

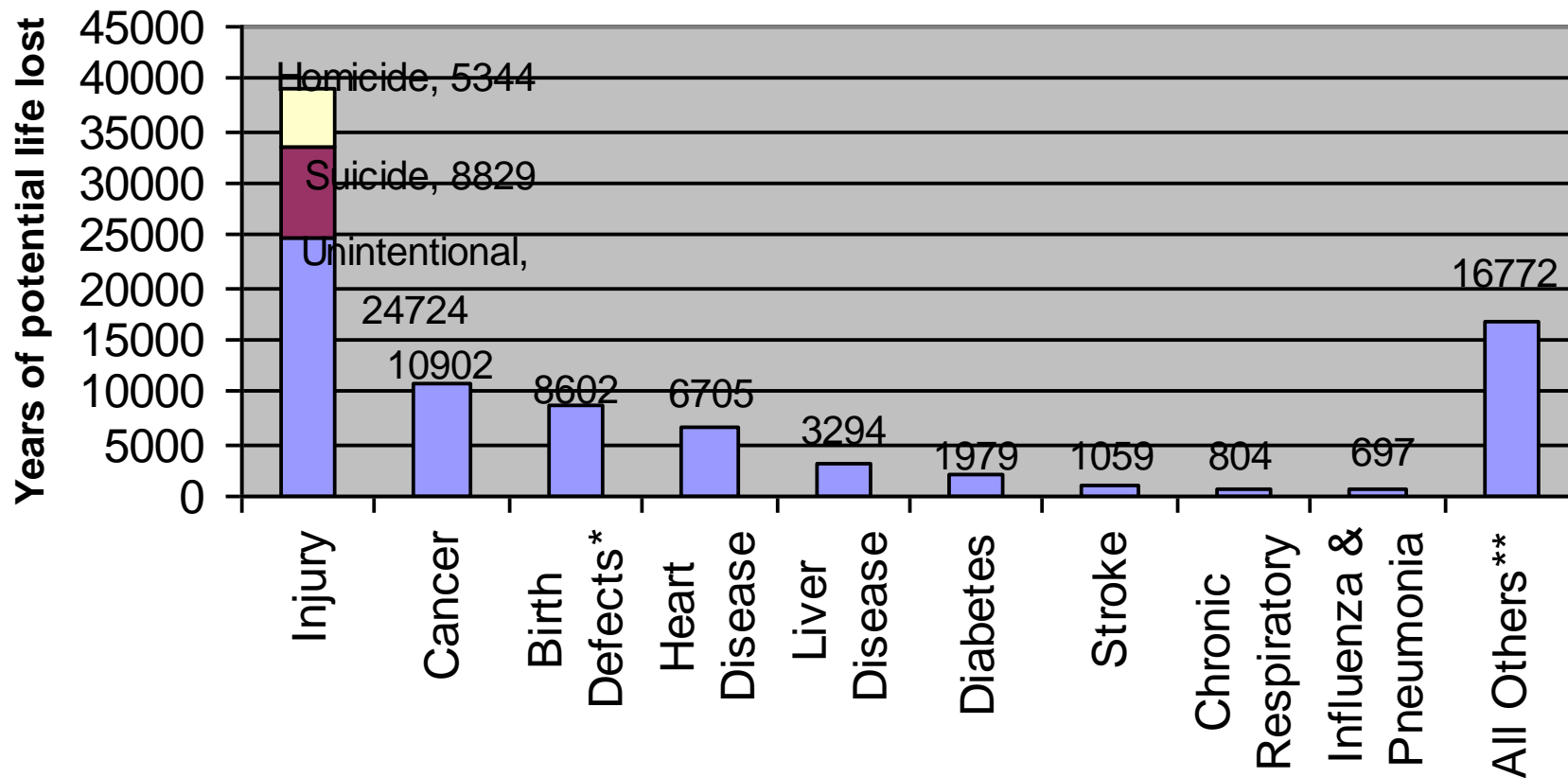
Child Safety

Preventing Injury
Among Infants and
Young Children

Office of Injury Prevention
NM Department of Health



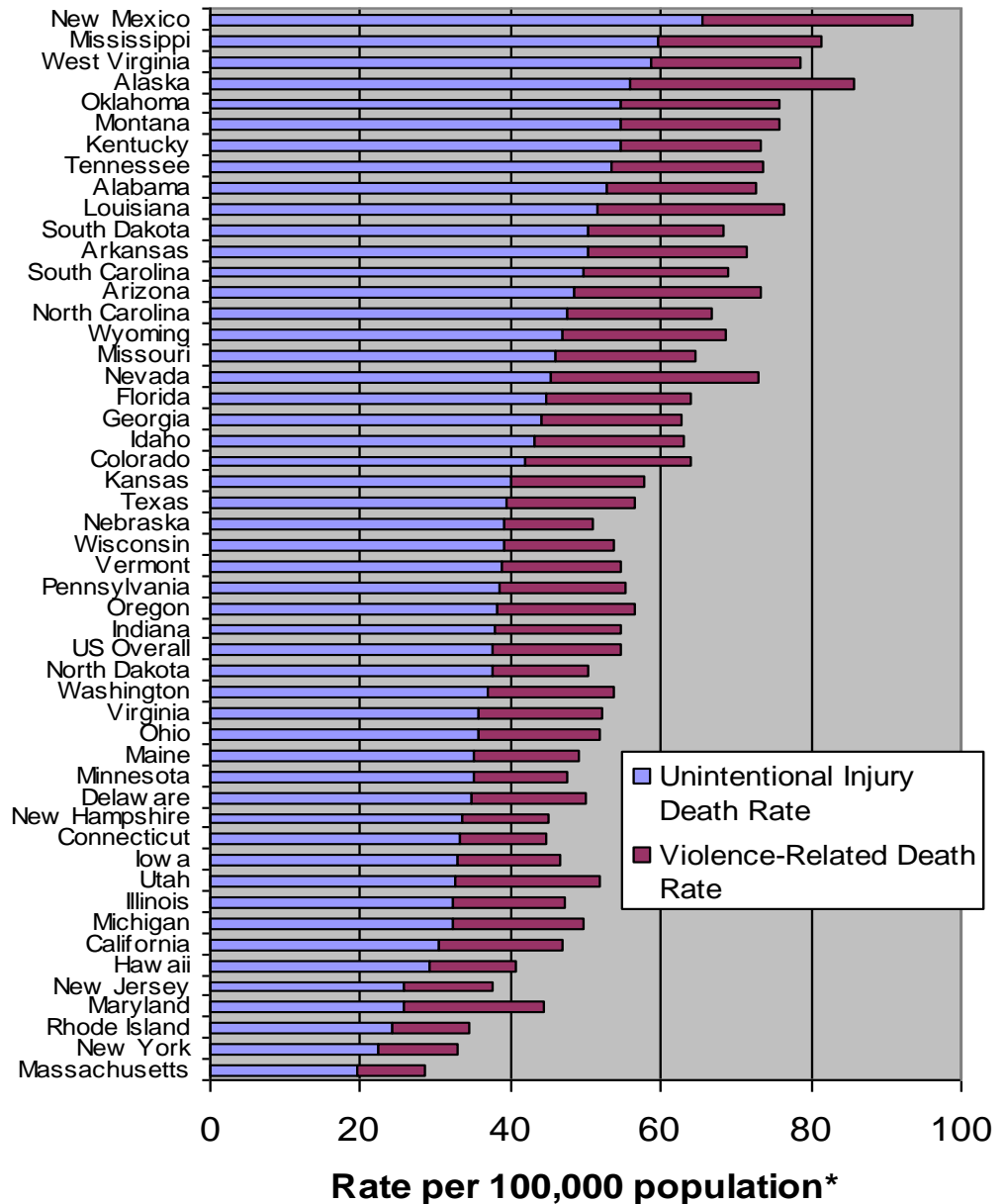
Premature Death before Age 65 (measured by YPLL), New Mexico, 2004



New Mexico consistently has one of the highest injury death rates in the nation

After the age of 1 month, fatality and serious disability resulting from injury exceeds any other cause until age 44.

Unintentional and Violence-Related Injury Death Rate by State, 2004



Leading Causes of Injury Death for Children

Infants - 1) Suffocation
2) Motor Vehicle
3) Intentional Abuse

Toddlers - 1) Motor Vehicle
2) Home Drowning
3) Fire

Small Children - 1) Motor Vehicle
2) Fire
3) Home Drowning

Suffocation Prevention



Suffocation

- The leading cause of *infant* injury death
- Infants most likely to suffocate in a sleep environment



Co-Sleeping Suffocation Hazards

- Suffocation 20-40 TIMES more likely if infant is in bed with parents
- Suffocation 5 TIMES more likely if infant is in bed with sibling



** National Center for Child Death Review*

Infant Suffocation Prevention

- Place infants on their backs; sleeping on stomach **DOUBLES** risk
- Remove all soft bedding, padding, pillows and toys; use a firm mattress and fitted sheets; soft bedding increases risk **5 TIMES**
- Sleeping on stomach with soft bedding increases risk **20 TIMES**



Infant Suffocation Prevention

- Inspect crib for design hazard or damage; 11 million defective cribs recalled since 2007; check list at www.cpsc.gov
- Drop sided cribs are no longer legally sold in US; fixed sided cribs have fewer hazards; portable cribs safer for transport, co-sleeping & overnight stays at other homes or motels

* Consumer Product Safety Commission - 2011

Toddler Suffocation Prevention

- Food chopped up very small; no grapes, green beans, carrots or hot dogs that are whole
- No balloons or toys with batteries, magnets, small parts or breakable plastic
- Any objects that can pass through a toilet roll must be out of reach of small child



