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# Adolescent Substance Abuse: Evidence-Based Programs

Sara McEwen, MD, MPH  
Governor's Institute on Substance Abuse

Janice Petersen, Ph.D., Director  
Office of Prevention/DMHDDSAS  
DHHS

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# Objectives of Presentation



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- General scope of the problem nationally and in NC
- New research on effects of alcohol on adolescent brain
- Resources and unmet need in NC
- Recommendations of NC IOM Substance Abuse Task Force report to the General Assembly
- Evidence-based practices in adolescent substance abuse (SA) prevention and treatment

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# National Data and Trends



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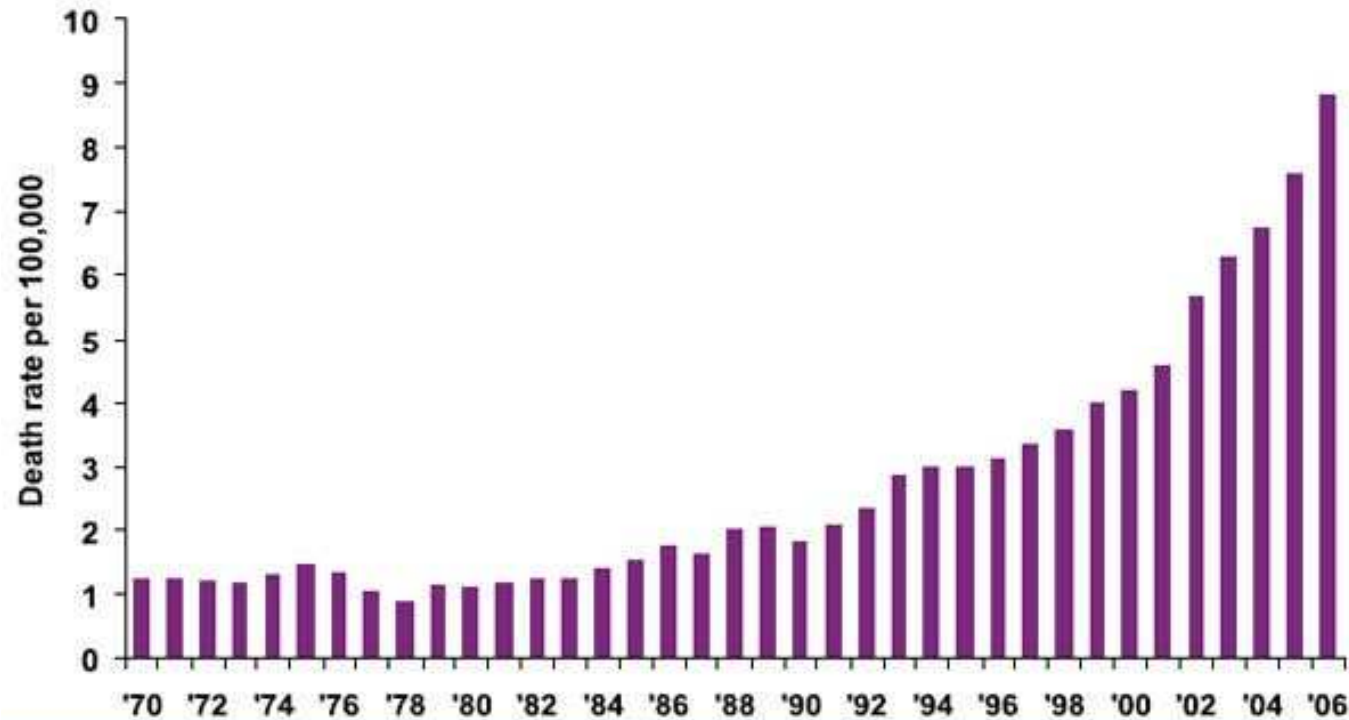
- Prescription pain relievers new gateway drug  
*“They are ‘legal’ so they must be safe.”*
- Deaths due to prescription abuse have overtaken accidents as #1 cause of death of young adults in several states. Still #2 in NC.

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# Prescription Drug Abuse On Rise



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Medscape

Rate of unintentional drug overdose death in the United States, 1970-2006.  
From Centers for Disease Control and Prevention.

