Bringing Prevention to the Hospital: the \textit{Guiding Good Choices} Program at Seattle Children’s

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Dr. Catalano is a board member to the Channing Bete Company, distributors of Guiding Good Choices
Objectives

- Why should healthcare providers care about prevention?
- Set the stage for exploratory work we are doing with parents of adolescents with chronic illnesses at Seattle Children’s Hospital
- Discuss ideas and implications
Global Shift in Causes of Mortality

- Due to the success of concerted worldwide efforts to address infectious disease, there has been a shift in the leading causes of mortality from infectious to non-communicable diseases and conditions.
- Behavioral health problems are implicated in this shift (motor vehicle fatalities, violence, mental health, and risky sex, alcohol, tobacco, and other drugs).
10 Leading Causes of Death in 10 to 24 year olds (Patton et al., 2009 Lancet)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Males</th>
<th>% total</th>
<th>Females</th>
<th>% total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Road traffic accidents</td>
<td>13.9</td>
<td>Lower respiratory infections</td>
<td>6.7</td>
</tr>
<tr>
<td>2</td>
<td>Violence</td>
<td>9.2</td>
<td>Self-inflicted injuries</td>
<td>6.2</td>
</tr>
<tr>
<td>3</td>
<td>Self-inflicted injuries</td>
<td>6.4</td>
<td>HIV/AIDS</td>
<td>6.1</td>
</tr>
<tr>
<td>4</td>
<td>Drownings</td>
<td>5.3</td>
<td>Tuberculosis</td>
<td>5.8</td>
</tr>
<tr>
<td>5</td>
<td>Tuberculosis</td>
<td>5.2</td>
<td>Road traffic accidents</td>
<td>5.0</td>
</tr>
<tr>
<td>6</td>
<td>Lower respiratory infections</td>
<td>5.2</td>
<td>Fires</td>
<td>4.3</td>
</tr>
<tr>
<td>7</td>
<td>HIV/AIDS</td>
<td>4.9</td>
<td>Maternal haemorrhage</td>
<td>3.2</td>
</tr>
<tr>
<td>8</td>
<td>War</td>
<td>2.8</td>
<td>Abortion</td>
<td>2.6</td>
</tr>
<tr>
<td>9</td>
<td>Leukaemia</td>
<td>1.9</td>
<td>Drownings</td>
<td>2.5</td>
</tr>
<tr>
<td>10</td>
<td>Meningitis</td>
<td>1.8</td>
<td>Meningitis</td>
<td>2.3</td>
</tr>
</tbody>
</table>

70.1% due to behavior problems  57.2% due to behavior problems
### Leading Causes of Mortality 15-24 Year Olds (U.S.)

<table>
<thead>
<tr>
<th>Cause</th>
<th>Total deaths (per 100,000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Motor Vehicle Crashes</td>
<td>15.9</td>
</tr>
<tr>
<td>2. Accidents</td>
<td>11.5</td>
</tr>
<tr>
<td>3. Intentional self harm (suicide)</td>
<td>10.7</td>
</tr>
<tr>
<td>4. Assault (homicide)</td>
<td>10.3</td>
</tr>
<tr>
<td>5. Malignant neoplasms</td>
<td>3.7</td>
</tr>
<tr>
<td>6. Diseases of heart</td>
<td>2.2</td>
</tr>
<tr>
<td>7. Congenital malformations, deformations and abnormalities</td>
<td>1.0</td>
</tr>
<tr>
<td>8. Influenza and pneumonia</td>
<td>0.5</td>
</tr>
<tr>
<td>9. Cerebrovascular diseases</td>
<td>0.4</td>
</tr>
<tr>
<td>10. Pregnancy, childbirth and the puerperium</td>
<td>0.4</td>
</tr>
<tr>
<td>-- All other causes (Residual)</td>
<td>11.1</td>
</tr>
</tbody>
</table>

48.8/100,000 or 72% of all deaths

Prevention is Critical for Health and Well-being

• Behavior problems cause harm in adolescence
• Behavior problems established in adolescence cause harm into adulthood
• Preventing these behavior problems during adolescence can reduce mortality and morbidity over the life course
Etiology/Epidemiology of Problem Behaviors

- Identify risk and protective factors that predict problem behaviors and describe their distribution across development, populations, and location.

Efficacy Trials

- Design and test preventive interventions to interrupt causal processes that lead to youth problems.

(Catalano, Fagan, Gavin, Greenberg, Irwin, Ross, & Shek, 2012 Lancet, O’Connel, Boat and Warner, 2009 Institute of Medicine)
Why is Substance Abuse Prevention Critical during Adolescence?

- Substance use (tobacco, alcohol, marijuana, other drugs) dramatically increases from early to late adolescence.
- Substance use is implicated in other behavior problems including risky driving, risky sex, mental health problems, early school leaving, and violence.
Why Involve Parents of Adolescents in Prevention?