** National Center for Child Death Review*

Suffocation & Asthma Prevention

- Keep temperature moderate; provide adequate fresh air; infants and toddlers breath 4-6 times as much air as adults per body weight
- “Flush” or change air in home once or twice per day to reduce concentration of carbon dioxide, dust, mold, radon, formaldehyde, solvents, & gas fumes; have gas company check for carbon monoxide leaks
- DO NOT use air fresheners, other scented products, or with products with “inert ingredients”; they all include many chemicals and cause development of allergies

Suffocation & Asthma Prevention

- Use humidifier in the winter with gas forced air or wood heat to reduce dust in air & heating costs; change gas heater filters three times per winter to reduce concentration of dust as well; install filters inside vents
- Hot water baseboard, portable radiator or radiant floor heat are preferable to reduce concentration of dust and particulate; none of these systems generate dust
- Use swamp cooler in dry hot weather, and/or an air purifier, to reduce concentration of particulate

Suffocation & Asthma Prevention

- Refrigerated air units are more healthy than swamp coolers in humid climates to prevent mold growth
- Swamp coolers need to be thoroughly cleaned and have filter changed three times per summer because of mold growth and particulate contamination
- Use fans to keep the baby cool, but not closer than five feet; baby can become sick from draft

Suffocation & Asthma Prevention

- Use air filtration unit for indoor pets
 - avoid owning dogs and cats with long hair
 - avoid having carpet if you have pets
 - avoid using silica base litter for cats
- Use air filtration unit if home is near:
 - heavy auto and truck traffic
 - dairy, pig or chicken farm and horse stable
 - refinery or other industrial operation
 - dirt road or property without vegetation

New Mexico Child Restraint Laws

Under age 1 (and preferably age 2)

- Rear-facing car seat in the back seat (front seat if no back seat available – deactivate airbag)

Under age 5 and 40 lbs.