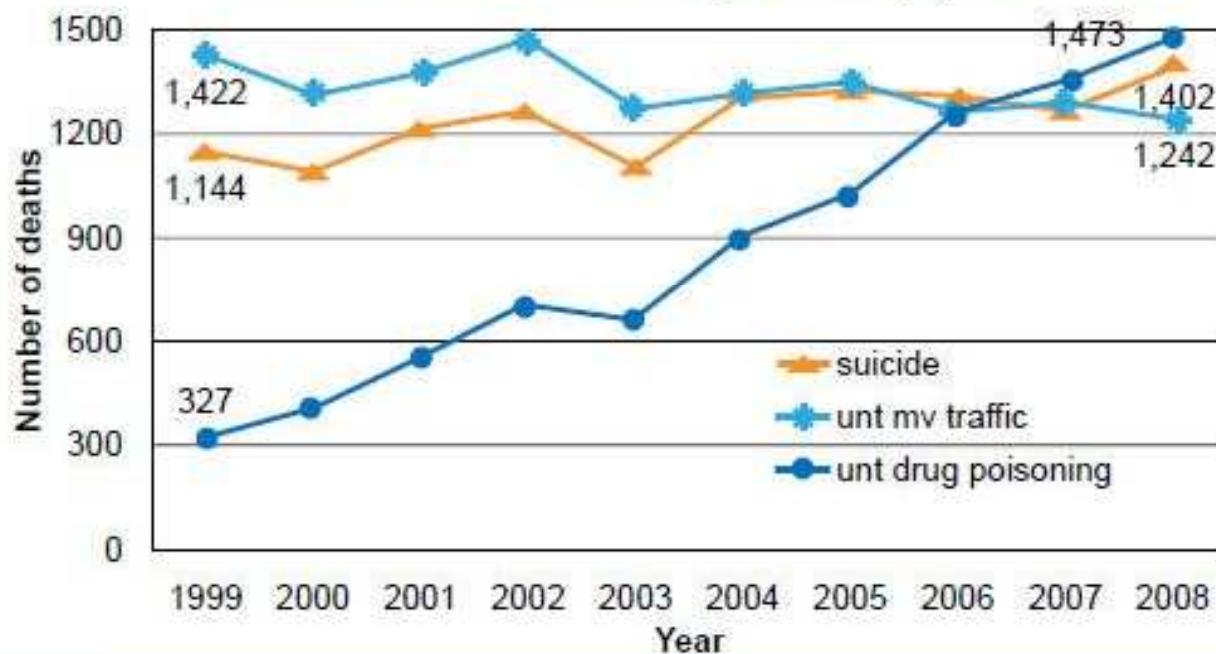
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# Prescription Drug Fatalities



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For first time, in 2007 unintentional drug poisoning exceeds MV traffic and suicide as the overall leading cause of injury death in Ohio.



Medscape

Number of deaths from motor vehicle traffic, suicide, and unintentional drug poisonings by year, Ohio 1999-2008. From Ohio Department of Health Violence and Injury Prevention Program.

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# NC Institute of Medicine



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## **NC IOM Task Force on Substance Abuse Services: Building a Recovery-Oriented System of Care**

18 month process beginning Fall 2007

Report submitted to General Assembly 2009

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# IOM Report Findings



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- Scope of the problem in NC is HUGE
  - Direct costs
  - Indirect costs

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# NC IOM Report (Cont'd)



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The downward spiral often begins in adolescence. More than 90% of individuals classified as having alcohol abuse or dependence problems initiated their bringing before age 21. The younger one starts...the more likely the use will turn into addiction.

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# Scope of the Problem in NC



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## Alcohol

- 35% of NC high school students report drinking in past 30 days
- 30% of NC middle school students report ever drinking alcohol
- 19% of NC high school students report binge drinking (>5) in past 30 days

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# Scope of Problem in NC



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## Marijuana

- 37% of NC high school students report ever using marijuana (9.5% for middle school)
- 20% of NC high school students report using marijuana in the past 30 days

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# Scope of Problem in NC



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## Inhalants

- 12% of NC students report ever using inhalants

## Prescription drugs

- 17% of NC high school students report misusing prescription drugs (9% for middle school)
- Most common: opioids (OxyContin, Vicodin, Percocet), benzodiazepines (Xanax, Valium), and stimulants (Ritalin, Adderall)

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# What do we know?

- Known for a while about medical consequences that include:
  - Alcohol poisoning
  - Drug overdose
  - Chronic conditions such as liver/heart disease
  - Violence, suicide, sexual assault, high risk sex
  - Accidents, especially motor vehicle accidents

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# What else do we know?

- School related outcomes: lower grades, greater risk for suspension/expulsion; linked to behavior and attention problems, anxiety and depression, higher risk of suicide, higher risk for having sex and being involved in sexual assault
- Gender related issue: girls who use drugs and alcohol are more apt to develop SA problems than boys are

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# A “harmless” rite of passage?