- Parents want their children to be successful
- Children want to discuss important issues with their parents throughout development (Coombs et al., 1991 J Youth Ad)
- Many risk and protective factors for behavior problems can be affected by family action
- Parenting programs have shown impact on risk and protective factors, increased positive and reduced problem behavior in controlled trials
## Risk Factors that Parents Can Impact

<table>
<thead>
<tr>
<th>Family</th>
<th>Individual/Peer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family History of the Problem Behavior</td>
<td>✓</td>
</tr>
<tr>
<td>Family Management Problems</td>
<td>✓</td>
</tr>
<tr>
<td>Family Conflict</td>
<td>✓</td>
</tr>
<tr>
<td>Favorable Parental Attitudes and Involvement in the Problem Behavior</td>
<td>✓</td>
</tr>
<tr>
<td>School</td>
<td></td>
</tr>
<tr>
<td>Academic Failure Beginning in Late Elementary School</td>
<td>✓</td>
</tr>
<tr>
<td>Lack of Commitment to School</td>
<td>✓</td>
</tr>
<tr>
<td>Individual/Peer</td>
<td></td>
</tr>
<tr>
<td>Early and Persistent Antisocial Behavior</td>
<td>✓</td>
</tr>
<tr>
<td>Alienation and Rebelliousness</td>
<td>✓</td>
</tr>
<tr>
<td>Friends Who Engage in the Problem Behavior</td>
<td>✓</td>
</tr>
<tr>
<td>Favorable Attitudes Toward the Problem Behavior</td>
<td>✓</td>
</tr>
<tr>
<td>Early Initiation of the Problem Behavior</td>
<td>✓</td>
</tr>
<tr>
<td>Constitutional Factors</td>
<td>✓</td>
</tr>
</tbody>
</table>
Parents' actions can also impact protective factors that affect multiple problems. Individual characteristics include:
- High Intelligence
- Resilient Temperament
- Competencies and Skills

In each social domain (family, school, peer group, and neighborhood):
- Prosocial Opportunities
- Reinforcement for Prosocial Involvement
- Bonding
- Healthy Beliefs and Clear Standards
Wide Ranging Approaches Have Been Found To Be Efficacious

<table>
<thead>
<tr>
<th>Prevention Programs/Policies</th>
<th>Violence</th>
<th>Drug Use</th>
<th>HIV STI</th>
<th>Unintended Pregnancy</th>
<th>Vehicle Crash Risk</th>
<th>Obesity</th>
<th>Mental Health</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Prenatal &amp; Infancy Programs (eg., NFP)</td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Early Childhood Education</td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Parent Training</td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>4. After-school Recreation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>5. Mentoring with Contingent Reinforcement</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Cognitive Behavior Therapy</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>7. Classroom Organization, Management and Instructional Strategies</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td>8. Classroom Curricula</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>
Tested, Effective Parent Training for Parents of Adolescents

- **Guiding Good Choices®** (Spoth et al., 1998; Mason et al., 2003; 2007)
- Adolescent Transitions Program (Dishion and Andrews, 1995)
- Parents Who Care (Haggerty et al., 2007)
- Creating Lasting Connections (Johnson et al., 1996)
- The Iowa Strengthening Families Program (Spoth, 1998)
- Functional Family Therapy (Klein et al., 1977; Sexton and Alexander, 2000)
- Focus on Families (Catalano et al., 1999; Haggerty et al, 2008)
Strengthens Parents Skills:

- Knowledge of adolescent development
- Strengthen family bonding
- Establish and reinforce clear and consistent guidelines for children’s behavior
- Teach children skills to resist peer influence
- Improve family management
- Reduce family conflict
An Example Parent Prevention Program
Guiding Good Choices

- **Getting Started:** How to prevent drug abuse in your family
- **Setting Guidelines:** How to develop healthy beliefs and clear standards about drug use
- **Avoiding Trouble:** How to say no to drugs
- **Managing Conflict:** How to control and express your anger
- **Involving Everyone:** How to strengthen family bonds
Guiding Good Choices Impact

- Affects parenting behavior regardless of family risk (Spoth et al., 1998 Am J Ortho)
- Reduced Growth in Substance Use (Mason et al., 2003 Prev Sci)
- Reduced Growth in Delinquency (Mason et al., 2003 Prev Sci)
- Reduced Depressive symptoms (Mason et al., 2007 J Res Ad)
- Is cost beneficial, returns $8.93 for every $1 invested (Washington State Public Policy Institute, 2013)
Can Guiding Good Choices be Implemented in a Health Maintenance Organization?

