Validating Use of ICD-10 Diagnosis Codes in Identifying Physical Abuse Among Young Children

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OBJECTIVE: Evaluate the positive predictive value of International Classification of Disease, 10th Revision, Clinical Modification (ICD-10-CM) codes in identifying young children diagnosed with physical abuse. METHODS: We extracted 230 charts of children <24 months of age who had any emergency department, inpatient, or ambulatory care encounters between Oct 1, 2015 and Sept 30, 2020 coded using ICD-10-CM codes suggestive of physical abuse. Electronic health records were reviewed to determine if physical abuse was considered during the medical encounter and assess the level of diagnostic certainty for physical abuse. Positive predictive value of each ICD-10-CM code was assessed. RESULTS: Of 230 charts with ICD-10 codes concerning for physical abuse, 209 (91%) had documentation that a diagnosis of physical abuse was considered during an encounter. The majority of cases, 138 (60%), were rated as definitely or likely abuse, 36 cases (16%) were indeterminate, and 35 (15%) were likely or definitely accidental injury. Other forms of suspected maltreatment were discussed in 16 (7%) charts and 5 (2%) had no documented concerns for child maltreatment. The positive predictive values of the specific ICD-10 codes for encounters rated as definitely or likely abuse varied considerably, ranging from 0.89 (0.80-0.99) for T74.12 "Adult and child abuse, neglect, and other maltreatment, confirmed" to 0.24 (95% CI: 0.06-0.42) for Z04.72 "Encounter for examination and observation following alleged child physical abuse." CONCLUSIONS: ICD-10-CM codes identify young children who experience physical abuse, but certain codes have a higher positive predictive value than others.

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