Recreation and Home Injury Prevention

Purpose

The falls prevention 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 (ED) visits resulting from falls among children ages 0 through 9 and among adolescents ages 10 through 19.

The falls prevention 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.



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Driver Diagram

Primary Driver	Secondary Driver	Change Ideas	Recommended Measures
PD1: Societal level Culture of falls prevention	SD1: Knowledgeable partners and policy makers	 Educate policymakers about evidence-based components of concussion prevention and management laws and programs Partner with communities and organizations to engage and participate in concussion awareness campaigns Implement community-wide information and enhanced enforcement campaigns that utilize mass media and enforcement strategies Use social media, blogs, and infographics to increase parents'/caregivers' understanding of risks and preventative measures for falls 	20, 21
PD2: Organizational level Supportive organizational policies and protocols for the reduction of traumatic brain injuries in youth sports and the home	Playground strategies and equipment compliant with the U.S. Consumer Product Safety Commission standards	 Work with schools to improve compliance with the U.S. Consumer Product Safety Commission's voluntary standards and ASTM codes related to playground layout, sightlines, surfacing, heights, protrusions, age-appropriate equipment, and age separation Work with city, state, and community-maintained parks to improve compliance with the U.S. Consumer Product Safety Commission's voluntary standards and ASTM codes related to playground layout, sightlines, surfacing, heights, protrusions, age-appropriate equipment, and age separation Work with commercial (non-residential) child care facilities to improve compliance with the U.S. Consumer Product Safety Commission's voluntary standards and ASTM codes related to playground layout, sightlines, surfacing, heights, protrusions, age-appropriate equipment, and age separation 	5, 6



Primary Driver	Secondary Driver	Change Ideas	Recommended Measures
PD2: (cont.) Supportive	SD2: Comprehensive	Develop a primary concussion training resource aligned with the CDC's Heads Up to High School Sports	1, 2, 3, 4, 5, 6, 7, 10, 11, 12,
organizational policies and protocols for the	training on the role of protective equipment,	2. Conduct outreach to non-school youth sports programs on the use of the CDC's Heads Up to Youth Sports or another approved course to train coaches, parents, and athletes in concussion prevention and management	13, 14, 15, 16
reduction of traumatic brain injuries in youth	game rules, and fair play in preventing	3. Conduct outreach to hospitals and community health centers on health care providers' completion of the CDC's Heads Up to Clinicians: Addressing Concussion in Sports among Kids and Teens or another approved course	
sports and the home	traumatic brain injuries in youth sports	 Encourage schools, non-school youth sports programs, hospitals and community health centers to require relevant staff and participants to complete an approved concussion training course 	
	SD3:	Partner with sports programs on prompt removal from play and assessment of any	1, 5, 6, 12, 13,
	Traumatic brain injury prevention protocols	athlete who has sustained a concussion in order to provide proper medical treatment to the athlete and to reduce the likelihood of the athlete sustaining repeat concussions	14, 15
	developed and	2. Develop practice guidelines that limit player-to-player contact	
	enforced by schools and non-	3. Develop guidelines on consistent and proper use of protective equipment by athletes during practices and games	
	school youth sports programs	4. Partner with schools on reporting and sharing of information about traumatic brain injuries that occur during competition and practices to identify schools that need to improve traumatic brain injury prevention, as well as those that have been successful in preventing these injuries	
		5. Partner with non-school youth sports programs on reporting and sharing of information about traumatic brain injuries that occur during competition and practices to identify non-school youth sports programs that need to improve traumatic brain injury prevention, as well as those that have been successful in preventing these injuries	



Primary Driver	Secondary Driver	Change Ideas	Recommended Measures
PD2: (cont.)		Partner with schools to establish protocols for classroom accommodations for students who have sustained a concussion	
Supportive organizational policies and protocols for the reduction of traumatic brain injuries in youth sports and the home	SD4: Health care providers engaged in the prevention of traumatic brain injuries	 Conduct outreach to hospitals to improve the education and teach back opportunities provided to parents regarding the risk and prevention of repeat concussions after their child/teen has been seen in the emergency department for treatment of a concussion Partner with health care providers in hospitals, community health centers and schools on the use of evidence-based and standardized concussion assessment tools and guidelines Ensure that health care providers provide youth athletes and their parents/guardians with written instructions to share with their school, youth sports program, and coach on how to safely return to the playing field and the classroom after a concussion 	7, 16
	SD5: Use of falls prevention strategies and equipment in	1. Train home visitors to consistently use a home safety checklist, such as the American College of Preventive Medicine's <u>childhood injury risk assessment tool</u> , developed in partnership with the CDC, to work with families to reduce child safety hazards and to implement falls prevention strategies in the home, including strategies to prevent falls from furniture, bicycles, stairs, and windows	8, 9, 17, 18, 19
	the home	Train personnel such as home visitors, firefighters, and EMTs on home safety audits and installation of window guards and stair gates, as well as smoke and CO detectors	
		3. Distribute free or low-cost window guards and stair gates to parents of young children through safety resource centers and other sources	
		 Install window guards and stair gates in homes to prevent falls from windows among young children 	



