

Appendices

Table S1. Characteristics of patients based on outcome defined by the expert panel

	Non-accidental injuries		Accidental injuries
	Inflicted n=3	Neglect n=6	n=711
Age in years, mean (SD)	1.03 (0.8)	2.1 (1.3)	3.8 (1.8)
Age ≤ 1 year	1 (33.3)	1 (16.7)	41 (5.5)
Sex, male (%)	2 (66.7)	6 (100)	409 (57.5)
Ethnicity (%)			
North European	2 (66.7)	3 (50.0)	493 (69.3)
Non-North European	1 (33.3)	3 (50.0)	218 (30.7)
SES (%)			
Low	0 (0)	3 (50.0)	167 (23.5)
Other	3 (100)	3 (50.0)	544 (76.5)
Number of previous ER visits in same hospital (%)			
0	3 (100)	4 (66.7)	520 (73.1)
1-2	0 (0)	2 (33.3)	152 (21.4)
>2	0 (0)	0 (0)	39 (5.5)
Time of ER visit (%)			
Day (8.00 am-6.00 pm)	2 (66.7)	4 (66.7)	451 (63.4)
Evening (6.00 pm-10.00 pm)	0 (0)	2 (33.3)	229 (32.2)
Night (10.00 pm-8.00 am)	1 (33.3)	0 (0)	31 (4.4)
Monday-Friday	1 (33.3)	4 (66.7)	491 (69.1)
Weekend	2 (66.7)	2 (33.3)	220 (30.9)
Type of injury (%)			
Closed head	1 (33.3)	1 (16.7)	57 (8.0)
Bone	1 (33.3)	2 (33.3)	217 (30.5)
Soft tissue	1 (33.3)	2 (33.3)	421 (59.2)
Burns	0 (0)	1 (16.7)	16 (2.3)
Mechanism (%)			
Fall of same height	1 (33.3)	0 (0)	196 (27.6)
Fall of height <3m	0 (0)	3 (50.0)	248 (34.9)
Fall of height >3m	0 (0)	0 (0)	7 (1.0)
Bicycle injury	0 (0)	0 (0)	58 (8.2)
Fire	0 (0)	1 (16.7)	13 (1.8)
Cutting	0 (0)	0 (0)	13 (1.8)
Injury by object	0 (0)	0 (0)	81 (11.4)
Animal bite	0 (0)	1 (16.7)	2 (0.3)
Pull	0 (0)	0 (0)	33 (4.6)
Others	2 (66.7)	1 (16.7)	60 (8.4)
Severity (%)			
Homewards without outpatient appointment	0 (0)	0 (0)	384 (54.0)
Homewards with outpatient appointment	1 (33.3)	2 (33.3)	256 (36.0)
Hospitalization	2 (66.7)	4 (66.7)	71 (10.0)

Short description of the three positive cases

A boy (1·5 years) and both parents visited the ER for an injury on the boy's left leg. The parents told that the boy had fallen over his toys while playing. Physical examination revealed a large haematoma on the boy's left leg. X-ray examination revealed a fracture of the left femur shaft. The child abuse checklist was positive because the history was not compatible with the injury (question 1). There was no extra information from the CAP because parents refused an additional history. Additional parental risk factors were: parent(s) with psychiatric problems, aged under 20 when child was born, financial problems and low educational level. Six months after the initial ER visit, the child visited the ER again because of ER: half a year later: ER visit because of a fracture of his distal tibia after his leg got stocked into the wheel of his mothers bike.

A girl (1·3 years) and her mother visited the ER. The mother said that the biological father had kicked and beaten the girl during the weekly visit a few hours earlier that day. On physical examination, the paediatrician found three erythematous areas on the back, possibly as a result of pressure from tightly holding the child. The history and information from the Child Protection Services revealed several risk factors, such as violent behaviour of the father towards both the mother and the child in the past. Although the presenting problem was 'injury due to physical abuse', the child was routinely tested with the child abuse checklist and considered positive because of inadequate behaviour of parents (question 6).

