

Alcohol-related problems and effective policies in the Canadian context: Improving the match between population level damage and societal response

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**Presented at the Annual Meeting of the American Public Health Association
Alcohol, Tobacco & Other Drugs Section
Washington DC, November 3-7, 2007**

Background & Context

- **Global burden of disease from alcohol**
 - 3rd of 26 risk factors in developed countries
 - Alcohol associated with over 70 types of trauma and disease conditions
- **Increased in consumption & high risk drinking**
 - Per adult rate of consumption has been increasing in Canada and provinces since 1996
 - Increase in the proportion of high risk drinkers from 1994
- **Increase in access to alcohol**
 - real price declining, density increasing, marketing more extensive, and other pressures that normalize alcohol use
- **Economic costs from alcohol estimated at \$14.9 Billion for Canada in 2002**

Setting Prevention Priorities

Possible Considerations

- Status quo – previous priorities become entrenched and institutionalized
- Values, ideology, politics and special interest groups
- Damage from alcohol - size, seriousness, increase in damage, visibility
- High risk drinkers, drinking contexts, vulnerable populations
- Costs
- Potential for impact – evidence-based response is available and capacity to respond

Canadian Addiction Survey (CAS)

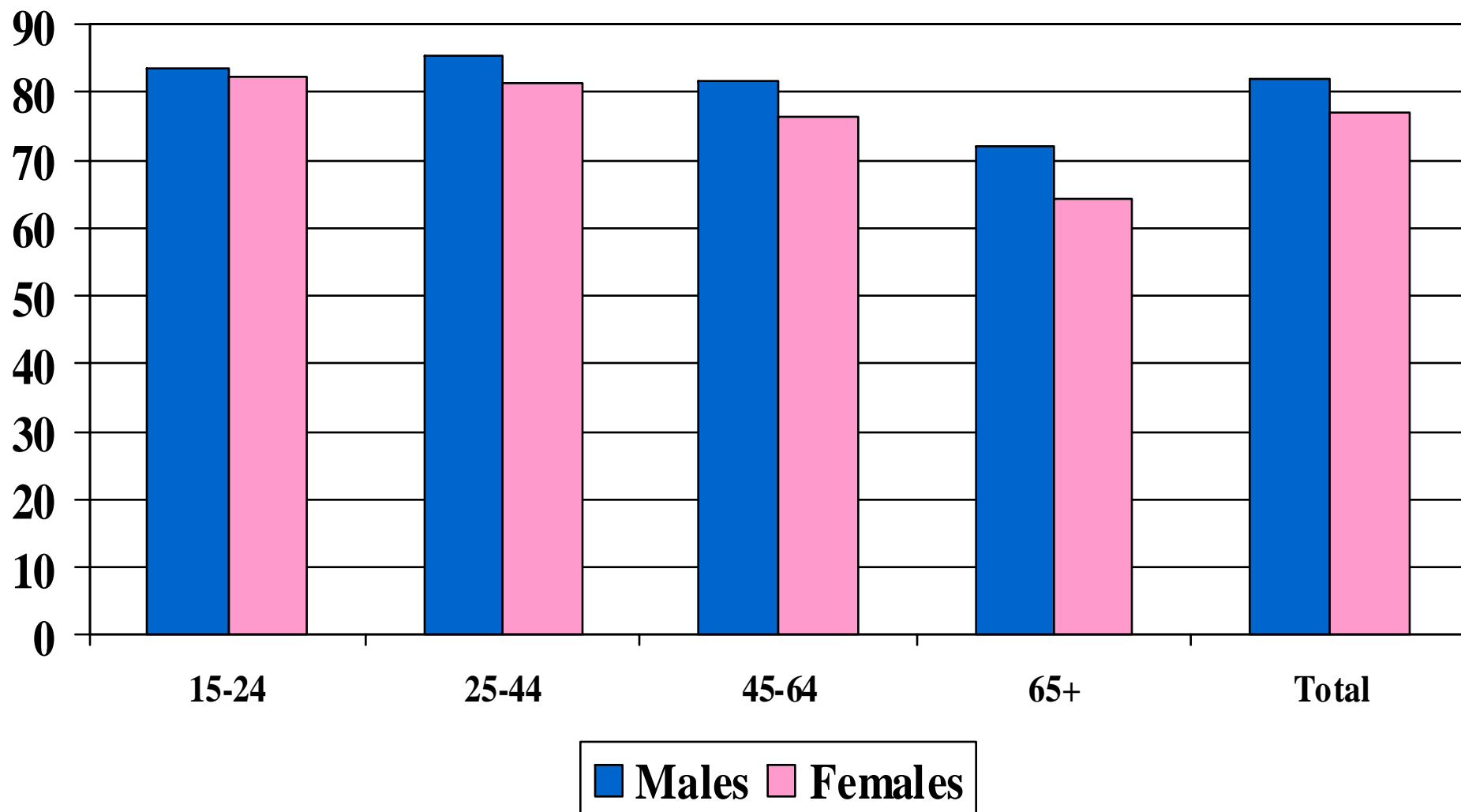
Brief Synopsis-Design and Methodology

- **Random-digit-dialling (RDD) methods in combination with Computer Assisted Telephone interviewing (CATI)**
- **Random sample of household telephone numbers selected, and respondents age 15 and older where selected who completed the interview in English and French**
- **Interviews conducted Dec '03 and Jan - April '04**
- **Base sample of 1,000 per province and some provinces purchased additional cases, total N 13,909**
- **Effective response rate 47.0%**

[Adlaf & Rehm, 2005]

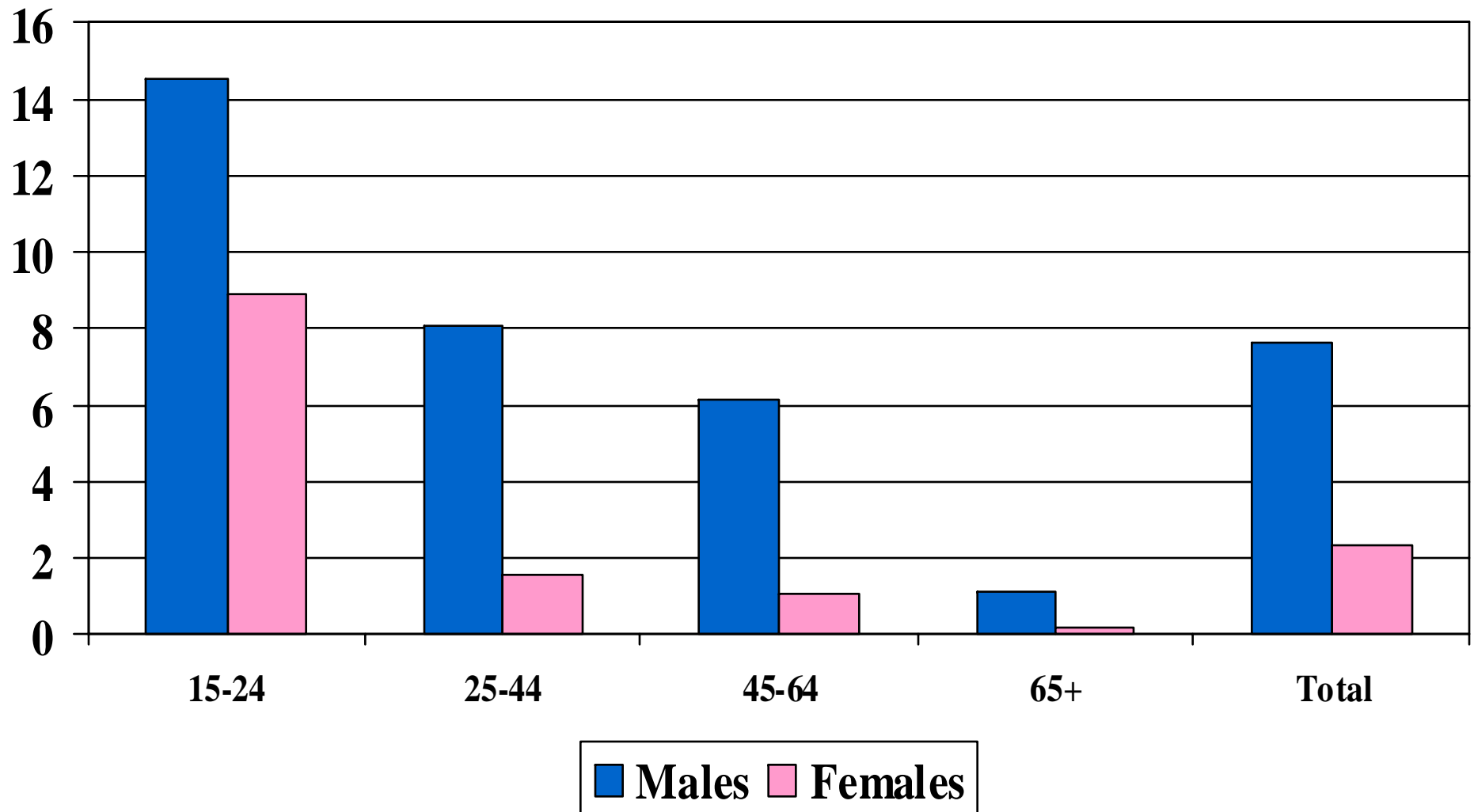
Consumed alcohol in the past 12 months % of respondents, Canada 2004

