#IDKData

What the New IPP Needs to Know

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Trauma Prevention Coordinator
UC Davis Health
Objectives

- Explain the importance of data for use in priority setting, program planning, quality improvement, evaluation and advocacy in injury prevention.

- Demonstrate use of national, state, local and trauma center data identify injury prevention priorities.

- Describe how injuries are identified and tracked in a trauma registry.

- Create a trauma center data request to summarize an injury priority in your IVP program.
Disclaimer

NO ACTUAL DATA WERE USED IN THE MAKING OF THIS PRESENTATION
Demystifying Data

For our purposes data is/are:

- A collection of facts or information we use to describe injuries and outcomes
- Numbers used to describe or compare a group or population
- Used to measure counts, proportions, rates, etc. (e.g. injuries)
- Comprised of clearly defined variables (e.g. age, gender, e-code, etc.)
How We Use Data

- Determine Priorities
- Plan Interventions
- Evaluate Programs
- Advocate
Determining Program Priorities
Priority is Relative

Injuries?
Fatalities?
Community concerns?

Program Capacity
Funding
Resources
Starting with the Basics – What’s Required

1. ACS verification (Chapter 18)
   - “One of the major causes of injury in the community”
   - “Based on local trauma registry and epidemiologic data”

2. State designation
   - Varies by state
Working with Injury Data
Deaths are the Tip of the Iceberg

- Fatal injuries
- Hospitalized injuries
- Injuries treated in ED
- Injuries treated in clinic
- No medical treatment
Sources of Injury Data

- Hospital records
- Law enforcement records
- Traffic collision reports
- Health behavior surveys
- Coroner reports
National Injury Data Sources

- Inventory of National Injury Data Systems
- National Electronic Injury Surveillance System (NEISS)
- Centers for Disease Control WISQARS (Web-based Injury Statistics Query and Reporting System) Data
- Behavioral Risk Factor Surveillance System (BRFSS)
- Youth Risk Behavior Survey (YRBS)
- Fatality Analysis Reporting System (FARS)
Example: Motor Vehicle Collision Injury Data

- Collision data (Police reports)
- EMS data (Run sheets)
- ED and Hospital Data (Electronic Medical Record)
- Registry Data (from EMR)
Purpose of the Trauma Registry

- Performance Improvement Process (PIP)
  - Trauma Quality Improvement Program (TQIP)
  - Hospital QI/QA
- National Trauma Database (NTDB) reporting
- Injury control and epidemiology
- Research and education
- Resource utilization
Typical Trauma Registry

1. Trained registrars collect patient information from EMR
2. Enter data into data management software or database
3. Most systems interface with EMR, automating some data abstraction
4. Registrars assign E-codes based on injuries and MD notes
5. Registry staff calculate AIS and ISS scores
6. Reported to NTDB, used for TQIP, injury surveillance, etc.
Proceed with Caution

- Registries follow national standards, but....
  - Each hospital sets own trauma activation criteria
  - Criteria are adjusted frequently – data variations
  - Does not usually represent the community
  - Quality depends on training and experience
ICD-10-CM – The Medical Codebook
International Classifications of Diseases, Tenth Revision, Clinical Modification

- Created by World Health Organization ICD-10
  - Medical diagnoses, procedures, injuries/cause of injuries
- ICD-10-CM (U.S. version of ICD-10)
- External Cause of Morbidity Codes (E-codes)
  - Define the mechanism of death or injury
  - Registry data – primary injury should have an e-code assigned
Example of ICD-10-CM E-code Categories

