Purpose

The teen driver safety change package includes: 1) an aim statement, 2) a driver diagram and 3) a measurement strategy for achieving the aim of reducing deaths, hospitalizations, and emergency department visits resulting from a crash, in which the victim was a driver or occupant of a vehicle and between the ages of 15 and 19.

The teen driver safety change package is intended to spread well-established evidence-based practices across a large number of pilot sites in states/jurisdictions. We expect the aim to be achieved if you are working across the entire driver diagram (e.g. all drivers, using multiple change ideas) and state/jurisdiction wide. If you are only working in selected areas of the driver diagram, we recommend that you strategically choose reinforcing drivers and change ideas to achieve the greatest impact and then revise your aim statement accordingly.



Driver Diagram

| Primary Driver | Secondary Driver | Change Ideas | Recommended Measures |
|----------------------------------|---|---|---|
| PD1: Societal level | SD1: Knowledgeable partners and policy makers | 1. Educate policymakers on evidence (i.e. crash, injury, fatality and citation data or compliance rates) demonstrating the effectiveness of GDL in order to support the adoption of state/jurisdiction GDL requirements as outlined in the Traffic Injury Research Foundation (TIRF) framework (e.g. EBPs: minimum 16 years old to enter the | 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 |
| Culture of teen driver safety | | Learner Stage/supervised driving; 12 month minimum Learner Stage; over 50 hours of mandatory, supervised driving in the Learner Stage; minimum 17 years old to enter Intermediate Stage/solo driving; minimum 12 months for Intermediate Stage; nighttime restrictions (9 or 10 pm and ending no earlier than 5am); teen passengers limited; minimum 18 years old for exit from the Intermediate Stage) | |
| | | Engage with local partners to develop a teen driver safety campaign that specifically addresses issues occurring in state/community drawing upon the NHTSA "5 to Drive" message | |
| | SD2: Multi- stakeholder | Create or expand state/jurisdiction teen driver safety coalitions (e.g., State Highway Safety Office, state licensing agency, state driver education, athletic associations, state Chiefs of Police, traffic officer and SRO associations, SADD, FCCLA, auto insurers, etc.) | 16 |
| | partnerships | Create/update Memoranda of Understanding (MoUs) between partners (e.g., state transportation, law enforcement, education, community agencies, etc.) to increase clarity regarding roles and responsibilities for teen driver safety | |
| | | Create/update a strategic and operational plan for the state/jurisdiction teen driver safety coalition, including a state/jurisdiction process map of teen driver safety strategies and programs | |



| Primary Driver | Secondary Driver | Change | eldeas | Recommended Measures |
|---|--|--|--|--|
| PD2: Organizational level Organizational policies and procedures support the culture and practice of teen driver safety | SD1: Enforced GDL policies, programs, and best practices | 1. 2. 3. 4. 5. | Partner with law enforcement on standard procedures to ensure teens are in compliance with state GDL law Provide incentives for participating in teen driver safety programs/interventions (e.g., in New Jersey some high schools require students to complete Share the Keys before they can apply for a permit to park on school grounds) Partner with health care organizations to implement standard procedures for health care professionals to provide anticipatory guidance on teen driver safety to teens and parents/caregivers at adolescent wellness visits Create/improve your data collection, assessment, tracking, and reporting systems Partner with teen driver safety programs to develop evaluation plans | 2, 3, 4, 5, 6, 7, 8, 9, 10, 13, 14, 15, 17 |
| PD3: Relational/ Individual level Families and teens knowledgeable in teen driver safety best practices | Interactive learning and dissemination of teen driver safety educational materials | 1. 2. 3. 4. 5. | road, including driving at night, passengers, cell phones and texting, seat belts, and use of alcohol and other drugs), such as the CDC Parent-Teen Driving Agreement Facilitate discussion with teens using positive messaging (e.g., Share the Keys) and provide teach-back opportunities for teens to improve their understanding of risk factors for being involved in a motor vehicle crash (e.g. distraction) (Singh, 2010 as cited in GHSA, 2013, p.7) | 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13 |



Measurement Strategy

Select the measures that will give you the best indication of signals of improvement from working on your drivers and change ideas. Your state/jurisdiction is encouraged to choose up to 5 - 7 (or more if needed) measures. More than one change idea may be necessary to move a given measure. We encourage all CS CollN states/jurisdictions to report on the 3 state/jurisdiction outcome measures, monthly or quarterly, and to explore the ability to collect data that is more current.

