

Leadership: Making Injuries a Priority

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University of Alberta

SHARP Conference
Prince George, B.C. - September 24, 2009

Starting Points...

- Share lessons that I have learned over my past twenty years of treating and trying to prevent these devastating injuries
- Discuss what needs to be done to change Canada's safety culture in general
- Engage you in a very frank, open discussion of where to go from here
- It is safe to speak what is on your mind
- We are all here to learn

What's on Your Mind?

- What are you expecting to hear today?
- What do you want to hear?

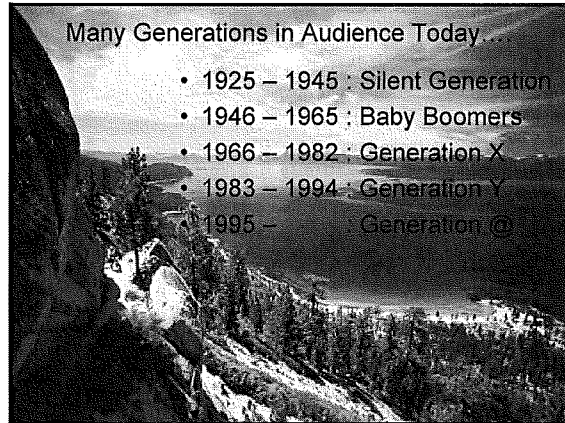


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Many Generations in Audience Today ...

- 1925 – 1945 : Silent Generation
- 1946 – 1965 : Baby Boomers
- 1966 – 1982 : Generation X
- 1983 – 1994 : Generation Y
- 1995 – : Generation @



Chinese Proverb

Tell me, I forget.

Show me, I remember.

Involve me, I understand.

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Mildred Lake 1975

BECHTEL **Syncrude Project 9776**
FORT McMURRAY, Alberta


APRIL 8, 1975
DATE

A-239
EMPLOYEE No.

L. Francescatti
NAME

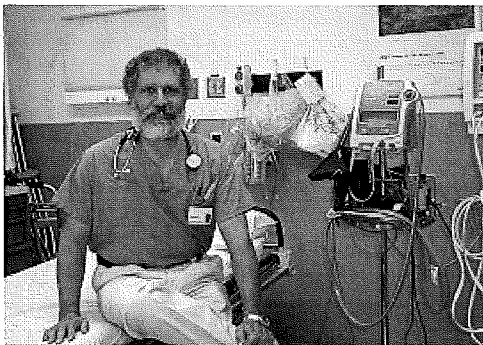
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CANADIAN BECHTEL LTD. - OFFICE STAFF



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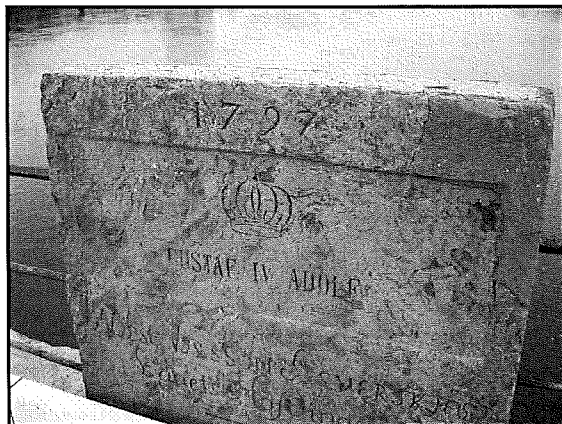
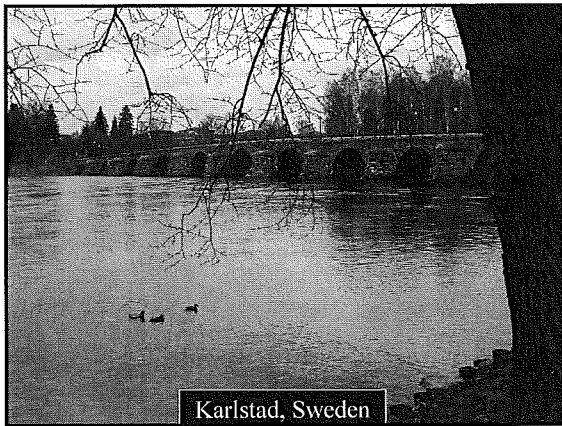
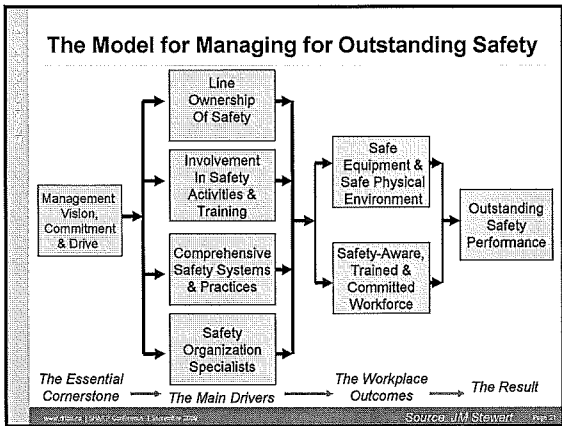
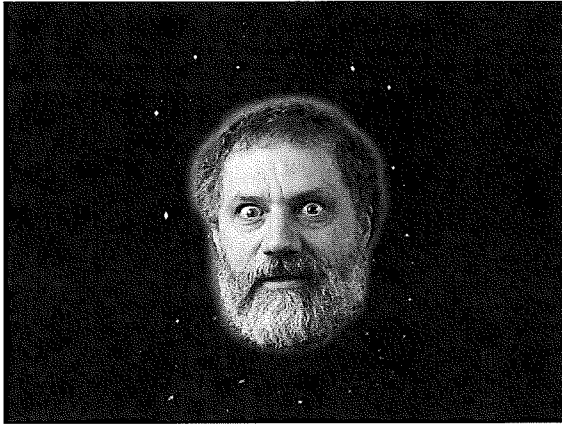