- **V00-V09**: Pedestrian injured in transport accident
- **V10-V19**: Pedal cycle rider injured in transport accident
- **V20-V29**: Motorcycle rider injured in transport accident
- **V30-V39**: Occupant of three-wheeled motor vehicle injured in transport accident
- **V40-V49**: Car occupant injured in transport accident
- **V50-V59**: Occupant of pick-up truck or van injured in transport accident
- **V60-V69**: Occupant of heavy transport vehicle injured in transport accident
- **V70-V79**: Bus occupant injured in transport accident
- **V80-V89**: Other land transport accidents
- **V90-V94**: Water transport accidents
- **V95-V97**: Air and space transport accidents
- **V98-V99**: Other and unspecified transport accidents
- **W00-W19**: Slipping, tripping, stumbling and falls
- **W20-W49**: Exposure to inanimate mechanical forces
- **W50-W64**: Exposure to animate mechanical forces
- **W65-W74**: Accidental non-transport drowning and submersion
- **W85-W99**: Exposure to electric current, radiation and extreme ambient air temperature and pressure
- **X00-X68**: Exposure to smoke, fire and flames
- **X10-X19**: Contact with heat and hot substances
- **X30-X39**: Exposure to forces of nature
- **X50-X59**: Overexertion and strenuous or repetitive movements
- **X52-X58**: Accidental exposure to other specified factors
- **X71-X83**: Intentional self-harm
- **X92-V09**: Assault
Example of ICD-10-CM an E-code

A driver who collided with a light pole – V47.0XXA

ICD-10-CM Codes > V00-Y99 Car occupant injured in transport accident >

Car occupant injured in transport accident V40-V49 >

Codes

- V47 Car occupant injured in collision with fixed or stationary object
  - V47.0 Car driver injured in collision with fixed or stationary object in nontraffic accident
    - V47.0XXA ...... initial encounter
    - V47.0XXD ...... subsequent encounter
    - V47.0XXS ...... sequela
  - V47.1 Car passenger injured in collision with fixed or stationary object in nontraffic accident
    - V47.1XXA ...... initial encounter
    - V47.1XXD ...... subsequent encounter
    - V47.1XXS ...... sequela
Registry Data Reports: Where to Start

- Talk to your TPM and registrar
  - Who can give you the data?
  - How are requests submitted?
  - In what format will it be sent to you?
- Ask for the data dictionary/codebook
  - Be familiar with the database variables
- Be vigilant about protecting PHI (HIPAA)
- Ask you will receive the data (Spreadsheet, summary, etc.)
Warning - You Get What You Ask For

“How many MVC patients do we treat?”

“How many male drivers injured in a motor vehicle collision did we treat in 2018 who were between the ages of 16-20 y/o, had a BAL > .08”
Framing a Trauma Registry Data Request

- Type of Injury (ICD-10 E-code)
- Gender
- Ages or age range
- Date range (months, year, grant year, etc.)
- Are you interested in:
  - Race or ethnicity
  - Zip code of injury
  - Safety equipment used
Trauma Registry – It’s Like a Data Buffet

- Demographic information
- Injury Severity Score (ISS)
- Admission type
- Discharge location
- Length of stay
- Procedures
- Blood alcohol level
Presenting Your Data
Accurate Representation is Key

Describe the purpose of the data
- Define a problem
- Show outcomes, etc.

Be clear about what you are describing
- Demographics
- Time frame
- Location, etc.

Present to your intended audience
- Trauma surgeons
- Media
- Community group, etc.

Don’t tweak the data
- Professional integrity
When Presenting Data – Always Include...

<table>
<thead>
<tr>
<th>Source of data</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Registry, Hospital discharge, corner etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Demographic</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Age, Gender, Race, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time frame</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Year, Date Range, Grant Term, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What’s being measured</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Injuries, Fatalities, ED Visits, etc.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>• County, City, Zip code, etc.</td>
</tr>
</tbody>
</table>
## 10 Leading Causes of Injury Deaths by Age Group Highlighting Unintentional Injury Deaths, United States – 2017