Note: The measurement strategy does not include a specific measure for each change idea. When selecting measures, consider the set of change ideas that will be necessary to move a measure. This may include change ideas that don't have a "recommended measure" listed in the driver diagram. If you opt to add a measure or would like guidance on selecting measures, please contact CSN for technical assistance.

| State/Jurisdiction Outcome Measures | Process Measures |
|--|--|
| Rate of teen motor vehicle | 1. Percent of communities that participate in campaign |
| fatalities | 2. Percent of teens reporting distracted driving, including cell phone use and texting |
| Rate of teen motor vehicle | 3. Percent of teens reporting driving during restricted hours |
| related hospitalizations | 4. Percent of teens reporting use of seat belts |
| Rate of teen motor vehicle | 5. Percent of teens reporting driving while under the influence of alcohol or drugs |
| related ED visits | 6. Percent of teens reporting speeding |
| | 7. Percent of teens reporting driving with teen passengers |
| | 8. Percent of teens reporting driving while fatigued |
| | 9. Percent of teens reporting understanding of GDL requirements |
| | 10. Percent of teens reporting safe driving practices |
| | 11. Percent of parents reporting understanding of GDL requirements |
| | 12. Percent of parents reporting enforcement of GDL with their teen driver |
| | Percent of signed parent-teen driving agreements among teens participating in an evidence-based teen driver safety program |
| | 14. Percent of schools that provide GDL education |
| | 15. Percent of health care organizations that give anticipatory guidance to caregivers on teen driver safety |
| | 16. Percent of active stakeholders in the state/jurisdiction teen driver safety coalition |
| | 17. Percent of teen driver safety programs with evaluation plans |



State/Jurisdiction Outcome Measures

| Measure | Numerator | Denominator | Data Collection Methods | Reporting Frequency |
|--------------------|--------------------------------|-----------------------------|--------------------------------|--------------------------|
| Rate of teen | Total number of motor vehicle | Population of teens ages 15 | Work with state | Monthly or Quarterly |
| motor vehicle | related deaths among teens | through 19 over the same | epidemiologist, using the Teen | depending upon what is |
| related fatalities | ages 15 through 19 | time period | Driver Safety Outcome Data | feasible for your state/ |
| | | | Worksheet | jurisdiction |
| Rate of teen | Total number of motor vehicle | Population of teens ages 15 | Work with state | Monthly or Quarterly |
| motor vehicle | related hospitalizations among | through 19 over the same | epidemiologist, using the Teen | depending upon what is |
| related | teens ages 15 through 19 | time period | Driver Safety Outcome Data | feasible for your state/ |
| hospitalizations | | | Worksheet | jurisdiction |
| Rate of teen | Total number of motor vehicle | Population of teens ages 15 | Work with state | Monthly or Quarterly |
| motor vehicle | related ED visits among teens | through 19 over the same | epidemiologist, using the Teen | depending upon what is |
| related ED visits | ages 15 through 19 | time period | Driver Safety Outcome Data | feasible for your state/ |
| | | | Worksheet | jurisdiction |

Process Measures

Note: Review the data collection column for guidance on operationalizing process measures. You may need to conduct assessments or administer questionnaires to determine your population of interest.

