

# Alcohol, Drugs and Trauma: A Risky Mix



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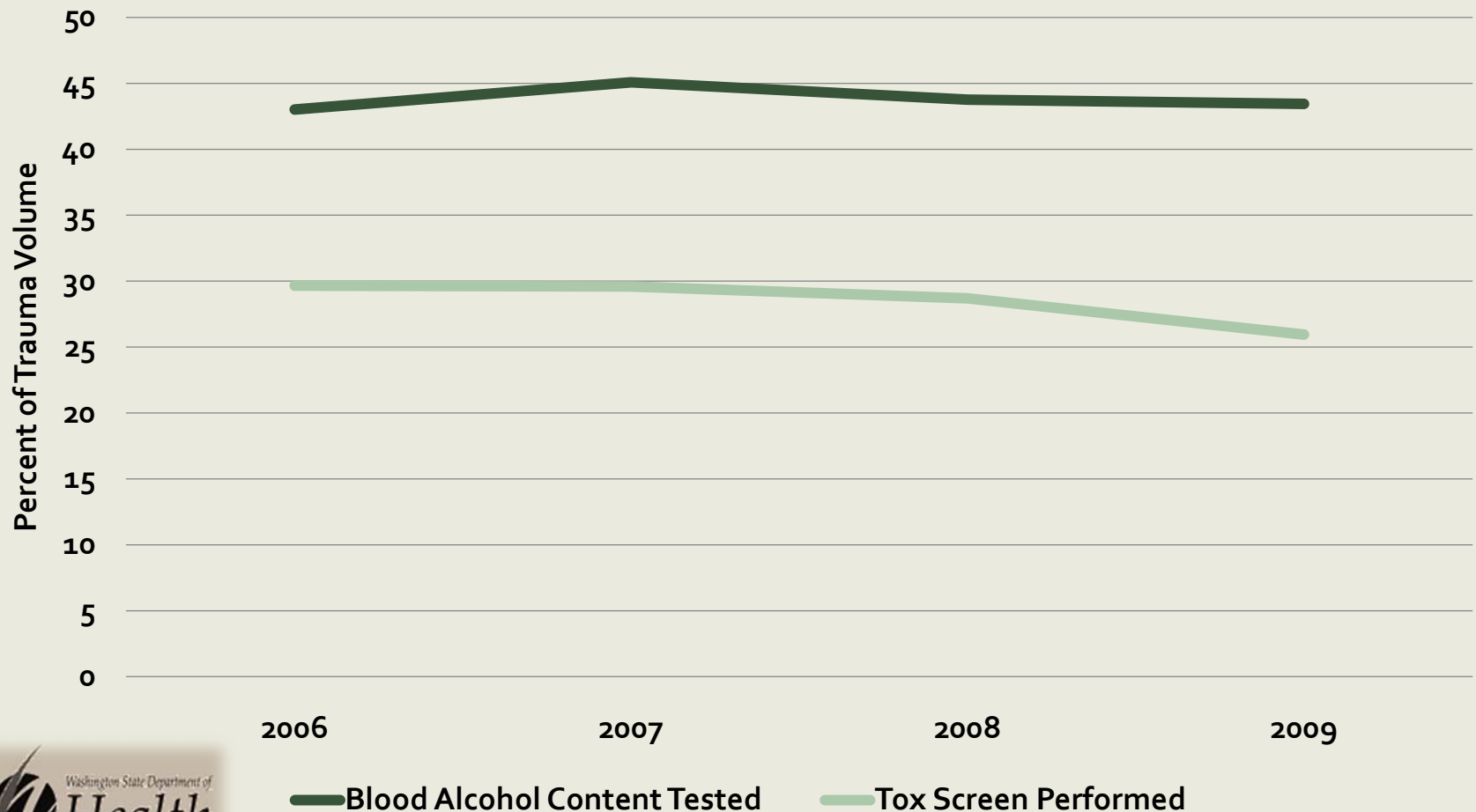
# Definitions:

- Alcohol use is determined by an alcohol test:
  - Blood alcohol level  $\geq 0.8$  g/dl for adults age 21+
  - Blood alcohol level  $\geq 0.2$  g/dl for minors
- Drug Use is determined by a toxicology report.