- Car seat in back seat if available; rear facing optional but safer

Under age 6 or 60 lbs.

- Booster seat or car seat

Under age 12

- Booster seat until they fit properly in adult seat belt (straps do not cross neck and stomach)



When Child Is Ready For Adult Seatbelt

Proper Seat Belt Fit:

- Lap belt rests on hips, not stomach
- Shoulder belt rests on chest, not the neck
- Knees are bent over seat edge



Motor Vehicle Safety

Adult Neglect = Child Danger

- Approximately 40% of children who ride with unbelted drivers are unrestrained
- Substance abuse by driver with lack of proper restraint of children is common



Source: Centers for Disease Control and Prevention

Non-Motorized Vehicle Helmet Law in New Mexico

NM children under age 18 must wear a helmet when riding:

- Bicycles
- Skateboards
- Scooters
- Skates
- Tricycles



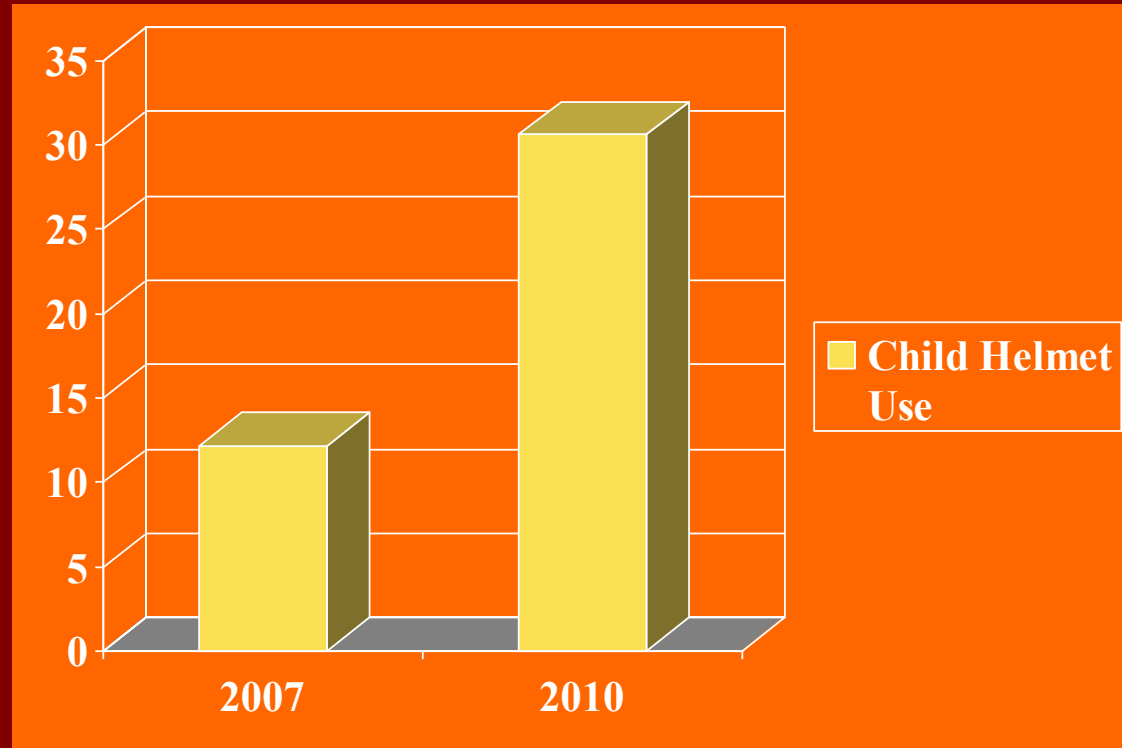
www.nmchildhelmetlaw.com

Child Helmet Use Increasing in New Mexico After Passing Law

2007: 12.2% Use

2010: 30.6% Use

Every helmet utilized represents an annual savings of \$142 in emergency, hospital and disability care, rehabilitation and loss of income



