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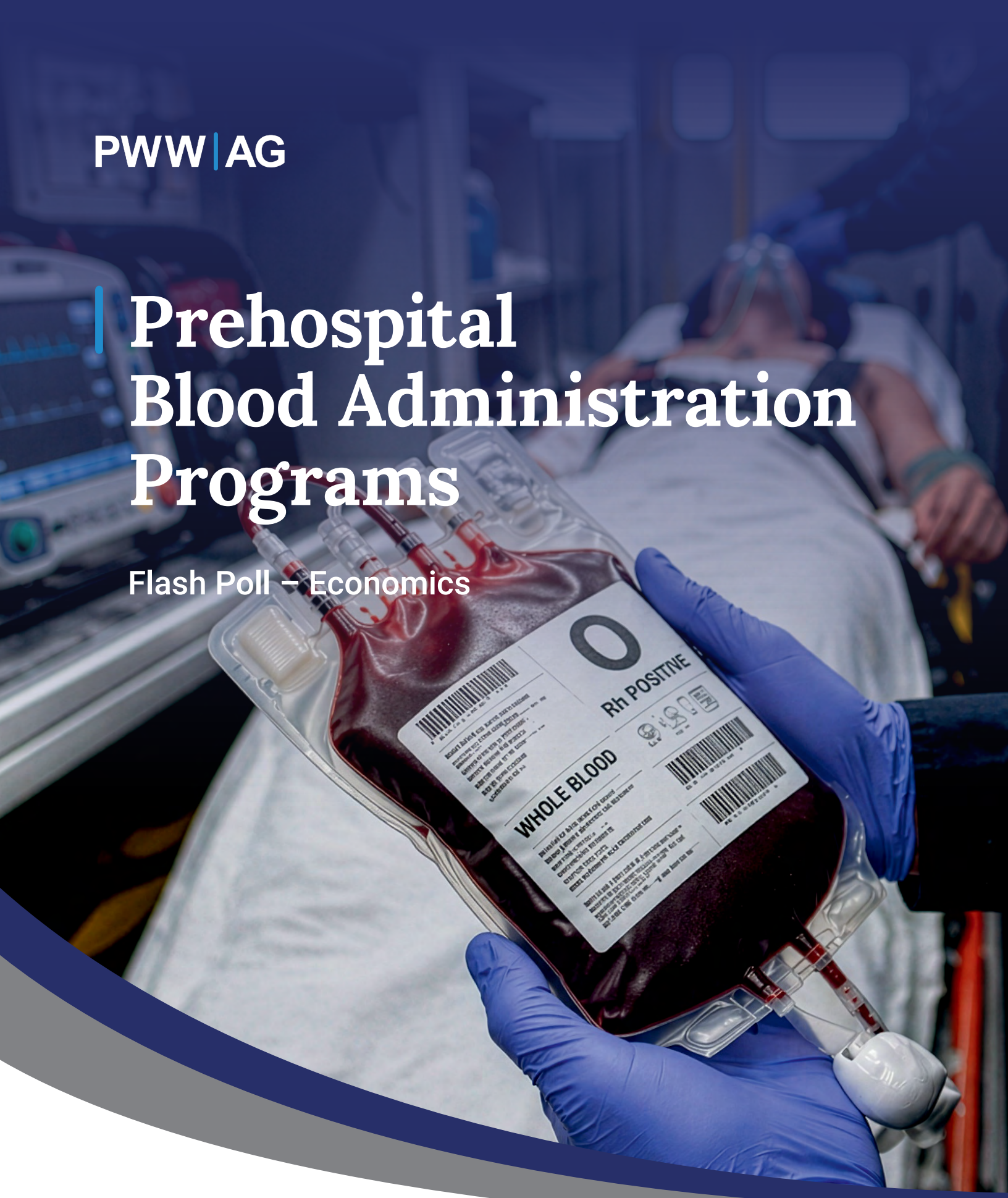
Prehospital Blood Administration Programs

Flash Poll – Economics



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Executive Summary

The **Prehospital Blood Transfusion Coalition** (PBTC) and PWW Advisory Group (PWW|AG) conducted a national "flash poll" to better understand the economic realities of implementing and sustaining prehospital blood administration programs. Responses from 55 EMS agencies, including fire-based, public non-fire, and air medical providers, highlight both the growing adoption of these programs and the significant financial challenges associated with them.

