

CONSENSUS

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# Perioperative Quality Initiative (POQI) consensus statement on fundamental concepts in perioperative fluid management: fluid responsiveness and venous capacitance

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## Abstract

**Background:** Optimal fluid therapy in the perioperative and critical care settings depends on understanding the underlying cardiovascular physiology and individualizing assessment of the dynamic patient state.

**Methods:** The Perioperative Quality Initiative (POQI-5) consensus conference brought together an international team of multidisciplinary experts to survey and evaluate the literature on the physiology of volume responsiveness and perioperative fluid management. The group used a modified Delphi method to develop consensus statements applicable to the physiologically based management of intravenous fluid therapy in the perioperative setting.

**Discussion:** We discussed the clinical and physiological evidence underlying fluid responsiveness and venous capacitance as relevant factors in fluid management and developed consensus statements with clinical implications for a broad group of clinicians involved in intravenous fluid therapy. Two key concepts emerged as follows: (1) The ultimate goal of fluid therapy and hemodynamic management is to support the conditions that enable normal cellular metabolic function in order to produce optimal patient outcomes, and (2) optimal fluid and hemodynamic management is dependent on an understanding of the relationship between pressure, volume, and flow in a