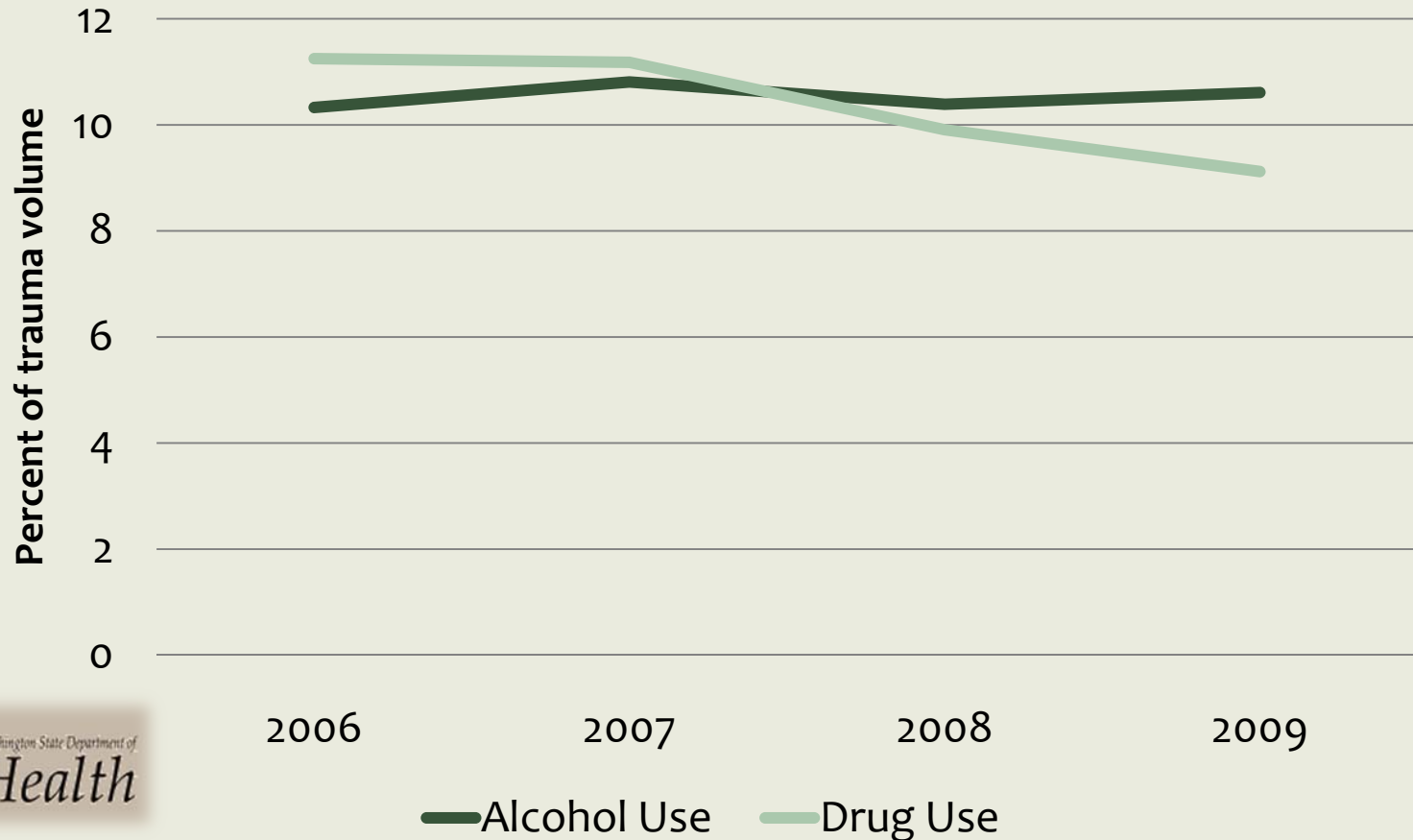
# Nearly half of trauma patients are screened for blood alcohol levels while only a quarter of them are screened for toxicology

(DOH inclusion criteria, Excluding transfers-out)



# At least one in every 10 trauma incidents involves either alcohol or drugs or both

(DOH inclusion criteria, Excluding transfers-out)



# WTR shows about a quarter of those in the registry who tested positive for alcohol also tested positive for one or more drugs

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



	No Alcohol Use	Alcohol Use
No Drug Use	13,217 (91.8%)	1,215 (71.6%)
Drug Use	1,186 (8.2%)	481 (28.4%)

