

Department of Health and Human Services

OFFICE OF
INSPECTOR GENERAL

TRENDS IN HOME OXYGEN USE



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OFFICE OF INSPECTOR GENERAL

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MANAGEMENT ADVISORY REPORT



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PURPOSE

This report identifies trends in the use of home oxygen systems for the Medicare program.

BACKGROUND

This study was requested by HCFA staff in connection with their examination of the Medicare fee schedule for oxygen services during budget deliberations.

- ▶ Liquid oxygen systems provide the highest purity of oxygen. They are prescribed for patients requiring a large amount of oxygen, generally more than four liters per minute (LPM).
- ▶ Gaseous tank systems are supplied to patients who require up to two LPM or do not require a continuous flow of oxygen.
- ▶ Concentrators are stationary machines which operate electronically to generate higher concentrations of oxygen from room atmosphere. They are designed for patients requiring a continuous flow of oxygen of up to four LPM and who are house-bound or have minimal portability needs.

Our inspection focused only on trends in the use of home stationary systems. We did not analyze costs or reimbursement.

METHODOLOGY

We started with the 1 percent file of the Part B Medicare Annual Data (BMAD) files, including local carrier codes. They provided consistent data for the entire 4-year period of the inspection, from 1986 through 1989, and they had been validated by an independent consultant and by HCFA. As a further step, we contacted Medicare carriers representing seven States to refine and independently validate the data.

We limited our review to non-purchased home stationary equipment and contents.

FINDING

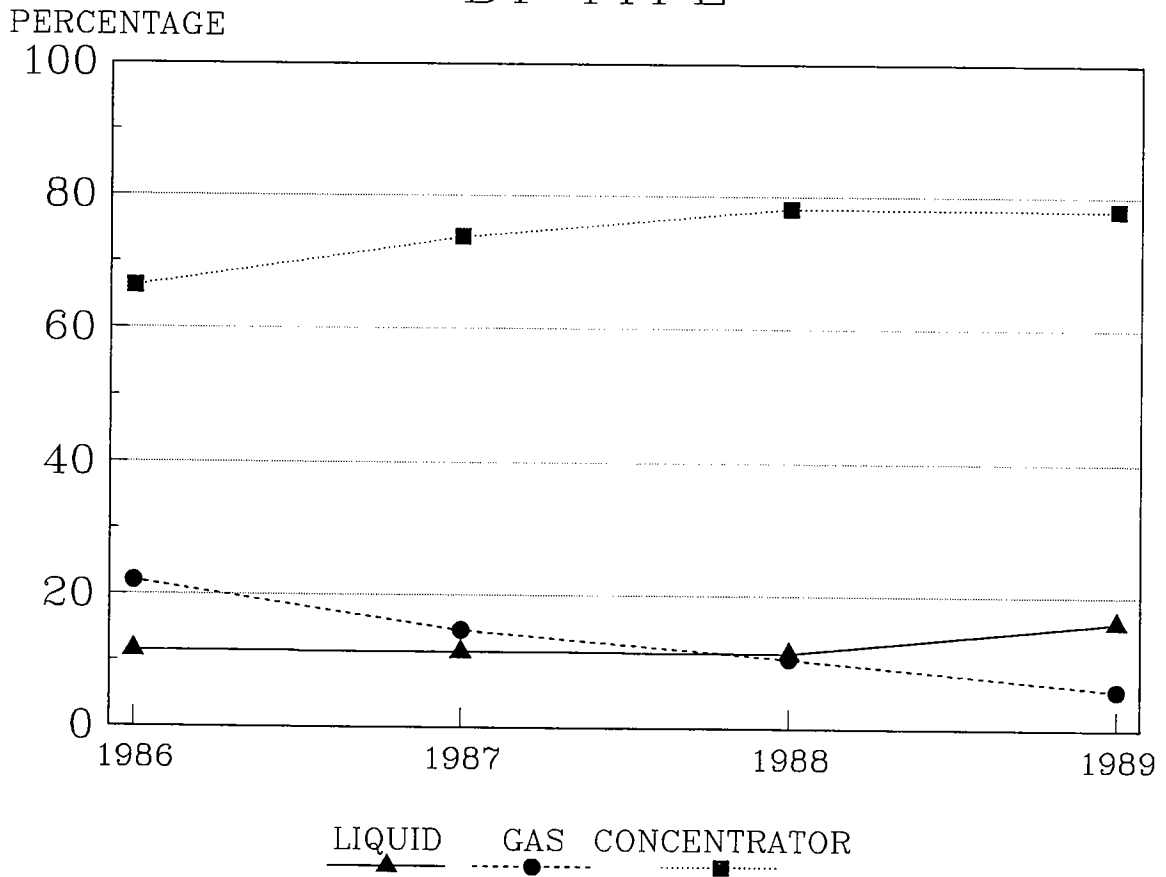
There has been a shift towards use of oxygen concentrators.