<table>
<thead>
<tr>
<th>Rank</th>
<th>&lt;1</th>
<th>1-4</th>
<th>5-9</th>
<th>10-14</th>
<th>15-24</th>
<th>25-34</th>
<th>35-44</th>
<th>45-54</th>
<th>55-64</th>
<th>65+</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Homicide Unspecified 139</td>
<td>Unintentional MV Traffic 302</td>
<td>Unintentional Drowning 125</td>
<td>Suicide Suffocation 280</td>
<td>Unintentional Poisoning 5,039</td>
<td>Unintentional Poisoning 8,711</td>
<td>Unintentional Poisoning 5,182</td>
<td>Unintentional Poisoning 5,471</td>
<td>Unintentional Poisoning 5,084</td>
<td>Unintentional Fall 7,667</td>
<td>Unintentional Poisoning 38,659</td>
</tr>
<tr>
<td>3</td>
<td>Unintentional MV Traffic 50</td>
<td>Unintentional MV Traffic 50</td>
<td>Unintentional Fire/Burn 54</td>
<td>Suicide Suffocation 185</td>
<td>Homicide Firearm 4,391</td>
<td>Homicide Firearm 4,094</td>
<td>Suicide Firearm 3,099</td>
<td>Suicide Suffocation 3,937</td>
<td>Suicide Firearm 4,219</td>
<td>Suicide Firearm 5,996</td>
<td>Unintentional Fall 16,338</td>
</tr>
<tr>
<td>4</td>
<td>Homicide Other Spec., Classifiable 70</td>
<td>Unintentional Suffocation 110</td>
<td>Homicide Firearm 78</td>
<td>Homicide Firearm 126</td>
<td>Suicide Suffocation 2,959</td>
<td>Suicide Firearm 3,458</td>
<td>Suicide Suffocation 2,562</td>
<td>Suicide Suffocation 2,294</td>
<td>Unintentional Fall 2,760</td>
<td>Suicide Unspecified 5,123</td>
<td>Suicide Firearm 23,854</td>
</tr>
<tr>
<td>5</td>
<td>Undetermined Suffocation 50</td>
<td>Unintentional Suffocation 50</td>
<td>Suicide Suffocation 96</td>
<td>Unintentional Drowning 110</td>
<td>Suicide Suffocation 2,321</td>
<td>Suicide Suffocation 3,063</td>
<td>Homicide Firearm 2,501</td>
<td>Suicide Suffocation 1,084</td>
<td>Suicide Suffocation 1,681</td>
<td>Unintentional Suffocation 3,920</td>
<td>Homicide Firearm 14,542</td>
</tr>
<tr>
<td>6</td>
<td>Unintentional Drowning 45</td>
<td>Unintentional Poisoning, Other 54</td>
<td>Unintentional other Land Transport 25</td>
<td>Undetermined Suffocation 469</td>
<td>Suicide Firearm 887</td>
<td>Suicide Suffocation 1,080</td>
<td>Homicide Firearm 1,447</td>
<td>Suicide Poisoning 1,459</td>
<td>Suicide Suffocation 2,802</td>
<td>Suicide Suffocation 13,017</td>
<td>Suicide Suffocation 22,439</td>
</tr>
<tr>
<td>7</td>
<td>Undetermined Unspecified 37</td>
<td>Homicide Other Spec., Classifiable 45</td>
<td>Homicide Suffocation 15</td>
<td>Unintentional Drowning 50</td>
<td>Suicide Suffocation 463</td>
<td>Suicide Suffocation 785</td>
<td>Undetermined Poisoning 792</td>
<td>Unintentional Fall 1,248</td>
<td>Unintentional Fall 2,871</td>
<td>Unintentional Poisoning 6,948</td>
<td>Suicide Suffocation 13,911</td>
</tr>
<tr>
<td>8</td>
<td>Homicide Suffocation 26</td>
<td>Homicide Firearm 44</td>
<td>Homicide Suffocation 14</td>
<td>Suicide Suffocation 29</td>
<td>Undetermined Drowning 280</td>
<td>Unintentional Poisoning 470</td>
<td>Unintentional Fall 1,522</td>
<td>Suicide Poisoning 887</td>
<td>Suicide Poisoning 811</td>
<td>Suicide Poisoning 1,278</td>
<td>Suicide Poisoning 6,948</td>
</tr>
<tr>
<td>9</td>
<td>Unintentional Natural/Environmental 15</td>
<td>Unintentional Suffocation 14</td>
<td>Homicide Suffocation 39</td>
<td>Undetermined Poisoning 792</td>
<td>Suicide Suffocation 268</td>
<td>Suicide Poisoning 404</td>
<td>Homicide Fall 397</td>
<td>Suicide Suffocation 451</td>
<td>Suicide Poisoning 773</td>
<td>Suicide Poisoning 1,111</td>
<td>Suicide Poisoning 6,554</td>
</tr>
<tr>
<td>10</td>
<td>Three Tied 16</td>
<td>Unintentional Firearm 31</td>
<td>Two Tied 13</td>
<td>Unintentional Suffocation 35</td>
<td>Unintentional Fall 212</td>
<td>Suicide Poisoning 351</td>
<td>Suicide Poisoning 337</td>
<td>Suicide Poisoning 411</td>
<td>Suicide Poisoning 732</td>
<td>Suicide Poisoning 919</td>
<td>Suicide Poisoning 4,459</td>
</tr>
</tbody>
</table>