Column Percent

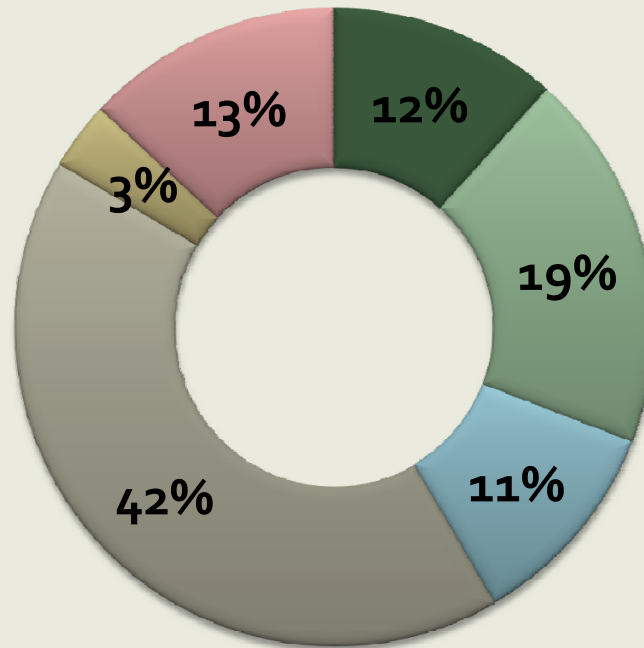
p value = 0.000

# Among those patients tested positive for drugs, the choice of drug is cannabis followed by cocaine

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)

