

The future of Indiana: Reducing risky behavior of our youth



Indiana Family Impact Seminars

A project of the Indiana Consortium of Family Organizations

Center for Families, Purdue University
Department of Family and Consumer Sciences, Ball State University
Indiana Association for the Education of Young Children
Indiana Association for Marriage and Family Therapy
Indiana Extension Homemakers Association®
Indiana Family Services
Indiana University School of Public Health - Bloomington
Indiana Youth Institute
Marion County Commission on Youth, MCCOY
National Association of Social Workers - Indiana Chapter
Purdue Extension Health and Human Sciences

The Future of Indiana: Reducing Risky Behavior of Our Youth

Indiana Family Impact Seminar
November 15, 2016

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Future of Indiana: Reducing Risky Behaviors of our Youth

Family Impact Seminars have been well received by federal policymakers in Washington, DC, and Indiana is one of several states to sponsor such seminars for state policymakers. Family Impact Seminars provide state-of-the-art research on current family issues for state legislators and their aides, Governor's Office staff, state agency representatives, educators, and service providers. One of the best ways to help individuals is by strengthening their families. The Family Impact Seminars speakers analyze the consequences an issue, policy or program may have for families.

The seminars provide objective, nonpartisan information on current issues and do not lobby for particular policies. Seminar participants discuss policy options and identify common ground where it exists.

The future of Indiana: Reducing risky behaviors of our youth is the nineteenth in a continuing series designed to bring a family focus to policymaking. The topic was chosen by the very legislators these seminars are intended to inform. This seminar features the following speakers:

Julie Whitman, MSW

*Vice President of Programs
Indiana Youth Institute Health,
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jwhitman@iyi.org*

Julie Whitman oversees a dynamic program staff that manages the Because Kids Count Conference, regional trainings and webinars, nonprofit management consulting, KIDS COUNT® data products and services, the Virginia Beall Ball Library, professional development grants, and internal and external evaluations. She also leads the agency's external collaboration work, interfaces with state policy makers, and serves on several statewide boards and task forces. Ms. Whitman previously worked in the area of criminal justice with a focus on teen victims.

Sarah Wiehe, MD, MPH

*Pediatrician and Public Health
Researcher
Children's Health Services Research
Indiana School of Medicine
swiehe@iu.edu*

Dr. Wiehe is a pediatrician and public health researcher for Children's Health Services Research at Indiana University School of Medicine, an Affiliated Scientist at the Regenstrief Institute for Health Care, and Adjunct Assistant Professor of Geography and Public Health. Her research focuses on how poverty and associated social determinants of health influence adolescent behaviors such as smoking, substance use, and risky sexual activity. She is currently working on two projects – (1) space-time determinants of adolescent health-risk entitled Pearl Grlz, and (2) the epidemiology and geospatial correlates of sexually transmitted infections.

Mary Ott, MD, MA

*Associate Professor of Pediatrics
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Dr. Ott is board certified in Pediatrics and Adolescent Medicine. Dr. Ott's research expertise is in adolescent pregnancy and STI prevention, and ethics of research with adolescents on sensitive topics. Her current research includes evaluations of community-based pregnancy prevention programs, an assessment of adolescent capacity to make decisions about contraceptive use, and an intervention to support teen parents of hospitalized children. Dr. Ott's work is informed by a developmental understanding of adolescents' unique vulnerabilities balanced by recognition of their emerging capacities, and the need for clinical systems and research to support adolescents in their transition to healthy and productive adults.

For further information on the seminar, contact the Indiana Consortium of Family Organization c/o the Center for Families at Purdue University, 1200 West State Street, Fowler Hall, West Lafayette, IN 47907-2055; (765) 494-9878; cff@purdue.edu

This briefing report and past reports can be found at Center for Families at Purdue University's website: www.purdue.edu/fis and on the Family Impact Institute's national website: www.familyimpactinstitute.org

The Future of Indiana: Reducing Risky Behaviors of our Youth

Some of the greatest threats to youth well-being come from preventable causes, including drug and alcohol use^{1,2}, early sexual risk-taking^{3,4,5,6}, pregnancy^{7,8,9}, and suicidal thoughts^{10,11}. Despite declines over recent years, rates remain high. Adolescent pregnancies are very costly to both federal and state governments, with a total of \$375.9 million dollars spent in Indiana in a recent year¹²: only 14 states have higher teen birth rates than Indiana^{13,14}. It is important to consider these challenges in light of the developmental changes that occur during adolescence, particularly in terms of brain development. Research offers new insights into how to tackle these challenges.

Adolescents take more risks than children or adults do as evidenced by drinking, lack of contraceptive use, car accidents, and crime rates¹⁸. During adolescence brains are continuing to develop, often priming youth for reward- and pleasure-seeking (e.g., risky) behaviors, as opposed to logical and rational choices.¹⁸ Development continues to occur during adolescence, gradually leading to greater cognitive control and understanding for less risky decisions¹⁸.

Adolescent substance use is a concern in Indiana. Recent data indicates that 33% of adolescents have had at least one alcoholic drink and 20% have had at least five drinks or more in one day over the past 30 days¹⁵. Of these individuals, 22% said they rode with a driver who had been drinking alcohol one or more times¹⁵.

Indiana was ranked 20th highest teen birth rates among females aged 15-19 in the U.S. in 2011,¹⁶ which indicates a sharp increase in birth rates from 33rd in 2008.^{16,17} Importantly, current statistics indicate 51% of high school students in Indiana have had sexual intercourse, 20% of whom indicate alcohol or drug use took place before their last sexual encounter^{16,17}.

Considerations for Legislators

Multiple Risky Behaviors: Indiana is Doing Worse than Other States

- Youth are participating in a variety of risk-taking behaviors, including risky sexual behavior, drinking, smoking, and drug use.
- These risk-taking behaviors are shown to be related to suicidal thoughts.¹
- Indiana fares worse than most other states in almost all of these categories.
- Hard drug use—although an epidemic in Indiana—is more of a problem for adults than adolescents.²
- Research has identified some risk and protective factors for these youth.
- Family involvement, schools, community, and individual and peer relationships can be both risk and protective factors for Hoosier youth³.
- Intervention and prevention efforts should target these risk and protective factors.
- Risky-behaviors are bundled with multiple problems for children, their families, and society. Tackling risky-behaviors with targeted programs will simultaneously aid additional problems that are occurring in the lives of Hoosier families.
- Some programs that have been effective in other states are listed below.

Policy Strategies Shown to be Effective:

- Increase access to programs for high-risk populations in need of services.⁴
- Public education campaigns - enhance prevention programs for families and Hoosier youth.⁴
- Graduated drivers' licensing, alcohol tax, and childbearing costs to Indiana State—programs like these have a high return on investment.^{4,5}

Preventing Risky-Behaviors

Automotive Deaths

- Graduated Drivers Licensing (GDL) programs reduce the overall crash rates for adolescent youth.^{5,6}
- For 16 year old drivers there was a decrease of 16% in overall crash rates in the period of one year using a GDL program.^{5,6,7}
- Stronger GDL programs are related to greater fatality reduction compared with individuals who do not participate in a GDL program.^{5,6,7}

Policy Strategies Shown to be Effective:

- States have seen success in implementing strong GDL programs
 - Gradual introductions of high risk driving scenarios to new drivers
 - Implementation at a state level.^{5,6,7}

Unplanned Pregnancies

- Unplanned pregnancies are high in Indiana compared with other states.^{8,9}
- Colorado Family Planning Initiative reduces the cost of these unplanned pregnancies.⁸
- Provider education and training programs minimize the number of unplanned pregnancies.^{8,9}
- Birth rates among low-income teens (aged 15-19 years) have dropped by 39% in counties where this program is used.^{8,9}
- Abortion rates decreased by 42% in these counties between 2009 and 2013.
- Women who received these services showed a 53% decrease in repeat births.^{8,9}

Policy Strategies Shown to be Effective:

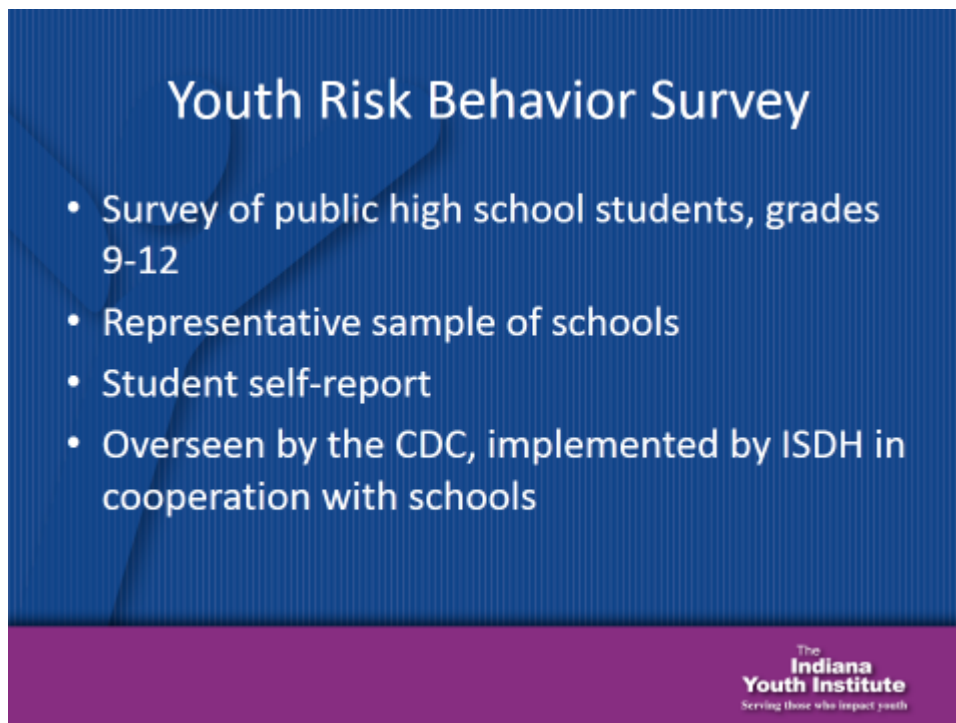
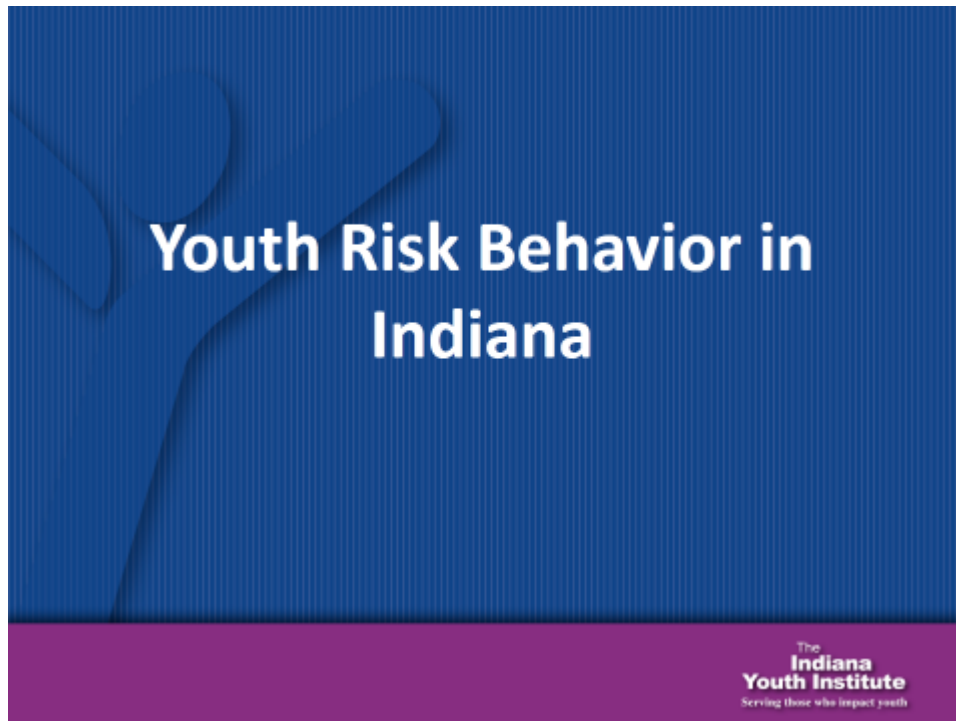
- Cost-savings is high.
- For every \$1 invested there is an average of \$5.85 avoided in Medicaid costs over three years.^{8,9}

