Queensland Child Protection Newsletter

December 2014
Table of contents

Research Update ........................................................................................................... 1
Abusive head trauma ..................................................................................................... 1
  1. Validation of a clinical prediction rule for pediatric abusive head trauma .............. 1
  2. Quantitative measurement of retinal hemorrhages in suspected victims of child abuse 1
  3. Concurrent threshold retinopathy of prematurity and abusive head trauma ............ 1
Physical abuse ............................................................................................................. 2
  2. A perplexing case of child abuse: Oral injuries in abuse and physician reporting responsibilities 2
Sexual Abuse ............................................................................................................... 3
  1. Childhood sexual abuse and its association with adult physical and mental health: Results from a national cohort of young Australian women ........................................................... 3
Emotional Abuse & Neglect ....................................................................................... 3
Prevention and Intervention ....................................................................................... 3
  1. THE SAAF STUDY: evaluation of the Safeguarding Children Assessment and Analysis Framework (SAAF), compared with management as usual, for improving outcomes for children and young people who have experienced, or are at risk of, maltreatment: study protocol for a randomised controlled trial ................................................................................................................ 3
Outcomes .................................................................................................................... 4
  1. Quality of life among Swedish school children who experienced multi-type child maltreatment .................................................. 4
  2. The effect of severe stress on early brain development, attachment, and emotions: A psychoanatomical formulation ........................................................................... 4
Child Protection Professionals ..................................................................................... 5
  1. Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged victims of child sexual abuse .............................................. 5
  2. Explaining gender differences in jurors’ reactions to child sexual assault cases .................. 5
  3. European survey of imaging in non-accidental injury demonstrates a need for a consensus protocol .................................................................................. 5
  4. Effects of child interview tactics on prospective jurors’ decisions ................................................. 6
  5. Child maltreatment identification and reporting behaviour of school psychologists ................ 6
Reviews & Guidelines ............................................................................................... 7
  1. Meta-analysis of psychological treatments for posttraumatic stress disorder in adult survivors of childhood abuse .......................................................... 7
Other ............................................................................................................................. 7
  1. Maternal and paternal filicide: Case studies from the Australian Homicide Project ........................................................... 7
  2. Neuroscience and the risks of maltreatment ................................................................................. 8
  3. Culture and context in understanding child maltreatment: Contributions of intersectionality and neighborhood-based research .................................................................................. 8
  4. Risk of re-reporting among infants who remain at home following alleged maltreatment ....... 8
  5. CT of the chest in suspected child abuse using submillisievert radiation dose ............... 9
Events ............................................................................................................................. 10
  January/ February 2015 ..................................................................................................... 10
References ................................................................................................................... 11
Introduction

Welcome to the brand new Queensland Child Protection Newsletter. This newsletter is a joint initiative of the Lady Cilento Children's Hospital (LCCH) Child Protection and Forensic Medical Service under Children's Health Queensland and the Statewide Child Protection Clinical Partnership. It supports best practice in child protection by facilitating timely access to recent research and professional development information.

Each monthly edition of this newsletter is also available via the CKN Child Protection Library Guide at: http://cairns.health.qld.libguides.com/childprotection.

Access to links
Hold down the Ctrl key and clink on the link to access full text journal articles and abstracts. Where full text articles are not linked, please use the corresponding reference to access the article via CKN. For articles not available via CKN, hospital staff can request document delivery via their designated library service.

Contact
To ensure receipt of this newsletter or to unsubscribe, please contact Laura Koopmans, Project Officer, Child Protection and Forensic Medical Service, Lady Cilento Children’s Hospital, Raymond Terrace, South Brisbane:
Laura.Koopmans@health.qld.gov.au
☎️ (07) 3068 5174
Research Update
Abusive head trauma