N: men = 5,623, women = 7,964

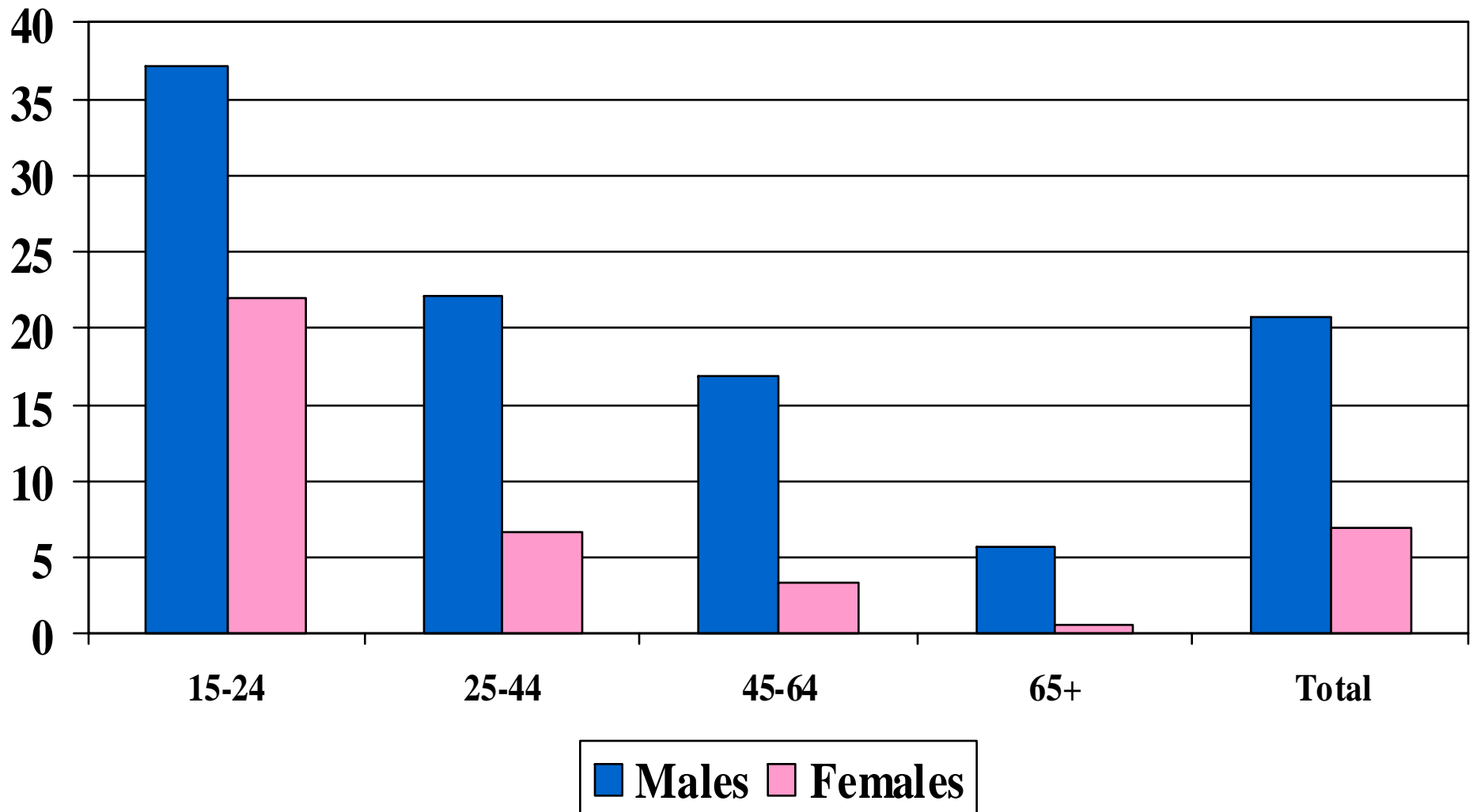


Consumed 5+ drinks on an Occasion Weekly % of respondents, Canada 2004

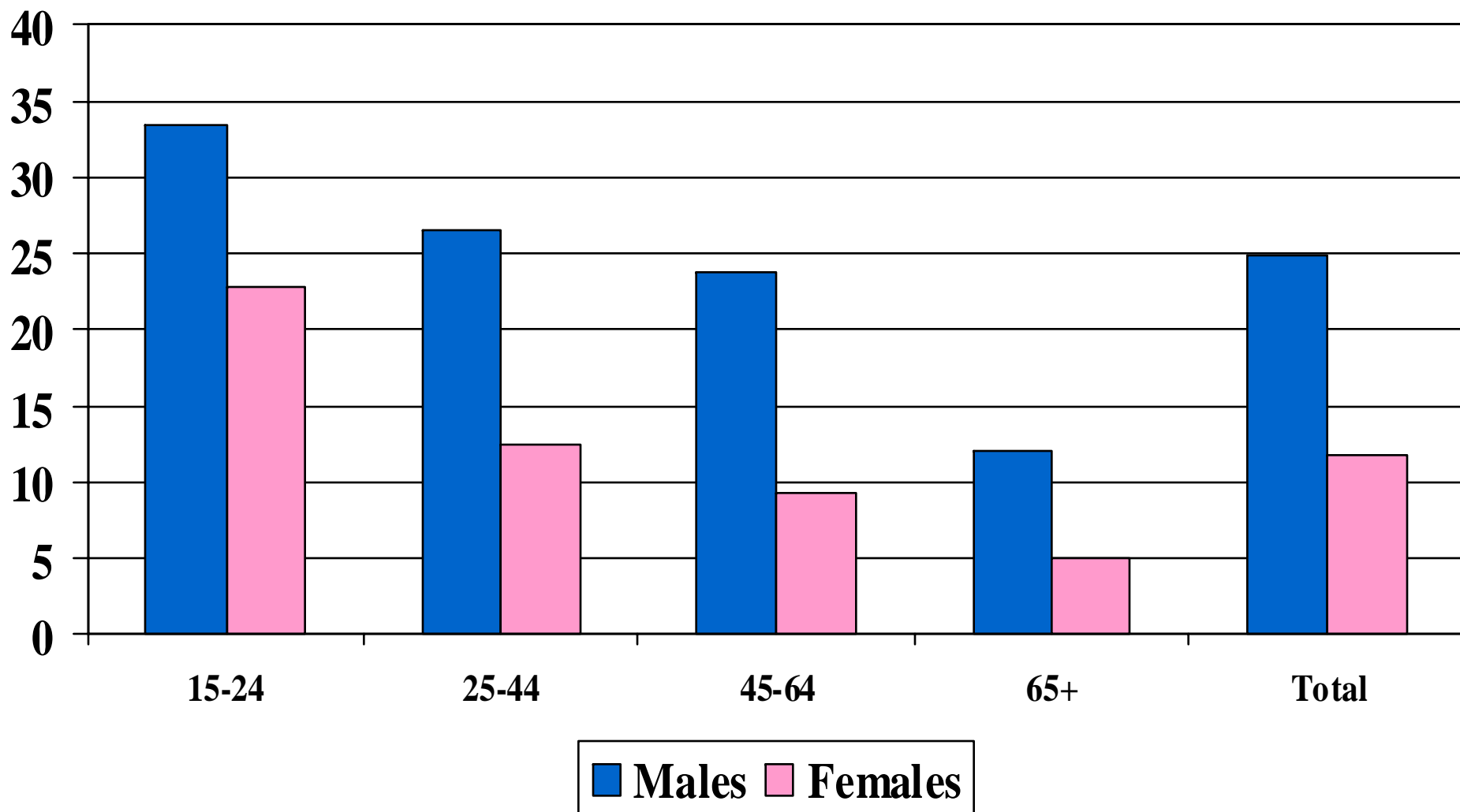
N: men = 5,592, women = 7,949



Scored 8+ on AUDIT
% of respondents, Canada 2004
N: men = 5,469, women = 7,799



Exceeded Low Risk Drinking Guidelines in Past Yr
14/wk men, 9/wk women, max 2/day
% of respondents, Canada 2004
N: men = 5,522, women = 7,902

