

Local Community Perceptions of Snakebite Envenomation in Panama

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Introduction

- Panama has the highest incidence of snakebites in Central and South America at 55.79 snakebites per 100,000 inhabitants (Gutiérrez, J. M. (2014))
- Central America has 150 species of snakes; 31 of these species are venomous (Bolaños R. 1982),
- Bothrops asper* is responsible for a majority of the snakebite morbidity (Gutiérrez JM. 2011)
- Most common snakes in El Valle, Panama



Bothrops Asper
 Source: <http://biogeodb.str.si.edu/bioinformatics/dfm/metas/view/29821>



Spilotes pullatus
 Source: <http://biogeodb.str.si.edu/bioinformatics/dfm/metas/view/24796>

Study Aims

- To characterize and quantify the perceptions of snakebites in El Valle, Panama
- To increase knowledge of envenomation and to assess local knowledge of prevention and treatment of snakebites

Methods

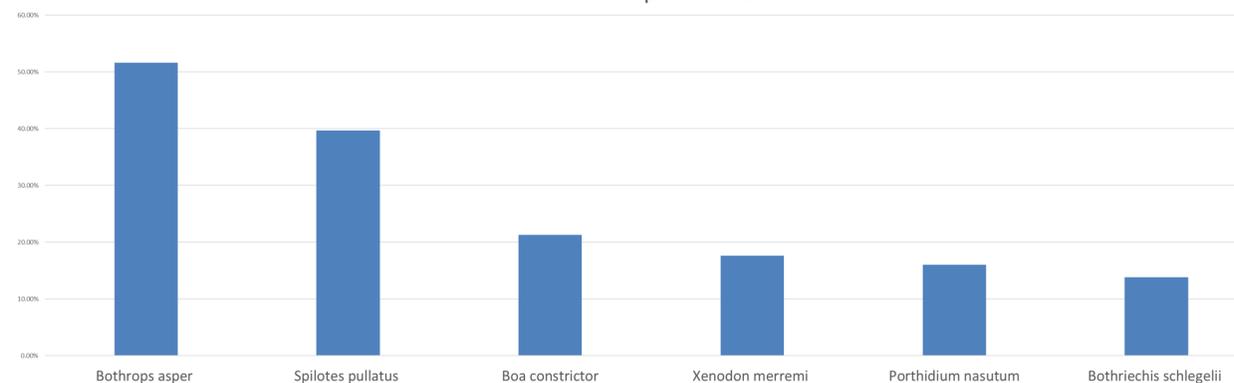
- Institutional Review Board approval was obtained by the regional health center and the Medical College of Wisconsin
- A survey was conducted at the health center in July 2018 in El Valle, Panama
- Survey data was uploaded to RedCap (Vanderbilt) for data analysis

Demographics (n=191)

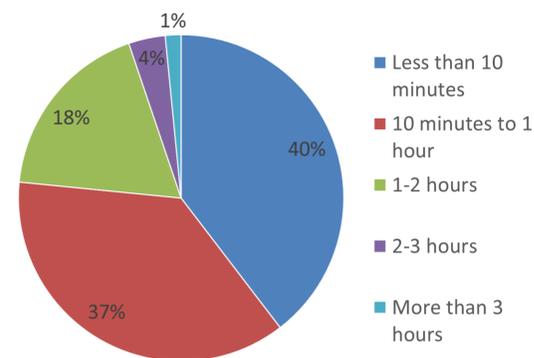
Gender		Employment	
Male	30.9%	Housewife	37.2%
Female	69.1%	Student	10.5%
Age		Laborer	9.4%
18-30	50.8%	Health worker	6.8%
31-45	30.9%	Business	5.2%
46-60	15.7%	Government	4.7%
60+	2.6%	Office worker	4.2%
Knowledge of Snakebites		Teacher	3.1%
Poor	46.6%	Guide	2.1%
Average	45%	Other	15.7%
Good	8.4%		

Results

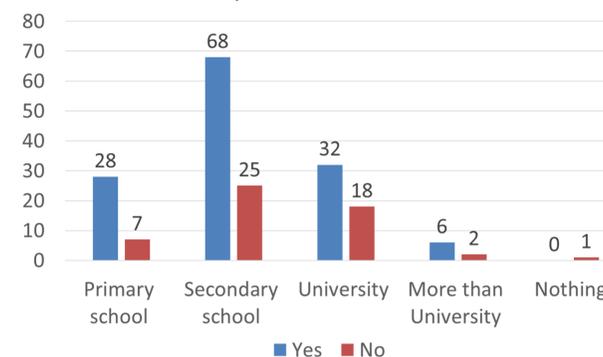
Common Snake Species in El Valle



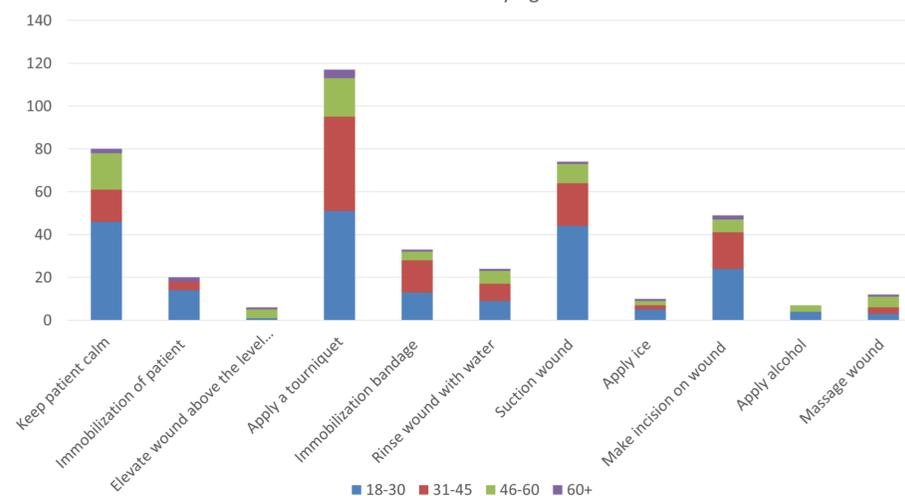
Time to travel to nearest clinic



Should You Bring the Snake into the Clinic by Level of Education



Treatment by Age



Discussion

- 8.4% of participants ranked their knowledge of snakebites as “good”
- 23.6% of participants more than 1 hour away from the nearest clinic
- 51.6% of participants said *Bothrops asper* is common on their property
- Majority of participants could not correctly identify the correct first aid treatment
- First aid for a snakebite should not include trying to suck out the venom, making incisions, applying a tourniquet, or applying ice
 - best strategy is to calm patient, get to clinic with antivenom which is only proven treatment for envenomation
- Majority of snakes in El Valle are vipers which have the same antivenom

Conclusion

- Local populations are not confident in their knowledge of snakebites
- There needs to be an effort to educate villages in Panama
- Next steps should assess where local populations bring envenomation patients especially those living outside of towns
- There is an opportunity for a comparative study with other Central and South American communities

Acknowledgments

Dr. Elaine Kohler Summer Academy of Global Health Research and the Medical College of Wisconsin Office of Global Health

A special thanks to Centro de Salud de El Valle for their support and hospitality