1. Validation of a clinical prediction rule for pediatric abusive head trauma

OBJECTIVE: To reduce missed cases of paediatric abusive head trauma (AHT), Paediatric Brain Injury Research Network investigators derived a 4-variable AHT clinical prediction rule (CPR) with sensitivity of .96. Our objective was to validate the screening performance of this AHT CPR in a new, equivalent patient population. METHODS: We conducted a prospective, multicenter, observational, cross-sectional study. Applying the same inclusion criteria, definitional criteria for AHT, and methods used in the completed derivation study, Paediatric Brain Injury Research Network investigators captured complete clinical, historical, and radiologic data on 291 acutely head-injured children <3 years of age admitted to PICUs at 14 participating sites, sorted them into comparison groups of abusive and non-abusive head trauma, and measured the screening performance of the AHT CPR. RESULTS: In this new patient population, the 4-variable AHT CPR demonstrated sensitivity of .96, specificity of .46, positive predictive value of .55, negative predictive value of .93, positive likelihood ratio of 1.67, and negative likelihood ratio of 0.09. Secondary analysis revealed that the AHT CPR identified 98% of study patients who were ultimately diagnosed with AHT. CONCLUSIONS: Four readily available variables (acute respiratory compromise before admission; bruising of the torso, ears, or neck; bilateral or interhemispheric subdural haemorrhages or collections; and any skull fractures other than an isolated, unilateral, non-diastatic, linear, parietal fracture) identify AHT with high sensitivity in young, acutely head-injured children admitted to the PICU.


2. Quantitative measurement of retinal hemorrhages in suspected victims of child abuse

OBJECTIVE: Child abuse is one of the leading causes of death in early childhood. The presence of retinal haemorrhages often supports the diagnosis. The purpose of this study was to determine whether the specific measurement of retinal haemorrhages when present on fundus photography correlates with other clinical findings typically seen in children suspected of having been abused. METHODS: The medical records of children with retinal haemorrhages who were suspected of being victims of abusive head trauma from June 2003 to June 2013 and who had widefield retinal photography performed were retrospectively reviewed. Data collected included haemorrhage-covered percentage (HCP) of the central retina (posterior pole or 40 degrees circle centred on fovea) measured by ImageJ in relation to death, length of hospital stay, presence of abnormal findings on neuroimaging or skeletal survey, and definite versus possible abuse. RESULTS: Significant difference in retinal haemorrhage measured on fundus photography was found in patients with axial skeletal fracture (P = 0.016), signs of severe brain trauma on neuroimaging (P = 0.014) and definite versus possible abuse (P = 0.023). No correlation of quantitative measurement of the retinal haemorrhage to length of hospital stay, death, or the presence of skull fracture was found in this cohort. CONCLUSION: The quantitative measurement of total retinal haemorrhage when present on fundus photography centred on posterior pole in children suspected of having been abused correlated with some but not all findings typically seen in abused children.


3. Concurrent threshold retinopathy of prematurity and abusive head trauma

No abstract available.


Children’s Health Queensland Hospital and Health Service
Physical abuse

1. Case report: Tufted angioma with Kasabach–Merritt syndrome mistaken for child abuse

SUMMARY: We report the case of a 2-month-old infant with a single apparently ecchymotic lesion on the shoulder that raised suspicions of abuse. The medicolegal examination concluded that the appearance of the lesion was only mildly suggestive of an ecchymosis. A second, temporally remote examination confirmed this doubt. The evolution of the lesion, notably an increase in its volume, allowed us to rule out a traumatic lesion and was suggestive of a vascular tumour. The histological type of the tumour was a tufted angioma. There was thrombocytopenia and consumptive coagulopathy. All these data confirmed the diagnosis of Kasabach–Merritt syndrome. In contrast to benign infantile haemangiomas, which are frequent and well-known in clinical practice, vascular tumours complicated by Kasabach–Merritt syndrome are rare. They deserve to be widely known because they mandate rapid medical management and because they are one of the only differential diagnoses of ecchymosis, especially in children. When there is doubt about the traumatic nature of a cutaneous lesion, a temporally remote examination is essential. The evolution of the lesion may then suggest a dermatologic origin.

Full text: http://ac.els-cdn.com/S0379073814004095/1-s2.0-S0379073814004095-main.pdf?_tid=db966d66-7b49-11e4-9888-00000aab0f27&acdnat=1417651967_60688a6c4c297618b1e5c611b12f7b8b