Findings show that while prehospital blood programs are expanding, particularly among ground EMS providers since 2021, cost structures vary widely. Average annual program expenses range from approximately **$36,000** to **$77,000** depending on

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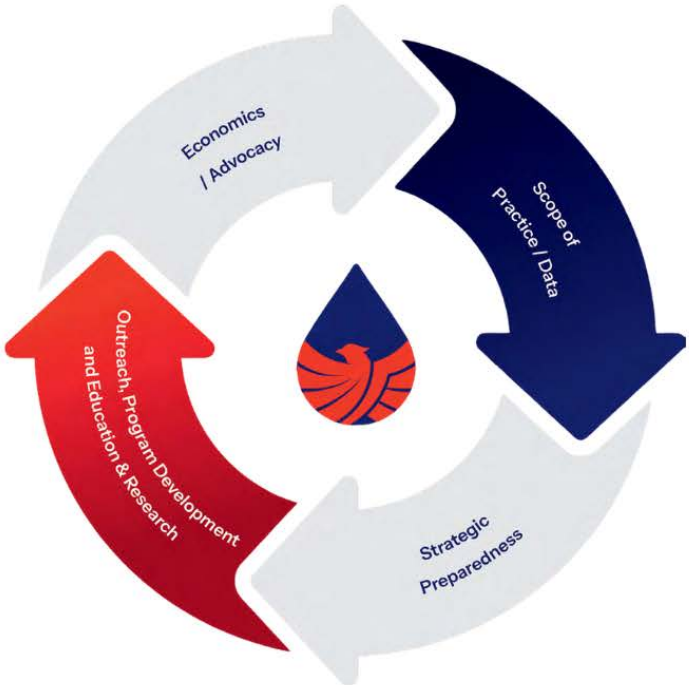
provider type, with **total reported annual costs nearing $2 million across respondents**. Patient volume is a key driver of efficiency, with air medical programs demonstrating higher utilization rates and lower cost per patient compared to ground providers. However, when fully loaded program costs are considered, **the total expense per patient is substantial, averaging nearly $12,000 and exceeding $28,000 in some fire-based systems**.

Despite these high costs, reimbursement mechanisms remain limited. Although recent Medicare policy changes allow billing at the ALS2 level when blood is administered, only a small percentage of agencies report billing differently for these cases. Even when optimized, per patient reimbursement increases are modest (*approximately 12% for ground ambulance*) and fall far short of covering the 2,000% increased cost per patient. As a result, prehospital blood programs currently operate with a significant funding gap, raising important questions about long-term financial sustainability.

Overall, the findings underscore a critical disconnect between the clinical value of prehospital blood administration and the existing reimbursement framework. Without meaningful changes in payment policy, improved cost accounting practices, and strategies to increase utilization efficiency, many EMS agencies may face barriers to implementing or sustaining these life-saving programs.