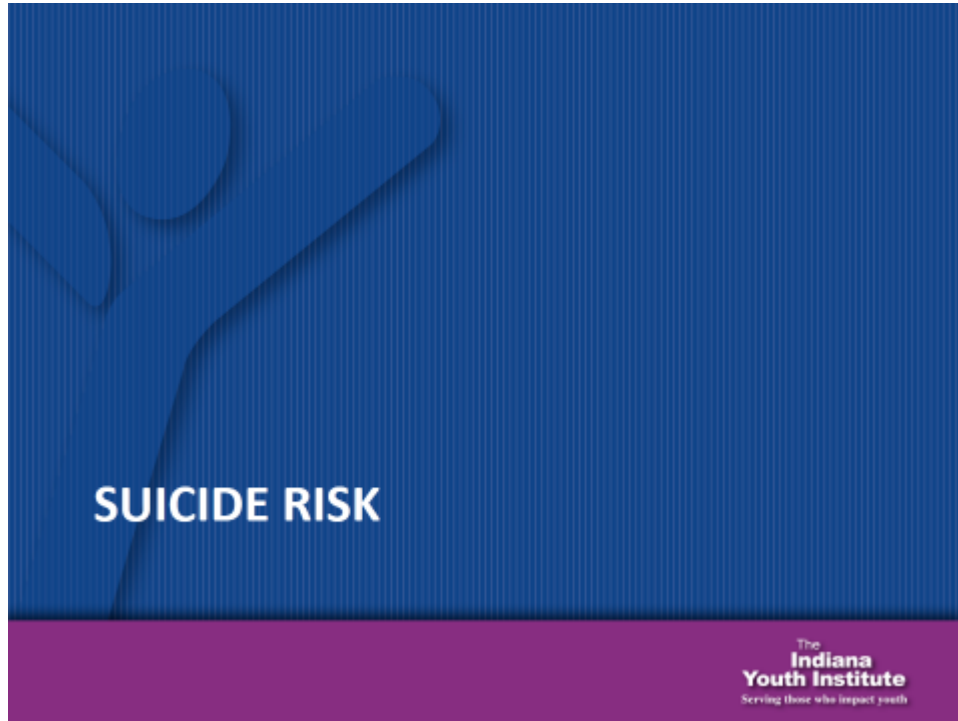
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Teen Deaths by Accident, Homicide, and Suicide


Rank	State	Rate per 100,000
1	Massachusetts	18
2	New York	19
3	Connecticut	21
26	Indiana	37
46	Alaska	63
47	Mississippi	65

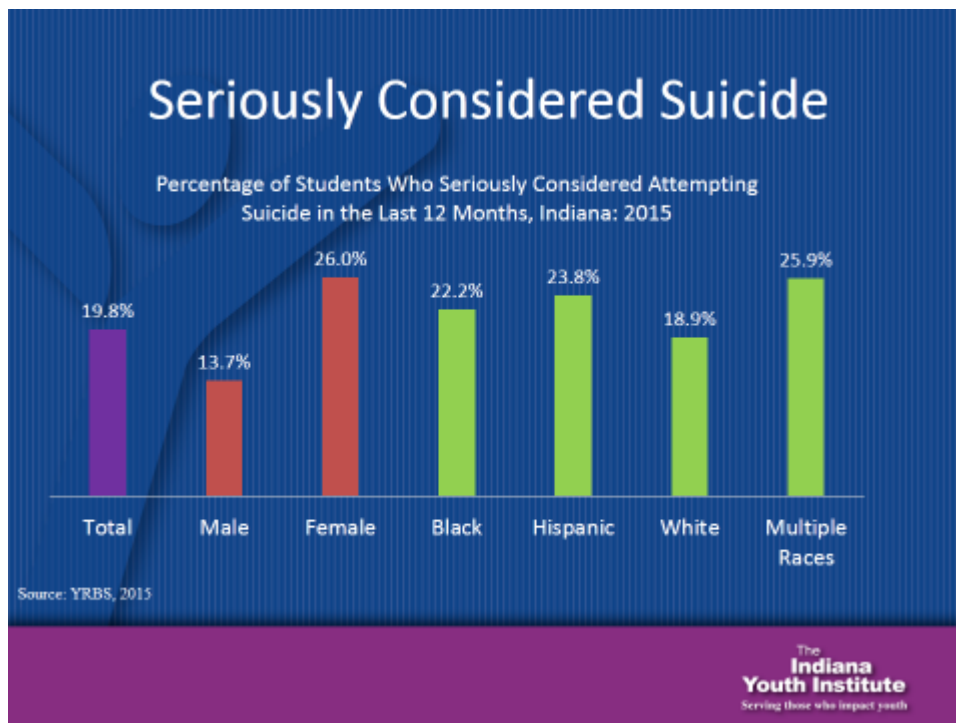
The Indiana Youth Institute
Serving those who impact youth

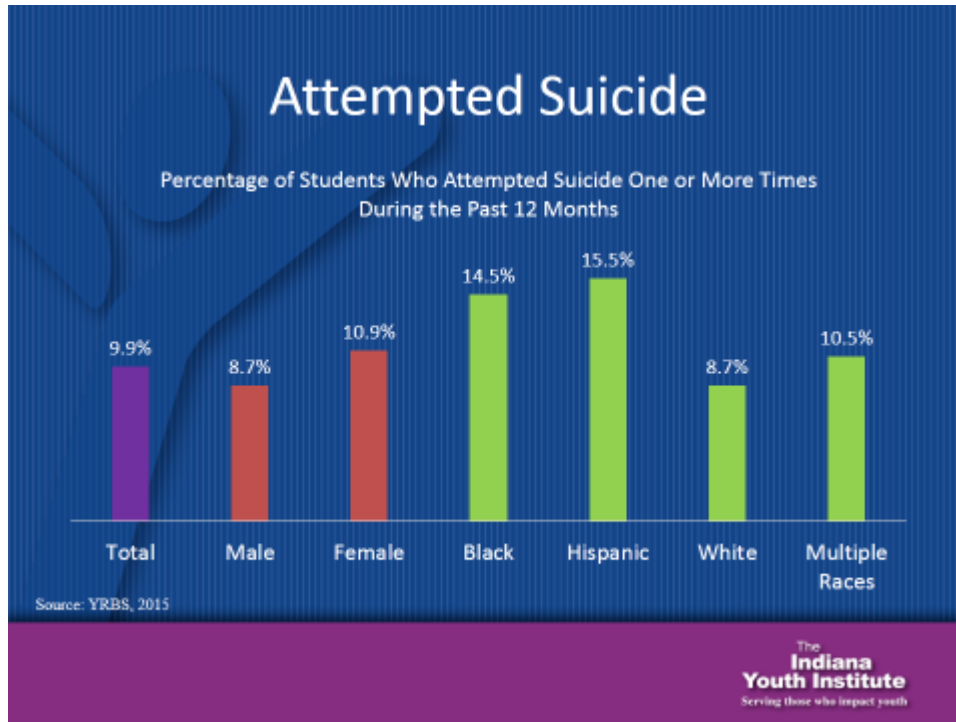
Indiana High School Students' Suicidal Thoughts and Behavior

	2011	2015
Felt sad or hopeless almost every day for 2+ weeks in a row	29.1%	29.3%
Seriously considered attempting suicide	18.9%	19.8%
Made a plan about how they would attempt suicide	13.6%	17.0%
Attempted suicide	11.0%	9.9%
Attempted suicide that resulted in an injury, poisoning, or overdose that had to be treated by a doctor or nurse	3.9%	3.9%
Asked for help from someone before their suicide attempt	N.A.	34.2%

Source: ISDH, Youth Risk Behavior Survey


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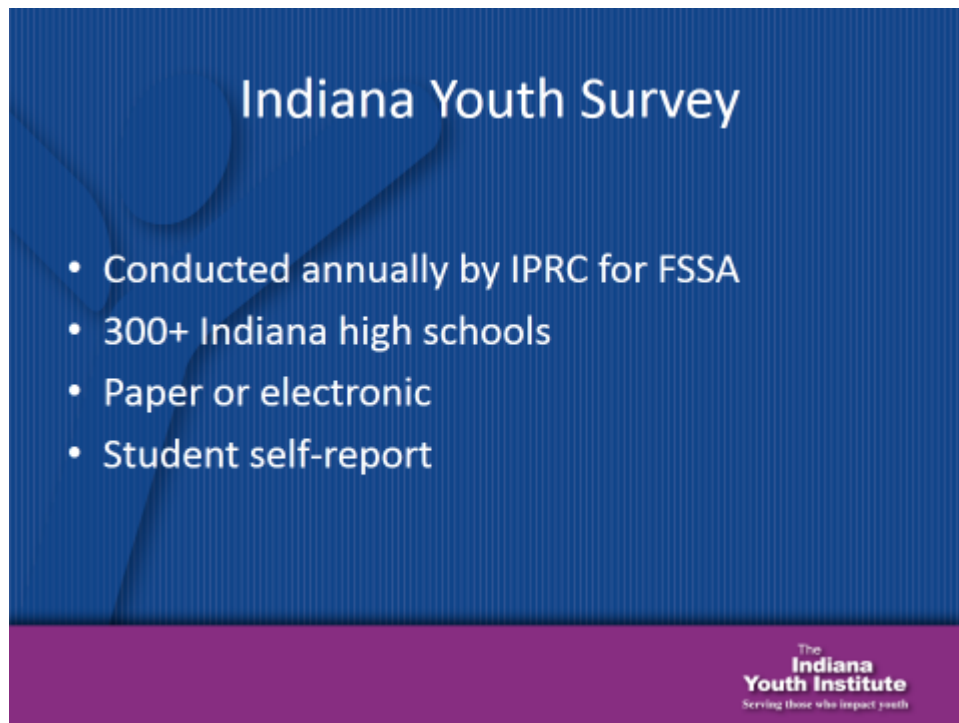