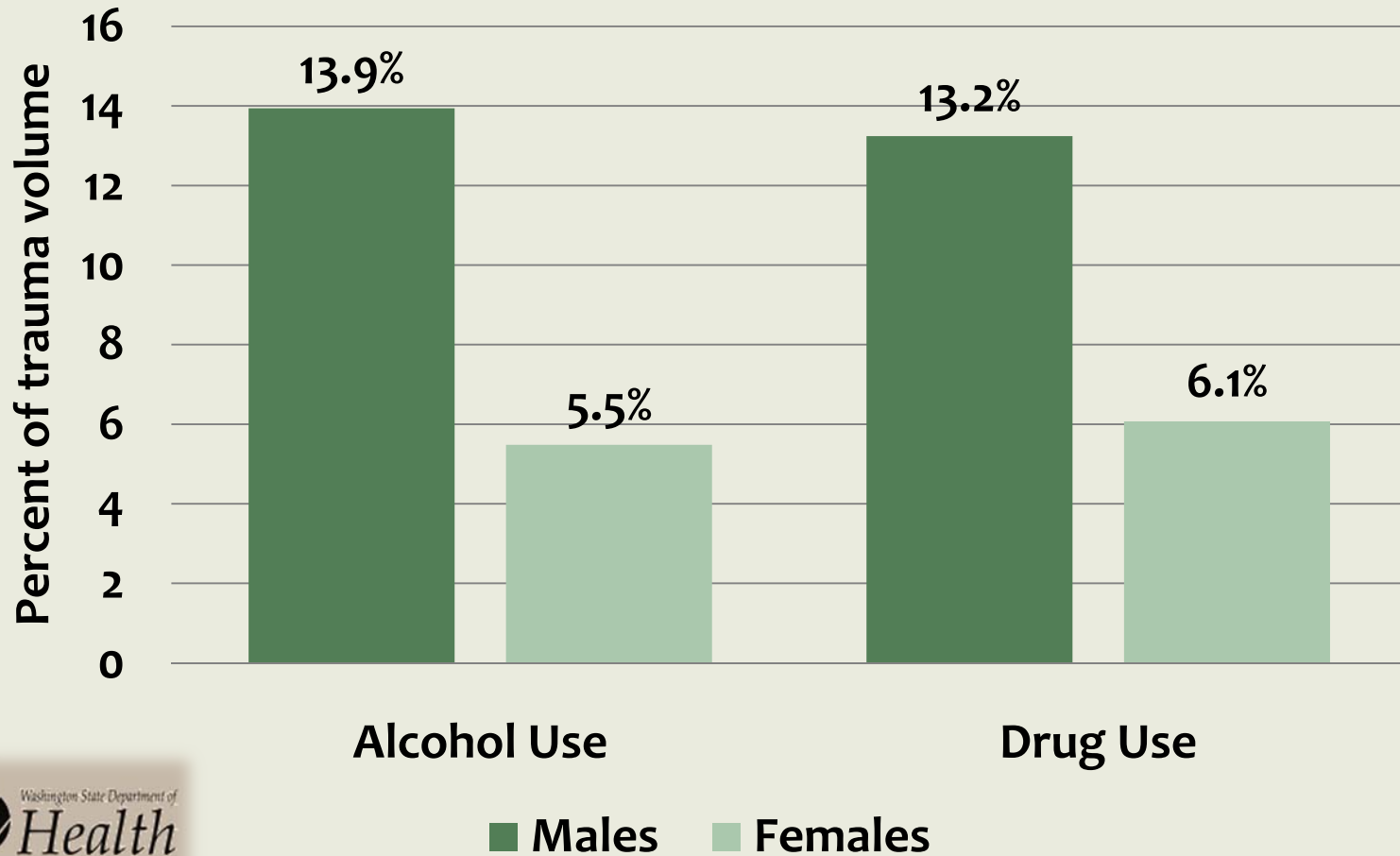


- Opiates
- Cocaine
- Amphetamine
- Cannabis
- Barbituates
- Other



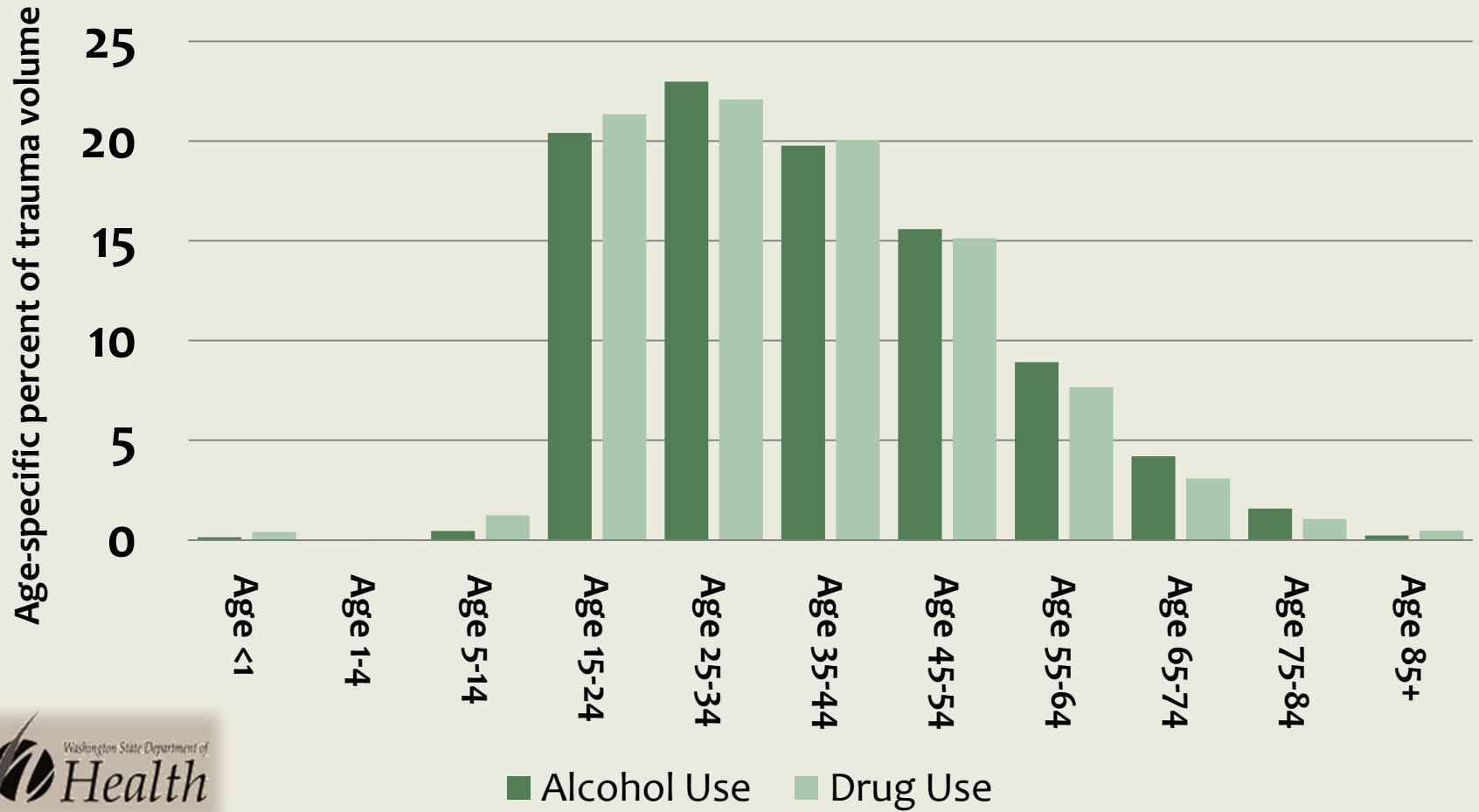
# WTR shows males are more likely to test positive for alcohol and drugs than females

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



# WTR shows trauma patients in their twenties have the highest exposure to alcohol and drugs

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)





# The patients tested positive for alcohol or drugs sustain more serious injuries than those patients with no positive test results

