Presentation Agenda

1. Measuring the impact of opioids
2. Who consumes opioids and why?
3. Potential labor market impacts of opioids
4. The Path Forward
Opioids are the leading cause of accidental death in the United States and the Commonwealth of Virginia.

<table>
<thead>
<tr>
<th>The Most Common Opioids</th>
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</thead>
<tbody>
<tr>
<td>Methadone</td>
</tr>
<tr>
<td>Vicodin, Lorcet, Lortab (hydrocodone)</td>
</tr>
<tr>
<td>Dilaudid (hydromorphone)</td>
</tr>
<tr>
<td>Percocet, Percodan, OxyContin (oxycodone)</td>
</tr>
<tr>
<td>Demerol (pethidine)</td>
</tr>
<tr>
<td>Duragesic (fentanyl)</td>
</tr>
</tbody>
</table>
Estimated Consumption of Narcotics
Daily Doses Per Million Inhabitants Per Day, 2017

Estimated Consumption of Selected Narcotics
Daily Doses Per Million Inhabitants Per Day, 2017

Age-Adjusted Drug Overdose Deaths Per 100,000
United States, 1999 - 2017

Deaths Per 100,000

Age-Adjusted Drug Overdose Deaths by Opioid Category
United States, 2000 – 2018*

Deaths Per 100,000

Age-Adjusted Drug Overdose Deaths Per 100,000
United States and Selected States, 2006 and 2017

Deaths from Overdoses from Selected Opioids in Virginia, 2007–2018

- **Fentanyl and/or Heroin**
- **Prescription Opioids (Excluding Fentanyl)**

**Source:** Virginia Department of Health, Office of the Chief Medical Examiner, Fatal Drug Overdose Quarterly Report, 4th Quarter 2018. Published April 2019. Data subject to revision.
Leading Methods of Unnatural Death in Virginia  
2007 - 2018

Deaths  
Motor Vehicle Related  
Gun Related  
Fatal Drug Overdose

Opioid Consumption
Survey Responses on Rationale for Opioid Consumption
United States, 2017

Source: Statista Survey, February 2017 of 1,029 respondents. "What was the main reason for taking opioids the last time you took them?" Approximately 2% of respondents were “other” and another 2% declined to respond to the survey question.
Self-Reported Health Status
Males Age 25-54, United States

<table>
<thead>
<tr>
<th>Health Status</th>
<th>Employed</th>
<th>Unemployed</th>
<th>Not in Labor Force</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excellent</td>
<td>20.0%</td>
<td>12.3%</td>
<td>20.6%</td>
</tr>
<tr>
<td>Very Good</td>
<td>36.3%</td>
<td>29.2%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Good</td>
<td>31.9%</td>
<td>35.1%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Fair</td>
<td>13.9%</td>
<td>10.7%</td>
<td>13.9%</td>
</tr>
<tr>
<td>Poor</td>
<td>17.4%</td>
<td>2.3%</td>
<td>1.2%</td>
</tr>
</tbody>
</table>

Respondents Who Took Pain Medication the Previous Day
Males Age 25-54, United States

Source: American Time Use Survey Responses. Employed (7,277), Unemployed (568), and Not in Labor Force (683). For disabled men, Employed (191), Unemployed (25), and Not in Labor Force (276).

Self-Reported Health Status
Females Age 25-54, United States

Source: Alan B. Kreuger (2016). “Where Have All the Workers Gone? American Time Use Survey Responses. Employed (7,453), Unemployed (637), and Not in Labor Force (2,265)
Respondents Who Took Pain Medication the Previous Day
Females Age 25-54, United States

Percent Taking Medication

- Not in Labor Force: 33.7%
- Unemployed: 27.3%
- Employed: 25.9%

Respondents Who Took Pain Medication the Previous Day
Males and Female Veterans Age 25-54, United States

Labor Markets
Labor Force Participation Rate, United States
January 2007 – April 2019

Sources: Bureau of Labor Statistics and Dragas Center for Economic Analysis and Policy. Seasonally adjusted data.
Combined Effect of Opioid Prescription Rates and Change in Labor Force Participation Rate
Prime Age Adults, Ages 25–54

Note: Data on change in state-level labor force participation is from CPS years 2009-2001 and 2014-2016 for prime age adults and county-level data on opioid levels is from CDC Vital Signs (QuintilesIMS). For each county, the combined effect is the average of the percentile rank of labor force participation change and the percentile rank of opioid prescription rate.