The state of the s	Secondary Oriver	Change Ideas	Recommended Measures
Relational/ Di Individual level ar tra Families and athletes	Direct outreach and training on raumatic brain njuries with athletes and amilies	 Conduct direct outreach to parents through links such as the PTA to provide additional anticipatory guidance on brain injury prevention Educate coaches, athletic trainers, sports officials, school nurses, parents, and athletes on the role of protective equipment and game rules in preventing traumatic brain injuries, as well as other injuries Partner with health care providers to give anticipatory guidance on traumatic brain injury prevention during child and adolescent wellness visits Partner with health care providers on teach back opportunities on falls prevention (including falls from furniture, bicycles, stairs, and windows) and the importance of active supervision to parents during child wellness visits 	7, 12, 13, 16, 17



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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 falls related fatalities • Rate of falls related hospitalizations • Rate of falls related ED visits 	 Percent of schools with model sports concussion policies Percent of schools requiring an approved concussion training course Percent of non-school youth sports programs requiring an approved concussion training course Percent of health care organizations requiring providers to take an approved concussion training course Percent of schools with a decrease in TBI occurring during competition and practices Percent of non-school youth sports programs with a decrease in TBI occurring during competition and practices Percent of health care organizations that give anticipatory guidance to caregivers on falls prevention Percent of home visiting sites that provide education to caregivers about falls prevention Number of homes receiving a home safety audit Percent of coaches, parents, and/or athletes who took an approved concussion training course Percent of health care providers who completed an approved concussion training course Percent of scaches who received training on the role of protective equipment in preventing injuries Percent of sports officials who received training on the role of game rules and fair play in preventing TBI Percent of schools reporting TBIs that occur during competition and practices Percent of onn-school youth sports programs reporting TBIs that occur during competition and practices Percent of child wellness visits during which a health care provider gives anticipatory guidance on falls prevention Number of sites distributing free or low-cost window guards or stair gates Number of homes in which window guards or stair gates are installed Percent of communities that participate in campaign



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State/Jurisdiction Outcome Measures

Measure	Numerator	Denominator	Data Collection Methods	Reporting Frequency
Rate of falls related fatalities	Total number of falls related deaths among children ages 0 through 9 and adolescents ages 10 through 19	Population of children ages 0 through 9 and adolescents ages 10 through 19 over the same time period	Work with state epidemiologist, using the Falls Prevention Outcome Data Worksheet	Monthly or Quarterly depending upon what is feasible for your state/jurisdiction
Rate of falls related hospitalizations	Total number of falls related hospitalizations among children ages 0 through 9 and adolescents ages 10 through 19	Population of children ages 0 through 9 and adolescents ages 10 through 19 over the same time period	Work with state epidemiologist, using the Falls Prevention Outcome Data Worksheet	Monthly or Quarterly depending upon what is feasible for your state/jurisdiction
Rate of falls related ED visits	Total number of falls related ED visits among children ages 0 through 9 and adolescents ages 10 through 19	Population of children ages 0 through 9 and adolescents ages 10 through 19 over the same time period	Work with state epidemiologist, using the Falls Prevention Outcome Data Worksheet	Monthly or Quarterly depending upon what is feasible for your state/jurisdiction



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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 schools with model sports concussion policies	Numerator: Aggregate number of schools with model sports concussion policies Denominator: Total number of schools in the population of interest	Define the population of interest. Define "model sports concussion policy." Track the aggregate number of schools with model sports concussion policies in the population of interest. Additional data you may find useful to track: Type and location of schools.	Monthly
2. Percent of schools requiring an approved concussion training course	Numerator: Aggregate number of schools requiring an approved concussion training course Denominator: Total number of schools in the population of interest	 Define the population of interest. Track the number of schools requiring the CDC's Heads Up concussion training course or other approved and aligned course in the population of interest. Ask schools to respond to the following question: Does your school require coaches, parents, athletes, and/or others to take the CDC's Heads Up concussion training course or other approved and aligned course? Additional data you may find useful to track: If yes, who of the following are required to take the course? (Coaches, Parents, Athletes, Other) How many people took the approved course during the previous quarter? Of those who took the course, how many were coaches, parents, athletes, other? Of those who took the concussion training course, how many successfully completed it? 	Monthly



