

# Analysis of Parent Engagement in Child Injury Prevention

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# Presentation Topics

## Introduction

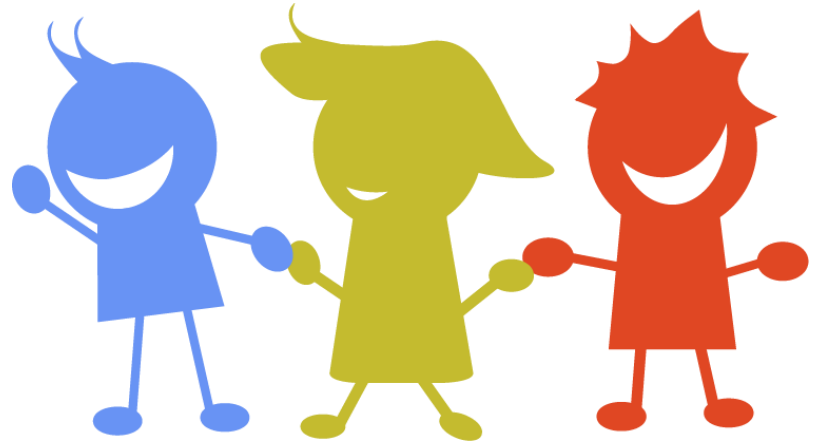
- Public Health Problem
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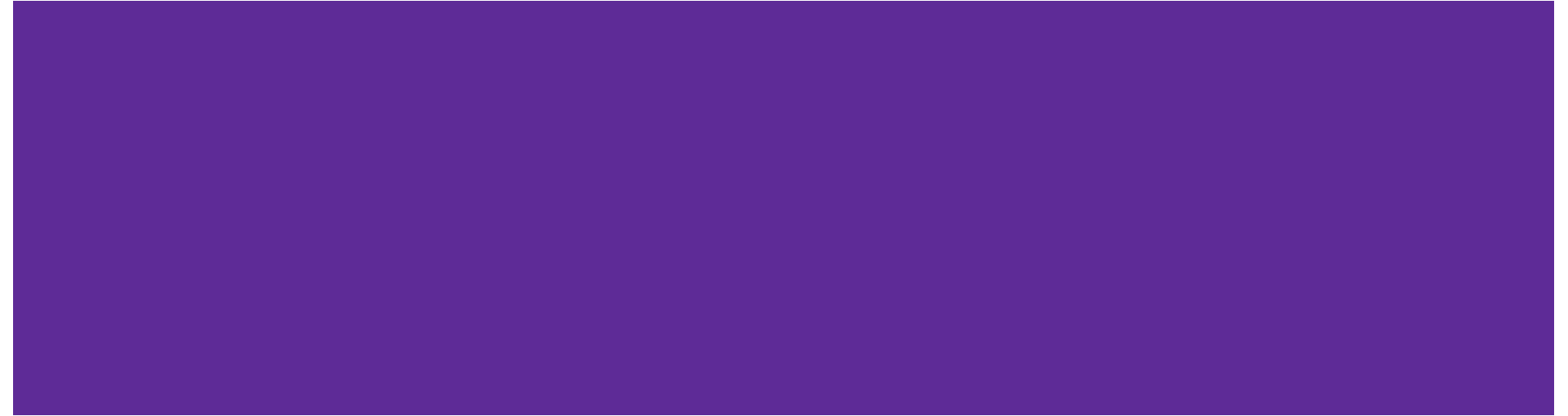
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# Introduction



# Public Health Problem

Child injury can be both **intentional and unintentional**, as well as **fatal and nonfatal**.

- **Unintentional injury** is the **top cause** of morbidity and mortality in children in the United States

Currently, the **Northeastern states** have some of the **lowest** child injury death rates in the country

- Massachusetts had 1.58 deaths per 100,000 children aged 0-14 in 2015.

The incidence of injury depends on many factors, including **age**: more children aged 0-4 and 10-14 suffered unintentional nonfatal injuries than children aged 5-9 in 2015.