2. A perplexing case of child abuse: Oral injuries in abuse and physician reporting responsibilities

SUMMARY: The following case presents a paediatric patient with an oral foreign body secondary to intentional injury. This patient had presented several previous times for medical care, first with thigh bruises, then mouth bleeding, and finally with the unusual finding of a sharp foreign body embedded in the tongue. This case illustrates the importance of considering physical abuse in the differential of orofacial injuries. Frenulum tears, both in mobile and non-mobile children, are concerning for abuse and should trigger further evaluation. This case highlights the complexity of assessing for physical abuse when examining a patient. Bruising, as seen in this patient, is common in children, and the clinical team must determine if the pattern, location, and history are concerning for a non-accidental injury. Physicians should strongly consider child abuse in the emergency department when patients present with concerning physical examination findings such as bruises or orofacial injuries without corroborating history. Finally, this case reviews mandatory reporting requirements for physicians and other medical professionals and highlights the obligation to report suspected child abuse even when not working in the professional capacity at the time of recognition.
Sexual Abuse

1. Childhood sexual abuse and its association with adult physical and mental health: Results from a national cohort of young Australian women

OBJECTIVE: Childhood sexual abuse (CSA) occurs across the world, with a prevalence of 20% internationally. Our aim was to investigate the associations between CSA, CSA plus adult violence experiences, and selected self-reported physical and mental health in a community sample of women. METHODS: Data from 7,700 women aged 28-33 years from the 1973-1978 cohort who completed Survey 4 of the Australian Longitudinal Study on Women's Health (ALSWH) were analysed. Questions about prior abuse experience such as child sexual abuse, IPV, adult physical and sexual assaults, and physical and mental health. RESULTS: Women who experienced CSA were 1.4 times more likely to experience bodily pain (adjusted odds ratio [AOR] = 1.37, confidence interval [CI] = [1.19, 1.58]), 1.3 times more likely to have poorer general health (AOR = 1.33, CI = [1.15, 1.54]), and 1.4 times more likely to be depressed in the past 3 years (AOR = 1.44, CI = [1.22, 1.71]) compared with those without abuse.. Women who experienced both CSA and adult violence were 2.4 to 3.1 times more likely to experience poor general (AOR = 2.35, CI = [1.76, 3.14]) and mental health (AOR = 2.69, CI = [1.98, 3.64]), and suffer from depression (AOR = 2.84, CI = [2.13, 3.78]) and anxiety (AOR = 3.10, CI = [2.12, 4.53]) compared with women with no abuse. CONCLUSION: This study demonstrates the importance of CSA in pain and poorer long-term mental and physical health.. It emphasizes how prior CSA may amplify pain and poorer long-term mental and physical health among women who are again exposed to violence in adulthood.

Emotional Abuse & Neglect

No articles identified.

Prevention and Intervention

1. THE SAAF STUDY: evaluation of the Safeguarding Children Assessment and Analysis Framework (SAAF), compared with management as usual, for improving outcomes for children and young people who have experienced, or are at risk of, maltreatment: study protocol for a randomised controlled trial

OBJECTIVES: Serious case reviews and research studies have indicated weaknesses in risk assessments conducted by child protection social workers. Social workers are adept at gathering information but struggle with analysis and assessment of risk. The Department for Education wants to know if the use of a structured decision-making tool can improve child protection assessments of risk. METHODS: This multi-site, cluster-randomised trial will assess the effectiveness of the Safeguarding Children Assessment and Analysis Framework (SAAF). This structured decision-making tool aims to improve social workers’ assessments of harm, of future risk and parents’ capacity to change. The comparison is management as usual. Inclusion criteria: Children's Services Departments (CSDs) in England willing to make relevant teams available to be randomised, and willing to meet the trial's training and data collection requirements. Exclusion criteria: CSDs where there were concerns about performance; where a major organisational restructuring was planned or under way; or where other risk assessment tools were in use. Six CSDs are participating in...
Outcomes

1. Quality of life among Swedish school children who experienced multi-type child maltreatment


OBJECTIVES: The aim of this study was to examine the overlap between child maltreatment types and their association with quality of life among school children. METHODS: A national cross-sectional study of 3,202 grade nine Swedish pupils of 15-years-of-age was carried out in 2011 with an 84% response rate. Data were analysed using Pearson chi-square and multiple linear regression analyses. RESULTS: Of the total sample, 650 children (20%) reported at least one type of maltreatment. There was a large degree of overlap between maltreatment types. In particular, neglect and witnessing intimate partner violence overlapped with most other types of maltreatment. There was a significant relationship between the degree of abuse and multi-type maltreatment. Results showed a linear relationship between the number of types of maltreatment and quality of life (p<0.001), indicating a dose-response relationship. CONCLUSION: The results emphasise the negative impact of child maltreatment on children's lives and highlight the importance of taking the broad spectrum of child maltreatment into account in both research and practice. A more comprehensive assessment of the width of maltreatment among professionals may help to identify the most seriously maltreated children and lead to an improved ability to target intervention and prevention at these children.