Source: NM Dept. of Health, Office of Injury Prevention

Motorized Vehicle Helmet Laws in New Mexico

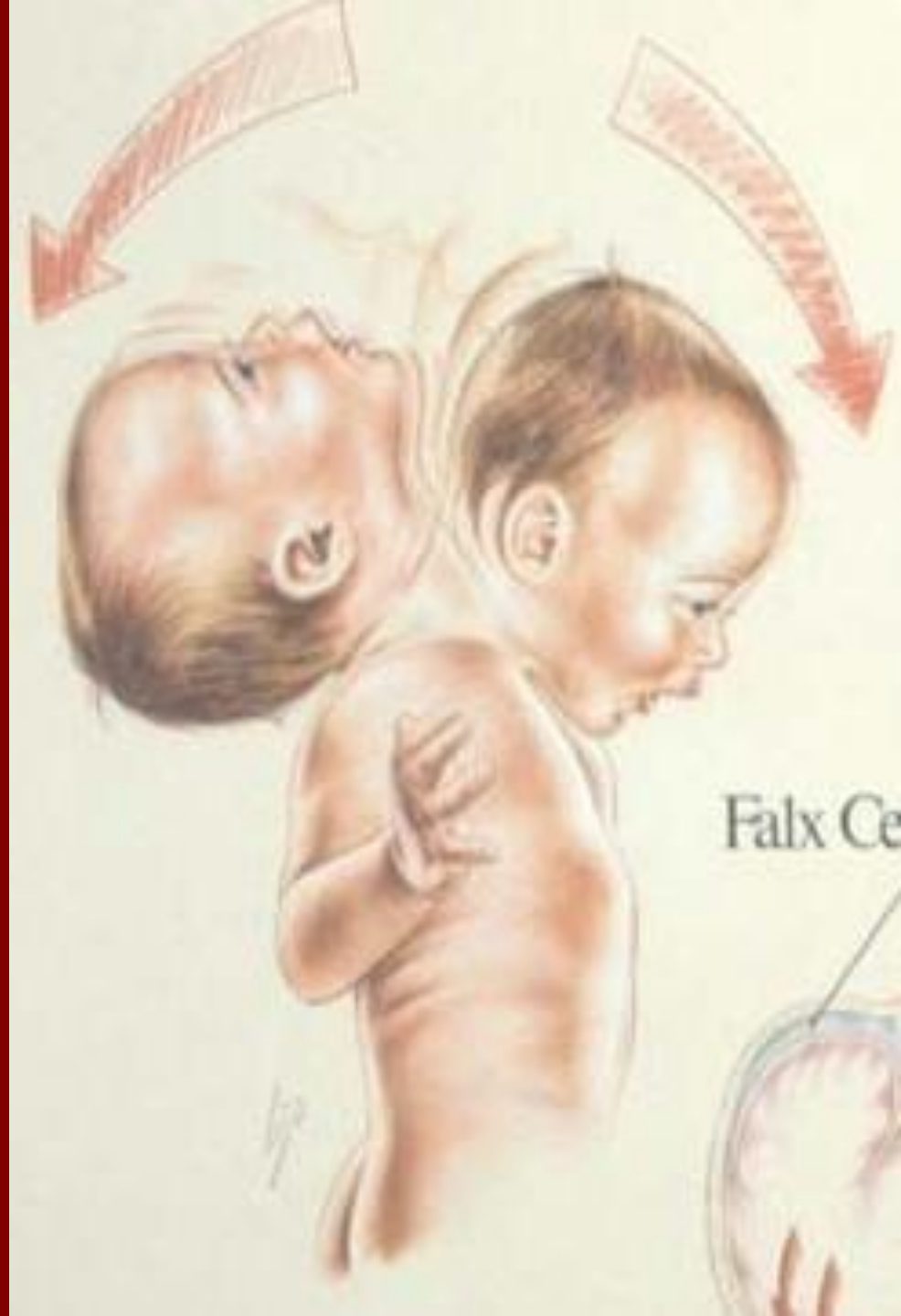
- Everyone under the age of 18 is required to wear a helmet on:
 - conventional (“street legal”), off road and miniature motorcycles (“pocket” bikes)
 - all terrain vehicles
 - snowmobiles

Concussion Symptoms

-Severity Detection-

- Disorientation, dizziness, memory loss, enlarged or uneven pupils, and headaches are common symptoms
- Any prolonged headache, or one that returns the next day, requires a visit to the urgent care clinic or hospital emergency room; bleeding on brain may increase slowly
- Continue observing for symptoms for 72 hours or more; ask questions to test for orientation and memory

Shaken Baby Syndrome Prevention



Shaken Baby Syndrome

- Definition: violent shaking of a baby's head; an acceleration/deceleration injury of brain and brain stem
- Vulnerability: head larger than chest, neck muscles undeveloped, blood vessels immature and fragile
- Impact: loss of vision & motor skills, brain injury or death

