

# BUPA HEALTH DIALOG—HEALTH ANALYTICS

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# Background

## Coordinated Veterans' Care (CVC) Program

When the program was launched in May 2011, it was primarily designed to focus on Gold Card holders who were at risk of admission to hospital and had at least one of:

- congestive heart failure
- coronary artery disease
- pneumonia
- chronic obstructive pulmonary disease, or
- diabetes.

Program documentation provided to GPs described the eligibility criteria for enrolment as

*“...[Gold Card holders] diagnosed with one or more chronic diseases or conditions that have resulted, or could reasonably result, in frequent hospitalisation”*

This phrasing allowed for GP discretion in determining which veterans should be enrolled.

## Program uptake

- As at 20 February 2015, a total of 28,306 veterans had enrolled in the program
- Of these, only 7,487 veterans (26.4%) met the desired eligibility criteria at enrolment

# Methodology

## Enrolled veterans

Veterans who had been enrolled in the CVC program for a continuous period of two years without exiting for any reason were identified. The two year period was considered sufficient for any changes in service utilisation to be realised.

## Non-Participating veterans

Review of the risk score profile for enrolled veterans revealed that on average, risk scores increased in the two years after enrolment. When matching based only on the risk score at the beginning of the two year period, risk trajectory for enrolled veterans was steeper than for non-participating veterans.

When looking at eligible veterans, enrolled veterans had a steep increase in risk score in the year prior to enrolment, indicating a deterioration in health status and/or progression to acute illness. However eligible non-participating veterans showed consistent risk scores in the year prior to enrolment, indicating stability in their health status.

In order to identify a suitable comparison group with a similar risk profile, and consequently a similar health status profile, across the whole two year period, the comparison group was derived by matching the veteran's risk score at enrolment and at two years post-enrolment.

## Population

This yielded a population of 10,330 enrolled veterans and 10,331 non-participating veterans. Of these, 23% of the enrolled population (n= 2,373) and 22.4% of the comparison population (n= 2,315) were eligible at enrolment.

## Baseline comparisons

Baseline demographics and service utilisation was examined between the groups to validate the sampling methodology.

Acute service utilisation metrics showed no significant differences between enrolled veterans and those not enrolled, for both eligible veterans and for those not eligible at enrolment.

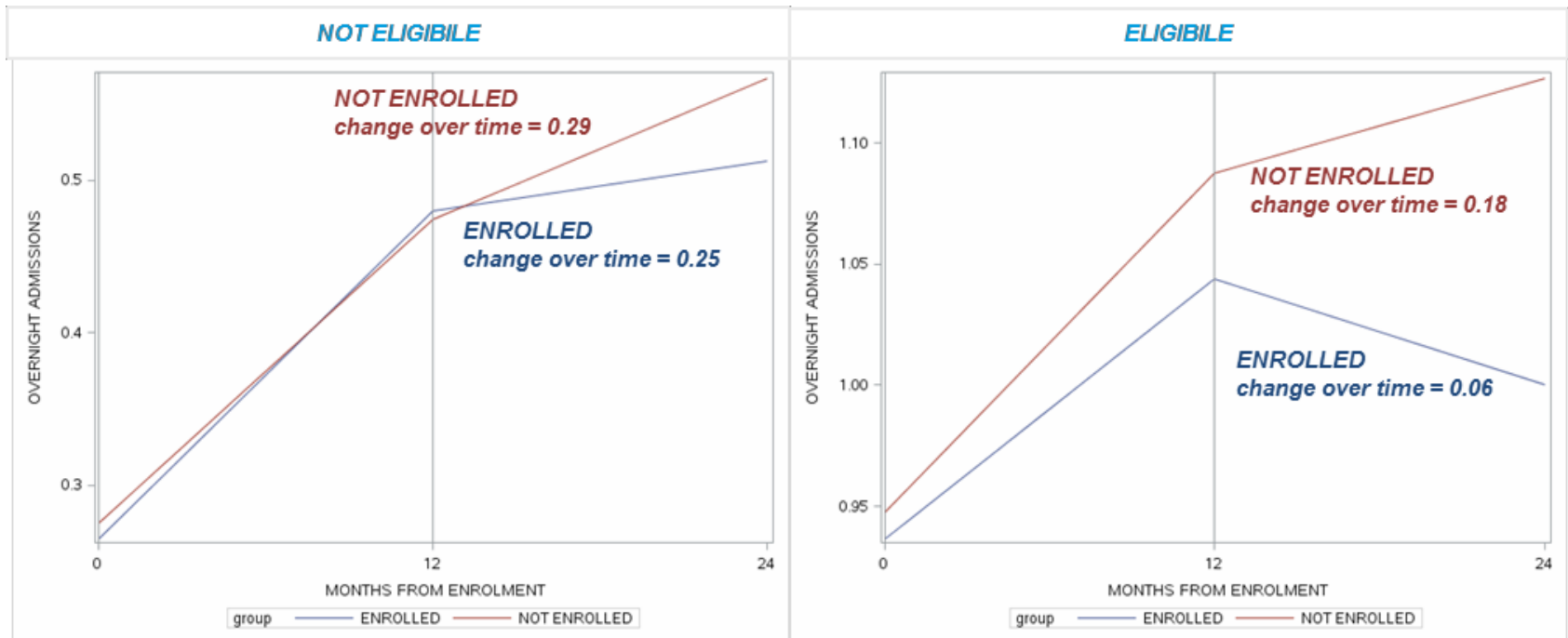
Some significant differences were found in primary care service utilisation, however as these differences were generally consistent across eligibility status, these differences were not considered to pose a major deviation to the homogeneity of the populations.