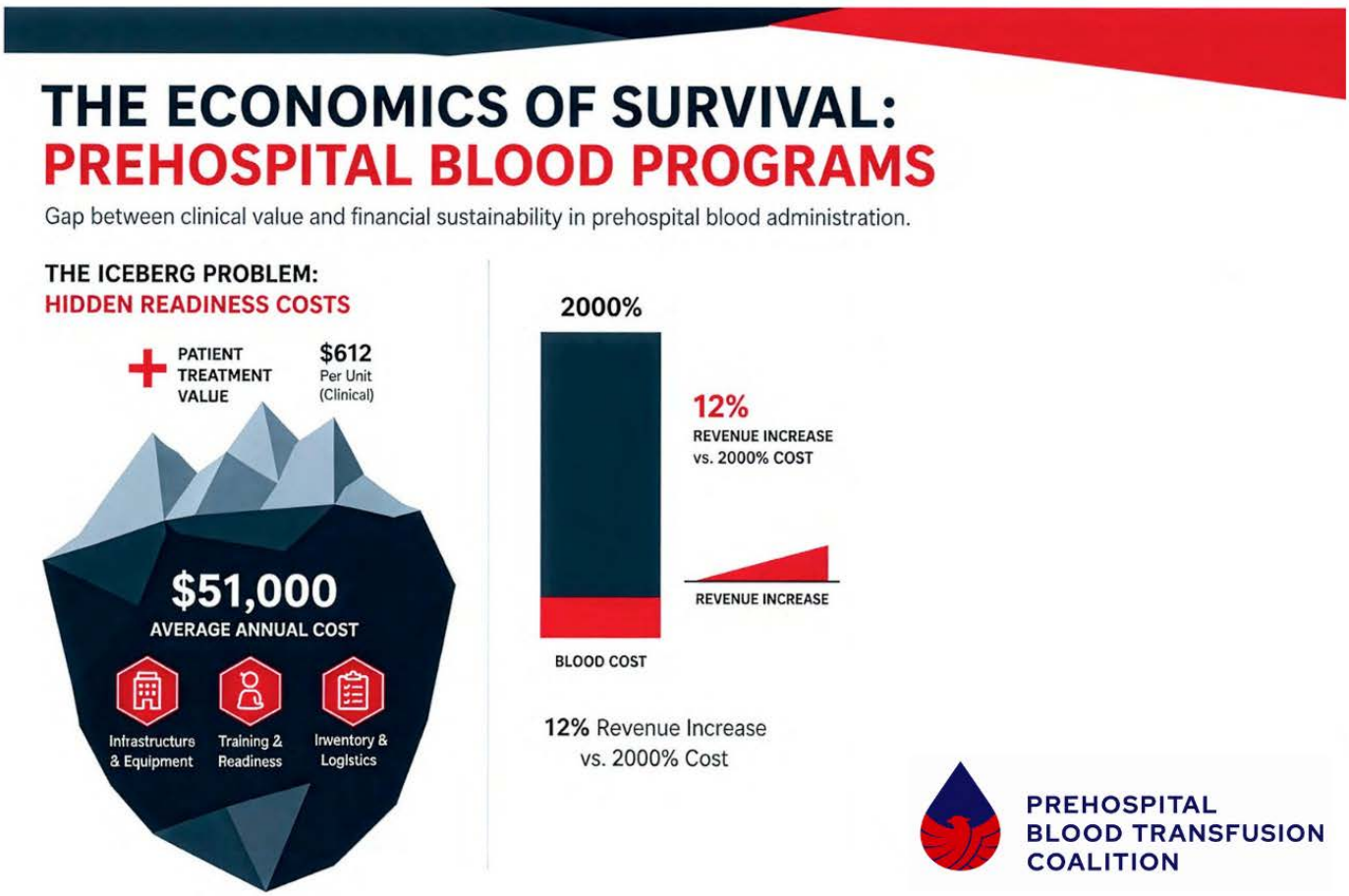
PREHOSPITAL BLOOD TRANSFUSION COALITION

Flash Poll and analysis provided by PWW Advisory Group, LLC

Background

To identify potential economic barriers to implementing prehospital blood programs, the Prehospital Blood Transfusion Coalition (PBTC) conducted a "flash poll" of agencies currently operating such programs.

A total of 55 responses were received, with varying levels of detail. These responses provided insight into the frequency of prehospital blood administration, associated expenses, and fee-for-service revenue generated from these programs.



