Excellence in Prevention – descriptions of the programs and strategies with the greatest evidence of success

Name of Program/Strategy: Project ALERT

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1. Overview and description

Project ALERT is a school-based prevention program for middle or junior high school students that focuses on alcohol, tobacco, and marijuana use. It seeks to prevent adolescent nonusers from experimenting with these drugs, and to prevent youths who are already experimenting from becoming more regular users or abusers. Based on the social influence model of prevention, the program is designed to help motivate young people to avoid using drugs and to teach them the skills they need to understand and resist pro-drug social influences. The curriculum is comprised of 11 lessons in the first year and 3 lessons in the second year. Lessons involve small-group activities, question-and-answer sessions, role-playing, and the rehearsal of new skills to stimulate students’ interest and participation. The content focuses on helping students understand the consequences of drug use, recognize the benefits of nonuse, build norms against use, and identify and resist pro-drug pressures.

2. Implementation considerations (if available)

3. Descriptive Information

| Areas of Interest | Substance abuse prevention |

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| Outcomes | 1: Substance use (alcohol, tobacco, and marijuana)  
2: Attitudes and resistance skills related to alcohol, tobacco, and other drugs |
| Outcome Categories | Alcohol Drugs Education  
Family/relationships  
Mental health  
Tobacco |
| Ages | 13-17 (Adolescent) |
| Genders | Male  
Female |
| Races/Ethnicities | American Indian or Alaska Native  
Asian  
Black or African American  
Hispanic or Latino  
White  
Race/ethnicity unspecified |
| Settings | School |
| Geographic Locations | Urban  
Suburban  
Rural and/or frontier |
| Implementation History | Two major evaluations of Project ALERT have been undertaken, both by Dr. Phyllis Ellickson and colleagues at RAND Corporation. The first major evaluation (data set 1) involved 30 middle schools in 8 urban, suburban, and rural communities in California and Oregon. The schools were randomly assigned to two treatment conditions (teacher-led, teacher plus teen leaders) and one control condition. The second major evaluation (data set 2) involved 55 middle schools in South Dakota, representing a wide variety of Midwestern communities. These schools were randomly assigned to one treatment and one control condition. Broad dissemination of Project ALERT began in 1995. Since then, more than 50,000 teachers have been trained to deliver the intervention in an estimated 3,500 U.S. school districts. |
| NIH Funding/CER Studies | Partially/fully funded by National Institutes of Health: No  
Evaluated in comparative effectiveness research studies: No |
| Adaptations | Project ALERT curriculum materials are available in Spanish. A Peer Teen Leader Component also is available and can be downloaded free of charge from the Project ALERT Web site (http://www.projectalert.com/). This implementation approach involves high school students in the delivery of the middle school program. Overall, Project ALERT is designed to be adaptive to the background |

