

# Drugs and Driving: Detection and Deterrence

Advisory Group on Drugs in Traffic

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## Key Messages

- Drugs are as serious a problem on the roads as alcohol.
- Drug driving is a different problem than drink driving.
- There is a great deal we have yet to learn.
- The drug-driving problem is of a magnitude deserving a societal response comparable to that afforded the drink-driving problem over the past 30 years.



# Overview

- Background
- The Evidence
- Experimental
- Epidemiological Evidence
- Legislation
- Enforcement
- Prevention
- Where do we go from here?



## Background

- Over the past 50 years, concern about impaired driving dominated by a focus on alcohol
- A great deal has been learned about alcohol and driving
- Evidence-informed practices have reduced the toll from alcohol-related crashes

## **What's all the fuss about drugs?**

- Very little was known about drugs in traffic
- Research was difficult, fraught with technical and methodological challenges
- Growing recognition of the extent of problem associated with drugs in traffic

## The Evidence

- Experimental – the effects of drugs on skills necessary for the safe operation of vehicles
- Epidemiological – the prevalence of drug use by drivers and the impact on crash risk

## Experimental Evidence

- Research shows a wide variety of substances can adversely effect the ability to operate a vehicle safely
  - ✓ Illegal drugs (e.g., cannabis, cocaine, opiates)
  - ✓ Psychoactive pharmaceuticals (e.g., benzodiazepines, narcotic analgesics)
  - ✓ Over-the-counter remedies (e.g., antihistamines)

## Experimental Evidence: Drug Effects

- Decreased alertness
- Sedation
- Impaired coordination
- Increased risk-taking
- Poor decision-making
- Deficits in divided attention
- Impaired cognitive function

***Drug effects are not necessarily  
similar to those of alcohol***



## Epidemiology (Descriptive)

- **Roadside Surveys** attempt to determine the prevalence of drug use among drivers on the road
- **Random sample** of drivers asked to provide bodily fluid sample for analysis of drug content

## Roadside Surveys



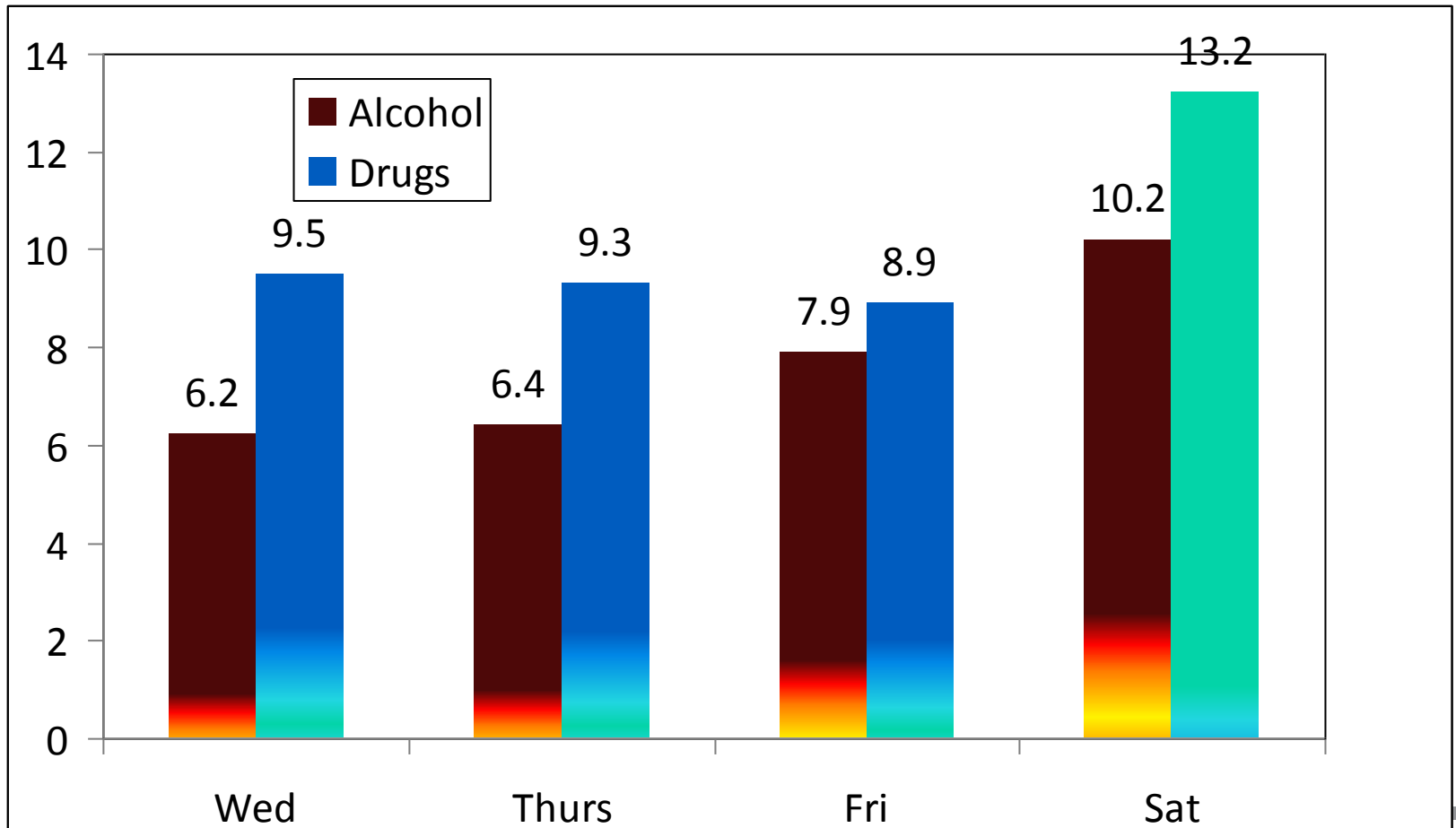
- **Many approaches**
    - ✓ Voluntary/mandatory
    - ✓ Nighttime/Day & night
    - ✓ Police/civilians
    - ✓ Breath/Blood/Urine/  
Oral fluid
-