- 4 physician practices encouraged parent participation (38 family capacity), $25 participation fee to cover costs
- 52 families wanted to participate
- Session participation ranged from 88-71%
- Satisfaction ratings high 4.3-5.5
- Indications of knowledge gain pre-post
- 75% held family meetings

Catalano et al., 1998, National Institute on Drug Abuse; Research Monograph 177
Adapting Guiding Good Choices (GGC) for Adolescents’ with a Chronic Illness

Seattle Children’s Hospital

Leslie Walker, MD
Richard F. Catalano, Ph.D.
Kevin P. Haggerty, Ph.D.
Erin Harrop, MSW
Why Substance Abuse Prevention for Adolescents with a Chronic Illness?

- Approximately 12% of adolescents live with a chronic illness
- They are as or more likely to misuse substances than their healthy peers
- They often require multiple medications, and frequently are taken in excess or intentionally withheld and sold to peers
- Substance use has great potential for adverse health outcomes for adolescents with chronic illnesses
- Health Care Providers established trust with parents can be used to refer to tested prevention programs

*Johnston, 2010; Sawyer, Drew, Yea, & Britto, 2007; Miauton, Narring, & Michaud, 2003
In Washington State Youth with Chronic Illnesses are more likely to Use Substances

Substance Use among Washington State 10th Graders

- Percent used tobacco in past 30 days
- Percent used marijuana in past 30 days
- Percent with binge drinking in last 30 days

Washington State Department of Health, 2010
Added Benefits of Involving Parents in Prevention

- A substantial portion of adolescents fail to routinely utilize preventive health care services, though these services improve adolescent health trajectories.
- Adolescents cannot receive preventive care without consent of their parent.
- Greater attention should be focused on how parents can support utilization of preventive healthcare.
Proactive, Supportive Parents

- Have more frequent conversations with their teen regarding health, mental health, vaccines, as well as their alcohol use, grades and their future
- More likely to endorse annual checkups and vaccinations for their adolescent
- May be useful allies with their teen’s health care provider

Motivating Question

Can we influence parents of adolescents to be more proactive, take a supportive role in healthcare, and reduce the likelihood that their teen will be involved in harmful substance use?
Examining Integration in Adolescent Clinic at Seattle Children’s Hospital

Research Questions:

1. What are the substance use prevention needs of families with chronically ill early adolescents?
2. Are there specific concerns that suggest adaptation/augmentation to Guiding Good Choices (GGC)?
3. What are the concerns of pediatric providers in recommending GGC to families?

Method: Focus Groups and Semi-Structured Interviews (adolescents, providers, parents)

Preliminary results of round 1 focus groups with adolescents and health care providers
Adolescent Recruitment

- Round 1 adolescents’ medical conditions:
  - Diabetes
  - Cardiac problems
  - Orthopedic problems
  - Crohn’s
  - Junior rheumatoid arthritis
  - Ovarian torsion
  - Inflammatory bowel disease
  - Ulcerative colitis
  - Type 2B von Willebrand disease
  - Anemia
  - PCOS
  - Substance abuse
Adolescent Focus Group

Themes

- Easy access to multiple medications
- Believe they have accurate knowledge of medication effects
- Prescription misuse is common and dangerous
- Support needed from parents and health care providers for medication management
- Medical marijuana perceived as a safe alternative to prescribed medication
Adolescent Theme

Prescription Misuse

- Reasons for not taking prescribed medications:
  - knowledge of side effects (weight gain, cognitive effects, cancer)
  - feeling different from their peers
  - lacking trust in their provider’s knowledge of the medication

- Teens also reported selling, stealing, seeking, and refusing medication
Provider Focus Groups and Interviews

- 5 physicians
- 3 nurses
- 3 social workers
- 1 psychologist
Provider Concerns about Adolescents with Chronic Illnesses

- Poor medication and treatment adherence
- Substance use or prescription misuse is not proactively, only reactively, discussed
- Substance use prevention is needed
- More support for parents is needed
- Medical marijuana should be included in one-on-one conversations between health care provider and patients
Providers Assessment of the Applicability of GGC to Teens with Chronic Health Problems

- Providers liked the GGC content/approach
- Additions suggested to GGC content
  - Medication management
  - Stress management
  - Dealing with healthy siblings
Providers Anticipated Barriers to Implementing in Hospital

- Additional time at hospital
- Travel time/expense
- Need for rolling enrollment in groups
- Split on desirability of condition-specific versus general groups
Providers Suggestions for Implementation of GGC

- Providers split on desirability of an online version of GGC for parents who might not be able to attend groups
- Incorporate GGC into current weekly parent group for 5 weeks
- Incorporate GGC into requirements for pre-transplant services
- Recommend GGC as a standard of care for teens to encourage referral
Next Steps

- Complete focus groups
- Modify GGC to incorporate learnings from adolescents, healthcare professionals, and parents
- Pilot new program
- Grant application to conduct trial
Questions & Discussion
Thank You!
Recommendations for Healthcare Professionals

- Learn about the research base for prevention science
- Visit databases of efficacious prevention policies and programs (e.g., www.blueprintsprograms.com, http://www.nrepp.samhsa.gov/)
- Build community partnerships to support tested, effective prevention programs for parents