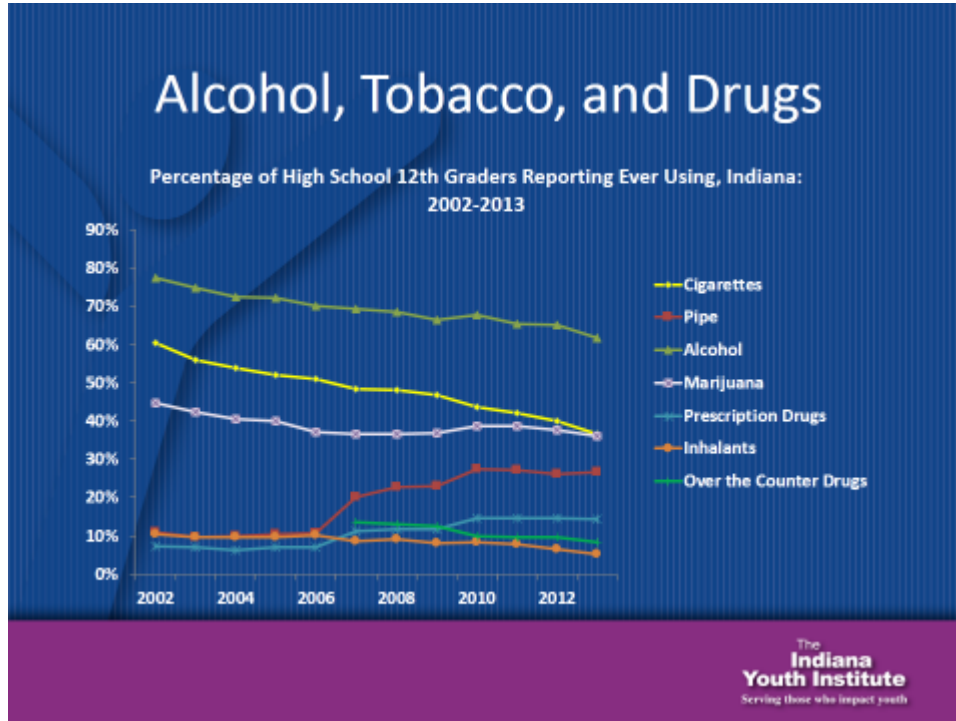
Suicide Deaths

Age Group	Total	Male	Female
10-14	9	7	2
15-19	43	33	10
20-24	76	68	8

Year: 2014 Source: ISDH

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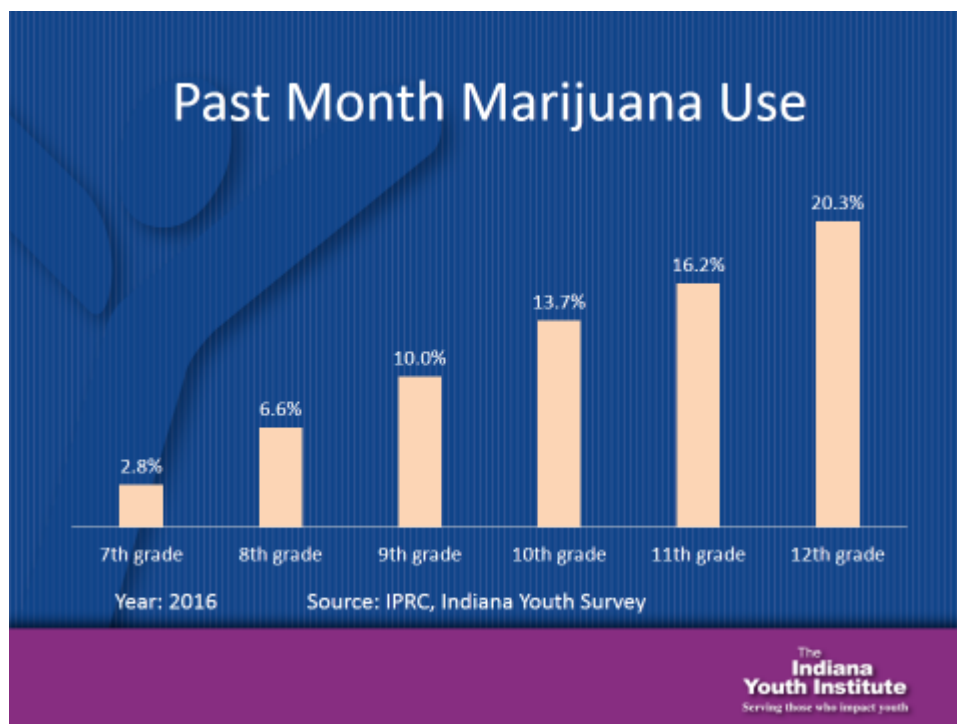
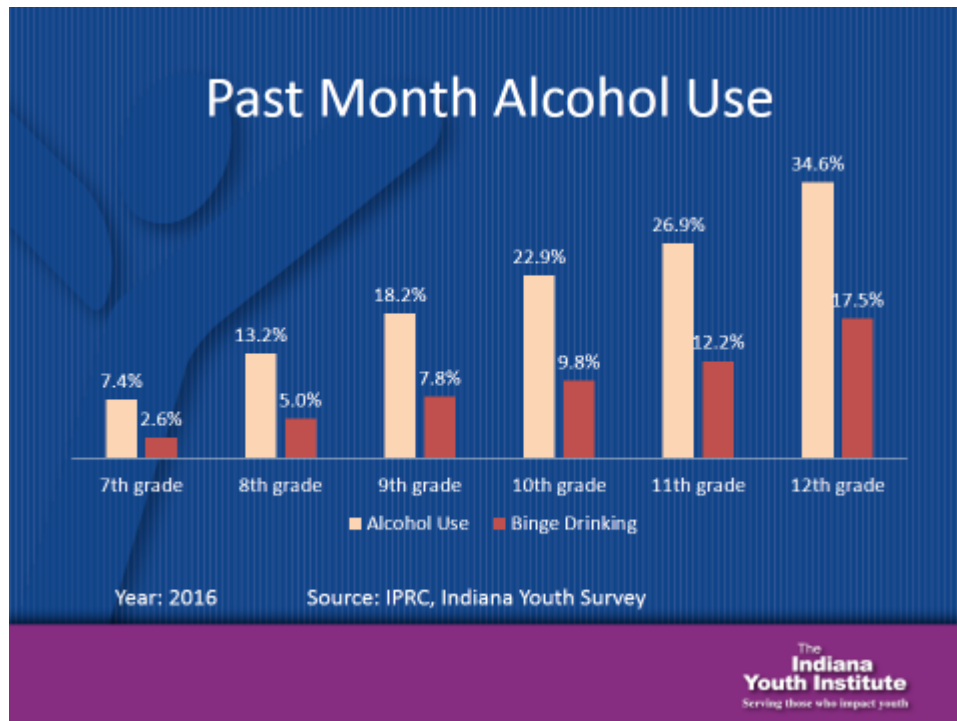


Smoking Among Youth

State	Ages 12-17		Ages 18-25	
	Rank	Current Smoking	Rank	Current Smoking
New York	1	4%	3	26%
Indiana	35	7%	44	35%
West Virginia	47	8%	50	40%

Source: SAMHSA, National Survey on Drug Use and Health, via KIDS COUNT Data Center

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Hard Drugs

- Meth and Heroin are used by <1% in all grades
- OTC drugs range from 3.3% (9th grade) to 3.4% (12th grade)
- Prescription drugs range from 3.1% (9th grade) to 6% (12th grade)

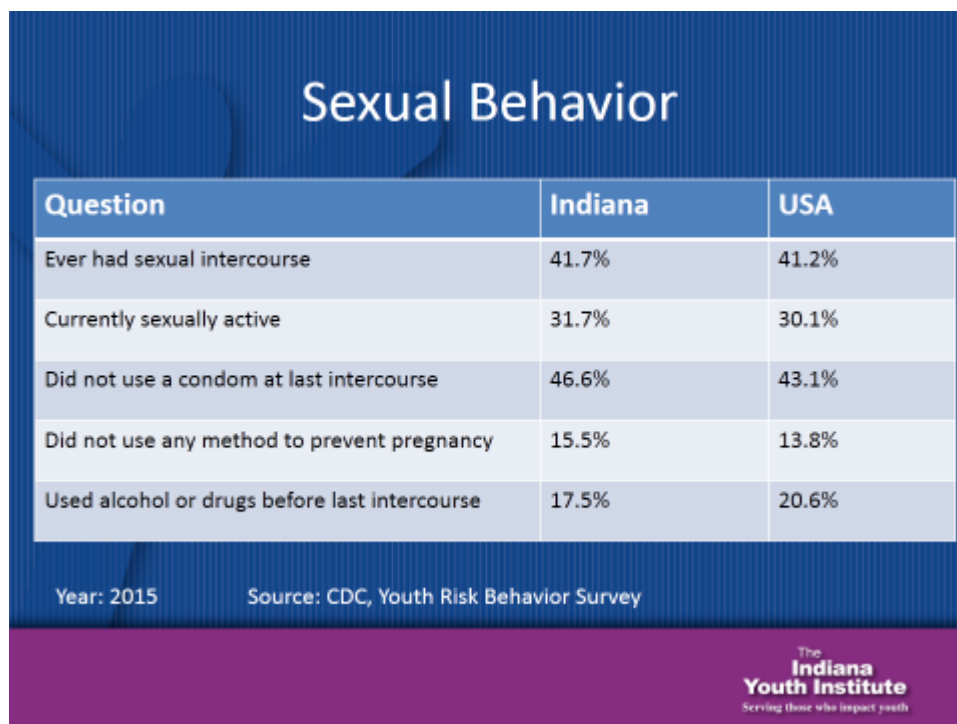
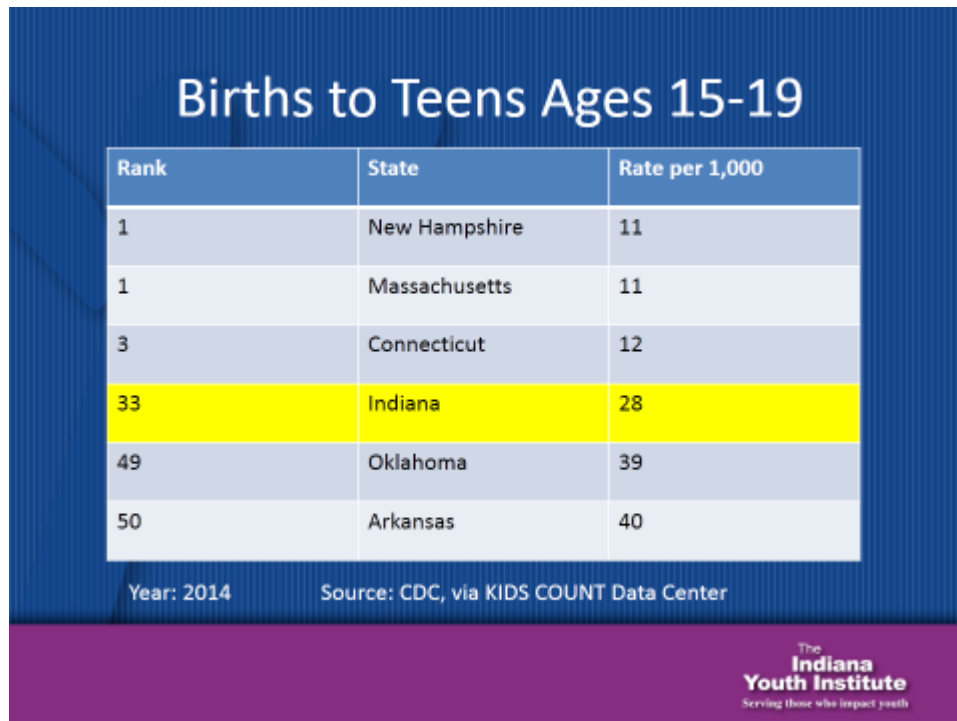
Year: 2016

