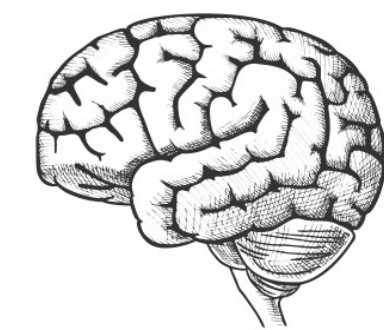


Zombieism Outbreak at a Small Liberal Arts College, State X — November 2019

Anderson Amador Corea, Alma Marquez, Anoushka Vinekar, Scout Zweifler

University of California San Diego Department of Family Medicine and Public Health



INTRODUCTION

- Zombieism is a serious disease of unknown origin that causes profound physical and behavioral changes
- Those infected disappeared, moved southward in search of others to prey on
- Their victims may die or become Zombies.
- In mid-November 2019, a small liberal arts college reported the following:
- Large number of students found dead, in advanced state of decay with bite marks on their necks, other students with the classic symptoms of Zombieism gone missing
- A study undertaken to investigate magnitude and identify risk factors

METHODOLOGY

- Cases who attended the college and disappeared or were found dead between 10/5-11/5
- Case control study was conducted
- Questionnaire administered to close contacts of the 28 most recent cases
- 56 controls chosen at random from the college directory
- Odds ratios and p values calculated for each exposure

RESULTS

- 83 cases identified between October 5 and November 5, 2019; 65% males
- Average age: 21 years (range 18-29 years)
- Epidemic curve compatible with person-to-person transmission
- Initial cases among freshmen and later among sophomores and juniors
- 93% cases versus 52% controls had late night habits (OR = 11.6, p = 0.0007).