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Green
Blue
Yellow
Black
Red



Johann Peter Frank 1788

"Honestly, people, it's 1788! Accident prevention programs need be a part of comprehensive public health programs!"

Henry Louis Mencken



"For every complex problem, there is a solution that is simple, neat, and wrong"

The Sage of Baltimore, American author, critic, newspaper man and iconoclast. (1890-1956)

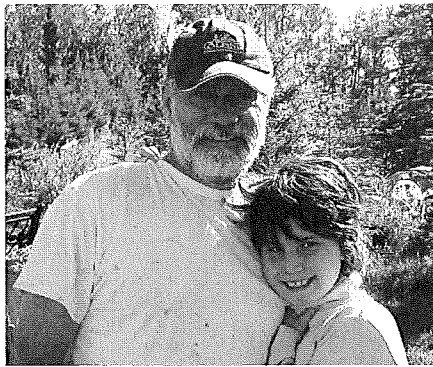
Let Us Explore Some Ideas....

- What is culture?
- How do you get people to listen?
- Are we on the same page?
- Are there any side-effects to this exercise?



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A Smile

- The most basic human instinct of them all
- In the medial orbitofrontal cortex of the brain
 - The pleasure and reward section of the brain
 - A smile triggers a chemical response
 - It is strongest when the face is looking directly at us
 - Try it with the person next to you...



The Cocktail Party

- You are at a cocktail party
- You have just met someone for the first time
- After some very brief, cursory chit-chat...
- The question that usually seems to follow is...



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The Question Usually Is...

- What do you do for a living?



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Your Answer Determines...

- Whether you are worthy to get to know...
- Where you stand in society...
- How important you are...
- How long I will talk to you...
- Am I prepared to invest my time in you...



www.360.co.uk | 12th May 2008 | September 2008

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What Do We All Crave?

Love

Are You Happy?

- Ask yourself that and answer honestly
- Truth be told, it may not get any better
- Unless you take action now!
- Delaying happiness does not work
- Live each minute to its fullest



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Happiness: What Is It?

- 50% is genetic – you either have it or you don't
- 10% comes from wealth and education
- 40% come from volunteering and social support network

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If Love and Happiness
are so important to us
all, then where are the
Departments or
Ministries of Love and
Happiness?

Preventable Deaths and Disability

- Close to 50% of all deaths are preventable
- For Canadians under 44 years of age injuries are the leading cause of death
- For those under 34 motor vehicle injuries are
- For those 1-19 years of age injuries exceed all other causes of death

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What Makes Us Healthy or Not?

- Genetics
- Gender
- Housing
- Education (literacy)
- Income & social status
- Personal health practices
- Resilience
- Nutrition
- Safety
- Social support networks
- Employment conditions
- Physical environment
- Culture
- Child development
- Spirituality
- Healthcare System

... this is life

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Mismatch Between Opportunity and Investment

Brain's "Malleability"

Spending on Health,
Education and Welfare

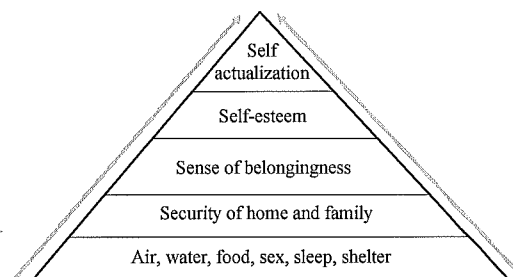
Headstart Welfare Medicare
Public Education Social Security
Research Medicaid

Source: CIAR

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Maslow's Hierarchy



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Why Do Folks Like These Things?