Source: IPRC, Indiana Youth Survey

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TEEN PREGNANCY AND PARENTING

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Risk Factors--Family

- Poor family management
- Family conflict
- Parental attitudes favoring drug use
- Parental attitudes favoring antisocial behavior
- Household adults involved in antisocial behavior

Risk Factors--Community

- Low neighborhood attachment
- Community disorganization
- Transitions and mobility
- Perceived availability of drugs
- Perceived availability of handguns
- Perceived racial discrimination

Risk Factors--School

- Academic Failure
- Low commitment to school
- Past grade retention

Risk Factors—Individual and Peer

- Rebelliousness
- Early problem behavior
- Early initiation of drug use
- Friends' use of drugs
- Friends' gang involvement
- Victimization (bullying or dating violence)
- Employed >20 hours/week

Protective Factors--Family

- Attachment to parents
- Family opportunities for prosocial involvement
- Family recognition for prosocial involvement
- Parental use of positive discipline strategies
- Parental involvement in education

Protective Factors—Community and School

- Opportunities for prosocial involvement
- Recognition for prosocial involvement
- Neighborhood collective efficacy
- Academic self-efficacy

Protective Factors—Individual and Peer

- Social skills
- Clear standards for behavior
- Prosocial friends
- Prosocial involvement
- Rewards for prosocial involvement
- Exercise/physical activity

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Measuring Risk and Protective Factors

- Annie E. Casey Foundation, evidence2success
- Search Institute, 40 Developmental Assets

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Effective Prevention and Intervention Efforts:

- Minimize risk factors
- Maximize protective factors
- Differentiate by gender, race, age or other key characteristics

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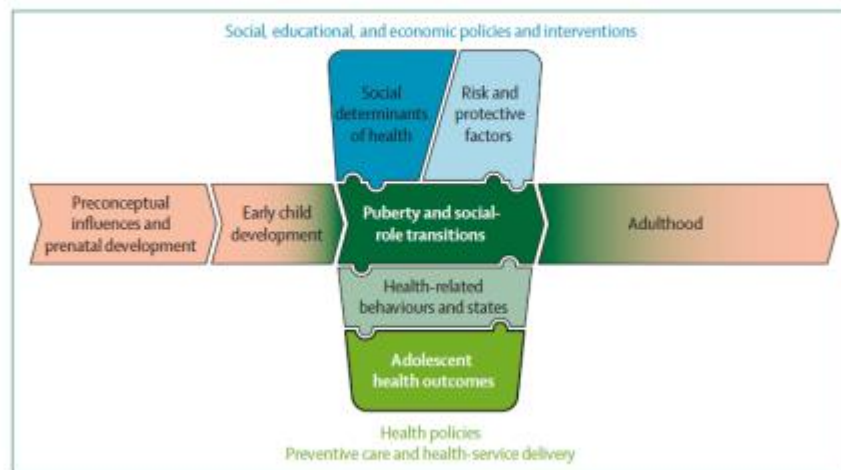
The adolescent brain: different, not deficient

Mary A. Ott, MD, MA
Associate Professor of Pediatrics & Adolescent Medicine
Sarah Wiehe, MD, MPH
Associate Professor of Pediatrics

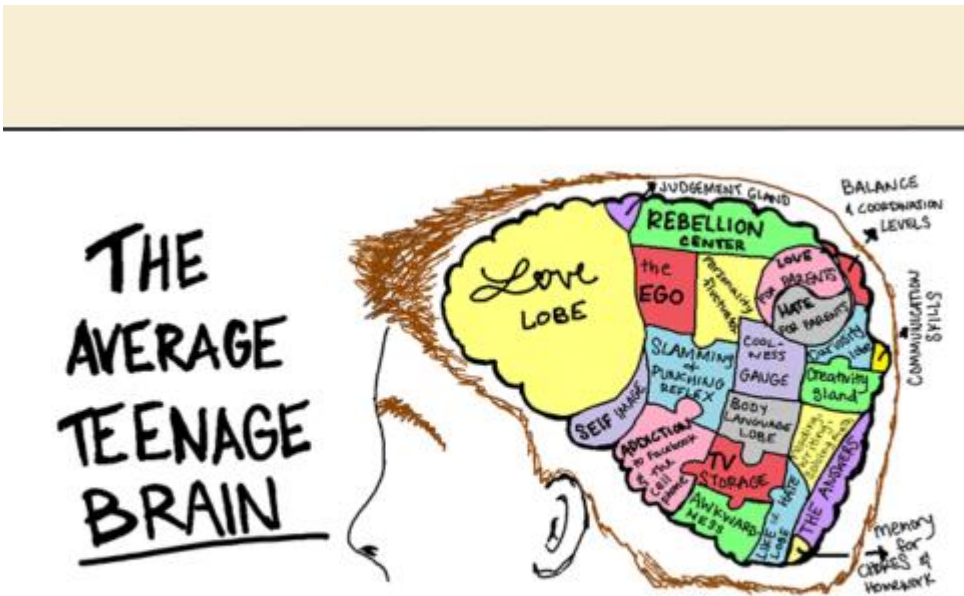
November 15, 2016



Conceptual framework for adolescent health



Sawyer SM, Afifi RA, Bearinger LH, Blakemore SJ, Dick B, Ezech AC, Patton GC. Adolescence: a foundation for future health. *Lancet* 2012; 379: 1630-40.



http://www.ted.com/talks/sarah_jayne_blakemore_the_mysterious_workings_of_the_adolescent_brain

Adolescence: 11-21 years

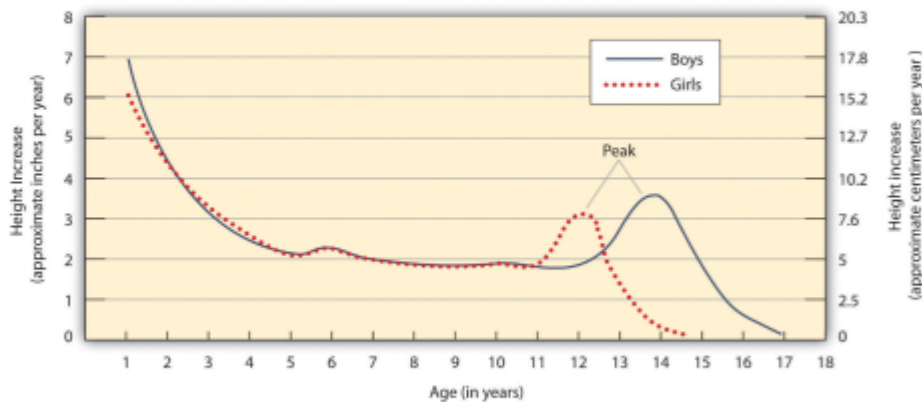


Physical changes of adolescence



Puberty occurs early in adolescence

Growth velocity in children and adolescence



Data from: Ulijaszek, S. J., Johnston, F. E., Preece, M. A., & Tanner, J. (1998). The Cambridge encyclopedia of human growth and development. Cambridge University Press: Cambridge, UK. Image from: catalog.flatworldknowledge.com/bookhub/reader/12013?e=tye_1.0-ch08_s02.

Social Transitions

- Less time with family; more time with peers
- High Emotional Turmoil → 5%-15%
- Friendships → closer, intimacy, disclosure, support
- Romantic relationships → normative in middle adolescence, stable & improve social functioning
- Civic involvement → ↑ compassion, interdependence
- College → 39% 18-25 year olds
- Living at home → 56% 18-24 years

Sources: (1) Smetana, Judith G., Nicole Campione-Barr, and Aaron Metzger. "Adolescent development in interpersonal and societal contexts." *Annu. Rev. Psychol.* 57 (2006): 255-284, (2) Pew Research Center, 2013

Academic demands of adolescence

Step 1: $k \div 3 = 4$

Step 2: $k \div 3 = 4$
 $\quad \quad \quad \times 3 \quad \times 3$

Step 3: $k \div 3 = 4 \times 3$
 $\quad \quad \quad \times 3 \quad \quad \quad 12$

