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# Estimating Cost Reductions Associated with the Community Support Program for People Experiencing Chronic Homelessness (CSPECH)

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# ACKNOWLEDGMENTS

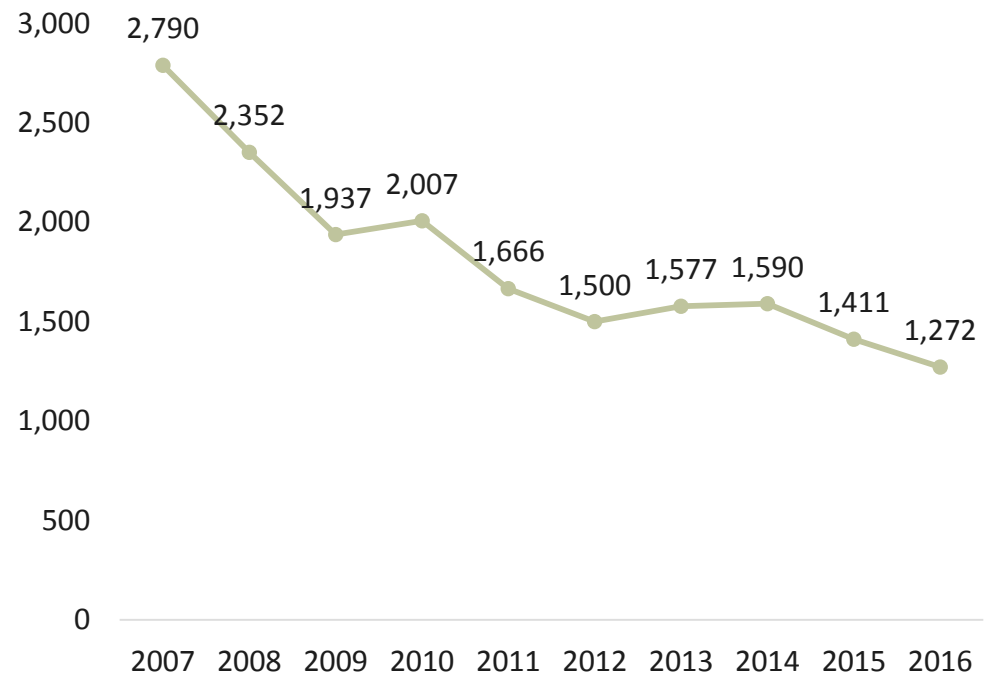
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- Sarah Dobbin, Emilia Dunham, Foster Kerrison and Scott Taberner from MassHealth
- Erin Donohue, Janice Harrington and Carol Kress from the Massachusetts Behavioral Health Partnership

# CHRONIC HOMELESSNESS IN MASSACHUSETTS

- Chronically homeless are a minority of homeless population but are intensive service users
- Persons experiencing chronic homelessness account for ~20% of all single adults experiencing homelessness on a given night in MA
- 54% reduction in chronic homelessness since 2007 in MA

Number of Chronically Homeless Individuals in Massachusetts



# MOTIVATION FOR STUDY

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- Housing stability is a key social determinant of health
- Adverse health effects of homelessness and barriers to accessing care result high cost use of acute physical and behavioral health services
- Permanent supportive housing (PSH) is an effective intervention for ending chronic homelessness
- Prior research suggests that PSH can also lead to lower health care costs
- CSPECH funds the supportive services component of PSH, with housing delivered and funded separately