# Public Health Problem

Nationally, the **most common** cause of nonfatal injuries is **falls**.

Other common causes include:

- Being struck by or against an object
- Overextension
- Motor vehicle accidents
- Cuts and pierces
- Poisoning
- Bites and stings



# Setting



**Agency:** Kiwanis Pediatric Trauma Institute (KPTI) at Tufts Medical Center

- Not-for-profit organization founded by Dr. Harold Gerrish in 1981 to treat injured children and research special needs of pediatric trauma patients
- Provides care for pediatric trauma patients up to the age of 15
- **3 components:** medical treatment, **community safety programs**, and research
- **Sample KPTI materials:**
  - B.E.L.T.S: classroom seatbelt safety program for 2nd graders
  - Information packets: concussions, child passenger safety, burn prevention, home safety, etc.
  - Electric outlet covers
  - And many more!

# Setting



## Project Description:

- Implementation of a community needs assessment survey to determine parent knowledge and engagement in child injury prevention.
- Analysis of survey responses to recommend improvements in KPTI services to address community needs.

**Population:** Parents of patients in the Pediatric Surgery, Gastroenterology, and Endocrinology clinics at TMC

# Aims and Objectives

**Aim 1:** Investigate parent knowledge and engagement in child injury prevention and safety techniques

- **Objective 1:** Implement survey and perform data analysis
- **Objective 2:** Determine community needs regarding child injury education

**Aim 2:** Provide recommendations for enhancement of KPTI services to improve child health, child safety, and parent engagement in child injury prevention.

- **Objective 3:** Develop methods to bridge gaps in parent knowledge and engagement in child injury prevention
- **Objective 4:** Review existing KPTI services to identify gaps in their community outreach



# Methods



# Methods

**Survey Development:** A previous ALE student adapted a pre-existing child injury prevention survey; Preceptor shortened this survey to one page and separated it into two sections (ages 0-15 and ages 0-7)

**Survey Implementation:** Administered by front desk staff at Pediatric Surgery, Gastroenterology, and Endocrinology clinics at TMC for 2 months; Collected every week

**Survey Analysis:** Database of responses kept in Excel; Percentage and frequency of responses for each question were calculated

**Literature Review:** Determine potentially effective methods to improve KPTI services.

# Methods - Survey Topics



**Types of Child Injury**



**Water Safety**



**Sports Safety**



**Home Safety**

# Methods - Survey Section 1



## Section 1: For parents of children ages 0-15:

Q1. Have smoke alarms been installed and maintained in your home?

- They are installed and maintained.       They are installed, but not maintained.  
 Our home does not have smoke alarms.       I don't know

Q2. Do your children know how to swim?  Yes, all of them.    Some of them.    No.    Not applicable\_\_\_\_\_

Q3. Do you throw out your unused or expired medicine, vitamins, and supplements?    Yes    No

Q4. Do your children wear protective gear during sports (For example, when in-line skating, use wrist guards, knee and elbow pads, and a helmet)?

- Every time    Frequently    Sometimes    Rare    Never    Not applicable\_\_\_\_\_

Q5. During the past year, has your child been injured for any of the following reason(s)? Check all that apply:

- |   |   |
|---|---|
| <input type="checkbox"/> Burns caused by hot liquids or steam       | <input type="checkbox"/> Burns caused by fire                                   |
| <input type="checkbox"/> Motor vehicle crash                        | <input type="checkbox"/> Pedestrian Hit   |
| <input type="checkbox"/> Choking on food or objects like small toys | <input type="checkbox"/> Fall   |
| <input type="checkbox"/> Drowning or near drowning                  | <input type="checkbox"/> Poisoning by household cleaners, vitamins or medicines |
| <input type="checkbox"/> Broken Bones                               | <input type="checkbox"/> Concussion   |
| <input type="checkbox"/> Other _____                                |   |

# Methods - Survey Section 2



## Section 2: For parents of children ages 0-7:

Q1. Do you have safety guards on the windows in your home? Yes No Not applicable\_\_\_\_\_