Therefore the matching process was considered to have produced a suitable population for comparison.

# Overnight Admissions

Overnight admissions increased significantly more for veterans not enrolled in the CVC Program than for enrolled veterans. This pattern was present for eligible veterans and for those who did not meet the eligibility criteria at enrolment.

The increase in overnight admissions for eligible veterans not enrolled in the program was three times as large as for eligible enrolled veterans.

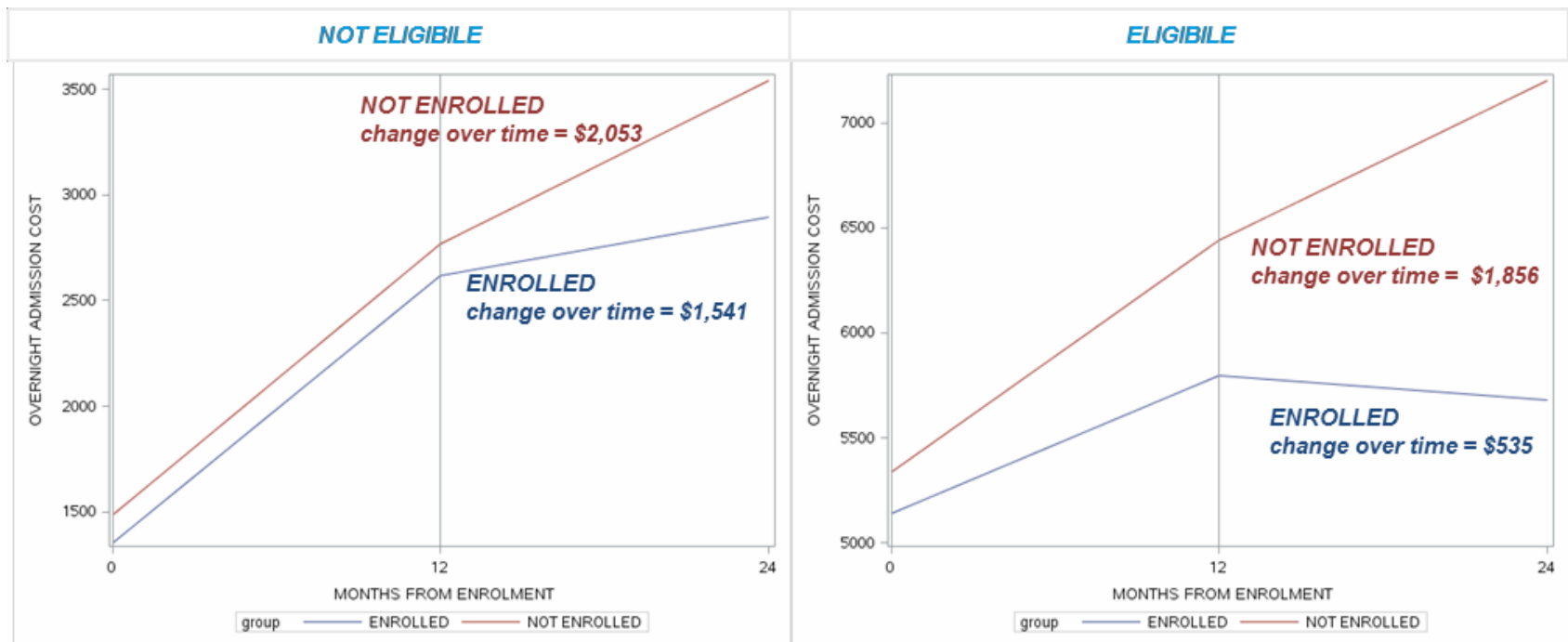


**Enrolled veterans had smaller increases in overnight admissions**

# Overnight Admissions – Costs

The cost of overnight admissions for veterans not enrolled in the CVC Program was significantly larger than for enrolled veterans. This pattern was present for both eligible and ineligible veterans.

Overnight admission costs for eligible veterans not enrolled in the program were 3.5 times as high as for eligible enrolled veterans.

