Describing Culture-Based Interventions

For Suicide, Violence, and Substance Abuse

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# Preface

*Describing Culture-Based Interventions* has been written for Tribal personnel who are writing up project ideas for grant applications, regulatory approval, publication, or similar purposes. Their bi-cultural competence is called upon to describe ideas and activities that originated in American Indian/Alaska Native cultures, but which must be explained to government and funding personnel of a Western, science-based culture. We hope *Describing Culture-Based Interventions* will help with the conceptual and linguistic challenge. By presenting a pathway for culture-based interventions, it is also hoped that grant reviewers and administrators will gain more insight into the utility of these approaches.

# Acknowledgements

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# Introduction

Interventions for youth suicide, violence, and substance abuse in Indian Country are conducted in a tribal environment in which “culture-based” interventions (CBI) are valued whereas the federal, state, and insurance industry emphasizes Western scientific “evidence-based” interventions (EBI). The difference between the two perspectives creates some difficulties for American Indian/Alaska Native (AI/AN) entities when they seek regulatory approval and funding for services. Therefore, it is useful to describe CBI and supporting evidence in concepts and terms recognized and accepted by the scientifically oriented professional service and government community where regulatory approval and funding lie.

Tribes, the federal Substance Abuse and Mental Health Services Administration (SAMHSA), and the entire behavioral health field are all committed to delivery of the most appropriate and effective promotion, prevention and treatment interventions. SAMHSA, in particular, recognizes the importance of partnership with tribes to build upon practice-based evidence to facilitate the continuing improvement of those services. Furthermore, the concept of EBI is evolving from a strict science-based to a “multiple streams of evidence-based” and from a rigid regulatory application to a “learning health care systems” approach.

The purpose of this manual is to translate CBI into the language and scientific framework used in EBI and to apply the existing scientific knowledge base on youth suicide, violence, and substance abuse to CBI. The goal is to facilitate communication with a scientifically oriented professional service and government community, particularly when preparing grant applications or seeking funding. A further goal is to facilitate project planning, management, and evaluation of CBI.

To begin, we define the basic terms: youth, suicide, violence, and substance abuse.

## Youth and youth development

“Youth” are between childhood and maturity phases of life, about 15-16 to 24-25 years of age. The “youth” phase of life is associated with developmental opportunities and challenges (e.g., family-making, training for employment, employment, and military service), as well as some notable social phenomena such as positive socio-political activism and delinquent gangs.

Youth are the parents, productive people, and leaders of tomorrow who are today in the process of developing social, moral, emotional, physical and cognitive competences to thrive and succeed. Young people build essential skills and competencies and feel safe, cared for, valued, useful, and spiritually grounded when their families and communities provide them with the needed supports and opportunities. Specifically, the outcomes of successful youth development are a sense of safety and structure; high self-worth and self-esteem; feeling of mastery and future; belonging and membership; perception of responsibility and autonomy; a self-awareness and spirituality; health; employability; together with civic and social involvement.

While normal youth development succeeds in the vast majority of cases, it does not always succeed. There are quite a few bumps along the road of normal youth development and a few disasters as well. Among the disasters are youth suicide, violence, and substance abuse.

## Youth Suicide, Violence, and Substance Abuse Defined

Youth suicide, violence, and substance abuse are a subset of many psycho-social ills with many shared causes and consequences besetting Indian Country.

**Suicide and Suicidality**. “Suicidality” consists of feeling depressed, thinking about suicide, taking a few very preliminary steps toward suicide, taking risks, and hinting at suicide. While milder forms of suicidality, violence, and substance abuse are pretty common characteristics of growing up, more severe forms require intervention.

Suicide is intentionally causing one’s own death by such means as prescription drug overdose, illegal drug overdose, poisoning, hanging, drowning, jumping, shooting, cutting, piercing, immolation, etc. Extreme “failure to care for self” is a form of suicidality recognized in civil commitment proceedings. In addition there are fatal accidents which are, in effect, intentional self-destruction. There is exposure to high risk with intent to self-destruct, including police-assisted suicide. And there is long-term gradual self-destruction. Suicidal death is usually an end-point in a longer-term process including instigation, contemplation, checking the idea, desensitization, rehearsal, failed attempts, distress, and disinhibition (by alcohol, drugs, etc.).[[1]](#footnote-1) Suicide typically has traumatic effects on family and friends or admirers—an estimated six persons per suicide.

For all ages world-wide, World Health Organization figures indicate that the rate of suicide is about 15 suicides per 100,000 people per year. The incidence is greater in some AI/AN communities and less in others.[[2]](#footnote-2) For example, the 8-year incident rates for suicide among Aboriginal communities in British Columbia varied from zero to 120 per 100,000.[[3]](#footnote-3)

**Violence: Teasing, Bullying and Harassment**. Youth violence ranges from “teasing,” “bullying” or “harassment” through “assault and battery” to “homicide.”

Harmful teasing, harassment or bullying (we’ll call them all “bullying”) is vastly more common but not as amenable to counting as are suicide, assault and battery, and homicide. There are many forms of bullying, a wide range of severity, and no coroners’ or police reports from which to get counts (incidence and prevalence rates).

Bullying may involve disability-, ethnicity-, and other diversity-based discriminatory behavior. Bullying behavior is often verbal, may consist of systematic exclusion, ridicule, and rumor mongering, and sometimes involves menacing, and painful-but-not-injurious assault and battery (e.g., “binging”). Consequences for the victims may be severe and lasting,[[4]](#footnote-4) depending upon the severity of the bullying and the vulnerability of the victim. Among the serious consequences are extreme avoidance, internalization, or, alternatively, offensive defense and retaliatory tactics adopted by victims. Bullying does not have to involve injurious assault and battery to be deadly: suicides have been attributed to e-mail cyber-bullying.[[5]](#footnote-5)

**Violence: Assault and Battery.** Youth violence also includes aggressive behaviors such as hitting, slapping, or fist fighting. School and gang violence are of particular concern. In addition to causing injury, youth violence undermines communities by reducing safety, interfering with normal peaceful activity, and burdening community institutions.

**Violence: Homicide**. More extreme levels of violence include homicide, such as young people beating their peers to death, knife attack and fights, and shootings. Although extremely rare, random, wanton, multiple-victim, hateful violence, and violence that invades school and family home sanctuaries are especially distressing to the community, motivating policy development, programmatic innovation, and public expenditure.

**Substance Abuse.** There are two reasons for bundling youth substance abuse together with suicide and violence. Substance abuse, itself, causes disability and death. Substance abuse also facilitates suicide and violence by reducing self-control (disinhibiting) and by stimulating aggressiveness. Furthermore, substances of abuse are important commodities in the commerce of crime. Finally, substance abuse is implicated in the majority of suicides and violence.

Youth substance misuse becomes abuse when amounts and patterns of consumption cause serious negative consequences. The harmfulness of substances of abuse includes acute toxicity, toxicity from chronic use, and dangerous method of administration. Societal harm includes consequences of intoxication (vehicle accidents, aggression, and sexual misadventures); detrimental effect on families (neglect of children, theft); and costs to social institutions (health care, enforcement, justice, and corrections).

Abuse can become a life-style which destroys normal youth development and, therefore, the *future of* *the people*, a primary concern in Indian Country.

## Interventions to Reduce Youth Suicide, Violence and Substance Abuse

A large repertoire of interventions exists to reduce youth suicide, violence and substance abuse.

Large amounts of private and public money are spent to support these interventions. Philanthropic organizations such as the Robert Wood Johnson Foundation; federal agencies such as SAMHSA; and tribal, county, and state government departments dispense these monies in a purposeful, structured, and informed way. For example, SAMHSA describes its information requirements and gives guidance on how to provide that information in its *Developing Competitive SAMHSA Grant Applications* manual.[[6]](#footnote-6) In Module 2, the manual identifies a mission statement and its core parts: who we are; what we do; who we do it for; how we do it; where we do it; and why we do it.

*Describing Culture-Based Interventions* is intended to facilitate responding to those purposes, structured application processes, and the information requirements.

The information requirements begin with the questions: is the intervention safe and does it work? Evidence supporting the safety and effectiveness of an intervention are required in order to obtain approval and support. This raises questions about the very nature of “evidence” to which we now turn.

## THE Culture- versus ScienTific evidence-based Intervention ISSUE

Cultures have unique ideas about modes of evidence: knowing, validity of knowledge, and limitations of knowledge (epistemology). Western, scientific research-based epistemology rejects the validity of a traditional epistemologies. Western scientific research-based epistemology is the foundation for Evidence-based Medicine (EBM) and, in behavioral health, evidence-based programs or interventions (EBI).

The concept of EBI was introduced in the mid-twentieth, and became a government mantra about the turn of the 21st century, for some very good reasons. Practitioners were ignoring available research findings on what works while practicing some interventions known to be useless or worse. Meanwhile, costs were escalating. EBI seemed a panacea for those problems. The disorders of health services continue to be real enough, and EBI is helpful, but EBI was found to be a limited cure.

Application of Western epistemology by regulatory and funding agencies—establishing EBI requirements for approval and support— attenuates the opportunity of traditional communities to live by their traditional world view. It undermines the right of AI/AN communities to self-determination (formally recognized and supported by federal government) while participating in the larger social enterprise (specifically, provision of health services) which has been established by the federal government in treaty and *inter alia* as an entitlement.

Culture-based interventions (CBI) are primarily based on “tradition, convention, belief, and anecdotal evidence”. Within the traditional society, these CBI are known and found compelling. Outside the traditional society, the cultural knowledge base is neither known nor appreciated. In addition, some traditional knowledge is considered to be sacred or to have special powers, per se, and may not be shared. Western research methods, per se, may be considered invalid, inappropriate, or even harmful to the interventions and the knowledge upon which they are based. The perspective and concerns of the world outside the traditional culture may be considered irrelevant.

The practical issue is funding and regulation of those culture-based health services: government and private funding sources are increasingly insisting upon EBI. Under the EBI mandate, developers of behavioral health interventions must present evidence meeting certain criteria, in order to be recognized as a promising or model program—and, therefore, able to generate revenue.[[7]](#footnote-7) The evidence is reviewed by committees of scientifically-oriented professionals.

Federal grant agencies, state program funding agencies, and some private funding sources then require recognition as “promising” or “model” programs as a precondition for funding. This generates lists of approvable and fundable interventions. In effect, the scientific perspective maintains control of interventions through the purse strings, whether or not a community agrees with the epistemology.

Concerns about the strict EBI mandate have also been widely and thoroughly argued on scientific and logical grounds by both medical and behavioral health service communities.

Problems with the strict EBI mandate, however, do not mean that science and evidence are of no help. Rather, information to identify and improve safe and effective interventions is generated by what SAMHSA refers to as “multiple streams of evidence” in what the Institute of Medicine refers to as a “Learning Health Care System”.

Fortunately, SAMHSA is currently moving away from a strictly science-based approach and is, instead, leading a “multiple streams of evidence” approach (i.e., culture-, practice-, and science-based) to identifying best practices.

To help traditional AI/AN communities participate in this “Learning Health Care Systems” approach, *Describing Culture-Based Interventions* provides guidance for the description of CBI and puts CBI on the path toward recognition of (what will become in the future) more broadly defined *promising* and *model* programs. This document further seeks existing evidence to support core components of CBI. Like most current medical interventions (which had roots in tradition, convention, belief, and anecdote) scientific evidence must then be found to evaluate the CBI in order to achieve recognition and acceptance. *Describing Culture-Based Interventions* facilitates recognition and acceptance by the science-based service and government community with a “scientific framework” for describing CBI.

# The “Evidence” in Evidence-Based Interventions

By the turn of the 21st century, EBM and EBI had become faddish, both ill-founded and dysfunctional. While EBM and EBI are returning to a well-founded and functional application, there are still some inappropriate mandates in force which are troublesome for appropriate application of CBI.

To go beyond the CBI versus EBI issue, we need to look more closely at the nature of “evidence” in EBI. The study of epistemology, in general, and of science, in particular, quickly leads to an understanding that no knowledge or no evidence is absolutely true or valid or dependable. Quite the contrary.

Scientific research evidence is information obtained by research design, measures, and data analyses. There is a great deal of merit in looking to scientific evidence-based services. However, a good understanding of evidence in the context of behavioral research and behavioral health treatment and prevention practice is also important.

A key concept in the recent Western tradition of “evidence-based medicine,” “evidence-based interventions,” “model and promising programs,” “best practices,” etc., is that an *active ingredient* exists in each intervention/practice/program which may be discovered by *internally valid*, *randomized,*  *controlled* trials employing *dependable* measures of the intervention and the outcome (or end-point).

Further, the names of Best Practices found on lists such as the National Registry of Promising Practices (NREPP) sometimes seem to suggest that the active ingredient is somewhere in the words chosen for the name. However, tables of contents in program manuals reveal that the behavioral health interventions/practices/programs found in Best Practices lists are, in fact, frequently combinations of the same, often imprecisely described core components. A little less obvious is that the core components, themselves, consist of a multitude of “active ingredients” including “warmth,” “directiveness,” “intensity,” “expertise,” and other well known, fundamental aspects of most efficacious behavioral health interventions.

The characteristics of effective interventions are often *confounded* with the characteristics of effective research methods and measurement by which they are determined to be effective. Confounding of trait and method is a well known problem in behavioral research. For example, in the study of effective psychotherapy, behavioral interventions tend to look good in reviews of scientific research. But behavioral interventions, behavioral outcome variables, and behavioral measures are related in ways other than the efficacy of the intervention (i.e., are *confounded*).

