1. Both substance misuse and substance use disorders harm the health and well-being of individuals and communities. Addressing them requires implementation of effective strategies.

2. Highly effective community-based prevention programs and policies exist and should be widely implemented.

3. Full integration of the continuum of services for substance use disorders with the rest of health care could significantly improve the quality, effectiveness, and safety of all health care.
Five Overarching Messages, Cont.

4. **Coordination** and **implementation** of recent health reform and parity laws will help ensure **increased access to services** for people with substance use disorders.

5. A large body of research has clarified the **biological**, **psychological**, and **social underpinnings** of substance misuse and related disorders and described **effective** prevention, treatment, and recovery support services. Future research is needed to guide the **new public health approach** to substance misuse and substance use disorders.

Contents of the Report

Chapter 1: Introduction and Overview of the Report
Chapter 2: The Neurobiology of Substance Use, Misuse, and Addiction
Chapter 3: Prevention Programs and Policies
Chapter 4: Early Intervention, Treatment, and Management of Substance Use Disorders
Chapter 5: Recovery: The Many Paths to Wellness
Chapter 6: Health Care Systems and Substance Use Disorders
Chapter 7: Vision for the Future: A Public Health Approach

Chapter 1
There are Reasons for Hope and Optimism

- The public supports **prevention** and **treatment** for substance misuse and related harms, **not incarceration**
- Research provides understanding and evidence on effectiveness of:
  - Prevention policies and community-based programs
  - New medications and behavioral therapies
  - A chronic care model of treatment and recovery
- Recent policies offer **new opportunities**:
  - Expanded access to prevention, treatment, and recovery
  - Integration with mainstream health care
Chapter 2
The Neurobiology of Substance Use, Misuse and Addiction

- This Chapter describes the neurobiological framework underlying substance use and why some people transition from using or misusing alcohol or drugs to substance disorders.
- It explains how these substances produce changes in brain structure and function that promote and sustain addiction and contribute to relapse.

Actions of Addictive Substances on the Brain

Addictive substances produce some common effects on the reward areas of the brain. Stimulants directly increase dopamine (DA) transmission. Opioids, alcohol, and inhalants do the same indirectly. Nicotine activates DA neurons.

In addition to other effects, alcohol activates the release of opioid peptides. Heroin and prescribed opioid pain relievers directly activate opioid peptide receptors.

Chapter 2
Defining Addiction

Substance use research has made considerable advances and we can now “see” the living brain
- Magnetic Resonance Imaging (MRI)
- Positron Emission Tomography (PET)

This research shows that addiction is a chronic brain disorder with potential for recurrence and recovery

Image Source, from the laboratories of Drs. N. Volkow and H. Schiibert
Chapter 2
Addiction Cycle & Brain Regions

- Addiction becomes more severe with continued substance use
- Continued substance use causes dramatic and persistent changes in brain regions that control:
  - Feelings of pleasure (basal ganglia)
  - Stress and feelings of unease, anxiety, and irritability which often accompany withdrawal (extended amygdala)
  - Executive function—i.e., organization of thoughts, decision making, ability to prioritize tasks (prefrontal cortex)
- Substance use "hijacks" these important areas of the brain
  - Powerful feelings associated with substance use create overwhelming desire for substance seeking and impair executive control functions

Chapter 2
Conclusion

- Addiction is a chronic brain disease
  - With addiction, dramatic changes in brain function occur that reduce a person’s ability to control his or her substance use
- Brain changes persist long after substance use stops
  - It is not known how much these changes may be reversed or how long it takes
- Adolescence is a critical "at-risk period" for substance use and addiction
  - All addictive drugs have especially harmful effects on the adolescent brain, which is still undergoing significant development

Chapter 3
Why Should We Care About Prevention?

- Misuse of alcohol and drugs is associated with numerous health and social problems
- Prevention helps stop the progression from substance use to problematic use or to a substance use disorder
- Prevention makes economic sense: research shows that prevention programs can save between $1.61 and $64 in societal costs for every dollar invested
- There is strong evidence of the effectiveness of prevention programs and policies: we know that prevention works
Chapter 3
What We Know About Risk & Protective Factors

- Risk and protective factors that predict substance use problems are reliable targets for prevention
- Risk and protective factors are consistent across diverse population groups
- Different communities/neighborhoods have different levels of risk and protection

