

Impact of Sofosbuvir on Utilization and Expenditure of Hepatitis C Medications in a Medicaid Population

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BACKGROUND

- Hepatitis C affects approximately 3.2 million people in the United States.¹
- It is estimated that the prevalence of Hepatitis C is doubled in the Medicaid population versus the commercial population.¹
- The approval of sofosbuvir (Sofvaldi[®]) in December 2013 for the treatment of chronic Hepatitis C offers improved efficacy and tolerability over other Hepatitis C regimens at a significantly greater cost.^{2,3}
 - Clinical trials have shown Sofosbuvir to have a cure rate of about 89 - 95%.
 - The cost of sofosbuvir itself is around \$84,000 for a 12-week course; however, while taken in combination as part of the treatment regimen, the cost can be approximately \$95,000 - \$170,000.
- The anticipation of greater efficacious therapies has led physicians to defer treatment for some patients, a phenomenon called "warehousing."⁴

OBJECTIVE

- To evaluate the impact of sofosbuvir on utilization and expenditure, along with pattern of Hepatitis C treatment regimens in a Medicaid population.

METHODS

- A large state government database of pharmacy claims (greater than 1M lives) was used to identify Hepatitis C patients based on claims for Hepatitis C therapies (i.e. peg interferon, ribavirin, telaprevir, boceprevir, sofosbuvir, and simeprevir) between January 1, 2013 and June 30, 2014.
- Utilization, expenditure, and Hepatitis C prescribing patterns were evaluated for this population before and after approval of sofosbuvir.
 - The pre-period for direct comparison was June 1 to November 30, 2013.
 - The post-period for direct comparison was December 1, 2013 to May 31, 2014.
 - Claims volume and plan cost was used to evaluate utilization and expenditure, either as percent of total drug cost or per member per month (PMPM) cost.
- To assess duration of sofosbuvir based regimens, Hepatitis C patients continuously enrolled between December 1, 2013 and June 30, 2014 were evaluated.
- Descriptive statistics were used to assess results.