** Center of Excellence for Early Child Development, Powers et al. 1991.*

Shaken Baby Syndrome

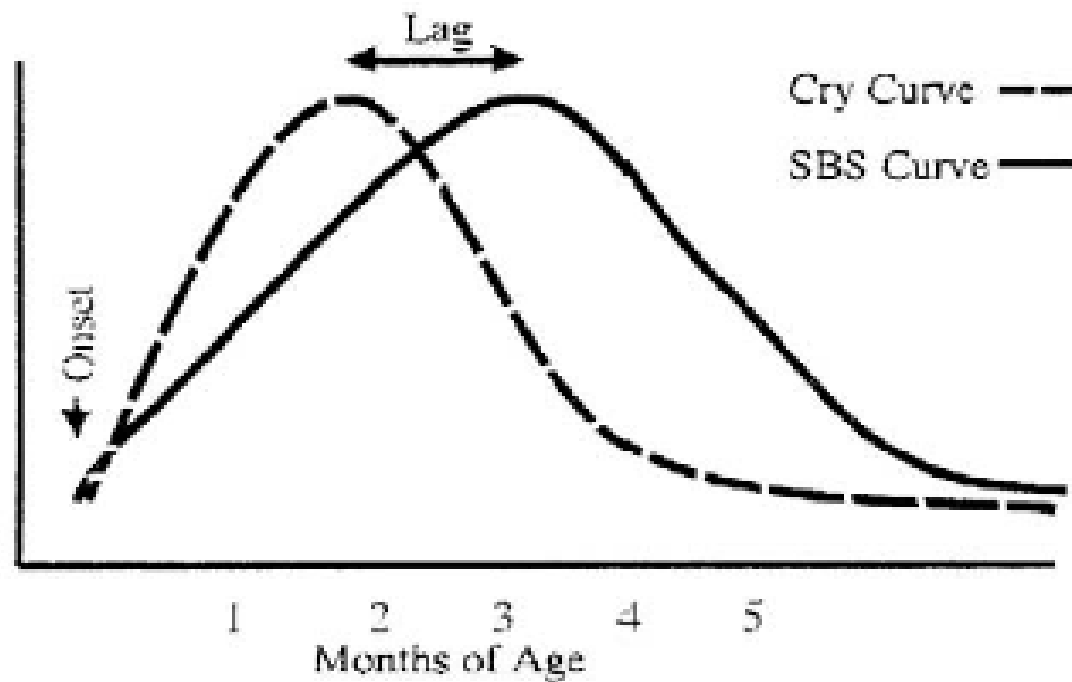
- Frequency: occurs almost exclusively among infants during the first 3-4 months
- Most common offenders: young males, often not related, usually unfamiliar with care giving protocols
- Cause: tension response to crying in combination with weak bonding and coping skills
- Largest risk: Many parents and caregivers are unaware of dangers of SBS

Crying and SBS

Medscape®

www.medscape.com

Curves of Early Crying and SBS Incidence



Source: Adv Neonatal Care © 2004 W. B. Saunders

Coping with Crying

- Extended periods of crying are completely NORMAL; the first 3 months are often called the “4th trimester”
- Wear ear plugs or phones, eliminating the highest pitch, but not all sound, thereby reducing tension levels
- If no method stops the crying, leave the baby secure in the crib, go to the next room or outside, take a deep breath, and rest momentarily
- Crying does not represent failure of the parent; seek support for the emotional strain and request assistance from family and friends

How to Reduce the Crying

- Place the baby near fan or clothes dryer, make a continual “ssh” sound near their ears or drive them around in the car; replicate the “white noise” of blood moving through vessels they hear in the womb.
- Wrap or swaddle the baby in a blanket, from mid-chest to the knees, where the arms cannot move, just as they were constrained in the womb.
- Hold the baby on the right side slightly face down in lap, again just as they were in the womb, but breathing never obstructed.

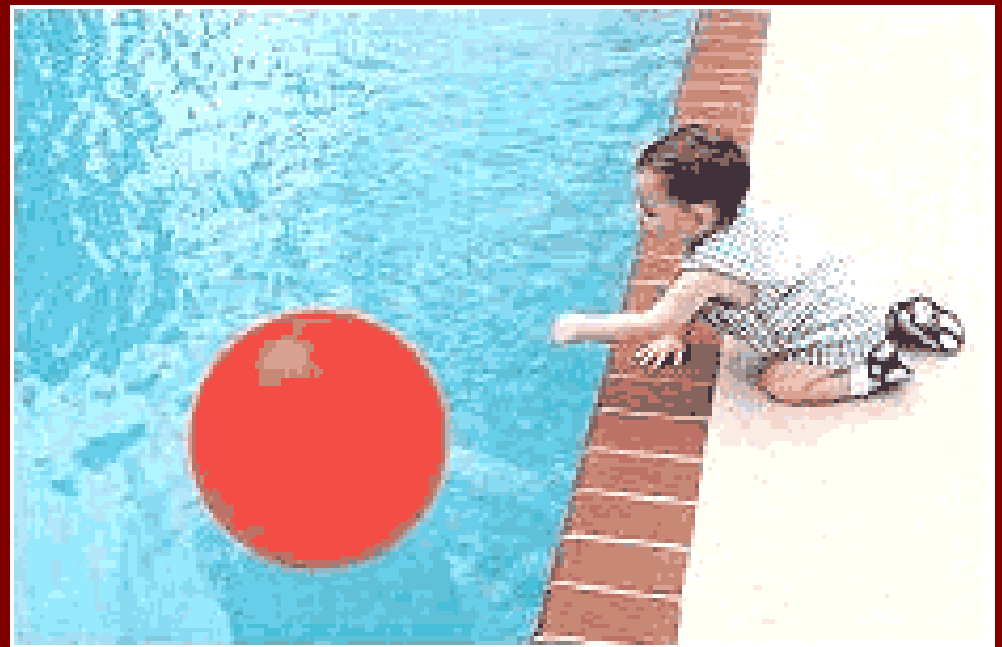
How to Reduce the Crying

- Gentle swinging and jiggling to remind baby of constant motion in the womb
- Sucking motion; use of pacifiers as desired
- Also give the baby a “probiotic” formula to relieve gas from poor digestion; if still breast feeding, track diet of mother for possible allergens of baby

* *Happiest Baby on the Block*
by Harvey Karp

Drowning Hazards

- Lack of supervision is associated with most drowning deaths; too often the drowning victim is unable to cry out for help
- Toddlers at highest risk for drowning; mobility without skills
- Site of drowning:
 - Infants; bath tub; bathing chairs not stable enough
 - Toddlers; pools, buckets, and toilets
 - Young children; hot tubs, pools, open water



