Example 1:

A = Gender, C = Hypertension, Y = Hyperlipidemia

P(A, C, Y) =

	A=Male	A=Female
C=YES, Y=YES	0.571	0.429
C=YES, Y=NO	0.494	0.506
C=NO, Y=YES	0.571	0.429
C=NO, Y=NO	0.494	0.506

As we can see from the table, P(A | C, Y) = P(A | Y) but , P(A | C, Y) != P(A | C).
This is an example where the separation holds but sufficiency does not.

Example 2:

A = Diabetes, C = Hyperlipidemia, Y = Gender

P(A, C, Y) =

	A=YES	A=NO
C=YES, Y=Male	0.646	0.354
C=YES, Y=Female	0.646	0.354
C=NO, Y=Male	0.385	0.615
C=NO, Y= Female	0.385	0.615

As we can see from the table, P(A | C, Y) = P(A | C) but , P(A | C, Y) != P(A | Y).
This is an example where the sufficiency holds but separation does not.