Chapter 3
Conclusion

- Over 60 prevention programs and policies have been shown to prevent substance use problems in rigorous research
- Communities are an effective organizing force for bringing evidence-based policies and programs to scale to improve public health
- As yet, there is insufficient evidence of the effects of state policies for reducing inappropriate prescribing of opioid pain medications

Chapter 4
Early Intervention, Treatment, and Management of Substance Use Disorders

- This chapter provides an overview of the scientific evidence supporting the effectiveness of treatment interventions, therapies, services, and medications available to identify, treat, and manage substance use problems and disorders.
Chapter 4
Overview

• There are effective strategies and services, ranging from self-change to specialty treatment:
  – Screening for substance use, misuse, and substance use disorders
  – Early intervention
  – Treatment
  – Management of treatment and recovery support for substance use disorders

Chapter 4
Substance Use Disorder Treatment

• Substance use disorder treatment – like treatment for most other illnesses – is designed to:
  – Stop or reduce major symptoms (harmful substance misuse)
  – Improve health and social function
  – Recognize and manage risks for relapse

• The SG Report notes that research shows that treatment also improves individuals’ productivity, health, and overall quality of life.

Substance Use Status Continuum

<table>
<thead>
<tr>
<th>Positive Physical, Social and Mental Health</th>
<th>Substance Use</th>
<th>Substance Use Disorder</th>
</tr>
</thead>
<tbody>
<tr>
<td>A state of physical, mental, and social well-being, free from substance misuse, in which an individual is able to realize his or her abilities, cope with the normal stresses of life, work productively and fruitfully, and make a contribution to his or her community.</td>
<td>The use of any substance in a manner, situation, amount, or frequency that can cause harm to the user and/or to those around them.</td>
<td>Clinically and functionally significant impairment caused by substance use, including health problems, disability, and failure to meet major responsibilities at work, school, or home; substance use disorders are measured on a continuum from mild, moderate, to severe based on a person’s number of symptoms.</td>
</tr>
</tbody>
</table>

*Chart showing definitions of Positive Physical, Social and Mental Health, Substance Misuse, and Substance Use Disorder*
Enhancing Health

Promoting optimum physical and mental health and well-being, free from substance misuse, through health communications and access to health care services, income and economic security, and workplace certainty.

Primary Prevention

Addressing individual and environmental risk factors for substance use through evidence-based programs, policies, and strategies.

Daily Intervention

Screening and detecting substance use problems at an early stage and providing brief interventions, as needed.

Treatment

Intervening through medication, counseling, and other supportive services to eliminate symptoms and achieve and maintain sobriety, physical, spiritual, and mental health and maximum functional ability. Levels of care include:

- Outpatient services;
- Intensive Outpatient/Partial Hospitalization Services;
- Residential/Inpatient Services; and
- Medically Managed

Recovery Support

Removing barriers and providing supports to aid the long-term recovery process. Includes a range of social, educational, legal, and other services that facilitate recovery, wellness, and improved quality of life.

Substance Use Care Continuum

<table>
<thead>
<tr>
<th>Enhancing Health</th>
<th>Primary Prevention</th>
<th>Daily Intervention</th>
<th>Treatment</th>
<th>Recovery Support</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promoting optimum physical and mental health and well-being, free from substance misuse, through health communications and access to health care services, income and economic security, and workplace certainty.</td>
<td>Addressing individual and environmental risk factors for substance use through evidence-based programs, policies, and strategies.</td>
<td>Screening and detecting substance use problems at an early stage and providing brief interventions, as needed.</td>
<td>Intervening through medication, counseling, and other supportive services to eliminate symptoms and achieve and maintain sobriety, physical, spiritual, and mental health and maximum functional ability. Levels of care include:</td>
<td>Removing barriers and providing supports to aid the long-term recovery process. Includes a range of social, educational, legal, and other services that facilitate recovery, wellness, and improved quality of life.</td>
</tr>
</tbody>
</table>

Treatment Setting and the Continuum of Care

- The SG report recognizes that SUD treatment is often delivered in predominantly freestanding programs that differ
  – in their setting (hospital, residential, or outpatient);
  – in the frequency of care delivery (daily sessions to monthly visits);
  – in the range of treatment components offered;
  – and in the planned duration of care.
- As patients progress in treatment and begin to meet the goals of their individualized treatment plan, they transfer from clinical management in residential or intensive outpatient programs to less clinically intensive outpatient programs that promote patient self-management.