- Addiction is a disease that begins in childhood and adolescence. Adolescence is a critical time for prevention and intervention.
- Abuse not leading to addiction still puts youth and others at increased risk, especially for accidents.
- SA can alter normal maturation of the brain with lasting effects on cognition.

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# Effect of SA on Neurobiology



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- SA and addiction is a brain disorder that starts in adolescence (usually). Disorder triggered by substance use, with predisposing genetic and environmental factors that increase susceptibility.
- Genetic predisposition accounts for approx ½ of likelihood of becoming addict (similar to susceptibility to other chronic diseases).
- Use of substances leads to physiologic changes and physical changes in brain circuits. This can endure for long periods. Adolescents especially vulnerable.

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# Neurobiology (cont'd)



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- Late development of prefrontal cortex region of the brain. This is section of brain that controls long-term decision making such as trade off between small reward (using and getting high) now and a large reward (going to college) in the future. Area not fully developed until around 25.
- If can delay alcohol and drug use until 21, virtually guaranteed to not have problem (<3% of alcohol abusers/addicts started after 21)

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# Alcohol's Effect on Adolescent v. Adult Brain



Greater effect:

- Impaired learning and memory processes
  - Particularly reversal learning
- Attention deficits
- Executive function tasks

Less sensitive than adults to sedative effects

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# Critical Role of Primary Care Providers



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- Opportunity to intervene: adolescents don't think they have a problem so don't seek help
- Screening, Brief Intervention, and Referral to Treatment (SBIRT): An evidence-based practice tested in emergency departments, primary care offices, hospitals, community health centers, and health departments

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# CRAFFT



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- 1. Have you ever ridden in a Car driven by someone (including yourself) who was high or had been using alcohol or drugs?
  2. Do you ever use alcohol or drugs to Relax, feel better about yourself, or fit in?
  3. Do you ever use alcohol or drugs while you are by yourself Alone?
  4. Do you ever Forget things you did while using alcohol or drugs?
  5. Do your Family or Friends ever tell you that you should cut down on your drinking or drug use?
  6. Have you ever gotten into Trouble while you were using alcohol or drugs?

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# Adolescent Services in NC



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- Children and adolescents under 18 are a priority (target) population and can receive publicly-funded SA services if they have primary diagnosis of SA related disorder and have been in juvenile justice/MAJORS program OR have an abuse or dependence diagnosis.
- In addition, other groups of youth are eligible for preventive services. These include adolescents who are at-risk of SA or who are currently using alcohol or drugs at a level that does not meet the definition of dependence

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# IOM Task Force Recommendations



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- **According to Task Force, what is needed is system of care that would provide evidence based practices based on an individual's need:**
- EB prevention to youth and adolescents to enhance knowledge and skills, reduce risk factors, and enhance positive protective factors so they are less likely to engage in harmful SA activities
- Strategy for kids with risky behaviors, but not yet addicted: primary care based brief intervention optimal; keeps risky use from exacerbating and/or becoming addiction

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# IOM SA Task Force Recommendations (cont'd)



- EB treatment options in specialized SA system.
- Ongoing recovery supports to prevent relapse.
- DPI and DMH should work to establish evidence-based prevention, early intervention, and treatment programs for students in the school setting.

*“Every school district in NC should implement evidence-based SA prevention programs and have trained staff to ensure that children with SA problems are identified early and referred into treatment with appropriate family and school supports.”*

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# IOM SA Task Force Recommendations(cont'd)



Environmental strategies to combat alcohol, tobacco, and drugs by limiting underage sale to minors of tobacco and alcohol.

Strategies include: spot checks, raising taxes, limiting adult use, Quitline NC, no smoking in public places, social norming, increase beer tax, media campaigns about drunk driving

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# Treatment Access and Quality



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- **ACCESS:** Most individuals with SA problems do not recognize they have a problem. This is especially true in the adolescent population.
- **QUALITY:** Those who do look for treatment find an array of barriers (in private and public systems) and some of the treatment available is not of high quality (i.e. does not include science-based practices ).

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# Service Array and Dose

- DOSE: Those that are fortunate enough to find and access high quality treatment often do not get it in sufficient dose for it to be as effective as it might be.
- ARRAY: Or, once they leave the inpatient setting, there are insufficient services and supports in their communities

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# Integrated Care



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- Many levels: from minimal collaboration to full integration
- Components
  - Patient centered medical home
  - Health care team coordinating services/supports
  - Stepped care
  - Clinical integration

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# Why Integrate Care?

