

# Direct Cost to Transfuse

By Jan Wade, SABM

# Direct Costs to Transfuse

**TABLE 2.1**

**PUBLISHED STUDIES ON ESTIMATED RBC COSTS IN 2003 DOLLARS**

Author, Year	Facilities	Study Technique	Acquisition Cost (%)	Patient Sample	Cost/Unit (2003 \$) <sup>a</sup>
Forbes, 1991	19 Teaching hospitals with level I or II trauma	Survey of blood related charges	37%	Mixed population	\$386
Mohandas, 1995	Outpatient cancer center	Review of blood related charges for 219 patients	26%	Solid tumors Hematologic tumors	\$629 \$678
Cantor, 1998	Outpatient cancer center	Survey of blood related cost activities	15%	Solid tumors Hematologic tumors	\$488 \$500
Crémieux, 2000	Outpatient cancer center	Cost activities recorded for 517 patients	19%	Solid tumors Hematologic tumors Complex patients	\$646 \$684 \$717

<sup>a</sup>Calculations based on the Consumer Price Index (CPI) for Medical Care Services. Adapted from Forbes JM, Anderson MD, Anderson GF, et al. Blood transfusion costs: a multicenter study. *Transfusion*. 1991;31:318-323; Mohandas K, Aledort L. Transfusion requirements, risks, and costs for patients with malignancy. *Transfusion*. 1995;35:427-430; Cantor SB, Hudson DV Jr., Lichtiger B, et al. Costs of blood transfusion: a process-flow analysis. *J Clin Oncol*. 1998;16:2364-2370; Crémieux PY, Barrett B, Anderson K, et al. Cost of outpatient blood transfusion in cancer patients. *J Clin Oncol*. 2000;18:2755-2761.

# Direct Cost of Blood

- Forbes Study of Direct Cost to transfuse a patient - 1991
- 19 teaching hospitals with Level 1 or Level 2 trauma
- Study of blood related charges – Included handling charges, lab charges and blood administration charges
- Medicare cost-to-charge discount ratio used to estimate actual hospital cost from the patient charges
  - **Mixed Population - \$386 per unit transfused (2003\$)**
  - **Acquisition cost - 37%**

# Direct Cost of Blood

- Mohandas Study 1995
- Review of blood related charges for 219 patients
- Outpatient cancer center. Review included charges for blood administration and for transfusion aberrations such as transfusion reactions and special lab studies
  - Solid tumors - \$629 (2003\$)
  - Hematologic tumors - \$678 (2003\$)
  - Acquisition cost – 26%

# Direct Cost of Blood

- Cremieux Study 2000
- Cost activities recorded for 517 patients, Outpatient cancer center. Review included direct material, variable direct labor, fixed direct labor and overhead
  - Solid tumors - \$646 per unit transfused (2003\$)
  - Hematologic tumors - \$684 per unit transfused (2003\$)
  - Complex patients - \$717 per unit transfused (2003\$)
  - Acquisition Cost – 19%

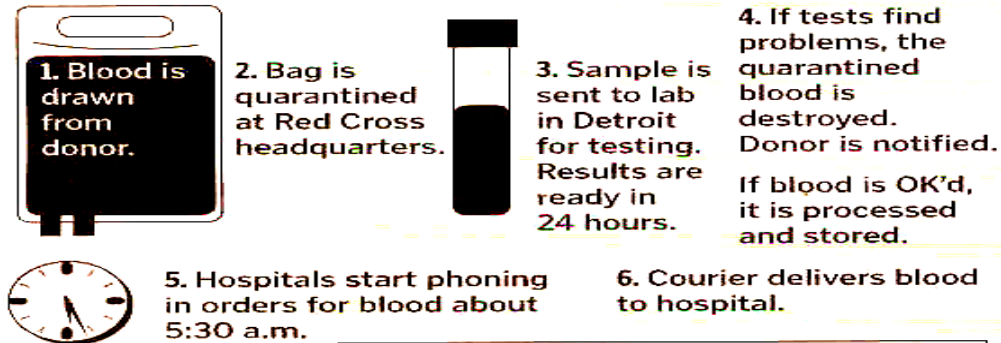
# Direct Cost of Blood

- Cantor Study 1998
- Outpatient cancer center
- Survey of blood related activities; based on process flow analysis
  - Solid tumors - \$488 (2003\$)
  - Hematologic tumors - \$500 (2003\$)

## The price of blood

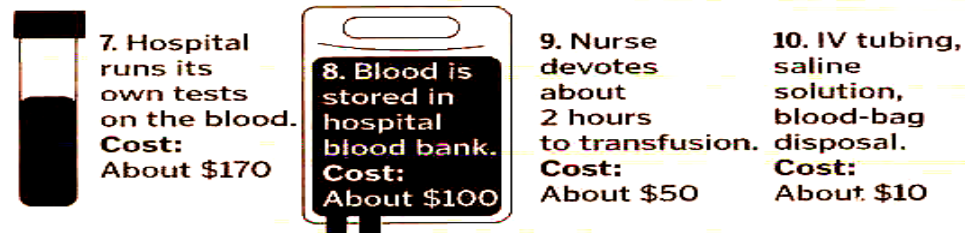
Blood is free when it leaves a donor's arm. But by the time it reaches a hospital there is a price tag attached. Added costs at the hospital push the price of a transfusion to at least \$500, studies say. This is how the process works at the Red Cross in Cleveland.

### Donation and testing



**Cost so far to hospital:**  
About \$190 to \$250 per bag of blood.

### Getting the blood to the patient



**Total cost to hospital: At least \$500.**

SOURCES: American Red Cross; Society for the Advancement of Blood Management; Cleveland Clinic

THE PLAIN DEALER

**Medicare does NOT Reimburse  
Until You Give 3 Units of Blood in  
Any Calendar Year.**

## Blood Center Collection, Testing, Processing Costs:

**\$190 - \$250/unit**

## Hospital's Transfusion Costs:

**\$170 to run own tests**

**\$100 to store blood**

**\$50 for 2 hrs transfuse**

**\$10 for disposables**

**Total = At least \$500**

**For Specific Requests,  
Expect 2 – 3 Times the  
Normal Costs**