RESULTS

Figure 1. Hepatitis C Expenditure

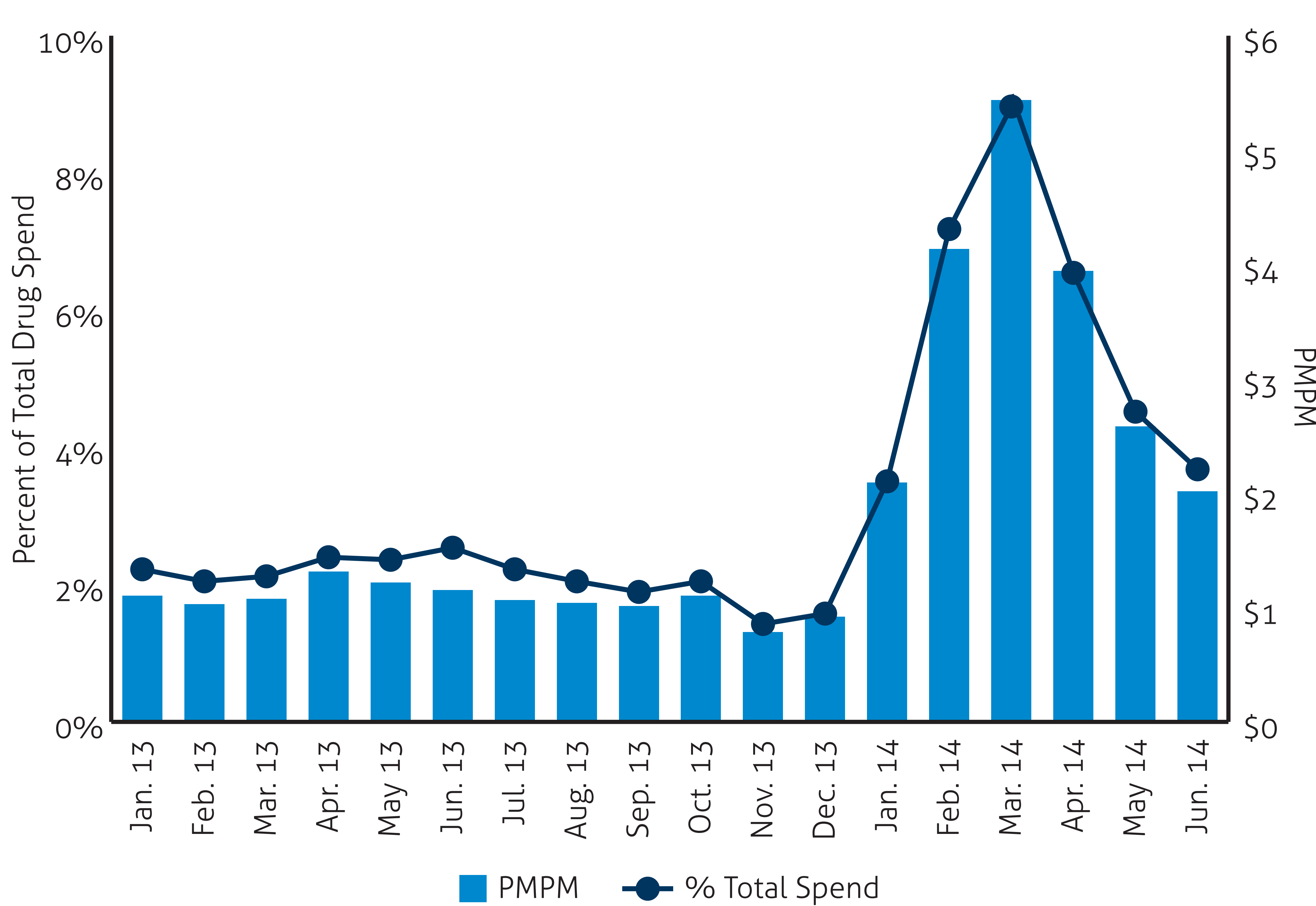


Figure 2. Hepatitis