# British Columbia Roadside Survey 2008

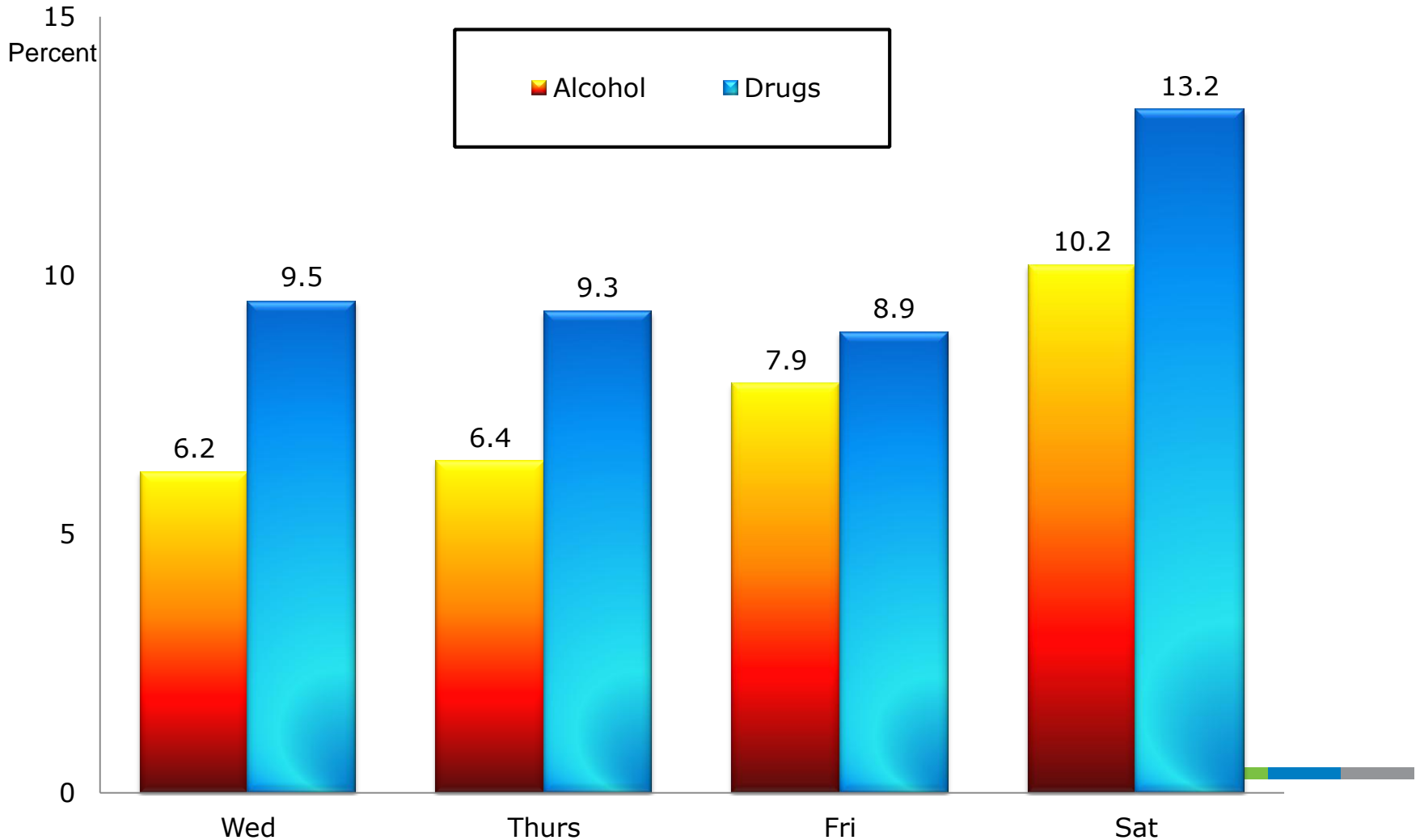
- 9 pm to 3 am
- Move every 90 min
- Wed thru Sat
- Voluntary
- Parking lot
- Breath and oral fluid
- BAC > 50 mg/dL given safe ride