Results

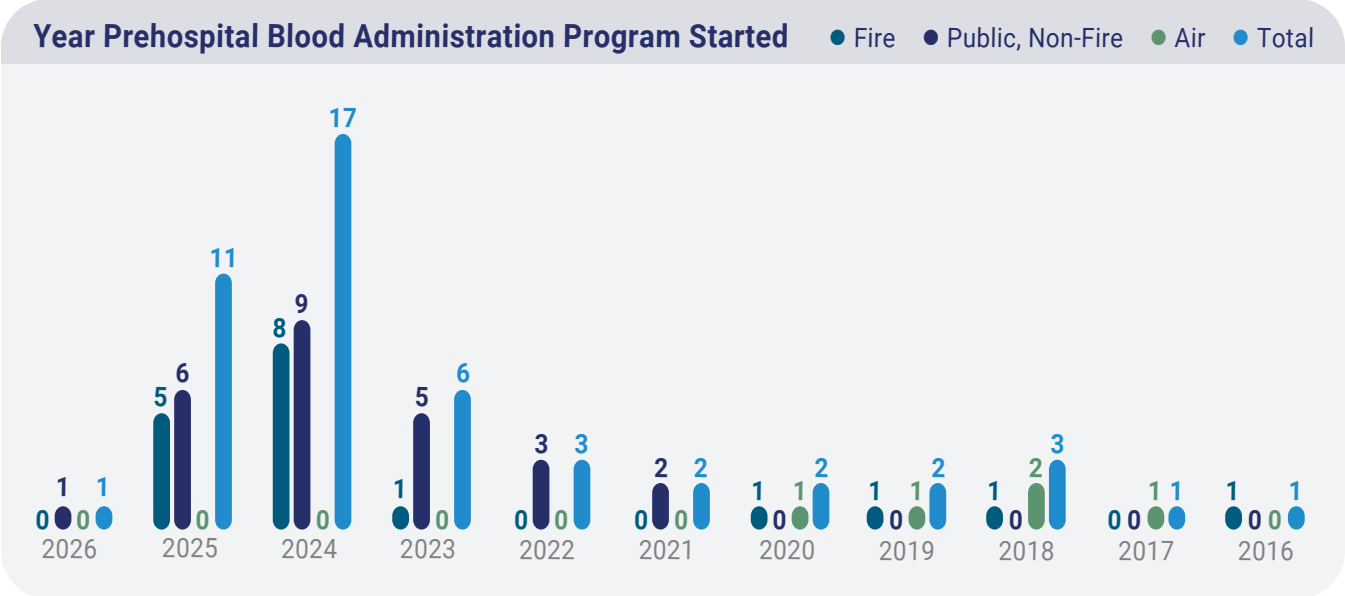
Survey Respondents

Agencies	#	%
Fire	21	38.9%
Public, Non-Fire	28	51.9%
Air	5	9.3%
Total	54	100.0%

Observations

- 51.9% of the survey respondents were Public, Non-Fire based agencies.
- 38.9% of the survey respondents were Fire department agencies.
- 9.3% of the respondents were air medical agencies.

Program Initiation

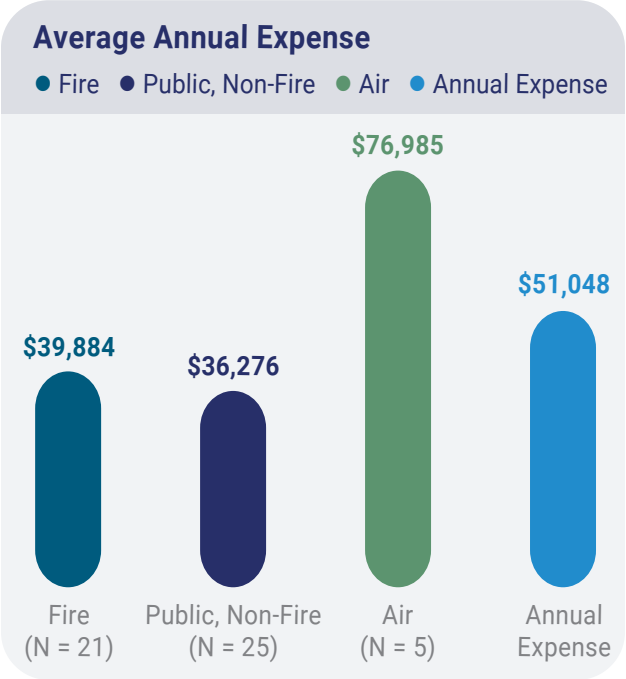


Observations

- Air medical providers were among the earliest adopters, initiating programs between 2017 and 2020.
- Most fire-based agencies launched programs within the past two years.
- Public, non-fire agencies began expanding programs starting in 2021.

