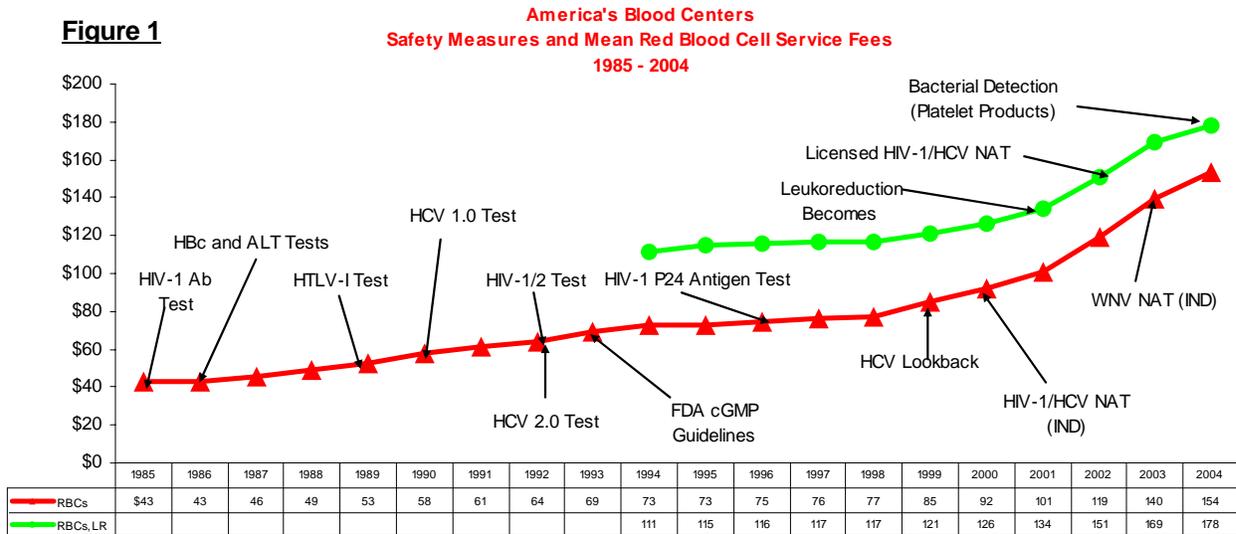# BLOOD COUNTS

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Blood Services: Cost, Reimbursement and Billing

A hot topic in the blood community and with the hospitals they serve has been the dramatic increase in the price of blood, and the realization that Medicare has not increased reimbursement to capture those raises. Figure 1 shows the average price of blood distributed by members of America's Blood Centers (ABC) and the safety measures associated with price increases.

Tests (NAT) for HCV and HIV, and later for West Nile virus. Also, at the urging of the Food and Drug Administration (FDA) and other organizations, many blood centers expanded the proportion of red blood cell (RBC) concentrates from which white blood cells had been removed by costly filtration technology. In 1999, about 20% of RBCs provided to the nation's hospitals were leukoreduced. By 2004, this figure had

Figure 1

America's Blood Centers
Safety Measures and Mean Red Blood Cell Service Fees
1985 - 2004

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
RBCs	$43	43	46	49	53	58	61	64	69	73	73	75	76	77	85	92	101	119	140	154
RBCs, LR										111	115	116	117	117	121	126	134	151	169	178

After many years of modest increases in the prices of blood services – indeed, increases far below the rates of inflation – between 1999 and 2004, hospitals saw their blood costs nearly double. The most important drivers were the costs of implementing new Good Manufacturing Practices (GMPs) and quality processes required by FDA, similar to those applied to the pharmaceutical industry, and the cost of new safety measures such as donor screening by Nucleic Acid

risen to 80%. The result of all these new safety measures was that the average cost of red blood cells for hospitals supplied by ABC members went from $85 in 1999 to $178 in September 2004 (Figure 1).

The cost of safety. In the mid-1990s, blood usage increased and blood shortages became more frequent. The increases in blood usage resulted from more blood-intensive hospitalizations of the aging popula-

tion, more transplants and aggressive cancer therapies. At the same time, ABC member centers and the American Red Cross lost hundred of millions of dollars in reserves or took on tremendous debt to implement new safety measures without raising prices to their hospital customers. Ultimately, the debt became unsustainable for these not-for-profit organizations.

In 2002, an estimated 5 to 10% of donors who had traveled to Europe became ineligible due to new precautionary deferrals for Mad Cow Disease. This required substantial investment in recruitment to compensate for the loss. Prices rose to keep up with new safety measures, increasing collections, ridding the organizations of debt, and restoring prudent reserves. As a result, hospitals have seen frequent and steep increases in their blood bills – with no end in sight.

Why is reimbursement not keeping pace with cost increases? Medicare and Medicaid reimbursement to hospitals has not kept pace with increases in the costs of providing transfusions – at least for inpatients, who receive about 95% of transfusions. Medicare and Medicaid are important for blood reimbursement because about half of red blood cells are transfused into patients over the age of 60.[1] In addition, Medicare and Medicaid reimbursement sets the pace for private insurance reimbursement rates.

