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# A Capitated Price-Per-Procedure Purchasing Model for the Neuroendovascular Treatment of Intracranial Aneurysms Reduces Hospital Expenses

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## Introduction

The neuroendovascular treatment of intracranial aneurysms relies heavily on the use of expensive medical implants and devices. In the current healthcare marketplace effective strategies to control expenses are needed.

## Methods

A two-tiered, capitated, price-per-procedure purchasing model for the neuroendovascular treatment of an intracranial aneurysm (Table 1) was developed through negotiations between our neuroendovascular surgeons, the hospital administration, and the vendor. The costs of implants and devices in the capitated model were compared to the costs of those same supplies if they had been purchased using existing a la carte prices at our institution. The total hospital expense for each patient treated and the percentage of that expense attributable to implants and devices used in the aneurysm procedure were calculated.

## Results

Over a 3-month period 15 patients were included; 6 patients had unruptured intracranial aneurysms (UIA) and 9 patients presented with subarachnoid hemorrhage (SAH) (Table 2). Detailed patient, procedural, and hospitalization financial data are shown in Table 3. The mean savings per case was $9,733 (range $1,001 – 22,865). The mean percent savings per case was 34% (standard deviation 18). The mean percentage of total hospital expense attributable to implants and devices used in the procedure was 73% for UIA and 25% for SAH. The aggregate savings of the purchasing model for all 15 cases combined was $145,989.

## Conclusions

The use of a capitated, price-per-procedure purchasing model for the treatment of intracranial aneurysms resulted in significant hospital savings at our institution. Capitated purchasing models may be an effective strategy to reduce costs while maintaining clinical standards.

## Learning Objectives

By the conclusion of this session participants should be able to:

1. Describe a novel, capitated purchasing model for the neuroendovascular treatment of intracranial aneurysms that resulted in significant savings at our institution.

2. Recognize that because healthcare reimbursements have stalled, a hospital's ability to provide cerebrovascular care at a profit depends on its ability to control expenses.

3. Consider that in contrast to other, simpler medical procedures that use a standard set of supplies, neuroendovascular aneurysm treatment expenses are uniquely difficult to control because it is hard to predict the volume and variety of different devices that may be used to treat a given aneurysm.

4. Appreciate that it is important to align the incentives of key stakeholders when developing an effective purchasing model; Neurosurgeons should understand the perspective of the hospital administration and the vendors.

5. Know that reducing costs improves value only if clinical standards are maintained.

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