



Center for Violence and Injury Prevention

GEORGE WARREN BROWN SCHOOL OF SOCIAL WORK

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Washington
University in St. Louis

INSTITUTE FOR PUBLIC HEALTH

Economic Costs and Consequences of Child Maltreatment

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*Saving Babies, Strengthening Families: A Summit to
Support the Health and Safety of Missouri's Babies
October 25, 2013*



Washington University in St. Louis

My background

- Health economist
- Assistant professor, George Warren Brown School of Social Work
- Faculty Affiliate, Center for Violence and Injury Prevention (CVIP)

- Grantee
 - Centers for Disease Control and Prevention (CDC) / Division of Violence Prevention (NCIPC-DVP) / Child Maltreatment
 - National Institutes of Health (NIH) / mental health (NIMH)

A social and public health issue

- Experts in social work, psychology, medicine, & other fields have identified many negative consequences & social determinants of child maltreatment (CM)
 - Victim mental health, physical health, quality of life, mortality
 - Lifelong impacts as well as short term
 - Direct & indirect impacts on society
- FY11: 3.0M investigated, 681,000 child victims, 1570 fatalities
 - Most researchers agree that official reports are underestimates

Why should we look at the costs of CM?

- In an era of resource constraints, it's never been more important to have good cost data.
 - Researchers have a responsibility to provide the most accurate data that we can to quantify and compare public health issues.
- But, dollar costs are only part of the story and should be put in perspective
 - The effects and toll of CM on children and families is paramount.

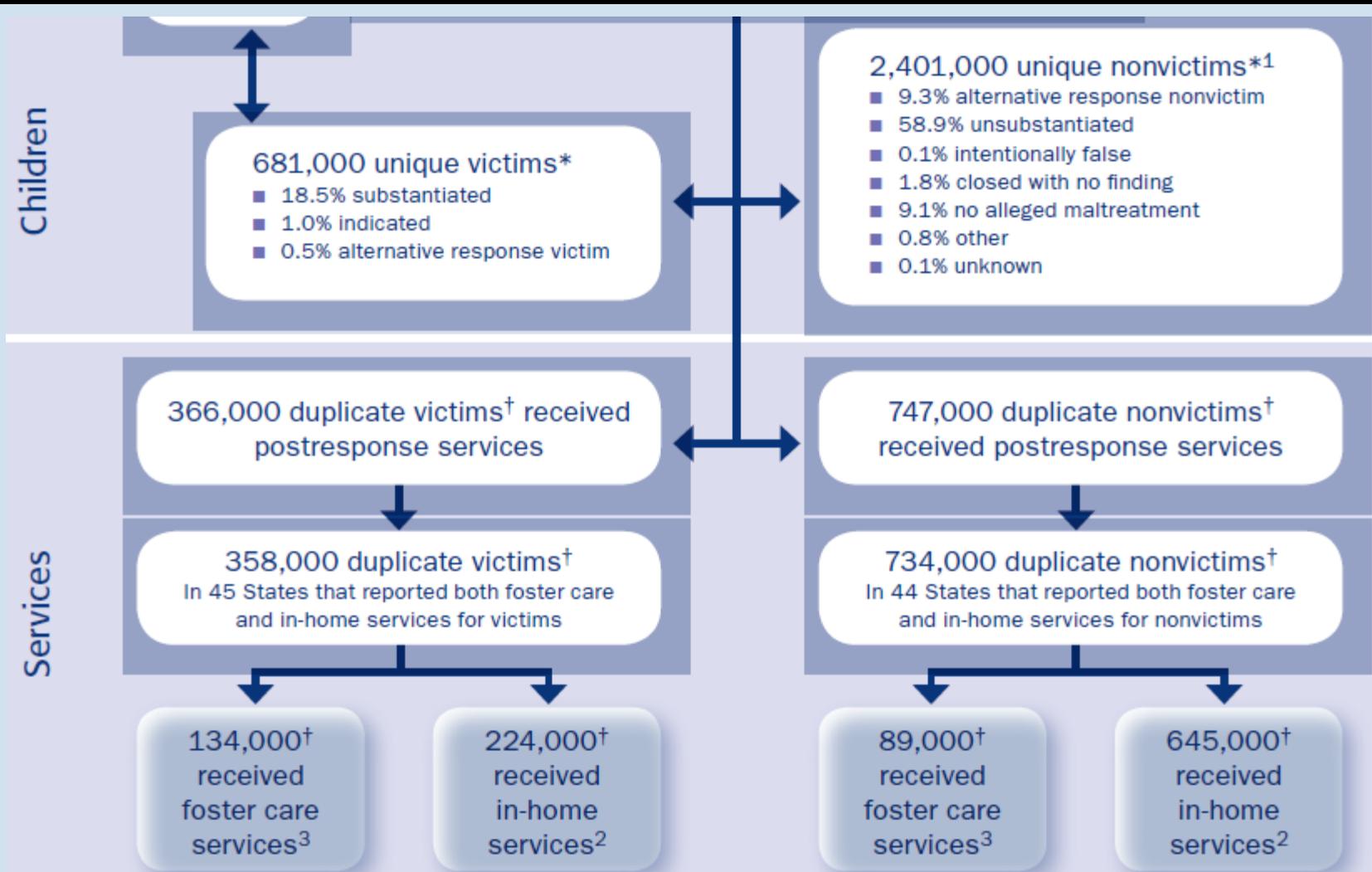
Why should we look at the costs of CM?