- Fatty foods
- Drugs
- Alcohol
- Inactivity
- Salt
- Sex
- Smoking



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Instant vs. Delayed Gratification

- Fatty foods → Obesity, diabetes, heart disease, injuries
- Drugs → Overdoses, addictions, mental illness, crime, injuries
- Alcohol → Cirrhosis, mental illness, violence, injuries, crime
- Inactivity → Obesity, poor health, disability
- Salt → Hypertension, cardiovascular problems
- Sex → STD's, unwanted pregnancy, Fetal Alcohol Syndrome
- Smoking → Cancer, COPD, bronchitis, injuries



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Know Your Personal Numbers

- Blood Pressure (115 / 75)
- Thyroid Stimulating Hormone
- Cholesterol
- Waist Size (At belly button: men < 40 in, women < 37 in)
- 10,000 steps a day
- Resting heart rate (60 in the am)
- C-reactive protein
- Vitamin D level
- Blood sugar
- 7-8 hours of sleep every night

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Super Healthy Foods

- Walnuts
- Wild salmon
- Blueberries (dark colorful fruits)
- Tomatoes
- Omega-3 eggs
- Yogurt
- Turkey
- Spinach
- Broccoli
- Spices
- Olive oil
- Green tea
- Pumpkin (colorful vegetables)

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Let's Now Review the Injury Problem

- Let's review what injuries are
- Let's discuss how we can approach the issue
- Let's review the concept of safety culture