Based on data used in “Where Have All the Workers Gone? An Inquiry into the Decline of the U.S. Labor Force Participation Rate” by Alan Krueger. Brookings Papers on Economic Activity, Fall 2017
Unemployment and Fatal Opioid Overdoses

- A simple bivariate analysis suggests that there is a causal relationship between the unemployment rate and the fatal opioid overdose rate in Virginia.

- A lack of economic opportunities may lead individuals to seek solace in a variety of substances, including opioids.

- This is likely an endogenous relationship, so we would need a viable instrument to explore in more detail.
ED Visits and Disability Rates

- A prevailing hypothesis is that increases in disability rates correspond to increases in opioid use.

- A bivariate examination suggests a causal relationship between the disability rate and emergency department opioid overdose visits.

- As with unemployment, this is likely endogenous, so we would need to obtain a viable instrument to explore in more detail.
The Path Forward: Opioids and Employment
Complications for Employers

Lack of skilled labor, an aging labor force, and close to record low unemployment rates make finding quality labor a challenge.

Failing Drug Tests—In 2017, positive tests for illegal drugs in the U.S. workforce remained at their highest level in more than a decade.

According to Detox’ Drugging at Work Survey, nearly 7 in 10 Americans have used drugs including opiates, amphetamines and cocaine while they were at work.
Has your company hired individuals with any of the following backgrounds?

We lack health system and healthcare provider capacity to identify and engage individuals, and provide them with high-quality, evidence-based opioid addiction treatment, in particular the full spectrum of medication-assisted treatment (MAT). It is well-documented that the majority of people with opioid addiction in the U.S. do not receive treatment, and even among those who do, many do not receive evidence-based care. Accounting for these factors is paramount to the development of a successful strategy to combat the opioid crisis.

There is a need for more rigorous research to better understand how existing programs or policies might be contributing to or mitigating the opioid epidemic.
I have come to believe that an uncompromising “abstinence-only” model is a holdover from the very beginnings of the recovery movement, almost 100 years ago, and our understanding has greatly evolved since then. The concepts of addiction and recovery that made sense in 1935, when Alcoholics Anonymous was founded, and which have been carried on by tradition, might not still hold true in the modern age of neurochemistry and functional MRIs.

Peter Grinspoon, M.D
Faculty, Harvard Medical School
(11 years clean-Opioids)

Source: Does addiction last a lifetime? Harvard Medical School. October 08, 2018
Substance Use Prevention and Treatment Initiative
The Pew Charitable Trusts

- Reduce the inappropriate use of prescription opioids while ensuring that patients have access to effective pain management.
- Expand access to effective treatment for substance use disorders, including through the increased use of FDA-approved medications and behavioral health therapies.
WHAT ROLE CAN EMPLOYERS PLAY IN THIS CRISIS?

Provide Education, Access to Help and Support

- Recovery Friendly Environment - Substance use disorder is a disease and we wouldn’t talk about zero tolerance for other diseases.
- Worker Education Programs - training such as early signs for managers could provide crucial intervention assistance for employees.
- Employee Wellness Programs - create a workplace culture that minimizes the stigma of addiction.
2018 Society for Human Resource Management (SHRM) and the Charles Koch Institute (CKI) WORKERS WITH CRIMINAL RECORDS Member Survey

74% of managers believe the cost of hiring individuals with criminal records is the same as or lower than that of hiring individuals without criminal records.

Employers can maintain a safe work environment and combat prescription drug abuse by taking the following measures:

Revise the company’s drug policy to address prescription drug use in addition to illegal drugs.

Educate employees about the dangers of prescription painkiller use and misuse.

Include prescription medications in their drug-testing program.

Partner with their health care and workers’ compensation insurance providers to prevent and manage opioid abuse.
“Collateral Consequences” - Dropping out of the workforce

• Discrimination and barriers to employment with a felony history

• Food and financial assistance through the Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF) benefits are difficult to receive for anyone with a past that includes a drug felony (12 states have a lifetime ban)

• Barriers to Education include no access to financial aid or grants for people with drug convictions

• An inability to return to work for at least five years if a drug felony was committed and the person was employed in the medical field
Resources to Combat SUDs

National focus on remedying barriers and opening up the playing field to those who move forward despite addiction, criminal convictions, etc.

Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act

First Step Act of 2018

Certificates of Rehabilitation
Next Steps

The foremost need is to acquire more and better information concerning opioid addiction:

• Better practices to reduce the “burden of hurt” for individuals and the inappropriate use of opioids.

• New research that advances our understanding of pain and addiction and the development of pioneering treatments.

• Increase the availability and distribution of overdose-reversing drugs.

• Increase public health data reporting and collection.
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