

Reliability and Validity of Injury Reporting for the National Children's Study

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Background and Rationale

Injuries are the leading cause of death in children greater than 1 year of age in the U.S., and are a major cause of morbidity to children. For this reason, injuries were determined to be an important outcome and theme area for the National Children's Study.



Study Aims

This study was designed to:

- Refine definition and criteria for ascertainment of injuries
- Determine reliability of parent reporting of injuries in relation to other factors
- Determine interval of recall necessary for reporting of injuries in the National Children's Study

Study Plan

- Setting: a large regional closed panel HMO
- Participants were randomly sampled from all enrolled children in 1 week
 - Parents of 2,000 children aged less than 6 years with medically attended injury during the preceding year
 - Parents of 1,000 children aged less than 6 years without injury visit
- Data Collection
 - Telephone interview
 - Computerized health records

Data Collected

Interview

- Demographic: age of respondent household, SES
- Number of injuries during preceding year
- Most recent injury
 - Date of injury
 - Nature
 - Source and location of medical care – for medically attended injuries
 - Limitation of activity



Medical Record Abstraction

- The same injury data

Status of Data Collection

Interviews were conducted between March 1 and August 13, 2003

	With Known Injury	Without Injury
Total children sampled	2,807	1,527
Not located	185	6
Located, not interviewed	200	104
Refused interview	494	257
Language or hearing problem	45	26
Too ill	1	1
Child died	1	1
Sampling error	85	61
Completed interview	1,796	972

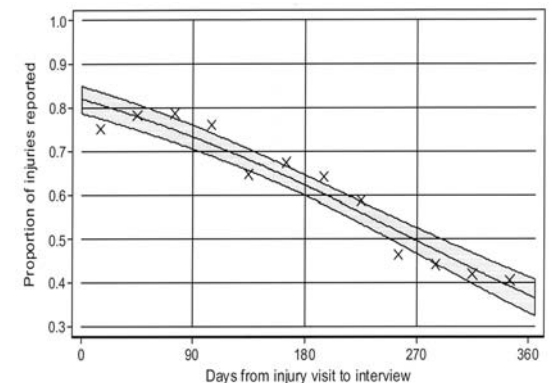
Proportion of Injuries Recalled

Recall Interval Months	Minor Clinic N = 756	Minor Urg. Care N = 597	Minor Ed./Hosp. N = 202	Major All N = 341
0	.71	.88	.92	.93
.5	.69	.87	.91	.93
1.5	.65	.85	.89	.91
3	.58	.81	.86	.88
4.5	.50	.76	.82	.85
6	.43	.70	.77	.80
12	.19	.41	.51	.56

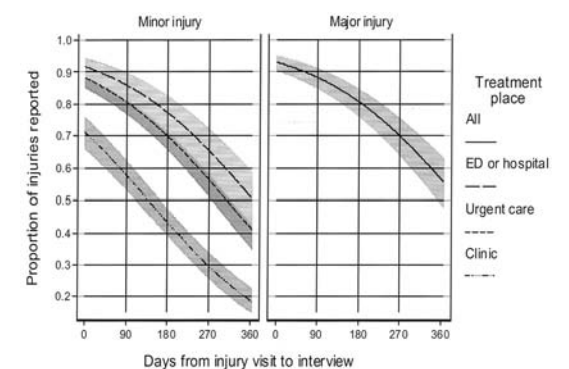
Conclusions

- To collect 90% of **major** injury events by parent report would require recall intervals no greater than **6 months**
- To collect 90% of **minor** injury events by parent report would require recall intervals no greater than **3 months**
- For reporting at 90% reliability, collection of medical event data will require either:
 - Capture directly from health care providers, or
 - Recall periods as short as 3 months or less, depending on severity and source of care

Proportion of Child Injuries with a Medical Visit Recalled by Parents – Days Since the First Visit for Each Injury



Recall of Injuries by Days Since the First Visit, Place of Treatment, and Major versus Minor Injury



Reference

Cummings P, Rivara FP, RS Thompson, RJ Reid. 2005. Ability of parents to recall the injuries of their young children. *Injury Prevention* 11:43-47.