

Internal Training Memo: Fetal Station Correlates with Fetal-Maternal Risk¹

According to Dr. John Patrick O'Grady,
"When evaluated clinically, these new definitions (outlet, low, and mid instrumental deliveries) appear to correlate with fetal-maternal risk, at least for forceps."¹

This statement implies that the fetal-maternal risk associated with an instrumental delivery increases the higher the fetal head is in the birth canal. When considering the appropriateness of a Vacuum-Assisted Delivery (V.A.D.), A.C.O.G. states that "The indications, preparation of the patient, and prerequisites for vacuum extraction are essentially the same as for forceps delivery."² Since forceps have generally been contraindicated for use in mid-station deliveries, the same would be expected for vacuum deliveries. Therefore, the following three stations represent birth situations where vacuum-assisted delivery is appropriately indicated.

1 Outlet Station with Occiput Anterior Orientation



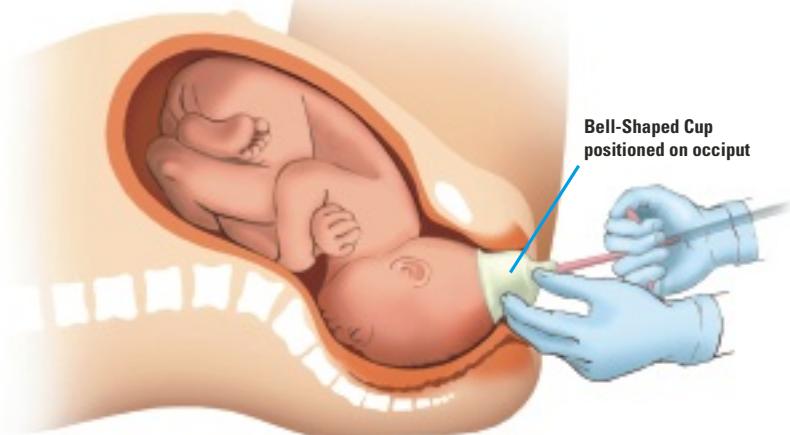
This situation is the most frequent scenario in which vacuum-assisted delivery can be effectively utilized. Choosing a soft, bell-shaped cup that won't facilitate off-axis traction or forced rotations of the fetal head will help reduce the risk of fetal injury.

¹O'Grady, J. P. Gimovsky, M. L. and McIlhargie, C. J. (1995). Vacuum Extraction in Modern Obstetric Practice, p. 23 (New York; Parthenon Publishing).

²ACOG Technical Bulletin, Number 196, August 1994

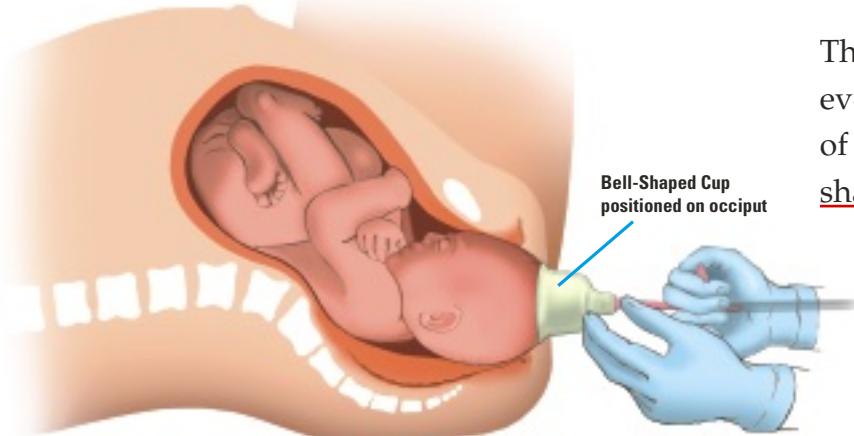
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2 Low Station with Occiput Anterior Orientation



The low-station situation is the second most frequent scenario for vacuum-assisted delivery. The fetal occiput is accessible to any type of vacuum cup. A soft, bell-shaped cup is the choice which provides the best trade-off between tractive capability and fetal safety.

3 Outlet-Station with Occiput Posterior Orientation



This situation can occur where the fetal head is nearly delivered and, even though posteriorly oriented, the fetal occiput is accessible to any type of vacuum cup. The best cup choice in this situation is also a soft, bell-shaped cup.

In the above situations, low profile (mushroom) cups are not needed for access to the fetal occiput. Since these cases represent the situations where vacuum-assisted delivery should be indicated, we conclude that low-profile (mushroom) cups, with their aggressive mechanical hold, are unnecessarily risky and a suboptimal choice for V.A.D. procedures.