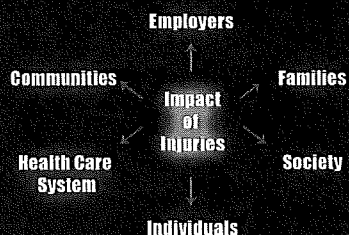


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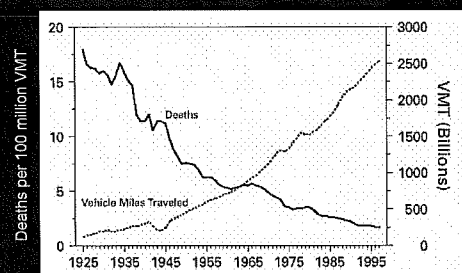
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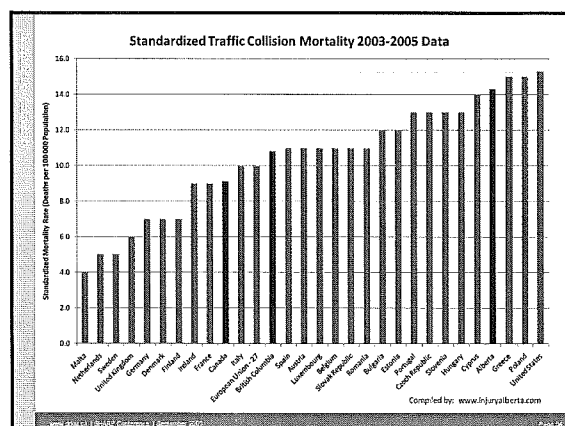
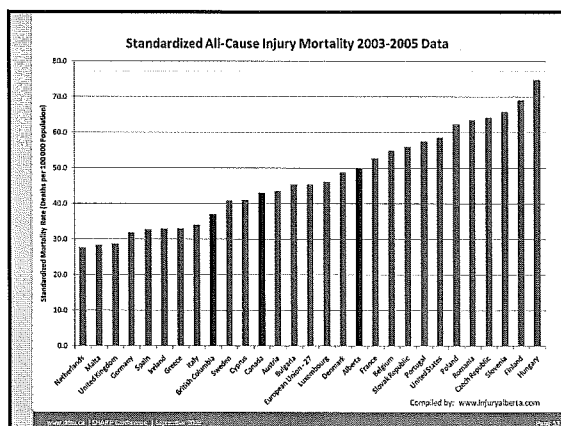
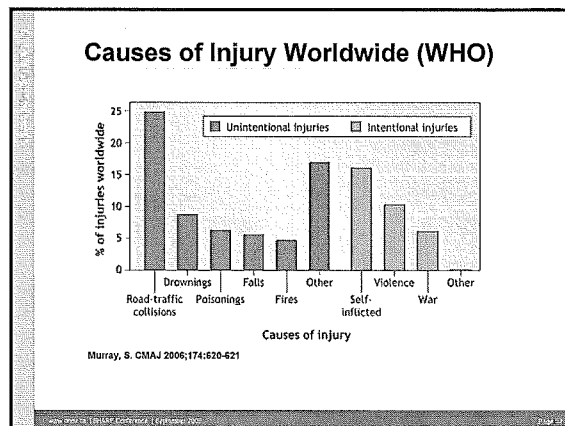
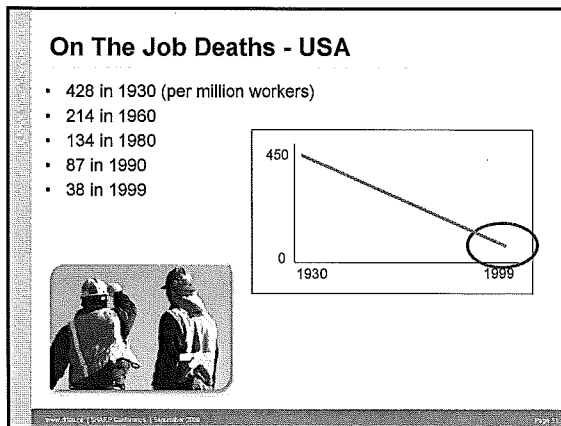
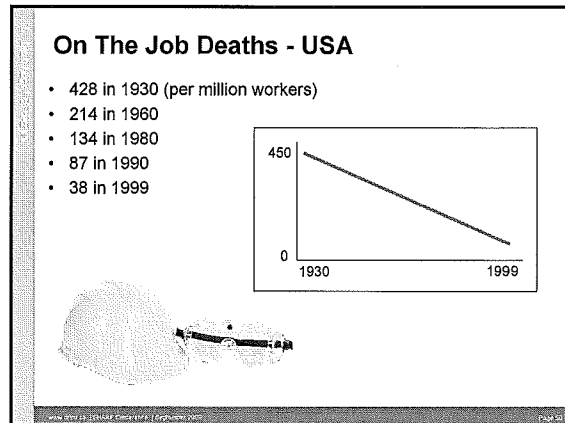
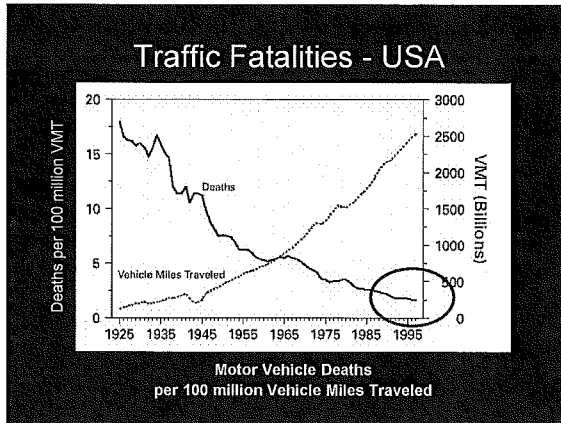
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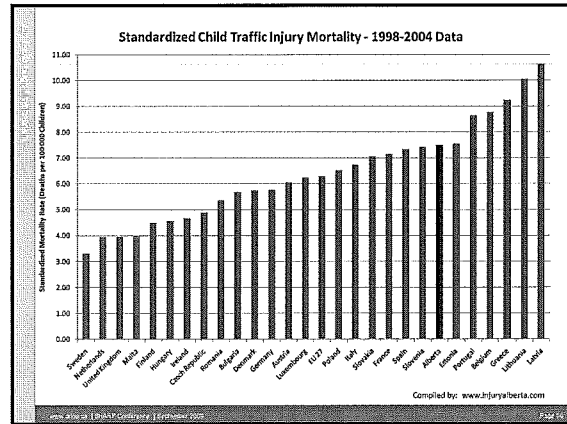
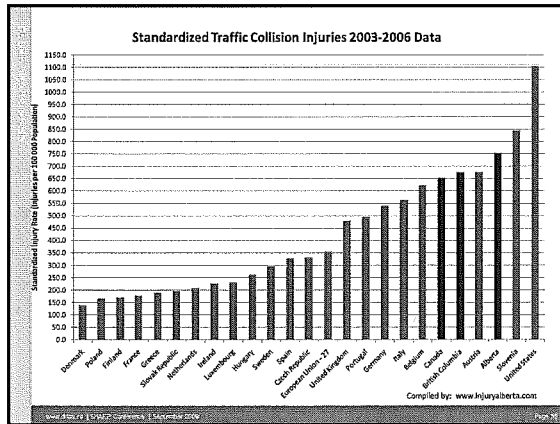


