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HEALTHCARE COST AND UTILIZATION PROJECT

HCUP Methods Series



Agency for Healthcare
Research and Quality



U.S. Department of Health and Human Services
Agency for Healthcare Research and Quality

Contact Information:
Healthcare Cost and Utilization Project (HCUP)
Agency for Healthcare Research and Quality
540 Gaither Road
Rockville, MD 20850
<http://www.hcup-us.ahrq.gov>

For Technical Assistance with HCUP Products:

Email: hcup@ahrq.gov

or

Phone: 1-866-290-HCUP

Recommended Citation: Barrett M, Steiner C. *Addendum to Healthcare Cost and Utilization Project (HCUP) E Code Evaluation Report (Updated for 2009)*. HCUP Methods Series Report # 2004-06. ONLINE November 1, 2011. U.S. Agency for Healthcare Research and Quality. Available: <http://www.hcup-us.ahrq.gov/reports/methods/methods.jsp>.

**HEALTHCARE COST AND UTILIZATION PROJECT (HCUP) E CODE EVALUATION
ADDENDUM WITH UPDATED INFORMATION FOR 2009**

HCUP Method Series #2004-06 *Healthcare Cost and Utilization Project (HCUP) E Code Evaluation* evaluates the reporting of external cause of injury codes (E codes) on injury-related discharges in the 2001 Healthcare Cost and Utilization (HCUP) databases. This addendum provides similar information on the 2006, 2008, and 2009 HCUP databases. Please reference the complete report for additional details on methods.

The percentage of injury discharges with an injury E code is defined as:

$$\frac{\text{\# of records with an injury diagnosis that have a valid injury E code}}{\text{\# of records with an injury diagnosis}} \times 100$$

The screens for identifying ICD-9-CM injury diagnoses and Injury E Codes are provided in Table 1 and Table 2. Injury diagnoses were counted only if they were reported as the first-listed or principal diagnosis. Injury E Codes were counted if they were reported in any position except the first-listed.

Table 1. ICD-9-CM Diagnosis Codes Used to Identify Injury Discharges

800-909.2, 909.4, 909.9	Fractures; dislocations; sprains and strains; intracranial injury; internal injury of thorax, abdomen, and pelvis; open wound of the head, neck, trunk, upper limb, and lower limb; injury to blood vessels; late effects of injury, poisoning, toxic effects, and other external causes, excluding those of complications of surgical and medical care and drugs, medicinal or biological substances.
910-994.9	Superficial injury; contusion; crushing injury; effects of foreign body entering through orifice; burns; injury to nerves and spinal cord; traumatic complications and unspecified injuries; poisoning and toxic effects of substances; other and unspecified effects of external causes.
995.5-995.59	Child maltreatment syndrome.
995.80-995.85	Adult maltreatment, unspecified; adult physical abuse; adult emotional/psychological abuse; adult sexual abuse; adult neglect (nutritional); other adult abuse and neglect.

Table 2. Injury E Codes

First character = "E" and <u>NOT ONE</u> of the following:	
E849.0-E849.9	Place of occurrence
E967.0-E967.9	Child and battering/maltreatment; perpetrator codes
E869.4	Accidental poisoning by second-hand tobacco smoke
E870-E879	Misadventures during surgical and medical care & surgical and medical procedures as the cause of abnormal reaction or later complication, without mention of misadventure at time of procedure
E930-E949	Drugs, medicinal, and biological substances causes adverse effects in therapeutic use