2. The effect of severe stress on early brain development, attachment, and emotions: A psychoanatomical formulation


SUMMARY: Child abuse is the most extreme form of stress in childhood and adolescence, and has severe effects on the child's development. Limbic nuclei and circuitry development are especially vulnerable to child abuse and neglect during the first year of life. Development at the neuronal level can be severely disturbed by trauma during early infancy, resulting in maladaptive synaptic formation, impeding experience-expectant brain development. Development of basic emotions may favor the development of negative instead of positive emotions. The new concept of psychoanatomical formulation is introduced. A case vignette is presented and analyzed, based on the disturbed neuroanatomy underlying symptom expression.

Full text: https://www.clinicalkey.com.au/#!/content/playContent/1-s2.0-S0193953X1400077X
1. Question types, responsiveness and self-contradictions when prosecutors and defense attorneys question alleged victims of child sexual abuse


SUMMARY: We examined 120 trial transcripts of 6- to 12-year-old children testifying to sexual abuse. Age and attorney role were analysed in relation to question types, children’s responsiveness and self-contradiction frequency. A total of 48,716 question–response pairs were identified. Attorneys used more closed-ended than open-ended prompts. Prosecutors used more invitations (3% vs. 0%), directives, and option-posing prompts than defense attorneys, who used more suggestive prompts than prosecutors. Children were more unresponsive to defense attorneys than to prosecutors. Self-contradictions were identified in 95% of the cases. Defense attorneys elicited more self-contradictions than prosecutors, but nearly all prosecutors (86%) elicited at least one self-contradiction. Suggestive questions elicited more self-contradictions than any other prompt type. There were no associations with age. These findings suggest that neither prosecutors nor defense attorneys question children in developmentally appropriate ways.

http://dx.doi.org/10.1002/acp.3103

2. Explaining gender differences in jurors’ reactions to child sexual assault cases


SUMMARY: In three experiments, we investigated the influence of juror, victim, and case factors on mock jurors’ decisions in several types of child sexual assault cases (incest, day care, stranger abduction, and teacher-perpetrated abuse). We also validated and tested the ability of several scales measuring empathy for child victims, children’s believability, and opposition to adult/child sex, to mediate the effect of jurors’ gender on case judgments. Supporting a theoretical model derived from research on the perceived credibility of adult rape victims, women compared to men were more empathic toward child victims, more opposed to adult/child sex, more pro-women, and more inclined to believe children generally. In turn, women (versus men) made more pro-victim judgments in hypothetical abuse cases; that is, attitudes and empathy generally mediated this juror gender effect that is pervasive in this literature. The experiments also revealed that strength of case evidence is a powerful factor in determining judgments, and that teen victims (14 years old) are blamed more for sexual abuse than are younger children (5 years old), but that perceptions of 5 and 10 year olds are largely similar. Our last experiment illustrated that our findings of mediation generalize to a community member sample.


3. European survey of imaging in non-accidental injury demonstrates a need for a consensus protocol


BACKGROUND: Paediatric non-accidental injury is a considerable health problem, and imaging plays a fundamental role in its assessment. Since the introduction of joint guidelines published by the Royal College of Radiologists (RCR) and Royal College of Paediatrics and Child Health (RCPCH) in 2008, there has been a concerted effort to adopt a consensus approach to imaging in this area in the United Kingdom. OBJECTIVES: This study aims to establish current practice amongst European Society of Paediatric Radiology (ESPR) members within their institutions with regards to the use of imaging in suspected non-accidental injury. METHODS: A web-based survey was created and circulated to all active ESPR members. The responses were collated and analysed. RESULTS: We received 134 responses, accounting for 37% of the current membership across 24 European countries. These responses highlighted significant variation amongst institutions, with no consensus regarding radiographic and cross-sectional imaging in the investigation of suspected non-accidental injury. CONCLUSION: There is a need for a European consensus protocol to
imaging in suspected non-accidental injury. We recommend implementing the joint RCR/RCPCH guidance, a move supported by the ESPR.


