PHYSICIAN'S PROFIT MAX. PROBLEM

$$\max \quad PX - CX$$

$$\text{s.t.} \quad B(x) - PX \geq NB^{\circ}$$

↑ CONSTANT ... PATIENT'S "OUTSIDE OPTION"

$$B(x) - PX = NB^{\circ}$$

$$\Pi = PX - CX, \qquad B(x) - PX = NB^{\circ}$$

$$PX = B(x) - NB^{\circ}$$

$$\Pi = B(x) - NB^{\circ} - CX$$

$$\frac{d\Pi}{dx} = B'(x) - C = 0$$

$$B'(x) = C$$

PATIENT'S MAX. PROBLEM

$$NB = B(x) - PX$$

$$\max_{x} \; B(x) - PX$$

$$\frac{dNB}{dx} = B'(x) - P = 0$$

$$B'(x) = P$$

$P > C$