

Common pediatric accidents, causes and preventive methods at Angau Memorial hospital

Dr Shedrick Wadigi

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Introduction

- Childhood injuries are major health issue world wide with increase incidence in developing nations.
- Causes are multifactorial
- >5 cases presented to Angau (COPD) per week (accidental injuries)
- Study was designed to identify the common accidents,causes and come up with preventive methods to minimize their occurrence.

Literature Review

- No literature published as yet in Papua New Guinea regarding study

- T Tandon, M Shaik, N Modi. Paediatric trauma epidemiology in an urban scenario in India.2007
 - Children age ranges (0-16)
 - Males dominate
 - Most fractures (7-12years) & indirectly proportional to age
 - 0-6 years sustain elbow injuries, 7-16 distal radius
 - Most injuries occur at home (47%), school (21%), sports (17%) and RTA (13%).

Literature Review

- Basak, et al: Childhood injuries in Siliguri city, India

- majority of injuries are superficial (53.2%)
- falls (56.4%)
- Extremities were mostly involved (62.3%)
- <5 years old are vulnerable
- Other contributing factors
 - Socio-economic status
 - Presence of siblings
 - Outdoor activities
 - Presence of care giver

Objectives

- Identify common pediatric injuries to Angau hospital (accidental & non-accidental)
- Identify possible cause(s), risk factors associated with paediatric injuries
- Identify different types and site of injuries in children
- Identify preventive methods to reduce increasing paediatric accidents.

Methodology

Study setting:

COPD, ED and Paediatric wards at Angau hospital.

Study design:

Cross-sectional study of prevalence of common pediatric accidents, causes and preventive methods of children up to 12years.

Subjects: Inclusion and exclusion criteria

Inclusion: Children up to 12 years old attending COPD/ED who sustained injuries in the community

Exclusion: Neonates from labour ward with birth trauma

Sample size

- 50 patients over 4 months (May – August)

Study tool

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- Questionnaire survey form

Data Collection:

- Data collected over 4 months
- Questionnaires were used
- Verbal consent

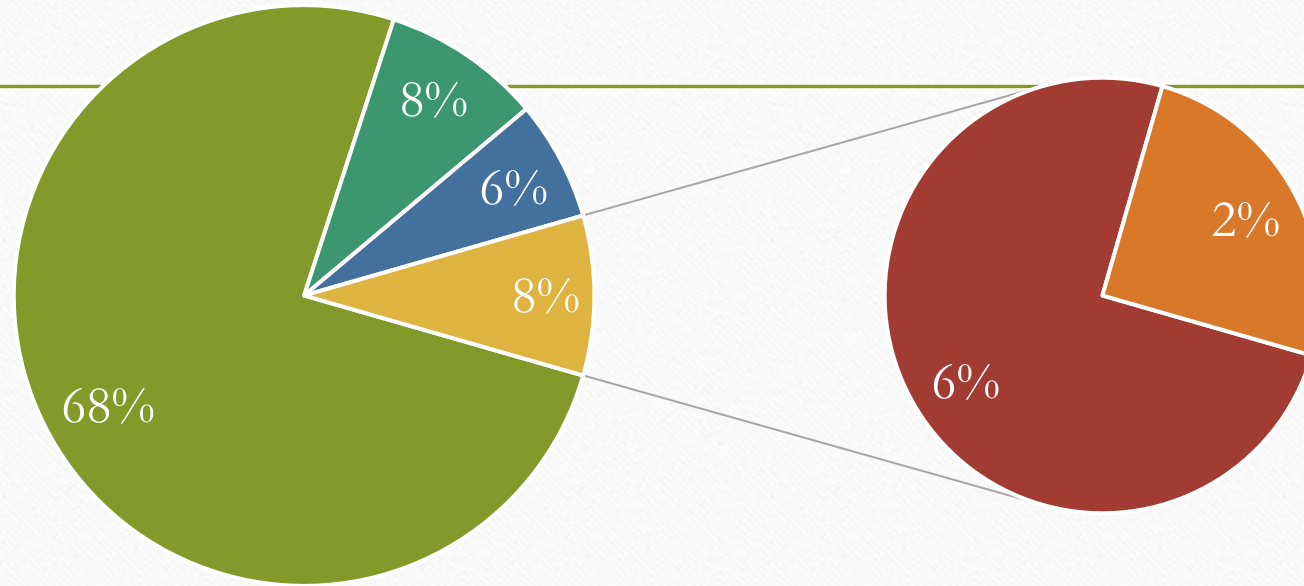
Data analysis and interpretation

- MS excel
- SPSS software 2016

Results

Variable		Frequency	Percent(%)
Age Distribution			
	0-4	18	36
	5-8	12	24
	9-12	20	40
Gender	Male	37	74
	Female	13	13
Residence			
	Settlement	13	26
	Rural	23	46
	Urban	14	28

Place of Origin

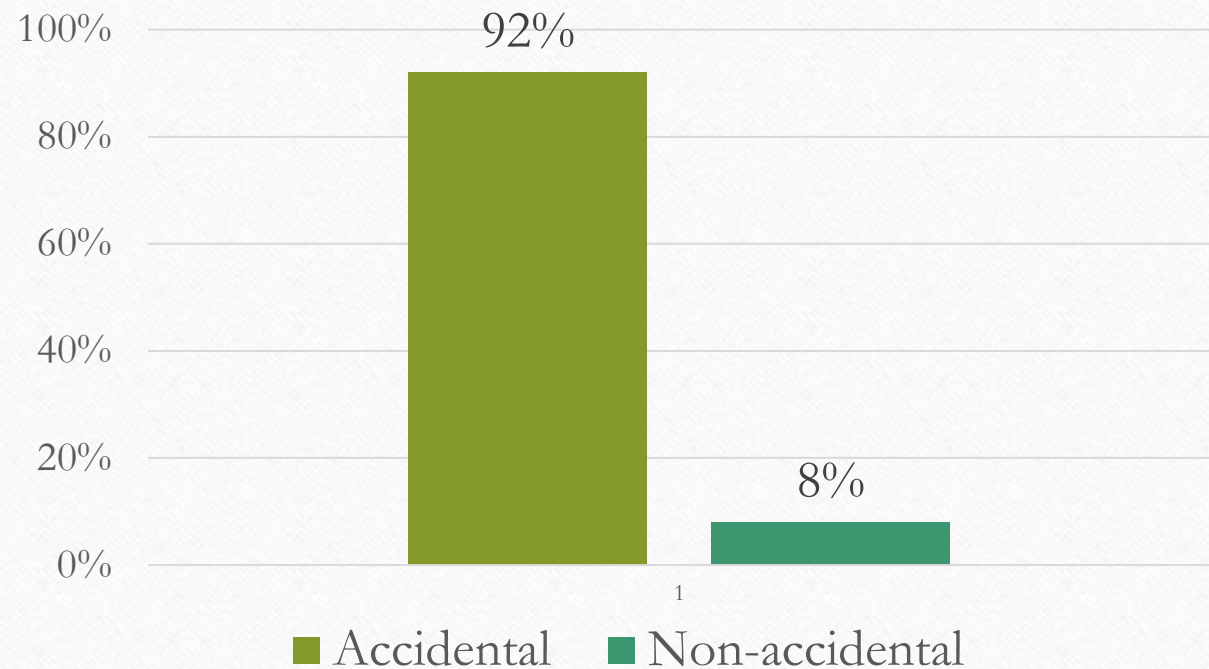


- Morobe
- Southern highlands
- Madang
- Eastern Highlands
- Others

Accidental vs Non-accidental injuries (n=50)

Accidental injuries: 46

Non-accidental injuries: 4



Common Pediatric injuries(n=50)