4. Effects of child interview tactics on prospective jurors' decisions

Johnston, J. L. and A. E. Shelley Behav Sci Law Ahead of print [Epub 02/12/2014].

SUMMARY: Although decisions in child sexual abuse (CSA) cases are influenced by many factors (e.g., child age, juror gender), case and trial characteristics (e.g., interview quality) can strongly influence legal outcomes. In the present study, 319 prospective jurors read about a CSA investigation in which the alleged victim was interviewed at a child advocacy center (CAC) or traditional police setting. The prospective jurors then provided legally relevant ratings (e.g., child credibility, interview quality, defendant guilt). Structural equation modeling techniques revealed that child credibility predicted greater confidence in guilt decisions and also mediated all associations with such decisions. Having fewer negative prior opinions and rating the interview as of better quality were associated with higher child credibility ratings. Mitigating factors (e.g., interview quality), as opposed to proxy indicators (e.g., participant gender), better predicted CSA case outcomes. Similar associations across groups (e.g., CAC interviews did not make child victims more or less credible) permit a tentative conclusion that CACs do not positively or negatively affect decisions made in hypothetical CSA cases. Ideas for future studies examining factors influencing decisions in CSA cases are discussed.


5. Child maltreatment identification and reporting behaviour of school psychologists


SUMMARY: A majority of substantiated maltreatment reports are made by educators and thus, teacher knowledge of child maltreatment reporting mandates and reporting behavior has been a focus of research. The knowledge and behavior of school psychologists, however, has not received similar attention. This study investigated the child maltreatment reporting behavior and knowledge of school psychologists. Practicing school psychologists (N = 274) responded to scenarios from the Crenshaw Abuse Reporting Survey—Form S (CARS-S) that required respondents to recognize reportable child maltreatment and answer factual questions regarding the reporting mandate. A significant correlation was found between school psychologists’ accuracy in deciding whether to report and their overall knowledge of the reporting mandate. Results highlight the knowledge and behavior of school psychologists working in varied settings when presented with cases focused on differing types of maltreatment issues. Practical implications for school psychology practice and training are discussed.

http://dx.doi.org/10.1002/pits.21810
1. Meta-analysis of psychological treatments for posttraumatic stress disorder in adult survivors of childhood abuse


**SUMMARY:** Posttraumatic stress disorder (PTSD) is highly prevalent in adult survivors of childhood sexual and/or physical abuse. However, intervention studies focusing on this group of patients are underrepresented in earlier meta-analyses on the efficacy of PTSD treatments. The current meta-analysis exclusively focused on studies evaluating the efficacy of psychological interventions for PTSD in adult survivors of childhood abuse. Sixteen randomized controlled trials meeting inclusion criteria could be identified that were subdivided into trauma-focused cognitive behavior therapy (CBT), non-trauma-focused CBT, eye movement desensitization and reprocessing, and other treatments (interpersonal, emotion-focused). Results showed that psychological interventions are efficacious for PTSD in adult survivors of childhood abuse, with an aggregated uncontrolled effect size of $g = 1.24$ (pre- vs. post-treatment), and aggregated controlled effect sizes of $g = 0.72$ (post-treatment, comparison to waitlist control conditions) and $g = 0.50$ (post-treatment, comparison with TAU/placebo control conditions), respectively. Effect sizes remained stable at follow-up. As the heterogeneity between studies was large, we examined the influence of two a priori specified moderator variables on treatment efficacy. Results showed that trauma-focused treatments were more efficacious than non-trauma-focused interventions, and that treatments including individual sessions yielded larger effect sizes than pure group treatments. As a whole, the findings are in line with earlier meta-analyses showing that the best effects can be achieved with individual trauma-focused treatments.

