Using Poiseuille's equation:

$$Q = \frac{\pi R^4 \Delta P}{8 \eta_{blood} L} \Rightarrow \Delta P = \frac{8 \eta_{blood} L Q}{\pi R^4}$$

Volumetric flow rate: $Q = \frac{4\ cm^3}{min} = \frac{4 \times 10^{-6}}{60} \frac{m^3}{s}$

Length of the needle: $L = 4\ cm = 0.04\ m$

$D_{needle} = 0.40\ mm \Rightarrow R = 0.20\ mm = 2 \times 10^{-4}\ m$

$\eta_{blood} = 4 \times 10^{-3}\ Pa.s$ and $\rho_{blood} = 1.05 \times 10^{-3}\ kg/m^3$

pressure at the entrance of the needle should be higher than 18 torr $= 2.4 \times 10^3\ N/m^2$

$$\Rightarrow \Delta P = \frac{8 (4 \times 10^{-3}\ Pa.s)(0.04\ m)\left(\frac{4 \times 10^{-6}}{60} \frac{m^3}{s}\right)}{\pi (2 \times 10^{-4})^4}$$

$$\Rightarrow \Delta P = 16985\ N/m^2 = 1.70 \times 10^4$$

$$P_1 + \Delta P = \rho_{blood} g h \Rightarrow h = \frac{1}{\rho_{blood} g}\left(2.4 \times 10^3 + 1.7 \times 10^4\right) \Rightarrow$$

$$\boxed{h = 1.8\ m}$$