A boy (1 month) and both parents attended the ER for an apparent life-threatening event. He had stopped breathing for about 20 seconds, had started to gasp, and then had become cyanotic and less responsive. Neurological examination revealed a lethargic baby with macrocephaly, disturbed eye movements, and disturbed movement pattern. The anterior fontanel was full and downward gaze was noticed intermittently. CT imaging of the brain showed multiple subdural hygromas, cerebral infarctions, and a fracture of the parietal bone. The boy tested positive because the history was not compatible with the established injuries. The history and information from other health care providers revealed several risk factors,

such as: cry baby, low educational level of parents and bad attachment of parents/child. The child was not known at the Child Protection Services yet.

Parental questionnaire

Child

1. What is your relation to the child?
 - Mother
 - Father
 - Other: (you can stop filling in this form)

2. What is the reason of ER attendance?
 - Accident (traffic, house, sport, etc)
 - Illness (continue to question 4)
 - Other:

3. Where got he/she injured?
 - In or around the house
 - In a traffic accident
 - At school/Day Care
 - During sports
 - Other:
 - N/a

4. Has he/she ever before severely got injured?
 - Yes
 - No

5. Has he/she ever before visited the ER because of an injury?
 - Yes
 - No

6. How do you rate your child's health in general?
 - Excellent
 - Good
 - Moderate
 - Poor

7. Does a medical specialist treat your child for any reason?
 - Yes
 - No

8. Does your child go to school?
 - Yes
 - No (continue to question 13)

9. In which grade is he/she?
 - Preschool
 - Grade:

10. What kind of education he/she gets
 - Regular education
 - Special needs education:

11. Does he/she keep up with classmates?
 - Yes
 - Poor
 - No

12. What is child's school name?

13. Is your child going to:
 - Day Care
 - Host family
 - Pre- or after school care
 - None of the above

14. Who is taking care of your child?

- Mainly the mother
- Mainly the father
- Both parents
- Both parents and others:
- None of the above

15. Is your child, or another family member, known at social services?

- Yes
- No

Family

1. What is your family status?

- Living together with partner/husband/wife
- Living together with someone else than partner/husband/wife (e.g. brother, sister, parent)
- Endured relation, not living together
- Single parent, reason:
 - Divorced
 - Partner passed away
 - Other reason
- Other:

2. How many children do you get?

3. With how many persons you live at home? (including your children)

4. Do(es) your child(ren) live with you at home? (more than one answer possible)

- Yes, they all live at home
- No, child(ren) live(s) on his/her/their own
- No, child(ren) live(s) with others

5. Does the child you visit the ER with live with his/her biological parent(s)?

- Yes, with both of them
- Yes, with father
- Yes, with mother
- No, with none of them

6. What is your mother country?

- The Netherlands
- Morocco
- Turkey
- Surinam
- Netherlands Antilles
- Other:

7. Are you, in general, satisfied with family matters?

- Yes
- Moderate
- No

Questionnaire for General Practitioners

Your assessment

1. Do you have any suspicion of child abuse?

- Yes
- No
- Dubious
- No information available

2. Probability of child abuse in this family?

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 Very low Very high

1. How many times has this child visited your practice with injury complaints in the last 12 months?.....
2. How many times has this child visited the outpatient clinic with injury complaints in the last 12 months?.....
3. How many times has this child visited the ER with injury complaints in the last 12 months?.....

Child

1. Since when do you know the child?
2. How many GP's did the child have prior to you?
3. Birth weight Gramme
4. Prematurity (<37 weeks)? Yes No Unknown
5. Difficulties during pregnancy/delivery? Yes No Dubious Unknown
6. Adoption child/foster child? Yes No Unknown
7. Baby colic? Yes No Dubious Unknown
8. Hyperactive child? Yes No Dubious Unknown
9. Chronically ill child? Yes No Dubious Unknown
10. Physically or mentally disabled child? Yes No Dubious Unknown
11. Behavioural problems? Yes No Dubious Unknown
12. Bad attachment to parents? Yes No Dubious Unknown
13. Failure to thrive, now or in the past? Yes No Dubious Unknown
14. Adiposity? Yes No Dubious Unknown