# STUDY QUESTIONS

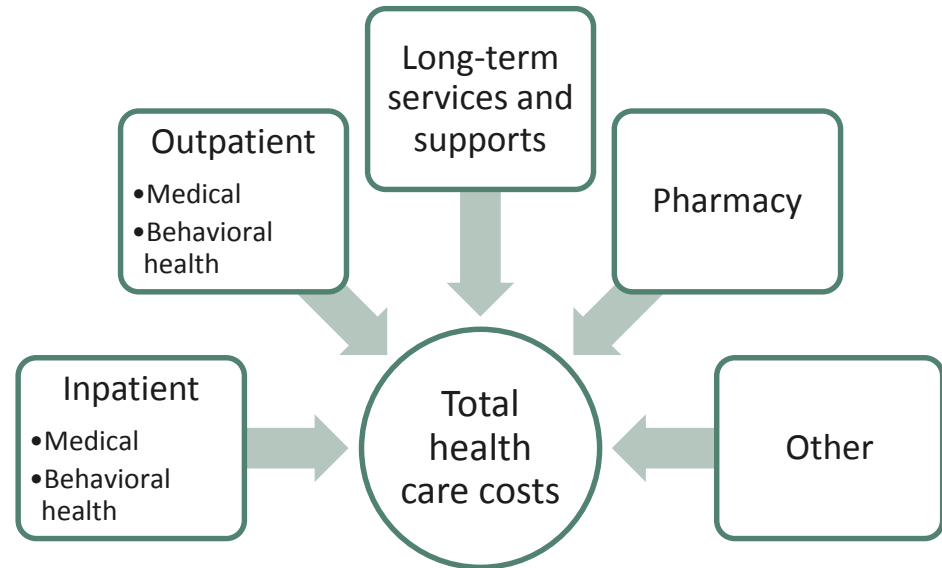
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1. Is receipt of CSPECH services associated with reductions in physical and behavioral health costs?
2. To what extent do physical and behavioral health care cost reductions associated with CSPECH offset the cost of the program itself?

# DATA

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- Study cohort includes all 1,301 persons who received CSPECH services between SFY2007 and SFY2013
  - Cohort predominantly male (72%) & age 40-59 (67%)
- MassHealth provided all claims (fee-for-service and managed care encounter) from SFY2006 to SFY2013



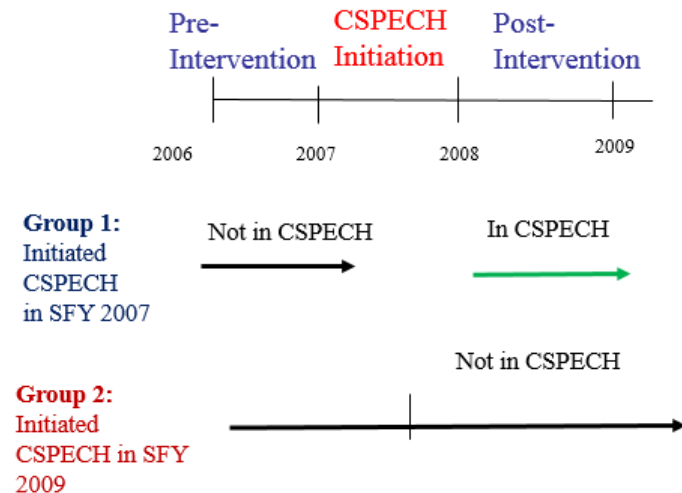
# ANALYTIC APPROACH 1

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- Fixed effects regression
- Used all 1,301 members of study cohort
- Each person serves as their own control
- Two models:
  - Immediate change in health care costs after CSPECH initiation
  - Change in costs between 2-year periods pre/post CSPECH initiation

# ANALYTIC APPROACH 2

- Difference-in-difference design
- Used a subset (N = 415) of the study cohort
- Created CSPECH intervention & comparison groups based on date of CSPECH initiation
- Compared changes in health care costs from 1-year pre/post for CSPECH group to corresponding changes in same time period to comparison group
- Matched groups based on age, sex & baseline health care costs



