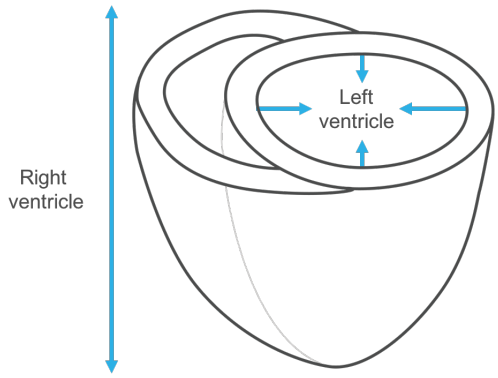
Point-of-care echocardiography

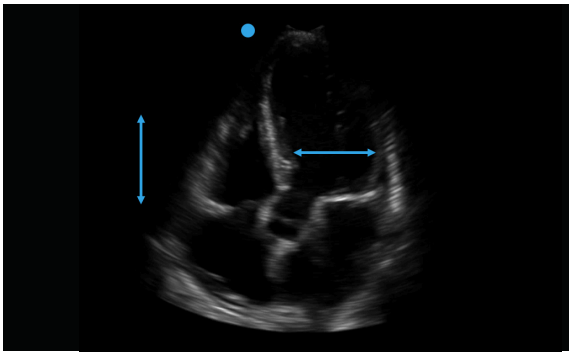
EVALUATING RIGHT-HEART FUNCTION

Evaluating left-heart systolic function and right ventricular size, as a marker of strain, are core point-of-care echo applications. We can also evaluate right-heart function to help guide diagnosis and resuscitation.

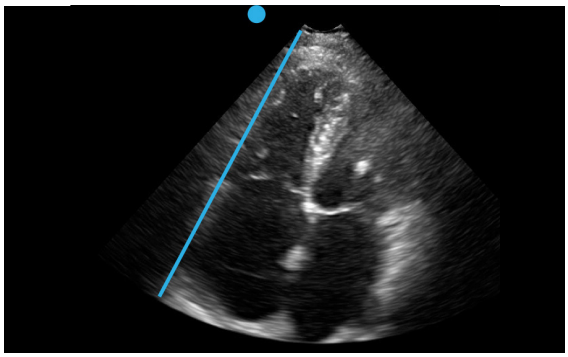
The shape and movement of the right ventricle are different from the left. The major axis for right ventricular movement will appear as vertical, not inward.

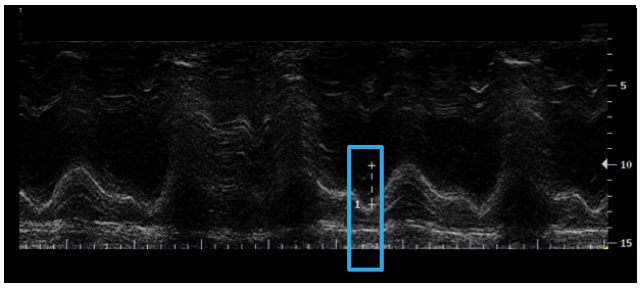


We can evaluate right ventricular function best using the apical four chamber view. In this window, the left ventricle contracts in, while the right ventricle moves up and down (see right). Reduced movement indicates decreased right-heart function.



We can quantitatively measure right ventricular function using the **triscuspid annular plane systolic excursion (TAPSE)**. Place an M mode cursor through the free wall of the right ventricle at the level of the valve and obtain a tracing (see right). Then measure the displacement of the right ventricle (below).





A TAPSE > 1.7 cm is normal.
A TAPSE < 1.7 cm indicates right ventricular dysfunction.