Traffic Fatalities - USA



Motor Vehicle Deaths
per 100 million Vehicle Miles Traveled

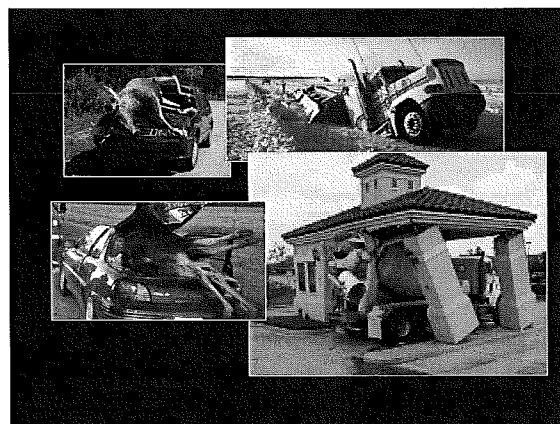
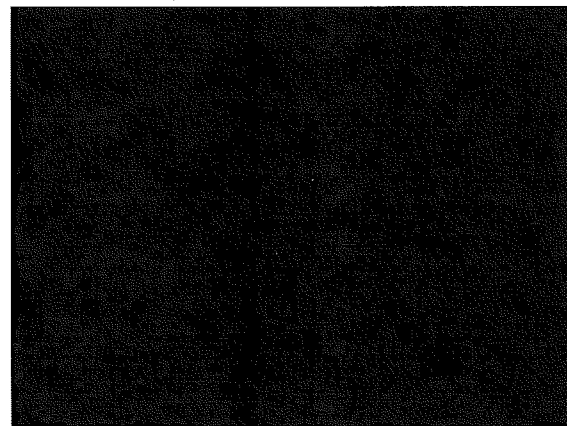




“911, What is Your Emergency?”

- “...the dog bit my son in the face and he’s bleeding...”
- “...there’s been a terrible car crash and 3 people are trapped inside the burning vehicle...”
- “...I came home and my 16 year old daughter is on the floor not breathing and there’s a bunch of pills all over the place...”
- “...my grandma slipped on the ice and she can’t get up...”
- “...some boys have fallen through the ice into the river...”

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How Do We Start

Making Sense of All of This?

Two Simple Questions:

- Driven Highway 2 between Edmonton and Calgary
- Use a cellphone
- While driving



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What Are We Talking About?

- A disease...
 - A silent killer
 - Something that happens on a daily basis all around us
 - Something that we don't even know exists but is killing us and debilitating us every single day
 - Something that is totally predictable and preventable

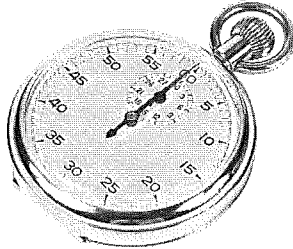
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Injuries

- A 'Crash Course' -

The Remainder of Today's Presentation Will:

- Help you to identify and better understand *Injuries*
- Highlight the impact of *Injuries* on our lives
- Review *Substance Abuse*
- Mention *Brain Disorders*
- Discuss *Fatigue*
- Explore *Traffic Injuries*
- Introduce opportunities for leadership in safety culture
- Work on a case study
 - Cellphones and driving




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Definition of Injury

"In jus" – Not Right

Technical Definition of Injury

- Any specific and identifiable bodily impairment or damage resulting from exposure to the transfer of energy:
 - Thermal energy
 - Mechanical / kinetic energy
 - Electrical energy
 - Chemical energy
 - Absence of essentials for life: oxygen and heat

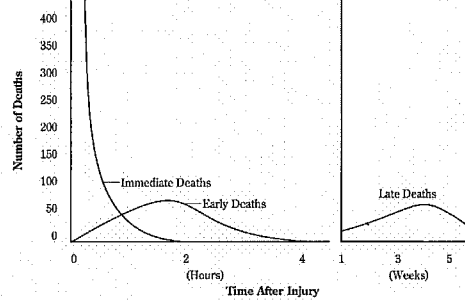


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How do People Die From Injuries?

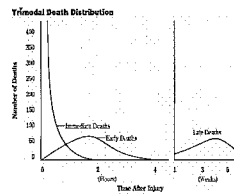
*There are 3 kinds of people in the world:
those who can count and those who can't.*

Trimodal Death Distribution

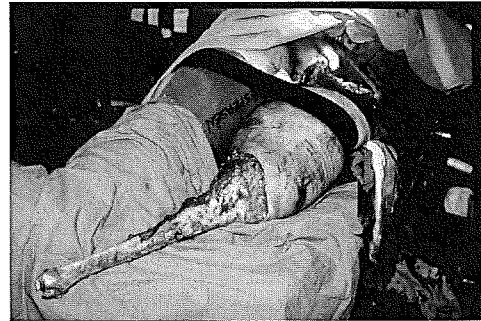


Causes of Death

- **First Peak**
 - traumatic disruptions of brain, spine, heart, aorta
- **Second Peak**
 - closed head injuries, hypovolemic & obstructive states
 - it is this peak that we focus a large part of our acute care
- **Third Peak**
 - sepsis, multiple organ failure

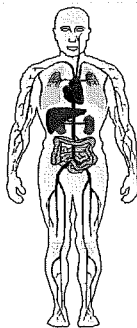


The Power of One Injury versus Millions



The ABCs...