A very important source of misunderstanding is the practical relationship between “internal validity” (which proves “efficacy”) and “external validity” or “generalization” (which is where an intervention may or may not be “effective”). Rigorous pursuit of “internal validity” requires highly expert practitioners, selected subjects, and controlled laboratory conditions. We know that outcomes vary to greater or lesser extent when diverse community practitioners apply scientifically tested intervention protocols to diverse community persons/populations of focus under diverse real-life community conditions.

The rigorous pursuit of internal validity (which proves “efficacy”) actually diminishes potential external validity or generalizability or “effectiveness.” It is simply impossible to test an intervention protocol for every set of practitioners, persons/populations of focus, and conditions found in real-life practice. The laboratory-proven efficacious intervention is of unknown effectiveness in real-life application. So one cannot maintain a strict “scientific evidence-based” criterion for choice of acceptable interventions in diverse circumstances. This fact leads to a conundrum for strict EBI mandates: disseminating EBI logically forces us to fall back on the same kind of reasoning used for evaluating Practice-Based and Culture-Based Interventions.

Another source of misunderstanding about evidence supporting the effectiveness of interventions is statistical issues like *sample* and *effect* *sizes*. For example, large samples can detect statistically significant effects of theoretical interest, but which are, however, too small to be of any therapeutic or preventive significance.

*Surrogate* measures (e.g., measuring attitude change as a surrogate for changes in rates of suicide because the former is more convenient to measure) are also a technical source of misunderstanding of effective intervention. Many interventions cause changes in the surrogate with no effect on the ultimate outcome/end-point, while some interventions have caused positive changes in the surrogate while causing unexpected negative changes in the ultimate outcome/end-point. Not having a practical alternative to surrogate measures does not render them valid.

Altogether, the concept of “replication with fidelity” of an intervention consisting of a scientifically identified active ingredient (cause) with a validly measured outcome/endpoint (result) in an internally valid trial is a simply misunderstanding of the reality of science and of behavioral health intervention. It is illogical to impose a strict EBI mandate. Rather, scientific evidence contributes important understanding, together with other streams of evidence, to a learning health care system.

## Beyond the Randomized, Controlled Experimental Trial

Several common components of behavioral health interventions, especially CBI, make internally valid scientific research especially challenging:

* Choice is a powerful factor in making an intervention work, which rules out randomization in research design.
* Self-healing belief is guided by expert healers, which rules out “blinding” and “double-blinding” in research design.
* Guided development of unique interpersonal relationships is a crucial determinant of health and thriving, which rules out “control (of treatment conditions)” in research design.
* Complex webs of inter-related and reciprocal factors are not reducible to simple, linear causal models which practically rules out the isolation of single active ingredients.

These characteristics of behavioral health provide little opportunity for randomized, controlled experimental trials. However, important, useful evidence is also found by methods other than controlled research, e.g. various qualitative designs; case study (story telling; community story telling); case control for rare incident studies; follow-back analyses of secular trends; and natural experiment (program evaluation, policy research).

There are many programs, practices, and intervention strategies whose purpose is to prevent youth suicide, violence, substance abuse and to promote health and thriving. To a large extent, these strategies are supported by **practice-based evidence**. Practice is a powerful source of evidence because large numbers of trained providers experience trial-and-error learning on a continuous basis in a real world setting.

The methodology used to identify and evaluate evidence involves:

* Assembling experts
* Presentation and submission of published, especially, experimental evidence
* Compiling the practice-based evidence of participants and their colleagues
* Debate
* Consensus

The methodology is used for accumulating, reviewing and judging the:

* Evidence practice guidelines (by professional associations)
* Program standards (accreditation and standards organizations)
* Resource materials (non-governmental advocacy organizations)
* Governmental strategic plans
* Other bodies of knowledge in which practice is the best source of evidence

Practice-based evidence is developed and documented in conferences, professional guidelines, and world-wide government plans for youth suicide, violence, and substance abuse intervention.

## Application of Evidence: “Adaptation-Adoption”

We have shown above that replication of an EBI varies according to diverse characteristics of practitioners, person/populations of focus, and conditions. The Surgeon General’s Report[[8]](#footnote-8) attributes at least 50 percent of a program’s success, not to the protocol, but to aspects of implementation. Aspects of implementation include nature of the local problem, needs of the target population, receptiveness of the setting, leadership commitment, practical implementation tactics, and local ownership. The protocol is extensively reshaped by these local considerations.

Understanding dissemination of evidence-based interventions/practices/programs requires understanding the role of “adaption” in the dissemination, adoption, and implementation of “best practices.” In addition to finding that EBI can be implemented among diverse groups, Miranda et al.,[[9]](#footnote-9) note that interventions must be adapted to both subcultures and individuals. Adaptation for the local context (individual, community, and culture) includes engaging the interests (economic, social status, and other interests) of the stakeholders as well as their beliefs and conventions. In the end, every replication is and must be an adaptation which makes it a Culture-Based Intervention to a greater or lesser extent.

The point here is not how innovations are disseminated, but that every EBI exists locally *only* as an adaptation. Therefore, a locally developed CBI may be logically related to an EBI using cultural appropriateness as the translation. Our first task is only to make that translation plausible. This reverse translation work was also explained and demonstrated in an important White Bison publication.[[10]](#footnote-10)

One Sky Center’s work includes providing technical assistance for the adaptation-adoption process ().



Figure 1. Technical Assistance for Adaptation-Adoption

## Sources of Evidence for Culture-Based Interventions

We have shown above that finding evidence for CBI is a much broader intellectual process than testing a pharmacologic entity. We can find evidence for CBI in several ways:

Directly testing CBI in a scientific fashion

For example, model programs have been tested for AI/AN populations and listed by NREPP.[[11]](#footnote-11) Project Venture, American Life Skills/Zuni Life Skills, Dialectic Behavior Therapy, and ...Stop Bullying have been directly evaluated in actual AI/AN practice and found effective.

Cultural adaptation of EBI

Evidence for the CBI is provided by research on the EBI. For example, the EBI, Motivational Interviewing/Enhancement[[12]](#footnote-12) [[13]](#footnote-13) has been adapted by One Sky Center[[14]](#footnote-14) and by the University of New Mexico[[15]](#footnote-15) for use in AI/AN programs. Inferences about effectiveness rest on trials conducted elsewhere.

CBI analogous to EBI

Evidence for the CBI is by analogy from research on the EBI. For example, the EBI, Cognitive Behavioral Therapy (CBT) is fundamentally similar to many CBI. For example, elder mentoring for youth shapes cognitions in youthful participants in ways that contribute to healthy feelings and behavior. Sweat Lodge procedures explore triggers for risky behavior, alternatives are identified, and participants’ thoughts and attitudes are changed toward more harmonious and constructive directions.

Using proven theory, principles and facts

A “learning health care system” integrates and reasons from the entire body of knowledge. Evidence supporting a CBI exists in the theories, principles, and facts of the CBI which have been proven in scientific research. For example, a “nation-building” strategy uses theory, principles, and facts scientifically proven by LaLonde and Chandler on the relationship between community control of local institutions, continuity of identity in individuals, likelihood of suicide in individuals with or without such identity, and community suicide rate with and without community control.[[16]](#footnote-16) This empirical work is a cornerstone of Canadian Aboriginal policy and is also beginning to be adopted in the US.

Scientific review papers commonly assemble evidence from studies of comparable programs, practices, and interventions. The evidence is then evaluated, leading to a conclusion about the probable safety, efficacy, and effectiveness of the intervention. A considerable body of knowledge exists at the intervention strategy level, which we summarize below. Some review papers are specific to indigenous peoples and some to American Indians and Alaska Natives.[[17]](#footnote-17) [[18]](#footnote-18) These questions, answers, evidence, and evaluation of evidence are also steps along the path to NREPP recognition.

# A Scientific Framework for Community-Based Interventions

None of the limitations and problems with science mean that scientific research evidence is unimportant. While scientific research yields less absolute truth, validity, and dependability—and CBI can have a more valid and dependable basis—than a strict EBI mandate presumes, Western scientific research still has a great deal to contribute to our understanding of the safety and effectiveness of interventions to reduce youth suicide, violence, and substance abuse.

The Western scientific perspective emphasizes theory, deductive reasoning, mechanistic models, verifiable prediction, experimental testing, objective observation, and mathematical analysis of quantitative information. This perspective is referred to as the “scientific framework.” The enormous material success of the scientific framework has led to its widespread acceptance and dominance in most sectors of life, including the regulation and funding of health services.

The scientific framework is, firstly, an approach to description. Within this scientific framework, we have identified several models to help describe CBI: the ecological model, prevention models, a logic model, and operational manuals. The following sections describe each of these models.

## An Ecological Model for Understanding Youth Suicide, Violence, and Substance Abuse

Ecology refers to the web of relationships among humans, animals, plants, natural forces, and land forms. To conceptualize the many forces driving youth suicide, violence, and substance abuse (especially the relationships among those drivers) public health professions use an ecological model. Today, the “ecological model” is used by the Center for Disease Control (CDC) Injury Center, World Health Organization (WHO),[[19]](#footnote-19) [[20]](#footnote-20) medical field,[[21]](#footnote-21) and others to understand and deal with youth suicide, violence, and substance abuse.

While the shape and words of the ecological model vary, the basic ideas are that individual behavior is the result of interactions among the individual (throughout his/her life course) and sectors of his/her social environment. The social sectors are separated into those earliest/closest and those further away from the individual.



Figure 2. Ecological model for understanding youth suicide, violence, and substance abuse

Here, we modify the WHO model to analytically classify the contributing factors to youth suicide, violence, and substance abuse into four domains: interpersonal (family, peer and close relationships); community (school, work, local culture, and social institutions); and the broader society (especially the tribal and American Indian and Alaska Native cultures). This is merely one way of picturing an ecological model; other configurations would do as well.

## Prevention Model

Prevention is distinguished from treatment and rehabilitation in terms of *timing* of the intervention relative to the course of illness, injury or disorder. **Prevention** occurs before an illness emerges; **treatment** occurs when the illness emerges; and **rehabilitation** occurs after illness. Prevention is also a forward-looking *attitude* and *perspective*. That is, prevention involves looking forward to the next negative consequence to avoid and the next healthy option to pursue. **Primary** prevention is to prevent an illness from ever occurring (or to reduce the number that occur). **Secondary** prevention is to prevent an illness from becoming more severe or long-lasting. **Tertiary** prevention is to prevent long-term or severe disability from setting in after an illness. Even in the case of death, there are adverse consequences for the family, community, and culture to be avoided and healthy options to be pursued, if one is thinking preventatively.

In the last 10 years another prevention model has been adopted by the Institute of Medicine and federal agencies. This one focuses on the *population of focus* fora preventive intervention. **Universal** prevention is directed to an entire population or subpopulation before an illness occurs. **Selective** prevention is directed to a population of people currently at significantly high risk of the illness. And **Indicated** prevention is directed to a population of persons who currently have the illness, injury or disorder.

It is very helpful to identify which type of prevention one is using for youth suicide, violence, or substance abuse. The logic of universal (or primary) prevention strategy is very different from the logic of indicated (or rehabilitation or tertiary) prevention. The preferred universal prevention strategies are public education, school curricula, and environmental changes; the preferred strategy for selective prevention may be family strengthening; while the preferred strategy for indicated prevention will often be intensive treatment. Similarly, the logistics are very different. Universal prevention involves a very large target population and the cost of the intervention per person must be very low.

## A Logic Model for Culture-Based Interventions

In the scientific framework, a program or intervention is diagrammed using a “logic model.” The logic model guides description of a project by specifying what kind of descriptive content should be used, and how it should be organized. It identifies key functional relationships to be explained (e.g., logical relationship among causes of the problem, interventions, and outcomes). Logic models are vitally important for grant writing, as well as planning, project management, and program evaluation. For example, the commonly used project logic model, *input-activities-output-outcome* is used in the WK Kellogg Evaluation Handbook.[[22]](#footnote-22) When a group of people builds a logic model together, the logic model also helps the group process by providing a structure for bringing together diverse facts and perspectives.[[23]](#footnote-23) RAND’s “Getting to Outcomes”[[24]](#footnote-24) and the University of Kansas’ “Community Toolbox”[[25]](#footnote-25) use logical models in a stakeholder group context.

We often start a community project with unarticulated, unsystematic, and unconnected ideas. Most people have plausible but inexplicit theories about youth suicide, violence, and substance abuse and how to fix them. The purpose of a logic model is to make those ideas explicit, focused, and logically related.

Logic models, too, are powerful communication devices. The logic model helps to bridge the gap between CBI and EBI. A CBI may initially be described as intervening in “a good way” according to an Elder’s knowledge of tradition, together with his or her wisdom and experience. While paying respectful attention is culturally appropriate and productive, translation into a scientific framework can also be feasible and useful. While premises of the CBI may include references to the spiritual, analogous natural facts and principles can be found to express similar ideas. Behind traditional ways of doing things, there are often concrete facts and reasoned inferences. Beliefs, rituals, and artifacts can be treated both reverentially and as subjective phenomena described objectively. Thus we get from the original formulation of a CBI to a formulation that can be useful for communicating with regulators and funders.

The project theory can be represented in a general logic model as follows ().



Figure 3. Logical Model for Youth Suicide, Violence, and substance abuse Prevention and treatment Interventions

To traditional audiences (and legislative bodies) a story is often the best way to describe (by metaphor) the principles of an intervention. For example, Don Coyhis of White Bison, Inc. uses a story about babies falling in the water to illustrate primary/universal prevention. He also uses a story about forests to illustrate cultural revitalization as a healing intervention.