Average Annual Expense of Prehospital Blood Programs

Average Annual Expense	Average	Range	
		Low	High
Fire (N = 21)	$39,884	$3,500	$135,000
Public, Non-Fire (N = 25)	$36,276	$5,000	$100,000
Air (N = 5)	$76,985	$21,000	$120,000
Average Annual Expense	**$51,048**		



Observations

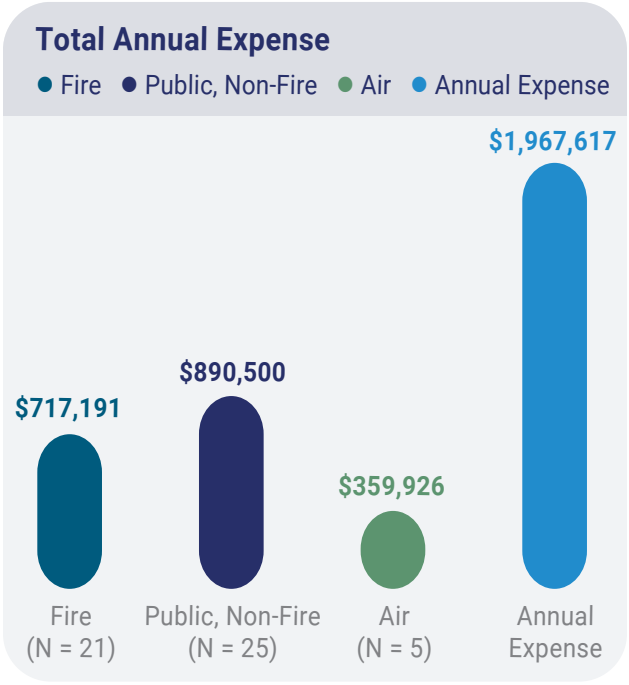
- Air medical programs reported the highest average annual expense ($76,985).
- Public, non-fire agencies reported slightly lower costs than fire-based agencies.
- There is significant variation in reported costs.
  - Additional education regarding cost allocation and accounting practices may improve consistency.

Total Annual Expenses of Prehospital Blood Administration Programs

	Total Annual Expense
Fire (N = 21)	$717,191
Public, Non-Fire (N = 25)	$890,500
Air (N = 5)	$359,926
Total Annual Expense	**$1,967,617**

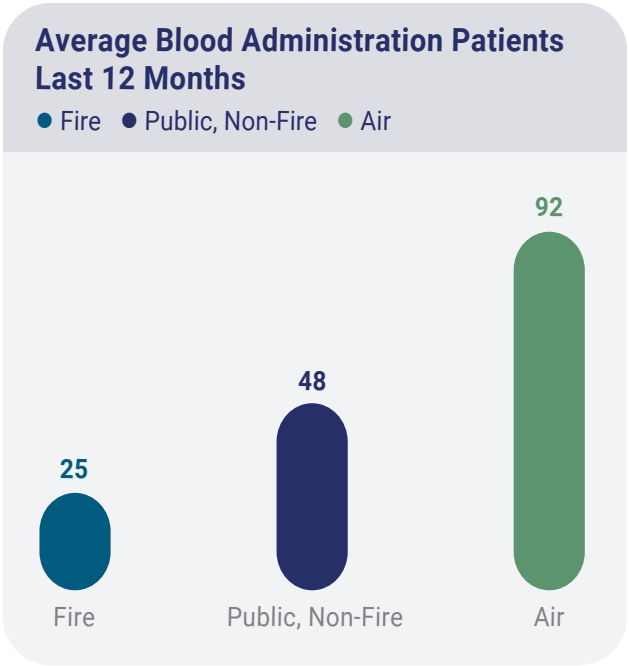
Observations

- Combined annual costs across respondents total nearly $2 million.



