Given ibd, we know everything


$$
\operatorname{Pr}(E=a a, C=a a, D=a b)
$$

- $\operatorname{Or} \operatorname{Pr}\left(Y_{E}, Y_{C}, Y_{D}\right)=\sum_{\bullet} \sum_{\bullet}\left(\operatorname{Pr}\left(Y_{E} \mid \bullet, \bullet\right) q(\bullet) q(\bullet)\right.$

$$
\left.\sum_{\bullet}\left(\operatorname{Pr}\left(Y_{C} \mid \bullet, \bullet\right) q(\bullet) \sum_{\bullet}\left(\operatorname{Pr}\left(\left.Y_{D}\right|^{\bullet}, \bullet\right) q(\bullet)\right)\right)\right)
$$