Step 4: $k = 12$



$$14. \int u\sqrt{a+bu} \, du = \frac{2}{15b^3} (3bu - 2a)(a+bu)^{3/2} + C$$

$$15. \int u^2\sqrt{a+bu} \, du = \frac{2}{105b^3} (15b^2u^2 - 12abu + 8a^2)(a+bu)^{3/2} + C$$

$$16. \int u^n\sqrt{a+bu} \, du = \frac{2u^n(a+bu)^{3/2}}{b(2n+3)} - \frac{2an}{b(2n+3)} \int u^{n-1}\sqrt{a+bu} \, du$$

$$17. \int \frac{udu}{\sqrt{a+bu}} = \frac{2}{3b^2} (bu - 2a)\sqrt{a+bu} + C$$

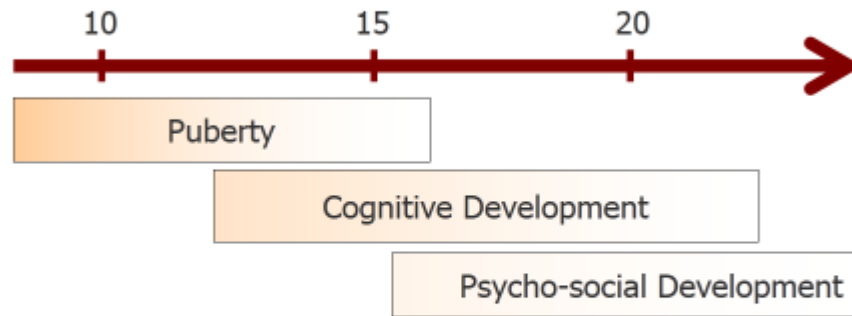
$$18. \int \frac{u^2 du}{\sqrt{a+bu}} = \frac{2}{15b^3} (3b^2u^2 - 4abu + 8a^2)\sqrt{a+bu} + C$$

$$19. \int \frac{u^n du}{\sqrt{a+bu}} = \frac{2u^n\sqrt{a+bu}}{b(2n+1)} - \frac{2an}{b(2n+1)} \int \frac{u^{n-1} du}{\sqrt{a+bu}}$$

$$20. \int \frac{du}{u\sqrt{a+bu}} = \begin{cases} \frac{1}{\sqrt{a}} \ln \left| \frac{\sqrt{a+bu} - \sqrt{a}}{\sqrt{a+bu} + \sqrt{a}} \right| + C & \text{if } a > 0 \\ \frac{2}{\sqrt{-a}} \tan^{-1} \sqrt{\frac{a+bu}{-a}} + C & \text{if } a < 0 \end{cases}$$

$$21. \int \frac{du}{u^n\sqrt{a+bu}} = -\frac{\sqrt{a+bu}}{\alpha(n-1)u^{n-1}} - \frac{b(2n-3)}{2\alpha(n-1)} \int \frac{du}{u^{n-1}\sqrt{a+bu}}$$

Growth and Development



Adolescent Decision-Making

TEEN-AGE MOUSE



Capacity to Consent to Health Research

MacCAT-CR Subscales	Range	Our study of 12-24 yo Mean (\pm SD)	Studies of Healthy Adults (range)
Understanding	0 - 26	20.9 (\pm 3.5)	20.2 - 25.8
Appreciation	0 - 6	5.5 (\pm 0.9)	4.2 - 5.9
Reasoning	0 - 8	6.6 (\pm 1.9)	4.4 - 7.1
Choice	0 - 2	2 (\pm 0)	2

Ott MA, MacGregor KM. The Teenage Trialist: Adolescent Capacity to Consent, presented at Pediatric Academic Societies Annual Meeting: 1 May 2016, Baltimore, MD.

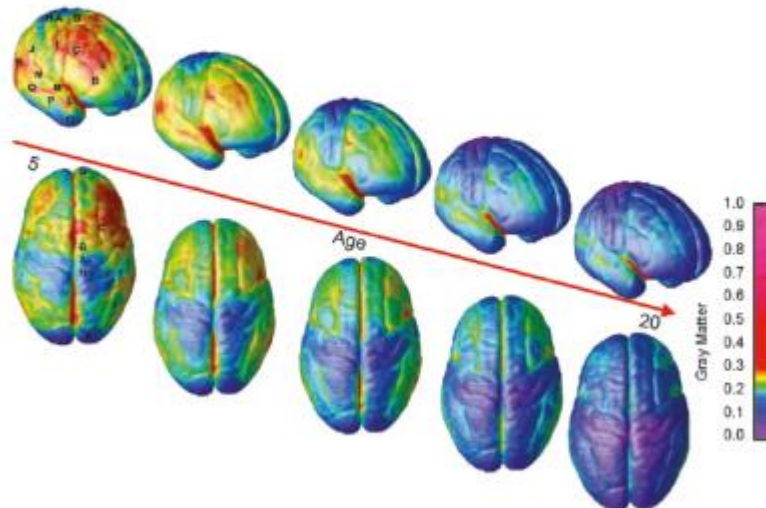
Predictors of Capacity to Consent

- Understanding:

Predictor [1]	Beta (SE)	Std. Beta	t
Health Literacy (REALM)	0.317 (0.046)	0.567	6.91***
Affluence (FASII)	0.517 (0.169)	0.252	3.07**
	R ²	.41***	
p<0.01, *p<0.001			
[1] Age & chronic illness non-significant & removed			

- Reasoning: similarly predicted by health literacy & affluence (R²=0.23, p<0.001)
- Appreciation: health literacy only (R²=0.69, p<0.001)

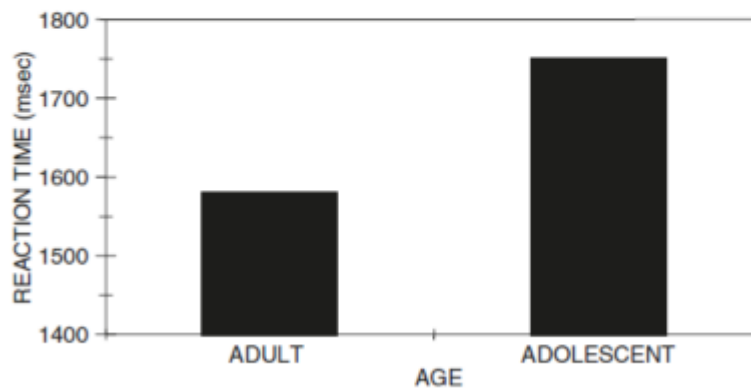
Synaptic Pruning – Evolved for Learning



Gogtay N, Giedd JN, Lusk L, Hayashi KM, Greenstein D, Vaituzis AC, Nugent TF, Herman DH, Clasen LS, Toga AW, Rapoport JL, Thompson PM. Dynamic Mapping of Human Cortical Development During Childhood Through Early Adulthood. *PNAS* 2004;101(21):8174-9.

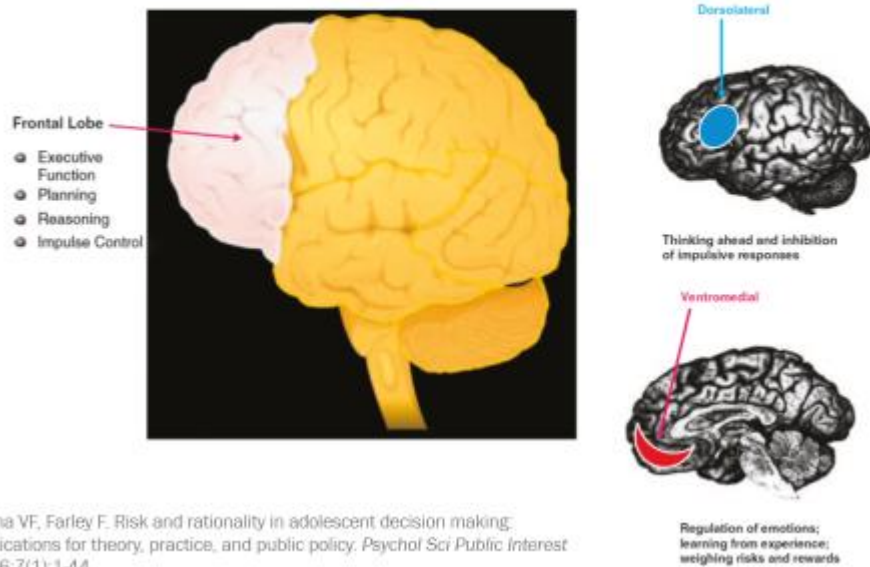
Reaction time among adolescents and adults

Participants responded to questions such as, “Is it a good idea to set your hair on fire?”, “Is it a good idea to drink a bottle of Drano?”, and “Is it a good idea to swim with sharks?”



Reyna VF, Farley F. Risk and rationality in adolescent decision making: implications for theory, practice, and public policy. *Psychol Sci Public Interest* 2006;7(1):1-44.

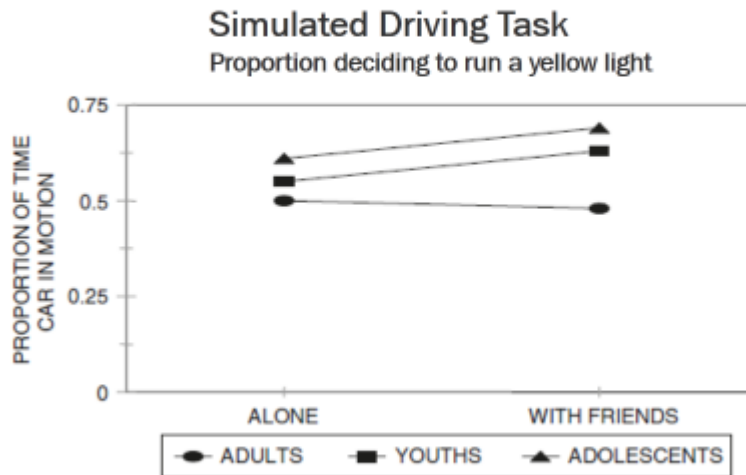
Adolescent Brain



‘Hot’ and ‘Cold’ Decision-Making

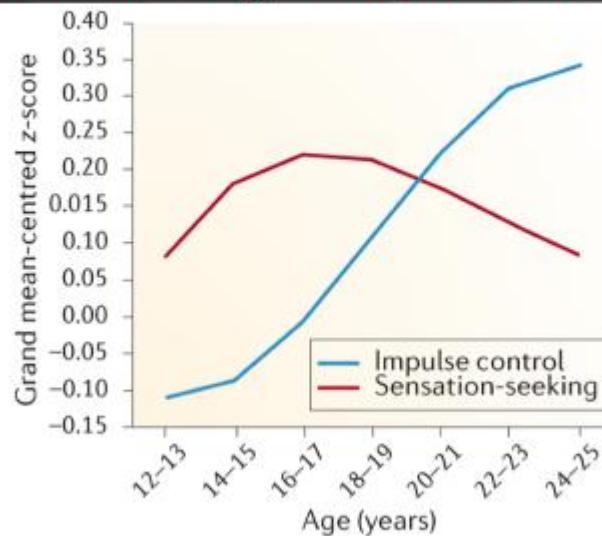
- “Cold” – controlled situation, low emotion
→ Adolescents similar to adults
- “Hot” - high emotion, distraction
→ Adolescents different types of responses, riskier decisions

Influence of Peers



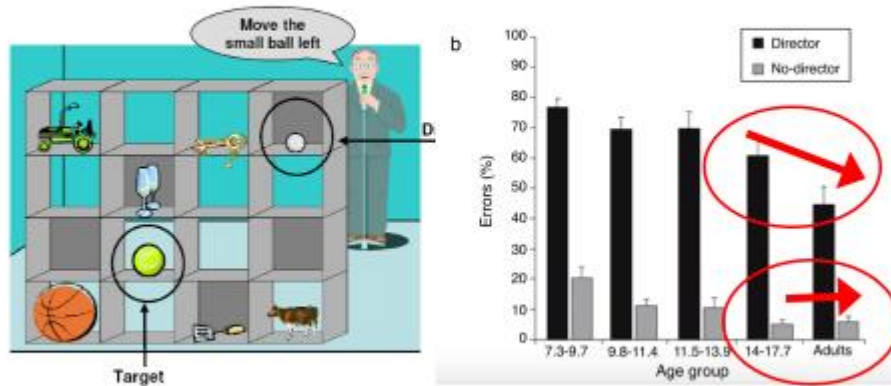
Reyna VF, Farley F. Risk and rationality in adolescent decision making: implications for theory, practice, and public policy. *Psychol Sci Public Interest* 2006;7(1):1-44.