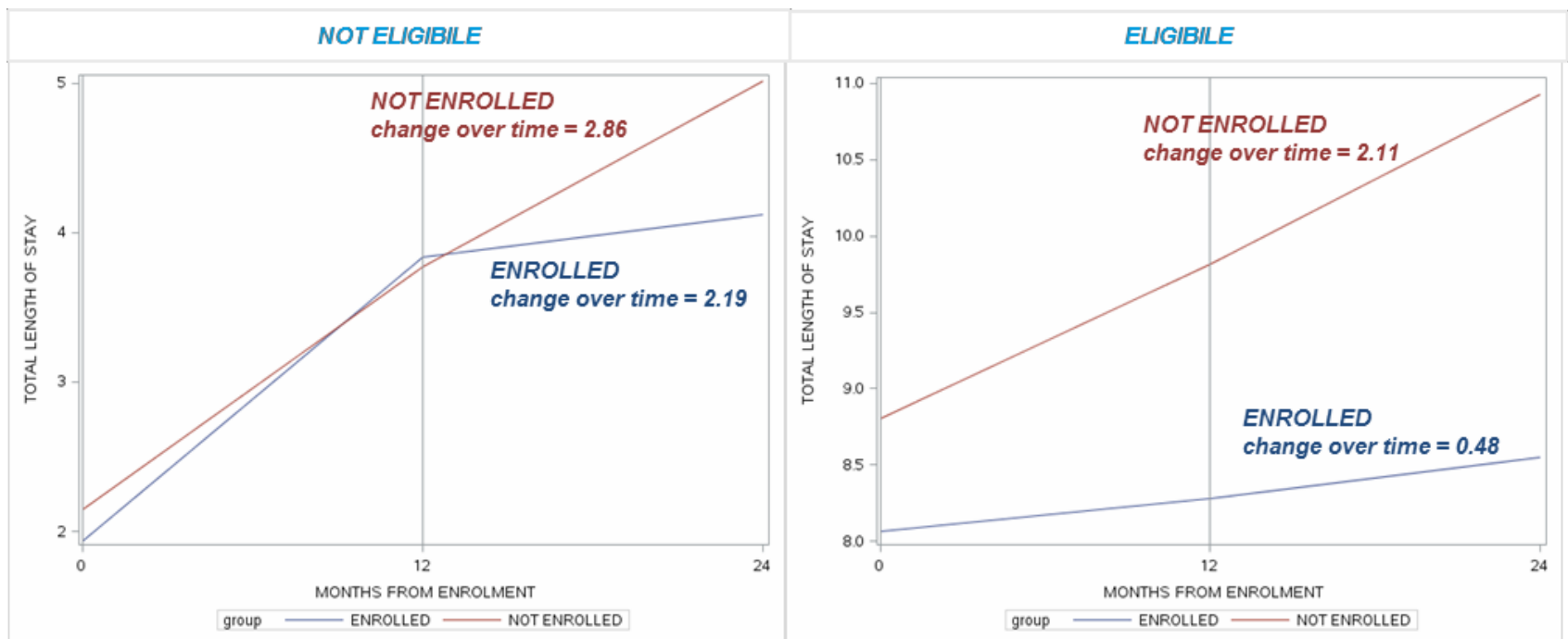


**Increase in overnight admission costs were smaller for enrolled veterans**

# Overnight Admissions – Length of Stay

The increase in total length of stay for overnight admissions was significantly larger for veterans not enrolled in the CVC Program than for enrolled veterans. This pattern was present for both eligible and ineligible veterans.

The total length of stay of overnight admissions for eligible veterans not enrolled