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



## INJURY SEVERITY SCORE (ISS) BY ALCOHOL USE

		No	Yes
Minor	ISS 0-8	36.1%	34.0%
Moderate	ISS 9-15	39.8%	29.3%
Serious	ISS 16-75	24.1%	36.7%

p value = 0.000

## INJURY SEVERITY SCORE (ISS) BY DRUG USE

		No	Yes
	ISS 0-8	40.0%	26.7%
	ISS 9-15	39.6%	30.7%
	ISS 16-75	23.5%	42.5%

p value = 0.000

# WTR shows use of alcohol and drugs increases the likelihood of death in older ages

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



## CASE FATALITY BY ALCOHOL USE

	No	Yes
Age <1	2.4%	0.0%
Age 1-4	2.8%	0.0%
Age 5-14	0.9%	0.0%
Age 15-24	4.0%	3.9%
Age 25-34	4.7%	3.4%
Age 35-44	3.3%	4.1%
Age 45-54	3.9%	5.4%
Age 55-64	3.8%	6.8%
Age 65-74	5.2%	8.1%
Age 75-84	6.8%	8.7%
Age 85+	8.3%	12.5%

## CASE FATALITY BY DRUG USE

	No	Yes
Age <1	2.4%	0.0%
Age 1-4	2.8%	0.0%
Age 5-14	0.9%	1.6%
Age 15-24	4.2%	3.1%
Age 25-34	4.8%	2.9%
Age 35-44	3.7%	2.7%
Age 45-54	4.2%	4.0%
Age 55-64	3.9%	6.8%
Age 65-74	5.2%	10.4%
Age 75-84	6.7%	16.9%
Age 85+	8.2%	15.2%

# The WTR patients tested positive for alcohol or drugs are more likely to be sent to the ICU from the ED than those patients with no positive test results

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



## ED DISPOSITION TO ICU BY ALCOHOL USE AND ISS

		No	Yes
Minor	ISS 0-8	4.5%	13.0%
Moderate	ISS 9-15	9.4%	22.6%
Serious	ISS 16-75	47.4%	60.8%