Dual Systems: Sensation Seeking & Impulse Control



Steinberg L. The influence of neuroscience on US Supreme Court decisions about adolescents' criminal culpability. *Nat Rev Neurosci* 2013;14:513-518.

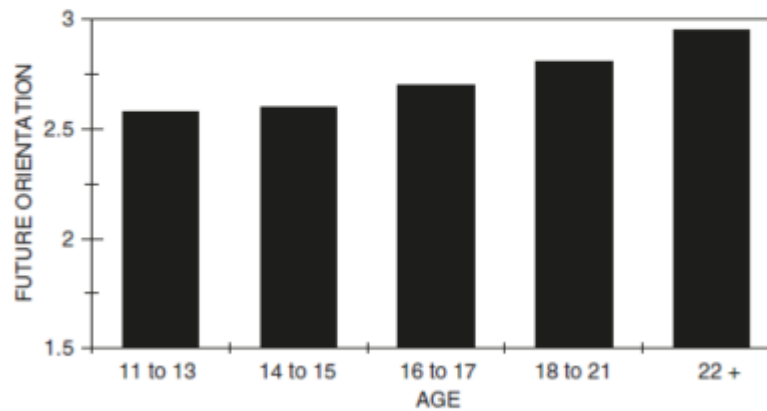
Perspective Taking



Dumontheil I, Apperly IA, Blakemore SJ. Online usage of theory of mind continues to develop in late adolescence. *Dev Sci* 2010;13:331-338.

Future orientation at different ages

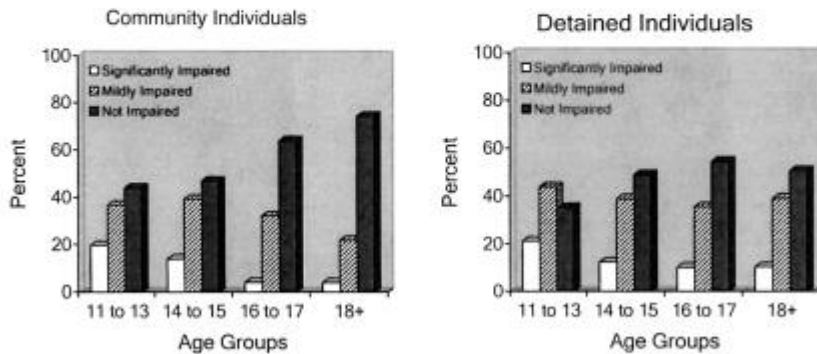
Participants rated responses to the item, "I would rather save my money for a rainy day than spend it on something fun."



Reyna VF, Farley F. Risk and rationality in adolescent decision making: implications for theory, practice, and public policy. *Psychol Sci Public Interest* 2006;7(1):1-44.

Environmental influences on Cognition

Impairment in decision-making community vs. system involvement



Grisso T, Steinberg L, Woolard J, et al. Juveniles' competence to stand trial: a comparison of adolescents' and adults' capacities as trial defendants. *Law Hum Behav* 2003;27:333-363.

Teaching Empathy

- “Text to connect” messages targeting cognitive/emotional empathy and prosocial behaviors sent to 555 teens 1 to 5 times a day.
- Qualitative responses
 - *I love the way that every time I got a text, no matter what it was that I was doing, I would look at my phone, and for a minute, I would be able to think about things that matter deeply to me. [male, age 18]*
- Behavioral results
 - Increased minutes helping others
 - Increased giving support in relationships
- Psychological results
 - Increased prosocial motivations
 - More emotional empathy in scenarios
 - Less aggressive beliefs



Sara Konrath, PhD, IU School of Philanthropy: www.iPEARlab.org

Summary – Adolescent Brain

- Logical decisions in controlled ('cold') contexts
- Specific vulnerabilities, particularly in 'hot' contexts
 - Distraction
 - Emotion
 - Perspective taking
- Specific strengths
 - “Hardwired” for learning
 - Positive risks
- Environments matter

Ideal Program

- Allows development of decision-making capacity
- Focus on learning
- Supportive environment

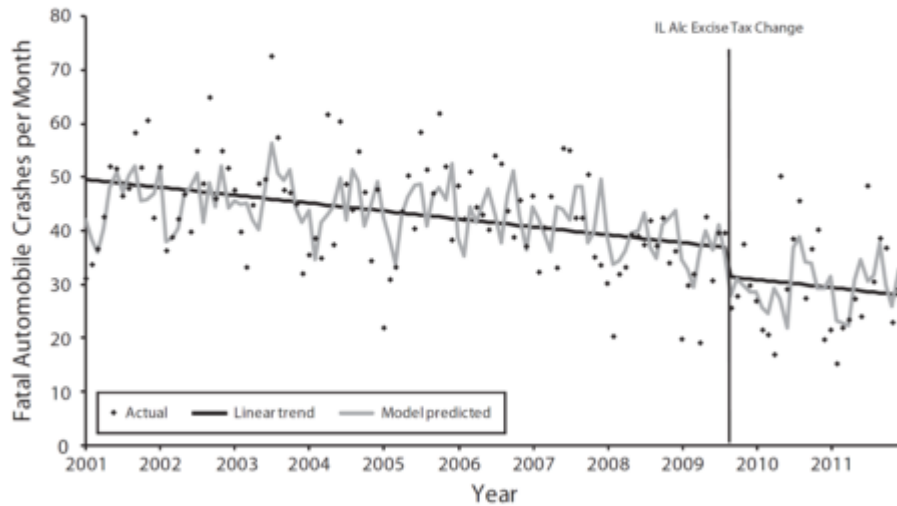
Interventions that Work

Policies addressing structural risks: graduated drivers' licensing

- Graduated driver licensing (GDL): gradually introducing higher risk driving situations to new drivers
- Systematic review of 21 GDL programs and 2 analyses of >40 US states
- ALL studies showed reductions in crash rates in ALL jurisdictions and for ALL crash types
- For 16 year old drivers: median decrease per population adjusted overall crash rates during year 1=16%
- Decrease in per population adjusted injury crash rates: median decrease=21% (range: 2-46% decrease)
- Stronger GDL programs correlated with greater fatality reduction

Russell, K.F., Vandermeer, B., Hartling, L. (2011). Graduated driver licensing for reducing motor vehicle crashes among young drivers. *Cochrane Database of Systematic Reviews* 2011, 10

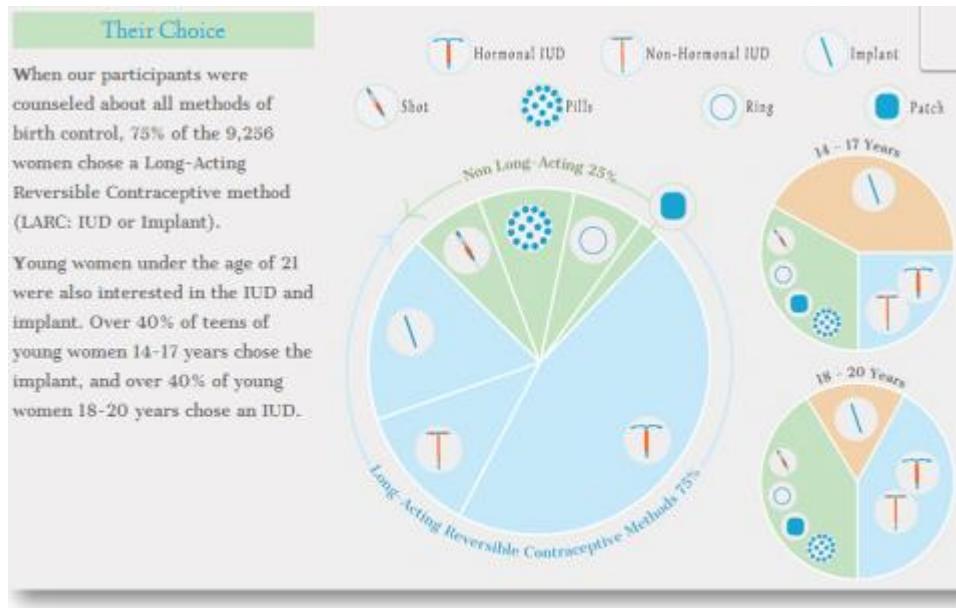
Policies addressing structural risks: alcohol tax



Wagenaar AC, Livingston MD, Staras SS. Effects of a 2009 Illinois alcohol tax increase on fatal motor vehicle crashes. *Am J Public Health* 2015; 105:1880-5.

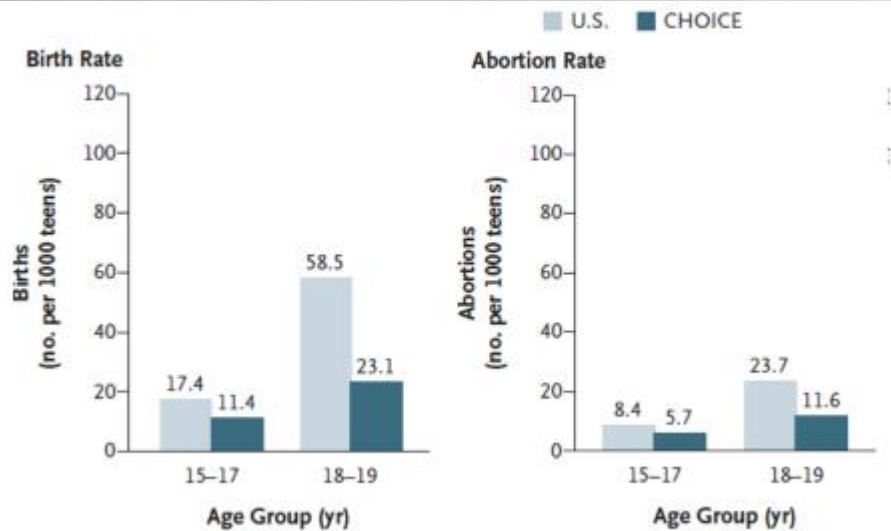
Public Costs of Teen Childbearing Indiana (2010)





<http://www.choiceproject.wustl.edu>
 Secura GM, Madden T, McNicholas C, Mullersman J, Buckel CM, Zhao Q, Peipert JF. Provision of no-cost, long-acting contraception and teenage pregnancy. *N Engl J Med* 2014; 371: 1316-23.

Birth and abortion rates in young women in US compared to CHOICE



Secura GM, Madden T, McNicholas C, Mullersman J, Buckel CM, Zhao Q, Peipert JF. Provision of no-cost, long-acting contraception and teenage pregnancy. *N Engl J Med* 2014; 371: 1316-23.