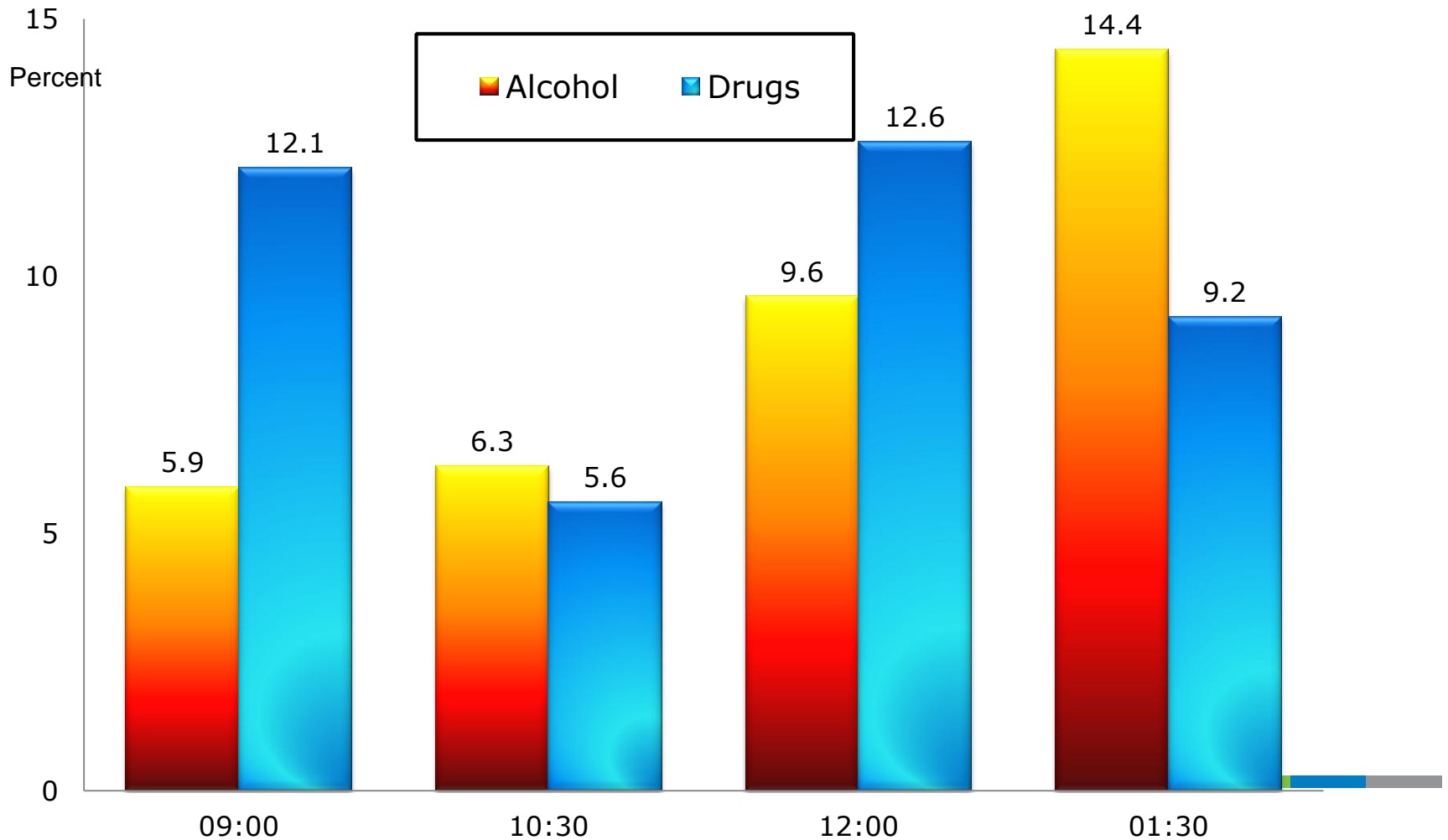
# Percent Alcohol and Drug Positive Cases by Day of Week