Although blood and blood components comprise less than 1% of hospital expenses (*e.g.*, in 2003 about $3 billion for US blood services out of about $500 billion in hospital expenses reported by *AHA Hospital Statistics*), one in six hospitalized patients requires blood.[2] Moreover, blood is the largest single item in a hospital laboratory's budget.

Despite being a small budgetary item, blood tends to be on hospitals' radar screen because lack of availability can cause severe disruptions and affect hospital revenues. The biggest impact is postponement of elective surgeries. Occasionally, major surgeries are delayed, organs for transplant are wasted, and hospitals lose even more revenue.

Calculating the Cost of Blood. Because prices for blood and blood components remained stable up to the mid-1990s, the Centers for Medicare and Medicaid Services (CMS) removed these products from its "market basket" updates of rising healthcare therapy costs used to adjust inpatient reimbursement rates under the Diagnosis-Related Groups (DRG) payment system.[3] In addition, CMS "rebases" Medicare and Medicaid reimbursement rates infrequently – meaning that the overall cost of a hospitalization is rarely reexamined. The last time a rebasing occurred was in 1996. As a result, while hospital blood bills from blood centers have more than doubled to over $3 billion in recent years, reimbursement has not kept pace. In 2000 – at the urging of ABC, its members and other organizations – Congress directed CMS to look at including the costs of blood in the market basket updates. While CMS agreed to do so, it has had difficulty determining an acceptable mechanism for obtaining blood prices. Earlier this year, CMS asked the Bureau of Labor Statistics (BLS) to develop a system to obtain regular updates on blood prices directly from the blood services industry using BLS' Producer Price Index (PPI) survey system. Finally, in its August 12, 2005 final rule for the fiscal year 2006 hospital inpatient prospective payment system (PPS), CMS removed the blood and blood products category from its "market basket" and placed those costs in its miscellaneous products category (not subject to DRGs).[4] Explaining this change, CMS said it believes that the BLS PPI for blood and derivatives "may not be consistent with the trends in blood costs faced by hospitals," and that "the PPI for finished goods minus food and energy moves most like the recent blood cost and price trends."

Outpatient system for blood reimbursement improving. Before July 2000, reimbursement for outpatient transfusions was cost-based – in other words, hospitals and clinics were reimbursed based on what they billed. Then, to better control costs and simplify billing, CMS introduced the Ambulatory Payment Classification (APC) system for outpatient reimbursement. APCs are average bundled costs of similar therapies and, like DRGs, reimbursement is the same no matter what specific treatment and supplies a patient receives within the APC bundle.

When the draft APC scheme was published in April 2000, the rates CMS proposed for transfusion reimbursement were far lower than what hospitals actually were paying for blood components. Under pressure from Congress generated by ABC and other blood organizations, CMS agreed to "unbundle" blood and listed each blood product separately for reimbursement, although CMS uses reimbursements based on hospital billing data. Under pressure from the blood organizations, CMS has improved blood APC reimbursement rates, but the rates remain far below actual costs for blood. In reality, APCs account for only about 5% of transfusions in hospitals.

Hospital "Billing" for Blood. Adding to the problem is the fact that CMS has had such great difficulty in determining the correct reimbursement for blood because hospital blood "billing" data is woefully inade-

quate. (Under the DRG system, of course, hospitals do not "bill" CMS for blood costs. However, in order to determine actual costs and adjust reimbursement, Medicare requires hospitals to submit "billing" reports that reflect the prices they pay for the goods and services involved in treating Medicare patients.)

In a 2002 study, The Lewin Group (a Washington DC-based healthcare think tank) commented:

"The updates in Medicare inpatient payment levels are severely flawed by the quality of the hospital cost data pertaining to blood products and administration (transfusions) that is reported to CMS. In 2002, CMS reported that only 48.0% of hospitals billed at all for one or both of the blood-related cost centers in their cost reports to Medicare." [5]

According to The Lewin Group, the reason many hospitals failed to report their blood costs was that billing procedures for blood were confusing and needed clarification from CMS. ABC subsequently conducted an informal survey of hospital laboratory directors and found that they felt taking the time to bill for blood would not increase their reimbursement because – like lab tests – blood is included in the DRGs and the DRG reimbursement is fixed.

While it is true that reimbursement for a DRG is fixed for a given year, in reality, the only way for CMS to determine the real costs of blood services and its usage is through hospital "billing" data. And if half the data are missing and much of it is wrong, CMS has no way to accurately fix the reimbursement rate. So, there is a vicious cycle of poor billing practices leading to poor reimbursement, which in turn leads to a lack of interest in accurate billing, which then reinforces poor billing practices.

