Maine Medical Center
Department of Emergency Medicine
Journal Club Summary Template

Date: 3/22/2018	**Presenter Name: Jason Block**

Article Citation:
Lindberg DM, Shapiro RA, Laskey AL, et al. Prevalence of abusive injuries in siblings and household contacts of physically abused children. Pediatrics. 2012;130(2):193-201.

Country(ies): US

Funding Source(s): Health Resources and Services Administration/Maternal and Child Health Bureau, EM Services for Children Program.

☐ None Stated

Purpose
Research Question(s): ☒ None Stated
Hypotheses: ☒ None Stated
Study Purpose: The objective was to determine the prevalence of abusive injuries identified by a common screening protocol among contacts of physically abused children.

Methods
Study Design: Prospective, observational, multicenter, cross-sectional
Outcome(s) ***[or Dependent Variable]:*** Physical abuse in contact child
Intervention ***[or Independent Variable]:*** Screening protocol
Ethics Review: ☒ IRB Review ☐ IACUC Review ☐ Other: ☐ None Stated
Research Setting: 20 child abuse teams in the US, primary sites are large academic hospitals
Study Subjects: Children <10 years evaluated by a child abuse physicians for concerns of physical abuse, and their contacts <5 years old (household contacts, home daycare contacts).
Inclusion Criteria: Physically abused children <10 years old (High-likelihood on 7-point scale with serious injury)

Exclusion Criteria:
Index children: Age >10, No serious injury in index child
Subjects: Age >5

Study Interventions: Contacts of index children were screened for physical abuse by predetermined protocols by age:
Age <5 – physical exam
Age <2 – physical exam + skeletal survey
Age <6 months – physical exam + skeletal survey + neuroimaging (CT/MRI)

Study Groups:

Instruments/Measures Used:
Physical Exam, Skeletal Survey, Neuroimaging

Data Collection:
Prospectively enrolled contact children over 1 year

Data Analysis:

***A priori* sample size calculation?** ☒ Yes ☐ No ☐ Not Described ☐ N/A

Statistical analyses used:

Adjustment for potential confounders? ☐ Yes ☐ No ☐ Not Described ☒ N/A
If yes, list:

Results

Study participants:
479 contacts of 627 index children

Brief answers to research questions *[key findings]:*
Contacts of abused children with serious injuries are at high risk for abuse, particularly in twins.
-11.9% of contacts had abusive fracture on skeletal survey

Additional findings:
The odds-ratio of fracture in a twin contact was 20.1 relative to non twin contacts.
Physical exam was insensitive at identifying findings suggestive of fracture

Limitations:
Small study – did not achieve *a priori* sample size calculation
Radiologists have experience reading skeletal survey

Clinical Implications
Applicable? **Feasible?** **Clinically relevant?** **Comments:** Applicable and clinically relevant. Feasibility is questionable with regard to radiologist experienced in skeletal survey availability.

Level of evidence generated from this study
☐ Ia: evidence obtained from meta-analysis of randomized controlled trials ☐ Ib: evidence obtained from at least one randomized controlled trial ☐ IIa: evidence obtained from at least one well-designed, controlled study without randomization ☒ IIb: evidence obtained from at least one other type of well-designed quasi-experimental study ☐ III: evidence obtained from a well-designed, non-experimental study ☐ IV: expert committee reports; expert opinion; case study; case report

Additional Comments/Discussion/Notes
Neuroimaging did not pick up any additional injuries not identified by skeletal survey, but this is probably still indicated in children <6 months. Physical exam alone is inadequate and injuries will be missed.