

MEMORANDUM

To: Gopher Venture Capital
From: UMN Innovations
Date: February 13, 2008
RE: Market Sizing for Blood Clot Removal

The worldwide market for blood clot removal is significant and growing; approximately 10 million people suffer from blood clots each year.¹ The market for thrombectomy devices that remove clots, however, is currently underserved due to the abundance of devices that fail to meet customer needs. Market research has confirmed that physicians are eagerly awaiting more effective percutaneous devices, such as the one UMN_Clots² plans to provide.

Market need is the key ingredient to a successful product. UMN_Clots has three targeted markets with a need for its product: Neurothrombectomy, Coronary Chronic Total Occlusion (CTO), and Peripheral Vascular Disease. Through physician input and preliminary research, UMN_Clots believes the neural market appears to be the most promising area for its product. Accordingly, the company is focusing its efforts on developing a product for the treatment of ischemic stroke.

National Projections

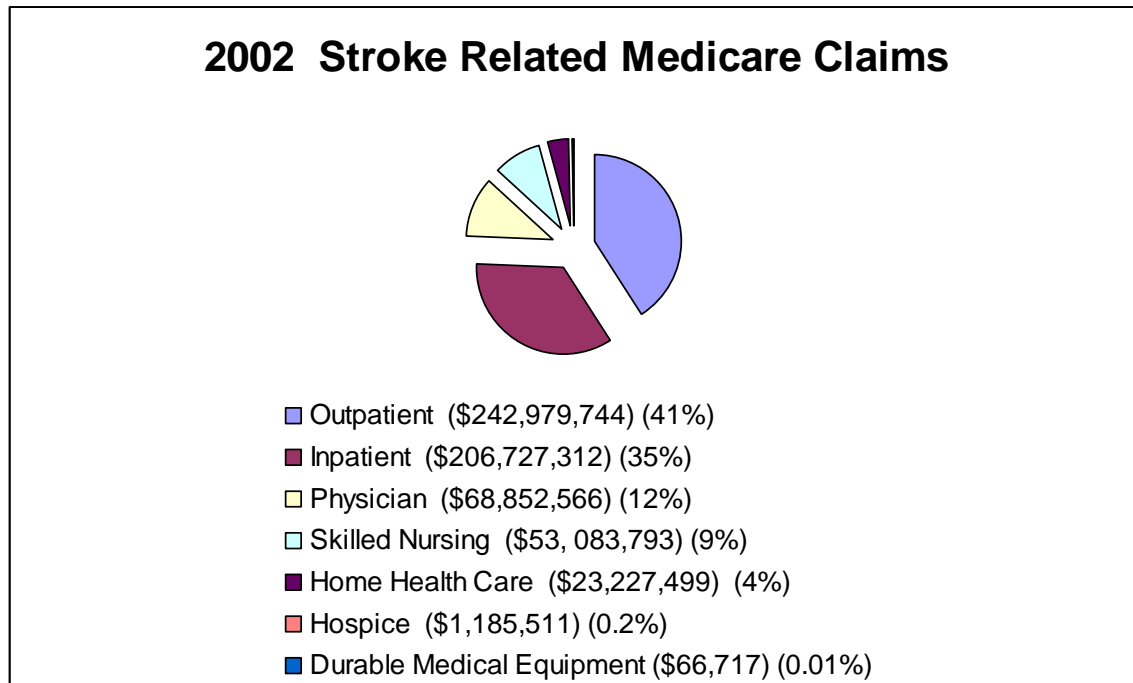
As referenced above, according to the American Stroke Association there are approximately 700,000 strokes per year in the U.S. Of those, 88% (616,000) are ischemic strokes and only 20% are caught in time for treatment. This leaves UMN_Clots with a potential total patient population of 123,200 ($700,000 \times 0.88 \times 0.20$). However, this is assuming 100% market share which is unrealistic. From a sensitivity analysis perspective, UMN_Clots believes it can achieve between 5-15% market share. This would result in approximately 6,160 to 18,480 treatable patients within the first few years.

Information from a 2002 Medicare claims database of 2 million beneficiaries (five percent of the Medicare population) found 14,431 patients who had inpatient claims submitted with the two DRGs most closely affiliated with stroke (14 Med Specific Cerebrovascular Disorders except TIA and 15 Med Transient Ischemic Attack & Precerebral Occlusions). Multiplying by 20 for 100% of the Medicare beneficiaries, there would be approximately 288,620 stroke patients out of approximately 42.5 million beneficiaries, or 0.68% of the Medicare population.

¹ Possis Medical 2002 Annual Report.

² This is fictitious technology for a class exercise. Real technologies do exist though.

Information from the same database indicates that total claims related to DRGs 14 and 15 were \$596,422,197. Multiplying by 20, the total Medicare costs in 2002 were approximately \$11.922 billion. The \$596,422,197 amount is broken down among inpatient, outpatient, physician, skilled nursing, home health, hospice and durable medical equipment as follows:



International Projections

As in the United States, stroke is the third leading cause of death worldwide and a leading cause of adult disability.³ Although UMN_Clot is not currently pursuing an international market, it is evident there is potential demand for its product overseas.

Likely Revenue Sources

Given that the UMN_Clot Micro-catheter will have a specific treatment window of 2-8 hours, the product is expected to be used at the hospital either in a catheter lab or another inpatient setting. Most hospitals purchase medical equipment through group practice organizations (GPOs). As such, UMN_Clot can expect its revenue stream to come from direct sales to GPOs.

³ DGNews. "Stroke Patients Show Significant Risk Reduction When Given Atacand." www.docguide.com; World Health Report - 2002, from the World Health Organization; International Cardiovascular Disease Statistics, a publication from the American Heart Association.