C Patients and Expenditure

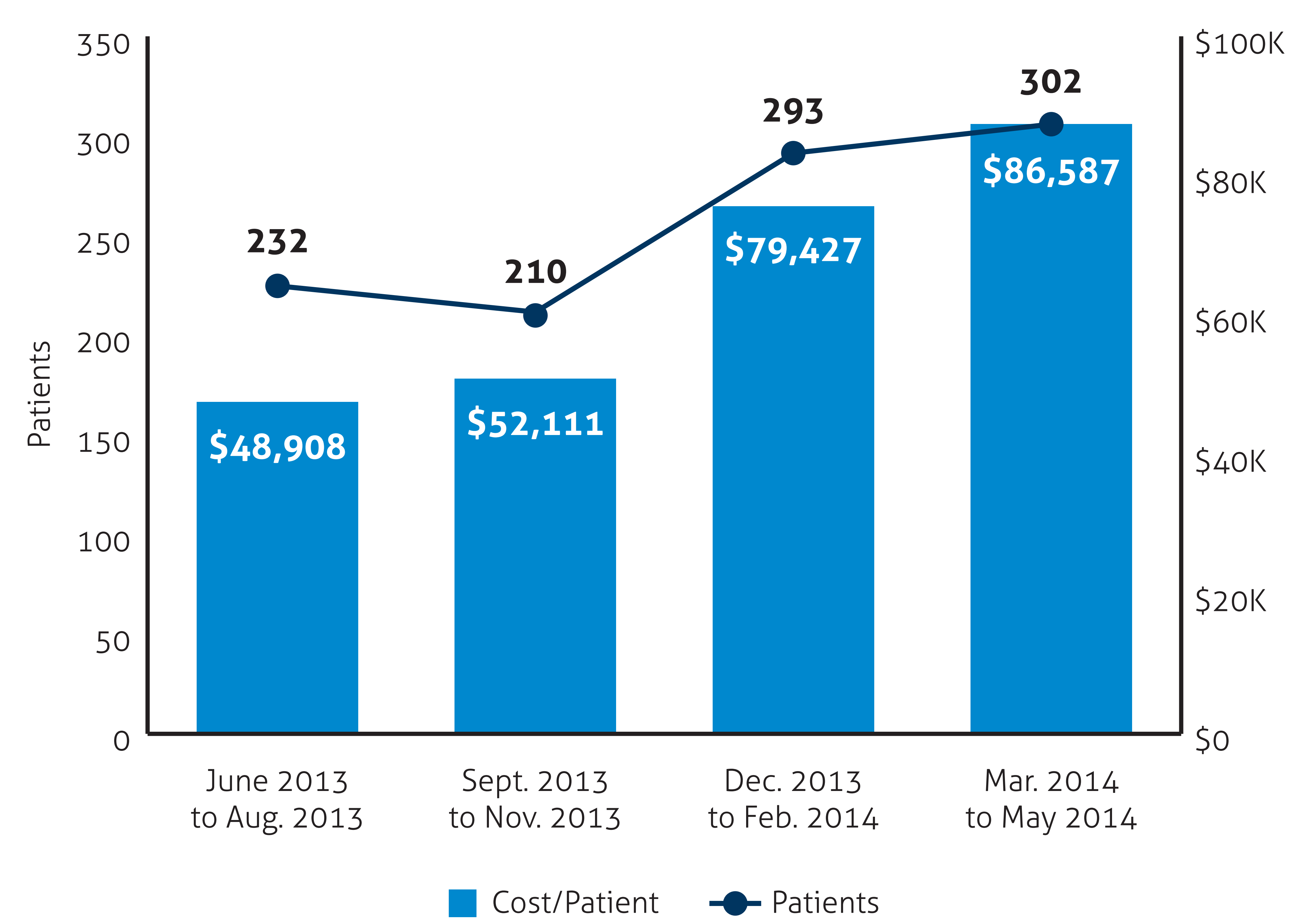


Figure 3. Hepatitis C Regimens Post