p value = 0.000

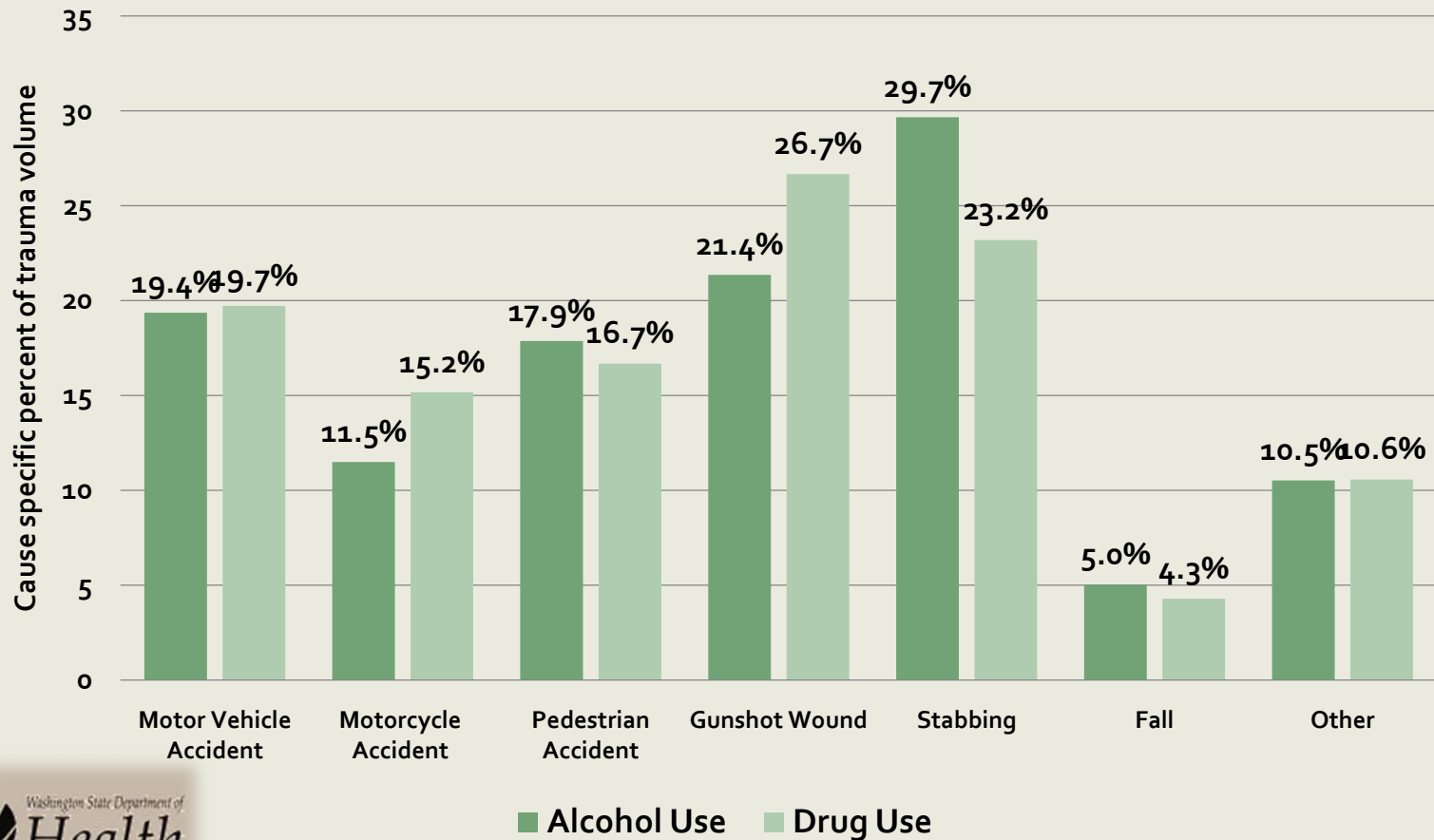
## ED DISPOSITION TO ICU BY DRUG USE AND ISS

		No	Yes
	ISS 0-8	4.6%	14.2%
	ISS 9-15	9.5%	21.1%
	ISS 16-75	47.2%	60.0%

p value = 0.000

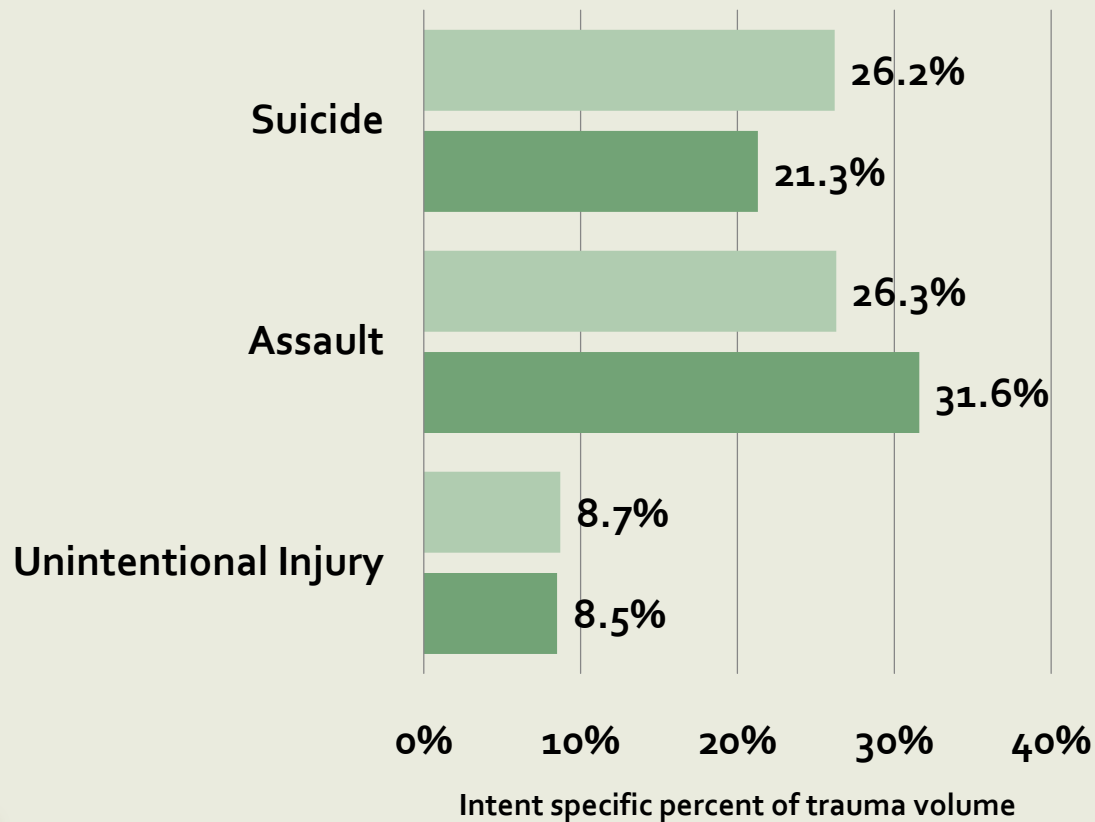
# In WTR use of alcohol and drugs by injury mechanism

