

**REGIONAL RURAL INJURY STUDY III: THE ROLES OF INJURY TYPE AND INJURED BODY PART IN DETERMINING SHORT- AND LONG-TERM CONSEQUENCES OF INJURIES AMONG CHILDREN ON AGRICULTURAL OPERATIONS**

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**Background** Children living on agricultural operations are at high risk of work-related injury.

**Aims/Objectives/Purpose** Evaluate the effects of anatomical location of and type of injury on short- and long-term consequences among children (<20 years old) on agricultural operations.

**Methods** Data were collected for 1474 eligible agricultural operation households in Minnesota, Wisconsin, North Dakota, South Dakota and Nebraska. Two 6-month injury data collection periods followed baseline collection; annual follow-up evaluation data were collected for 2 years. By comparing youth in case and control households, changes between baseline and follow-up were examined. Multivariate logistic regression and cumulative logit models characterised associations between injury status and long-term health- and work-related characteristics.

**Results/Outcome** Anatomical locations most frequently injured among youth were legs (39%) and arms (35%). Frequently occurring injury types included fractures/dislocations (27%) and sprains/strains (23%). Brain/spine injuries, while infrequent (5%), were among the most severe: all required treatment by a health care professional. Characteristics of youths in case households were compared to those in control households at different intervals post-injury reporting period: youths with brain/spine injuries were seven times more likely to have trouble with pain/discomfort at 1 year; arm and leg injuries were associated with lower odds of feeling happy at 6 months (OR 0.3; 95% CI 0.1 to 0.9); fractures/dislocations were associated with elevated risks of not completing work/chores at 1 year.

**Significance/Contribution to the Field** Short- and long-term consequences of injuries among youths on agricultural operations differ by injury type and anatomical location, interfering with regular activities, and impacting work productivity.