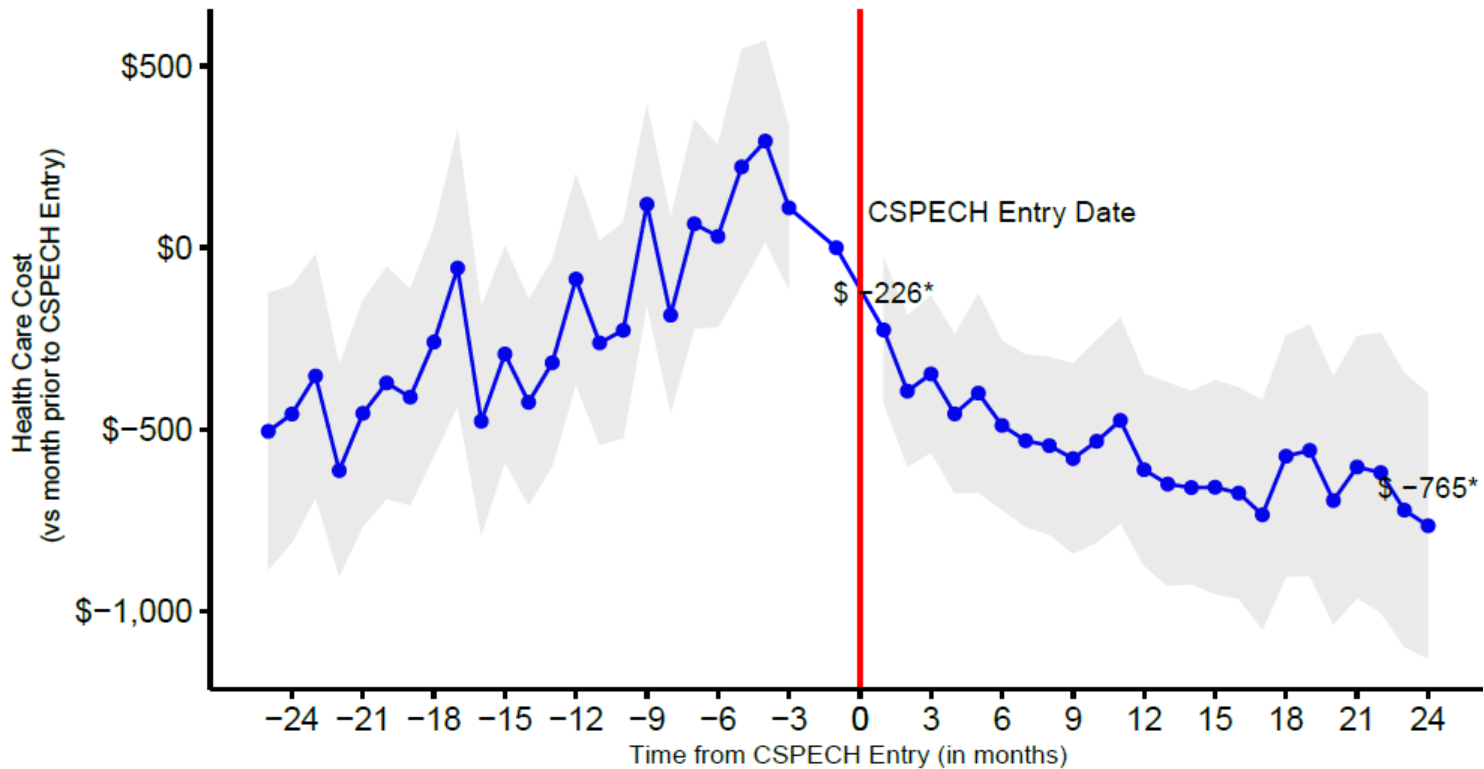


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# QUESTION 1

Is receipt of CSPECH services associated with reductions in physical and behavioral health costs?