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<table>
<thead>
<tr>
<th>and experiences of students in each classroom and to the changes in the broader social and cultural climate that surrounds them. Because the curriculum is highly participatory (students are asked questions and are involved in group activities and skits), it can vary from one classroom to another. Teachers are trained to respond to the changing input and feedback of students over time and from group to group. Designed adaptation therefore can take place in the hands of adept teachers.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adverse Effects</strong></td>
</tr>
<tr>
<td>The most committed smokers reacted negatively to an early version of the curriculum, smoking more than their counterparts in the control condition. In response to this observed boomerang effect, the curriculum was revised to include a smoking cessation lesson designed to bring these more committed smokers back into the classroom psychologically and to improve their response to the program. Results show that the revised curriculum (the only version that has ever been distributed to schools) has no adverse effects and, in fact, has a positive impact on these high-risk early smokers.</td>
</tr>
<tr>
<td><strong>IOM Prevention Categories</strong></td>
</tr>
<tr>
<td>Universal</td>
</tr>
<tr>
<td>Selective</td>
</tr>
<tr>
<td><strong>4. Outcomes</strong></td>
</tr>
<tr>
<td><strong>Outcome 1: Substance use (alcohol, tobacco, and marijuana)</strong></td>
</tr>
<tr>
<td><strong>Description of Measures</strong></td>
</tr>
<tr>
<td>For alcohol, cigarettes, and marijuana, student questionnaires asked about lifetime use, frequency of use within the past month and year, and the amount used. Students were also asked if they had suffered negative consequences due to the use of these drugs (e.g., missed school, did something they later felt sorry for, got into trouble at home or at school).</td>
</tr>
<tr>
<td><strong>Key Findings</strong></td>
</tr>
</tbody>
</table>
| In multiple randomized control group studies, Project ALERT produced lasting outcomes for participants from a variety of ethnic and economic backgrounds who were at low, moderate, or high risk for alcohol, tobacco, or marijuana use. Overall, Project ALERT was equally effective when taught solely by classroom leaders and when teen leaders were included in classroom delivery. Analyses at the end of grade 8 (15 months after baseline) assessed students by risk level for future drug use. Among students who had tried neither cigarettes nor marijuana at the beginning of 7th grade, Project ALERT participants were nearly 50% less likely than other students to become current marijuana users by 8th grade. After incorporation of the 8th-grade booster
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<table>
<thead>
<tr>
<th>Studies Measuring Outcome</th>
<th>Study 1, Study 2, Study 3, Study 4, Study 5, Study 6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study Designs</td>
<td>Experimental</td>
</tr>
<tr>
<td>Quality of Research Rating</td>
<td>4.0 (0.0-4.0 scale)</td>
</tr>
</tbody>
</table>

### Outcome 2: Attitudes and resistance skills related to alcohol, tobacco, and other drugs

**Description of Measures**

This outcome was measured by student surveys. The surveys inquired about risk and protective factors such as student awareness of consequences of substance use, beliefs about the prevalence of substance use and its acceptability to others, resistance self-efficacy, and expectations of substance use in the next 6 months.

**Key Findings**

In multiple randomized control group studies, analyses of program effects on attitudinal risk factors showed that Project ALERT dampened pro-drug beliefs about cigarette and marijuana use (low resistance self-efficacy, low perceived consequences of use, tolerance of drugs, expectations of future use, and low estimates of peer drug use). Effect sizes for beliefs about cigarette and marijuana use, calculated as the standardized adjusted mean difference between groups, were small for all students combined (0.07-0.17) and for students at different risk levels (0.07-0.27). The curriculum had a more limited impact on beliefs about alcohol. Although Project ALERT's effects on drug use dissipate in high...
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School, its effects on knowledge and beliefs persist during the high school years. In 10th grade, former ALERT participants were more likely than other students to believe that drug use has negative social consequences and produces dependency, that resistance has benefits, and that fewer peers use and approve of use. Effects on beliefs about the risk of dependency, social consequences of use, and lower peer use continued into 12th grade.

Studies Measuring Outcome | Study 1, Study 2, Study 3, Study 4, Study 5, Study 6
Study Designs | Experimental
Quality of Research Rating | 4.0 (0.0-4.0 scale)


Benefits minus cost, per participant

According to the WSIPP study, this program strategy returns

$54

in savings that would otherwise be associated with education, substance abuse, teen pregnancy, child abuse and neglect, or criminal justice system.

