E step: For $\{HHH\}$, $W_0 = \dfrac{k \cdot P_0^3}{k \cdot P_0^3 + (1-k) \cdot P_1^3} = \dfrac{0.5 \times 0.6^3}{0.5 \times 0.6^3 + 0.5 \times 0.1^3} = 0.9954$

For $\{HHT\}$, $W_0 = \dfrac{k \cdot P_0^2 \cdot (1-P_0)}{k \cdot P_0^2 \cdot (1-P_0) + (1-k) \cdot P_1^2 \cdot (1-P_1)} = 0.9412$

For $\{TTT\}$, $W_0 = \dfrac{k \cdot (1-P_0)^3}{k \cdot (1-P_0)^3 + (1-k) \cdot (1-P_1)^3} = 0.0807$

M step: $k = \dfrac{\sum W_i}{n} = \dfrac{0.9954 + 0.9412 + 0.0807}{3} = 0.6724$

$$P_0 = \frac{0.9954 \times 3 + 0.9412 \times 2}{0.6724 \times 9} = 0.8045$$

$$P_1 = \frac{(1-0.9954) \times 3 + (1-0.9412) \times 2}{(1-0.6724) \times 9} = 0.0445$$