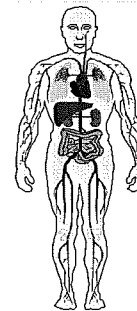
- **Airway**
 - patent / maintainable / unmaintainable
- **Breathing**
 - rate / mechanics / quality / color
- **Circulation**
 - evaluate end organ perfusion



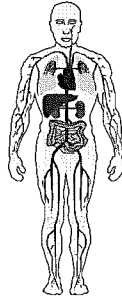
Trauma

Immediately 'life-threatening'

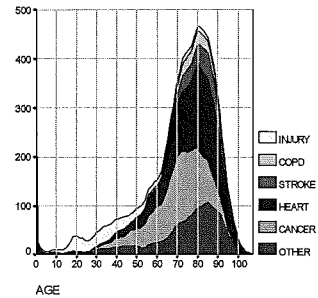
- airway obstruction
- tension pneumothorax
- open pneumothorax
- massive hemothorax
- flail chest
- cardiac tamponade



- pulmonary contusion
- myocardial contusion
- aortic disruption
- thoracic diaphragmatic hernia
- tracheobronchial disruption
- esophageal disruption

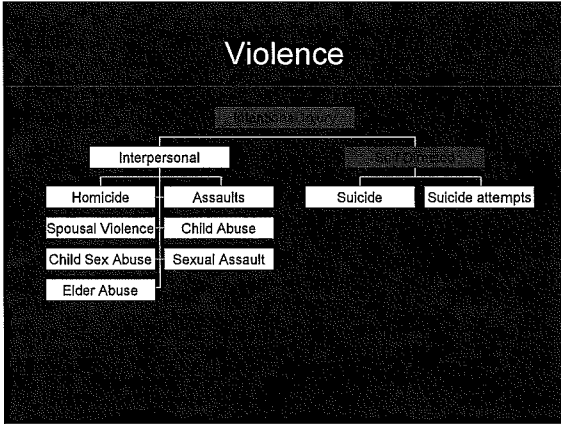
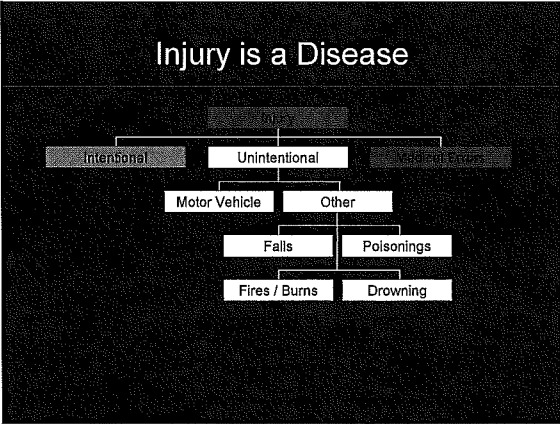
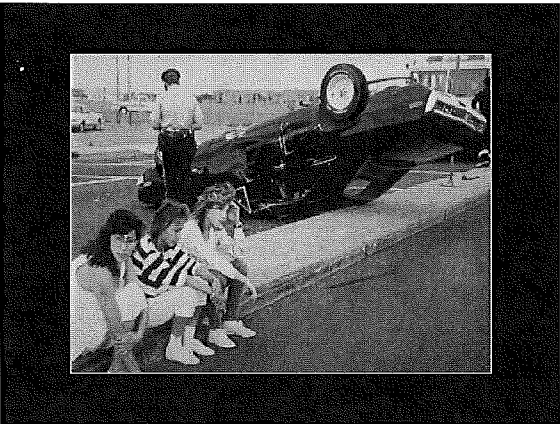
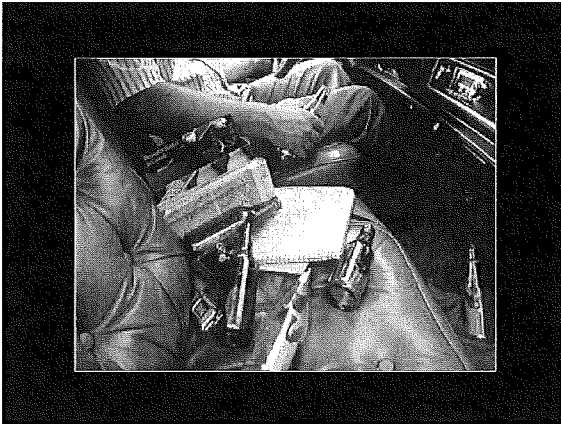