M	easure	Numerator / Denominator	Data Collection	Reporting Frequency
3.	Percent of non- school youth sports programs requiring an approved concussion training course	Numerator: Aggregate number of non-school youth sports programs requiring an approved concussion training course Denominator: Total number of non-school youth sports programs in the population of interest	 Define the population of interest. Track the number of non-school youth sports programs requiring the CDC's Heads Up concussion training course or other approved and aligned course in the population of interest. Ask the non-school youth sports programs to respond to the following question: Does your youth sports program require coaches, parents, athletes, and/or others to take the CDC's Heads Up concussion training course or other approved and aligned course? Additional data you may find useful to track: If yes, which of the following are required to take the course? (Coaches, Parents, Athletes, Other) How many people took the approved course during the previous quarter? Of those who took the course, how many were coaches, parents, athletes, other? Of those who took the concussion training course, how many successfully completed it? 	Monthly
4.	Percent of health care organizations requiring providers to take an approved concussion training course	Numerator: Aggregate number of health care organizations requiring providers to take an approved concussion training course Denominator: Total number of health care organizations in the population of interest	Define the population of interest (e.g. hospitals, primary care practices, community health centers, etc.). Define "health care providers." Track the number of health care organizations requiring providers to take the CDC's Heads Up to Clinician's concussion training course or other approved and aligned course in the population of interest. Ask the health care organizations to respond to the following questions: 1. Does your health care organization require providers to take the CDC's Heads Up to Clinicians concussion training course or other approved and aligned course?	Monthly



M	easure	Numerator / Denominator	Data Collection	Reporting Frequency
			 Additional data you may find useful to track: If yes, which of the following are required to take the course? (Pediatricians, Family Practice Physicians, Primary Care Physicians, Nurse Practitioners, Nurses, Other) How many health care providers at your health care organization took the approved course during the previous quarter? Of those who took the course, how many were pediatricians, family practice physicians, primary care physicians, nurse practitioners, nurses, other? Of those who took the concussion training course, how many successfully completed it? 	
5.	Percent of schools with a decrease in TBI occurring during competition and practices	Numerator: Aggregate number of schools reporting a decrease in traumatic brain injuries that occur during competition and practices Denominator: Total number of schools in the population of interest	Define the population of interest. Analyze reports provided by schools on the number of traumatic brain injuries that occurred during competition and practices. Track the number of schools in the population of interest reporting a decrease in traumatic brain injuries that occur during competition and practices. Additional data you may find useful to track: Type of school; contextual information (e.g. competition, practice, activity, etc.).	Quarterly
6.	Percent of non- school youth sports programs with a decrease in TBI occurring during competition and practices	Numerator: Aggregate number of non-school youth sports programs reporting a decrease in TBI that occur during competition and practices Denominator: Total number of youth sports programs in the population of interest	Define the population of interest. Analyze reports provided by non-school youth sports programs on the number of traumatic brain injuries that occurred during competition and practices. Track the number of non-school youth sports programs in the population of interest reporting a decrease in traumatic brain injuries that occur during competition and practices. Additional data you may find useful to track: Type of school; contextual information (e.g. competition, practice, activity, etc.).	Quarterly



M	easure	Numerator / Denominator	Data Collection	Reporting Frequency
7.	Percent of health care organizations that give anticipatory guidance to caregivers on falls prevention	Numerator: Aggregate number of health care organizations that give anticipatory guidance to caregivers on falls prevention 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 falls prevention. Additional data you may find useful to track: Type of health care organization.	Monthly
8.	Percent of home visiting sites that provide education to caregivers about falls prevention	Numerator: Aggregate number of home visiting sites that provide education to caregivers about falls prevention Denominator: Total number of home visiting sites in the population of interest	Define the population of interest. Define "education to caregivers about falls prevention." Track the aggregate number of home visiting sites in the population of interest that provide education to caregivers about falls prevention. Additional data you may find useful to track: Number of visits in which education is provided.	Monthly
9.	Number of homes receiving a home safety audit	N/A	Define where you are working in your state or jurisdiction. Track the aggregate number of homes receiving a home safety audit. Note: It is recommended to define a goal for this measure. Additional data you may find useful to track: Type of home; organization(s) providing audits.	Monthly



Measure	Numerator / Denominator	Data Collection	Reporting Frequency
10. Percent of coaches, parents, and/or athletes who took an approved concussion training course	Numerator: Number of coaches, parents, and/or athletes who took an approved concussion training course Denominator: Total number of coaches, parents, and/or athletes in the population of interest	Define the population of interest (e.g., coaches, parents, and/or athletes in specific schools and programs that actively engage in sports). Track the number of coaches, parents, and/or athletes in the population of interest who took an approved concussion training course. Track samples of 20. Additional data you may find useful to track: Segment the data into number coaches, number of parents, and/or number of athletes who took the approved course by the start of the season; type of sport(s) athlete plays.	Monthly
11. Percent of health care providers who completed an approved concussion training course	Numerator: Number of health care providers who completed an approved concussion training course Denominator: Total number of health care providers in the population of interest	Define the population of interest. Track the number of health care providers in the population of interest who took an approved concussion training course. Track samples of 20.	Monthly
12. Percent of coaches who received training on the role of protective equipment in preventing injuries	Numerator: Number of coaches who received training on the role of protective equipment in preventing injuries Denominator: Total number of coaches in the population of interest	Define the population of interest. Track the number of coaches in the population of interest who received training on the role of protective equipment in preventing injuries. Track samples of 20. If you aren't able to track samples of 20, track as many coaches up to 20. Additional data you may find useful to track: Number of coaches who received training by the start of the season; type of sport(s).	Monthly