* *National Center for Child Death Review*

Drowning Prevention

- Constant supervision near water; indoors or outdoors
- Wading pools emptied when not in use; backyard ponds empty if small children reside in or visit home
- Teach young children to float and swim as early as possible



Fire Hazards

- Cooking and home heating are leading causes of fires
- Smoking is the principal cause of fire-related deaths
- Most fatal fires occur at night
- 90% of homes have a smoke alarm, but 25% not functioning
- 40% of fire deaths occur in a home that lacks a smoke alarm
- Vulnerable environments include:
 - substandard housing
 - overcrowded living conditions
 - too much clutter
 - substance abuse linked to 40% of fires

Young Children and Fires

- Toddlers start most of the fires that kill children
- Young children tend to hide from fires, making rescue more difficult
- Create a fire escape plan and practice with small children on a regular basis



Fire Prevention

- Keep matches and lighters locked up
- Smoke alarms prevent most fire deaths
- Install smoke alarms and check batteries twice per year; photoelectric alarms outperform other types



Fire Prevention

- Avoid wall to wall carpeting
- Avoid heavy drapes
- Avoid fabric furniture with thick padding
- Avoid fabric covered toys.
- Average home took 17 minutes to have a major fire in 1970*
- Average home took 3 minutes to have a major fire in 2004*

* *National Institute of Science and Technology*

Scalding Prevention

Turn down the temperature on the hot water heater; 120 degrees maximum

Small children have only two layers of skin while adults have three, increasing the vulnerability to severe burns



* *Handbook of Injury and Violence Prevention.* 2007

Burn Prevention

- Never cook with hot oil, grease or butter on the open stove with a small child present
- Never leave pan handles extended out from stove where small children can grab them
- Never leave boiling water unattended
- Never leave appliances unattended when in use
- Never leave matches or lighters accessible

Sunburn and Heat Stroke Prevention

- Maintain hydration and body temperature
 - Small children tend to overheat more frequently
 - Heat stroke can be far more serious for children, as it can potentially cause brain damage
 - If someone is very flush, dizzy, nauseous or exhibiting other symptoms indicating potential heat stroke:
 - pour cold water over head, neck, and shirt
 - do not permit small child to return to outdoor activity on same day; treat as serious injury

Sunburn and Heat Stroke Prevention

- Wearing protective clothing is more important than applying sunscreen:
 - Baseball caps, and whenever possible, full brim hats
 - Cotton or other light material shirts with collars
 - Loose shorts extending to knee, which cover the thighs for sitting at length in the sun
 - Remain in the shade if in bathing suit, short shorts or without a shirt; use jacket, umbrella or shawl to cover exposed skin if shade not available

Sunburn and Heat Stroke Prevention

- Follow protective protocols:
 - Seek shade after swimming, as skin burns faster when wet, just under surface of water, or when exposed to reflection of sun off water
 - Avoid direct sunlight between 10 AM and 4 PM, or rest frequently in the shade during the day in the summer
 - Plan swimming, boating and other outdoor activities for early morning or evening during summer

Sunburn and Heat Stroke Prevention

- No sunscreen product can substitute for proper clothing or other precautions for extended sun exposure
- The Food and Drug Administration states that any protective claim for a sunscreen product exceeding SPF 50 is “inherently misleading”
- The Environmental Working Group provides an annual rating of sunscreens, recommending products that contain zinc oxide or titanium dioxide
(www.ewg.org – Skin Deep Database)

Sunburn and Heat Stroke Prevention

- Preventing Children From Overheating in Cars
 - Never choose to leave a child in a car, even with windows cracked in moderate weather; even lock car in garage and driveway to prevent access
 - Purposely leave purse or wallet in back seat with baby; child is then never forgotten during errand
 - Purposely open rear door prior to locking to check for any child, as other children could be inside, even accidentally

Safe Product Selection & Use

The Protocols for
Poison Prevention

Safe Cleaning Product Selection & Use

- Avoid use of cleaning products with “inert ingredients”; most include solvents, which off-gas for two weeks
- Avoid use of oven or drain cleaner including “lye”, or storing in home after use; it is a deadly poison
- Utilize non-toxic products for cleaning, including for laundry and carpet (white vinegar, hydrogen peroxide, lemon juice, borax, baking soda, castile soap)
 - *one cup vinegar per gallon of water will clean carpet better than soap, remove old soap and stain remover, and stay cleaner longer*

Safe Pest Control

- “Clean, Dry and Sealed” (CDS) format;
 - clean - wash dishes, cover garbage, sweep & vacuum floor & furniture, put food away in airtight containers
 - dry - fix roof and plumbing leaks, vent moisture in bathrooms, drain water away from house outdoors
 - sealed – replace door sills, caulk around windows & seam between foundation and floor, cover vents, stove pipes, and fireplace chimney openings with wire mesh to prevent access to pests
- Pesticides and insecticides have no long term impact if home is not clean, dry and sealed, so why use?
- Use hydrogen peroxide with water in spray bottle instead of aerosol pesticide spray for individual pest removal

Safe Pet Care

- Do not use flea treatments – toxic chemicals spread to carpets, rugs, beds, furniture and clothing
- Do not use flea collars – small children hug dogs around neck, and toxic chemicals spread on to the child
- Wash and brush indoor/outdoor pets twice per month
 - Use dishwashing liquid on dogs
 - Use wet rag on cats
- Keep cats outdoors or change litter every week; do not have litter box in child's bedroom and clean every day