- **There is a business case for preventing child maltreatment.**
- Real dollar costs that society pays
- Opportunity costs: what we lose from CM cannot be used elsewhere
- Prevention can let society make better choices about resources

How should we look at the costs of CM?

- We can start with budgets.
- Child protective service (CPS) agencies around the country receive federal dollars to provide social services.
 - Services are also provided by states and many nonprofits (e.g., Nurses for Newborns).
 - A full accounting of service delivery would include and value these as well.

Social services for CM response (FY11)



Federal cost of social services

- 2.0 million CPS responses
- 869,000 in-home services
- 213,000 foster care services
- Federal budget exceeds \$8 billion
- Unfortunately, this is only a fraction of the true dollar costs of CM. Society pays in many other ways.



Services

134,000[†]
received
foster care
services³

224,000[†]
received
in-home
services²

89,000[†]
received
foster care
services³

645,000[†]
received
in-home
services²

The perspective of economics

- Economists “cost” health problems in terms of the net impact on social resources
- **Direct costs**
 - Short-term, immediate response: medical care, social services, criminal justice
- **Indirect costs**
 - Accrue over long-term: adult medical, special education, lost earnings & productivity, criminal justice
- **Externality**
 - Costs are borne, in part, by all—not just victims, perpetrators

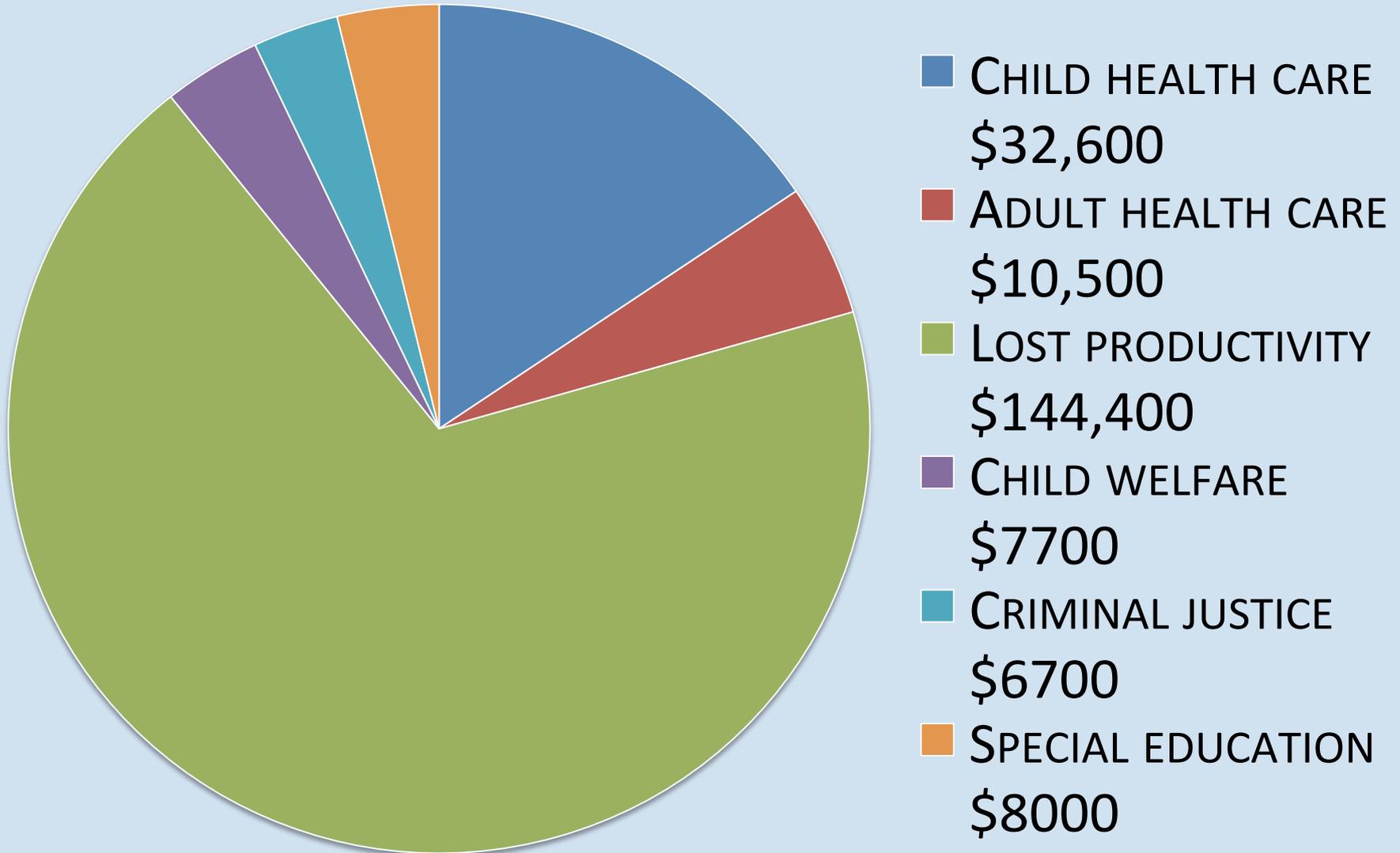
Total costs of CM

- CM in the United States in a single year (2008) is estimated to cost society at least \$124 billion
- \$210,000 (discounted) lifetime costs per case
 - A per capita sum of annual costs over all ages, starting at age 6, with future costs discounted at 3% per year

Fang X, **Brown DS**, Florence CS, Mercy JA. The economic burden of child maltreatment in the United States and implications for prevention. *Child Abuse Negl.* 2012 Feb;36(2):156-65.

<http://dx.doi.org/10.1016/j.chiabu.2011.10.006> (open access manuscript)

What's included in these costs?



Total costs of CM in context

- \$124 billion for US child abuse & neglect
- Magnitude compares with other health issues
 - Total costs of obesity estimated \$210 billion