in the program was more than 4 times higher than for eligible enrolled veterans.

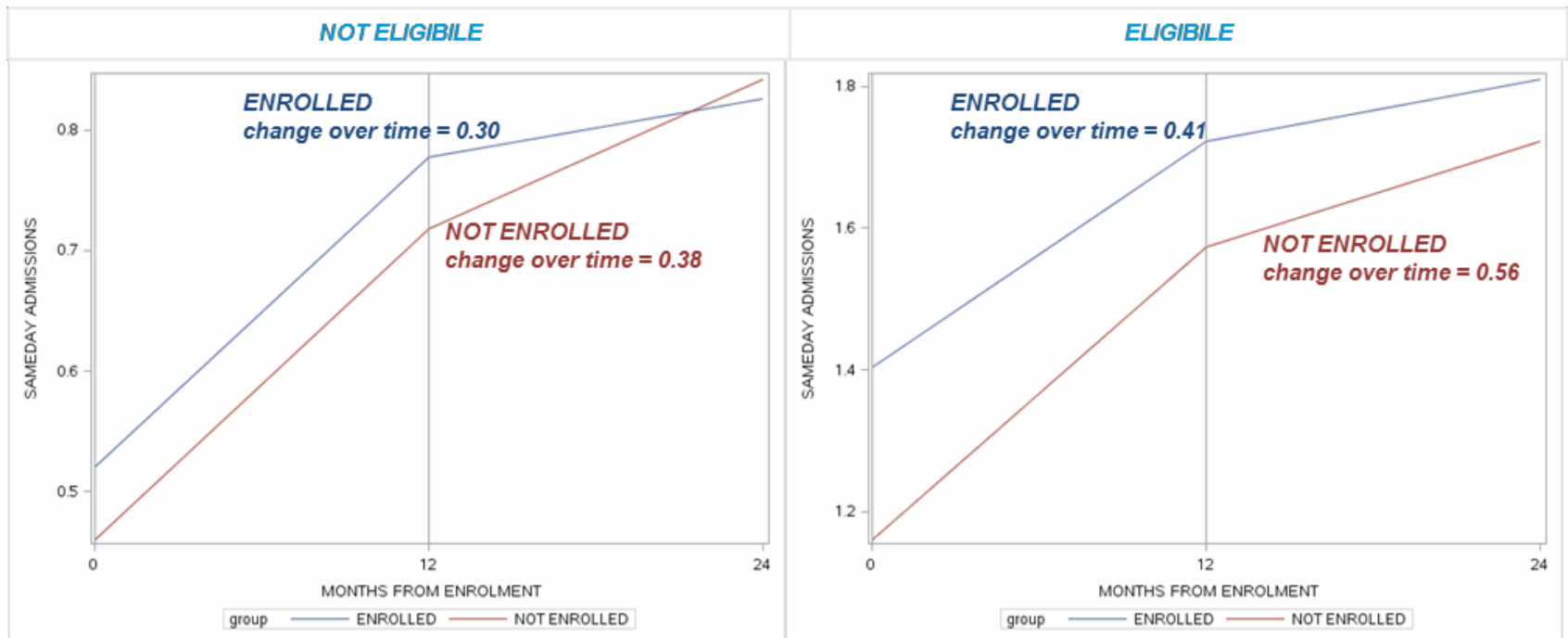


**Enrolled veterans had smaller increases in length of stay for overnight admissions**

# Sameday Admissions

The increase in sameday admissions was larger for veterans not enrolled in the CVC Program than for enrolled veterans, however this difference was not significant. This pattern was present for both eligible and ineligible veterans.