The logic model introduces a conceptual approach and a knowledge base more familiar to a science-oriented community. Logical description is an important mode of reasoning in a science-oriented community. Just by being phrased in the terms of this model, the CBI is logically justified (i.e., has face validity) to a funding and regulating community. Indeed, the majority of currently accepted, funded, in-practice Western psycho-social interventions can claim little more than face validity, testimony, and anecdotal support—but they are described in a logically acceptable way.

The logic model has even more power. Using a logic model facilitates theoretical and logical scrutiny which strengthens credibility. The logic model lends itself to research design and measurement, which renders the intervention more amenable to independent evaluation and replication. That, too, strengthens the credibility of the intervention.

The logic model also has local utility. It stimulates a critical, rigorous review of an intervention by the CBI participants, themselves. This internal review is helpful even when underlying belief in the intervention rests on tradition. Reconsidering presumptions about cause leads us to consider additional information and to redesign the approach accordingly.

## Program Manuals

In addition to the strength of supporting evidence, NREPP recognizes and values manualization. Manuals are of major importance in dissemination and contribution to the “learning health care system.” The rationale for a logic model for CBI includes its utility for assessment, planning, and management of an intervention. Manualizing the intervention may lead to better scaling of the effort and allocation of resources. A manual also makes it easier to train and manage project personnel. Mapping the chain of short-medium-long term outcomes may lead to a more realistic focus.

So, rigorous description of a CBI with a logic model within the scientific framework is useful in today’s regulatory and funding environment, as well as for project management. And a program manual “grounds” the logic model. It covers a series of materials and activities as indicated in the table of contents below.

The manual referred to below is for an intervention known as *Gathering of Native Americans (GONA).* GONA is a 4-day gathering for Native Americans who want to become change agents, community developers, and leaders. The GONA is based on several ideas: community healing is necessary for prevention; healthy traditions in the Native American community are key to effective prevention; the holistic approach to wellness is a traditional part of Native American belief systems; every community member is of value in empowering the community; and the GONA is a safe place for communities to share, heal, and plan for action. The GONA manual is downloadable from the SAMHSA website. [[26]](#footnote-26)

|  |  |
| --- | --- |
| [I.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#I.) | Introduction |
| [II.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#II.) | Philosophical Overview |
| [III.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#III) | Values of the Gathering of Native Americans Curriculum |
| [IV.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#IV.) | Target Audience |
| [V.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#V.) | Pre­Registration |
| [VI.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#VI.) | Registration |
| [VII.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#VII) | GONA Training Coordinator (TC) Job Description |
| [VIII.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#VIII) | GONA Trainer Qualifications |
| [IX.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#IX.) | Trainer Preparation |
| [X.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#X.) | Evaluation Process |
| [XI.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#XI.) | Regional Cultural Considerations in Opening Ceremonies |
| [XII.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#XII) | Logistical Considerations |
| [XIII.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#XIII) | Module Overview |
| [XIV.](http://preventiontraining.samhsa.gov/CTI05/GONATOC.HTM#XIV) | Trainer Outline Summary-AGENDA |

## Guide to the Logic Model for Culture-Based Intervention Projects

How do we actually use the logic model to help translate a CBI? The logic model can be expressed as a set of eight questions addressed to those planning or leading or participating in a culture-based intervention (CBI). The questions can be asked at any point(s) in the problem assessment, project planning, and management phases of the project. The venues for questions can be in-person or telephone consultations, program review meetings, focus groups, or planning group meetings. Each question can refer specifically to each of the individual; relationship; community; and culture domains. The questions can be discussed in any order; however, they are presented here in the order appropriate for use in grant applications. Good answers to these questions yield content for grant proposals in the language of the science-oriented service and government community.

### Causes of youth suicide, violence, and substance abuse.

*Introduction: There may be many causes of youth suicide, violence, and substance abuse. These causes may fall into individual, family, community and/or cultural domains.*

*For example: personality or character; mental illnesses like depression or soul sickness; substance abuse; isolation; unemployment; family conflict and disintegration; negative or negligent community attitudes; loss of culture with which to inspire and guide youth; institutional and official incapacity or corruption; infiltration and exploitation by criminal elements; etc.*

***“What causes of youth suicide, violence, or substance abuse is your CBI focused on?”***

### Population of focus

*Introduction: Many kinds of people, families, components of communities, and/or components of the culture, may be affected by—and affect—youth suicide, violence, and substance abuse.*

*For example: isolated persons; school-aged children; youth (16-24); school drop-outs; single parents; care-takers who have themselves been traumatized; urban migrants; the 10% of the people that have 90% of the problems; etc.*

***“Who/what population is your CBI focused on?”***

### Intervention Strategy

*Introduction (strategy): There are three ways of describing your intervention. First, your CBI uses a general strategy.*

*For example: Mentoring of youth by Elders; Talking Circles; Sweat Lodge ceremonies; Youth development; Community Healing ceremonies and rituals; Community assessment, mobilization and planning; Cultural restoration and renewal.*

***“Which kind of strategy does your CBI use?”***

### Intervention Theory of Action

*Introduction (theory of action): This is the second way to describe your intervention. You have a theory about how or why it works (“theory of action”).*

*For example, Wiping of Tears allows people to release their grief, emotionally let go of a dead person, and get on with life. Mentoring by Elders gives youth guidance in successfully navigating life’s challenges and passages. Close monitoring and supervision mitigates violent peer norms.*

***“How does your CBI work? What is your “theory of action” about how the CBI addresses the causes of youth suicide, violence, or substance abuse for your CBI’s population of focus?****”*

### Program Manual

*Introduction (program manual or any how-to-do-it documentation): The third way to describe your intervention is by saying exactly what you do, step-by-step. Your CBI strategy consists of a number of separate steps, actions, or “how-to-do-it” instructions. These steps may be written down in an implementation plan or program manual.*

***“What are the steps in implementing your CBI? Do you have a manual?****”*

### Outcomes—short-term

*Introduction: You intend to make a difference with this CBI. What will change when your efforts (CBI) are successful? You may expect outcomes happening many years down the road, but there are also short-term and medium-term things that happen on the way to the long-term outcome.*

*In the short term (at end of intervention) the outcomes might be acquired knowledge, skills, attitudes, community plans, or agency agreements.*

***“What will be the short-term outcomes of your CBI? What measures or indicators of these outcomes will there be?”***

### Outcomes—medium-term

*In the medium term (e.g., six months after end of intervention) the outcome may be family re-integration, employment opportunities, or community control of services.*

***“What will be the medium-term outcomes of your CBI? What measures or indicators of these outcomes will there be?”***

### Outcomes—long-term

*In the long run (e.g., one to five years after intervention), the outcome may be a drop in the youth suicide or violence rates, or involvement of all tribal members in community ceremonies.*

***“What will be the long-term outcomes of your CBI? What measures or indicators of these outcomes will there be?”***

These questions result in a logical description of the CBI which is inherently credible, amenable to measurement and testing, and useful for further assessment, planning, and project management purposes. That description will meet the information requirements for SAMHSA and other granting agency Requests for Application/Proposal. This will also be a major step along the path to recognition as a promising program by NREPP and similar entities.

# Causes of Youth Suicide, Violence, and Substance Abuse

The first question in the logic model () concerns the causes of youth suicide, violence, and substance abuse.

***“What are the causes of youth suicide, violence, and substance abuse (or their positive alternatives, health and thriving) you are addressing in your CBI?”***

Indigenous cultures have theories about the causes of youth suicide, violence, and substance abuse which are understandable to Western health practitioners, researchers, and administrators. While the emphases, words, and narrative details vary, most of the world’s cultures have historically considered youth suicide, violence, and substance abuse a result of being out of balance within oneself; lacking harmony with the natural and spiritual environment; disobedience of a supernatural will; or possession by or under the influence of evil power.

Most people want to believe that instances of suicide and violence are predictable and preventable. While the causes of any single case of suicide or lethal violence may be understandable in retrospect, predicting what an individual is going to do before he does, and predictions from unique risk and protective factors or simple sets of factors, are imprecise at best. (This is a common problem with population health screening programs.)

Here is the statistical idea: the *incidence* of suicide and lethal violence are extremely low (i.e., on the order of 1 or 2 per year in a community of 10,000 persons), the identified predictors are neither highly *sensitive* nor *specific*, there are unknown *confounding* variables, and measurement is neither highly *reliable* nor *valid*. Even coroner classification of death by suicide, homicide, disease (e.g., cirrhosis of the liver) or accident is not totally accurate.[[27]](#footnote-27) Such misclassifications happen randomly as well as for systemic reasons. Just one misclassification among 10 or so persons (the approximate annual rates of suicide and homicide per 100,000 persons) amounts to a huge 10% measurement error which weakens valid attribution of a rate change to cause (such as a suicide prevention program).

Similarly, basing interventions on predicting which *individuals* are actually going to suicide or commit homicide is problematic. There are cases of suicide and lethal violence in spite of many protective factors and in the absence of risks factors (*false negative*).[[28]](#footnote-28) More importantly, a vast majority of individuals subject to risk factors and a lack of protective factors do not complete suicide or commit lethal violence (*false positive*). In several retrospective studies, specific signals (such as statement of intent to kill) were found to have preceded acts of violence.[[29]](#footnote-29) Although such warnings may seem plausible predictors in general, we do not know how many signals were not followed by violence—probably a great many.

There is some uncertainty in the accuracy of any prediction. There is also some risk of *harm* done by any medical, social, legislative, educational, or other intervention. If the potential harm is worrisome, anyuncertainty in the predictor variable for a low incidence problem can reduce predictive accuracy to a point where the statistically potential harm of an intervention begins to be greater than the statistically potential benefit.

There may be reason for intervention anyway. Some signals of impending violence indicate very serious pathology needing immediate and intensive intervention, regardless of the statistical prediction of future violence or suicide or the cost of intervention with those individuals. Physical fighting, harassment, and intimidation are quite prevalent and even normative in some communities. Domestic violence also contributes to the culture of violence. An underground economy in illegal drugs, theft, and prostitution contaminates the community environment and worsens the risk of youth suicide and violence. Ameliorating these “predictors” justifies intervention in their own right.

Otherwise, for a low frequency problem, the intervention must be very low risk and must have sufficient cost-benefits for false positives to justify the intervention independently of the cost-benefits for true positives. Reducing many of these risk factors and, especially, increasing many of the protective factors, is justified if doing so (1) is inherently beneficial to the persons directly affected by the intervention, (2) is also beneficial to the general wellbeing of individuals, families, communities, and the wider society, and (3) carries a low risk of harm to either..

If identifying specific individuals or specific predisposing or precipitating conditions is not a highly effective component of prevention, what is? In a world of youth suicide, violence and substance abuse better described by uncertain, probabalistic than by certainty principles, how can we focus and organize prevention efforts?

The combined knowledge of Indigenous, professional, non-governmental organization and government literature indicates that youth suicide, violence, and substance abuse are not caused by single uncomplicated factors acting in a linear fashion. Youth suicide, violence and substance abuse are caused, in a probabilistic fashion, by complex mixes of multiple determinants. These include a community sense of powerlessness; absence of community life-sustaining institutions (life passages ceremonies); lack of rewarding and behavior-shaping family roles; lack of valued productive and community roles; losing one’s way in life; personal losses; mental illnesses (esp., conduct disorder, depression); substance abuse; contagious example (copy-cat); preoccupation with self and lack of consideration for others; realistic appraisal of worse-than-death prognosis; realistic appraisal of threats to survival; and other factors.

Attempting to reduce youth suicide, violence, and substance abuse must inevitably deal with the whole gamut of underlying factors which drive these particular indices. Indeed, it must necessarily improve health status and thriving across the board; it must facilitate and enrich the normal process of youth development into adulthood.

## Causes in the Individual Domain

The first domain in both traditional and modern Western public health approaches is the individual domain of the ecological model (see Figure 2). Some individual factors like morals, ethics, thinking patterns, identity, etc., are greatly influenced by the individual’s environment and teaching/rearing. Other individual factors are more internal. Everybody’s bio-chemistry is somewhat different; some people’s bio-chemistry can cause mood and behavioral problems leading to youth suicide, violence, and substance abuse, for example, abnormal corticotrophin-releasing factor levels, serotonin turnover, and cholesterol levels.[[30]](#footnote-30) Further, pathological unhappiness, hopelessness, and over-reactivity are individual abnormalities in brain function, not just bad habits.

New evidence is emerging that stressful, aversive environments impact the parents’ biochemistry which is then passed on to their children.[[31]](#footnote-31) [[32]](#footnote-32) The inheritance of acquired characteristics, without change in the genes on the DNA, is “epigenetics.” [[33]](#footnote-33) [[34]](#footnote-34) To date, epigenetic mechanisms have been associated with a number of syndromes, including diabetes. Historical trauma and the effects of cultural oppression are considered explanations for some pathologies in Indian Country, but a mechanism by which these effects were transmitted down through the generations had not previously been proposed. Epigenetics could become extremely important as a mechanism with which to explain historical trauma and trans-generational physical and behavior health problems, including a vulnerability to youth suicide, violence, and substance abuse.

A well researched model of an individual characteristic increasing the risk of suicide is the “stress-vulnerability” model.[[35]](#footnote-35) [[36]](#footnote-36) In this model, some individuals are (due to their genetic makeup) more vulnerable to the levels of environmental stress than others. The vulnerability can be so great as to require treatment and care in order to prevent suicide, violence, or substance abuse.

