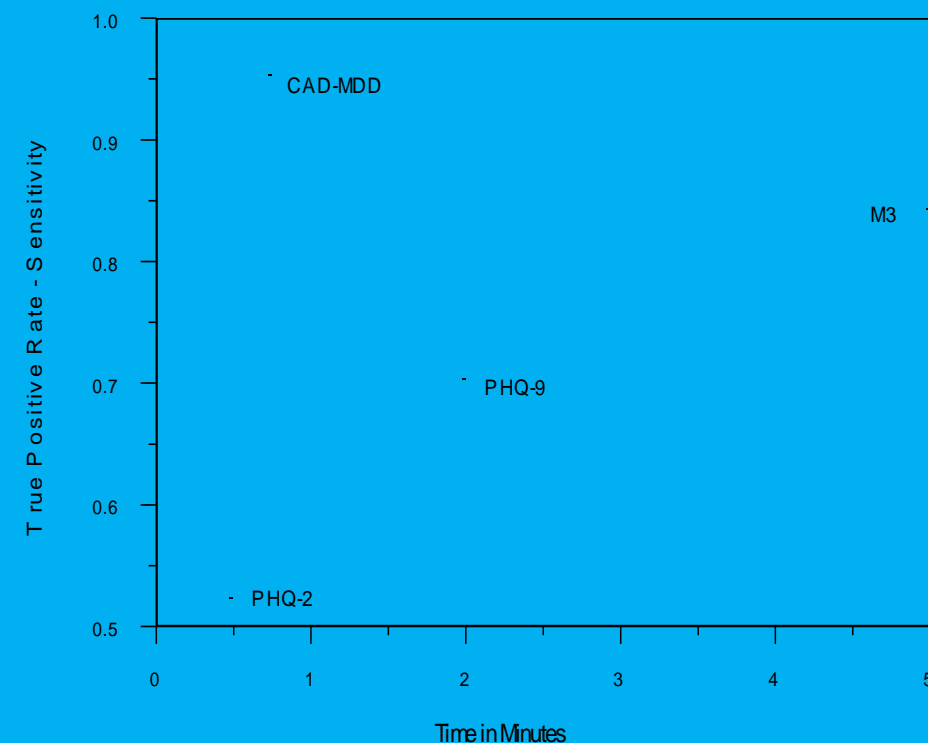
http://www.ihs.gov/california/tasks/sites/default/assets/File/BP2013-DepressionScreening-Stuart.pdf

In a 2014 editorial in the _American Journal of Psychiatry_ written by its senior editor Robert Freedman and Helena Kraelmer, Professor Emeritus of Statistics at Stanford University said that the computerized adaptive tests (CAT-MH) is a truly outstanding contribution to measurement in medicine, and it promises to improve the accuracy and cost-effectiveness of diagnosis of depression. http://ajp.psychiatryonline.org/article.aspx?articleid=1819676 .

Comparison of Diagnostic Screening Tools for Depression

as a Function of Time and Sensitivity

Robert D. Gibbons Ph.D. Department of Medicine University of Chicago

MHIS Depression, Substance Use & Suicide Assessment Workflow

CAD-MDD
C-SSRS
NIDA ASSIST

➕

CAT-ANX
CAT-DI
CAT-MANIA

➕

Triage
Intervention
Treatment
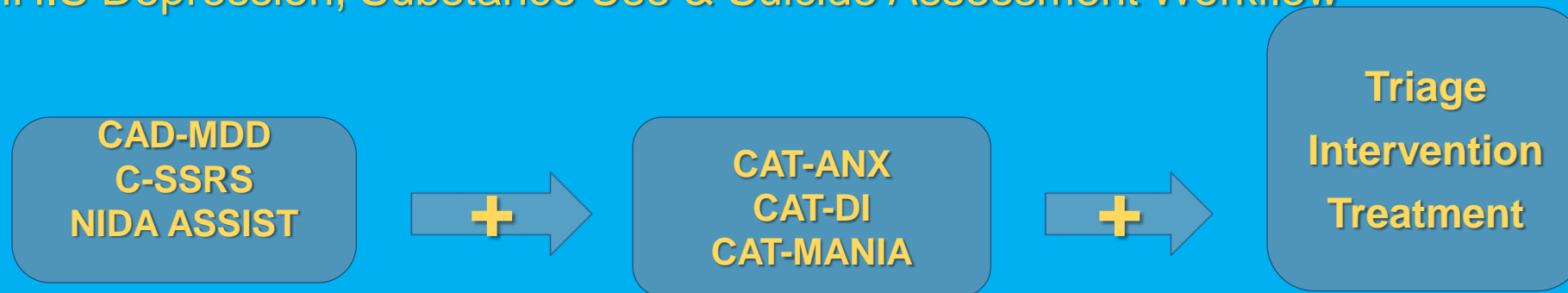
At check-in

When patient is
roomed

In the exam room

As noted in the Institute of Medicine and IHS reports depressive severity is the primary driver
of suicide risk.. Detecting, monitoring and treating depression decreases the risk of suicide and medication nonadherence.