| Measure | Numerator / Denominator | Data Collection | Reporting Frequency |
|--|---|---|------------------------|
| 1. Percent of communities that participate in campaign | Numerator: Aggregate number of communities that participate in campaign Denominator: Total number of communities in the population of interest | Numerator: Define "participate." Track the aggregate number of communities that participate in the campaign. Denominator: Define the population of interest. Additional data you may find useful to track: Number and type of sites/organizations in your communities. | Monthly |



| N | leasure | Numerator / Denominator | Data Collection | Reporting Frequency |
|----|---|---|--|--|
| 2. | Percent of teens reporting distracted driving, including cell phone use and texting | Numerator: Number of teens ages 15 through 19 reporting distracted driving Denominator: Total number of teens ages 15 through 19 in the population of interest | Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define "distracted driving" in your measurement tool and the response(s) that indicate distracted driving (e.g. Rarely, Sometimes, Often, Always from the suggested questionnaire item below). Track the number of teens ages 15 through 19 in the population of interest reporting distracted driving. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: In the last two weeks, did you use a cell phone or hand held device while driving? (Never, Rarely, Sometimes, Often, Always) Additional data you may find useful to track: All teens reporting distracted driving | Baseline, post intervention, 3-6-month follow up |
| | | | in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of sites. | |
| 3. | Percent of teens reporting driving during restricted hours | Numerator: Number of teens ages 15 through 19 reporting driving during restricted hours Denominator: Total number of teens ages 15 through 19 in the population of interest | Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define the response(s) in your measurement tool that indicate driving during restricted hours (e.g. Rarely, Sometimes, Often, Always from the suggested questionnaire item below). Track the number of teens ages 15 through 19 in the population of interest reporting driving during restricted hours. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: In the last two weeks, did you drive during your state/jurisdiction's restricted driving hours? (Never, Rarely, Sometimes, Often, Always) Additional data you may find useful to track: All teens reporting driving during their state/jurisdiction's restricted driving hours in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of sites. | Baseline, post intervention, 3-6-month follow up |



| Me | easure | Numerator / Denominator | Data Collection | Reporting Frequency |
|----|--|--|---|--|
| 4. | Percent of teens reporting use of seat belts | Numerator: Number of teens ages 15 through 19 reporting use of seat belts Denominator: Total number of teens ages 15 through 19 in the population of interest | Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define the response(s) in your measurement tool that indicate use of seat belt (e.g. Often, Always from the suggested questionnaire item below). Track the number of teens ages 15 through 19 in the population of interest reporting use of seat belts. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: In the last two weeks, did you use your seat belt? (Never, Rarely, Sometimes, Often, Always) Additional data you may find useful to track: All teens reporting use of seat belts in the pilot site, at the same time intervals, including those who receive the | Baseline, post intervention, 3-6-month follow up |
| 5. | Percent of teens reporting driving while under the influence of alcohol or drugs | Numerator: Number of teens ages 15 through 19 reporting driving while under the influence of alcohol or drugs Denominator: Total number of teens ages 15 through 19 in the population of interest | intervention and those who do not; Number and type of sites. Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define the response(s) in your measurement tool that indicate driving while under the influence of alcohol or drugs (e.g. Rarely, Sometimes, Often, Always from the suggested questionnaire item below). Track the number of teens ages 15 through 19 in the population of interest reporting driving while under the influence of alcohol and drugs. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: In the last two weeks, did you use alcohol or drugs prior to or while driving? (Never, Rarely, Sometimes, Often, Always) Additional data you may find useful to track: All teens reporting use of alcohol or drugs prior to or while driving in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of sites. | Baseline, post intervention, 3-6-month follow up |



