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In this talk, we will introduce a high and low risk structured model of cholera infections in the population of Cameroon. The model has two cholera infection pathways, direct (human-to-human) and indirect (contaminated water-to-human) transmissions. We will use our model's demographic equation to "fit" the population of Cameroon, and then use the fitted cholera model to capture cholera cases in Cameroon from 1990 to 2017. Furthermore, we will explore optimal control strategies that will minimize the number of cholera infections in Cameroon and the cost of controls over time. (Received September 19, 2018)