Clinicians and crisis workers encounter mental illness and substance abuse in most suicidal and violent individuals. The huge amount of literature on suicide has recently been reviewed and evaluated by a world-wide panel of experts.[[37]](#footnote-37) Consensus among these experts is that individual mental illness and alcohol/drug abuse are involved in, and immediate drivers of, the preponderance of suicides. The majority of violent crime reports also cite alcohol as a causal factor.

The fact that these individuals are identified as needing intervention for other, serious clinical reasons also reduces the problem of focusing efforts to prevent youth suicide, violence, and substance abuse. Indeed, suicide, violence and substance abuse prevention protocols are routinely applied during treatment these individuals.

Joiner described individual neurobiological and social personality factors in two integrative review papers.[[38]](#footnote-38) [[39]](#footnote-39) The neurological review explores overall heritability, specific genetic variants, and serotonergic variants. The psychological review explores diagnostic correlates, substance use, hopelessness, social isolation, impulsivity, aggression, ineffectiveness, and altruism (“making others better off”).

Joiner’s bottom line is that there is no simple one-factor theory; suicide is an end-point in a long-standing process. He offers an interpersonal-psychological theory to embrace the multiple factors.[[40]](#footnote-40) People gradually acquire the ability to complete suicide through practice with self-injury. The sub-suicidal self-injury is driven by impulsive behavior which is driven by serotonergic dysregulation. This ability to complete suicide is engaged when a desire for death emerges. The desire is created by a sense of burdensomeness and a lack of belonging (disconnectedness) to a valued group or individual. Among the factors contributing to these suicide-drivers are childhood physical and violent sexual abuse.[[41]](#footnote-41) This theory offers a framework for comprehensive interventions, including cognitive behavioral therapy, selective serotonin reuptake inhibitors, and interpersonal reconnection.

Bottom line: some people have something wrong inside them that drives them toward youth suicide, violence and substance abuse. That something is a medical, developmental, or spiritual type of problem.

## Causes in the Interpersonal Domain

Beyond the individual domain in the ecological model are family and other close interpersonal relationships, notably, peers (see Figure 2).

. The family consists of roles providing vital support and structure for the individual. Nurturing, protective and instructional environments are required for normal child development. Men and women depend upon each other for caring, support, and safety. A well-functioning family provides an opportunity for healthy behavior and personal satisfaction.

Dysfunctional and broken families are a major cause (and, also, a consequence) of emotional and behavioral problems. Family dysfunction and breakdown are prevalent in some AI/AN communities. Neglect and abuse in such a close and sensitive arena as family life wreaks immediate havoc with functioning as well as with personality, emotional, and social development.

Family dysfunction is, in part, a consequence of substance abuse and loss of productive roles for men, both resulting from destruction of the indigenous way of living, its challenges undermined and supplanted by a meager welfare system. Family dysfunction and break-down are also causes: they deprive children of nurturance and guidance which instill emotional health, coping and life skills, and a sense of security, cultural continuity and self-respect. Lack of effective parenting transfers control of children to peer groups which lack cultural identity and good purpose.

Bottom line: some families need support and strengthening, especially, in delivering adequate child care, but also in spouses caring for each other. That support and strengthening is typically a focus of social work, whether as a public or religious service. Supplementation of parental nurturance and guidance is typically a focus of school counseling and behavioral psychologists. Countering, or positively transforming peer group norms, is typically the focus of innovative social activists.

## Causes in the Community Domain

Beyond the individual and interpersonal domains in the ecological model is the community domain (see Figure 2). The community domain includes work settings, school settings, community institutions, social activities, and community norms, etc. Community functions include the regulation of social interactions, especially aggression. Social dominance or the pecking order affects physiology, including blood pressure, testosterone level, glucocorticoid level, as well as posture, mannerisms, and social tactics. Directly and indirectly, the community regulates suicide, violence, and substance abuse.

Communities provide an important opportunity for individuals to find meaningful roles with consequent satisfaction and healthy behavior. One indicator of healthy communities is control of social services and institutions—that is, control over things affecting the conditions of community life. Chandler and LaLonde have related the level of control to individual identity and to both individual suicide and community suicide rates.[[42]](#footnote-42)

This also relates to the theory of “social capital.” Individuals in healthy communities with abundant social networks thrive and prosper along with their community. Powerless, conflicted, non-thriving communities deny individuals identity and constructive outlets. They deny individuals the opportunity to participate in the engaging, rewarding, life-long occupation of community living and thriving. Consequently, individuals have low levels of trust and reciprocal obligation which would, otherwise, have been assets to the community.

AI/AN rates of youth suicide, violence, and substance abuse vary from exemplary to catastrophic. Such differences are seen among First Nations communities in British Columbia, Canada,[[43]](#footnote-43) and between Maori and Pacific Islanders in New Zealand.[[44]](#footnote-44) [[45]](#footnote-45) Catastrophic health status in those tribal communities is attributed to the destructive impact of colonization on indigenous culture. Exemplary health status in other tribal communities is attributed to self-governance, cultural integrity, and similar conditions.

Bottom line: community structure and functioning is a source of health and thriving of individuals (and families); structural defects and dysfunction in communities contributes powerfully to youth suicide, violence and substance abuse. Improving the structure and functioning of communities is typically the focus of advocates and coalitions.

## Causes in the Cultural Domain

It is useful for thinking about interventions to consider culture as that which goes beyond individual, interpersonal, and community domains (see Figure 2). The powerful role of culture—beyond individual, interpersonal, and community factors—is identified in most youth suicide, violence, and substance abuse prevention plans.

Culture includes language (even minor differences in vocabulary, idiom, and pronunciation), life-style (even urban versus rural), physical appearance (hair style, clothing), natural philosophy (materialism and spiritualism), social structures (clan and family), values (strength, bravery, integrity, and propriety), political/governance philosophy (individual-social contract, representation, uses of power, and assignment of rights), ceremony (grieving, life passages, and celebrating), stories (historical, archetypical, and moral), and symbols (ensigns, uniforms, animal images, building design, and music/song). While culture has historical continuity, culture is a living thing that also evolves and adapts to changing circumstances.

Altogether, culture provides a great deal of support and guidance to individuals (and families and communities) who identify with, accept, and participate in the culture.

Like other living things, cultures can thrive and be healthy, or they can stagnate, whither, or be out of harmony with current challenges and opportunities. The flow of influence between cultures and a people goes two ways. As something individuals identify with, accept, and participate in, cultures can be neglected, abandoned, or morphed in ways that reduce the constructive support and guidance they provide.

Bottom line: health and thriving of individuals (families and communities) is supported and directed by a culture, but the culture, itself, requires participation and nurturance from its people, and contributions to its constructive evolution. Badly damaged cultures are a major contributor to youth suicide, violence, and substance abuse (and pathologies of all kinds). Maintenance of healthy culture, treatment of sick culture, and rehabilitation of badly damaged culture requires civic leadership as well as popular participation. Such civic leadership is typically the focus of both very unique people who emerge and dedicated non-governmental organizations. Encouragement and support for their efforts is typically the focus of enlightened government.

# Epidemiology of Youth Suicide, Violence, and Substance Abuse

The second question in the logic model is concerned with epidemiology—the distribution of health and sickness among individuals, families, communities, and cultures (see ).

*Many kinds of people, families, components of communities, and/or components of the culture, may be affected by suicide/violence (or lack of health and thriving).*

***“Who/what population is your CBI focused on?”***

It is, of course, useful to identify individual or groups of youth with such a high probability of suicide, violence, or substance abuse that they can be the population of focus for intensive interventions. However, the population of focus is defined in a more probabilistic fashion.

Table 1. Age-Specific Homicide and Suicide Rates

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Estimated global homicide and suicide rates by age group, 2000 | | | | |
| Age Group  (years) | Homicide Rate  (per 100,000 population) | | Suicide Rate  (per 100,000 population) | |
| Males | Females | Males | Females |
| 0-4 | 5.8 | 4.8 | 0.0 | 0.0 |
| 5-14 | 2.1 | 2.0 | 1.7 | 2.0 |
| 15-19 | 19.4 | 4.4 | 15.6 | 12.2 |
| 30-44 | 18.7 | 4.3 | 21.5 | 12.4 |
| 45-59 | 14.8 | 4.5 | 28.4 | 12.6 |
| >60 | 13.0 | 4.5 | 44.9 | 22.1 |
| Totala | 13.6 | 4.0 | 18.9 | 10.6 |

Source: WHO Global Burden of Disease project for 2000. Version 1.

a Age-standardized.

Epidemiological data include the incidence of suicide, violence and substance abuse among various groups. This information identifies the scale of the problem, location of the problem, and who the population of focus should be for an intervention. Youth suicide, violence, and substance abuse are found in all age, gender, socio-economic, occupational, regional, and other groups.

However, youth suicide, violence, and substance abuse rates also differ among these groups. For example, suicide is typically much higher for older males than for any other group (see Table 1). At times and under special circumstances, suicide rates rise or fall from the usual rates for these groups, indicating possible causes and suggesting plausible approaches. For example, the highest rate of suicide worldwide is for males over 60 years old while the rate of suicide among adolescent Inuit males is almost double that of the over 60 year olds. Epidemiological surveys indicated that romantic disappointment was commonly involved,[[46]](#footnote-46) a factor identified by Joiner as “disconnectedness.” These facts suggest a population of focus defined by both demographics and life events.

Healthy People 2010[[47]](#footnote-47) sets objectives for improving certain epidemiological rates related to youth suicide and violence. A search engine selects among them on age, race & ethnicity, and topic (e.g., suicide and violence prevention). The data sources include the National Vital Statistics System, Center for Disease Control, and National Center for Health Statistics. Epidemiological data suitable for tribal purposes is also available from Area Health Board Epidemiological Centers which are supported by the Division of Epidemiology and Disease Prevention of the Indian Health Service. Guidance in using data for planning is also available as Stat Pak on the Office of Juvenile Justice and Delinquency Program site.[[48]](#footnote-48)

Table 2. Relative Rates of death among AI/AN people

|  |  |  |  |
| --- | --- | --- | --- |
| Cause of death | Healthy People 2010 goal | AI/AN rate per 100,000 (age standardized) | Total Population rate per 100,000 |
| All causes: 10-14 years old | 16-3a | 26.7 | 22.1 |
| All causes: 15-19 years old | 16-3b | 90.5 | 70.6 |
| All causes: 20-24 years | 16-3c | 146.1 | 95.3 |
| Suicide | 18-1 | 12.6 | 11.3 |
| Homicide | 15-32 | 9.1 | 6.5 |
| *Non-fatal* physical assaults (no deaths) | 15-37 | 99.4 | 31.1 |
| Unintentional injuries | 15-13 | 59.9 | 35.0 |
| Motor vehicle crashes | 15-15 | 30.4 | 15.6 |
| Residential fire | 15-25 | 2.1 | 1.2 |
| Drowning | 15-29 | 3.1 | 1.6 |
| Alcohol- and drug-related crashes | 26-1 | 19.2 | 5.9 |
| Cirrhosis | 26-2 | 25.9 | 9.5 |

shows the rate of AI/AN suicide and homicide (all ages) compared with total population rates. The rates for AI/AN are age-standardized to make them directly comparable to the total population.

Deaths from all causes among older youth—i.e., young adults—is about 50 percent higher. Suicide is slightly higher while homicide is, again, about 50 percent higher. Non-fatal physical assault is related, and is about three times the rate of the total population.

At the same time, unintentional deaths in total, and deaths due to motor vehicle crashes, residential fires, and drowning are nearly double the total population rate.

Death due to cirrhosis of the liver (usually caused by excess alcohol consumption) is about two and a half times the total population rate while alcohol- and drug-related crashes, triple.

Adolescent alcohol, accident and assault seem to be the outstanding pattern. While epidemiological data suffer from a number of errors which affect comparisons between a subgroup and the total population, these epidemiological data can be used to help target youth suicide, violence, and substance abuse interventions.

# Interventions for Youth Suicide, Violence, and substance abuse

The intervention comes next in our logic diagram (see ) —its strategy (third question), theory of action (fourth question), and manualized steps (fifth question).

A project is characterized by its youth suicide, violence, and substance abuse prevention strategy, while the theory of action provides the rationale for that strategy, and the manualized steps explain in more detail what the project actually looks like “on the ground.” Evidence for the safety and effectiveness of these intervention strategies comes from the entire body of research on prevention techniques, behavioral change techniques, youth suicide, violence, and substance abuse prevention, academic reviews of the research, and national research- and consensus-based strategies developed for youth suicide, violence, and substance abuse prevention.

The consensus is that youth suicide, violence, and substance abuse and its prevention are complex and not amenable to simple or quick fixes. Sustained action at multiple levels among many social and service sectors is required. National suicide, violence, and substance abuse prevention plans for indigenous peoples detail such collaboration among the players and leadership by government (e.g., US; Canada; Australia; New Zealand).

Most “model” and “promising” programs are combinations of intervention strategies and span populations of focus in several ecological domains. The combinations of components in most model programs overlap extensively. For clarity, we have separated out the strategies into those focused on domains: strategies focused on suicidal, violent, and substance abusing individuals; strategies focused on their interpersonal relationships (especially, families); strategies focused on communities; and strategies focused on culture per se. Strategies focused on culture, per se, involve use of culture for healing purposes and changes to current culture for that and other purposes.

## Intervention Strategies Focused On Potentially or Actually Suicidal, Violent, or Substance Abusing Individuals

Pursuing our logic model, we now discuss major intervention strategies (#3, Figure 3). Culture- and Practice-Based, as well as Science-Based Interventions fall into these strategies. Here they are grouped into domains of the socio-ecological model described above (see Figure 2), i.e., Individual; Interpersonal; Community; and Culture. We start with the Individual domain.