| | | | | _ |
|----|---|---|--|--|
| M | easure | Numerator / Denominator | Data Collection | Reporting Frequency |
| 6. | Percent of teens reporting speeding | Numerator: Number of teens ages 15 through 19 reporting speeding Denominator: Total number of teens ages 15 through 19 in the population of interest | Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define the response(s) in your measurement tool that indicate speeding while driving (e.g. Rarely, Sometimes, Often, Always from the suggested questionnaire item below). Track the number of teens ages 15 through 19 in the population of interest reporting speeding. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: In the last two weeks, did you speed while driving? (Never, Rarely, Sometimes, Often, Always) Additional data you may find useful to track: All teens reporting speeding while driving in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of sites. | Baseline, post intervention, 3-6-month follow up |
| 7. | Percent of teens reporting driving with teen passengers | Numerator: Number of teens ages 15 through 19 reporting driving with teen passengers Denominator: Total number of teens ages 15 through 19 in the population of interest | Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define the response(s) in your measurement tool that indicate driving with teen passengers in the vehicle (e.g. Rarely, Sometimes, Often, Always from the suggested questionnaire item below). Track the number of teens ages 15 through 19 in the population of interest reporting driving with teen passengers. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: In the last two weeks, did you drive with other teen passengers in the vehicle? (Never, Rarely, Sometimes, Often, Always) Additional data you may find useful to track: All teens reporting driving with other teen passengers in the vehicle in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of sites. | Baseline, post intervention, 3-6-month follow up |



| M | easure | Numerator / Denominator | Data Collection | Reporting Frequency |
|----|--|---|--|--|
| 8. | Percent of teens reporting driving while fatigued | Numerator: Number of teens reporting driving while fatigued Denominator: Total number of teens ages 15 through 19 in the population of interest | Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define "driving while fatigued" in your measurement tool and the response(s) that indicate driving while fatigued (e.g. Rarely, Sometimes, Often, Always from the suggested questionnaire item below) Track the number of teens ages 15 through 19 in the population of interest reporting driving while fatigued. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: In the last two weeks, did you drive while fatigued? (e.g. having trouble staying awake, yawning, having the urge to close your eyes) (Never, Rarely, Sometimes, Often, Always) Additional data you may find useful to track: All teens reporting driving while fatigued in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of sites. | Baseline, post intervention, 3-6-month follow up |
| 9. | Percent of teens reporting understanding of GDL requirements | Numerator: Number of teens reporting understanding of GDL requirements Denominator: Total number of teens ages 15 through 19 in the population of interest | Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define "understanding of GDL requirements" in your measurement tool and the response(s) that indicate understanding of GDL requirements (e.g. Good, Very Good, Excellent from the suggested questionnaire item below) Track the number of teens ages 15 through 19 in the population of interest reporting understanding of GDL requirements. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: How would you rate your understanding of the GDL requirements in your state/jurisdiction? (Poor, Fair, Good, Very Good, Excellent) Additional data you may find useful to track: All teens reporting understanding of GDL requirements in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of sites. | Baseline, post intervention, 3-6-month follow up |



| Measure | Numerator / Denominator | Data Collection | Reporting Frequency |
|--|--|--|--|
| 10. Percent of teens reporting safe driving practices | Numerator: Number of teens reporting safe driving practices Denominator: Total number of teens in the population of interest | Define the population of interest (e.g., teens receiving teen driver safety and GDL education). Define "safe driving practices" in your measurement tool and the response(s) that indicate safe driving practices (e.g. number of practices selected in a GDL requirements checklist to be consider overall safe driving practice). Track the number of teens ages 15 through 19 in the population of interest reporting safe driving practices. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. | Baseline, post intervention, 3-6-month follow up |
| | | Additional data you may find useful to track: Safe driving practices among all teens in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of safe driving practices reported; Number and type of sites. | |
| 11. Percent of parents reporting understanding of GDL requirements | Numerator: Number of parents reporting understanding of GDL requirements Denominator: Total number of parents in the population of interest | Define the population of interest (e.g., parents receiving teen driver safety and GDL education). Define "understanding of GDL requirements" in your measurement tool and the response(s) that indicate understanding of GDL requirements (e.g. Good, Very Good, Excellent from the suggested questionnaire item below). Track the number of parents in the population of interest reporting understanding of GDL requirements. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Suggested questionnaire item: How would you rate your understanding of the GDL requirements in your state/jurisdiction? (Poor, Fair, Good, Very Good, Excellent) Additional data you may find useful to track: All parents of teens reporting understanding of GDL requirements in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of sites. | Baseline, post intervention, 3-6-month follow up |