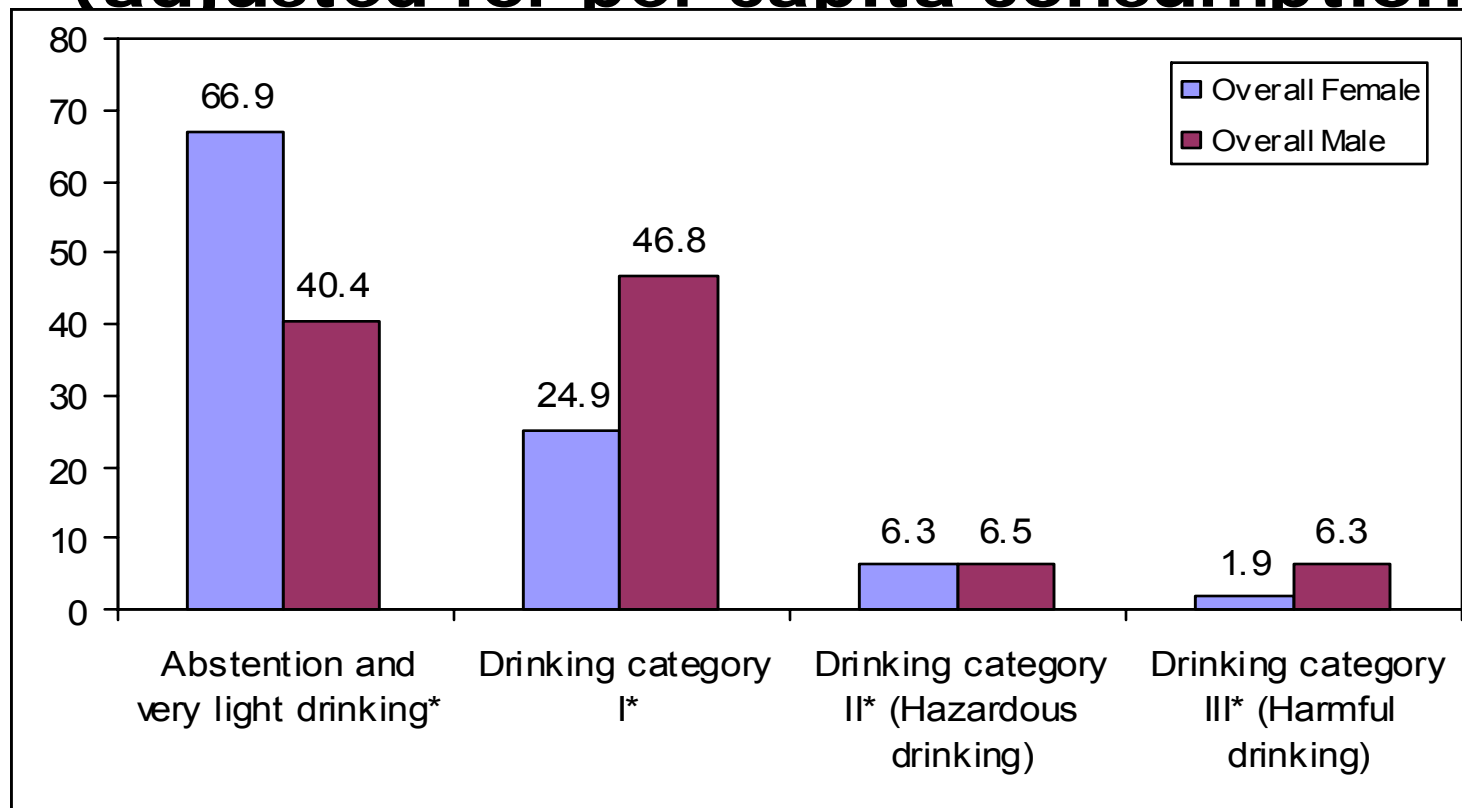


Drinking Patterns & Rates in Canada

- Both high risk drinking patterns and overall consumption levels have been shown to impact chronic disease and other harm from alcohol.
- Results from the Canadian Community Health Surveys suggest that high-risk drinking has increased from 10% to 14% between 1993 and 2004.
- The 2004 Canadian Addiction Survey found that 23% of past-year drinkers exceeded the low-risk drinking guidelines.
- Also, 17% of past-year drinkers were considered to drink hazardously (Alcohol Use Disorders Identification Test).

Prevalence (%) of overall alcohol consumption in Canada 2003/2004 (CAS)

(adjusted for per capita consumption)