6. Washington State results (from Performance Based Prevention System (PBPS) – if available)

<table>
<thead>
<tr>
<th>Scale</th>
<th>Result</th>
<th>Direction</th>
<th>N</th>
<th>Instruments used for this program</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refusal Skills</td>
<td>significant improvement</td>
<td>3106</td>
<td>AM Refusal Skills [Y4]</td>
<td></td>
</tr>
<tr>
<td>Refusal Skills</td>
<td>significant improvement</td>
<td>1463</td>
<td>Healthy Decisions Survey - Middle School [APMY01], Refusal Skills [Y4i]</td>
<td></td>
</tr>
<tr>
<td>Peer Use</td>
<td>significant improvement</td>
<td>2612</td>
<td>PPG-Individual/Peer [PPG03]</td>
<td></td>
</tr>
<tr>
<td>Risk of Use</td>
<td>significant improvement</td>
<td>8298</td>
<td>Healthy Decisions Survey - Middle School [APMY01], PPG-Individual/Peer [PPG03], RM Individual/Peer [PPG03B]</td>
<td></td>
</tr>
<tr>
<td>Disapproval of Use (peer)</td>
<td>significant improvement</td>
<td>7346</td>
<td>PPG-Individual/Peer [PPG03], RM Individual/Peer [PPG03B]</td>
<td></td>
</tr>
</tbody>
</table>

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7. **Where is this program/strategy being used (if available)?**

<table>
<thead>
<tr>
<th>Washington Counties</th>
<th>Oregon Counties</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benton/Franklin, Chelan/Douglas, Grays Harbor, Jefferson, King, Klickitat, Pierce, Quinault Nation, Thurston/Mason, Yakima</td>
<td></td>
</tr>
</tbody>
</table>

8. **Study Populations**

The studies reviewed for this intervention included the following populations, as reported by the study authors.

<table>
<thead>
<tr>
<th>Study</th>
<th>Age</th>
<th>Gender</th>
<th>Race/Ethnicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study 1</td>
<td>13-17 (Adolescent)</td>
<td>51% Female 49% Male</td>
<td>71% White 10% Asian 9% Hispanic or Latino 8% Black or African American 2% American Indian or Alaska Native</td>
</tr>
<tr>
<td>Study 2</td>
<td>13-17 (Adolescent)</td>
<td>51% Female 49% Male</td>
<td>71% White 10% Asian 9% Hispanic or Latino 8% Black or African American 2% American Indian or Alaska Native</td>
</tr>
<tr>
<td>Study 3</td>
<td>13-17 (Adolescent)</td>
<td>51% Female 49% Male</td>
<td>71% White 10% Asian 9% Hispanic or Latino 8% Black or African American 2% American Indian or Alaska Native</td>
</tr>
</tbody>
</table>

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| Study 4 | 13-17 (Adolescent) | 51% Female 49% Male | 71% White 10% Asian 9% Hispanic or Latino 8% Black or African American 2% American Indian or Alaska Native |
| Study 5 | 13-17 (Adolescent) | 50% Female 50% Male | 87.5% White 8.6% American Indian or Alaska Native 3.9% Race/ethnicity unspecified |
| Study 6 | 13-17 (Adolescent) | 50% Female 50% Male | 87.5% White 8.6% American Indian or Alaska Native 3.9% Race/ethnicity unspecified |

9. Quality of Research

The documents below were reviewed for Quality of Research. Other materials may be available. For more information, contact the developer(s).

**Study 1**

**Study 2**

**Study 3**

**Study 4**

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Study 5

Study 6

Supplementary Materials
Data collection forms
Educators Guide
Grade 7 Monitoring Form, Session 1
Grade 7 Student Survey
Grade 8 Student Survey Teacher Checklist

Quality of Research Ratings by Criteria (0.0-4.0 scale)
External reviewers independently evaluate the Quality of Research for an intervention's reported results using six criteria:
1. Reliability of measures
2. Validity of measures
3. Intervention fidelity
4. Missing data and attrition
5. Potential confounding variables
6. Appropriateness of analysis

For more information about these criteria and the meaning of the ratings, see Quality of Research.

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Reliability of Measures</th>
<th>Validity of Measures</th>
<th>Fidelity</th>
<th>Missing Data/Attrition</th>
<th>Confounding Variables</th>
<th>Data Analysis</th>
<th>Overall Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: Initiation of drug use</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
<tr>
<td>2: Aggressive behavior</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
<td>4.0</td>
</tr>
</tbody>
</table>

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**Study Strengths**

The measures and items are well described based on extensive literature review. Most items have been commonly and successfully used in previous research. The items were adjusted for the age of respondents, and five survey versions were pretested. The use of saliva cotinine for truth in tobacco reporting was excellent.