Average Patient Volume Receiving Prehospital Blood Administration

Average Patients Treated (Last 12 Months)	#	%	Low	High
Fire (N = 17)	25	15.2%	0	77
Public, Non-Fire (N = 24)	48	29.1%	0	525
Air (N = 5)	92	55.8%	23	239
Overall	**165**	**100.0%**		

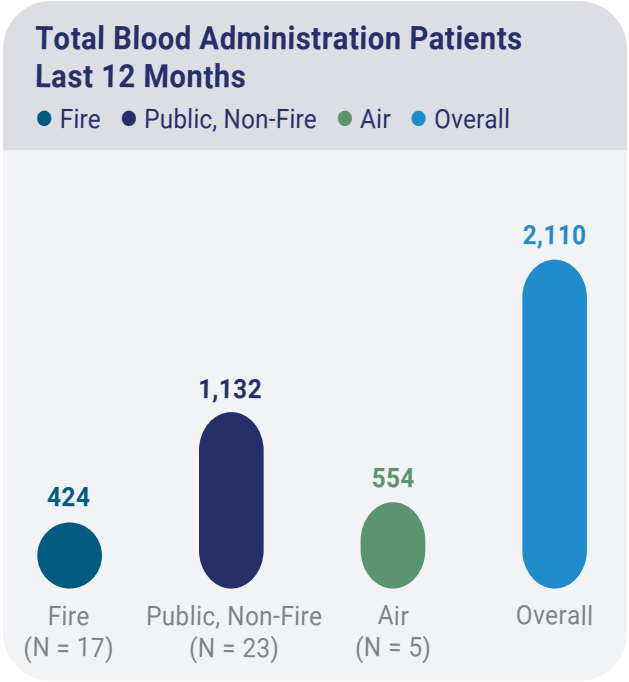


Total Patient Volume Receiving Prehospital Blood Administration

Total Patients Treated (Last 12 Months)	Patients	%
Fire (N = 17)	424	20.1%
Public, Non-Fire (N = 23)	1,132	53.6%
Air (N = 5)	554	26.3%
Overall	**2,110**	**100.0%**

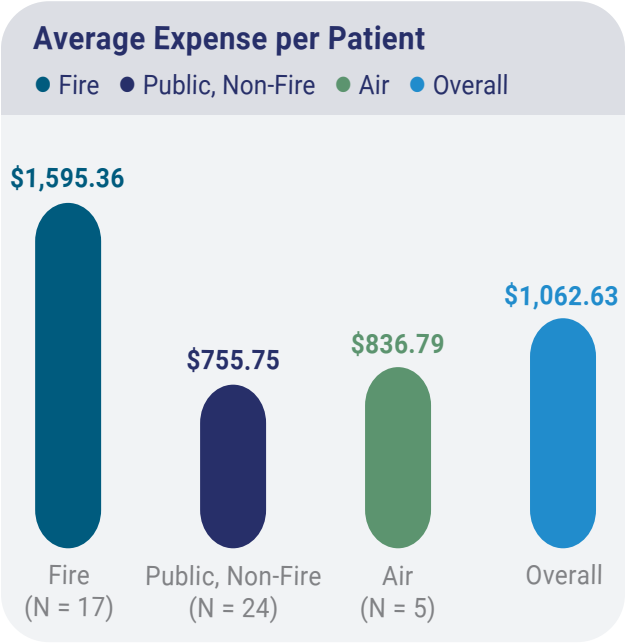
Observations

- Air medical providers treat the highest percentage of patients receiving blood.
- Public, non-fire agencies account for the largest total patient volume.



Average Expense Per Patient for Prehospital Blood Administration

Average Patients Treated (Last 12 Months)	#	%	Avg. Per Patient
Fire (N = 17)	25	15.2%	$1,595.36
Public, Non-Fire (N = 24)	48	29.1%	$755.75
Air (N = 5)	92	55.8%	$836.79
Overall	**165**	**100.0%**	**$1,062.63**