# ANALYTIC APPROACH 1

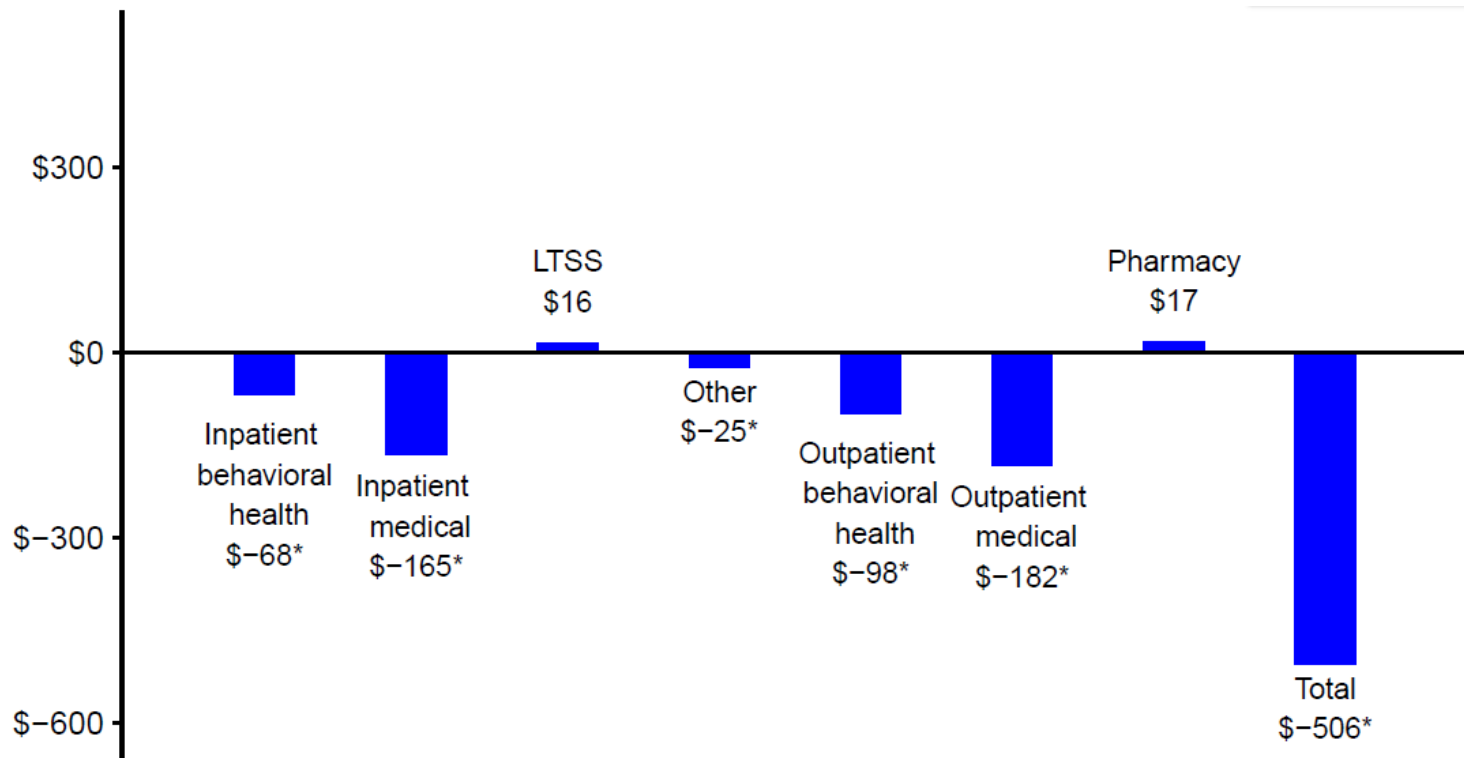


\* P < .05

Shaded gray area represents 95% confidence intervals.

