

## TALKING POINTS

### **Isenberg researchers improve circulation of blood supply**

A research team led by Anna Nagurney, professor of Operations Management and director of the Virtual Center for Supernetworks, has developed a model that improves the performance of medical blood supply chain networks. The model and its accompanying algorithm capture the procurement, testing, processing, and distribution of blood throughout their medical supply chains.



Blood, note the Isenberg School of Management researchers, is frequently in scarce supply. The U.S. averages 38,000 donations daily, but the supply is frequently two days away from running out. Blood is also perishable -- roughly 8 percent becomes outdated and goes to waste.

Some of the model's novel features include its ability to account for perishability and its incorporation of costs associated with waste, disposal, and shortages and surpluses at points of demand. Agencies and communities can also use the model to create advance blood allocation plans for disasters.

Nagurney's fellow researchers were Amir H. Masoumi and Min Yu, Ph.D. candidates in Management Science. A research paper describing their study will appear in the journal, *Computational Management Science*.

#### **More Information**

#### **[Supply Chain Network Operations Management of a Blood Banking System](#)**

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