Drinking categories

Females

Males

Abstainer or very light drinker

0 to < 0.25g/day

0 to < 0.25 g/day

Drinking Category I: Moderate drinking

0.25 to < 20g/day

0.25 to < 40g/day

Drinking Category II: Hazardous drinking

20 to < 40g/day

40 to < 60g/day

Drinking Category III: Harmful drinking

40+ g/day

60+ g/day

Solution to calculate attributable fraction and RR

- Take most recent/comprehensive meta-analysis to establish RR

→

$$AAF = \frac{\sum_{i=0}^k P_i (RR_i - 1)}{\sum_{i=0}^k P_i (RR_i - 1) + 1}$$

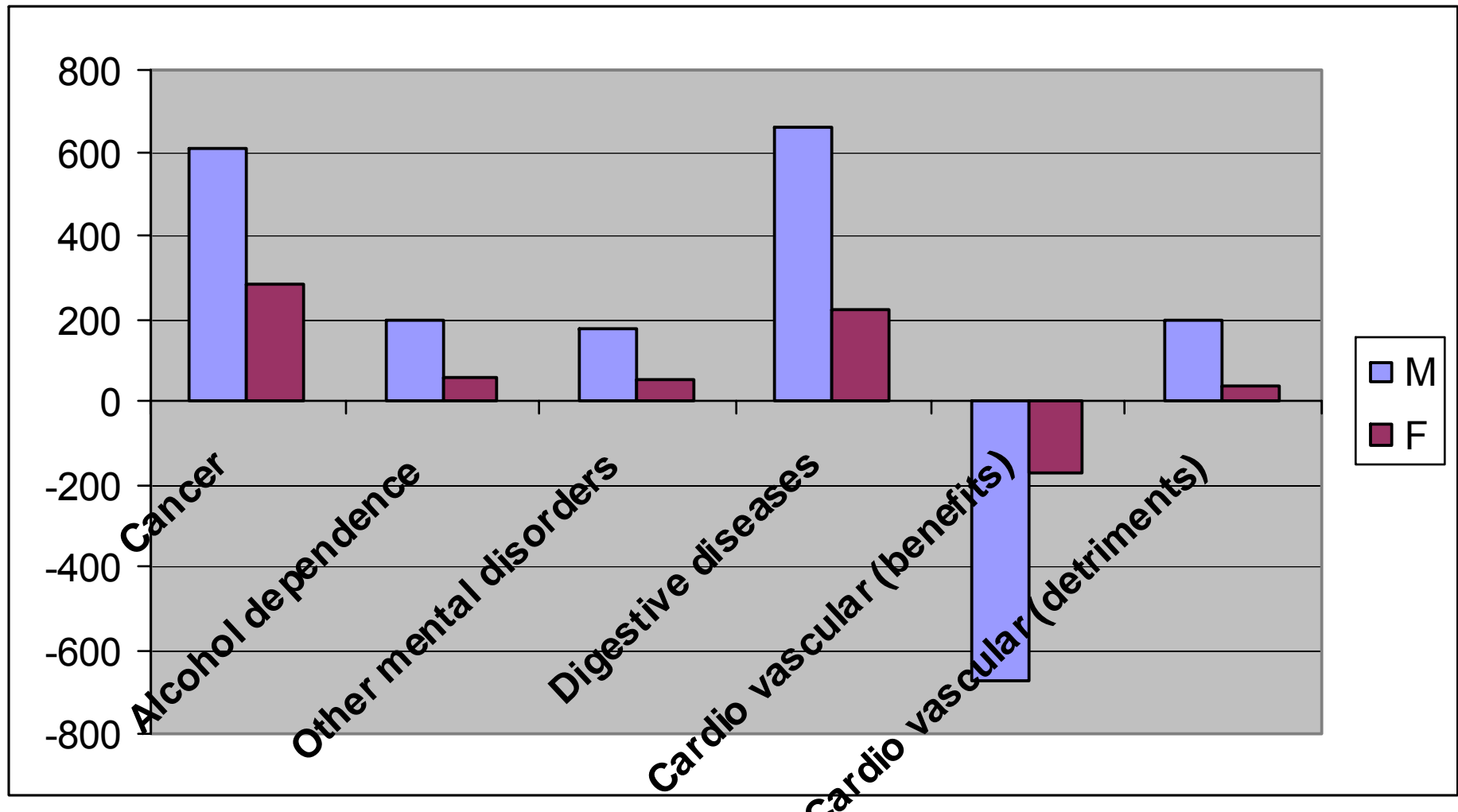
- Conduct sensitivity analysis to potential alternatives (e.g. Corrao et al. series vs. English/Ridolfo/Gutjahr plus tradition) => no change in estimates

Key: P=prevalence, RR=relative risks, i = 0 to K: 0=abstention, 1=moderate, 2=hazardous, and 3=harmful. Here K is 3.

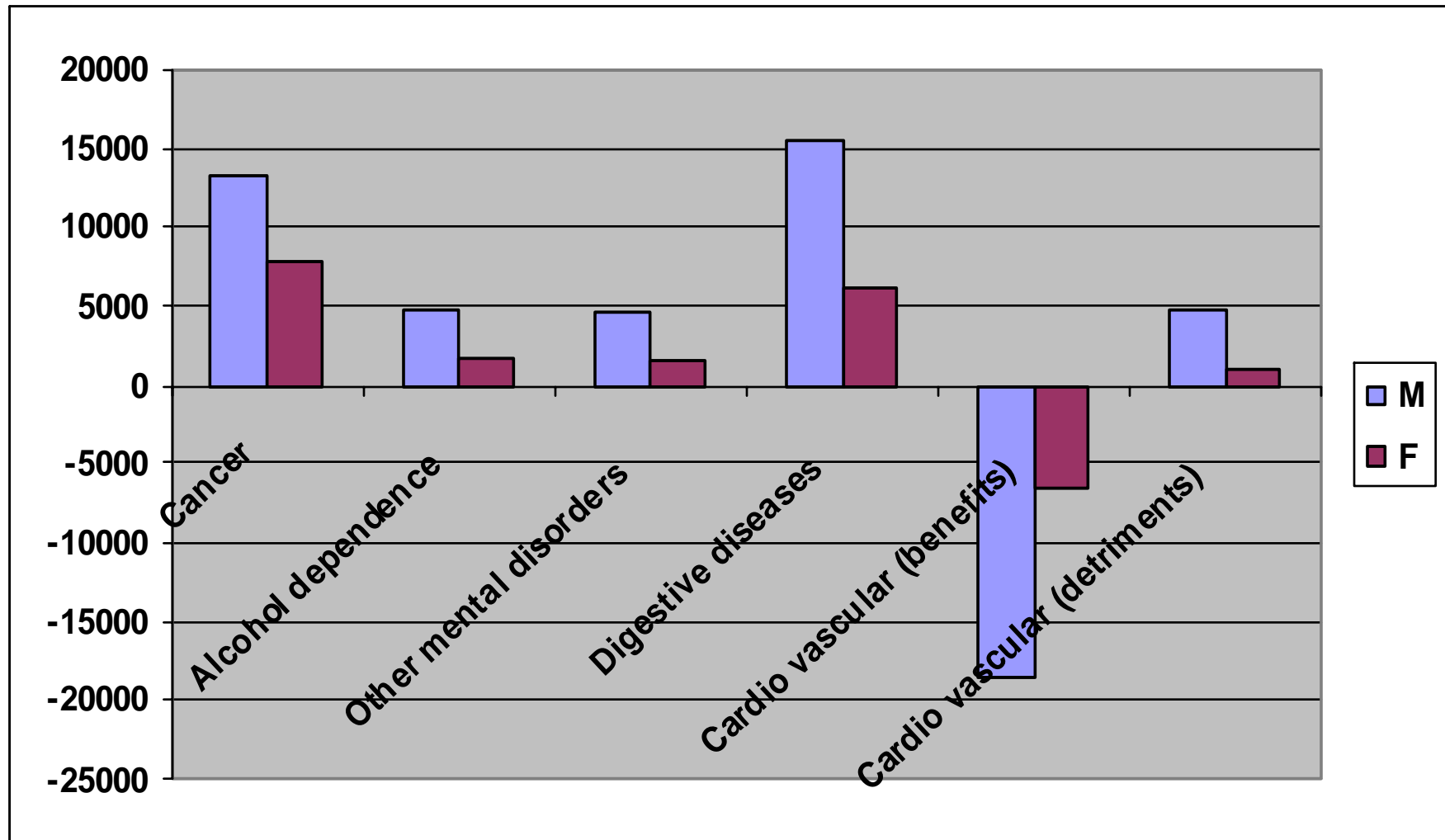
Proportion of alcohol-attributable mortality and years of life lost (YLL) to all alcohol-attributable chronic disease mortality and YLL for persons < age 70 years

Disease categories	Mortality	YLL
Cancer	34.58%	34.11%
Mental disorders	22.20%	20.81%
Digestive diseases (detriments)	34.23%	35.56%
Cardiovascular (detriments)	9.04%	9.52%
Cardiovascular (benefits)	-90.37%	-89.14%
Diabetes (benefits)	-9.52%	-10.86%