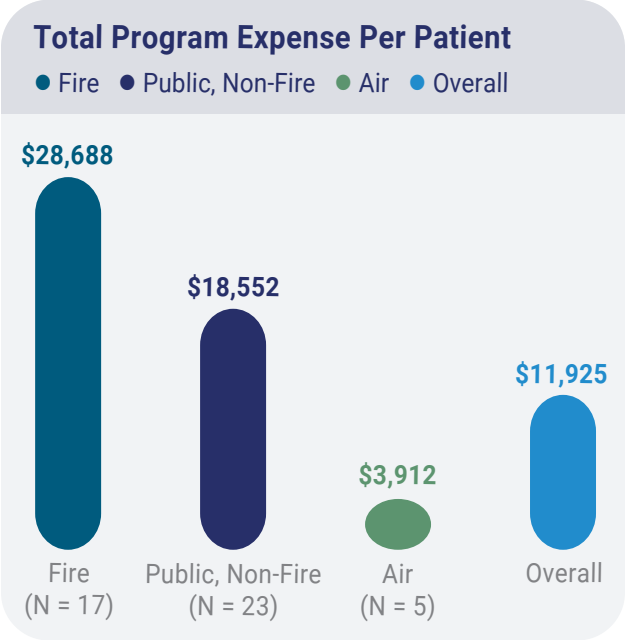


Observations

- The Average Expense per Patient of $1,062.63 reflects the average expense incurred per agency for the implementation of a blood program. This expense is *in addition to* the cost of the ambulance response.

Total Expense Per Patient for Prehospital Blood Administration

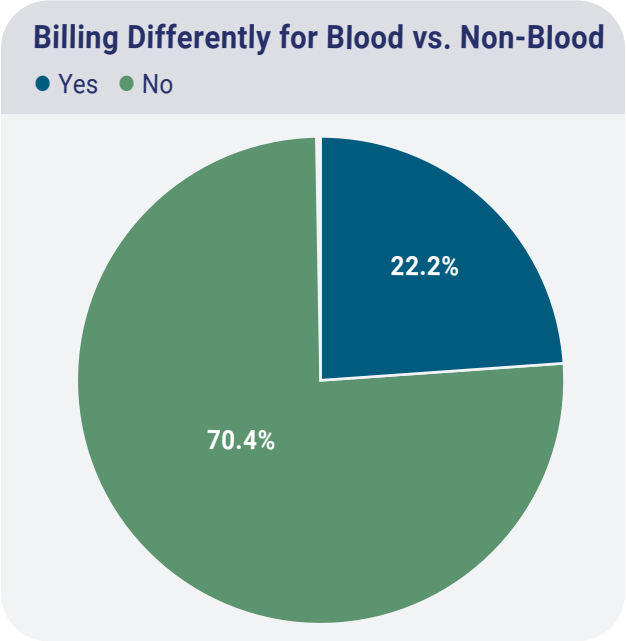
Total Patients Treated (Last 12 Months)	Patients	%	Expense
Fire (N = 17)	424	20.1%	$28,688
Public, Non-Fire (N = 23)	1,132	53.6%	$18,552
Air (N = 5)	554	26.3%	$3,912
Overall	**2,110**	**100.0%**	**$11,925**



Observations

- The Total Expense per Patient reflects the total costs for all agencies to implement a prehospital blood program divided by the total number of patients treated across all respondents.
- The $11,925 expense per patient is the sum of all costs for all respondents divided by the total number of patients receiving a blood transfusion by all respondents.
- The Total Expense per Patient far exceeds the Average Expense per Patient.
- Air programs demonstrate economies of scale.