Safe Use of Microwaves and Plastic Containers

- Microwave Ovens
 - Stand back a minimum of 5 feet to cook; avoid looking through glass to avoid radiation exposure
 - Do not insert Styrofoam, plastic or metal containers, including plastic baby bottles
 - Use glass and ceramic containers only
- Plastic bottles
 - Do not heat any liquid, and preferably no food, in plastic container on stove or in microwave

Safe Skin Product Selection

- Avoid skin products containing mineral oil; alternate names include adepsine, lignite, paraffin, white, mineral seal or baby oil, petrolatum, aboleine, drakeol
- Avoid any household or personal products with fragrances; they contain hundreds of chemicals
- If mother applies these products to chest, breastfeeding baby can easily absorb in process of nursing
- Check (www.ewg.org – Skin Deep Database)

Safe Skin Product Selection

- Do not use sunscreen or bug repellent on infants; avoid use on toddlers, minimize use on small children; “organic” and “natural” terms do not apply; not regulated
- Check www.ewg.org for best sunscreens and use oil of lemon eucalyptus or catnip for bug repellent (citronella & peppermint oils less effective; DEET only for disease carrying mosquitos – preferably on clothing, not skin)
- Scrutinize ingredients of creams, soaps and powders used on infants, toddlers and small children; use coconut, calendula or emu oil for cream; not regulated

* *Environmental Working Group*

Safe Everyday Product Use

- Average woman uses 12 products, including 168 ingredients, per day
- Average man uses 6 products, including 85 ingredients, per day
- Average child is exposed to 61 ingredients per day
- The general rule is that fewer ingredients indicate a safer and higher quality product; cosmetics not regulated

* *Environmental Working Group*

Safe Electronic Product Selection and Use

- Cordless phones – replace with traditional wired phones or never place against face nor locate next to bed
- Cell phones – keep 2 to 4 inches away from face; if kept “on” to receive calls during day, put in purse or briefcase, and not in pocket; during night, never locate next to bed; turn off whenever possible
- Laptop computers or “e-readers” – never use directly on lap without tray, or book or other layer of protection

**University of Pittsburgh Cancer Institute
Federal Communications Commission*

Safe Electronic Product Selection and Use

- Televisions
 - no television for children under the age of two
 - no television in child's bedroom
 - a maximum of two hours per day for older children
- Computers & Wi-Fi routers - turn off one hour before bedtime and when not in use)
- Electric & digital alarm clocks – across room and not located on bedside table next to pillow

** American Academy of Pediatrics
University of Pittsburgh Cancer Institute*

Safe Appliance Product Selection and Use

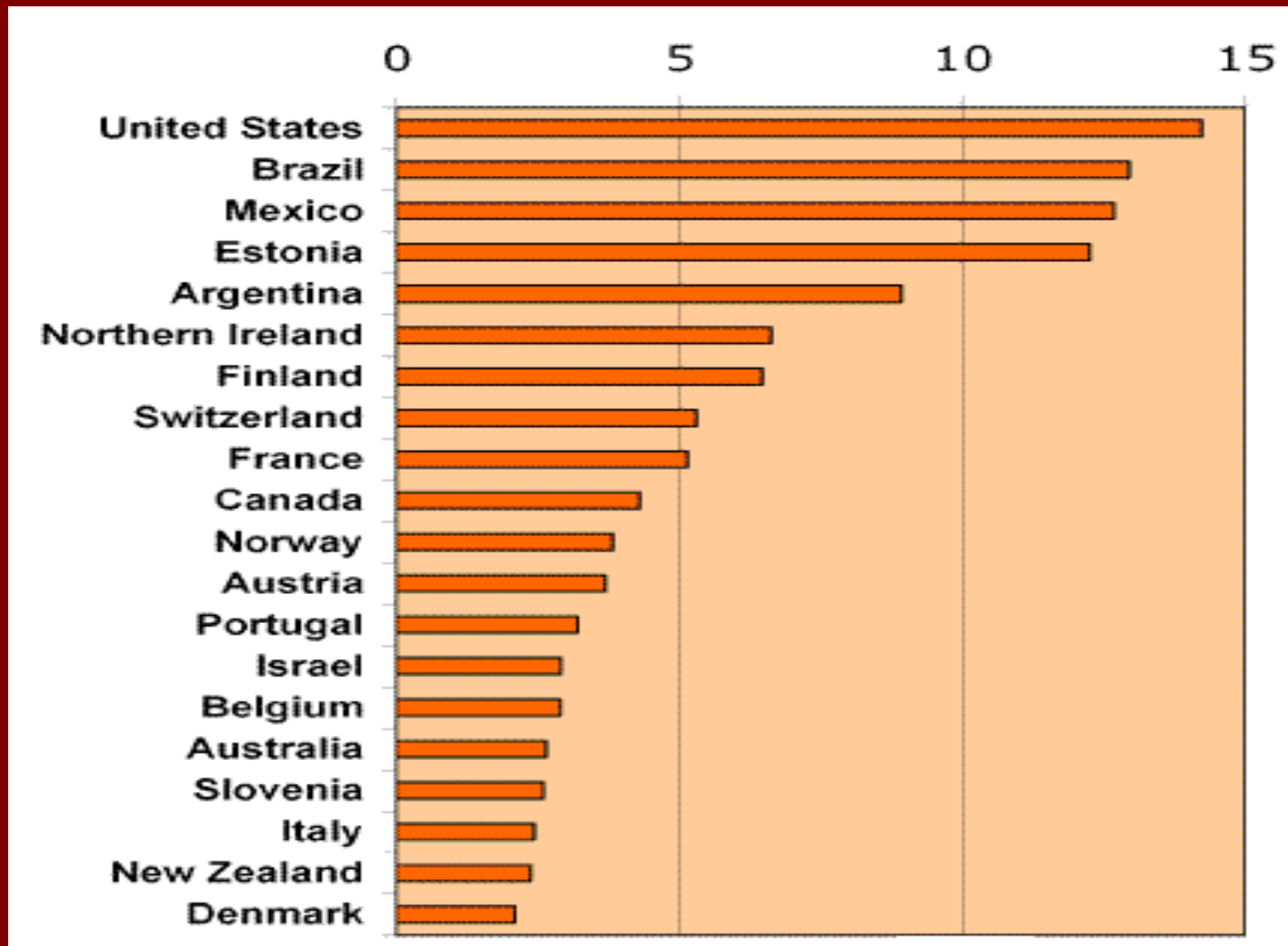
- Refrigerators & microwave ovens - not near crib or on other side of common wall from crib or bed
- Electric blankets & water beds – not to be used during pregnancy except to warm bed, then turn off before use
- Fans and baby monitors - keep across room from infants
- Fluorescent and CFL lighting – keep away from infants and small children