Alcohol-attributable Mortality in Canada Chronic Disease, 2002, persons < age 70

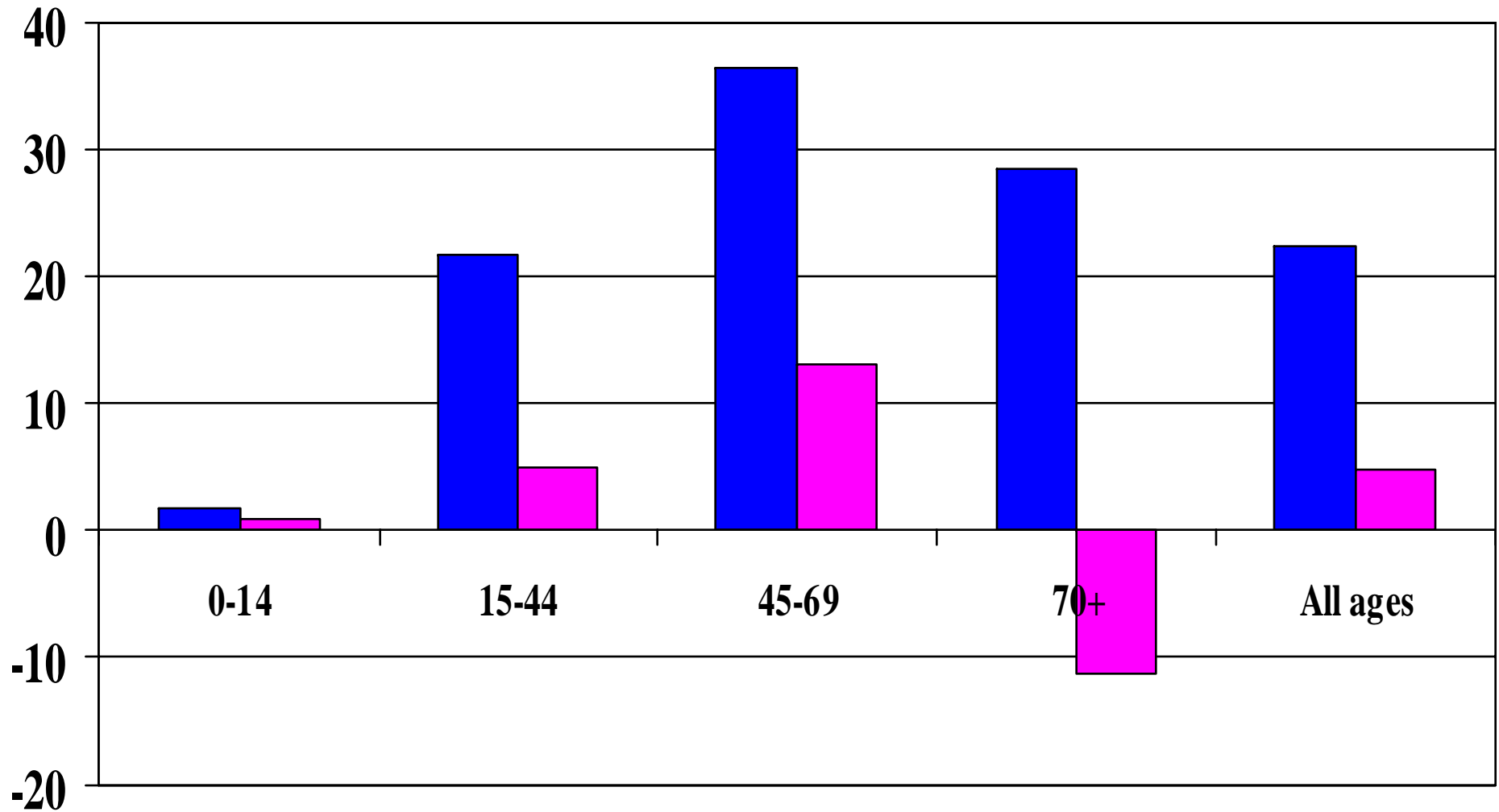


Alcohol-attributable Years of Life Lost in Canada Chronic disease, 2002, persons < 70 years of age