**Full text:** [http://dx.doi.org/10.1002/car.2358](http://dx.doi.org/10.1002/car.2358)

2. Maternal and paternal filicide: Case studies from the Australian Homicide Project


**SUMMARY:** Data drawn from the Australian Homicide Project were used to examine whether and how maternal and paternal filicide perpetrators differ in terms of motivations for filicide and childhood and adulthood adversities. In addition, key differences between filicide and non-filicide perpetrators were examined. Data were collected across a number of states and territories in Australia between 2010 and 2013 through interviews with 231 men and women convicted of murder or manslaughter. Of these participants, 14 had perpetrated filicide. Detailed information on the developmental background of the perpetrators, as well as motives and situational contexts of the homicide incidents, was gathered through the interviews. Findings from the current study reveal some important gender differences among filicide perpetrators. For example, filicidal fathers are more likely to perpetrate accidental filicide, and to report unemployment, alcohol and drug problems and previous engagement in child abuse, while filicidal mothers are more likely to perpetrate altruistic or neglectful filicide, and to report mental health problems. In addition, male filicide perpetrators report a greater number of adversities compared to male non-filicide perpetrators, while female filicide perpetrators display fewer adversities compared to their non-filicide counterparts. Findings from the current study reveal some important gender differences among filicide perpetrators.

[http://dx.doi.org/10.1002/car.2358](http://dx.doi.org/10.1002/car.2358)
2. Neuroscience and the risks of maltreatment


**SUMMARY:** Findings from neuroimaging are increasingly being cited in policy debates to strengthen the case for early identification of, and intervention with, children at risk of maltreatment and poor outcomes. While agreeing that neuroscientific research into the risks of maltreatment is a very valuable and exciting area of study, this article challenges the confidence with which these findings are used in policy discussions. It critically discusses the reliability and validity of the relevant findings and the contribution they can currently make to our understanding of the causes and consequences of maltreatment. In addition, it is argued that this type of evidence, which is new in policy debates, is often being used in ways that are problematic. Many participants in the relevant policy debates seem to subscribe either to an implicit version of dualism about the relationship between the mind and the body, or to reductionism — the view that the mental can be reduced to the physical. Such assumptions threaten the way we think about human agency and moral responsibility but it is argued that they are misguided for conceptual reasons. It is concluded that neuroscience has the potential to contribute to our understanding of the causes and effects of maltreatment but cannot do so in isolation from the social sciences.

Full text: [http://ac.els-cdn.com/S0190740913003423/1-s2.0-S0190740913003423-main.pdf?_tid=224d714c-7b49-11e4-bf24-00000aab0f6c&acdnat=1417651656_80a88f98db78920a0bb4f721db48fd67](http://ac.els-cdn.com/S0190740913003423/1-s2.0-S0190740913003423-main.pdf?_tid=224d714c-7b49-11e4-bf24-00000aab0f6c&acdnat=1417651656_80a88f98db78920a0bb4f721db48fd67)

3. Culture and context in understanding child maltreatment: Contributions of intersectionality and neighborhood-based research


**SUMMARY:** In the early 1990s, the U.S. Advisory Board on Child Abuse and Neglect commissioned a series of reviews that appeared as the edited volume, *Protecting Children from Abuse and Neglect* (Melton & Barry, 1994). Using the 1994 review “Sociocultural Factors in Child Maltreatment” (Korbin, 1994) as a background, this article reconceives culture and context in child maltreatment work. Since 1994, conditions promoting research and practice attention in this area include immigration-driven global increases in diverse, multicultural societies where different beliefs and practices meet (and clash); expanding purview of the human rights discourse to children; and the disproportionate and disparate representation of cultural, ethnic, and racial groups in child-welfare systems. Although research on child maltreatment has advanced in many ways over 20 years, the complexity of child maltreatment leaves many critical questions demanding further attention, culture and context among them. To help address these questions, we propose two approaches for future maltreatment research: intersectionality - the simultaneous examination of multiple identities (such as gender, race, and socioeconomic status) - as a framework for understanding the complexity of cultural factors; and neighborhood-based research as a means for understanding the context of child maltreatment from the perspective of an ecological framework.


4. Risk of re-reporting among infants who remain at home following alleged maltreatment


**SUMMARY:** Maltreatment that begins during infancy is likely to be chronic in duration and developmentally consequential if the appropriate intervention is not delivered. Repeated reports of maltreatment may signal unmet service needs. This study prospectively followed infants who remained at home following an initial report of maltreatment to determine the rate of re-reporting within 5 years. Birth records for all children born in California in 2006 were linked to statewide child protection records through 2012; 5.2% (*n* = 29,135) of children were reported for abuse or neglect prior to age 1. Following an initial report, 81.9% of infants remained in the home, the majority (60.7%) of whom
were re-reported within 5 years. The highest rate of re-reporting was observed among infants whose initial allegation was substantiated and who had a case opened for family maintenance services (69.1%). Infants whose initial allegation was not investigated had re-reporting rates that were equal to or higher than other infants remaining in the home without services. Findings highlight that most families with infants reported for maltreatment are not formally served through the child protection system. High rates of re-reporting underscore the challenge of delivering services that remedy conditions necessitating child protection follow-up and call attention to the importance of accessing data from community service providers.