Colorado Family Planning Initiative

- Colorado Department of Public Health and Environment (CDPHE)
- Program (partnered with Title X)
 - Reduced cost for IUDs and contraceptive implants
 - Provider education, training
- Results- 2009-2013
 - >30,000 women chose LARCs
 - Birth rate declined 39% 15-19 year olds; 9% for 20-24 year olds.
 - Abortion declined 42% 15-19 year olds; 18% for 20-24 year olds.

Colorado Family Planning Initiative: <https://www.colorado.gov/pacific/cdphe/reducing-unintended-pregnancy>

Cost-Savings of LARCs

\$1 Invested in the LARC program = **\$5.85** Costs to Medicaid avoided

For every \$1.00 invested in the LARC program an estimated average of \$5.85 was avoided by the Colorado Medicaid program over a three year period.

CDPHE Colorado Family Planning Initiative

<http://www.larc4co.com>

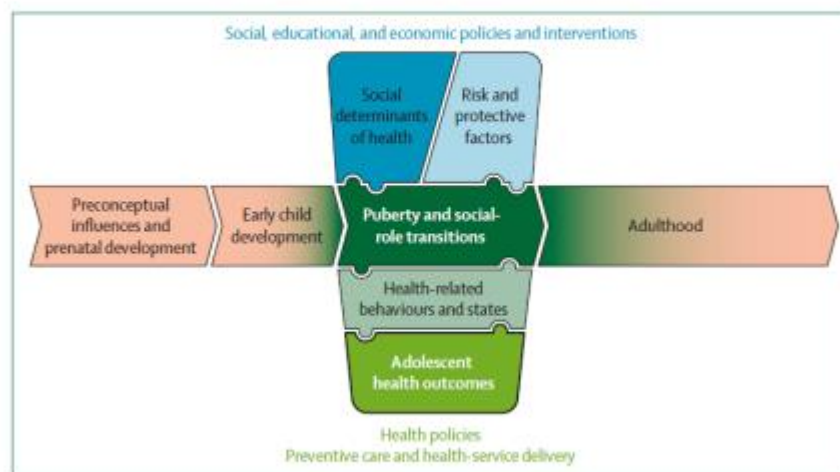
Colorado Family Planning Initiative: <https://www.colorado.gov/pacific/cdphe/reducing-unintended-pregnancy>

Juvenile Detention Alternatives Initiative

- Juvenile Detention Alternatives Initiative (JDAI): diversion program where low-risk youth are diverted from detention to community-oriented options (<http://www.in.gov/idoc/dys/2407.htm>)
- Indiana leading the nation in JDAI efforts
 - 50+% reductions in juvenile detentions
 - DOC commitments down 37% in 2013
 - Millions of dollars saved previously used for incarceration
- Best approaches
 - Involvement of family
 - Multisystemic therapy (Tippecanoe County)

Schwalbe CS, Gearing RE, MacKenzie MJ, Brewer KB, Ibrahim R. A meta-analysis of experimental studies of diversion programs for juvenile offenders. *Clinical Psychology Review* 2012, 32(1), 26-33.

Conceptual framework for adolescent health



Sawyer SM, Afifi RA, Bearinger LH, Blakemore SJ, Dick B, Ezech AC, Patton GC. Adolescence: a foundation for future health. *Lancet* 2012; 379: 1630-40.

Nurse-family partnership program effects on adolescent girls

- Study design: Randomized trial (N=310 youth from 400 families enrolled in the Elmira NFP program)
- Intervention: 9 home visits (range, 0-16) during pregnancy and 23 (range, 0-59) from birth through 2nd birthday
- Benefit to adolescent GIRLS of women in the pregnancy/infancy nurse-visited group, compared to control group
 - FEWER arrests (10% vs. 30%)
 - FEWER convictions (4% vs 20%)
- Girls born to unmarried and low-income mothers, compared to comparison group counterparts
 - FEWER children (11% vs. 30%)
 - LESS Medicaid use (18% vs. 45%)

Eckenrode J, Campa M, Luckey DW, Henderson CR, Cole R, Kitzman H, Anson E, Sidora-Arcoleo K, Powers J, Olds D. Long-term Effects of Prenatal and Infancy Nurse Home Visitation on the Life Course of Youths: 19-Year Follow-up of a Randomized Trial. *Arch Pediatr Adolesc Med* 2010;164(1):9-15.

Early childhood education: Abecedarian Project

- Study design: Randomized controlled trial; N=111 young people from predominantly low-income families
- Intervention: full-day, year-round child care given 5 days a week for 5 years (from age 0–5 years with a structured curriculum)
- Results:
 - LESS teenage parenthood (26% vs 45%)
 - MORE years of education by age 21 years (12.2 vs 11.6 years)
 - MORE likely to be enrolled in a 4 year college (35.9% vs 13.7%)
 - MORE likely to be in school at age 21 years (42% vs 20%)
 - MORE likely to hold a better job (47% vs 27%)
 - LESS likely to report past-month marijuana (18% vs 39%)

Campbell FA, Ramey CT, Pungello E, Sparling J, Miller-Johnson S. Early childhood education: young adult outcomes from the Abecedarian Project. *Appl Dev Sci* 2002; 6: 42–57.

Early childhood education: Chicago Child-Parent Center program

- Study design: Quasi-experimental design; N=1539 young people
- Intervention: early childhood program including half-day preschool for children aged 3–4 years, half or full-day kindergarten, and full-day services for children aged 6–9 years
- Results at age 20:
 - MORE high school completion (50% vs 38%)
 - FEWER arrests (17% vs 25%) and violent arrests (9% vs 15%)
 - LOWER school dropout rates (47% vs 55%)

Reynolds AJ, Temple JA, Robertson DL, Mann EA. Long-term effects of an early childhood intervention on educational achievement and juvenile arrest: a 15-year follow-up of low-income children in public schools. *JAMA* 2001; 285: 2339–46.

Early childhood education: Chicago Child-Parent Center program

- Study design: Quasi-experimental design; N=1539 young people
- Intervention: early childhood program including half-day preschool for children aged 3–4 years, half or full-day kindergarten, and full-day services for children aged 6–9 years
- Results at age 24:
 - MORE school completion (71% vs 64%)
 - MORE attendance in 4 year colleges (15% vs 10%)
 - FEWER felony arrests (16% vs 21%), felony convictions (16% vs 20%), and incarceration rates (21% vs 26%)

Reynolds AJ, Temple JA, Ou SR, et al. Effects of a school-based, early childhood intervention on adult health and well-being: a 19-year followup of low-income families. *Arch Pediatr Adolesc Med* 2007; 161: 730–39.

Early childhood education: Chicago Child-Parent Center program

- Study design: Quasi-experimental design; N=1539 young people
- Intervention: early childhood program including half-day preschool for children aged 3–4 years, half or full-day kindergarten, and full-day services for children aged 6–9 years
- Results at age 28:
 - HIGHER income (US\$11,582 vs \$10,796), occupational prestige (28% vs 21%)
 - LESS substance abuse (14% vs 19%), drug and alcohol abuse (16% vs 23%), arrests (48% vs 54%), felony arrests (19% vs 25%), and incarceration rates (15% vs 21%)

Reynolds AJ, Temple JA, Ou SR, Arteaga IA, White BA. School-based early childhood education and age-28 well-being: effects by timing, dosage, and subgroups. *Science* 2011; 333: 360–64.

Our future: a *Lancet* Commission on adolescent health and wellbeing THE LANCET

~~Big problem~~ Huge opportunity

This generation of adolescents and young adults can transform all of our futures; there is no more pressing task in global health than ensuring they have the resources to do so.

What 1 800 000 000 adolescents are facing in the world today:



Youth unemployment Armed conflict Promotion of unhealthy lifestyles Less stable families Environmental degradation Mass migration

Family Impact Checklist: Using Evidence to Strengthen Families

Questions policymakers can ask to bring the family impact lens to policy decisions:

- How are families affected by the issue?
- In what ways, if any, do families contribute to the issue?
- Would involving families result in more effective policies and programs?

These questions sound simple, but they can be difficult to answer. The Family Impact Checklist is one evidence-based strategy to help ensure that policies and programs are designed and evaluated in ways that strengthen and support families in all their diversity across the lifespan. This checklist can also be used for conducting a family impact analysis that examines the intended and unintended consequences of policies, programs, agencies, and organizations on family responsibility, family stability, and family relationships.

Family impact analysis is most incisive and comprehensive when it includes expertise on (a) families, (b) family impact analysis, and (c) the specifics of the policy, program, agency, or organization. Five basic principles form the core of a family impact checklist. Each principle is accompanied by a series of evidence-based questions that delve deeply into the ways in which families contribute to issues, how they are affected by them, and whether involving families would result in better solutions. Not all principles and questions will apply to every topic, so it is important to select those most relevant to the issue at hand.

The principles are not rank-ordered and sometimes they conflict with each other. Depending on the issue, one principle may be more highly valued than another, requiring trade-offs. Cost effectiveness and political feasibility also must be taken into account. Despite these complexities, family impact analysis has proven useful across the political spectrum and has the potential to build broad, bipartisan consensus.

More detailed guidelines and procedures for conducting a family impact analysis are available in a handbook published by the Family Impact Institute at www.familyimpactinstitute.org.

Principle 1. Family responsibilities.

Policies and programs should aim to support and empower the functions that families perform for society—family formation, partner relationships, economic support, childrearing, and caregiving. Substituting for the functioning of families should come only as a last resort.

How well does the policy, program, or practice:

<u>Strong</u>	<u>Adequate</u>	<u>Limited</u>	<u>N/A</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Help families build the capacity to fulfill their functions and avoid taking over family responsibilities unless absolutely necessary?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Set realistic expectations for families to assume financial and/or caregiving responsibilities for dependent, seriously ill, or disabled family members depending on their family structure, resources, and life challenges?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Address root causes of assuming financial responsibility such as high child support debt, low literacy, low wages, and unemployment?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Affect the ability of families to balance time commitments to work, family, and community?

Principle 2. Family stability.

Whenever possible, policies and programs should encourage and reinforce couple, marital, parental, and family commitment and stability, especially when children are involved. Intervention in family membership and living arrangements is usually justified only to protect family members from serious harm or at the request of the family itself. How well does the policy, program, or practice:

<u>Strong</u>	<u>Adequate</u>	<u>Limited</u>	<u>N/A</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Strengthen commitment to couple, marital, parental, and family obligations, and allocate resources to help keep the marriage or family together when this is the appropriate goal?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Help families avoid problems before they become serious crises or chronic situations that erode family structure and function?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Balance the safety and well-being of individuals with the rights and responsibilities of other family members and the integrity of the family as a whole?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide clear and reasonable guidelines for when nonfamily members are permitted to intervene and make decisions on behalf of the family (e.g., removal of a child or adult from the family)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Help families maintain regular routines when undergoing stressful conditions or at times of transition?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recognize that major changes in family relationships such as aging, divorce, or adoption are processes that extend over time and require continuing support and attention?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	provide support to all types of families involved in the issue (e.g., for adoption, consider adoptive, birth, and foster parents; for remarried families, consider birth parents, stepparents, residential and nonresidential parents, etc.)?