- An ounce of prevention.....
  - A. ....is worth a pound of cure.
  - B. ....is a ton of work.
- Increasingly strapped SA/MH system: primary care is de facto SA provider
- Willie Sutton phenomenon
- Less stigma
- Better coordination of care

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# Behavioral Health Drivers in Primary Care



- A majority of patients seen in primary care settings have behavioral health (BH) issues that precipitate the visit
- 67% of people with a behavioral health disorder do not get behavioral health treatment.
- 80% of people with a behavioral health disorder will visit primary care at least one time in a calendar year.
- 30-50% of referrals from primary care to an outpatient behavioral health clinic do not make the first appointment.
- Two-thirds of primary care physicians (PCPs) (N=6,660) reported not being able to access outpatient behavioral health for their patients. Shortages of mental health care providers, health plan barriers, and lack of coverage or inadequate coverage were all cited by PCPs as important barriers to mental healthcare access.

Source: Patient Centered Primary Care Collaborative: [www.pcpcc.net](http://www.pcpcc.net)

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# Thank you!

Sara McEwen, MD, MPH

Governor's Institute on Substance Abuse

[sara.mcewen@governorsinstitute.org](mailto:sara.mcewen@governorsinstitute.org)

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# IOM Recommendations



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## **Evidence-based practices in adolescent substance abuse (SA) prevention and treatment**

- **The most effective strategies are those that include multi-faceted interventions that include the individual, family, schools and community**

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# Evidence-Based Practice



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- Approach to Prevention and treatment validated by some form of documented scientific evidence
- Promotes high quality care and better outcomes.

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# Evidence-Based Practice



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Success has been seen in providing adolescents with necessary tools that have resulted in significant gains in reducing tobacco use, decreasing motor vehicle accident, and increasing physical activity.

[www.ncchild.org](http://www.ncchild.org): (Portrait of Adolescent Health in NC-2009)

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# Evidence-Based Practice



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## Local Successes



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# Evidence-based Practice



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- North Carolina Practice Improvement Collaborative
- SAMHSA National Registry of Evidence Based Programs and Practices (NREPP)
- OJJDP Blueprints
- Center for Disease Control and Prevention (CDC)

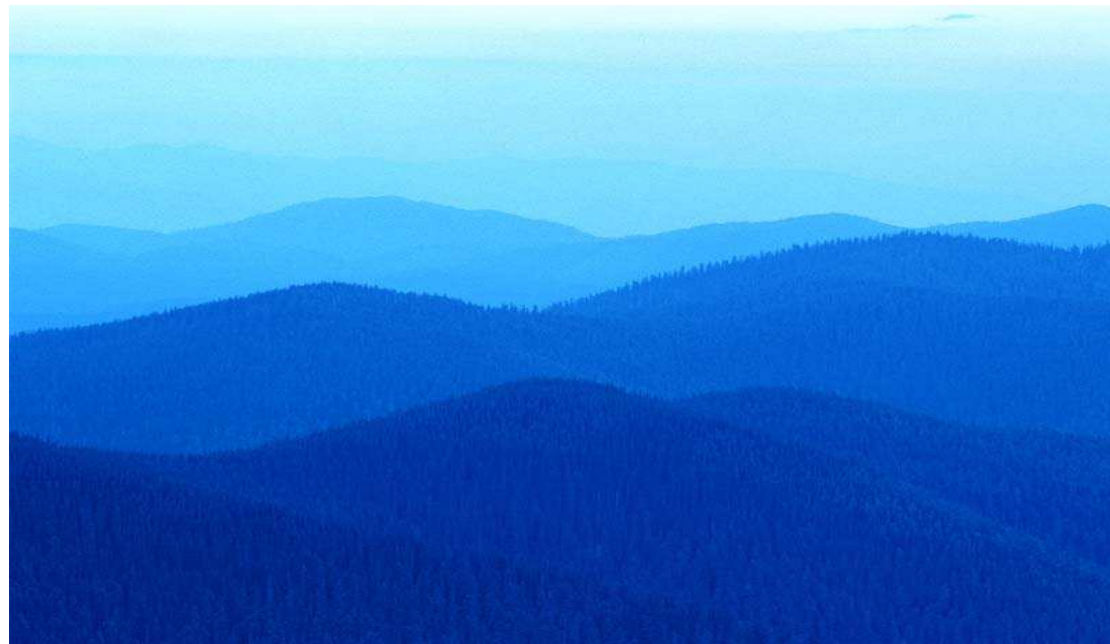
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# Common themes of evidence based practices for adolescents



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- Competence
- Confidence
- Connections
- Character
- Caring