Use Case for MHIS MORISKY Medication Adherence Protocol

- ANYWHERE> ANYTIME Integrated Mental Health, Adherence, & Substance Use Screening and Assessments
- Tailored Interventions OPTIMIZE ART Treatment Adherence for HIV
- Monitoring ART Response & Diagnosis of Treatment Failure

SCREENING ASSESSMENT REPORTING → ⏱ real-time DATA → **TAILORED ADHERENCE INTERVENTIONS** → ⏱ real-time DATA → **COUNSELING TRIAGE TREATMENT**

MHIS

Completed	Suicide Ideation & Intent (C-SSRS)	Major Depressive Disorder (CAD-MDD)	Depression Inventory (CAT-DI)	Anxiety (CAT-ANX)	Mania/Hypomania (CAT-M/HM)	Medication Adherence (MMAS-8)	NIDA Modified ASSIST
	+/-	+/-	SCORE	SCORE	SCORE	SCORE	SCORE
8/10/15, 10:42 AM		+	64.1			3.5	19
7/28/15, 10:29 AM		+	64			2.5	22
7/26/15, 1:12 PM	+	+	72	79		1.5	-

Depression (dep)	
Severity	64.1 (mild)
Precision	4.9
Probability	96.80%
Percentile	45.5
Medication Adherence (mmas-8)	
Score	3.5
Intentional	0
Unintentional	3.5
NIDA Modified ASSIST (nm, assist)	

MHIS MORISKY MEDICATION ADHERENCE PROTOCOL

Encounters	Patient name	Sex	Date of birth	ID number	SBIRT	CATMH	MMAS	A1c	Diet Plan (y/n)	Intervention	Co-morbidities	# of medications	Weight	BMI
	STODGHILL, GEARLDINE	F	7/4/1946	200063354							DM, HTN, OBESITY,SU,MH			
1	BASELINE		6/1/2014		25	87	1	13.9	no	30 minutes	HIGH RISK	6	274	30.71
2	MONITORING		8/7/2014			75	2.5	11.4	y	30 minutes	HIGH RISK	4	261	29.31
3	MONITORING		9/27/2014		16	69	6.5	9.1	y	15 minutes	MEDIUM RISK	4	243	24.44
4	MONITORING		10/13/2014			49	8	6.7	y	15 minutes	LOW RISK	3	218	19.65

100% Sustainable MHIS Payment Models

Primary Care & FQHCs can submit CMS-1500 claims for 100% reimbursement for the MHIS Morisky Medication Adherence Protocol under Medicare, Medicaid, or Private Insurance. There is no cost for MHIS for Uninsured, Homeless, or Incarcerated Populations.

HCPCS, CPT Codes	Type of Code	ICD-9 Diagnosis Code Range
G0108	Diabetes Patient Self Mgmt Trainig	250.00 - 250.93
96150-155	MHIS Non Medical Behavior Assessment and Brief Intervention	use appropriate
GO444, 99201-99205	MD Annual Screening Depression/Depression Claim After Annual	296.21 (mild)296.22(moderate) 296.33 (severe)
G8932	Suicide risk assessed at the initial evaluation	E950.0-E950.9
90791	Anxiety Disorder Assessment Non Medical	300-300.21
90791	Mania/Bi-Polar Assessment Non-Medical	296.00 - 296.99
H0049, 99408	SBIRT Screening	303, 304 alcohol, drug dependence
99401	Hypertension med adherence screen/ intervention risk 15 minutes	403.00 - 405.99
90649, 90650	Asthma medication adherence screening	493.00 - 493.92

Sustainable MHIS Pharmacy Medication Therapy Management Models

Medication Adherence Diabetes Medications
Medication Adherence Anti-Depressant Medications
Medication Adherence Hypertension Medications
Medication Adherence Cholesterol Medications
Medication Adherence Psychiatric Medications
HEDIS Medication Adherence Measures
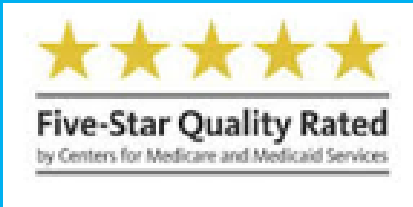
Medicare Prescription Drug, Improvement and Modernization Act

Baseline Screening & Continuous mental health, adherence and substance use assessments with timely and tailored interventions to improve adherence.
Pharmacist can submit monthly claims for a $25.00 reimbursement for Medication Therapy Management under Medicare, Medicaid, or Private Insurance

MTM Codes

CPT Code	Description	Time
99605	Initial patient visit	15 minutes
99606	Established patient visit	15 minutes
99607	Additional time with initial or established patient	15 minutes