HCUP Inpatient Data: Percentage of Injury Discharges with an Injury E Code

HCUP Database	2009	2008	2006	2001
Nationwide Inpatient Sample (NIS)	92.33%	91.70%	88.10%	85.70%
State Inpatient Databases (SID)				
AR	98.29%	98.00%	98.30%	NA
AZ	98.83%	84.90%	83.50%	79.10%
CA	92.90%	93.00%	94.00%	95.00%
CO	98.91%	98.90%	99.00%	99.10%
CT	99.50%	99.40%	99.80%	99.40%
FL	97.90%	98.00%	95.00%	80.10%
GA	93.61%	95.40%	95.10%	94.20%
HI	90.83%	91.70%	95.10%	60.40%
IA	87.59%	86.60%	82.20%	80.70%
IL	85.22%	84.00%	56.90%	56.50%
IN	70.70%	67.60%	69.80%	NA
KS	93.04%	92.70%	88.00%	59.80%
KY	85.88%	84.40%	79.40%	76.40%
LA	82.46%	85.00%	NA	NA
MA	98.26%	98.60%	99.10%	98.60%
MD	96.04%	96.10%	97.00%	95.70%
ME	94.90%	93.40%	97.90%	87.00%
MI	82.60%	82.30%	83.40%	85.50%
MN	89.07%	89.00%	88.30%	85.00%
MO	97.78%	98.10%	99.20%	98.30%
MT	88.44%	NA	NA	NA
NC	95.37%	94.80%	97.30%	95.50%
NE	94.74%	95.00%	98.40%	95.90%
NH	98.33%	98.70%	99.80%	NA
NJ	95.34%	96.20%	97.90%	0.989
NM	88.98%	NA	NA	NA
NV	93.86%	92.70%	79.10%	NA
NY	99.03%	98.90%	100.00%	98.80%
OH	64.96%	65.00%	69.00%	NA
OK	91.26%	93.10%	64.80%	NA
OR	89.13%	89.00%	88.90%	87.90%
PA	97.29%	97.30%	NA	96.30%
RI	97.27%	97.20%	99.70%	92.80%
SC	97.63%	96.90%	95.10%	97.10%

SD	69.30%	67.20%	67.10%	NA
TN	96.42%	96.20%	93.80%	94.90%
TX	86.28%	85.30%	83.20%	71.80%
UT	90.40%	90.70%	92.60%	92.30%
VA	95.77%	85.90%	89.90%	78.10%
VT	96.89%	99.30%	99.40%	98.80%
WA	95.92%	93.50%	95.80%	97.30%
WI	99.45%	99.40%	100.00%	98.50%
WV	70.20%	68.00%	55.70%	52.60%
WY	77.88%	79.40%	NA	NA

Source: Agency for Healthcare Research and Quality, Healthcare Cost Utilization Project (HCUP), Nationwide Inpatient Sample (NIS) and State Inpatient Databases (SID). Not all States participate in HCUP.

HCUP Emergency Department Data: Percentage of Injury Discharges with an Injury E Code

HCUP Database	2009	2008	2006	2001
Nationwide Emergency Department Sample¹	93.16%	93.0%	92.2%	NA
State Emergency Department Databases²				
AZ	99.23%	96.80%	98.40%	NA
CA	95.25%	92.50%	92.90%	NA
CT	99.68%	99.40%	99.90%	99.40%
FL	97.82%	97.00%	93.20%	NA
GA	93.59%	96.20%	97.20%	NA
HI	91.84%	91.20%	97.50%	NA
IA	90.57%	89.20%	90.30%	NA
IL	85.48%	NA	NA	NA
IN	69.65%	71.00%	74.50%	NA
KS	90.61%	86.80%	85.90%	NA
KY	82.82%	79.30%	NA	NA
MA	99.51%	98.70%	99.90%	NA
MD	97.15%	96.60%	97.10%	94.90%
ME	91.02%	87.50%	NA	80.10%
MN	80.70%	71.50%	79.50%	71.90%
MO	99.45%	99.20%	99.70%	98.20%
NC	98.59%	97.50%	NA	NA
NE	97.99%	98.50%	99.40%	97.70%
NH	94.31%	92.40%	95.00%	NA
NJ	85.03%	85.00%	83.00%	NA
NY	99.64%	99.60%	100.00%	NA
OH	71.50%	69.30%	68.60%	NA
RI	98.40%	98.00%	NA	NA
SC	98.49%	95.90%	98.10%	97.60%
SD	91.92%	89.40%	87.90%	NA
TN	96.75%	95.30%	96.90%	97.30%
UT	95.46%	91.60%	97.30%	95.70%
VT	95.04%	98.20%	98.90%	NA
WI	99.44%	99.40%	100.00%	NA

Source: Agency for Healthcare Research and Quality, Healthcare Cost Utilization Project (HCUP), Nationwide Emergency Department Sample (NEDS) and State Emergency Department Databases (SEDD). Not all States participate in HCUP.

¹ The NEDS includes ED visits that do and do not result in admission to the same hospital.

² The SEDD includes only those ED visits that do not result in admission to the same hospital.