Some causes of youth suicide, violence, and substance abuse lie within individuals. Some people have something wrong inside them that drives them toward youth suicide, violence, and substance abuse. That something is a medical, developmental, or spiritual type of problem. Interventions in the individual domain identify individuals at risk and intervene to reduce their immanent or longer-term youth suicide, violence, and substance abuse potential.

### Screening and Gatekeepers

An often recommended youth suicide, violence, and substance abuse prevention strategy is improved detection of suicidal potential among persons at immanent risk of youth suicide, violence, or substance abuse, usually with mental illness co-morbidity, followed by a supportive, guiding intervention, and referral to appropriate (i.e., sufficiently intensive and expert) care and treatment.

Youth suicide, violence, and substance abuse prevention plans pursue this strategy by systematic screening programs and by education and brief training for non-expert, lay persons in contact with an immanently suicidal person, especially when that person is isolated or masking suicidal motivation. Some strategies train and support “peer helpers” and some focus on breaking through the “code of silence.”Detection, supportive guidance, and referral are provided by friends, family and such other key observers as schools, law enforcement officers, etc.

Gatekeeper training programs are provided by, for example, **Question, Persuade, and Refer (QPR)**.[[49]](#footnote-49) Mentoring programs, such as **Native Helping Our People Endure (HOPE)** [[50]](#footnote-50) elaborate the on-going, supportive component.

Project HOPE trains youth in making commitments, strategic planning, and knowledge of traditional humor, spirituality, culture, risk and protective factors, hostility, violence, assertive life skills, communication with peers, developing and maintaining healthy relationships, and breaking the code of silence. Local facilitators are trained to lead the youth trainings. The facilitator’s and learner’s manuals are downloadable at the One Sky Center site.[[51]](#footnote-51)

A meta analysis by the US Preventative Services Task Force found little evidence supporting use of screening instruments in primary care settings.[[52]](#footnote-52) The base rate of suicide is extremely low, even in communities with suicides so frequent that community-wide trauma is experienced. It isn’t clear whether screening by peers *in situ* is more sensitive or selectively applied and, therefore, more effective than screening in primary care.

While the evidence on actual prevention of suicide and violence by screening and gate keeping may be weak and mixed, there is still potential for amelioration of the immediate cognitive, emotional, and behavioral problems of referred individuals.

In addition, reducing the immediate youth suicide, violence, and substance abuse rate is not the only outcome. Persons trained and designated as gatekeepers experience increased health and thriving as a result of the attention they receive, secondary benefits of training, and the sense of responsibility and control inherent in the gatekeeper role. The community also benefits by the creation of opportunities for constructive roles aimed at securing a public benefit, as well as by creation of a means of processing community concern and grief. These outcomes, too, reduce youth suicide, violence, and substance abuse risk in the long run.

### Treatment of Mentally Ill, Substance Abusing, and Violent or Suicidal Individuals

Screening programs and gatekeepers refer suicidal, violent, or substance abusing persons to expert care and treatment, as do school counselors, law enforcement personnel, courts, family, friends, and individuals themselves. The clearest of youth suicide, violence, and substance abuse prevention strategies is improving treatment of individual cases of mental illnesses, crises, and emergent suicidal process.

An international team of suicide experts did an extensive review and evaluation of the literature on suicide prevention (reviews, meta-analyses, quantitative studies, randomized controlled trials, cohort studies, ecological studies, and population-based studies).[[53]](#footnote-53) The evidence indicated that education of treatment personnel in depression recognition and treatment and the tertiary/indicated prevention strategy of restricting access by a suicidal person to lethal means prevented suicide. This appears to be the most strongly evidence-based approach to suicide prevention.

Care may include hospitalization or other intensive monitoring and supervision; separation from lethal means; crisis intervention; etc. Treatment may include medication; listening, supporting and understanding; cognitive behavioral therapy; group therapy; etc. It takes extraordinary skill and dedication to provide this intervention and “compassion burn-out” is a serious problem. Even well-trained therapists sometimes shy away from indications of suicidality.

The US Air Force suicide prevention program includes a treatment strategy. The *do ask/do tell/do refer* mandate in a hierarchical, authoritarian community is an important, unique aspect of this program. Strong evidence supports its preventive impact on suicide, moderate-to-severe family violence, and homicide outcomes.

The “Matrix” program[[54]](#footnote-54) incorporates a number of interventions into a comprehensive, intensive outpatient treatment program which has been successfully used for drug and alcohol problems in Indian Country. Such treatment is appropriate for individuals at risk of youth suicide and violence, but not actively suicidal. It is an example of secondary prevention.

Motivational Interviewing is a cultural adaptation of the established protocol[[55]](#footnote-55) itself a further development of the stages of change model. [[56]](#footnote-56) Readiness to change and interventions which facilitate such readiness have long been known as critical to improvement of health. Manual downloads are available at the One Sky Center site. [[57]](#footnote-57)

AI/AN healing includes beliefs, practices, botanical medicines, religion, spirituality, and rituals of several hundred AI tribes and AN villages. AI/AN traditional healing and medicine means “practices… shaped by long-standing cultural world-views and values.”[[58]](#footnote-58) It is concerned at least as much with prevention as curing. Where curing illness, correcting disorder, and repairing injury have done all they can, traditional healing provides reconciliation to the natural course of life including morbidity and mortality. Religion and spiritual matters are completely intertwined with health. Principal goals are balance in the four realms of spiritual, emotional, mental and physical health; following a cultural path; and sharing in the cycle of life.[[59]](#footnote-59) Purification, cleansing, and cognitive change are central themes.

Spirituality of AI/AN people is crucial to their CBI, as to everything in the traditional AI/AN way of life. Traditional belief is that everything has a spirit—celestial bodies, flora, fauna, inanimate objects (like rocks), and people. These spirits exist both in a spirit world and in the observable, material world. Knowledge is received from the spiritual world, as are healing influences. A state of harmony with the spirits is sought—good health and thriving depend upon it. Connection to the spirit world is a sophisticated religious practice of healers.

Healers’ recommendations to patients include life-style changes; offerings to spirits; diet; improved knowledge of language and culture, meditation, and engaging in certain treatments. The outcome of the diagnostic process is focus, expectations, commitment, and mobilization of effort.

Goals of AI/AN traditional medicine and healing are wholeness, balance, harmony, beauty, and meaning,[[60]](#footnote-60) spiritual well-being, restoration of emotional and physical health and well-being. Traditional healing and medicine confront imbalances, negative thinking, and unhealthy lifestyle. The outcome is restoration of well-being and harmony, and change of thought, feeling, and behavior. In particular, indigenous medicine has the task of healing emotional pain. If anything, AI/AN healing is more concerned with behavioral health than physical, although that distinction is not made. Healing also aims to alleviate the alienation of illness and to achieve reintegration. It focuses on healing the person (or community) even more than curing a disease.

Exposed to many traumas and much pain, and with little access to Western medicine, even for the illnesses, disorders, and injuries with which Western medicine does best, AI/AN peoples have had to rely on traditional healing and medicine by default. In dealing with disease, the goal may not be a cure. A good transition into the next world is important, even when mortality cannot be prevented.

Health means a person has a sense of purpose, follows inner guidance (inscribed by the Creator); walks on a path of beauty; balance; harmony; has good thoughts; is grateful, respectful and generous.[[61]](#footnote-61) One concept of illness is fragmentation of the soul with some parts lost to another dimension or reality or world. This soul illness is very much a part of substance abuse, youth suicide, violence, and substance abuse. The goal of soul healing is to attract back those fragments.

Because illness is a matter of morality, balance, and spiritual forces, not all presenting problems are treatable. Some are nature’s retribution (for disrespect or violation of taboos). Some are an expression of self-centeredness, imbalanced living, or feeble constitution. Some illnesses are imposed by sorcerers or non-human evil entities. Some illnesses involve the intrusion of supernatural objects. Other illnesses initiate passage to a higher level of being or a new role.

Diagnosis rests on experience and acute observation, while the more overt adjuncts to diagnostic procedures include communication with spirits, sacred bundles, pipes, masks, etc. Intuition, sensitivity, and spiritual awareness are key assets of traditional diagnosticians. The healer engages the patient by explaining his/her philosophy, plausible causes of illness, and acceptance of offerings and gifts. Among the causes a diagnosis may reveal are discord in prominent social relationships, e.g., male/female.[[62]](#footnote-62) Other causes are cruel words, abusive behavior, and violence. Failure to love and care for one’s spouse and children, and desertion of them, are taboo violations causing illness in the person, community, and tribe.

Treatment includes teaching, mentoring, counseling; ritual, ceremony, prayer, songs; energy work; lying on of hands; smudging; community ceremonies (e.g., chanting, singing, dancing, and sweat lodge); and botanicals. Traditional practitioners use the most powerful intervention known to any healing practice: skillful and effective use of the well-known but sometimes misunderstood, powerful “placebo” effect.

Prayer helps to focus the mind on harmony and balance among all things, free of anger, fear, and strife. Music invokes ideas and its rhythm entrains the mind. Smudging affects consciousness, feeling, and sensitivity through the ritual, possibly potentiated by the aerosols. Oral and topical application of botanicals also involves rituals, and active ingredient in addition to the activity of the substance per se. Massage is used in a fashion more like acupuncture than sports medicine—it helps to visualize the disorder and the healing process.

Counseling may be potentiated by sacred venues like ceremonial lodges and associated sacred rituals. Ceremony affirms cultural values and identity, and involves communication with spirits, placating them, and gaining release from their perceived controlling influence. A sweat lodge ceremony can overcome avoidance, denial, and get the patient back in touch with primal wisdom, i.e., doing what he already knows is right.

Mehl-Madronna[[63]](#footnote-63) identified eight principles of traditional healing: healing takes time and time is healing; healing takes place within the context of a relationship; achieving an energy of activation is necessary; systems are isomorphic (biological, psychological, cosmic); self-discovering in peace and quiet (avoidance of distraction); awareness of emotions; bed rest; and ceremony.

AI/AN culture is also used as a partner in Western medicine and healing. It is used to create expectancy and engagement of patient and healer and family and community. Controlled research showed that spiritual healing sessions are effective in creating high expectations in both healer and patient (versus controls) and, subsequently, greater improvement in objectively evaluated medical outcomes.[[64]](#footnote-64)

Culture-specific elements of youth suicide, violence, and substance abuse prevention interventions aim to make members of the indigenous culture feel valued, included, empowered and responsible—these are an off-set to historic marginalization and oppression. Culture-specific elements tailor interventions by means of culturally appropriate language (e.g., passages of text, speech in indigenous words); terminology (e.g., “all my relations”); traditional graphic elements (e.g., use of circles more often than lines; use of symbolic feathers); significant items of traditional dress (e.g., ornamentation); concept-laden symbols (e.g., medicine wheel); ceremonial music (e.g., drumming); culturally-specific forms of common social process (e.g., diplomatic protocols for expressing honoring and respectfulness); social institutions (e.g., powwow); references to social structure (e.g., importance of lineage, clan); ideas of spirituality and universal relatedness, etc.

Culture-specific elements of youth suicide, violence, and substance abuse prevention respond to the culturally unique meanings of youth suicide, violence, and substance abuse, identify and address the culturally unique risk and protective factors, and identify and utilize/accommodate the culturally unique interventions (and opportunities to create such interventions).

Adaptation of treatment interventions include dealing with causes of youth suicide, violence, and substance abuse unique to the circumstances of many AI/AN communities, and taking advantage of treatment modes that are believed in by members of those communities. Healing from loss, recovering from trauma, healing from sexual abuse, and transforming normalized “co-dependent” thinking processes are required for many suicidal members of AI/AN communities. The 12-step process of Alcoholics Anonymous is a well-known protocol which underlies a number of interventions for the target population of suicidal persons. Discovering and rebuilding individuals’ cultural identity through flute playing, working with horses, traditional meditation, and mentorship are unique opportunities that AI/AN cultures provide for individual treatment of at risk persons. Others include: Story Telling, Sweat Lodge; and Talking circle.

**Telling stories** is powerfully healing and instructive. Many stories are now posted on the internet. They need little or no interpretation, ritual, musical or other adjuncts to have their impact. However, the telling of stories (as opposed to simply reading them) carries additional impact related to the story-teller (e.g., grandmother, medicine person) and the setting (e.g., family living room, community lodge).

A **sweat lodge** ceremony is a widely used and flexible ceremony that involves steam generated by hot rocks in a dark enclosure. Water, sometimes including herbs, is applied to the hot rock by a medicine person who also leads the ceremony. The ceremony includes the medicine person, subject, relations, and guardians. The sweat lodge has spatial orientation (four directions, spirit world) and is constructed to hold in heat and be dark. There is an important etiquette. The ceremony is a tangible and decisive commitment to accomplishing something, and requires fortitude. The outcome is physical and mental experiences (purification, renewal, and fresh start), affirmation of an individual’s sense of personal, and cultural identity.

The **talking circle** is a group activity which enables orderly expression, unburdening, and consolation. The circle is a symbol of connectivity and completeness. The outcome is emotional and social healing. (Western group therapy and support groups operate in a similar way for similar purposes.)

The **vision quest** begins with a premise that individuals are put on the earth for a reason, but the reason is often unclear. Chandler and LaLonde have demonstrated the causal relationship between personal vision and suicide. The vision quest is a very serious, arduous journey into the spirit world to learn what that purpose is. It involves extensive preparation and guidance from a medicine man. Symbolic objects are made or gathered, prayers are said and a mind-set created, a ceremony is held, and the supplicant is taken to a certain spot where he remains for a given period of time during which he prays and has visions. Then he is brought back to share the vision with the medicine man and to integrate the experience into his life.