Data Source: National Center for Health Statistics (NCHS), National Vital Statistics System.

Produced by: National Center for Injury Prevention and Control, CDC using WISQARS™.
Putting Injury Data into Perspective

- Hospital data
- County data
- State data
- National data
Putting Injury Data into Perspective

UC Davis = 255 (Registry)
Sacramento County = 634 (EpiCenter)
California = 10,806 (EpiCenter)
U.S. = 71,089 (WISQARS)

Motor vehicle occupant 2015
Non-fatal injuries: Ages 0-8 years
Demographics – Why Clarity Matters

862 Injury Falls at UCDH in 2018

- 784 patients were 65 year and older
- 68 patients were 45-65 years old
- 10 patients were 1-5 years old
50 people killed in car crashes in Sacramento!

Since 2014, an average of 10 people have died each year from car crashes in Sacramento County.

From 1/1/2014 to 12/30/2018, Sacramento County had a total of 50 MVC fatalities.
Location – Why Clarity Matters

UC Davis Medical Center (2017) – 47 pediatric falls from structures ★
Social Framing – It’s Relatable

There were 243 non-fatal motor vehicle collision injuries among children ages 5-10 years old in Sacramento County 2018.

It would take 4 school buses to carry all the children who were injured in preventable car crashes in Sacramento County last year.
Infographics

FALLS AMONG OLDER ADULTS ARE

COSTLY

$50 Billion Annually
$29 Billion Medicare
$12 Billion Private/Out-of-Pocket
$9 Billion Medicaid

COMMON

1 in 4
Older adults (65+) falls each year

PREVENTABLE

Clinicians can use STEADI to prevent falls & reduce costs

Fall Death Rates in the U.S.
INCREASED 30%
FROM 2007 TO 2016 FOR OLDER ADULTS

If rates continue to rise, we can anticipate
7 FALL DEATHS EVERY HOUR BY 2030

Learn more at www.cdc.gov/HomeandRecreationalSafety

I have so many questions
Demonstrating Your Programs Worth

A Basic Introduction to Program Evaluation
Objectives

- Describe the importance of evaluation, the “why” and “when” evaluation should be done.
- Explain the differences between formative, process, impact, and outcome evaluation.
- Provide examples of tools to demonstrate program worth.
“Without adequate evaluation, programs are simply not able to demonstrate the value of their work to stakeholders, and just as equally important, they are unable to demonstrate whether the interventions they are implementing are having an impact or not.”

“Often program planners possess a self-perceived opinion that the programs they conduct are evidence-based and/or believe they are utilizing evaluation effectively.”

“Studies show that program planners often believe the program’s reputation for effectiveness amongst its stakeholders is more important than objective evidence of effectiveness. “

Evaluation is one way of listening to the people you are trying to help.
## Categories of Information Produced by Evaluation

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information you already know.</strong></td>
<td>Indicates program is working well. Data about aspects of program that work well, that program staff knows about, and that should be publicized whenever possible.</td>
</tr>
<tr>
<td></td>
<td>Indicates program needs improvement. Data about aspects of program that need improvement, that staff knows about and hopes will not be found out. Staff is unlikely to mention these aspects to the evaluator.</td>
</tr>
<tr>
<td><strong>New information</strong></td>
<td>Indicates program is working well. Data about aspects of program that work well, but staff does not know about them. All evaluation uncovers some pleasant surprises, but program staff rarely expects them.</td>
</tr>
<tr>
<td></td>
<td>Indicates program needs improvement. Data about aspects of program that need improvement and about which staff is unaware. This is the type of information staff most expects when evaluation begins.</td>
</tr>
</tbody>
</table>
Include the Following Components in the Design of Your Program:

