

Cost Considerations: Is a Venous Practice Financially Feasible?

European experts comment on the economic challenges they face with venous reimbursement within their countries.

WITH STEPHEN BLACK, MD, FRCS(Ed), FEBVS; MARC SAPOVAL, MD, PhD; AND CHRISTIAN ERBEL, MD



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This question, as ever, is a chicken-and-the-egg conundrum. Treatments inevitably start from a position of patient need and require refinement before the question of economic viability is addressed. Financial feasibility, in its barest essence, comes down to the question: is the cost of the treatment delivered exceeded by the cost of withholding the treatment from the patient?

To truly understand this question, we need to understand the cost of no treatment (eg, best medical therapy). ATTRACT has demonstrated that 50% of patients with acute deep vein thrombosis (DVT) will develop postthrombotic syndrome (PTS), and no reliable data exist to outline how expensive this condition may be. Until we understand this and stop focusing only on the cost of treatment, we will not make progress. Significant complications of PTS take years to manifest (in particular, ulcers), and it is well established that the cost of treating ulcers is high. However, the cost of work days lost, lifelong analgesia, destruction of quality of life, and other associated health burdens are not as well understood.

The cost of treatment is expensive to start with, and payment structures, funding bodies, and commissioners have not yet caught up with the economic demands. Cost-effective treatment is delivered by improving results, minimizing reintervention, and ultimately, ensuring that we keep the intervention as short and simple as

possible. The demands are different for the treatment of patients with acute and chronic disease.

Acute therapy is compounded by a more unpredictable length of stay, the need for lytic (which is expensive), and in many centers, requirements for high-dependency beds as routine. To improve financial feasibility in patients with acute disease, we have increased the use of mechanical thrombectomy to reduce the length and dose of lytic and actively worked to reduce in-hospital stay with the ultimate goal of moving to an outpatient/office-based delivery of therapy. Additionally, we have made strides to remove the need for high-dependency bed support based on evidence that suggests venous patients have little need for it. We have also dedicated effort toward improving technical outcomes to mitigate the cost of reintervention.

In patients with chronic disease, the pathway has been easier because many patients can be managed through a day-case pathway. The procedural fees for these stents sustain the practice, which is built around the ability to do multiple procedures in an operating session. Lists need to be optimized, and as with acute patients, we have actively worked to improve primary patency.

Returning to the question at hand, at this stage, we probably do not know the answer, but if we drive data to understand the cost of no treatment in these patients, ensure that we continue to improve our delivery of intervention, and collect robust data to support emerging therapies, we should be able to answer the question fully.



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The indication of acute thrombus removal using pharmacomechanical thrombectomy (PMT) is still open for debate. Despite several randomized trials showing

positive results in favor of this approach (eg, open vein theory), the recent ATTRACT trial failed to confirm the benefit of interventional treatment compared with conventional anticoagulation.

Because of these results, in France, where there is already a deficit of teams performing PMT, the referring clinicians are now more reluctant to send patients. The issue of reimbursement for the device further complicates the adoption of PMT and increased utilization.

However, in a few dedicated centers that are trained to use the AngioJet™ thrombectomy system (Boston Scientific Corporation) and have a multidisciplinary approach to the disease, there is still significant activity. There is a need to persuade the local payers (eg, the hospital administration) that the cost is acceptable, given the benefit for the patient and the attraction of new patients to the health care structure.

Still, there is a need for more clinical evidence. A properly designed prospective trial evaluating the benefit of a single session of PMT is needed to assess the clinical value in appropriately selected patients. We anticipate that focusing on proximal ascending acute DVT in younger patients and absence of underlying prothrombotic disease (eg, cancer) in a relatively small number of patients with total stenting would yield enough positive results to allow the design of the next ATTRACT trial.

Upon availability of a larger data set, a macroeconomic study would be of great value to help in aiming at reimbursement of the technique in France.

adequate reimbursement is possible for catheter-directed lysis and thrombectomy of patients with an acute thrombotic occlusion.

Based on these factors, whether a venous practice is financially feasible depends on many factors:

- Having a balance of patients with acute and chronic venous occlusions will help optimize the budget for your venous practice.
- The type of intervention used for a chronic occlusion affects the cost structure of the venous center. The longer the venous occlusion, the higher the amount of dedicated venous stents needed, and the higher the expenses for the center.
- In the acute thrombosis setting, reimbursement depends on the type of intervention—local lysis alone or with thrombectomy, as well as whether rotational or nonrotational thrombectomy is used.
- The costs for a dedicated venous stent vary significantly; the stent selection has a major impact on the expenses of the venous center.

Another important aspect is the negotiations of the purchasing groups to reduce material costs. ■

1. MacDougall DA, Feliu AL, Boccuzzi SJ, Lin J. Economic burden of deep-vein thrombosis, pulmonary embolism, and post-thrombotic syndrome. *Am J Health Syst Pharm.* 2006;63(suppl 6):S5-S15.



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Health care economics may limit interventional treatment of chronic venous occlusions for the vast population of venous patients. One retrospective review calculated that the economic burden of DVT, pulmonary embolism, and PTS is about \$20,569 per year for United States health care plan enrollees,¹ which is a significant financial cost for any health system. Expenses are high for specific high-pressure balloons and dedicated venous stents worldwide, whereas the billing system for these devices is based on those used for arterial interventions, which have significantly lower material costs. Conversely, in Germany,