The increase in sameday admissions for eligible veterans not enrolled in the program was 36% higher than for eligible enrolled veterans.



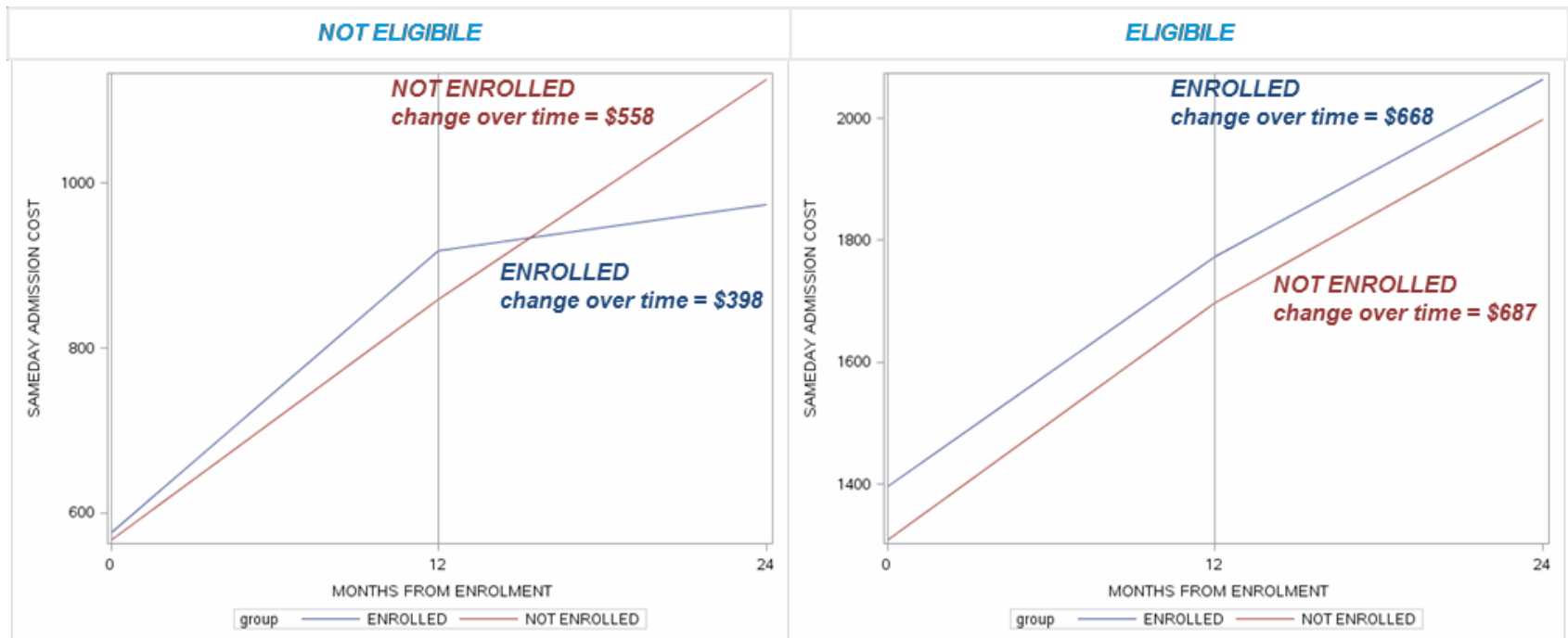
**Increases in sameday admissions were smaller for enrolled veterans**



## Sameday Admissions – Costs

The change in sameday admission costs over time was different for eligible and ineligible veterans. The increase in the sameday admission costs was slightly smaller for eligible enrolled veterans compared with eligible non-participating veterans; this was not significant.