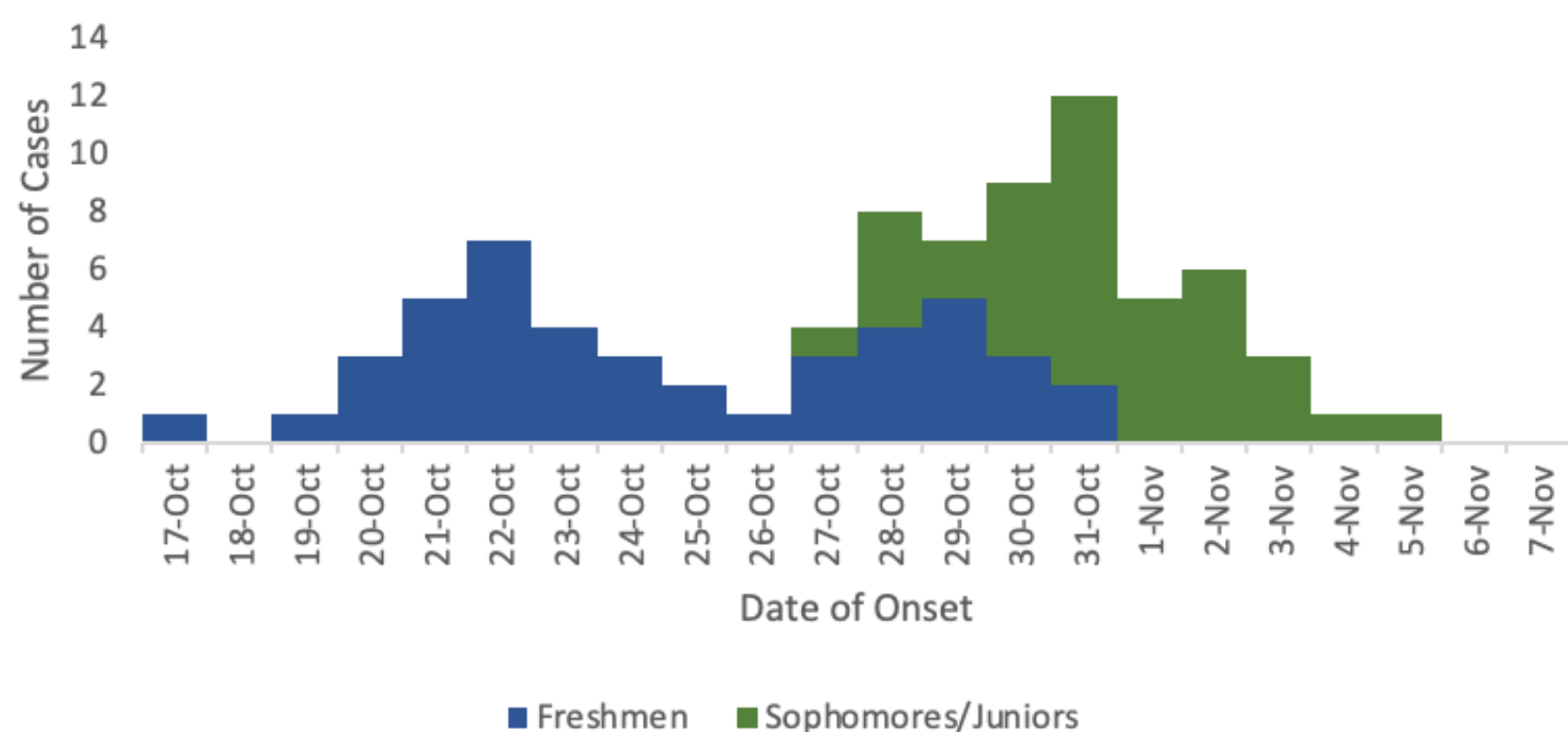
CONCLUSION

- Person-to-person spread implicated
- Possible links to the Transylvania outbreak
- Persons should exhibit caution with late-night activities in areas where prior cases have been identified.

Don't stay out too late unless you
want to become a zombie!
Inform the authorities if you see
someone displaying symptoms.



Cases of Zombieism by class, State X, 2019



	Cases Exposed/Total (%)	Controls Exposed/Total (%)	Odds Ratio	P-Value
Male	19/28 (68%)	33/56 (59%)	1.5	0.6
Art major	12/27 (44%)	10/54 (19%)	3.5	0.03
Late night habits	25/27 (93%)	28/54 (52%)	11.6	0.0007
Horror film society	19/28 (68%)	23/54 (43%)	2.8	0.05
Goth	22/28 (79%)	30/54 (56%)	2.9	0.07

TWISTED TRANSMISSION: A ZOMBIE OUTBREAK IN ACADEMIA, TRANSYLVANIA --- NOVEMBER 2019

Elian Lopez | Anthony Romero | Abigail Sanchez | Valerie Savala
 FMPH 171, University of California San Diego, Department of Family Medicine and Public Health

BACKGROUND

In November 2019, a Zombieism outbreak was reported to Transylvania State Department at a small liberal arts college.

- Victims die or become Zombies
- Unknown origin
- 83 patients

Objectives

- To identity key exposures of Zombieism

METHODS

Case definition

- Cases; Students at college X who disappeared between November 1st 2019, and November 22nd, 2019, without explanation
- Onset of symptoms is followed within 24 hours by the disappearance of the individuals.

Case-Control Study

- 28 cases;
- 56 controls
 - all ages & majors at college
- Results determined by Odds Ratio (OR) and P-value for exposure

RESULTS

- Out of the 83 cases, 54 (65%) cases were male
- Mean Age 21 Years(range 18-29)
- Strong Zombieism risk factor was “late night habits”(OR: 11.6)