Reasons for Not Seeking Treatment

- There are many reasons people do not seek treatment.
- The most common reason is that they are unaware that they need treatment;
  – they have never been told they have a substance use disorder or
  – they do not consider themselves to have a problem.
- This is one reason why screening for substance use disorders in general health care settings is so important.
Chapter 4
Screening and Brief Intervention

- **Substance misuse screening** should occur for everyone in every health care settings, including primary, urgent, psychiatric, school health clinics, and emergency care
- **Brief interventions** should be provided to adolescents and adults who are at risk of or show signs of substance misuse
- **Ongoing monitoring** is important to build a trusting relationship with a clinician to promote either a reduction of substance use or abstinence

### Evidence-Based Screening Tools for Substance Use

<table>
<thead>
<tr>
<th>Screening Tool</th>
<th>Substance Type</th>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alcohol</td>
<td>Drugs</td>
</tr>
<tr>
<td>Alcohol Screening and Brief Intervention for Adolescents and Youth: A Practitioner's Guide</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Alcohol Use Disorders Identification Test (AUDIT)</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Alcohol Use Disorders Identification Test-C (AUDIT-C)</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Brief Screener for Tobacco, Alcohol, and Other Drugs (BSTAD)</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>CRAFFT (Car, Relax, Alone, Forget, Friends, Trouble)</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>CRAFFT (Part A)</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

*Chart showing evidence-based screening tools for substance type and age group.

### Evidence-Based Screening Tools for Substance Use

<table>
<thead>
<tr>
<th>Screening Tool</th>
<th>Substance Type</th>
<th>Age Group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alcohol</td>
<td>Drugs</td>
</tr>
<tr>
<td>Drug Abuse Screen Test (DAST-10)</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>DAST-20: Adolescent version</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Helping Patients Who Drink Too Much: A Clinicians Guide</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>NIDA Drug Use Screening Tool</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>NIDA Drug Use Screening Tool: Quick Screen</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>Opioid Risk Tool</td>
<td>✗</td>
<td>✗</td>
</tr>
<tr>
<td>S2BI (Screening to Brief Intervention)</td>
<td>✗</td>
<td>✗</td>
</tr>
</tbody>
</table>

*Chart showing evidence-based screening tools for substance type and age group.
Motivational Interviewing (MI)

- A client-centered counseling style that addresses client ambivalence to change
- Counselor uses a conversational approach to help a client discover their own interest in changing their substance using behavior
- The main purpose of MI is to examine and resolve ambivalence
- MI is effective in reducing the substance misuse of patients who come to medical settings for other conditions

Chapter 4
Qualities of Effective Treatment

- **Individualized** treatment plans
- Goals that are **person-centered** and **strength-based**
- Targeted efforts to keep the individual **engaged in care**
- Care that considers both **physical** and **mental health**
- **Culturally competent care** that considers age, gender identity, race and ethnicity, language, health literacy, religion, sexual orientation, culture, physical health problems, and co-occurring conditions

Chapter 4
Treatment Behavioral Therapies for Substance Use Disorders

- Behavioral therapies can be provided in individual, group, and/or family sessions in virtually all treatment settings.
- These structured therapies help patients recognize the impact of their behaviors – such as those dealing with stress or interacting in interpersonal relationships – on their substance use and ability to function in a healthy, safe, and productive manner.
- These therapies also teach and motivate patients in how to change their behaviors as a way to control their substance use disorders.
Need for Counselors & Therapists to be Trained

- Many counselors and therapists working in SUD treatment programs have not been trained to provide evidence-based behavioral therapies.
- The SG report notes that unfortunately rather than using evidence-based behavioral care, general group counseling, which is not reliably effective in reducing substance use, remains the major form of behavioral intervention available in most treatment programs.

Individual Counseling

- Individual counseling has been extensively studied in many specialty care settings but rarely within non-specialty settings.
- Most studies support the use of individual counseling as an effective intervention for individuals with substance use disorders.

Behavioral Therapies

- Contingency Management
- Community Reinforcement Approach
- Motivational Enhancement Therapy
- The Matrix Model
- Twelve-Step Facilitation Therapy
- Family Therapies
  - Family Behavior Therapy (FBT)
  - Multi-Systemic Therapy (MST)
  - Multi Dimensional Family Therapy (MDFT)
  - Brief Strategic Family Therapy (BSFT)
  - Functional Family Therapy (FFT)
  - Behavioral Couples Therapy (BCT)
### Tobacco Use Cessation Efforts in Substance Use Disorder Treatment Programs

- People with mental and/or substance use disorders account for 40 percent of all cigarettes smoked in the United States.
- Research has shown that incorporating tobacco cessation programs into substance use disorder treatment does not jeopardize treatment outcomes and is associated with a 25 percent increase in the likelihood of maintaining long-term abstinence from alcohol and drug misuse.