Alcohol-Related Mortality, Canada 2002

Rate per 100,000 population by age group

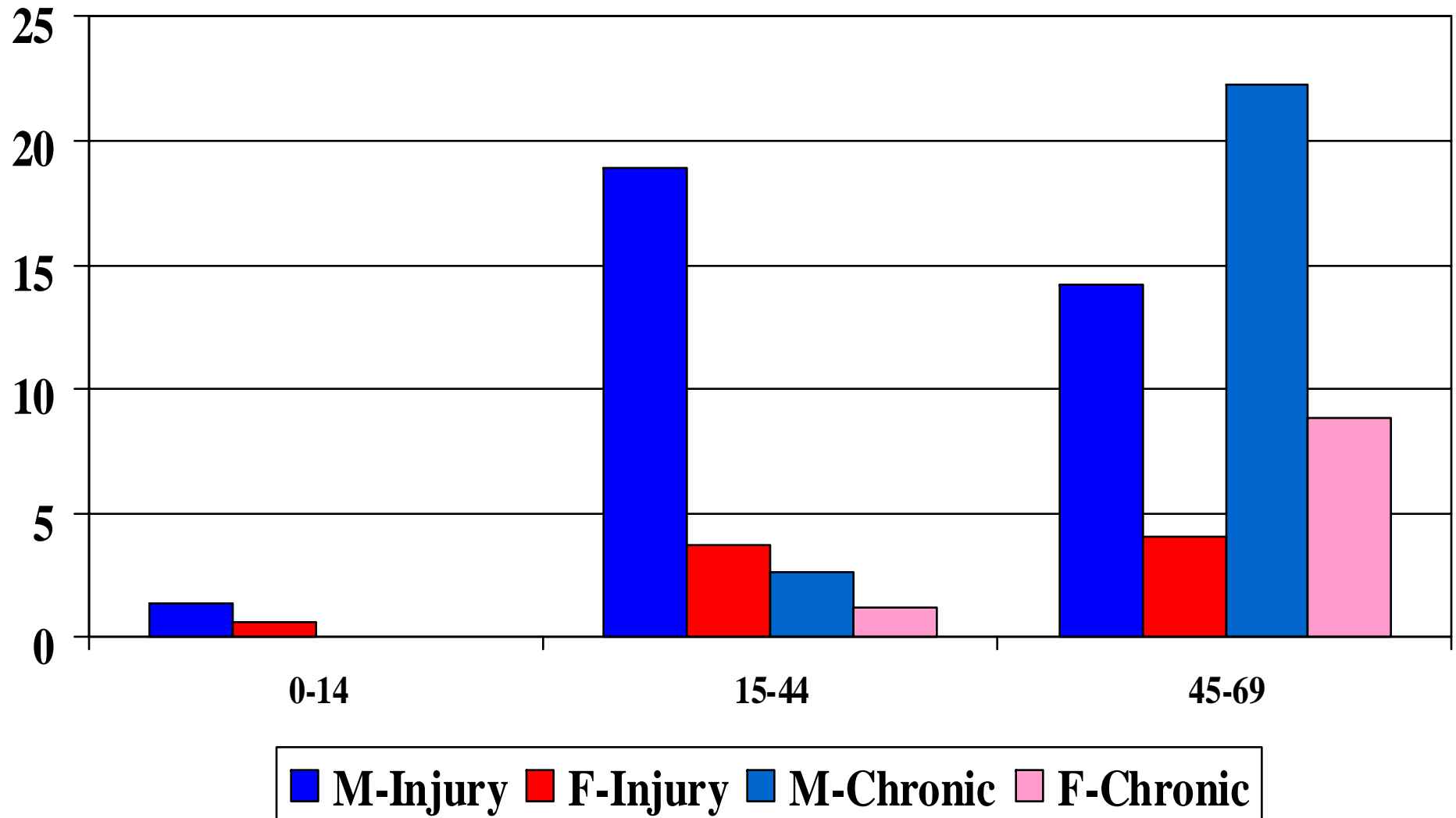


■ Males ■ Females

Alcohol-Related Mortality, Canada 2002

Injuries/Violence & Chronic Conditions

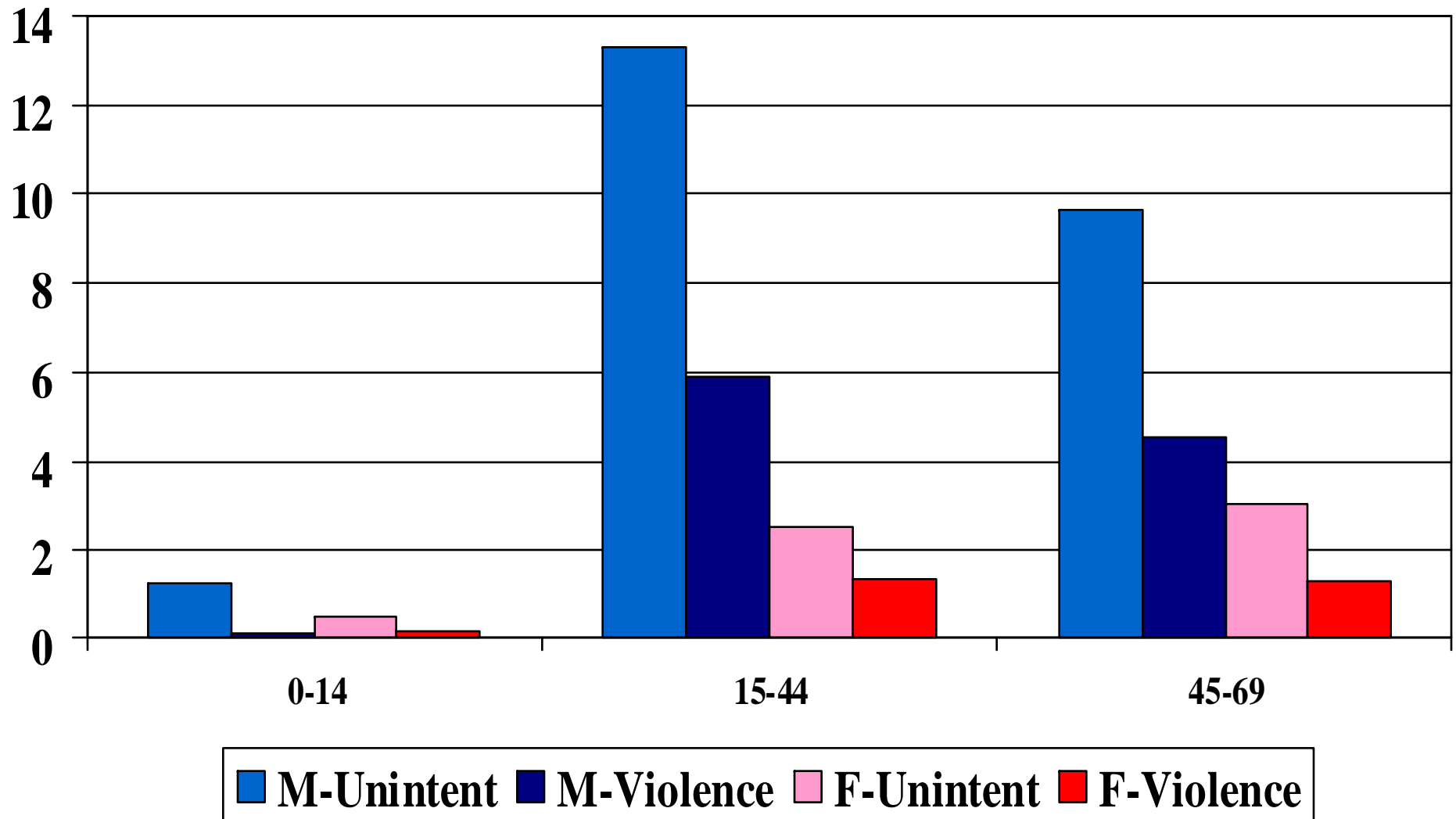
Rate per 100,000 population by age group



Alcohol-Related Mortality, Canada 2002

Unintentional Injuries & Violence

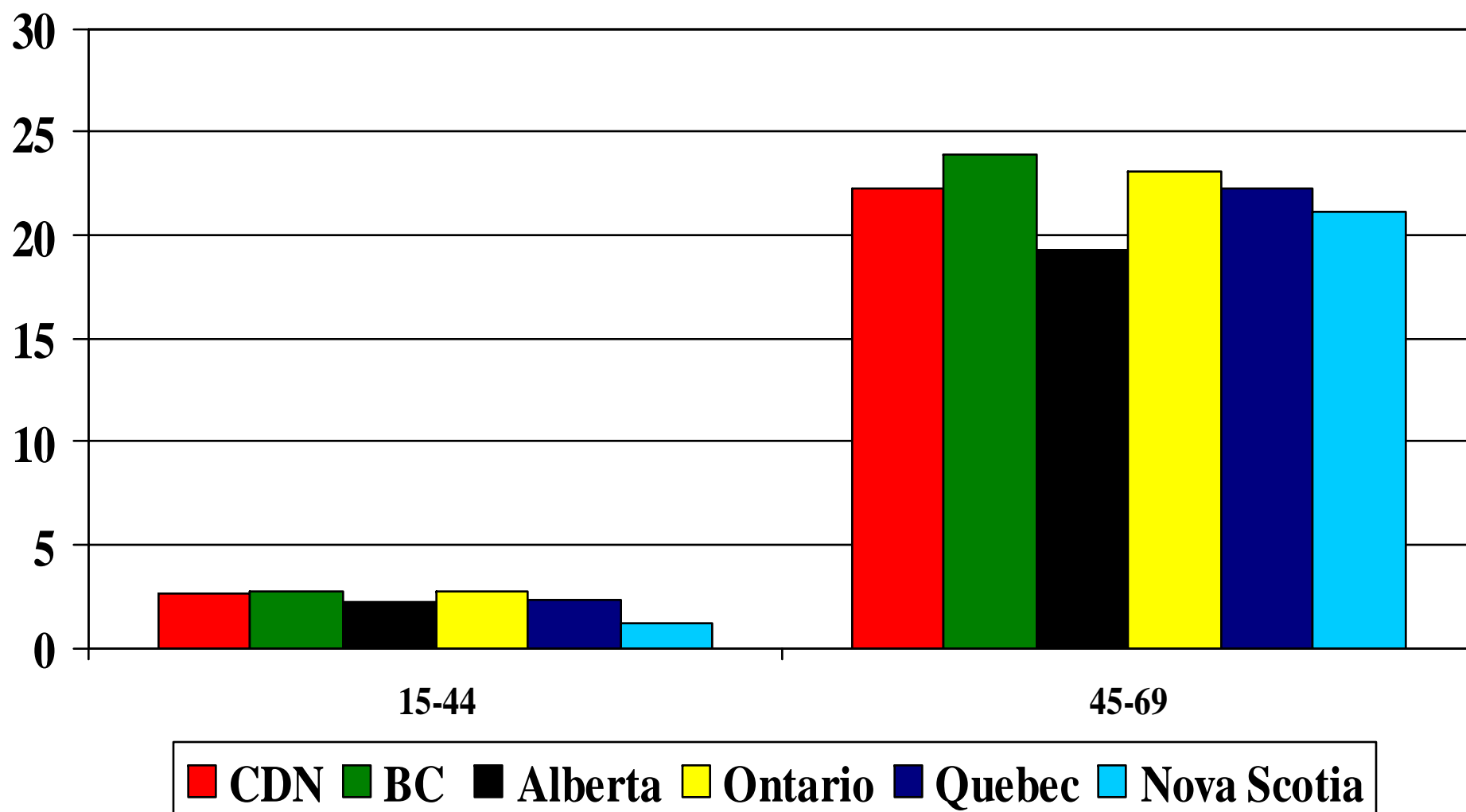
Rate per 100,000 population by gender & age group