Distribution of deaths in Alberta 1995



**Injury Deaths per 100,000
Children
Aged 1 - 14 in OECD
Countries**





Society's View of Injuries

- It was an "accident"
- It was a "freak accident"
- He (she) lived a good life
- Their ticket was up
- What can you do?
- An act of God
- Being in the wrong place at the wrong time
- I never thought it could happen to me

www.who.ca | 2002 ACICR Conference | September 2002

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How Do We Make Sense of This?

- Every year in Canada
 - Almost **14,000** people die as a result of injury
 - That's about 38 people a day, every single day
 - Over **200,000** people suffer injuries and are hospitalized as a result



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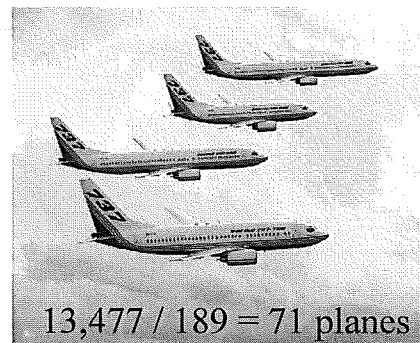
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Injury Compression

- In 2002 - 13,477 Canadians died from injuries
- $13,477 / 365$ (days/year) = 37 people per day
- Deaths at World Trade Centre on Sept 11th
 $3,047 / 37 = 82$ days
- Every 82 days in Canada we lose the same number of folks as on September 11, 2001
- Where is the outrage?

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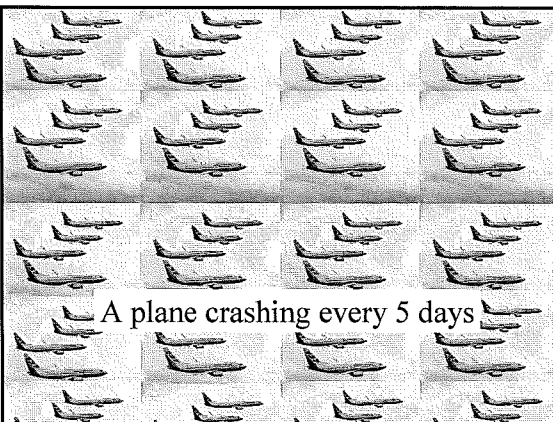
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$13,477 / 189 = 71$ planes

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A plane crashing every 5 days

Alberta's Injury Problem:

- **Every hour of every day**, 45 Albertans are unintentionally injured.
- **Each day**, 24 people are either **killed or permanently disabled** in Alberta as a result of preventable injuries.
- The total annual cost of unintentional injuries to Alberta is **\$1.8 billion**.
- Injury is the **leading cause of death** among Albertans under the age of 44.

Source: The Economic Burden of Unintentional Injury in Alberta, 2002 ACICR SPSS Injury Database

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What is the leading cause
of INJURY DEATH
in Alberta?

What is the leading cause
of INJURY DEATH
in Alberta?

SUICIDE

Injury Deaths Breakdown

1. Suicide - 450
2. Motor Vehicle Related - 420
3. Overdose Accidental Poisonings - 320

Injuries – Below the Surface

1 Death
32 Hospitalizations
293 Treated in Emergency Rooms
Treated in a physician's office
Treated at home or never treated

Source: Alberta Injury Control Strategy
Injury Prevention: Meeting the Challenge, New York, 1999

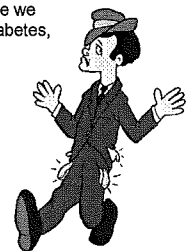
Let's Put This into Perspective...

- Every year in Alberta,
- Over 1,500 people die as a result of injuries
- Over 24,000 people are hospitalized as a result of injuries
- Over 420,000 people are treated in our emergency rooms for injuries
- The number of motor vehicle fatalities increased by 20.4% from 2004 to 2005.




If This is an Important Issue...

- When was the last time you were asked to donate dollars or time for injury research / prevention?
- Then why is there no "Injury Society" like we have for other diseases like Cancer, Diabetes, Lung Disease, Heart and Stroke, etc.?



GARDNER, Crystal

It is with great sorrow that we announce the death of our dearly loved youngest daughter, Crystal Gardner on February 16, 2006 at the age of 21 years old.



"Weep Not for Me"
Weep not for me, but comfort take
And live again in my dear
The loving arms of those on
Life's other side.