### Chapter 4
#### Treatment Medication Management of Substance Use Disorders

- The U.S. Food and Drug Administration (FDA) has approved three medications to treat alcohol use disorders and three others to treat opioid use disorders.
- However, an insufficient number of existing treatment programs or practicing physicians offer these medications.
- To date, no FDA-approved medications are available to treat marijuana, cocaine, methamphetamine, or other substance use disorders.

### Chapter 4
#### Conclusion

- Substance misuse and substance use disorders can be reliably and easily identified through screening.
- Substance use disorders can be **effectively treated**, with recurrence rates no higher than those for other chronic illnesses such as diabetes, asthma, and hypertension.
- **Medications can be effective** in treating serious substance use disorders, but they are under-used.
- Treatment is **cost-effective compared with no treatment**.
**Chapter 5**
**Recovery: The Many Paths to Wellness**

- Recovery from substance use disorders has had several definitions. Although specific elements of these definitions differ, all agree that recovery goes beyond the remission of symptoms to include a positive change in the whole person.
- In this regard, “abstinence,” though often necessary, is not always sufficient to define recovery.

**Chapter 5**
**Recovery: The Many Paths to Wellness**

- Remission from substance use disorders—the reduction of key symptoms below the diagnostic threshold—is more common than most people realize.
- “Supported” scientific evidence indicates that approximately 50 percent of adults who once met diagnostic criteria for a substance use disorder—or about 25 million people—are currently in stable remission (1 year or longer).
- Remission from a substance use disorder can take several years and multiple episodes of treatment, RFS, and/or mutual aid.

**Recovery-Related Values and Beliefs**

- People who suffer from substance use disorders (recovering or not) have essential worth and dignity.
- The shame and discrimination that prevents many individuals from seeking help must be vigorously combated.
- Recovery can be achieved through diverse pathways and should be celebrated.
- Access to high-quality treatment is a human right, although recovery is more than treatment.
- People in recovery and their families have valuable experiences and encouragement to offer others who are struggling with substance use.
Chapter 5
Recovery Support Services

- Mutual Aid Groups
- (Peer) Recovery Coaching
- Recovery Management
- Recovery Housing
- Recovery Community Centers
- Recovery-based Education

Mutual Aid Groups

- The Surgeon General’s Report on Alcohol, Drugs and Health includes a discussion of mutual aid groups.
- The members share a problem or status and they value experiential knowledge—learning from each other’s experiences is a central element—and they focus on personal-change goals. The groups are voluntary associations that charge no fees and are self-led by the members.
- The best-known mutual aid group today is AA and its various 12-Step models, such as NA, CA and MA.

Recovery Housing

- The Surgeon General Report notes that a substance-free environment and mutual support can benefit an individual during and/or after outpatient treatment.
- Recovery Housing residents informally share resources with each other, give advice about how to find employment, manage legal problems, interact with the social service system and access health care.
Oxford Houses and Research

- The SG report noted that a randomized controlled trial found that people with severe substance use disorders who were randomly assigned to live in an Oxford House after substance use disorder treatment were two times more likely to be abstinent and had higher monthly incomes and lower incarceration rates at follow-up 2 years later than similar individuals assigned to receive standard continuing care.

Oxford Houses Saves Money

- The net cost benefit to the health care and criminal justice system from the Oxford House assignment compared to standard care.
- The Surgeon General’s Report noted that the estimated cost benefit from Oxford Houses was $29,000 per person over a 2-year follow-up period.

Chapter 5: Recovery
Recovery: State of the Science

- Well-supported scientific evidence demonstrates the effectiveness of 12-step mutual aid groups focused on alcohol and 12-step facilitation interventions.
- Evidence for the effectiveness of other recovery supports (educational settings, drug-focused mutual aid groups, and recovery housing) is promising.
- Many other recovery supports have been studied little or not at all.
Chapter 5
Conclusion

• Celebrate and support recovery, but let it stand on its own
• Make health care systems amenable to recovery concepts, people, and organizations
• Invest in research on the effectiveness of recovery supports
• Conduct research on how health care systems can work best with recovery support services
• Expand research on the innovative and emerging recovery supports that are happening in diverse communities and cultures

Chapter 6
Health Care Systems and Substance Use Disorders

• Supported scientific evidence indicates that closer integration of substance use-related services in mainstream health care systems will have value to both systems.
• Substance use disorders are medical conditions and their treatment has impacts on and is impacted by other mental and physical health conditions.
• Integration can help address health disparities, reduce health care costs for both patients and family members, and improve general health outcomes.