### Capacity For Treatment And Prevention For At-Risk Individuals

Of course, **capacity** is the elephant in the room. There is far less capacity (i.e., sufficient numbers of sufficiently expert personnel) than needed in most AI/AN locales. In some locales, especially small, rural, AI/AN communities, expert treatment and care are almost non-existent. It is obvious that greatly increased capacity (i.e., funded positions) is required to meet the need for behavioral health services dealing with depression, substance abuse, and behavioral problems.

For example, May described ramping up the capacity in the Navajo Nation over a 10 year period.[[65]](#footnote-65) This cultural intervention consisted of comprehensive health services developed and delivered over a 10 year time period, begun as an Adolescent Suicide Prevention Project. Upon community input, it broadened to address the complete array of underlying issues. It obtained active involvement of the community in assessment and planning, ultimately being institutionalized as a tribal behavioral health department. Interventions included education and awareness raising; identifying and monitoring risks; identifying high-risk persons and families; outreach/screening/intervention in service institutions and social venues; school-based life skills and other interventions; natural helpers for advocacy, referral and non-professional counseling; and professional mental health delivered in community settings. The capacity was increased over the period from 1.2 full time equivalents (FTE) to 57 FTE. Outcomes were reduced suicide gestures and attempts.

Increased numbers of funded personnel positions is not an easy solution. Another solution is to increase the productivity of existing personnel. The capacity gap is so huge and so crucial, that increased youth suicide, violence, and substance abuse prevention training for existing personnel can be considered a system-wide strategic imperative, per se.

In-service training increases productive capacity of existing personnel. The state of Alaska is implementing a promising approach to increasing capacity through its **village behavioral aide** program. Persons employed by the area native health corporation are provided with comprehensive manuals and trained by the University of Alaska.[[66]](#footnote-66) The manualization, training program, certification, and employment components of this program are highly promising.

Technical assistance also increases the productive capacity of existing personnel. **Public-academic liaison** (PAL) programs, originally sponsored by the PEW Memorial Fund, have successfully infused expertise into local treatment services. Direct consultation assists with individual cases, while behavioral health providers in training at the universities also learn to appreciate the local communities and some later choose to work there. The University of British Columbia, with support from the Ministry of Health, has run a highly successful PAL for many years. Many manuals on behavioral health and youth suicide, violence, and substance abuse prevention for Aboriginal peoples are posted on the UBC website.[[67]](#footnote-67)

**Telemedicine** is also being used at Fort Belknap reservation, Montana, rural California, and Alaska native health corporations. Telemedicine brings tertiary level expertise to sites having only primary care services. Diagnosis and care planning are a major contribution to local capacity to manage and treat youth suicide, violence, and substance abuse cases.

Bottom line: Identification, mentorship, referral of persons at risk of youth suicide, violence, and substance abuse are established youth suicide, violence, and substance abuse prevention interventions. Treatment by the specialty service sector is the most strongly evidence-based tertiary/indicated preventative intervention for youth suicide, violence, and substance abuse. However, the strongest evidence is for a beneficial impact on short-to-medium term outcomes: cognitive, emotional, and behavioral outcomes.

## Intervention Strategies Focused on the Interpersonal Domain

Some causes of youth suicide, violence, and substance abuse lie within the interpersonal domain—peers and families. Families are also the victims of youth suicide, violence, and substance abuse. Countering, or positively transforming peer group norms, is typically the focus of innovative social activists, Boys and Girls Clubs, youth development, service-learning and similar programs. Some families need support and strengthening, especially, in delivering adequate child care, but also in spouses caring for each other. That support and strengthening is typically a focus of social work, whether as a public or religious service. Supplementation of parental nurturance and guidance is typically a focus of school counseling and behavioral psychologists.

### Parenting And Family Skills

Parenting is extremely important to the healthy functioning and development of a child.[[68]](#footnote-68) Culture provides guidance and parents provide a model together with close monitoring and discipline. When either are lacking or distorted, unhealthy behavior patterns may be transmitted and unhealthy behavior may be instigated. For example, parental neglect and abuse is a risk factor for a child’s youth suicide, violence, and substance abuse. Even average parenting skill may be insufficient to protect the child against toxic environments outside the family, for example, bullying at school, or peer norms of risky behavior. Challenging child behavior can also overwhelm a parent’s capacity to respond in a positive, constructive manner. Parent skill training can put the parents back in charge and help reduce the child’s risk for youth suicide, violence, and substance abuse and to improve health and thriving.[[69]](#footnote-69) [[70]](#footnote-70) Parent skill training is prominent among model programs for youth suicide and violence.

The model program, **Multi-Systemic Family Therapy**, is one of the best known parental skills interventions. The original goal of Multi-systemic family therapy was to improve behavior of offending youth. However, the intervention deals with the broad spectrum of unhealthy behavior, including those increasing the risk of youth suicide, violence, and substance abuse. Interventions typically aim to improve caregiver discipline practices, enhance family affective relations, decrease youth association with deviant peers, increase youth association with pro-social peers, improve youth school or vocational performance, engage youth in pro-social recreational outlets, and develop an indigenous support network of extended family, neighbors, and friends to help caregivers achieve and maintain such changes. Specific treatment techniques used to facilitate these gains are integrated from those therapies that have the most empirical support, including cognitive behavioral, behavioral, and the pragmatic family therapies.[[71]](#footnote-71) The **American Indian Strengthening Families Program** is an evidence-based family skills training program based at the University of Utah and listed as a model program by SAMHSA. Skills are taught in child, parent, and family sessions. **Functional Family Therapy**, another model program, also changes and strengthens family behavior patterns, while the **Early Childhood Home Visitation** program mitigates maltreatment, abuse, and neglect in order to prevent the development of youth violence later on.

### Postvention

”Postvention” (aka, Crisis Response Plan) is the most likely first step at the local level, because youth suicide and violence tend to be the alarm that gets people’s attention and motivates them to act. The community responds spontaneously to a tragic loss—someone comforts and assists the victims and survivors. Postvention builds upon that naturally occurring protocol by planning in advance of an incident, planning a systematic and systemic response, and applying evidence to the design of the response plan.

Postvention is influenced by evidence on averting common, maladaptive responses to youth suicide and violence (for example, isolation of the survivors, and unrelenting demands upon affected care-givers). The immediate outcomes of postvention are relieving the distress of those affected by youth suicide and violence including family, friends, and care providers who may all be traumatized, especially in the case of multiple or cluster youth suicide, bullying, and violence. Postvention provides immediate relief, enables people to carry on and prevents the trauma from turning into handicaps typical of youth suicide and violence survivors. AI/AN communities often have resources and traditions for postvention including customary help and support of extended families, cleansing ceremonies for discharging grief, and ways of interpreting loss. Youth suicide, violence, and substance abuse prevention in AI/AN communities includes rediscovering and facilitating the employment of these traditions.

One such protocol is **Wiping the Tears** for grieving and emotionally letting go of the dead. The Wiping of the Tears ceremony is a ritual meant to release the spirits of the dead and heal the grief of survivors.

Postvention also prevents contagion by finding and treating high risk cases associated with the incident of youth suicide and violence, and by redirecting survivors’ grief into community mobilization. The risk of contagion may also be reduced by putting motivations and consequences into perspective by means of debriefing sessions.

Bottom line: Teaching parents to effectively raise children, to deal with challenging child-rearing issues like peer pressure, substance abuse, school failure, and risky behavior, and to maintain nurturing environments for the child are effective preventative interventions. Reducing family dysfunction and preventing family break-down by family therapy is an effective youth suicide, bullying, and violence preventative intervention. Postvention for families (and other caretakers) in the wake of a youth suicide and violence is an effective prevention of further youth suicide, violence, and substance abuse.

## Public Health Intervention Strategies

Public health strategies bridge between strategies focused on the individual/interpersonal domains, on the one hand, and strategies focused on the community/cultural domains, on the other. Public health strategies are more influenced by the disease model of Western medicine than are the community/cultural domains which we return to in the next section. The public health strategies focus on changing the immediate external causes and moderators of youth suicide, violence, and substance abuse.

### Risk Factor Reduction

A central public health approach is reducing exposure to risks. We refer here to a strategy aimed at broad subpopulations such as school children, new parents, and new retirees. SAMHSA offers a manual for building resilience and reducing exposure to risks among young children, *Building Blocks for Healthy Futures*.[[72]](#footnote-72) Similar strategies may be targeted on subpopulations at higher risk: persons in contact with family services or law enforcement or justice.

Reducing exposure to risks can be achieved by **removing** the risk (e.g., closing down drug houses); by **shielding** the people at risk from the source of risk (e.g., establishing, monitoring, and enforcing rules); and by **warning** the people at risk about the risk (e.g., public education).

Many risk-reduction interventions for behavioral health problems are based on the theory that individuals make **decisions** based on **information**. Prevention of unhealthy diet and lifestyle, substance abuse, risky sexual behavior, dangerous driving, suicidal impulse, bullying, violence, etc., includes providing information on consequences of risky behavior and methods of dealing with that risk.

One means of reducing exposure to risks is **public education** (aka, **social marketing**). Such campaigns use media, posters, lectures, and promotional events to raise awareness of risk; encourage risk avoidance in the general public; and mobilize the community’s front-line institutions (schools, churches, workplaces, law enforcement, justice, and corrections) to eliminate risks. This public education approach is well known in its use to promote better diet and exercise and to discourage tobacco and excessive alcohol use.

Professional social marketers employ the technologies of commercial advertising to achieve the objective in national campaigns. However, local campaigns take advantage of local communication methods about how to get out a message tailored to the local gestalt.

Public education is favored in national and local strategic prevention plans because it is a well-understood protocol; it is relatively easy and economical; and because it gives the youth suicide, violence, and substance abuse prevention agency a high public profile.

It is now thought that peer pressures are a very important driver of unhealthy diet and lifestyle, substance abuse, risky sexual behavior, dangerous driving, suicidality, and violence. The normal developmental process involves a transition from the controlling influence of parents/family through a period of predominantly peer influence, followed by the larger influence of the family which the individual forms him/herself. The period of predominant peer influence is risky, involving the emergence of new appetites and capacities together with peer support for exploration of opportunities and reduced awareness of and regard for hazards and moral obligation. This is exacerbated by parent influences which have been weakened by family dysfunction or break-up. Risk-reduction includes shortening exposure to unsupervised peer influence. Related interventions include teaching resistance and refusal skills (e.g., the **Iowa Strengthening Families** and **Preparing for Drug-Free Years** programs). Finally, peer norms are changed to be less risky by means of adult-led youth groups (e.g., Cubs, Scouts, and Guides).

### Protective/Resiliency Factor Enhancement

Another central public health approach is strengthening resiliency and establishing protective factors in the community. The enhancement of protective/resiliency factors is one of the most frequently used approaches to youth suicide, violence, and substance abuse prevention. The theory of action is that people are subject to many and continuous reasons to choose not to live, or not to live well. Reasons include losses, failures, disappointments, hardship, etc. It takes resilience to carry on living despite these adversities. Resilience comes from personal attitudes, social bonds, obligations, support, coping skills, continuity of identity, engagement in ongoing activity, etc. The protective/resiliency strategy builds up these elements.

Mentoring (elder to youth): Elders pass on culture via modeling, stories, advice, values, rules/guidelines for living, and a personal connection with the past. Raudenbush and Hall developed a protocol for this intervention called “Wisdom Teachings: Lessons Learned from Gathering of Elders.”[[73]](#footnote-73) The National Football League Players Association and Johns Hopkins Center for American Indian Health holds an annual **Native Vision Sports** **and Life Skills Camp**. AI/AN youth are taught sports by the professionals and engage in festivities. The messages to youth are stories of personal hardship, courage, and victory. Native leaders participate to encourage citizenship, respect of elders, and Indian pride. The **Career and Life Skills Curriculum** of the Native American Achievement Program at Arizona State University encourages achievement of academic goals, determination of career goals, attainment of leadership skills, and development of personal life skills. The outcome is persistence and graduation.[[74]](#footnote-74)

Techniques for resisting peer influence and asserting healthy self-interest are taught by the NREPP model program, Zuni/American Life Skills Curriculum.[[75]](#footnote-75) It teaches and instills coping and life skills which, the theory of action explains, displace and counter the negative forces driving substance abuse, risky sexual behavior, dangerous driving, suicidality, and violence. Others include **Promoting Alternative Thinking Strategies**; **I Can Problem Solve**; **Al’s Pals**; **Improving Social Awareness-Social Problem Solving**; **Peer Coping Skills Training**; **Social-Moral Reasoning Development Program**; and **Viewpoints**.

The **Zuni/American Indian Life Skills Development curriculum** is a school-based, culturally tailored, suicide-prevention curriculum.[[76]](#footnote-76) It teaches communication, problem solving, management of stress and depression, anger regulation, and goal setting skills. It also increases knowledge of suicide. Methods are informing, demonstrating skill, and feedback on student performance. Outcomes are reduced suicide probability and hopelessness, increased problem-solving and suicide intervention skills. A manual is available. [[77]](#footnote-77)

The **Canoe Journey**[[78]](#footnote-78) is based on a tradition of making and operating large coastal canoes. It uses a combination of life skills, activity, and community involvement. The eight week skills course teaches communication, decision-making, goals-setting, and other skills. A manual is available.[[79]](#footnote-79)

Natural experiment and case study methods have provided scientific evidence to prove the safety and effectiveness of a number of CBI, resulting in NREPP recognition for some, including **Project Venture**, a service learning program. **Service Learning** is a primary/universal preventative intervention for individual youth who do not have elevated risk factors for youth suicide, violence, substance abuse, or mental illness. Examples include the NREPP model program, Project Venture,[[80]](#footnote-80) Tribal Service Learning Manual,[[81]](#footnote-81) and various Boys & Girls programs.