- A plan for pilot testing all the program’s plans, procedures, activities, and materials.
- A method for determining whether the program is working as it should and whether you are reaching all the people your program planned to serve.
- A system for gathering data you will need to evaluate the final results of your program.
Every Evaluation should contain these basic components

1. A Clear and Definite Objective
2. A Description of the Target Population
3. A Description of What is to be Evaluated
4. Specific Methods
5. Instruments to Collect Data
6. Raw Information
7. Processed Information
8. Analyses
## Stages of Evaluation

<table>
<thead>
<tr>
<th>Stages</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative</td>
<td>Formative evaluation is a way of making sure program plans, procedures, activities, materials, and modifications will work as planned. <strong>Begin formative evaluation as soon as the idea for a program is conceived.</strong></td>
</tr>
<tr>
<td>Process</td>
<td>The purpose of process evaluation is to learn whether the program is serving the target population as planned and whether the number of people being served is more or less than expected. <strong>Begin process evaluation as soon as the program goes into operation.</strong></td>
</tr>
<tr>
<td>Impact</td>
<td>The purpose of impact evaluation is to measure whatever changes the program creates in the target population’s knowledge, attitudes, beliefs, or behaviors. <strong>Collect baseline information for impact evaluation immediately before, or just as, the program goes into operation.</strong></td>
</tr>
<tr>
<td>Outcome</td>
<td>For ongoing programs (e.g., a series of safety classes taught each year to all third graders in your area), <strong>conduct outcome evaluation at specified intervals (e.g., every year, every 3 years, or every 5 years).</strong> The purpose is to learn how well the program succeeded in achieving its ultimate goal (i.e., decreasing injury-related morbidity and mortality).</td>
</tr>
</tbody>
</table>
## Types of Methods by Evaluation Stage

<table>
<thead>
<tr>
<th>Stage</th>
<th>Methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formative</td>
<td>• Personal Interviews with open-ended questions</td>
</tr>
<tr>
<td></td>
<td>• Focus Groups</td>
</tr>
<tr>
<td></td>
<td>• Participant Observation</td>
</tr>
<tr>
<td></td>
<td>• Reviewing Logic Models &amp; Strategy Plans</td>
</tr>
<tr>
<td></td>
<td>• Helps to develop program materials, messaging, course, re-directs</td>
</tr>
</tbody>
</table>
## Types of Methods by Evaluation Stage

<table>
<thead>
<tr>
<th>Stage</th>
<th>Methods</th>
</tr>
</thead>
</table>
| **Process** | • Direct Contacts  
  • Tracking forms (person or household contacted)  
  • Nature of the contact  
  • Number of items distributed  
  • Number of items returned  
  • Number of items loaned  
  • Number of items purchased  

  • Indirect Contacts  
  • Tracking forms (person or household contacted by your partners)  
  • Estimates |

![Evaluation Stages Diagram](image-url)
## Types of Methods by Evaluation Stage

<table>
<thead>
<tr>
<th>Stage</th>
<th>Methods</th>
</tr>
</thead>
</table>
| Impact | • Pre/Post Testing  
        | • Survey Instruments  
                      |   • Questionnaires with closed-end items  
        | • Direct Observations  
                      |   • Observed by watching  
                      |   • Observed by listening |

### Impact Stages:
- **Formative**
- **Process**
- **Impact**
- **Outcome**
## Types of Methods by Evaluation Stage

<table>
<thead>
<tr>
<th>Stage</th>
<th>Examples</th>
</tr>
</thead>
</table>
| Outcome   | • Convert data on behavior change into estimates of changes in morbidity and mortality.  
            **Must have three items:**  
            1. Data showing the effectiveness of the behavior in reducing morbidity or mortality.  
            2. Data showing the prevalence of the behavior before the program began.  
            3. Data showing the prevalence of the behavior after the program is complete. |
Three program phases with corresponding evaluation focus

Program Planning
- Assess
- Plan
- Develop or modify activities

Implementation
- Implement activities

Outcomes
- What is expected to change?