 - Total costs of smoking estimated \$193 billion
 - (Obesity & smoking are about half medical, half productivity)
- \$210,000 lifetime costs per case of CM
 - About the same as 4 years of full fare undergraduate tuition, room, and board at Washington University

Medical costs of CM: children (16%)

- My research
 - CPS survey + Medicaid claims in 14 states (36 states soon)
- **CM increased Medicaid costs by \$2800/year**
 - About 9% of Medicaid expenses are due to CM
 - Mean child w/CM had \$6,400 annual expenditures
 - Mental health care & prescription drugs were largest
 - We all pay for Medicaid (\$1.1B of MO general fund)
 - 48% of all births and 37% of all children in Missouri

Florence CS, **Brown DS**, Fang X, Thompson HF. Health care costs associated with child maltreatment: impact on Medicaid. *Pediatrics*. 2013 Feb;36(2):156-65.

<http://pediatrics.aappublications.org/content/132/2/312.long>

Medical costs of CM: children (16%)

- Psychotropic medications are especially costly
 - Maltreated children have twice the odds of using medication
 - Racial & ethnic disparities, even after adjusting for need
 - \$1400 annual expenditures for children in CM
- Traumatic brain injury is less common but devastating & costly
 - Estimates vary widely but may exceed \$25,000 per incident

Raghavan R, **Brown DS**, et al. Medicaid expenditures on psychotropic medications for children in the child welfare system. *J Child Adolesc Psychopharmacol*. 2012 Jun;22(3): 182-9.

<http://dx.doi.org/10.1089%2Fcap.2011.0135>

Brown DS, Fang X, Florence CS. Medical costs attributable to child maltreatment: a systematic review. *Am J Prev Med*. 2011 Dec; 41(6):627-35. <http://dx.doi.org/10.1016/j.amepre.2011.08.013>

Medical costs: adults (5%)

- Abused & neglected children develop more health problems as adults
 - Mental health (anxiety, depression)
 - Health risk behaviors (smoking, alcohol, drug abuse)
 - Increased chronic disease (heart disease, cancer, obesity)
- Society pays these costs too
 - Medicare, Medicaid, care for the uninsured, and increased premiums for private insurance
 - Estimated \$800+/year throughout lifetime

Brown DS, Fang X, Florence CS. Medical costs attributable to child maltreatment: a systematic review. *Am J Prev Med.* 2011 Dec; 41(6):627-35.