5. CT of the chest in suspected child abuse using submillisievert radiation dose

**SUMMARY**: The cornerstone of child abuse imaging is the skeletal survey, but initial imaging with radiographs may not demonstrate acute and non-displaced fractures, especially those involving the ribs. Given the high mortality of undiagnosed non-accidental trauma, timely diagnosis is crucial. CT is more sensitive in assessing rib fractures; however the effective radiation dose of a standard chest CT is high. We retrospectively identified four children (three boys, one girl; age range 1-4 months) admitted between January 2013 and February 2014 with high suspicion for non-accidental trauma from unexplained fractures of the long bones; these children all had CT of the chest when no rib fractures were evident on the skeletal survey. The absorbed radiation dose estimates for organs and tissue from the four-view chest radiographs and subsequent CT were determined using Monte Carlo photon transport software, and the effective dose was calculated using published tissue-weighting factors. In two children, CT showed multiple fractures of the ribs, scapula and vertebral body that were not evident on the initial skeletal survey. The average effective dose for a four-view chest radiograph across the four children was 0.29 mSv and the average effective dose for the chest CT was 0.56 mSv. Therefore the effective dose of a chest CT is on average less than twice that of a four-view chest radiograph. Our protocol thus shows that a reduced-dose chest CT may be useful in the evaluation of high specificity fractures of non-accidental trauma when the four-view chest radiographs are negative.

## Events

### January/ February 2015

<table>
<thead>
<tr>
<th>January 2015</th>
<th>February 2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>26-30</strong></td>
<td><strong>7-8</strong></td>
</tr>
<tr>
<td><strong>World Congress on Juvenile Justice</strong></td>
<td><strong>Seen and heard: Children and the courts</strong></td>
</tr>
<tr>
<td>Geneva Switzerland</td>
<td>Canberra ACT</td>
</tr>
<tr>
<td><strong>11-15</strong></td>
<td><strong>World Congress on Public Health</strong></td>
</tr>
</tbody>
</table>
References


   http://dx.doi.org/10.1002/acp.3103


   http://cmx.sagepub.com/content/early/2014/12/10/1077559514562066.abstract


   http://dx.doi.org/10.1111/iod.12151


   http://ac.els-cdn.com/S0272735814001500/1-s2.0-S0272735814001500-main.pdf?_tid=f6d60458-7b48-11e4-877f-00000aad35d&acdnat=1417565183_3b27b9ec85b1e2130ba74c20deee4b24

    http://dx.doi.org/10.1002/car.2358
Full text: [http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4233223/pdf/cios-6-432.pdf](http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4233223/pdf/cios-6-432.pdf)


Full text: [http://pediatrics.aappublications.org/content/133/6/e1537.full.pdf+html](http://pediatrics.aappublications.org/content/133/6/e1537.full.pdf+html)

[http://dx.doi.org/10.1111/cfs.12196](http://dx.doi.org/10.1111/cfs.12196)


23. Keene EJ, Skelton R, Day PF, Munyombwe T, Balmer RC. The dental health of children subject to a child protection plan. *Int J Paed Dentistry; Ahead of print [Epub 15/12/2014]*. 
[http://dx.doi.org/10.1111/ipd.12149](http://dx.doi.org/10.1111/ipd.12149)


[http://dx.doi.org/10.1002/pts.21810](http://dx.doi.org/10.1002/pts.21810)


45. Yonekawa Y, Takusagawa HL, Mukai S. Concurrent threshold retinopathy of prematurity and abusive head trauma. *JAMA ophthalmology; Ahead of print [Epub 21/11/2014].*


Disclaimer: The views or opinions expressed in the information found in this newsletter do not necessarily reflect those of the Lady Cilento Children’s Hospital or QH. This document is simply a platform which facilitates access to existing relevant information.