Alcohol-Related Mortality, Canada & 5 Prov., 2002

Chronic Conditions- Males

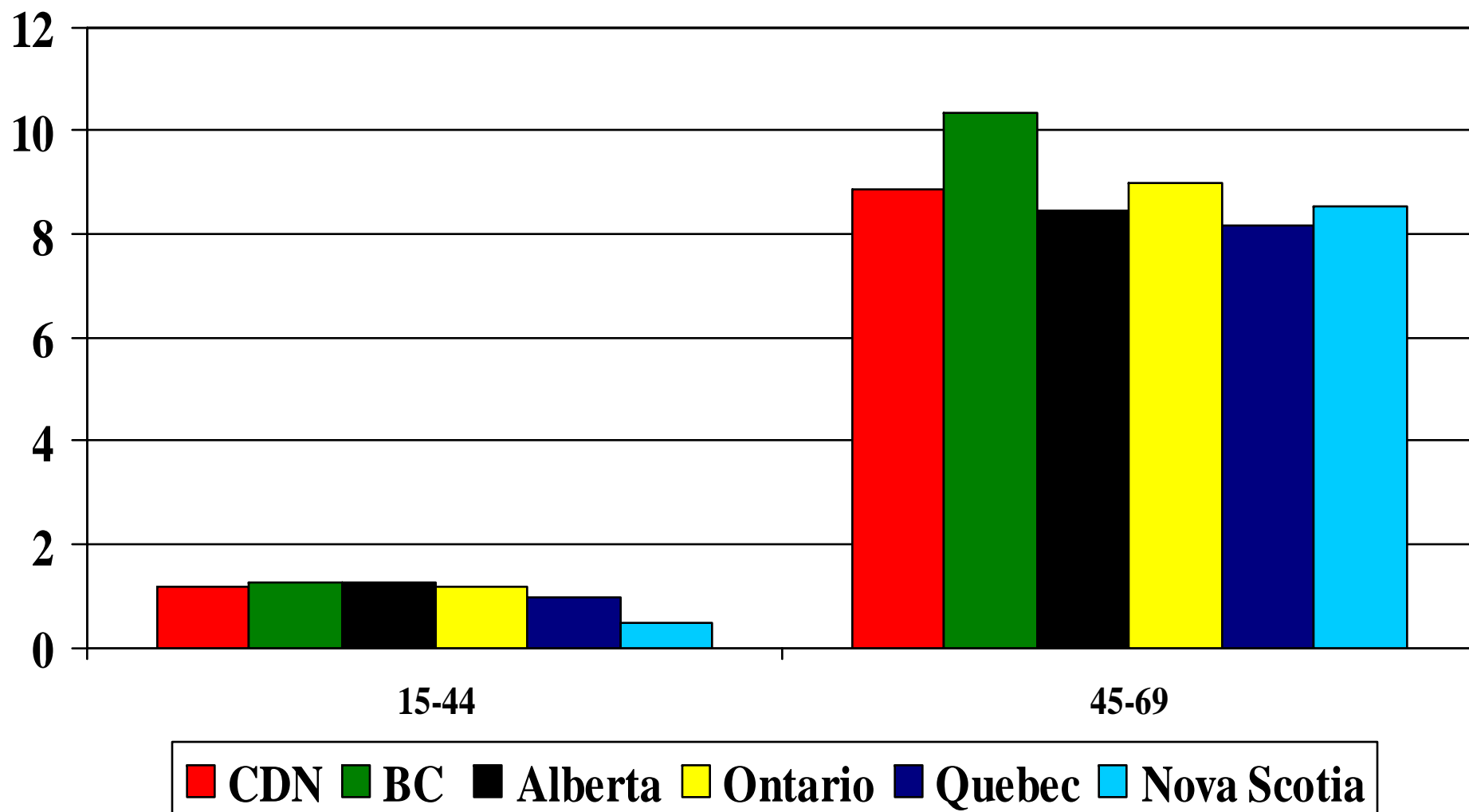
Rate per 100,000 population by age group



Alcohol-Related Mortality, Canada & 5 Prov., 2002

Chronic Conditions- Females

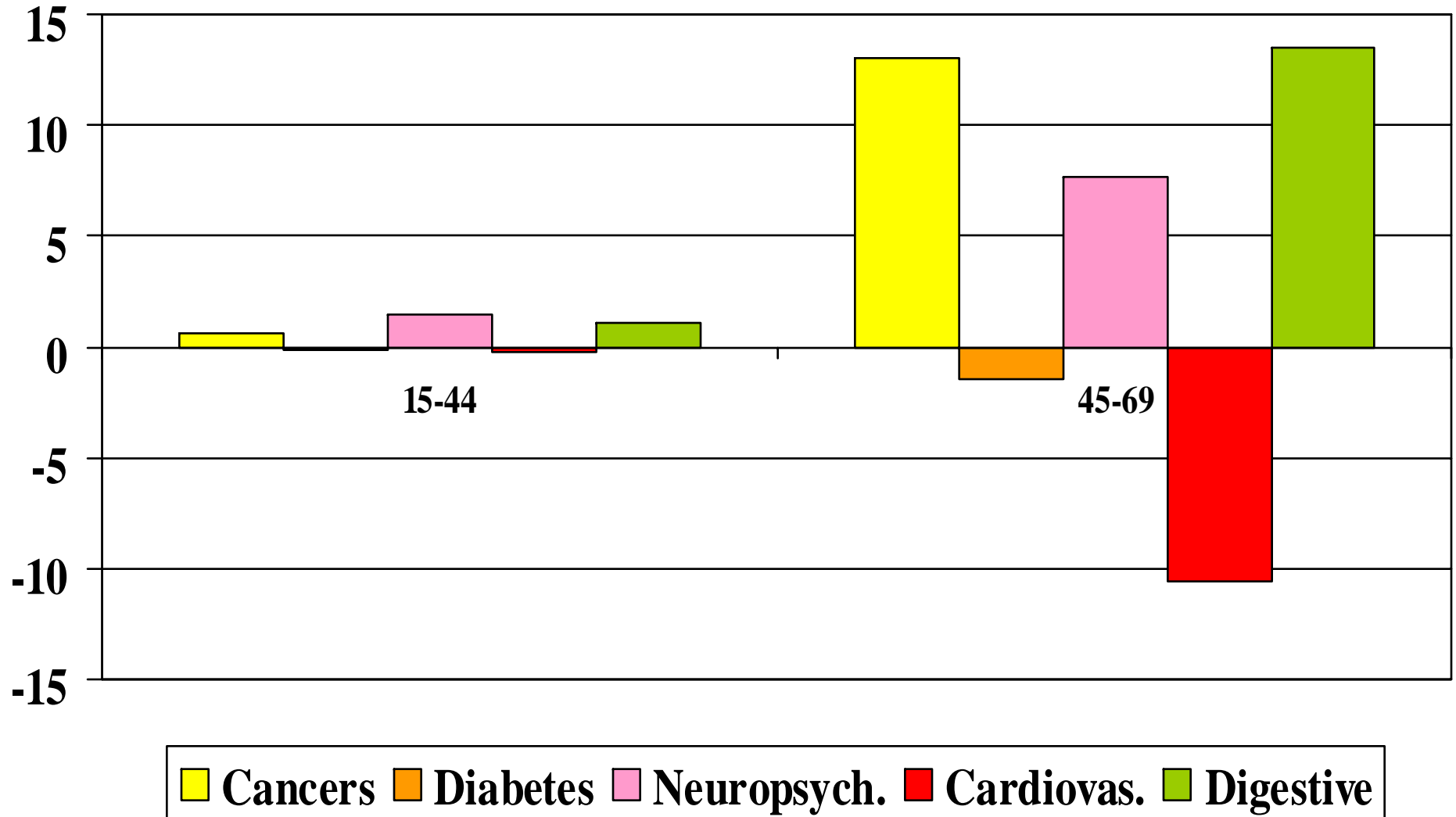
Rate per 100,000 population by age group



Alcohol-Related Mortality, Canada 2002

Males: *Specific Chronic Conditions*

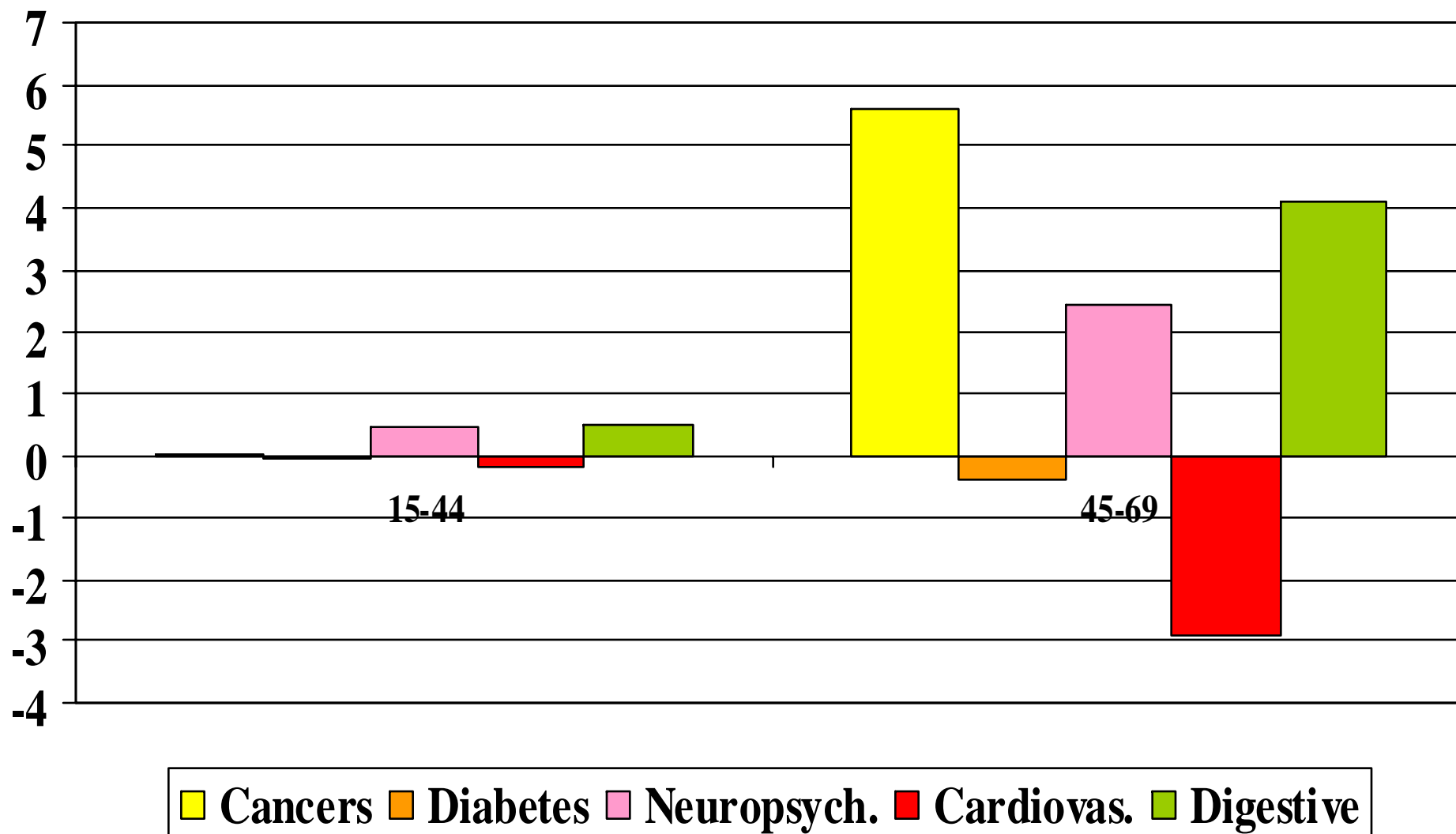
Rate per 100,000 population by age group