Lovingly remembered by her parents,
Charles and Deanne Gardner, sister
Erica and brother-in-law, Kurt Kuchta and
brother-in-law, Chris West. She will also be
lovingly missed by her grandparents, Hans
and Ann Gardner and John and Barbara
Gardner as well as her aunts, uncles,
cousins and many friends.

A celebration of her life at a time of
memories will start at 2:00 pm and the
burial ceremony to follow at 4:00 pm at
Grace Lutheran Church, 907-111 St.
Barnard. There will be a viewing and
visitation from 1:00 pm to 2:00 pm
preceded by the service. Crystal is
interred in the cemetery at a later date at
St. John's Lutheran Church Cemetery
(near Church Creek). Story Plain, in lieu of
flowers, donations may be made to the
Arthritis Society #107,
1010-102 Street, Toronto,
ON M7A 1B3.

Reverend A. McBride
Westlawn Chapel 484-5900

Crystal Gardner's car ended up under a tanker-trailer

CRASHES

Continued from B1

There was the second young Story Plain resident
to die in a car crash within three days.
Crystal Gardner, 21, died in an accident last
Thursday when her car ended up under a tanker-trailer
as she tried to pass Highway 104.

She was northbound on Range Road 20 at 9:30
a.m. when she tried to pass the light-duty pickup
yield to a westbound semi-truck pulling a trailer
to a farm.

Her Ford Focus ended up under the tanker-trailer
and was dragged about 50 metres, according
to RCMP Const. David Angers.

An 18-year-old, Spencer Grove man also died at the
scene of an accident on Sunday when he lost control
of a car on Township Road 524 near Range
Road 271.

The car struck a power pole, skidding, coming to
a stop.

The man was wearing a seat belt.
The cause of the accident will undergo investigation.

More news on this story at www.cbc.ca

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CRASHES

Continued from B1

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Do You Know Anyone Famous
Who Has
Lost Their Life
Due to Injury?



Famous Injury-Related Deaths

- Princess Diana (36) - Car crash
- Sonny Bono (63) - Skiing head injury
- John F. Kennedy Jr. (39) & John Denver (54) - Plane crash
- Abraham Lincoln, Ghandi (79), John Lennon (40) & John F. Kennedy, Malcolm (39) – Assassination / murder
- Kurt Cobain (27) & River Phoenix (23) - Suicide
- Marilyn Monroe (36) – Suicide / homicide?
- Christopher Reeves - Horseback riding related fall injury
- Michel Trudeau (23) – Skiing / avalanche

www.whois.com | Power Solutions | September 2006

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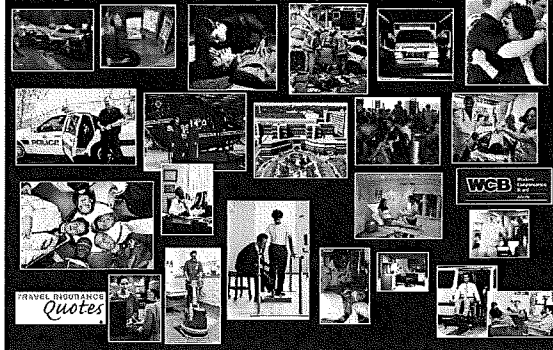
Famous Injury-Related Deaths

- **Brian Jones (27)** – Drowning in swimming pool (homicide?)
- **Jim Morrison (28)** – Drug overdose
- **Tim Horton (44)** – Single vehicle crash, impaired driving?
- **Rasputin (44)** – Poisoned, shot, beaten, drowned
- **Jimi Hendrix (28)** – Choking on vomit (overdose drugs/alcohol)
- **Vincent van Gogh (37), Sylvia Plath (?), & Virginia Woolf (59)** – Suicide
- **Buddy Holly (23) & Patsy Cline (30)** – Plane crash
- **John Belushi (33), Chris Farley (33), Judy Garland (47), & Hank Williams (30)** – Overdose drugs/alcohol

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Injuries Are Very Expensive!



Annual Costs of Injury

- Total annual cost of unintentional injury in Canada > \$14 billion
- Total annual direct cost of unintentional injury in Alberta - \$1.8 billion



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Tough Problem: Tough Talk

Substance Abuse in Society

Broad Drug Groups of Abuse

- Alcohol
- Tobacco
- Illicit drugs
 - Cannabis
 - Opiates
 - Barbiturates
- Licit drugs

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Alcohol: 100% Attributable

- Alcoholic psychosis
- Alcohol dependence
- Alcoholic polyneuropathy
- Alcoholic cardiomyopathy
- Alcoholic gastritis
- Alcoholic liver cirrhosis
- Ethanol toxicity
- Methanol toxicity
- Other alcohol poisonings

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