Accidental injury	Frequency (n=50)	Percent(%)
Fracture and dislocation Lower extremities	17	34
Fracture and dislocation upper extremity	16	32
Head injuries	5	10
Blunt and penetrating injuries	3	6
Insects and snake bite with envenomation	2	4
Drowning	2	4
Attempted suicide	1	2
Burns/scalds	1	2
Eye injury	1	2
Spinal Cord injury	1	2
Pelvic fracture	1	2

Nature of injuries:

- 56% -falls
- 18% - hit by an object
- 4%- MVA
- 3% - snake and insect bites

Types of Injuries:

- 74%- Sustained wounds/fractures
- 8% - Bruising & lacerations
- 6% - abrasions
- 4%- inflammations

Common site:

- Extremities: upper (32%), lower (34%)
- Head, face, neck (20%)
- Chest & abdomen (10%)

Type of injury with age (n=50)

74% - wounds & fractures:

- 0-4 yrs old – Lower extremity(18%) & head, face & neck (10%)
- 5-12 years – Upper extremity(12%) & head, face & neck (6%)

8% - bruising & lacerations:

- 0-4yrs (6%)

Common location of injuries

Location of Accident	Frequency (n=50)	Percent (%)
Home	28	56
Along roadside/ bush track	11	22
In-hospital	4	8
Sports field	3	6
Along riverside/well	2	4
School	2	4

Risk factor(s)/causes of accident(n=50)

Risk Factor	Frequency (n=50)	Percent (%)
Lapse/absence of parental supervision	27	54
Unsafe home environment (hazards in home)	5	10
Lack of Safety around fires	1	2
Lack of supervision around waterways		
Lack of car safety	4	8
Walking /riding bicycle on road at night	2	4
Not wearing shoes when walking outside	3	6
No proper hospital beds	4	8
Not taking regular medication	1	2
Child adoption(illegal)	1	2
Factor not identified	2	4

Other contributing factors

- History of domestic violence (12%)
- Parents divorced (16%) and parental death (10%) – not well looked after by relatives

Discussions

- Most patients presented are from rural setting (46%)
 - Male dominate accidental injuries (74%)
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- >90% are accidental injuries
 - Fracture and dislocation of upper and lower extremity are most common, 56% due falls, 18% being hit by moving objects
 - 18% lower extremities injuries were sustained by 0-4 years old, 12% evenly distributed between 5-8 years and 9-12 years old.
 - Most injuries occurred at home (56%) and along bush track (22%), in-hospital (8%) due to lapse/absence of parental care and supervision (54%), 10% with unsafe home environment, lack of care safety & no proper hospital beds (8%)

Recommendations

- Increase parental awareness on effective preventive measures
- Adopt Safe at home Tips for under 5s in PNG context from the Royal Society for the prevention of Accidents(www.rosipa.com.com/keeping-kids-safe)
- Provide better hospital beds with support
- Improving socioeconomic living standards.
- Advocate on Pikinini Act
- Further study on Non-accidental injuries to established a clear management pathway

Conclusion

- Pediatric injuries due to fall is still the commonest nature or cause of accidents with increased incidence of non-fatal & fatal injuries
- Increase awareness & education on preventive measures of childhood injuries in schools, churches, hospitals and other organizational groups may help largely in reducing pediatric accidents.

Simple messages during Campaign

- Don't put furniture's near windows (children may climb up)

- Never leave your baby on a raised surface
- Keep the stairs clear. Use safety gate at top & bottom of ladder
- Keep hot irons,matches,lighters out of reach
- Always use fireguard around open fires, never hold hot drink & the child
- Never leave a baby to feed alone
- Keep medecines ,toxins locked up in a cupboard
- Always supervise children in paddling or swimming pools
- Keep sharp knives, scissors & garden tools out of reach

Acknowledgments

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- Professors Trevor Duke & John Vince
- Patients studied

References

1. T Tandon, M Shaik, N Modi. Paediatric trauma epidemiology in an urban scenario in India.2007
2. Basak, et al: Childhood injuries in Siliguri city. West Bengal.India
3. [www.rospa.com/keeping-kids-safe\](http://www.rospa.com/keeping-kids-safe)
4. Google.com
5. Scholar google.com