Chapter 6: Health Care Systems and Substance Use Disorders

• Use of Health IT is expanding to support greater communication and collaboration among providers, fostering better integrated and collaborative care, while at the same time protecting patient privacy.
• It also has the potential for expanding access to care, extending the workforce, improving care coordination, reaching individuals who are resistant to engaging in traditional treatment settings, and providing outcomes and recovery monitoring.
Chapter 6: Health Care Systems and Substance Use Disorders

• Well-supported evidence shows that the current substance use disorder workforce does not have the capacity to meet the existing need for integrated health care, and the current general health care workforce is undertrained to deal with substance use-related problems.

• Health care now requires a new, larger, more diverse workforce with the skills to prevent, identify, and treat substance use disorders, providing “personalized care” through integrated care delivery.

Precision Targeting At Risk Populations

• Pregnant women & newborns.

• Youth & Young Adults.

• Underserved populations, including racial & ethnic minorities, the elderly, sexual minorities and rural communities.

• Individuals exposed to trauma, including physical, emotional, and sexual abuse.

• Individuals in high risk environments, including the homeless; the justice involved; and service members deployed in war zones.

• People with co-occurring conditions.

Chapter 6 Conclusions

• Integrating care for substance use disorders into mainstream health care can increase quality, effectiveness, and efficiency of health care

• Health IT is expanding to support greater communication and collaboration among providers, fostering better integrated care

• A larger, more diverse workforce is needed, with skills to prevent, identify, and treat substance use disorders:
  – Today’s substance use disorder workforce does not have capacity to meet existing need for integrated care
  – General health care workforce is undertrained to deal with substance use-related problems
Chapter 7
Vision For The Future: A Public Health Approach

1. Both substance misuse and substance use disorders harm the health and well-being of individuals and communities. Addressing them requires implementation of effective strategies.
2. Highly effective community-based prevention programs and policies exist and should be widely implemented.
3. Full integration of the continuum of services for substance use disorders with the rest of health care could significantly improve the quality, effectiveness, and safety of all health care.

Chapter 7
Vision For The Future: A Public Health Approach, Cont.

4. Coordination and implementation of recent health reform and parity laws will help ensure increased access to services for people with substance use disorders.
5. A large body of research has clarified the biological, psychological, and social underpinnings of substance misuse and related disorders and described effective prevention, treatment, and recovery support services.

What Can NAADAC Do?

• Expand Evidence-based Interventions – Work with community leaders and community coalitions to implement prevention, treatment, and recovery programs and policies
• Translate the Science into Public Understanding – Use the Surgeon General’s Report to inform NAADAC members, your patients/clients, the public and community leaders
• Mobilize Different Sectors of the Community – Engage with stakeholders such as people in recovery, policymakers, law enforcement, health care, education, businesses, and the faith community to encourage change
A Toolkit for change:
What can NAADAC Do?

- Encourage Parents to Talk to Their Children – Refer parents to the Surgeon General’s Report on Addiction for background information, encourage them to talk to their children about alcohol and drugs and the risks they face.
- Monitor and Evaluate Progress – Continually assess accomplishments, needs of people in recovery, community needs and other stakeholders. Adjust strategies as appropriate; share progress with stakeholders.
- And more! – Use your imagination and understanding of the hope, experience, and strengths of people seeking to recover from the effects of alcohol and/or drugs to envision new strategies for change.

Surgeon General Report (SGR) Website

Collateral materials are available to support activities and can be found on the Surgeon General Website (www.Addiction.SurgeonGeneral.gov).

QUESTIONS?

For questions or further information, contact

H. Westley Clark, MD, JD, MPH
(HWestleyClark@yahoo.com)
Disclaimer

• This presentation was made by contract on behalf of the Substance Abuse and Mental Health Services Administration (SAMHSA).
• Dr. Clark is not a federal employee, and this presentation does not represent any official position of SAMHSA.