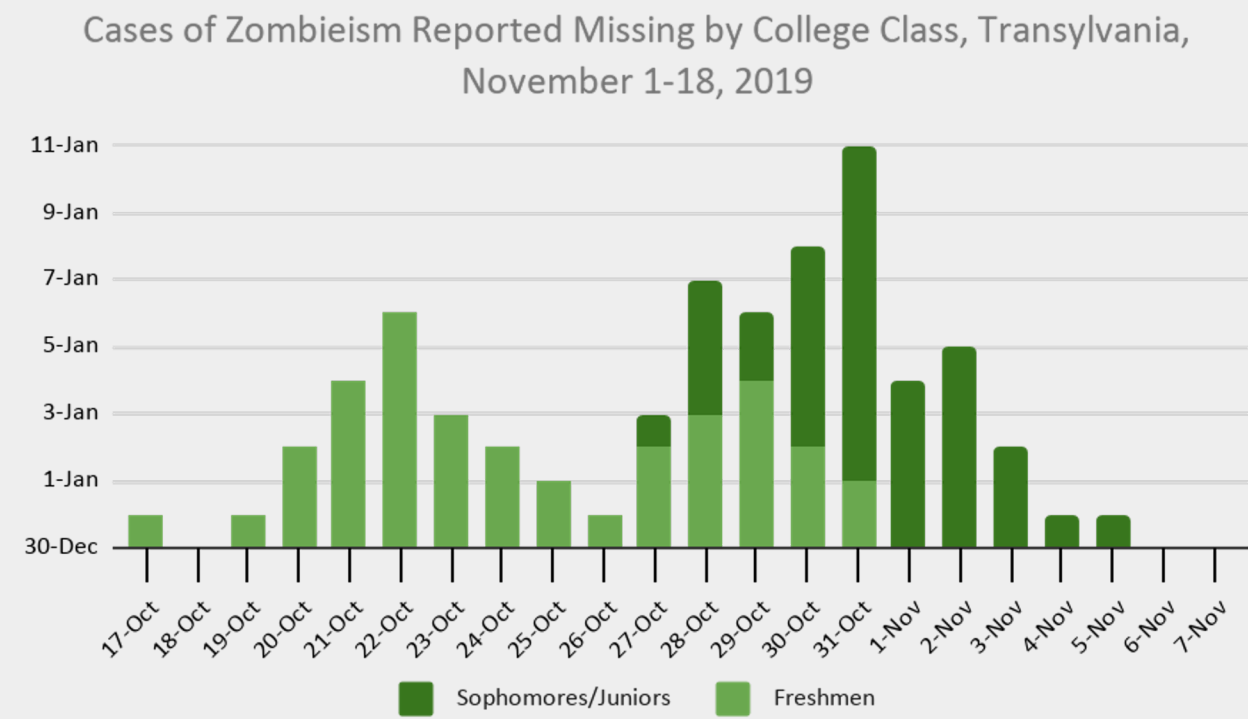
CONCLUSIONS

- There was a statistical correlation between late night habits and developing Zombieism in this outbreak.
- To prevent further spread we recommend:
 - Introducing A Curfew
 - Stay in at night
 - Avoid Late Night Activities

To prevent further spread of
 Zombieism, don't go out at night!

FIGURES & FINDINGS

Epidemic Curve



Odds Ratios for Exposures

Exposure	Cases Exposed (%)	Controls Exposed (%)	Odds Ratio	p-value
Late night habits	25/27 (93%)	28/54 (52%)	11.6	<0.001
Art major	12/27 (44%)	10/54 (19%)	3.5	0.03
Goth	22/28 (79%)	30/54 (56%)	2.9	0.07
Film society	19/28 (68%)	23/54 (43%)	2.8	0.005
Male	19/28 (68%)	33/56 (59%)	1.5	0.56



Moos, Zoos and Zombies: The Rise of the Zombies at a Country Fair, Transylvania 2019

Brianna Lau, Letty Sandoval, Matthew Jarvis, David Hernandez

Background

- Zombieism: severe behavioral and physical changes
- 11 "zombies" reported after Transylvanian county fair

Methods

- Retrospective cohort study
- Case def: attended fair on 08/31 and disappeared by 09/01
- Unstructured interviews with families of cases on exposures

Results

- Avg age: 18 yr (6-35); 55% male
- Median incubation: 7 hr (7-9 hr)
- Overall attack rate (AR)=50%
- Petting zoo AR=91%; RR=10.0

Conclusion

- Cases infected at petting zoo
- More research needed on infectious agent and transmission routes

Zombieism is a disease of unknown origin that causes severe physical and behavior changes.

Avoid wild animals, animal attractions, and sick people.

Report "zombies" and disappearances to local health department.

Onset of Zombie Symptoms or Disappearance following exposure to County Fair, Transylvania, 8/31 - 9/1/19



Exposures Among County Fair Attendees (N=22), Transylvania 2019

Exposure	Attack Rates (%)		RR	P-value
	Exposed	Unexposed		
Petting zoo	91%	9%	10.0	0.0006
Pig races	80%	25%	3.2	0.03
Stunt show	71%	13%	5.7	0.03
Pony rides	67%	44%	1.5	0.6
Games	67%	44%	1.5	0.6
Corn dog	64%	36%	1.8	0.4
Rides	62%	33%	1.8	0.4
Mosquito bites	58%	40%	1.5	0.7
Haunted house	50%	50%	1.0	0.6

Background

- Zombieism causes physical & behavioral changes, unknown cause
- September 1, 2019 - 11 cases in rural Transylvania after attending county fair

Methods

- Retrospective cohort study of county fair attendees/family members of cases
- Case definition: those who attended the county fair on & disappeared by Sept. 1st
- Data collected on attractions visited & foods consumed

Results

- Attack rate = 50% (11/22)
- 1.2:1 male:female, mean age of cases = 19 (range: 6-35)
- Mean incubation period = 7 hours (range: 3-14)
- Visiting pet zoo strongly associated with Zombieism (RR=10.0; p<0.001)
- No animals tested