However for ineligible veterans, sameday admission costs increased by 40% more for those not enrolled than for enrolled veterans. This difference was significant.

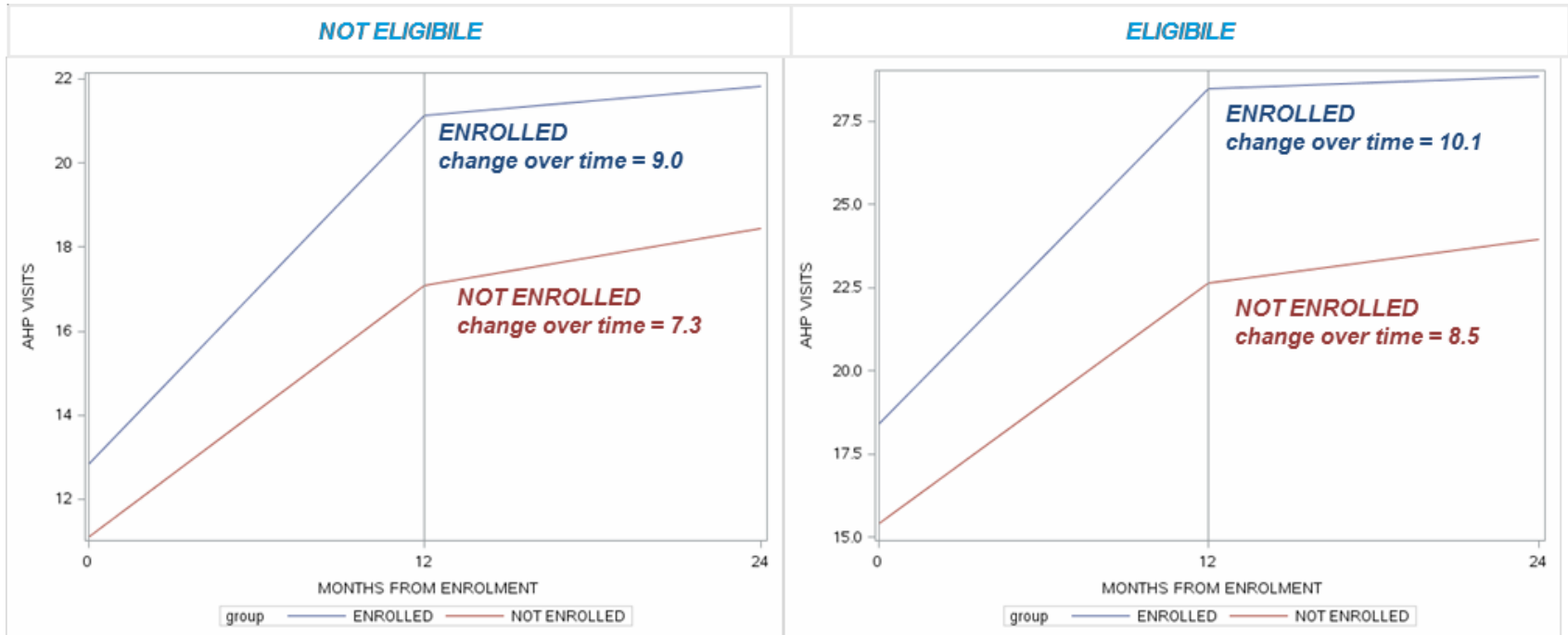


**Ineligible enrolled veterans had smaller increases in sameday admission costs**

# Allied Health Professional Visits

AHP visits increased significantly more for enrolled veterans than for those not enrolled. This pattern was present regardless of eligibility status.

The increase in AHP visits for eligible enrolled veterans was 19% more than for eligible non-participating veterans. For ineligible veterans, the increase in AHP visits for enrolled veterans was 23% more than for veterans not enrolled.