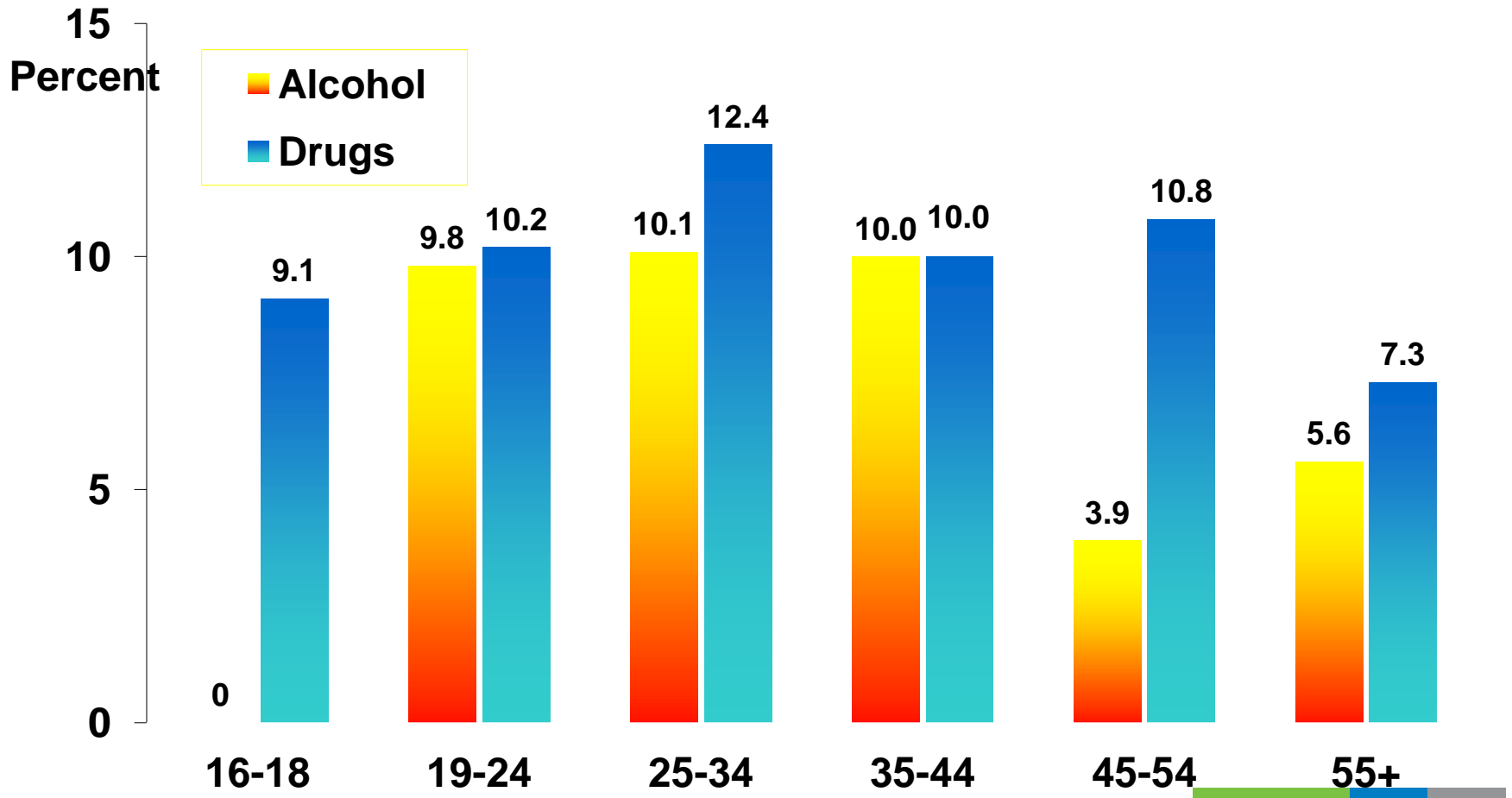
# Alcohol and Drug Positive Cases According to Day of Week