| | | • | | |
|-----|--|--|---|--|
| Me | easure | Numerator / Denominator | Data Collection | Reporting Frequency |
| 12. | Percent of parents reporting enforcement of GDL with their teen driver | Numerator: Number of parents reporting enforcement of GDL with their teen driver Denominator: Total number of parents in the population of interest | Define the population of interest (e.g., parents receiving teen driver safety and GDL education). Define "enforcement of GDL with your teen driver" in your measurement tool and the response(s) that indicate enforcement of GDL (e.g. number of practices selected in a GDL requirements checklist that they enforce with their teens). Track the number of parents in the population of interest reporting enforcement of GDL with their teen driver. Collect the data pre-intervention and post intervention. Ideally, you would also collect the data 3-6 months post-intervention. Track samples of 20 over time. Additional data you may find useful to track: Parental enforcement of GDL among all parents in the pilot site, at the same time intervals, including those who receive the intervention and those who do not; Number and type of enforced GDL requirements reported; Number and type of sites. | Baseline, post intervention, 3-6-month follow up |
| 13. | Percent of signed parent- teen driving agreements among teens participating in an evidence- based teen driver safety program | Numerator: Number of signed parent-teen driving agreements Denominator: Total number of parent-teen pairs in the population of interest | Define the population of interest (e.g., parent-teen pairs that participate in an evidence based teen driver safety program who receive the parent-teen driving agreement). Track how many parent-teen driving agreements are signed for parent-teen pair program participants. Track samples of 20 over time. Additional data you may find useful to track: Number of signed parent-teen driving agreements for all parent-teen pairs in the pilot site, at the same time intervals, including those who participate in an evidence-based teen driver safety program and those who do not; Number and type of sites. | Monthly |
| 14. | Percent of schools that provide GDL education | Numerator: Aggregate number of schools that provide GDL education Denominator: Total number of schools in the population of interest | Define the population of interest. Track the aggregate number of schools that provide GDL education. | Monthly |



| Measure | Numerator / Denominator | Data Collection | Reporting Frequency |
|--|--|--|---------------------|
| 15. Percent of health care organizations that give anticipatory guidance to caregivers on teen driver safety | Numerator: Aggregate number of health care organizations that give anticipatory guidance to caregivers on teen driver safety Denominator: Total number of health care organizations in the population of interest | Define the population of interest. Define "give anticipatory guidance." Track the aggregate number of health care organizations in the population of interest that provide anticipatory guidance on teen driver safety. Additional data you may find useful to track: Type of health care organization. | Monthly |
| 16. Percent of active stakeholders in the state/jurisdiction teen driver safety coalition | Numerator: Aggregate number of active members in the state/jurisdiction teen driver safety coalition Denominator: Total number of members in the population of interest | Define "active members" (e.g. participate in a minimum of one activity per quarter, such as those listed below) Track the aggregate number of active stakeholders in the state/jurisdiction teen driver safety coalition. It is recommended to analyze minutes from coalition meetings and determine the number of members who: • Attend coalition meetings • Educate teens about teen driver safety • Educate parents about teen driver safety • Educate policy makers about teen driver safety • Participate in teen driver safety campaigns • Other tasks Additional data you may find useful to track: Type of stakeholder; Reach of stakeholder. | Quarterly |



| Measure | Numerator / Denominator | Data Collection | Reporting Frequency |
|---|--|--|------------------------|
| 17. Percent of teen driver safety programs with evaluation plans | Numerator: Aggregate number of teen driver safety programs with evaluation plans Denominator: Total number of teen driver safety programs in the population of interest | Define the population of interest. Define "evaluation plan." Track the aggregate number of teen driver safety programs with evaluation plans in the population of interest. Additional data you may find useful to track: Type of programs. | Monthly |



References and Resources

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