Mother

1. Known at your practice? Yes No (continue to 'father')
2. History of childhood abuse? Yes No Dubious Unknown
3. Abuser in the past? Yes No Dubious Unknown
4. Chronically diseased? Yes No Dubious Unknown
5. Psychiatric disorder, now or in the past? Yes No Dubious Unknown
6. Alcohol addiction, now or in the past? Yes No Dubious Unknown
7. Drugs addiction, now or in the past? Yes No Dubious Unknown
8. Young parent (<20y)? Yes No Dubious Unknown
9. Unintended pregnancy (of this child)? Yes No Dubious Unknown
10. Negative attitude towards medical interventions? Yes No Dubious Unknown
11. Low educational achievement? Yes No Dubious Unknown
12. Minimum income? Yes No Dubious Unknown
13. Prolonged unemployed/incapacitated? Yes No Dubious Unknown
14. Poor social network? Yes No Dubious Unknown

Father

1. Known at your practice? Yes No (continue to 'family')
2. History of childhood abuse? Yes No Dubious Unknown
3. Abuser in the past? Yes No Dubious Unknown

- 4. Chronically diseased? Yes No Dubious Unknown
- 5. Psychiatric disorder, now or in the past? Yes No Dubious Unknown
- 6. Alcohol addiction, now or in the past? Yes No Dubious Unknown
- 7. Drugs addiction, now or in the past? Yes No Dubious Unknown
- 8. Young parent (<20y)? Yes No Dubious Unknown
- 9. Unintended pregnancy (of this child)? Yes No Dubious Unknown
- 10. Negative attitude towards medical interventions? Yes No Dubious Unknown
- 11. Low educational achievement? Yes No Dubious Unknown
- 12. Minimum income? Yes No Dubious Unknown
- 13. Prolonged unemployed/incapacitated? Yes No Dubious Unknown
- 14. Poor social network? Yes No Dubious Unknown

Family

- 1. Single parent family? Yes No Unknown
 - 2. Reordered family? Yes No Unknown
 - 3. Large family (>3 children)? Yes No Unknown
 - 4. Multiple birth in family? Yes No Unknown
 - 5. Poor housing? Yes No Dubious Unknown
 - 6. History of domestic violence? Yes No Dubious Unknown
 - 7. History of family stressor? Yes No Dubious Unknown
- If yes:

Nurture

- 1. Serious problems with upbringing the child? Yes No Dubious Unknown
- 2. Negative attitude towards the child? Yes No Dubious Unknown
- 3. Poor interaction between parent(s) and child? Yes No Dubious Unknown
- 4. Cultural aspects contributing on the risk of child abuse? (child punishments) Yes No Dubious Unknown

Additional comments

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Questionnaire for youth doctors

Child

15. Birth weight
16. Prematurity (<37 weeks)?
17. Difficulties during pregnancy/delivery?
18. Adoption child/foster child?
19. Baby colic?
20. Hyperactive child?
21. Chronically ill child?
22. Physically or mentally disabled child?
23. Behavioural problems?
24. Bad attachment to parents?
25. Failure to thrive, now or in the past?
26. Adiposity?
27. Bad school attendance?

-Gramme
- Yes No Unknown
- Yes No Dubious Unknown
- Yes No Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- N/a Yes No Dubious
- Unknown

Parents

1. Chronically diseased parent?
2. Parent(s) addicted to alcohol, now or in the past?
3. Parent(s) addicted to alcohol, now or in the past?
4. Parent(s) with psychiatric disorder, now or in the past?
5. History of childhood abuse?
6. Abuser in the past?
7. Young parent(s) (<20y)?
8. Unintended pregnancy (of this child)?
9. Low educational achievement?
10. Minimum income?
11. Prolonged unemployed/incapacitated?

- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown

Family

8. Single parent family?
9. Reordered family?
10. Large family (>3 children)?
11. Multiple birth in family?
12. Poor housing?
13. History of domestic violence?
14. Poor social network?
15. History of family stressor?

- Yes No Unknown
- Yes No Unknown
- Yes No Unknown
- Yes No Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- If yes:

Nurture

5. Serious problems with upbringing the child?
6. Negative attitude towards the child?
7. Poor interaction between parent(s) and child?
8. Cultural aspects contributing on the risk of child abuse? (child punishments)
9. Regular visit to youth health care?
10. Child known at social services?

- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Dubious Unknown
- Yes No Unknown