# Percent Alcohol and Drug Positive Cases According to Time of Night



# Percent Alcohol and Drug Positive Cases According to Driver Age Group



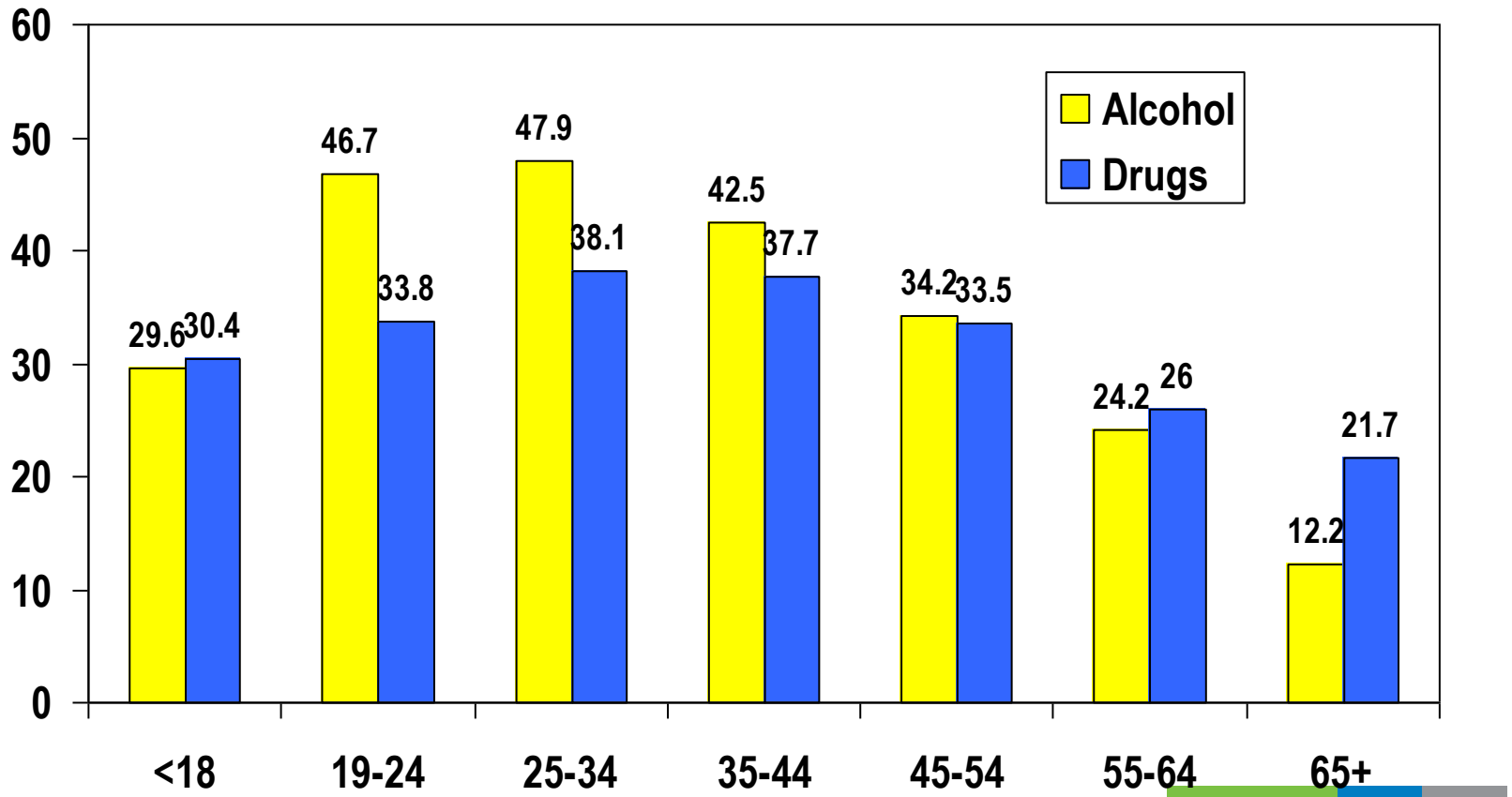
## Drivers Involved in Crashes

- Numerous studies have examined drug use among driver involved in serious crashes
- Fatalities more likely to be tested
- Studies find a variety of substances