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



# Use of alcohol and drugs in WTR data by the intent of injury

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



# Nearly half of WTR patients with serious injuries (ISS 16+) who test positive for alcohol or drugs are either on Medicaid or self-pay

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



## ALCOHOL USE

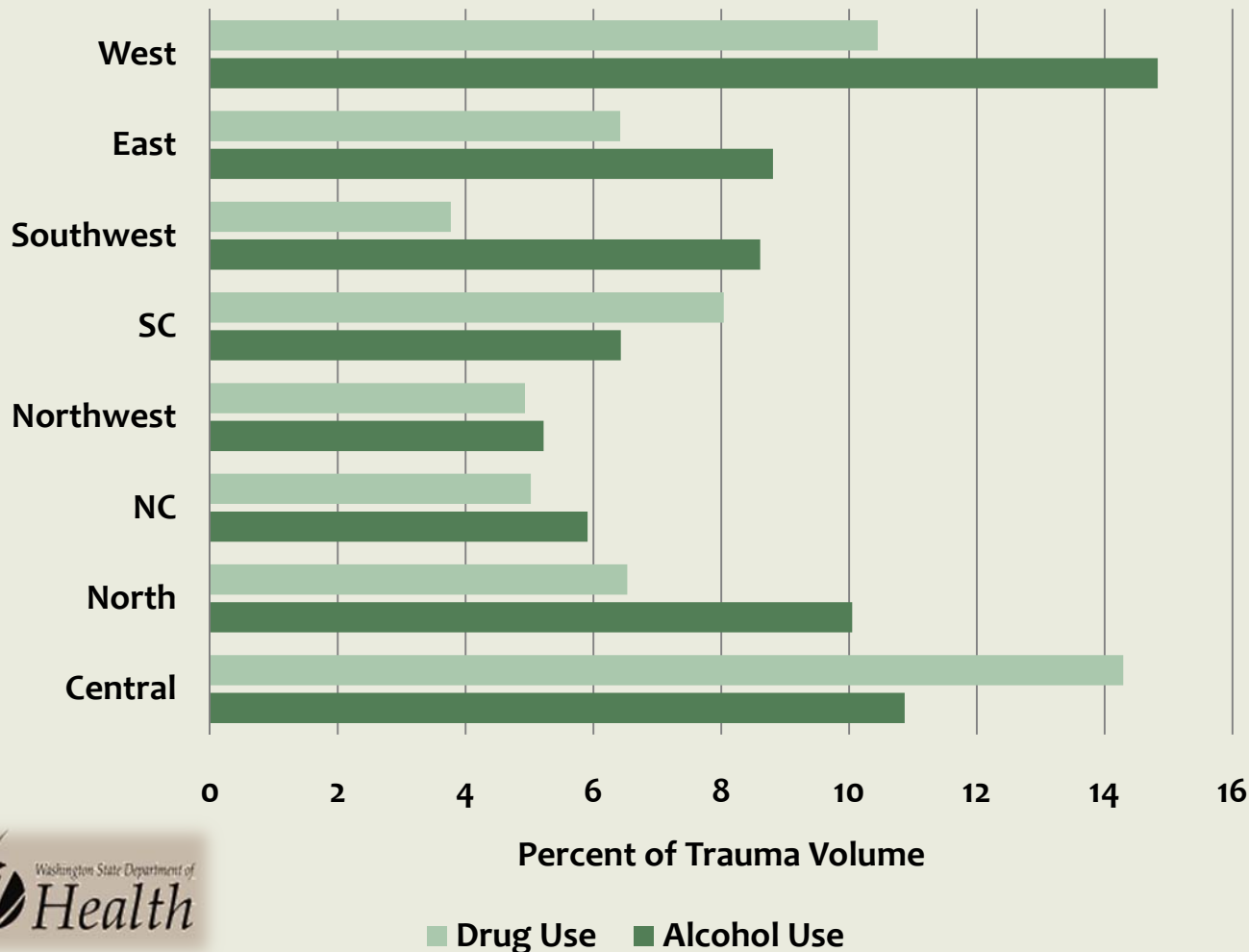
	No (Col%)	Yes (Col%)
None	1.1%	2.6%
Medicare	25.4%	7.4%
Medicaid	14.8%	<b>23.9%</b>
Labor & Industries	5.3%	1.1%
HMO	5.2%	4.7%
Other Insurance	12.8%	12.5%
Self-Pay	8.4%	<b>17.6%</b>
Commercial Insurance	16.0%	15.7%
Health Care Service	6.1%	6.4%
Other Sponsored	2.1%	2.9%
Charity Care	2.8%	5.4%