The Service Learning theory of action is that giving to the community (i.e., service) develops moral character, constructive habits, and a lasting emotional attachment to the community. In addition to the bonding aspects of service learning, these projects provide activity, challenge, and skill development.

**Project Venture**[[82]](#footnote-82) [[83]](#footnote-83) is a cultural adaptation of the youth development movement’s “service-learning” intervention by the National Indian Leadership Development Program[[84]](#footnote-84) which achieved SAMHSA “model program” status.[[85]](#footnote-85) It consists of an experiential, learning-based program which challenges youth to deliver community service. Outcomes include a developed sense of community responsibility and ownership. Instructions for obtaining the program replication guide are available at the Project Venture site.[[86]](#footnote-86)

### The Media

The media have an impact on public health, for example, the recent increase in public attention to diet is attributed in part to the media. On the negative side, however, the media are also thought to increase or decrease suicidal risk, depending on how they publicize youth suicide and violence.[[87]](#footnote-87) Suggested justifications, glamour, common cause, and just the attention, per se, make youth suicide, violence, and substance abuse contagious and subject to copycat repetition. [[88]](#footnote-88) [[89]](#footnote-89) Case studies of school violence have found some instances in which mimicry played a part. Evidence exists that fictional material can also materially affect youth suicide, and violence rates (and, currently, episodes of multiple murder/youth suicide and violence).

The Centers for Disease Control (CDC) have suggested guidelines for reporting youth suicide and violence, as has The Suicide Prevention Resource Center,[[90]](#footnote-90) the WHO, the UK, Canada Health,[[91]](#footnote-91) and some other Commonwealth countries.[[92]](#footnote-92) Suggestions to the media include: avoid detailed descriptions, avoid romanticizing or glamorizing, avoid simplistic explanations of motivation and other causes, provide referral information, indicate that the problem is avoidable/treatable, report existing counter-measures, and get expert opinion.

Bottom line: Developing local community leadership and mobilizing community agencies and members are effective in identifying and mitigating risk factors, and in enhancing protective factors. Risk factor reduction is accomplished by interdiction, suppression, changing community environments (e.g., healthy schools policy, and media campaigns. Media campaigns, in particular, are a popular intervention for youth suicide, violence, and substance abuse prevention (and other risky or destructive behaviors). Enhancing protective factors include training interventions for entire groups (e.g., school children) and experiential and service learning). School-based coping and life-skills training is an evidence-based, primary and secondary prevention intervention. Engaging individuals by means of service learning programs is an evidence-based primary prevention intervention.

## Intervention Strategies Focused On Community Competency

Community structure and functioning is a source of health and thriving of individuals (and families); structural defects and dysfunction in communities contributes powerfully to youth suicide, violence, and substance abuse. Communities have, to varying degrees, the leadership, organization, and capacity, i.e., the *community competence*, to improve the quality of life for members, to provide opportunities, and to rise to challenges. Part of *community competence* is *social capital*, the fund of trust and reciprocity that exists among members of the community. Improving the structure and functioning of communities is typically the focus of advocates and coalitions.

### Community Assessment

The American Indian Community Suicide Prevention Assessment Tool is a protocol (built on a manual) that brings AI/AN community members together to assess a youth suicide or violence or substance abuse) problem, survey resources which can be applied to a community solution for the problem, and initiate organized activity in multiple community sectors toward that end. The survey of resources is comprehensive—more comprehensive than a problem-oriented committee might initially suppose. Barriers and opportunities otherwise overlooked are systematically included:

* Identity
* History
* Lifestyle
* Population characteristics
* Government
* Land
* Environment
* Water
* Economy
* Recreation
* Medical and social services and facilities
* Housing
* Education
* Community self-helping processes
* Community cohesion
* Family integration.

The assessment protocol culminates in a plan. The tool is downloadable.[[93]](#footnote-93)

### Community Leadership

Initiatives like Native Aspirations, WellBriety, Drug Free Communities, Weed and Seed, Community Anti-Drug Coalitions of American (CADCA), and the Indian Country Methamphetamine Initiative require local leadership for initiation, implementation, maintenance, and sustained institutionalization at the local site. Community leaders must rely on volunteers and contributions of time and effort from thinly-funded agencies. There are many other community needs competing for time and attention. At the same time, local leadership faces vested interests with effective veto power. It takes outstanding motivation, knowledge and skill to be an effective community leader for youth suicide, violence, and substance abuse prevention.

A systematic development of community leadership among AI/AN communities is required to operate in a challenging environment of scarce resources and normalized denial, resistance, and unhealthy lifestyle. Leadership development includes creating role models, facilitators, strategic leadership, and assertive healing.

The Four Worlds Institute has a **College of Human and Community Development** which systematically trains community leaders within a cultural framework, learning system, and value orientation.[[94]](#footnote-94) [[95]](#footnote-95) [[96]](#footnote-96) White Bison provides a formal training program for “**fire-starters**,” creating local leaders with community organizing, small group leadership, and medicine wheel skills.[[97]](#footnote-97)

Community-to-community leadership has proven effective in stimulating, supporting, and guiding local leadership. Community-to-community advocacy for reform and technology transfer, and evidence for its effectiveness, has been documented by case study methodology, e.g., Alkali Lake, British Columbia to Hollow Water, Manitoba.[[98]](#footnote-98) Local players often say they **prefer to receive leadership, training, and technical assistance from their peers in other communities**, rather than from a national or other expert source.

The Kennedy School of Government at Harvard University, government agencies, and various foundations have programs to recognize, honor, and publicize the methods and achievements of local leadership.

### Community Mobilization

Community mobilization marshals public interest and involvement; brings local resource managers and actors together to plan and commit and to acquire the knowledge and expertise they need to proceed with actual youth suicide, violence, and substance abuse prevention work. Advanced community mobilization interventions have been developed for drug abuse prevention. SAMHSA has funded a number of such projects as has the Robert Wood Johnson Foundation and others. Community Anti-Drug Coalitions of America (CADCA) provides instructional materials for community coalition building and operations.[[99]](#footnote-99) These evidence-based techniques apply to community mobilization for youth suicide, violence, and substance abuse prevention as well.

Unique opportunities also exist in indigenous communities for community mobilization. Pervasive unhealthy living and a high degree of family relatedness to victims are pressures to do something. Resources for this mobilization include traditional values and principles supportive of healthy living and cultural content that can be applied to community mobilization.

Prochaska and DiClemente's[[100]](#footnote-100) individual change model is the basis for quite a few community mobilization protocols, including the Tri-ethnic Center for Prevention at Colorado State University.[[101]](#footnote-101) The **Community Readiness Model** is theory- and evidence-based, manualized, and supported with an extensive training program, together with quantified, normed community assessment.

The Community Readiness model applies the DiClemente & Prochaska model of personal readiness for change[[102]](#footnote-102) to the community. The model not only assesses readiness for prevention interventions, it participates in mobilizing and moving an AI/AN community forward along the readiness path, instituting prevention as it progresses. The manual is downloadable.[[103]](#footnote-103)

**Gathering of Native Americans (GONA)** is a 4-day gathering for Native Americans who want to become change agents, community developers, and leaders. The GONA is based on several ideas: community healing is necessary for prevention; healthy traditions in the Native American community are key to effective prevention; the holistic approach to wellness is a traditional part of Native American belief systems; every community member is of value in empowering the community; and the GONA is a safe place for communities to share, heal, and plan for action.[[104]](#footnote-104)

GONA takes participants through four stages of development—belonging; mastery; interdependence; and generosity. The cultural ideas communicated are healthy traditions and community healing, holistic approach, historical trauma, people’s contribution to leadership and healing within a community, support and empowerment for people, rituals and teachings, feelings and healings into action, and use of a safe place. The outcomes are enhanced motivation for community action and understanding of the opportunities. The manual is downloadable at the SAMHSA site.[[105]](#footnote-105)

White Bison has published a seven-step approach to community development[[106]](#footnote-106) and provides training for coalition-building (**Using Clan Knowledge**)[[107]](#footnote-107) specific to AI/AN communities. The method includes community readiness assessment, GONA training, and an adapted CADCA approach to coalition-building and operations. White Bison, Inc. is an organizational base for the Wellbriety movement which includes a number of culturally-based programs, projects, teachings, and materials aimed at improving AI/AN health.[[108]](#footnote-108) These include the **Sacred Hoop Journey; Coalition Building through Clan Knowledge; Families, Mothers, Fathers, Sons, and Daughters of Tradition; Fire-starters; Warrior Down; The Healing Forest; and The Medicine Wheel and the Twelve Steps**. Printed, video, and in-person training are available for these interventions.

Other evidence-based methodologies for community mobilization include the “**Community Story Telling**” methodology of the Four Worlds Institute.[[109]](#footnote-109)

Tested community collaboration manuals have been developed by a number of health care organizations.[[110]](#footnote-110)

### Community Change Strategies

*Community competency* involves leadership, mobilization, and change toward preventing youth suicide, violence, and substance abuse. Three strategies for community change can be distinguished.

One approach is a **grass-roots, reform movement** strategy. For example, White Bison uses elements such as “fire-starters” and “sacred hoop journeys” to recruit, motivate, and mobilize Indian Country nation-wide.

A second approach is **collaboration** among established stake-holders, including citizens and agency personnel, in a strategic planning and implementation oversight capacity. SAMHSA’s *Strategic Prevention Platform* and its predecessor, RAND’s *Getting to Outcomes*, are principal methods. CADCA can be seen as exemplifying that strategy. Challenges are persuading stakeholders to participate, the technology of assessment and planning, and the leap from plans to implementation by agencies.

A third approach consists of initiatives **mandated** by government and implemented by agencies. Such an initiative consists of multi-sector planning, policy harmonization, procedure alignment, and resource allocation among multiple agencies. Such initiatives are common in federal, state, and local mainstream government. In AI/AN communities, one example of this approach is the use of Task Forces in the Indian Country Methamphetamine Initiative. Challenges here are the tendency for agencies and personnel to want to be seen as on-board with important causes, the usual duplication of effort, and attempts by all to leverage the resources of others.

Suicide, violence, and substance abuse prevention in Indian Country is necessarily a community-wide, multi-sector effort. Circumstances are different from the mainstream in many AI/AN communities. For example, agencies may have more committed personnel, but fewer resources. The dynamics of governance may be different and, indeed, tribal governance seems to have been a moderating factor in some attempted interventions. The empirical question is how well each of these approaches works and why.

## Intervention Strategies Focused On Culture

Cultures, like communities can be made less risky, healthier, and more able to cope with threats to health and thriving. As an *object of an intervention*, culture is rediscovered and reinvigorated. Traditional strengths are preserved while evolving toward meeting current conditions. Rediscovery and reinvigoration of AI/AN culture is central to many AI/AN agenda, including nation-rebuilding.[[111]](#footnote-111) [[112]](#footnote-112) This is frequently a primary objective of AI/AN communities and the people who lead and serve them, so it must be a major principle of a CBI strategy for Indian Country.

Re-discovering and re-establishing language, arts, ceremonies and identity is part of preserving the strengths of cultures that have been damaged by conquest and other adversities. Re-establishment of institutions and self-government (sovereignty) are among the strategies designed to strengthen such cultures.

At the same time, envisioning the future, identifying current opportunities for improving health, social and economic status are essential to the health and thriving of Indian Country. One very well developed strategy for revitalizing an indigenous culture is the **Access to Determinants of Health** developed by Four Worlds.[[113]](#footnote-113) This protocol is logically stated, methodologically thorough, and well documented.

The health and thriving of individuals (and families and communities) is supported and directed by a culture; but culture, itself, requires participation and nurturance from its people, as well as contributions to its constructive evolution. Badly damaged cultures are a major contributor to youth suicide, violence, substance abuse, and pathologies of all kinds. Maintenance of healthy culture, treatment of sick culture, and rehabilitation of badly damaged culture requires civic leadership as well as popular participation. Important aspects of civic leadership include both “how to do it” (methods) and the “vision”. Such civic leadership is typically the focus of very unique people who emerge, and dedicated non-governmental organizations. Encouragement and support for their efforts is typically the focus of enlightened government.

There are three major ways CBI emerge. (1) Culture, per se, *is* the prevention or treatment. (2) Interventions are developed originally and directly *from* beliefs, practices, and other elements of the culture. (3) Imported EBI and Practice-Based Interventions (PBI) are adapted using beliefs, practices, and other elements of the culture.

## Culture is Treatment and Prevention

The belief that “culture is treatment” has been advanced by professionals, government leaders, and AI/AN activists.[[114]](#footnote-114) [[115]](#footnote-115) [[116]](#footnote-116) [[117]](#footnote-117) [[118]](#footnote-118) Cultural teachings, practices, and social conventions yield balance of mind, body, spirit and emotions. Living in a *good way*, as guided by cultural leaders and *written in the heart*, will bring behavioral health. Traditional cultural beliefs and practices constitute a principal form of treatment and prevention, per se. “Culture *is* prevention” means an awareness of (and participation in) the values, traditions, ceremonies, and sense of community, per se, that improves health and thriving, while preventing suicide, violence, and substance abuse.[[119]](#footnote-119)

Culture as an intervention shares the stage with Western-style risk-reduction and protective interventions for suicide, violence, and substance abuse. As an intervention, culture (consisting of stories, ceremonies, knowledge, skills, values etc.) is used to strengthen individuals, families, and communities. As an intervention, culture provides constructive, time-filling activity as well as social services and productivity. As an intervention, cultural activities provide social contact and a vehicle for the communication of caring. A common CBI is re-instituting a traditional mentoring relationship between elders and youth.