M	easure	Numerator / Denominator	Data Collection	Reporting Frequency
13	. Percent of sports officials who received training on the role of game rules and fair play in preventing TBI	Numerator: Number of sports officials who received training on the role of game rules and fair play in preventing TBI Denominator: Total number of sports officials in the population of interest	Define the population of interest. Track the number of sports officials in the population of interest who received training on the role of game rules and fair play in preventing TBI. Track samples of 20. If you aren't able to track samples of 20, track as many sports officials up to 20. Additional data you may find useful to track: Number of sports officials who received training by the start of the season; type of sport(s).	Monthly
14	Percent of schools reporting TBIs that occur during competition and practices	Numerator: Aggregate number of schools reporting TBIs that occur during competition and practices Denominator: Total number of schools in the population of interest	Define the population of interest. Track the aggregate number of schools in the population of interest that provide reports on number of TBI that occur during competition and practices. Additional data you may find useful to track: Type of school; contextual information (e.g. competition, practice, activity, etc.).	Monthly
15	. Percent of non- school youth sports programs reporting TBIs that occur during competition and practices	Numerator: Aggregate number of non-school youth sports programs reporting TBIs that occur during competition and practices Denominator: Total number of non-school youth sports programs in the population of interest	Define the population of interest. Track the aggregate number of non-school youth sports programs in the population of interest that provide reports on number of TBI that occur during competition and practices. Additional data you may find useful to track: Type of school; contextual information (e.g. competition, practice, activity, etc.).	Monthly



Measure	Numerator / Denominator	Data Collection	Reporting Frequency
16. Percent of wellness vis during which health care provider given anticipatory guidance of prevention	number of child wellness h a visits in which a provider gives anticipatory guidance on falls prevention Denominator: Total number	Define the population of interest (e.g., wellness visits in specific health care clinics, hospitals, etc.). Track the number of child wellness visits in the population of interest in which a provider gives anticipatory guidance on falls prevention. Track samples of 20 over time. Additional data you may find useful to track: Number of children seen for wellness visits; number of times during the visits guidance was provided to the patient or caregiver.	Monthly
17. Percent of visiting site provide education t parents abordalls preven	that provide education to parents about falls prevention	Define the population of interest. Define "educates parents about falls prevention." Additional data you may find useful to track: Number of home visits conducted; number of home visits in which education was provided.	Monthly
18. Number of distributing or low-cost window gua or stair gate	free	Define where you are working in your state or jurisdiction. Track the aggregate number of sites distributing free or low-cost window guards or stair gates. Note: It is recommended to define a goal for this measure. Additional data you may find useful to track: Type of site; number of window guards distributed; number of stair gates distributed.	Monthly
19. Number of homes in w window gua or stair gate installed	rds	Define where you are working in your state or jurisdiction. Track the aggregate number of homes in which window guards or stair gates are installed. Note: It is recommended to define a goal for this measure. Additional data you may find useful to track: Type of home; number of window guards installed; number of stair gates installed.	Monthly



Measure	Numerator / Denominator	Data Collection	Reporting Frequency
20. Percent of policymakers educated on EB components of concussion prevention and management laws and programs	Numerator: Aggregate number of policymakers educated on EB components of concussion prevention and management laws and programs Denominator: Number of policymakers in the population of interest	Define the population of interest. Define "educated." Track the aggregate number of policymakers educated on evidence-based (EB) components of child passenger safety laws and effective strategies for enforcing those laws in the population of interest. Additional data you may find useful to track: Number and type of interactions with policymakers.	Monthly
21. 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	Define the population of interest. Define "participate." Track the aggregate number of communities in the population of interest that participate in the campaign. Additional data you may find useful to track: Number and type of sites/organizations in your communities.	Monthly



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References and Resources

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CDC. Heads Up to Clinicians: Addressing Concussion in Sports among Kids and Teens. Available at: https://www.cdc.gov/concussion/headsup/clinicians/

CDC Heads Up Concussion and Helmet Safety App. Available at: http://www.cdc.gov/headsup/helmets/index.html

CDC Heads Up Online Concussion Training Course. Available at: http://www.cdc.gov/headsup/highschoolsports/training/index.html

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