** University of Pittsburgh Cancer Institute
Zapped by Anne Louise Gittleman*

Firearm Injury



Firearms Death Rate (per 100,000, age adjusted) for One Year between 1990 and 1995 (Krug, Powell and Dahlberg, 1998)



Firearm Deaths in United States

- Every five weeks as many Americans die from gunshot wounds as from the 9/11 tragedy in New York in 2001
- Some 30,000 Americans die from gunshot wounds every year, rating this cause of death only behind motor vehicle crashes and prescription drug overdose

** Center for Disease Control
Violence Policy Center*

Gun Ownership

- 34.5% of American households included a gun in 2006
- New Mexico: 21% of households with young children stored guns unsafely
- YRRS data: 57.7% of children in grades 9-12 report a gun in the home

* *National Opinion Research Center*

Wiktor et. al 2004.



Firearm Hazards

- Toddlers love to explore closets, drawers, and other locations in the home where guns are concealed
- 8 to 12-year-old boys played with guns after receiving firearm safety training
- Education generally does not have significant impact on curiosity or at-risk behaviors among children with guns

* *Handbook of Injury and Violence Prevention*. 2007

Firearm Injury Prevention

- Preferably remove guns from home; average time for child to find anything hidden is 8 minutes
- Never place a loaded gun under a mattress, in the proximity of the bed or “hidden” in a closet
- Separate guns from ammunition, and lock up both; teens prone to aggression or depression are also at risk

Firearm Injury Prevention

- Locking up guns helps to prevent suicide attempts or additional danger in domestic disputes¹
- Firearms in the home are much more likely to cause injury or death of a family member than a burglar or stranger²



^{*1} Grossman et al., 2005 ²Kellermann et al., 1998

Alcohol, Substance Abuse & Injury



Alcohol As Cause Of Injury

- Alcohol is a significant factor in 46% of homicides, 42% of motor vehicle crash deaths, 35% of fall deaths, 30% of overdose deaths and 28% of suicides
- Alcohol closely associated with fire and drowning deaths, domestic violence and child abuse, lack of seat belt and car seat use

** Injury Hurts New Mexico, 2007*

Alcohol & Drug Abuse as Cause of Injury

- The average American has 11 prescriptions and 12 over the counter non-prescriptions; one of the most accessible poisons in a home
- Prescription opiate abuse is wide spread and often fatal in combination with alcohol
- All alcohol and drugs should be secured in a locked cabinet; if in a purse or briefcase, make inaccessible

* *Kaiser Family Foundation*

Tobacco, Alcohol & Drug Abuse as Cause of Injury

- 435,000 die from tobacco use each year
- 80,000 die from alcohol use each year
- 32,000 die from legal drug use each year
- 17,000 die from illegal drug use each year

** Morbidity and Mortality Weekly Report – CDC - 2010*

Problem Drinking

- Excessive drinking: More than 2 drinks for men and 1 drink for women almost every day
- Binge drinking: 5 or more drinks for men; 4 or more drinks for women within a few hours depending on weight of individual
- Risk drinking: mixing liquors, and mixing with sugar, carbonated or caffeinated drinks



Problem Drinking in New Mexico

- Consistently among the worst states for alcohol abuse
- DWI deaths have decreased, yet alcohol-related deaths are increasing
- Approximately one third of emergency room admissions are alcohol related

Source: NM Department of Health



State Resources

- John McPhee
Childhood Injury Prevention Coordinator
New Mexico Department of Health
505-827-2582
John.mcphee@state.nm.us
- Office of Injury Prevention
www.nmhealth.org/injury
- Helmet law - www.nmchildhelmetlaw.com

State Resources

- Safer New Mexico Now -
www.safernewmexico.org
- Injury Prevention Resource Center
1-800-231-6145
 - services available in Spanish
 - car seat inspections
 - car seat events and distributions

National Resources

- Safe Kids Worldwide - www.safekids.org
- Center for Disease Control & Prevention – www.cdc.gov – 1-800-CDC-INFO (232-4636)
- National Center for Injury Prevention & Control – www.cdc.gov/injury
- Consumer Product Safety Commission - www.cpsc.gov