

# One-Time Surveys

## Approach to minor injuries in non-ambulatory children

February 2015

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### Highlights

- A one-time CPSP survey revealed that 65% of Canadian paediatricians are aware that bruises and intra-oral injuries in pre-cruising children are “warning” or sentinel injuries for possible child abuse.
- Of the respondents who appropriately identified sentinel injuries, 92% were aware of bruises as sentinel injuries, while 67% were aware of intra-oral injuries as sentinel injuries.
- Paediatric subspecialists were significantly less likely than general paediatricians to be aware of the possible significance of a sentinel injury.

### Background

A sentinel injury is a visible or detectable minor injury in a non-ambulatory child that is poorly explained and therefore raises suspicions of physical abuse. Examples include bruises and intra-oral bleeding, which may be “warning injuries” for possible abuse. Timely recognition and management of a sentinel injury can potentially alter a pattern of escalating child abuse, but studies have demonstrated that, in up to a third of cases, physicians miss early signs of abuse. A CPSP one-time survey of Canadian paediatricians was conducted in February 2015 to evaluate awareness of sentinel injuries and their significance. The purpose of the survey was to assess paediatrician awareness of sentinel injuries in pre-cruising children as precursors to more serious physical abuse. Respondents were provided with clinical vignettes describing infants with sentinel injuries and were asked about their differential diagnosis and management plan. Multivariable logistic regression analysis was used to identify variables most strongly correlated with physician awareness of the significance of sentinel injuries.

### Results

The survey achieved a response rate of 23%, which is similar to other CPSP one-time surveys. Of the 582 respondents, 65% were aware that bruises and intra-oral injuries in pre-cruising children are red flags for possible physical abuse. Of those respondents who appropriately identified sentinel injuries, 92% were more likely to be aware of bruises as sentinel injuries than they were of intra-oral injuries (67%). Paediatric subspecialists were significantly less likely than general paediatricians to be aware of sentinel injuries as red flags for later serious abuse (adjusted OR = 0.57, 95% CI 0.37–0.88,  $p = 0.01$ ). Other important trends included higher awareness with more recent completion of residency, and also with additional training in the area of child abuse and neglect.

### Conclusion

- Over one third of Canadian paediatricians are unaware that unexplained bruising and intra-oral bleeding in a pre-cruising child should prompt assessment for possible abuse.
- Additional physician education is warranted to ensure that paediatricians recognize the importance of a sentinel injury and understand the indications for initiating appropriate investigation and management.

### References

Available upon request from the CPSP office

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