<http://dx.doi.org/10.1016/j.amepre.2011.08.013>

Other social costs (11%)

- Criminal justice system
 - Cost to prosecute and incarcerate perpetrators
 - Victims are more likely to be juvenile or adult offenders
 - Estimated \$6,700 per case
- Special education
 - CM causes development delay, reduced educational outcomes
 - Maltreatment is strong predictor of need for special education
 - Estimated \$8,000 per case

Jonson-Reid M, Drake B, Kim J, Porterfield S, Han L. A prospective analysis of the relationship between reported child maltreatment and special education eligibility among poor children. *Child Maltreat.* 2004 Nov;9(4):382-94.

Widom CS, Maxfield MG. An update on the cycle of violence. National Institute of Justice, 2001.
<http://www.ncjrs.gov/pdffiles1/nij/184894.pdf>

Lost productivity (69%)

- Reduced educational outcomes lead to lower-paying jobs and unemployment
 - Health problems increase absenteeism and reduce on-the-job productivity
- When kids are hurt, they have trouble catching up over a lifetime
 - Modest impact becomes large over 40+ years, even when discounted

Lost productivity (69%)

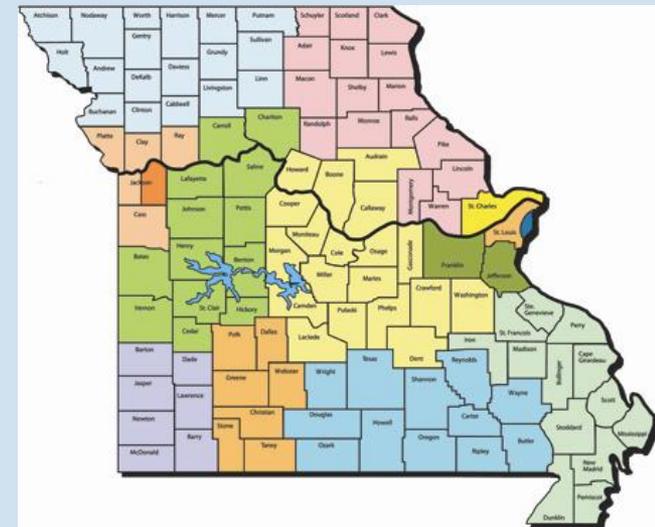
- Conservative estimate \$144,000 loss per victim
- Total of \$83.5 billion in annual productivity loss
- Additional taxpayer loss of revenues
- Reduced earnings mean adult survivor is unable to contribute as much back
 - Not included here, but this further hurts a state's economy

Currie J, Widom CS. Long-term consequences of child abuse and neglect on adult economic well-being. *Child Maltreat*. 2010 May;15(2):111-20.

<http://www.ncbi.nlm.nih.gov/pubmed/20425881>

Missouri perspective

- CM victimization rate: 4.1 / 1,000 (US ACF)
 - National average = 9.1 / 1,000
- 6,322 substantiated cases (MO DSS)
 - 58,782 reports screened in
- 36 fatalities: 2.5 / 1,000 (US ACF)
 - National average = 2.1 / 1,000



Missouri perspective

6,322 substantiated cases (MO DSS)
x \$210,000 lifetime costs per child
= \$1.3 billion per year net loss to Missouri economy

Includes \$17.7 million additional Medicaid costs

36 fatalities (US ACF)
x \$1,258,800 lost productivity
= \$45,316,800 economic loss to MO economy

Business case for prevention

- Prevention of abuse and neglect can reduce the the financial costs we all bear
 - Should examine specific initiatives
- Further, investing in early childhood development has been shown to 7-10% ROI
 - Early childhood education from birth to age 5, parent coaching, and home visitation programs
 - <http://heckmanequation.org/>
- A significant return on investment is possible from improving children's lives & preventing child abuse & neglect.

Caveats and limitations

- Economists have limited tools
 - Costs that society incurs as a result of current rates of CM
- We do not measure the personal & human cost to individual families
 - Value of lost life or quality of life is at a societal level
 - Excluded here, except for fatalities
- View estimates as a range
 - See peer-reviewed manuscripts for statistical bounds
 - Conservative assumptions applied when possible

Conclusions

- Total costs of CM are at least \$124 billion/year
 - At least \$210,000 in lifetime costs/child
 - Missouri costs are approximately \$1.3 billion/yr
- Society pays these costs, reinforcing the business case for preventing abuse & neglect
- We should consider this in addition to simply doing the right thing for children and families.

Thank you

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