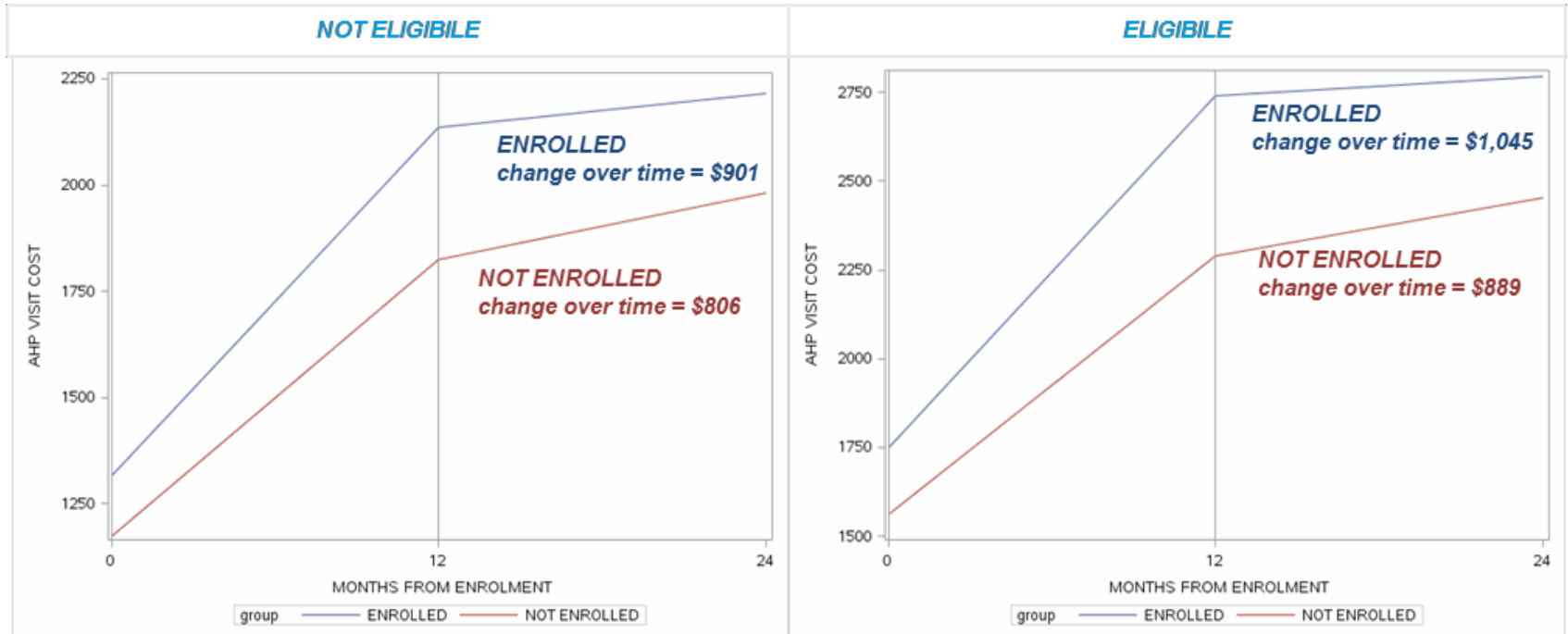


**Enrolled veterans had larger increases in AHP visits**

# Allied Health Professional Costs

AHP costs increased significantly more for enrolled veterans than for those not enrolled. This pattern was present for both eligible and ineligible veterans.

The increase in AHP costs for eligible enrolled veterans was 17.5% more than for eligible non-participating veterans. For ineligible veterans, the increase in AHP costs for enrolled veterans was 11.8% more than for veterans not enrolled.



**Enrolled veterans had larger increases in AHP costs**

# Key Findings

## Program Insight: Acute Care

**Enrolled veterans had *smaller* increases in acute care service utilisation:**

Veterans participating in the CVC Program were significantly more likely to have smaller increases in overnight and sameday admissions, costs, and length of stay

## Program Insight: Primary Care

**Enrolled veterans had *larger* increases in primary care service utilisation:**

Veterans participating in the CVC Program were significantly more likely to have larger increases in GP visits, Allied Health visits, and prescribed medications

## Program Insight: CVC Eligibility

**The benefits realised through program participation were larger for eligible**

**veterans:** The trends in acute and primary care services utilisation were stronger for eligible veterans, with larger differences between enrolled and non-participating veterans