Oxygen concentrator usage has increased since 1986, both in absolute terms and as a percentage of total services for all types of systems.

Relative Usage

The changes in relative usage are shown below:

RELATIVE OXYGEN USAGE BY TYPE



PERCENTAGE OF TOTAL				
	<u>1986</u>	<u>1987</u>	<u>1988</u>	<u>1989</u>
LIQUID	11.54	11.43	11.36	16.12
GAS	22.08	14.76	10.51	5.84
CONCENTRATOR	66.38	73.81	78.13	78.04

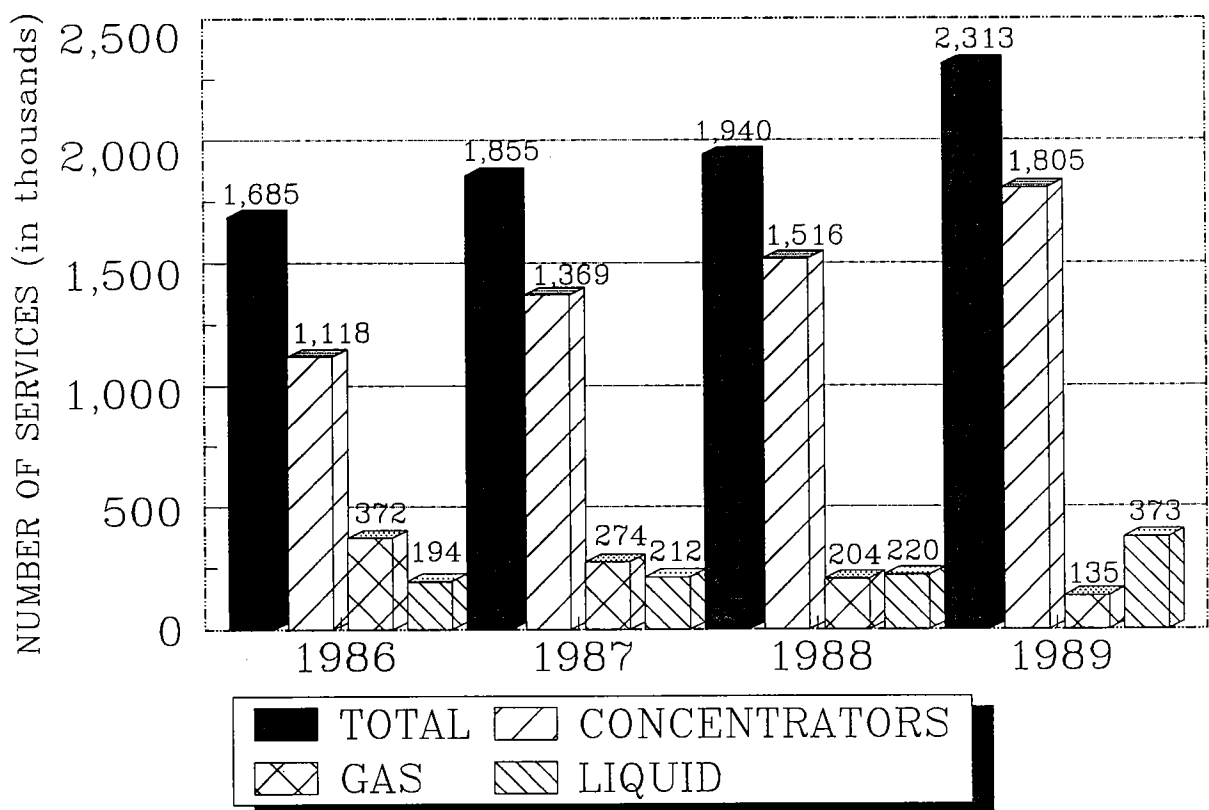
From 1986 to 1988, oxygen concentrator usage increased, while gaseous system usage decreased, and liquid system usage remained constant.

In 1989, oxygen concentrator usage remained constant at the 1988 level, while gaseous system usage continued decreasing, and liquid system usage increased.

Growth in Volume

The actual number of home oxygen services rose throughout the 4-year period of our review. Total usage grew from 1,685,000 to 2,312,900, an increase of 37 percent. Oxygen concentrators were the most frequently used delivery system during that period.

VOLUME USAGE OF OXYGEN BY TYPE



As shown above, services for concentrators and liquid systems increased in absolute terms, while gaseous systems declined in the same period.

CONCLUSION

From 1986 to 1989 the use of home stationary oxygen equipment and contents has increased in absolute terms. Oxygen concentrator usage increased both in absolute terms and as a percentage of total services. We hope this information will be helpful to HCFA as they consider possible adjustments to the fee schedule.