(Roth, J and Brooks-Gunn, J: Youth Development Programs and Healthy Development in Romer: Reducing Adolescent Risk-Toward an Integrated Approach)

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# Effective Programs



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- Positive Behavioral Intervention and Support

[www.ncpublicschools.org/positivebehavior](http://www.ncpublicschools.org/positivebehavior)

- The Seven Challenges

[www.sevenchallenges.com](http://www.sevenchallenges.com)

- Strengthening Families Program (SFP)

[www.strengtheningfamiliesprogram.org](http://www.strengtheningfamiliesprogram.org)

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# Resources



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- A Primer for Providers and Families with Addendum on Family Focused Prevention Programs (North Carolina)
- Identifying and Selecting Evidence-Based Interventions (SAMHSA)

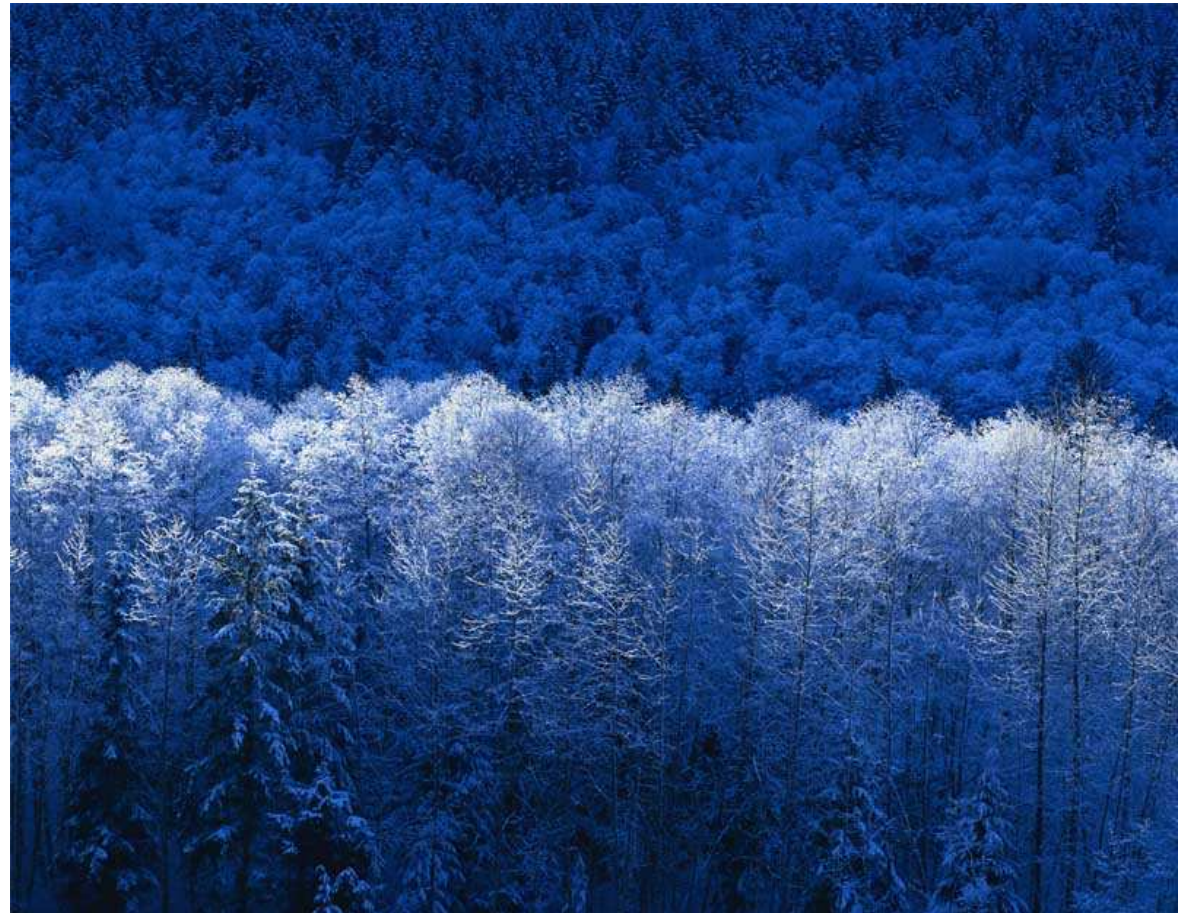
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# Challenges



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- Funding
- Personnel
- Training



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# Thank you for your participation!



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- Contact us:

Sara McEwen, M.D.-Governor's Institute

Janice Petersen, Ph.D.-Division of MH/DD/SAS



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