## DRUG USE

No (Col%)	Yes (Col%)
1.3%	1.4%
25.5%	9.3%
14.0%	<b>26.7%</b>
4.7%	4.3%
5.5%	3.6%
13.2%	10.8%
8.7%	<b>14.9%</b>
15.9%	16.0%
6.4%	5.0%
2.2%	2.0%
2.6%	6.1%

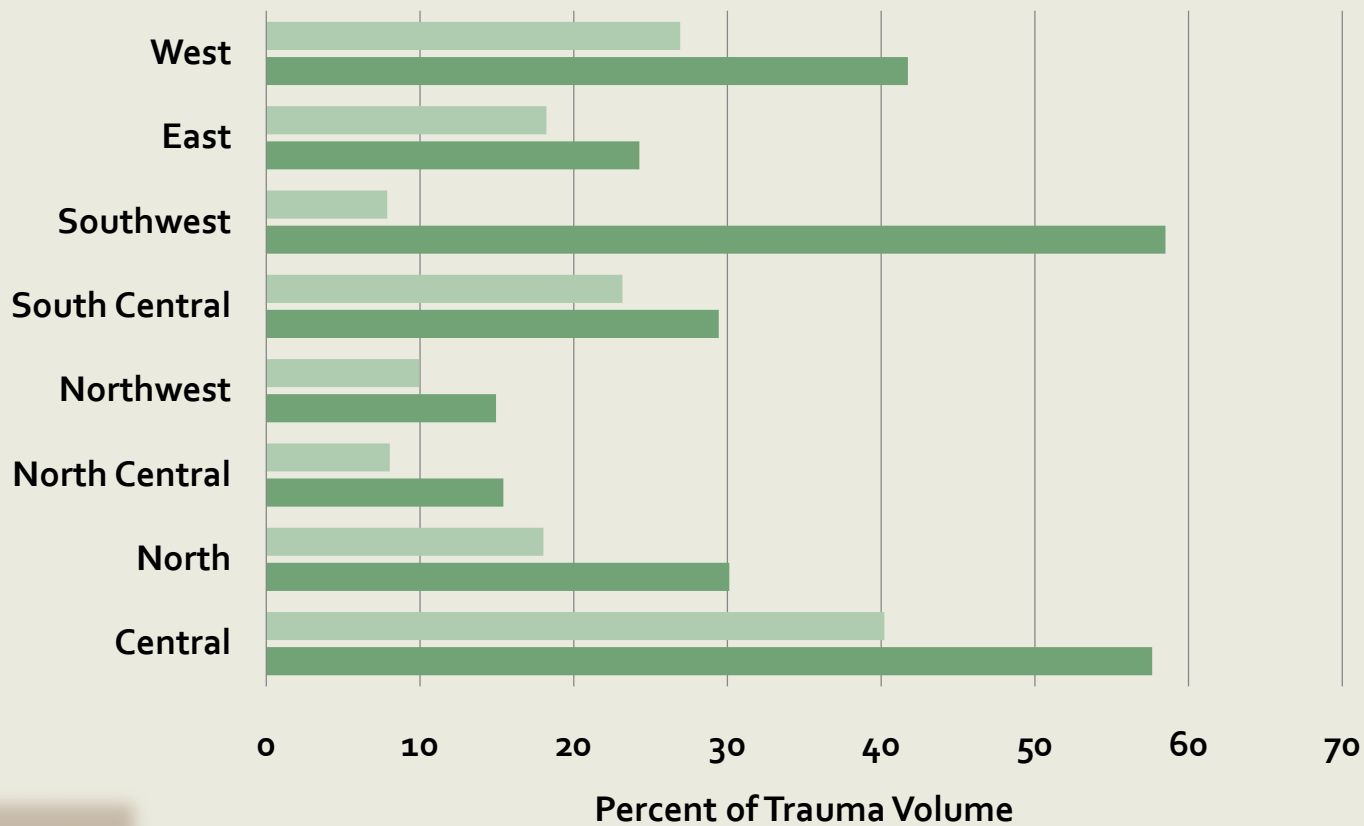
# Regional comparison of alcohol- and- drug related trauma in WTR data

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)



# Regional comparison of blood alcohol and toxicology screenings

(DOH inclusion criteria, Excluding transfers-out, 2006-2009)







**Thank You**