Conclusion

- Transmission due to contact with petting zoo
- To mitigate transmission, avoid:
 - Animal attractions, interaction with wild animals
 - Close contact with potential cases
- Further research needed on infectious agent, transmission routes, symptoms, and role of zoonotic transmission

prevent infection
and transmission of
Zombieism

Transylvania County Fair



avoid interactions
with wild animals
and animal
attractions



report individuals
showing signs of
aggression and
corpse-like
symptoms

Figure 1. Incubation period of
Zombieism

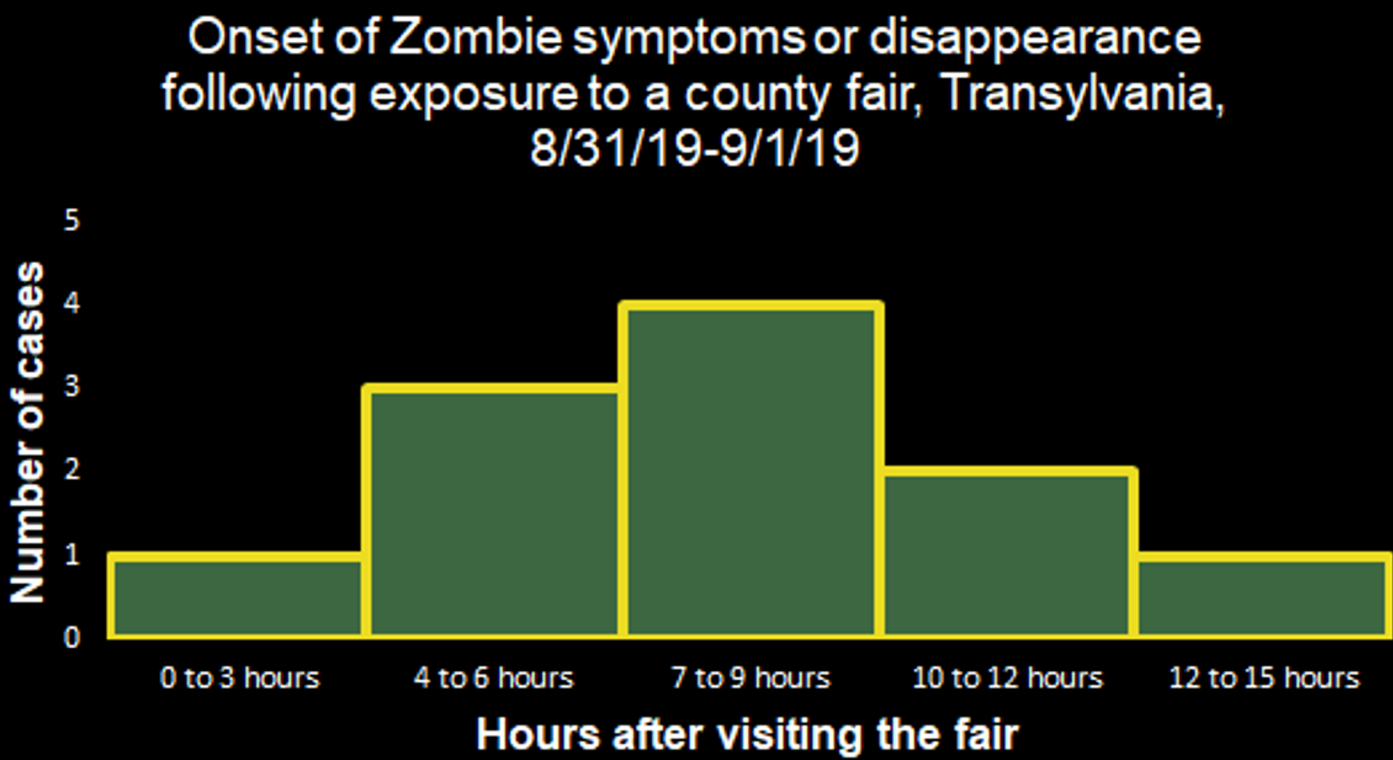


Table 1. Exposures associated
with Zombieism

Exposure	RR (Attack Rate Exp / Non Exp)	p-value
Petting zoo	10 (91% / 9%)	0.0006
Stunt show	5.7 (71% / 13%)	0.03
Pig races	3.2 (80% / 25%)	0.03
Corn dog	1.8 (64% / 36%)	0.4
Rides	1.8 (62% / 33%)	0.4
Games	1.5 (67% / 44%)	0.6
Pony rides	1.5 (67% / 44%)	0.6
Mosquito bite	1.5 (58% / 40%)	0.7
Haunted house	1 (50% / 50%)	0.6
Exotic bird show	0.5 (33% / 70%)	0.2