Formative Evaluation

Process Evaluation

Outcome Evaluation

Evaluation used during planning and implementation increases your ability to influence the outcomes.

At this point, we have very little control over the outcome.

Source: Fowler, C. C. (2011)
## Quantitative Methods Used in Evaluation

<table>
<thead>
<tr>
<th>Method</th>
<th>Purpose</th>
</tr>
</thead>
</table>
| Counting Systems                          | • Records the number of contacts with program participants and with people outside the program.  
                                            • Records the number of items a program distributes or receives.                                                                                                                                  |
| Surveys                                   | • Measures people’s knowledge, attitudes, beliefs, or behaviors.                                                                                                                                       |
| Experimental Studies                      | • Minimizes the effect of events outside the program on the assessment of a program’s effectiveness.                                                                                                 |
| Quasi-Experimental Studies                | • Used to reduce the effect of events outside the program on the assessment of the programs' effectiveness when experimental studies are impractical.                                                    |
| Converting data on behavior change into   | • Used to estimate the number of deaths or injuries prevented as a result of program participants changing their behavior.                                                                           |
| data on morbidity and mortality           |                                                                                                                                                                                                     |
| Converting data on behavior change into   | • Used to estimate the financial savings per dollar spent on your program.                                                                                                                             |
| data on cost savings                      |                                                                                                                                                                                                     |
### Evaluation Design Schematics

- **R** = Randomization
- **O₁** = The first, or baseline, observation
- **O₂** = The second observation (O₃ = the third, etc.)
- **X** = Intervention
- **P** = Placebo (P) usually indicates it may or may not be used.
- Intervention and comparison groups are shown on separate lines

<table>
<thead>
<tr>
<th>Schematic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>O₁ X O₂</td>
<td>This means there is only one group being measured.</td>
</tr>
<tr>
<td>RO₁ X O₂</td>
<td>People are randomly assigned to one of two groups. Both receive a baseline observation. One group is provided the intervention [X], the control group may or may not receive the placebo intervention (P).</td>
</tr>
</tbody>
</table>
## Variations

<table>
<thead>
<tr>
<th>Schematic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>RO₁ X O₂ O₃ O₄ RO₁ (P) O₂ O₃ O₄</td>
<td>Randomized pretest-posttest-control group-follow up design</td>
</tr>
<tr>
<td>RO₁ X O₂ O₃ O₄ O₅ O₆ O₇</td>
<td>Cross-over design</td>
</tr>
<tr>
<td>O₁ O₂ O₃ O₄ X O₅ O₆ O₇ O₈</td>
<td>Time series design</td>
</tr>
<tr>
<td>O₁ O₂ O₃ O₄ X O₅ O₆ O₇ O₈</td>
<td>Time series design with nonequivalent control group</td>
</tr>
</tbody>
</table>
Counting Systems

Data Collection Tool

Database Entry (REDCap)

Export Report

Analysis

Event Information

County of event
- Bastrop
- Blanco
- Burnet
- Caldwell
- Hays
- Travis
- Williamson

Event date/time

Event location name

04/26/2019 1:41pm

Confidential

Event street address

Event city

Event zipcode

Event length (hours)
- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8

Appointment Summary

Total number of scheduled appointments

Number of cancellations

Appointments Scheduled - Cancellations = apt_subtotal

Total number of walk-ins
SAFE KIDS AUSTIN 2019 Coalition Survey

Please provide feedback on the Safe Kids Austin coalition below. Your input will help guide coalition efforts and structure in 2019.

Are you currently a Safe Kids Austin member?
- Yes
- No

How important were the following coalition activities to you in 2018?