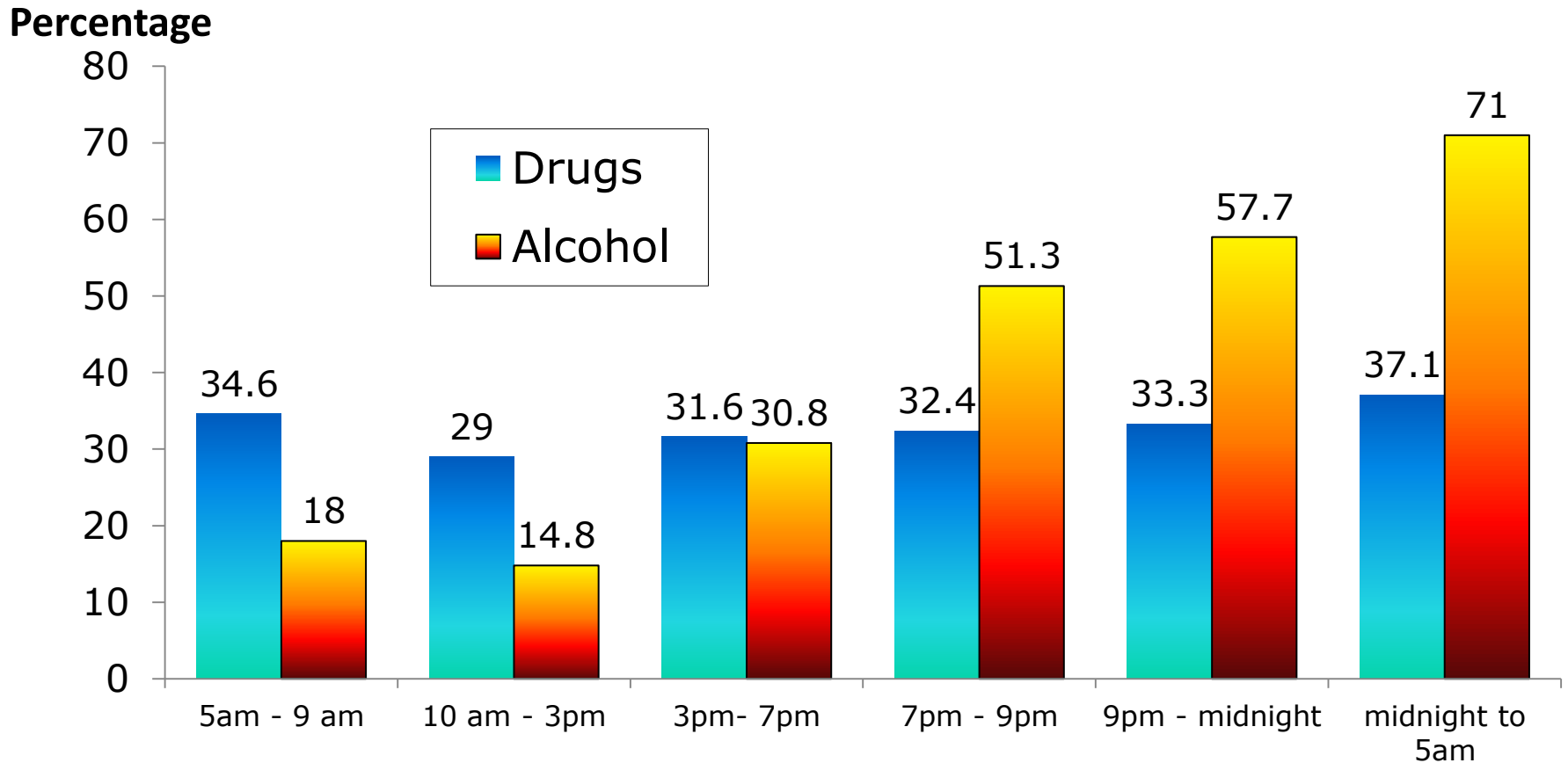


# Drug Use Among Fatally Injured Drivers in Canada 2000 - 2007

Percent



## Percentage of Drug and Alcohol Positive Driver Fatalities According to Time of Crash



## Analytical Epidemiology

- To what extent do drugs increase the risk of road crashes?
- Three primary approaches:
  - Case-control studies
  - Responsibility analysis
  - Pharmacoepidemiological studies
- Many methodological issues


## Analytical Epidemiology

- More recent, methodologically stronger studies show increased risk associated with psychoactive drug use
- Some studies show dose-related increase in risk for cannabis
- Magnitude of the risks are typically lower than those often associated with alcohol

## Legislation

- Drink-driving legislation often used as a model for drug-driving laws
- Two basic categories:
  - Behaviour-based statutes
  - Per se laws
- Type of law determines enforcement practices and prevention messages

## Behaviour-based Statutes

- Focus is on impaired driving behaviour as a result of drug use
  - First used to control “drunk driving” or “driving while intoxicated”
  - More recently, require objective measurement of impaired behaviour using standardized assessment protocols
  - A bodily fluid sample often required to confirm presence of psychoactive substance
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## Per Se Laws

- First used to deal with drink-driving – having a blood alcohol concentration (BAC) over specified limits was deemed an offence
- Legal “short cut” based on the established relationship between BAC and driver impairment and crash risk
- Scientific evidence establishing link between drug levels, impairment and crash risk are not well established
- Requires a separate limit for every substance

## Zero Tolerance Laws

- Alternative is to set the per se limit at zero
- Any detectable amount of prohibited substance in a driver constitutes an offence
- Many countries have zero tolerance laws for illegal drugs
- Pharmaceuticals pose a difficult issue



## Enforcement

- Type of legislation determines enforcement practices
- Two key components:
  - Stopping the vehicle
  - Obtaining the evidence
- Legal criteria for stopping vehicles and obtaining evidence vary by country
- Some allow random stops and random tests; others require at least suspicion that an offence has occurred