Alcohol-Related Mortality, Canada 2002

Females: *Specific Chronic Conditions*

Rate per 100,000 population by age group



Prevention & Intervention Strategies Evaluated

Babor et al. (2003) in *Alcohol No Ordinary Commodity*

- Regulating Physical Availability
- Pricing and Taxation
- Altering the Drinking Context
- Education and Persuasion
- Regulating Alcohol Promotion
- Drinking-Driving Countermeasures
- Treatment and Early Intervention

Ratings of 32 Policy-relevant Prevention Strategies and Interventions

- Evidence of Effectiveness – the quality of scientific information: 0, +, ++, +++, (?)
- Breadth of Research Support– quantity and consistency of the evidence: 0, +, ++, +++, (?)
- Tested Across Cultures e.,g. countries, regions, subgroups: 0, +, ++, +++, (?)
- Cost to Implement and Sustain – monetary and other costs: low, moderate, high

[Babor et al. 2003]

Ratings of 32 Policy-relevant Prevention Strategies and Interventions [continued]



Other considerations:

- target group - general population of drinkers, high risk drinkers or vulnerable groups, persons with harmful drinking patterns or dependence;
- adverse side effects - tax evasion, criminal activity, illicit production
- population reach - number of people affected by an intervention
- feasibility - political considerations, economic implications, side effects

[Babor et al. 2003]

Best Practices

- Minimum legal purchase age
- Government monopoly of retail sales
- Restriction on hours or days of sale
- Outlet density restrictions
- Alcohol taxes
- Sobriety check points
- Lowered BAC limits
- Administrative license suspension
- Graduated licensing for novice drivers
- Brief interventions for hazardous drinkers

[Babor et al 2003]

Response Options

- **What is the relevant of these 'best practices' to:**
 - High risk drinkers by age
 - Gender
 - Trauma related to alcohol use
 - Alcohol-related chronic disease
- **How do they fit with recent developments in Canada?**

Policy	Age /Gender	Trauma	Chronic Disease
Minimum legal age	Youth/both	Yes*	Possible
Government retailing	All/both	Yes	Yes
Restrict hours & days	All/both	Yes	Yes
Outlet density	All/both	Yes	Yes
Alcohol taxes	All/both	Yes	Yes
Lower BAC limits driving	All/both	Yes*	Possible
Admin License susp.	All/both	Yes*	Possible
Graduated licensing	Youth/both	Yes*	Possible
Brief intervention	All/both	Possible	Yes

Policy	Status - Comments
Minimum legal age	18 in 3 prov. & 19 in 7 prov. Staff of gov. liquor stores trained to prevent sales
Government* Retailing	Privatization in 1 Prov., and mixed system in others. Pressure to increase access; extensive marketing by government liquor boards in collaboration with alcohol industries
Restrict hours & days*	Generally eroded in past 2 decades
Control Outlet density*	Increasing especially in on-premise venues, and with partial privatization of alcohol control, e.g. BC
Raise alcohol taxes*	Real prices are declining
Lower BAC limits driving	National is 0.08 with lower with prov. For short term suspension
Admin License susp.	Implemented in most provinces
Graduated licensing	Implemented in most provinces
Brief intervention*	Some initiatives but not yet extensively applied

MADD Rating the Provinces and Territories 2006

	Alberta	B.C.	N.S.	Ontario	Quebec
LICENSING					
Minumum Drinking Age	✗	√	√	√	√
Graduated Licensing Program	√	√	√	√	√
.00% BAC for Drivers <21 or >5yrs Experience	✗	✗	▲	✗	✗
Enforcement of Graduated Licensing	√	√	√	√	√
POLICE ENFORCEMENT POWERS					
Stop Vehicles	√	√	✗	√	✗ √
Demand Documentation	√	√	✗	√	✗ √
Demand Standard Field Sobriety Test	✗	✗	✗	√	✗ √
Demand Samples From Drivers (Injury Crashes)	✗	✗	✗	✗	✗ ✗
Licensing Suspensions and Revocations					
24-hr License Suspension for Unfitness	✗	✗	✗	✗	✗ ✗
7-14 Day Admin. License Suspension	✗	✗	✗	▲	✗ ✗
90-Day Admin. License Suspension	√	√	√	√	✗
Vehicle and Remedial Programs					
Alcohol Interlock Program	√	√	√	√	√
Vehicle Impoundment	√	▲	▲	√	√
Vehicle Forfeiture	✗	✗	✗	▲	✗ ✗
Remedial Programs	√	√	√	√	√
Overall Performance					
Overall Performance	B-	C+	D+	B	C
Ranking across Canada	4	8	11	2	9
Newly Enacted Legislation					
Newly Enacted Legislation	▲				
Legislation	√				
Requires Attention	✗				

Recent Develoments

- A National Alcohol Strategy document was released in April 2007, entitled: *Reducing Alcohol-Related Harm in Canada: Toward a Culture of Moderation*. It contains 41 recommendations, in 4 categories: health promotion, prevention & education, health impacts and treatment, availability of alcohol, and safer communities. This is at the planning and implementation stage.
- The Alberta Drug Strategy of October 2005 provides a provincial framework for action on alcohol and other drug use.
- In British Columbia a paper was released in March 2006, entitled: *Following the Evidence: Preventing Harms from Substance Use in British Columbia*
- Deliberations are underway in Ontario with regard to a provincial drug strategy (which would included alcohol); in 2003 the Ontario Public Health Association released *A Framework for Alcohol Policy and Public Health in Ontario*.
- Quebec released an Interdepartmental Action Plan on Drug Addiction, 2006-2011.
- Nova Scotia released an alcohol strategy document in August 2007

Conclusions

- High risk drinking is evident among a range of groups, but particularly among youth and younger adults.
- Damage from alcohol includes trauma and chronic disease, with about equal level of damage from each.
- Trauma is more common among younger adults & chronic disease among older adults
- Our menu of response options -- with demonstrated impact, is applicable to all ages, both genders, and a range of problems.
- However, in recent years, several of those most relevant to reducing alcohol-related chronic disease and high risk drinking have been eroded.
- Therefore, in light of the increase in overall consumption and high risk drinking (noted earlier), it is expected that damage and burden from alcohol will increase -- if things do not change.
- It is too early to say whether the strategies noted above -- at the national and provincial level -- will reduce overall consumption, high risk drinking and alcohol-related damage.

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