Coalition meetings
- Important
- Slightly important
- Not important
- Unsure/Not applicable

Networking opportunities
- Important
- Slightly important
- Not important
- Unsure/Not applicable

Trainings
- Important
- Slightly important
- Not important
- Unsure/Not applicable

Advocacy opportunities
- Important
- Slightly important
- Not important
- Unsure/Not applicable

Information sharing
- Important
- Slightly important
- Not important
- Unsure/Not applicable

Media opportunities
- Important
- Slightly important
- Not important
- Unsure/Not applicable
Safe Baby University Evaluation Summary

Pre-Post Tests Results

<table>
<thead>
<tr>
<th>Questions</th>
<th>Pre-test % correct</th>
<th>Post-test % correct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1. A car seat is installed tight enough when you cannot move it more than back and forth.</td>
<td>44%</td>
<td>100%</td>
</tr>
<tr>
<td>Q2. Texas law states that children under age ____ must ride in a child safety seat when in a car.</td>
<td>50%</td>
<td>100%</td>
</tr>
<tr>
<td>Q3. (Pre) CPR for children includes both giving breaths and chest compressions.</td>
<td>61%</td>
<td>94%</td>
</tr>
<tr>
<td>Q4. (Post) When doing CPR on an infant, you do the chest compressions with 2 fingers instead of 2 hands.*</td>
<td>58%</td>
<td>94%</td>
</tr>
<tr>
<td>Q5. The safest way for a 1 year old child to ride in a car is in a forward-facing car seat.</td>
<td>94%</td>
<td>100%</td>
</tr>
<tr>
<td>Q6. The safest place for a newborn baby to sleep is in bed with parents.</td>
<td>94%</td>
<td>100%</td>
</tr>
<tr>
<td>Q7. If you feel frustrated and need a break, it is okay to leave a crying baby alone for a few minutes in a safe space.</td>
<td>50%</td>
<td>71%</td>
</tr>
<tr>
<td>Q8. Most babies go through a stage of development where they cry more often and are not easily soothed.</td>
<td>72%</td>
<td>100%</td>
</tr>
<tr>
<td>Q9. Children who are drowning will always call out for help.</td>
<td>83%</td>
<td>94%</td>
</tr>
<tr>
<td>Q10. &quot;Floaties&quot; (inflatable arm bands) are just as safe as US Coast Guard Approved life jackets.</td>
<td>94%</td>
<td>100%</td>
</tr>
</tbody>
</table>

*Question 3 was different on pre-test and post-test because students were given an older version of the post-test by mistake so we cannot truly compare change in knowledge on this question.
### Formative Example

#### DCMC Kids in Cars (KIC) CPS Program FY19 Grant Logic Model

<table>
<thead>
<tr>
<th>Inputs</th>
<th>Activities</th>
<th>Outputs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial support • TxDOT grant funding • 20% match by DCMC</td>
<td>Purchase/replenish supplies and CSS to distribute to permanent check-up clinics and events.</td>
<td>Number of CSS purchased for check-up events and clinics.</td>
</tr>
<tr>
<td>Human resources • IP Manager • IP Coordinator 1 • IP Coordinator 2 • Program Coordinator 1 • Program Coordinator 2 • Department Assistant • Finance Analyst</td>
<td>Develop and maintain community partnerships.</td>
<td>Number of community organizations engaged with KIC activities.</td>
</tr>
<tr>
<td>Space Resources • Office Space • Storage Space • Permanent check-up clinic/evet space</td>
<td>Expand awareness of program services through social media and earned media efforts.</td>
<td>Number of social posts, earned media, and CPS events for community organizations.</td>
</tr>
<tr>
<td>Community contributions • CPSs • Public safety organizations • Head Start/daycares • Community/educational organizations • Media contacts • Safe Kids Austin</td>
<td>Distribute educational materials at check-up clinics and events, as well as to targeted community organizations.</td>
<td>Number of educational materials distributed through check-up clinics and events.</td>
</tr>
<tr>
<td>Other • Research/vbest practices • Time • Van Fuel/Maintenance • Child Safety Seats • Supplies</td>
<td>Facilitate community CSS check-up clinics and events utilizing CPSTs.</td>
<td>Number of CSS checked at check-up clinics and events.</td>
</tr>
<tr>
<td></td>
<td>Facilitate school based booster seat events.</td>
<td>Number of CSS distributed at check-up clinics and events.</td>
</tr>
<tr>
<td></td>
<td>Host CPST certification courses to train new techs.</td>
<td>Number of individuals educated at check-up clinics and events.</td>
</tr>
<tr>
<td></td>
<td>Host CPST update courses to re-certify current techs.</td>
<td>Number of booster seats distributed at school based event.</td>
</tr>
<tr>
<td></td>
<td>Entrance CSS check-up appointment service (i.e. TOTS Line).</td>
<td>Number of individuals who complete CPST certification course, and update courses.</td>
</tr>
<tr>
<td></td>
<td>Increase CPST knowledge and skills base of program staff.</td>
<td>Number of scheduled appointments.</td>
</tr>
<tr>
<td></td>
<td>Track and monitor project metrics (e.g. RedCap) to assist performance improvements.</td>
<td>Number of national and state conferences attended, and number of CPS-related meetings attended.</td>
</tr>
</tbody>
</table>