## **Behaviour-based Enforcement**

- Requires evidence of impaired behaviour
- Requires evidence that driver consumed substance capable of producing the observed behaviour
- Requires police officers to be trained to recognize the signs and symptoms associated with use of different types of drugs

## Per Se Law Enforcement

- Some countries require officer to establish suspicion of drug use
- Others allow random testing without suspicions
- Enforcement requires officers be trained to collect a sample of bodily fluid for testing
- Victoria Australia has implemented random drug testing of drivers using oral fluid samples screened at roadside

## Prevention

- Primary prevention efforts have been relatively superficial
- Complex issue – many target groups, many substances, many circumstances
- A variety of carefully crafted approaches are required
- Opportunity to employ health professionals

## Where do we go from here?

- Although many parallels with the drink-driving issue, there are many substantive differences that warrant a distinct and separate response
- The magnitude of the drug-driving problem is deserving of a societal response comparable to that afforded the drink-driving over the past 30 years

## Where do we go from here?

- Encourage and facilitate research to enhance understanding of the problem
- Ensure research adheres to international guidelines to enhance validity and facilitate comparisons
- Develop and refine oral fluid test devices for use at roadside
- Establish evidence-informed policies and programmes
- Establish policies and programmes that address the risks posed by all types of impairing substances

## Where do we go from here?

- Ensure that drug-driving legislation focuses on road safety and is not used to identify and prosecute drug users
- Establish training programmes for all enforcement personnel
- Engage health care professionals in prevention efforts

## Key Messages

- Drugs are as serious a problem on the roads as alcohol.
- Drug driving is a different problem than drink driving.
- There is a great deal we have yet to learn.
- The magnitude of the drug-driving problem is deserving of a societal response comparable to that afforded the drink-driving problem over the past 30 years.



# Thank-you

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