Q2. Do you supervise your children when they're in or near water (including young children in bathtubs)?  
Every time Frequently Sometimes Rare Never Not applicable\_\_\_\_\_



Q3. When in a motor vehicle, are your children buckled in a car seat or booster seat? Do you make sure the safe belt is on your child's shoulder not neck?  
Every time Frequently Sometimes Rare Never Not applicable\_\_\_\_\_



Q4. Do your children wear life jackets when they swim?  
Every time Frequently Sometimes Rare Never Not applicable\_\_\_\_\_

Q5. Do you supervise or restrict your child's use of stoves, ovens, or microwaves?  
Every time Frequently Sometimes Rare Never Not applicable\_\_\_\_\_



Q6. Is your water heater temperature set below 120 degrees so that bath water is a safe temperature for your young child? Yes No I'm not sure. Not applicable\_\_\_\_\_



Q7. Do you have stair gates and guard rails on the staircase in your home?  
Yes No I don't have stairs in my home. Not applicable\_\_\_\_\_

Q8. Do you keep medicines and household cleaners where young children can't get to them? Yes No

Q9 Where does your child sleep when you are sleeping?\_\_\_\_\_ (if under age one)

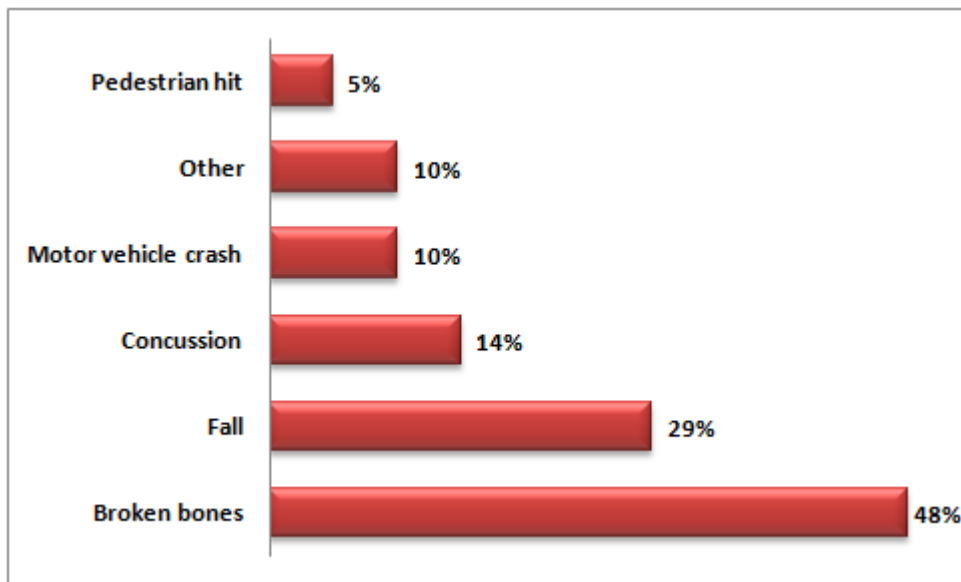
# Results





83 Responses!

# Results - Types of Child Injury Reported



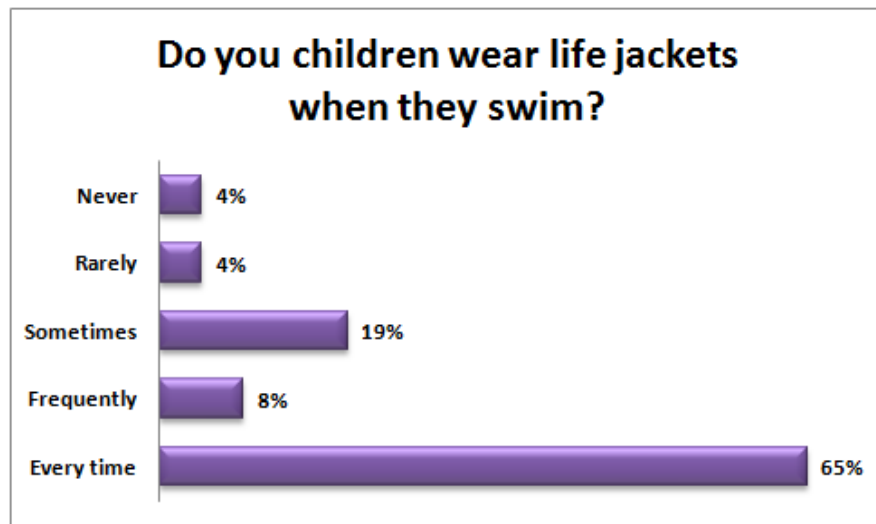
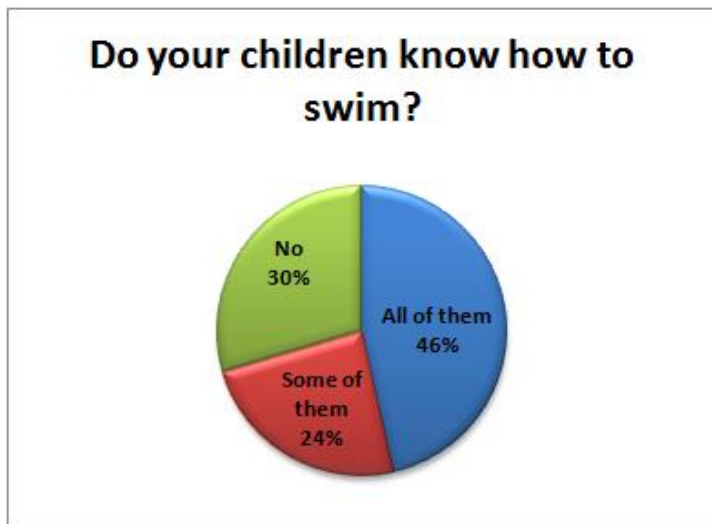
The **most common** type of child injury reported by parents of children aged 0-15 was **broken bones**.

The **second most common** type of child injury reported by parents of children aged 0-15 was **falls**.





# Results - Water Safety



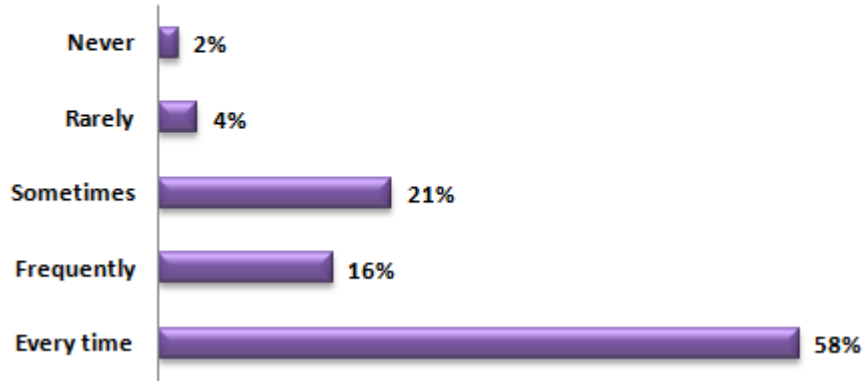
The **majority (70%)** of parents of **children ages 0-15** report **all or some** their children being able to swim.

The **majority (65%)** of parents of **children aged 0-7** report their children wearing life jackets **every time** they swim.