#### Outcomes

<table>
<thead>
<tr>
<th>Short</th>
<th>Medium</th>
<th>Long</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility • Increase access to CSS.</td>
<td>Action • To change behavior such that a larger proportion of the community (7 target counties) owns and properly uses CSS.</td>
<td>Conditions • To reduce mortality and severe injuries in children related to improper CSS use or non-use.</td>
</tr>
<tr>
<td>Learning • Increase awareness of positive outcomes associated with proper child safety seat use.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase knowledge regarding how to choose the correct CSS according to a child’s age, development, height and weight.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase skills among caregivers on how to properly install CSS in their vehicles, and use seats with their children.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Change attitudes regarding the importance of proper CSS use.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase capacity of CPSTs to provide CSS check-ups to 7 target counties.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Increase capacity of partner organizations to establish independent CSS check-up clinics.</td>
<td></td>
</tr>
</tbody>
</table>
**Process Example**

<table>
<thead>
<tr>
<th>TOTALS</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,445</td>
<td>CSS Distributed</td>
</tr>
<tr>
<td>-</td>
<td>Devices Loaned</td>
</tr>
<tr>
<td>1,547</td>
<td>CSS Inspected</td>
</tr>
<tr>
<td>774</td>
<td>CSS Inspection Hours</td>
</tr>
<tr>
<td>-</td>
<td>CSS Removed</td>
</tr>
<tr>
<td>61,355</td>
<td>PI&amp;E Distributed</td>
</tr>
<tr>
<td>29</td>
<td>CPSTs Trained</td>
</tr>
<tr>
<td>199</td>
<td>Events Conducted</td>
</tr>
<tr>
<td>1,699</td>
<td>Calls Received</td>
</tr>
<tr>
<td>221</td>
<td>CSS sold</td>
</tr>
<tr>
<td>-</td>
<td>CSS provided in Network</td>
</tr>
<tr>
<td>60</td>
<td>Safety Items Distributed</td>
</tr>
<tr>
<td>451</td>
<td>Safety Items Sold</td>
</tr>
<tr>
<td>10,065</td>
<td>Program Participants</td>
</tr>
<tr>
<td>$265,040.00</td>
<td>Funds Acquired</td>
</tr>
<tr>
<td>9</td>
<td>Grant Awarded</td>
</tr>
<tr>
<td>612</td>
<td>Social Media Posts</td>
</tr>
<tr>
<td>61</td>
<td>Media Segments</td>
</tr>
<tr>
<td>-</td>
<td>Legislative Visits</td>
</tr>
<tr>
<td>2</td>
<td>Legislative Testimonies</td>
</tr>
<tr>
<td>119</td>
<td>Volunteers Assisting</td>
</tr>
<tr>
<td>107</td>
<td>Inpatient Consults</td>
</tr>
</tbody>
</table>
Kids in Cars—FY18—Car Seat Check Up Inspection Participants

Map utilizes 592 records to generate a heat map of participants in the KIC coverage area. The greatest concentrations of participants are observed to be located in the Lockhart, San Marcos, Austin, Leander, Elgin, and the Georgetown area.

Data Source: KIC Inspection forms, KIC Participant Residence—FY2018, Dell Children’s Medical Center, Geocoded using Census 2010 dataset.
Impact Example
Outcome

Example
Questions?