The materials reviewed describe extensive measures to ensure intervention fidelity, including a teacher guide and checklist, and monitoring forms to document further support. Steps were taken to minimize attrition and account for missing data and the developers conducted analyses to assess the impact of attrition. Sample sizes were large. Attrition rates approached 10% but did not surpass this level and therefore were not a threat to internal validity.

Schools were blocked by district, and restricted assignment was used in randomization to enhance comparability between intervention and control schools and minimize potential confounding variables. Intervention effects can be attributed to the Project ALERT intervention outcomes reported in the publications reviewed. Data were analyzed both at the student and school levels and by students’ risk levels. Adjustments were made for baseline differences and intra-school correlation.

**Study Weaknesses**

No weaknesses were noted by reviewers.

**10. Readiness for Dissemination**

The documents below were reviewed for Readiness for Dissemination. Other materials may be available. For more information, contact the developer(s).

**Dissemination Materials**


Project ALERT program posters and sample newsletters

Project ALERT program Web site, http://www.projectalert.com

Project ALERT Readiness for Dissemination (overview document submitted to NREPP) Project ALERT Training Workshop Manual

Project ALERT videos:

- Project ALERT: Eight Classroom Lesson Videos & Guided Tour (2006)
- Project ALERT Training Video: Lessons 1, 4, and 8 (2004)
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Readiness for Dissemination Ratings by Criteria (0.0-4.0 scale)

External reviewers independently evaluate the intervention's Readiness for Dissemination using three criteria:

1. Availability of implementation materials
2. Availability of training and support resources
3. Availability of quality assurance procedures

For more information about these criteria and the meaning of the ratings, see Readiness for Dissemination.

<table>
<thead>
<tr>
<th>Implementation Materials</th>
<th>Training and Support Resources</th>
<th>Quality Assurance Procedures</th>
<th>Overall Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>4.0</td>
<td>3.5</td>
<td>3.8</td>
</tr>
</tbody>
</table>

Dissemination Strengths

Implementation materials are comprehensive, well articulated, and cogently structured. The videos and classroom poster realistically depict situations and should be engaging for young adolescents. Implementation materials are also available in Spanish. Videos are closed-captioned for the hearing impaired. The Project ALERT Web site is easy to navigate. On-site training is available both before and during implementation, and training can also be completed online. Fidelity measures, pre- and post-intervention measures, and scoring information are provided to support quality assurance.

Dissemination Weaknesses

Additional training, support, and/or technical assistance may be required for administrators to support implementation fidelity.

11. Costs

The information below was provided by the developer and may have changed since the time of review. For detailed information on implementation costs (e.g., staffing, space, equipment, materials shipping and handling), contact the developer.

<table>
<thead>
<tr>
<th>Item Description</th>
<th>Cost</th>
<th>Required by Program Developer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Curriculum in e-reader format with online videos and files for posters that can be projected</td>
<td>Free</td>
<td>Yes</td>
</tr>
<tr>
<td>Online training</td>
<td>Free</td>
<td>No</td>
</tr>
<tr>
<td>1-day, on-site workshop</td>
<td>$1,200 plus travel expenses</td>
<td>No</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Service Description</th>
<th>Price</th>
<th>Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toll-free phone support, online resources, and ALERT Educator newsletter</td>
<td>Free</td>
<td>No</td>
</tr>
<tr>
<td>Fidelity instrument and alignment and assessment tools</td>
<td>Free</td>
<td>No</td>
</tr>
</tbody>
</table>

12. Contacts

**For information on implementation:**

Christy Inberg  
(800) 253-7810  
cinberg@projectalert.best.org

Leslie Thompson Aguilar  
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**Learn More by Visiting:**  http://www.projectalert.com