# Results - Sports Safety

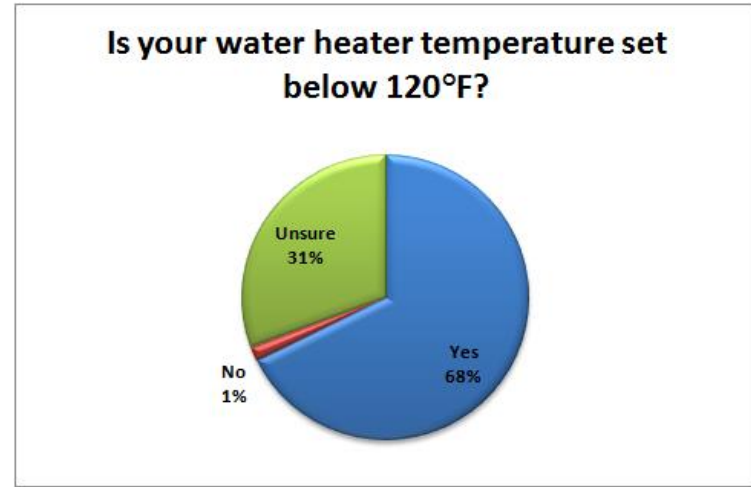
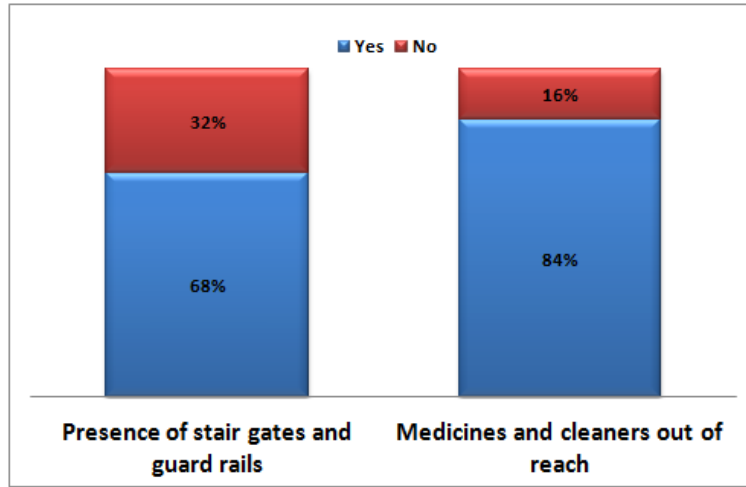


## Do your children wear protective gear during sports?



**58%** of parents report their children wearing protective gear **every time** they play sports.

# Results - Home Safety



**68%** of parents with stairs in their home report putting stair gates and guard rails on them.

**84%** of parents report keeping medicines and household cleaners out of reach from their children.

**31%** of parents report being **unsure** of their water heater temperature. However, **no** parents reported their children being affected by **burns**.

# Positive Results from Section 1

**99%** of parents with children aged 0-15 report having smoke alarms installed and maintained in their homes.



**95%** of parents with children aged 0-15 report they throw out unused or expired medicine, vitamins, and supplements.

# Positive Results from Section 2



**94%** of parents with children aged 0-7 indicate they supervise their children when they are in or near water every time.



**97%** of parents with children aged 0-7 indicate their child is buckled in a car seat or booster seat while in a motor vehicle every time.



**88%** of parents with children aged 0-7 report they supervise or restrict their child's use of stoves, ovens, or microwaves every time.

**90%** of parents with children aged 0-7 report their children sleeping in their own room or in their crib.

# Discussion and Recommendations



# Discussion

## Child Injury Prevention Topics Parents Are Engaged In:

- Smoke Alarm Safety
- Household Poison Safety
- Sleep Safety
- Seatbelt Safety

## Child Injury Prevention Topics To Focus On:

- Water Safety
- Kitchen Safety
- Stair Safety
- Sports Safety

# Recommendations

**KPTI Services to Expand On:** Helmets and Helmet Stickers, Concussion Information, I'm Safe! On My Bike in New England, Kiwanis Family Safety Day and Bike Rodeo

## **Potential Services to Develop at KPTI:**

- Educational Materials and Awareness Campaigns
- Life jackets of different sizes
- Youth Sports Safety Clinics
- Home Visits and/ or Injury Prevention Counseling
- KPTI reports

**Tailor future surveys** to specific child injury topics and to specific health outcomes



# Limitations

## Survey Methods:

- Self-reporting Bias
- Social Desirability Bias
- Asking leading questions
- Asking general questions
- Only offered in English



# Acknowledgements



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- All of the amazing staff at the 3 clinics we distributed the survey in





Questions?