Billing Practices for Prehospital Blood Administration

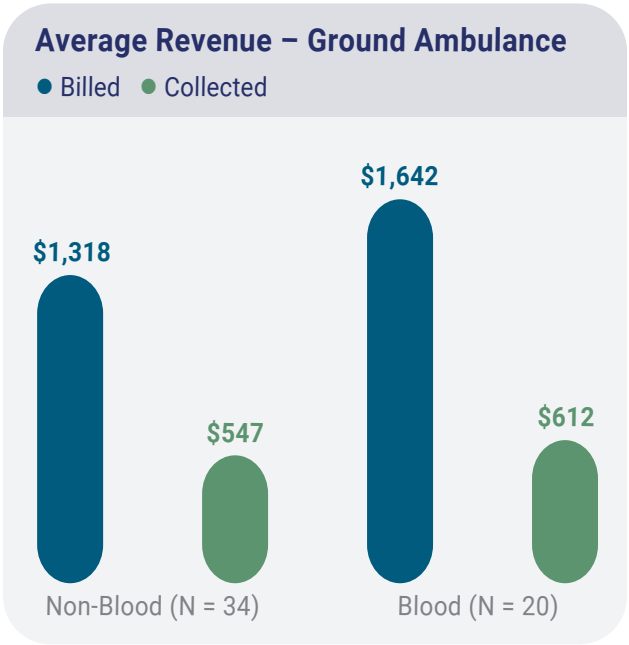


Observations

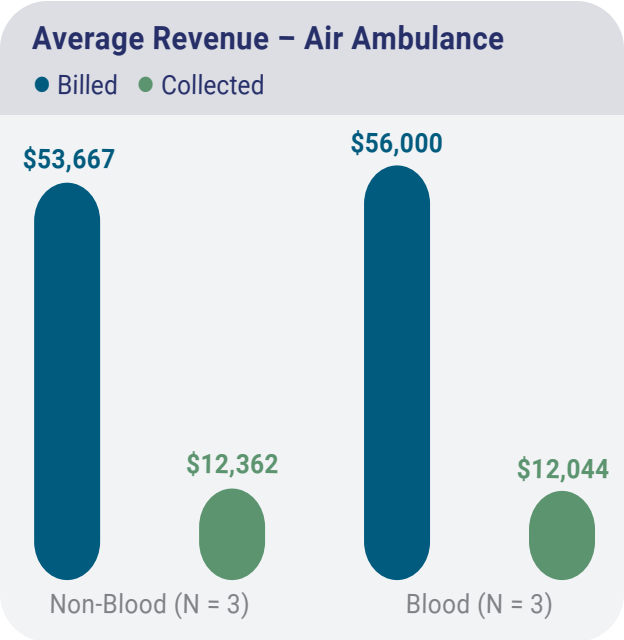
- Despite the high cost to the agency of a prehospital blood administration program, only 22% of the respondents indicated they are billing differently for patients receiving this intervention vs. patients not receiving the intervention.
- Medicare recently implemented a new rule in the Ambulance Fee Schedule that added Prehospital Blood administration eligible for billing and reimbursement at the ALS2 level of care.
  - Agencies should bill for the ALS2 reimbursement level whenever blood is administered.

Fee for Service Revenue

Average Billed and Collected Revenue (Ground Ambulance)	Billed	Collected
Non-Blood (N = 34)	$1,318	$547
Blood (N = 20)	$1,642	$612



Average Billed and Collected Revenue (Air Medical)	Billed	Collected
Non-Blood (N = 3)	$53,667	$12,362
Blood (N = 3)	$56,000	$12,044



Observations

- Ground ambulance reimbursement increases modestly (11.9%) when blood is administered.
- Air medical reimbursement shows minimal difference.
- The reimbursement increase does not come close to covering program costs, particularly for ground providers.

Key Takeaways

- Prehospital blood programs introduce significant fixed and operational costs that are not offset by current reimbursement models.
- Wide variability in cost accounting suggests many agencies lack full visibility into program economics.
- Patient volume is the primary driver of cost efficiency, with air medical programs demonstrating clear economies of scale.
- Current reimbursement models do not adequately offset costs, even with ALS2 reimbursement.
- Many agencies are not fully optimizing billing opportunities under existing Medicare rules, leaving revenue on the table.

PREHOSPITAL BLOOD TRANSFUSION COALITION

Acknowledgment

PWW Advisory Group (PWW|AG) extends its sincere appreciation to the Prehospital Blood Transfusion Coalition (PBTC) for its continued commitment to advancing pre-hospital blood administration programs nationwide. Through education, advocacy, and the sharing of best practices, PBTC plays a vital role in supporting EMS agencies and improving patient care outcomes across the industry.

To learn more about the Prehospital Blood Transfusion Coalition and its ongoing initiatives, visit prehospitaltransfusion.org