Sofosbuvir Market Entry

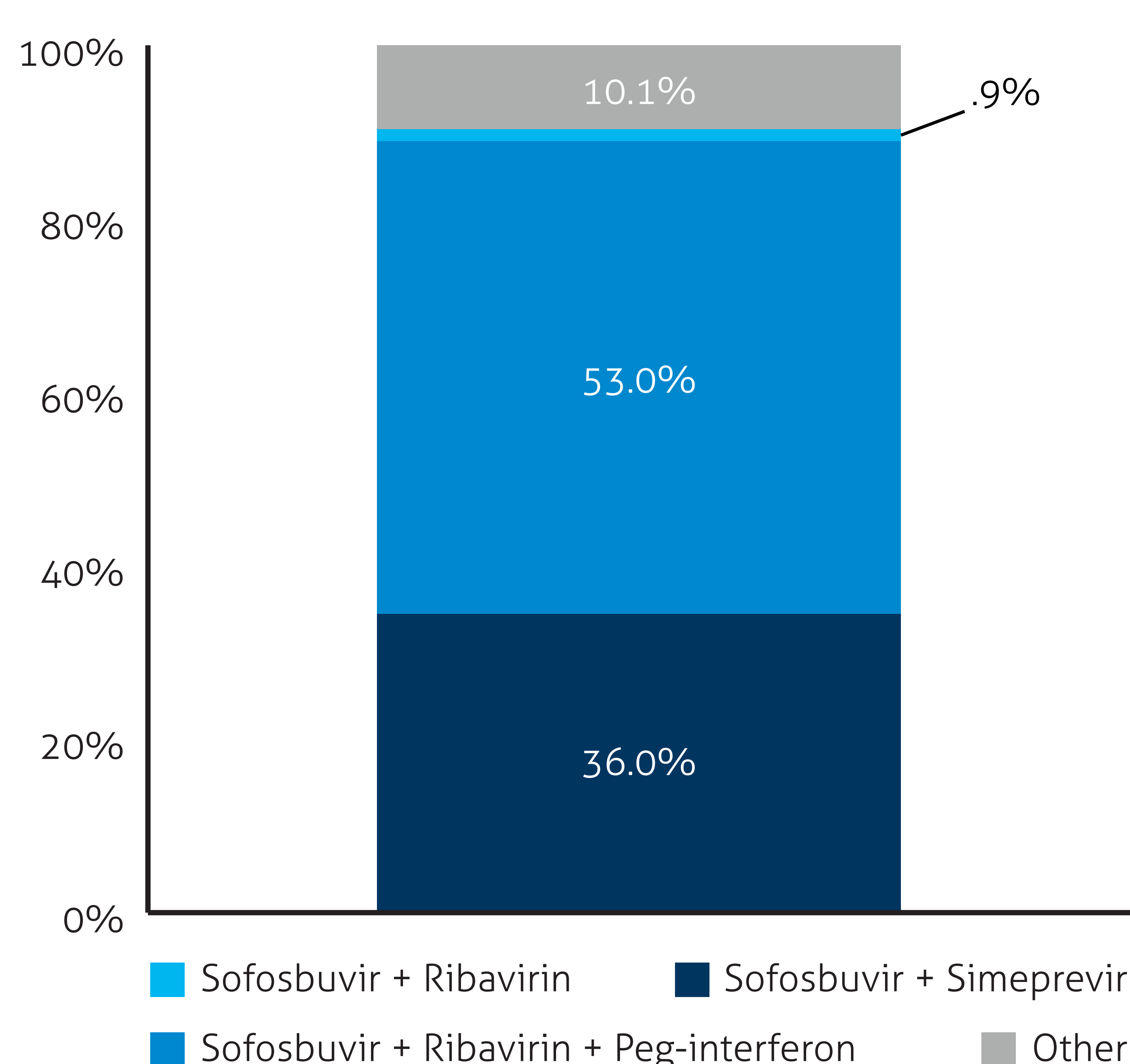
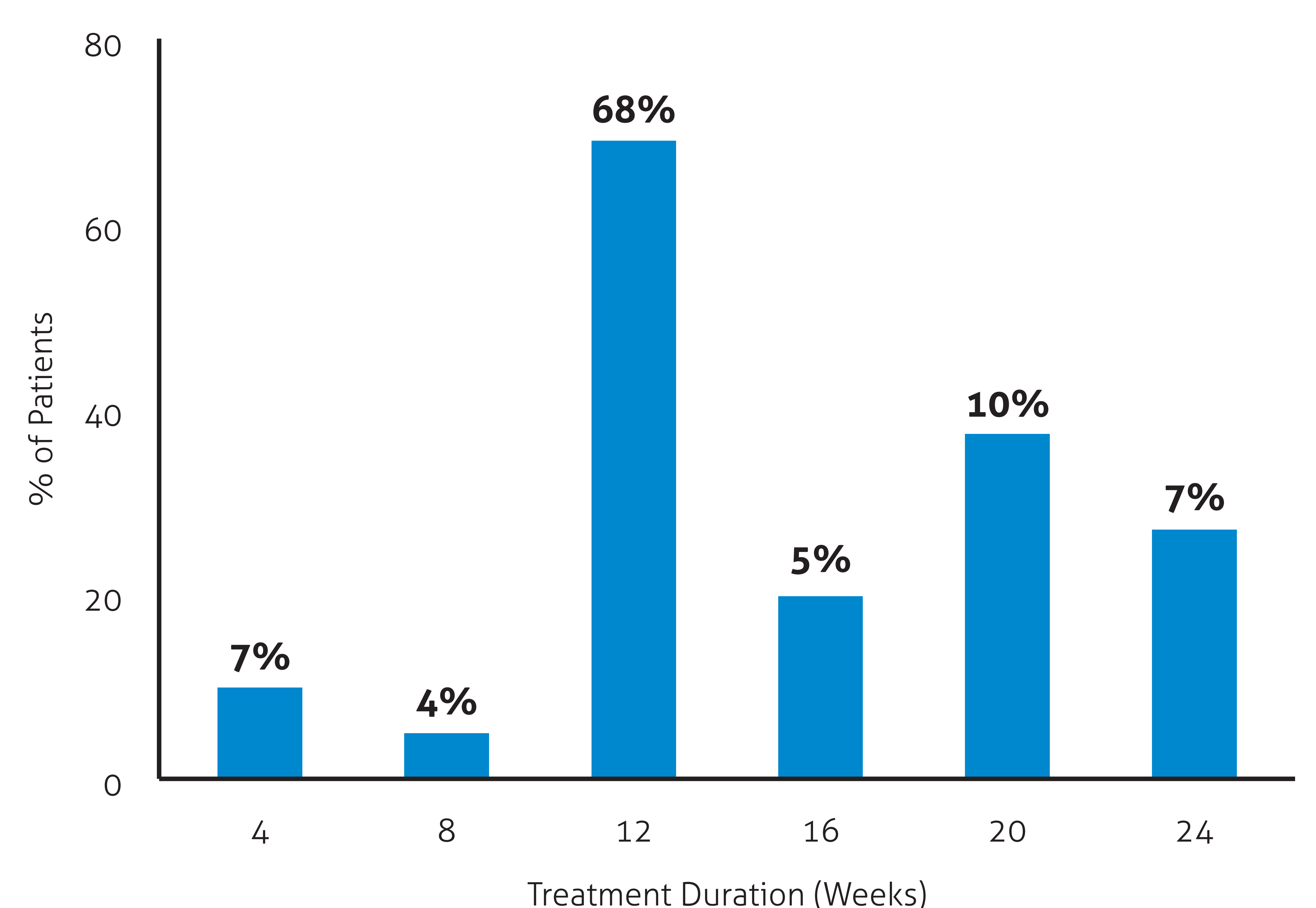


