Final Symposium january 5, 2022

Presented by BOTOVOLA Miraimila

Thanks to the team E^{2}M^2 (Ecological ⧉ Epidemiological Modeling in Madagascar)

Statistical model

Question : What is the relationship between risky sex behavior and cervical cancer among women in Mahajanga, Madagascar?

Hypothesis : Risky sex behavior increases the occurrence of cervical cancer

X_1 : multiple sex partners

X_2 : age at first intercourse

X_3 : use condoms

X_4 : vaccination HPV
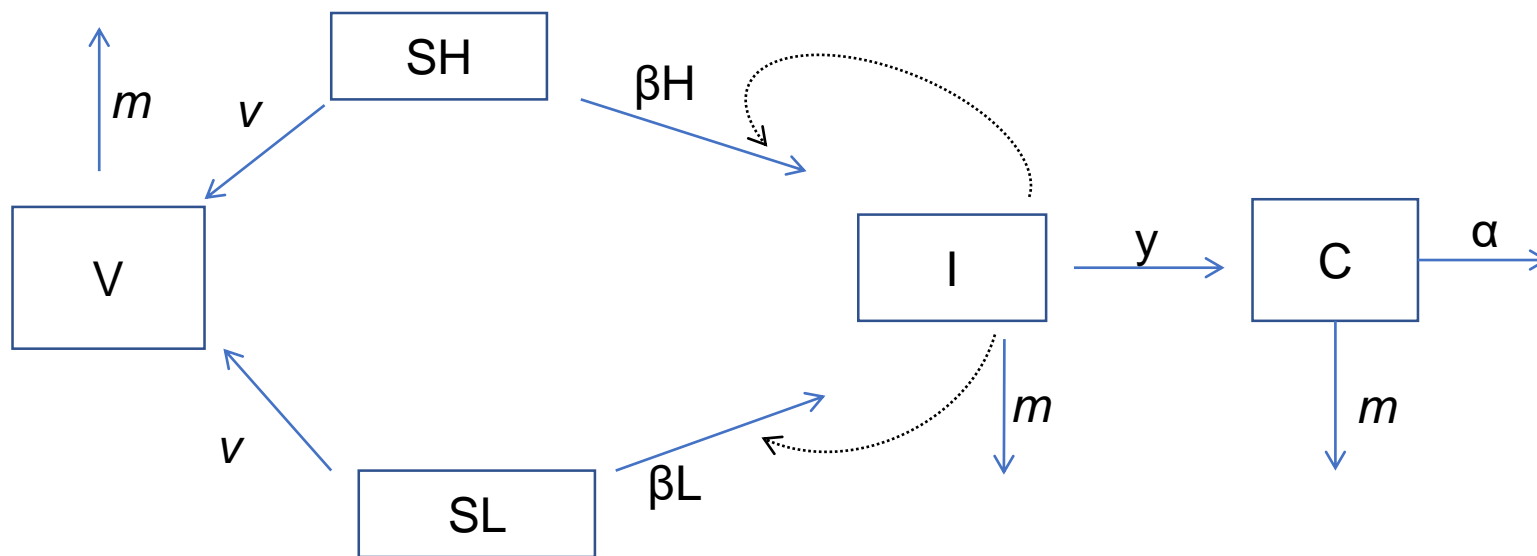
Y : cervical cancer

Family : binomial   Link : logit

glm (cancer_Y_N ~ X_1 + X_2 + X_3 + X_4, family = "binomial", link = "logit", dat = dataHPV)

Mechanistic model

Question : How does proportion of low risk sex behavior to high risk sex behavior change cervical cancer?

Hypothesis : Sexual behavior determines the occurrence of cervical cancer?

Status	Process
SH : succept to HPV with high risk sex behavior	v : vaccination rate
SH : succept to HPV with low risk sex behavior	m : natural death rate
I : HPV +	α : cancer death rate
C : HPV + with cervical cancer	y : rate of progression from I to C
V : vaccinated	βH : transmission rate in high risk sex
	βL : transmission rate in LOW risk sex

THANK YOU VERY MUCH!
MISAOTRA BETSAKA!