Principle 3. Family relationships.

Policies and programs must recognize the strength and persistence of family ties, whether positive or negative, and seek to create and sustain strong couple, marital, and parental relationships.

How well does the policy, program, or practice:

<u>Strong</u>	<u>Adequate</u>	<u>Limited</u>	<u>N/A</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recognize that individuals' development and well-being are profoundly affected by the quality of their relationships with close family members and family members' relationships with each other?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Involve couples, immediate family members, and extended family when appropriate in working to resolve problems, with a focus on improving family relationships?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Assess and balance the competing needs, rights, and interests of various family members?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Take steps to prevent family abuse, violence, or neglect?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acknowledge how interventions and life events can affect family dynamics and, when appropriate, support the need for balancing change and stability in family roles, rules, and leadership depending upon individual expectations, cultural norms, family stress, and stage of family life?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide the knowledge, communication skills, conflict resolution strategies, and problem-solving abilities needed for healthy couple, marital, parental, and family relationships or link families to information and education sources?

Principle 4. Family diversity.

Policies and programs can have varied effects on different types of families. Policies and programs must acknowledge and respect the diversity of family life and not discriminate against or penalize families solely based on their cultural, racial, or ethnic background; economic situation; family structure; geographic location; presence of special needs; religious affiliation; or stage of life.

How well does the policy, program, or practice:

<u>Strong</u>	<u>Adequate</u>	<u>Limited</u>	<u>N/A</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Identify and respect the different attitudes, behaviors, and values of families from various cultural, economic, geographic, racial/ethnic, and religious backgrounds, structures, and stages of life?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Respect cultural and religious routines and rituals observed by families within the confines of the law?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Recognize the complexity and responsibilities involved in caring for and coordinating services for family members with special needs (e.g., cognitive, emotional, physical, etc.)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ensure the accessibility and quality of programs and services for culturally, economically, geographically, racially/ethnically, and religiously diverse families?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Work to ensure that operational philosophies and procedures are culturally responsive and that program staff are culturally competent?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acknowledge and try to address root causes rather than symptoms of the issue or problem (e.g., economic, institutional, political, social/psychological causes)?

Principle 5. Family engagement.

Policies and programs must encourage partnerships between professionals and families. Organizational culture, policy, and practice should include relational and participatory practices that preserve family dignity and respect family autonomy.

How well does the policy, program, or practice:

<u>Strong</u>	<u>Adequate</u>	<u>Limited</u>	<u>N/A</u>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Provide full information and a range of choices to families, recognizing that the length and intensity of services may vary according to family needs?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Train and encourage professionals to work in collaboration with families, to allow families to make their own decisions (within the confines of the law), and to respect their choices?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Involve family members, particularly from marginalized families, in policy and program development, implementation, and evaluation?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Affirm and build upon the existing and potential strengths of families, even when families are challenged by adversity?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Make flexible program options available and easily accessible through co-location, coordinated application and reimbursement procedures, and collaboration across agencies, institutions, and disciplines?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Establish a coordinated policy and service system that allows localities and service providers to combine resources from various, diverse funding streams?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acknowledge that the engagement of families, especially those with limited resources, may require emotional, informational, and instrumental supports (e.g., child care, financial stipends, transportation)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Connect families to community resources and help them be responsible consumers, coordinators, and managers of these resources?

- Build on social supports that are essential to families' lives (e.g., friends; family-to-family support; community, neighborhood, volunteer, and faith-based organizations)?
- Consider the whole family (even if it is outside the scope of services) and recognize how family decisions and participation may depend upon competing needs of different family members?

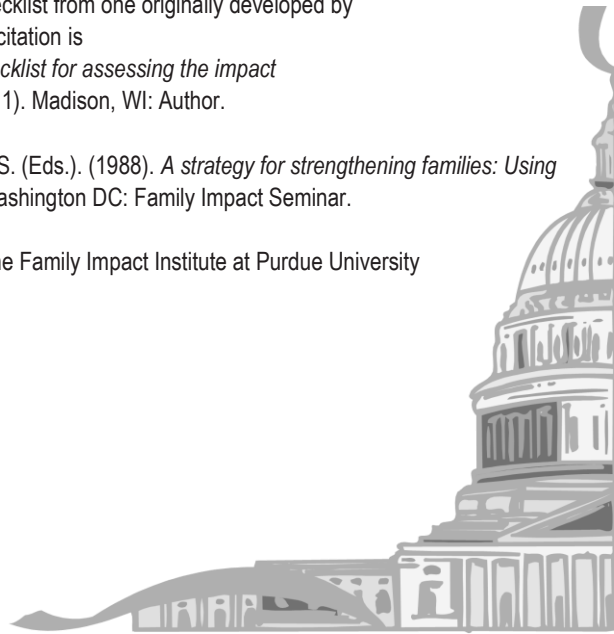
The Institute aims to strengthen family policy by connecting state policymakers with research knowledge and researchers with policy knowledge. The Institute provides nonpartisan, solution-oriented research and a family impact perspective on issues being debated in state legislatures. We provide technical assistance to and facilitate dialogue among professionals conducting Family Impact Seminars in 26 sites across the country.

The Family Impact Institute adapted the family impact checklist from one originally developed by the Consortium of Family Organizations. The suggested citation is Policy Institute for Family Impact Seminars. (2000). *A checklist for assessing the impact of policies on families* (Family Impact Analysis Series No. 1). Madison, WI: Author.

The checklist was first published in Ooms, T., & Preister, S. (Eds.). (1988). *A strategy for strengthening families: Using family criteria in policymaking and program evaluation*. Washington DC: Family Impact Seminar.

For more information on family impact analysis, contact the Family Impact Institute at Purdue University

fii@purdue.edu
 (765) 494-0979
www.familyimpactinstitute.org



Sponsoring Organizations and Descriptions

The **Center for Families at Purdue University** focuses on improving the quality of life for families and strengthening the capacity of families to provide nurturing environments for their members. To accomplish this, the center works with four important groups whose efforts directly impact quality of life for families: educators, human service providers, employers, and policymakers. With informed sensitivity to family issues, these groups have the power to improve the quality of life for families in Indiana and beyond.

Ball State University Department of Family and Consumer Sciences includes a variety of majors from interior design and residential property management to nutrition and marriage and family relations. We offer courses in family relations, infant/toddler, child development, marriage, life-work management, family stress and family policy. Students are also required to take interdisciplinary coursework. In addition, students are required to complete a 400 hour internship at a family or child related facility which also includes government internships. Our curriculum has been designed to fulfill the academic requirements to become a Certified Family Life Educator (CFLE). CFLEs have received academic training in ten substantive areas related to the family, one of which is family policy, and are certified by the National Council of Family Relations, a professional organization.

Indiana Association for Child Care Resource & Referral (IACCRR) serves as a resource to the Indiana General Assembly, the Indiana State Administration, public officials, media representatives, social service providers, and others. IACCRR provides important information on the state of child care systems and resources available across Indiana. IACCRR continues to develop strategic partnerships, build innovative programs, set national standards, negotiate, advocate and effectively position the child care needs of families at the local, statewide, and national policy level.

Indiana Association for the Education of Young Children's (IAEYC) mission is to promote and support quality care and education for all young children birth through age eight in Indiana. Indiana AIEYC is the state's largest and most influential organization of early childhood care and education professionals and parents promoting and supporting quality care and education for all young children. Over 2,200 members represented through sixteen local chapters, and a budget of over \$6 million dollars. Indiana AIEYC supports early care and education professional development through the T.E.A.C.H. (Teacher Education and Compensation Helps) scholarship project, the Indiana Non Formal Child Development Associate (CDA) project and by conducting the largest statewide conference. Indiana AIEYC also supports highest level of early care and education facilities by partnering with the Indiana FSSA/DFR/Bureau of Child Care to implement Paths to QUALITY™ and the Indiana Accreditation Project for over 820 early childhood facilities statewide.

The **Indiana Association of Marriage and Family Therapy** is part of the American Association of Marriage and Family Therapy. Since the founding of AAMFT in 1942, they have been involved with the problems, needs and changing patterns of couples and family relationships. The association leads the way to increasing understanding, research and education in the field of marriage and family therapy, and ensuring that the public's needs are met by trained practitioners. The AAMFT provides individuals with the tools and resources they need to succeed as marriage and family therapists.

Indiana Extension Homemakers Association® exists to strengthen families through continuing education, leadership development, and volunteer community support. We share information on new knowledge and research with our members and communities, promote programs on developing skills and family issues, and we support projects which help children and families in today's world.

Indiana Family Services represents families and respond to their needs by strengthening member agencies and creating alliances to promote excellence in advocacy and service for families throughout Indiana. Member agencies offer a wide variety of programs, including counseling, sexual abuse assessment, homemaker services, children's programs, services for victims of domestic violence, as well as many other diverse programs for over 90,000 individuals, approximately 80 percent of whom are low income. These services are offered regardless of race, creed, or color on a sliding fee scale supported by local United Ways and governmental grants.

The programs of Human Development and Family Studies and Youth Development at the **Indiana University School of Public Health – Bloomington** are dedicated to improving public health across Indiana through workforce development, community engagement, research, with teaching at the forefront of innovative public health education in Indiana. By reimagining public health through a comprehensive approach that enhances and expands disease prevention, the school is reshaping how parks, tourism, sports, leisure activities, physical activity, and nutrition impact and enhance wellness. With nearly 3,000 students in an array of undergraduate and advanced degree programs and more than 130 faculty in five academic departments our faculty and students conduct research, learn, teach, and engage with communities across a broad spectrum of health, wellness, and disease-prevention topics.

The **Indiana Youth Institute** promotes the healthy development of Indiana children and youth by serving the people, institutions and communities that impact their well-being. It is a leading source of useful information and practical tools for nonprofit youth workers, educators, policymakers, think tanks, government officials, and others who impact the lives of Hoosier children. In addition, it is an advocate for healthy youth development on the local, state, and national level.

MCCOY champions the positive development of youth through leadership on key issues, strengthening organizational capacity, and increasing the support of the youth worker community. As advocate, resource, capacity builder, and independent convener, MCCOY works to build a community where all youth can thrive, learn, engage, and contribute and where all adults support the positive development of youth.

The mission of the **National Association of Social Workers – Indiana Chapter** is to promote the quality and integrity of the Social Work profession while supporting social workers in their mission to serve diverse populations and to ensure justice and equality for all citizens of the state.

Purdue Extension Health and Human Sciences provides informal educational programs that increase knowledge, influence attitudes, teach skills, and inspire aspirations. Through the adoption and application of these practices, the quality of individual, family, and community life is improved. Health and Human Sciences Extension is a part of the mission of the College of Health and Human Sciences at Purdue University and the Purdue Extension Service

where
research meets
family policy

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