Figure 4. Sofosbuvir-Based Regimen



DISCUSSION

- Following entry of sofosbuvir to the market, costs associated with Hepatitis C therapies increased from approximately 2.2% of total pharmacy costs between January 2013 and November 2013 to about 5.5% in the 7 months after December 2013, while Hepatitis C PMPM went from \$1.17 to \$3.10. (Figure 1)
 - Following a peak of about 9% and a PMPM of \$5.50 in March 2014, Hepatitis C costs as a percentage of total pharmacy costs and PMPM have declined since. (Figure 1)
- The number of patients starting on a Hepatitis C regimen went from 210 to 293 (39% increase) from September to November 2013 and December 2013 to February 2014, respectively; cost per patient increased from \$52,111 to \$79,427 (52% increase) from September to November 2013 and December 2013 to February 2014, respectively. (Figure 2)
- Following December 2013, 90% of the Hepatitis C regimens were sofosbuvir based, with 53% of those being in combination with peg-interferon and ribavirin. (Figure 3)
 - Sofosbuvir accounts for approximately 90% of the overall Hepatitis C regimen cost.
- Of the sofosbuvir-based regimens, 68% had a treatment duration of 12 weeks. (Figure 4)
 - All patients starting a 12-week or 24-week sofosbuvir-based regimen completed the full course of therapy, as determined by having no claims for subsequent Hepatitis C therapy.

LIMITATIONS

- This study was conducted with data from a single state Medicaid population, thus the generalizability could be limited.
- The study only considered general overall utilization and economic trends following market entry of sofosbuvir.
- No clinical outcomes were considered to assess the true economic impact of sofosbuvir.

CONCLUSION

- Sofosbuvir has shifted the paradigm for the treatment of chronic Hepatitis C, with 90% of new patients starting on a sofosbuvir-based regimen.
- This change in prescribing behavior, along with a greater number of Hepatitis C patients' now receiving therapy, has significantly impacted overall pharmacy expenditure.
- Patients who were previously "warehoused" most likely contributed to the significant increase in the number of patients starting Hepatitis C therapy.
 - It is unsure what the continued impact on utilization and expenditure will be as other drugs in the Hepatitis C pipeline, considered to be equally efficacious and safe, are approved in the upcoming months.
- Further research is needed to assess the real-world impact on sustained viral response rates and clinical outcomes, to determine the overall cost-effectiveness of sofosbuvir.

REFERENCES

- Milliman. Health Care Reform and Hepatitis C: A Convergence of Risk and Opportunity. 10 December 2013.
- Lawitz, E., Mangia, A., Wyles, D., et al. Sofosbuvir for previously untreated chronic Hepatitis C infection. *N Engl J Med.* 2013;368:1878-87.
- First Databank.
- Infectious Disease Society of America. Recommendations for testing, managing, and treating Hepatitis C. Aug 2014.

DISCLOSURES

- This research was conducted by Magellan Rx Management, Glen Allen, VA, without external funding.