There are many culture-based interventions, each to be found in different forms at different times and cultural locations. These are described in a great many documents; many not part of any professional literature. Documentation and artifacts are being collected in university and government archives. Following is mention of several interventions which have some application in the prevention and treatment of youth suicide, violence, and substance abuse as part of the global goals of culture-based interventions. Generalized descriptions are provided, recognizing that there are tribal and community variations within each intervention.

Flute playing is used, like meditation, in self-discovery and self-healing. Dancing, fasting, drumming, making of relations, medicine wheel, naming, pipe, powwow, potlatch, give-aways, honoring, rites-of-passage, ritual art, masks, sand painting, shaking tent, singing, and smudging ceremonies are culture-based interventions to promote health and thriving, bring good fortune, and heal. These interventions produce trances and visions, focus and entrain the mind, and connect to the spirit world. They establish and strengthen interpersonal relationships; create or transform identity; provide instruction on values, morals, principles, behavioral protocols; and relieve feelings of loss, guilt, and fear. They apply to youth suicide, violence, and substance abuse in individual, interpersonal, and community domains.

# Outcomes of Interventions for Youth Suicide, Violence, and Substance Abuse

The fourth box in our scientific framework or logic model contains the outcomes expected for the CBI and measures or indicators (see ).

***“What will change when your efforts (CBI) are successful?***

* + 1. *In the long run, the outcome may be a drop in the youth suicide, violence or substance abuse rates, or a restored and vital culture.*
    2. *In the medium term the outcome may be family re-integration, employment opportunities, or community control of services.*
    3. *In the short term the outcomes might be acquired knowledge, skills, attitudes, community plans, or agency agreements.*

***“What will be the outcomes of your CBI? What measures or indicators of these outcomes will there be?”***

Categories of outcomes for SAMHSA-supported behavioral health programs are morbidity, employment/education, housing (stability), crime, and social connectedness, (*National Outcome Measures*).[[120]](#footnote-120) The outcomes and their measures/indicators are listed by SAMHSA:[[121]](#footnote-121) Good health, thriving (high); Identity, future vision, future commitment (high); Depression (low); Substance abuse (low); Suicidality (low); and Violence (low).

There is an art to evaluating outcomes. It starts with knowing what is achievable, as distinct from mandated.

Programs with long-term goals (such as reduction of suicide and homicide rates) are usually measured in terms of short- and medium-terms outcomes (such as increased awareness, participation in activities, skill in the expression of emotion, and changed interaction patterns). Focusing on achievable, measurable short- and medium-term outcomes is very wise, as is stating the expected long-term outcome. The short- and medium-term goals should be valuable, per se, independent of the long-term goals. Long-term goals may be untestable by any feasible research design as well as unmeasurable.

While research evidence for the safety and effectiveness of interventions remains important, only very modest levels of certainty are currently achievable. Furthermore, self-report is often used as the measure. Self-report is useful and many studies have tested its reliability and validity. However, self-report has some serious, inherent weaknesses, especially when questions pertain to what is clearly fashionable, unfashionable, censured, prognostic, heavily dependent on memory and judgment, etc.

An evaluation of the intervention would include measuring improvements in outcome due to the intervention. (To put this in perspective, outcomes are sometimes divided into short-, intermediate- and long-term.) This is particularly appropriate for youth suicide, violence, and substance abuse prevention interventions where the nominal outcome, measurable changes in youth suicide, bullying, and violence rates, is a long-term outcome that may not occur until after major social changes (intermediate-term) have been accomplished.

Short-term outcomes are evident at the end of an intervention, or within a few months thereafter. Outcomes in FDA RCTs are usually measured within a six week to six month time frame. Examples of a short-term outcomes for youth suicide, violence, and substance abuse prevention interventions would be “short-term survival rates for patients admitted to hospital on suicide-watch,” “creation of a community crisis response plan,” and “knowledge of and skill in coping with conflict and crises.”

# Summary

The purpose of *Describing Culture-Based Interventions* is to describe Culture-Based Interventions using a scientific framework with supporting evidence in order to secure their acceptance and support of regulating and funding entities.

Youth range in age from 15/16 to 24/25 years according to some international definitions. For some purposes, we consider the range from 10 to 25 years. During those years they transition from childhood into adult family, civic, and productive roles. Although the rates per 100,000 population vary, suicide, violence, and substance abuse are tragic failures in that transition in all societies and all socio-economic groups. These rates are high, on average, in AI/AN country. In some locations, at some times, these problems are of epidemic proportions. On the other hand, some AI/AN communities are doing very well indeed on these indicators.

While “suicide” seems straightforward, an identified, completed suicide is generally part of a larger, longer process of self-destruction which includes suicidal ideation, distress, disconnection from attachments, and attempts. Opportunity plays a role in timing of suicide. “Violence” ranges from teasing, bullying and harassment to fist fighting to multiple homicide. Violence is an aspect of unsafe, low morale, low control, and disorderly school, neighborhood, or community climate. Suicide and violence are very frequently exacerbated by substance abuse, especially, alcohol.

Suicide and homicide are low frequency events, even where perceived to be overwhelming. Instances are extremely difficult to predict and prevent in individual cases. Statistical prediction from risk and protective variables is also very problematic due to confounds, measurement error, and false positives/negatives. However, doing something about risk and protective factors remains important because of more immediate outcomes.

AI/AN communities innovating solutions for these problems are faced with a dilemma. On the one hand, it makes sense to them to use their culture and traditions to develop such interventions as elder-mentoring, sweat lodges, talking circles, and community ceremonies. Indeed, SAMHSA, Indian Health Service, Office of Minority Health and other federal agencies, together with RWJ and other Non-Governmental Organizations endorse the “develop their own solutions” and “self-determination” approach. On the other hand, regulatory and funding agencies insist upon “scientific evidence-based interventions” chosen from approved lists.

To ease this dilemma, *Describing Culture-Based Interventions* does several things. It puts the evidence in EBI in perspective, which makes recognition of CBI more achievable. It identifies a scientific framework for describing CBI, including several key conceptual models which are persuasive, per se, in the Western scientific epistemology. We have used the universal/selective/indicated prevention model in which “prevention” and “treatment” blend as they do in Indian Country. We used the ecology model because of the logistical need to distinguish among interventions aimed at individuals and interventions aimed at the public health, community environment, and culture. We used a logic model to organize CBI information into the classic Western paradigm. Our logic model consists of causes, populations of focus, interventions, and outcomes. One part of “intervention” is a manual which describes the intervention in terms of its steps. We have distinguished short, medium, and long-term outcomes in the logical model.

We reviewed intervention strategies. Some of these strategies are interventions with at-risk and indicated individuals. These include screening, gate keeping, treatment for disordered individuals, behavioral health services capacity, tertiary consultation to support primary behavioral health services, training for primary care providers, training of parents, and postvention. Sources of indigenous knowledge and practice, dissemination and teaching, practitioners, safety, holism, goals, outcomes, etiological ideas, diagnosis, and treatment topics are reviewed. Fundamental concepts of spirituality, harmony, balance, relationship of healer to patient, and the psychology of healing are discussed. We discuss AI/AN healing and medicine. A number of traditional, cultural health interventions are also reviewed. These are a resource of practices, symbols, materials, and ideas for CBI for youth suicide, violence, and substance abuse prevention.

Some strategies are focused on public health which bridges between the individual and community. Public health strategies include risk reduction, establishment of protective factors, and moderating the effects of media coverage. Protective factors include positive youth development.

Some strategies are focused on community competency—the capacity of communities to facilitate the quality of life of members and to organize themselves to effectively meet challenges to the wellbeing of the community and its members. Community strategies include leadership development, community mobilization, and several approaches to implementing community initiatives. We identify strategies which involve raising the level of community functioning by means of some specific protocols: GONA; Community Readiness; Community Assessment; and Community Healing.

Finally, we identify strategies focused on revitalizing the culture itself. We discuss the “culture *is* prevention” assertion which has wide currency in Indian Country today.

Of central importance to *Describing Culture-Based Interventions* is AI/AN CBI. We review a number of well-described, manualized, researched, and evaluated CBI which are either greatly adapted EBI, applications of the wider behavioral health knowledge base, or de novo developments from AI/AN culture. These include a treatment protocol (MI/MET), a couple of life skills approaches (Zuni Life Skills, Canoe Journey), a service-learning approach (Project Venture), three community development approaches (Assessment, Readiness, and GONA), a couple of bicultural programs (Traffic Safety and Mathematics), and an example of the development of a culture-based public health system (Navajo).

Finally, we looked at the measured outcomes of interventions aimed at treating and preventing youth suicide, violence, and substance abuse. We identified the federally designated outcomes for such interventions (National Outcome Measures). These tend to be concerned with actual changes in indices of public health such as morbidity (suicide and homicide), employment, housing stability, crime. A few programs, such as the USAF suicide prevention program have actually measured changes in the intended long-term outcome, suicide incidence, moderate-to-severe family violence, fatal accident, homicide. Some (e.g., Zuni Life Skills) measure demonstrated skills and competencies. Some interventions aimed at suicide prevention actually measure surrogates, e.g., referrals for treatment. Most, however, measure intervening, short-term outcomes: satisfaction, ideation, attitude, mood, problem solving practices. Self-report is often used to measure behavior such as substance abuse. Again, the expectation for CBI outcome assessment cannot be set unreasonably higher than what has been used for most current EBI.

# Conclusions and Recommendations

Youth suicide, violence, and substance abuse are regrettable but routine failures in normal maturation from childhood to adulthood. The rates of these failures vary greatly throughout the world. On average, AI/AN communities experience elevated levels of pathology by comparison with other Americans. In some communities, the problem is epidemic proportions and in some communities the problem is a “disaster”, i.e., overwhelms capacity of the community.

Most importantly, it is the underlying issues which should attract our attention. One of the underlying issues is the sheer lack of a well-trained behavioral health infrastructure of sufficient capacity to address routine problems in normal youth development. Insufficient capacity is a problem for most communities, but in rural and remote AI/AN communities, the lack of capacity is equivalent to a failed public health system. The capacity of behavioral health services is also a matter of expertise, for which training and technical assistance are appropriate interventions. Another underlying issue is the limited ability of the community (community competence) to facilitate the quality of life of members and to organize itself to effectively meet challenges to the wellbeing of the community and its members. Facilitating *Community Change* is the appropriate intervention.

We have seen a hunger for community mobilization among those touched by the AI/AN troubles. Community members want to be motivated and to develop hope and vision for a better life (including relief of youth suicide, violence, and substance abuse burdens). We believe a program of AI/AN community development through protocols like GONA, Community Mobilization/Readiness, Strategic Prevention Planning, etc. are necessary precursors to sufficient hope, vision, and commitment to result in action.

The process of community change takes time and focused investment. Long-term commitment to a few AI/AN communities with intensive developmental consultation and support might be the best strategy for making a substantial, long-term difference in youth suicide, violence, and substance abuse as well as the fundamental issues underlying those indices.

Tribes need to get control of basic quality of life matters for their communities, families, and individual members, rather than just attending to symptoms. Gaining control requires a significant commitment of leadership. Community leadership needs training and support to carry out its strategic mission, over and above day-to-day management duties.

Economic development is a central, long-term task upon which all hope of reduced youth suicide, violence and substance abuse are pinned.

Youth are clearly the major asset the tribe has for its long-term health and thriving. Youth development is the most important investment strategy tribes can made in their future. Youth need clear vision and driving motivation to become the pillars of tomorrow’s tribe—the parents, workers, stable and committed tribal members, and leaders. To clear vision and driving motivation must be added knowledge and skill—education and training. Through development of the vision, motivation and capabilities of the next generation, AI/AN communities could achieve improvements in quality of life which would also moderate much of the behavioral health pathology that currently exists and currently attracts attention.

We believe this investment in the next generation begins now with mobilizing the community.

# Resources

*Describing Culture-Based Interventions* is, by no means, the sole repository of information and guidance on youth suicide, violence, and substance abuse. A number of exhaustive inventories and reviews of youth suicide, violence and substance abuse programs and interventions exist, including some which are evidence-based, some which are adapted for use with AI/AN population of focus, and some which are developed specifically by and for AI/AN people In addition, the knowledge base on youth suicide, violence, and substance abuse has been systematically incorporated into advocacy organization/foundation, agency, professional association, state, and international, prevention policy, recommendations, and strategy plans, including some focused on indigenous peoples. Following is a partial list of resources consulted in preparing *Describing Culture-Based Interventions*. These sources can be tapped for programmatic ideas and descriptions as well as supporting evidence.

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*Best Practices Registry (BPR) for Suicide Prevention*. Suicide Resource Center/American Foundation for Suicide Prevention. Available at: <http://www.sprc.org/featured_resources/bpr//index.asp>. Reviews available at: <http://www.sprc.org/featured_resources/bpr//ebpp.asp>

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Good Character.com. Contains materials for children K-5. Available at: <http://www.goodcharacter.com/GROARK/Bullying.html>

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National Registry of Evidence-Based Programs and Practices (NREPP). Available at: <http://nrepp.samhsa.gov/>

National Youth Violence Prevention Resource Center. Available at: <http://www.safeyouth.org/scripts/topics/bullying.asp>

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