What is a "product" and what is a "processing fee"? A significant part of the problems hospitals have in accurately billing for blood is confusion over what to bill for and where. In July 2005, CMS issued a memorandum attempting to clarify how hospitals should bill blood for outpatient procedures. It reads in part:

"If an OPPS [outpatient] provider pays for the actual blood or blood product itself obtained from a community blood bank, or collects the blood or blood product in the OPPS provider's own blood bank and also assesses a charge for the blood, in addition to paying for processing and storage costs, the OPPS provider must separate the charge for the unit(s) of blood or blood product(s) from the charge for processing and storage services. The OPPS provider reports charges for the

blood or blood product itself using Revenue Code series 038X with the line item date of service (LIDOS), the number of units transfused, and the appropriate blood product HCPCS code and HCPCS modifier BL. The OPPS provider reports charges for processing and storage services on a separate line using Revenue Code 0390 or 0399 with the LIDOS, the number of units transfused, and the appropriate blood product HCPCS code and HCPCS modifier BL."

Further, CMS said: "Units of whole blood or packed RBC for which only processing and storage charges are reported are not subject to the blood deductible. The Medicare blood deductible is applicable only if the OPPS provider purchases whole blood or packed RBC from a community blood blank or if the OPPS provider assesses a charge for blood collected in its own blood bank that reflects more than charges for blood processing and storage. If the beneficiary has not already fulfilled the annual blood deductible or replaced the blood, OPPS payment for the blood or blood product will be made for the processing and storage costs only. The beneficiary is liable for the blood portion of the payment as the blood deductible."

"Pays for the blood itself in addition to a processing fee?" And what is the "blood deductible"? This needs even more clarification.

Let's take it one piece at a time. "The OPPS provider reports charges for the blood or blood product itself using Revenue Code series 038X . . . [and] reports charges for processing and storage services on a separate line using Revenue Code 0390 or 0399." What does that mean? In reality, CMS is using "code language" that the agency adopted over 20 years ago to settle a major philosophical controversy over billing for what are variously called replacement fees, replacement deposit fees, blood replacement fees, patient responsibility fees, non-replacement fees, etc.

In the 1970s, about 40% of blood was collected by blood centers and hospitals using special replacement fees to induce the friends and families of patients receiving blood to replace the blood used or pay a cash fee. The replacement fee was not covered by insurance. So either the patient replaced the blood used or paid the replacement fee. The way this worked was a patient was charged two fees: a replacement fee and a processing fee. The replacement fee usually was small ($10 to $20) and was considered the cost to recruit a new donor if the patient didn't replace the blood. The processing fee was the charge over and above the replacement fee for the hospital or blood

center to recoup its costs for collecting, testing, processing, and storing the blood donation.

When this issue was discussed at the national level in the late 1970s, labor unions and the American Legion felt it was unfair that older people (*i.e.,* Medicare recipients) should have to replace the blood they used or pay a fee – and wanted Medicare to cover all such fees. But many hospitals and blood centers asserted that if the replacement fee were paid by insurance, it defeated the purpose of the fees – which was that patients should take responsibility for replacing the blood they used. Eventually a compromise was struck. Medicare agreed it would not pay the replacement fees for the first three units of red blood cells (as an inducement for patients to replace the blood they received) and Medicare would pay for the replacement fees after the first three units transfused in any calendar year.

Accordingly, CMS created two sets of Revenue Codes (038X and 039X) to distinguish the replacement fee from the processing fee. Since blood from volunteer donors was free and blood prices comprised only the costs of collecting, processing, and delivering the blood to hospitals, CMS defined the replacement fee charged by a blood center or a hospital as the charge "for the actual blood or blood product."

So how should hospitals report the cost of blood to CMS? If the blood center provider or the hospital that collects its own blood does not assess a patient responsibility or replacement fee, reporting blood charges to CMS is simple: all charges for blood go under 039X Revenue Codes. It's that simple.

If, on the other hand, the blood center or hospital collector does assess a patient responsibility or replacement fee, then they report that fee under the 038X Revenue Code – but only after the patient has either paid the fees for the first three units of RBC transfused in a calendar year or otherwise replaced those RBC units (or some combination of blood replacement or fee payment). All processing fees go under the 039X Revenue Codes. Since less than 10% of blood is collected these days using replacement fees (most of it by hospitals), most hospitals need not worry about the 038X codes at all.

In summary:

- Blood prices are continuing to increase because the cost of safety is expensive.

- CMS is only starting to address the increasing cost of blood and blood components due to a number of systemic problems with its DRG and APC systems.

- Part of the problem is confusion on billing and part of the problem is lack of billing and/or accurate billing by hospitals for blood.

What's the solution? It is important that hospitals bill for blood and that they bill correctly. Otherwise, CMS will not have the data to fix reimbursement rates for blood. This is especially important when the fees for blood exceed the rates of inflation and every dollar captured counts. Until hospital billing data improve, the national blood and medical device organizations continue to seek interim solutions with CMS for accurately capturing the increasing costs of blood.

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