# ANALYTIC APPROACH 1

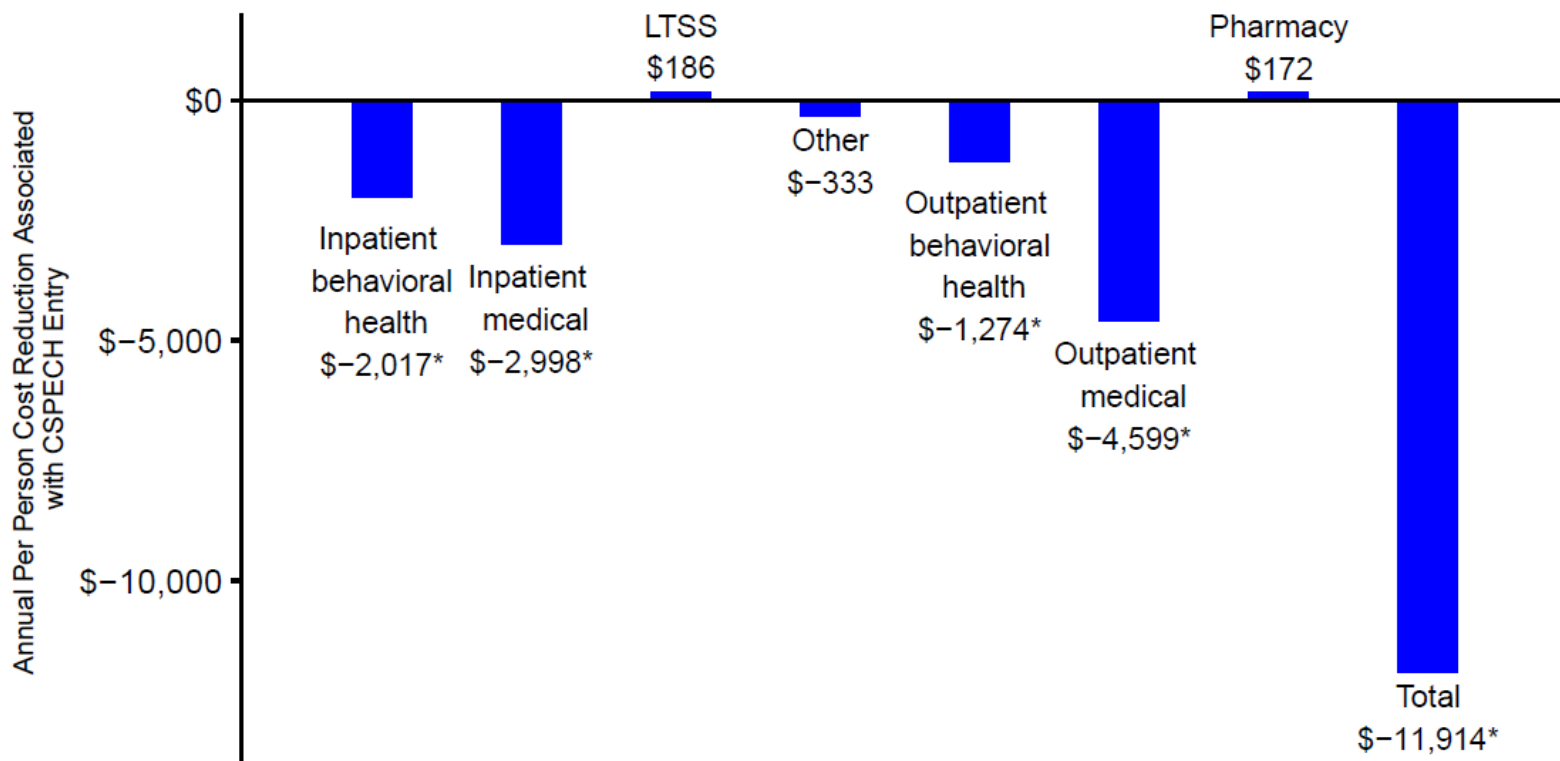
## Estimated Change in Average Monthly Per Person Health Care Costs in 2-year Period Following CSPECH Entry



\* P < .05

# ANALYTIC APPROACH 2

## Estimated Annual Per Person Reductions in Health Care Costs Associated With CSPECH Entry



\* P <.05

Standardized cost estimates based on two-part regression models.

# UNDERSTANDING DIFFERENCES BETWEEN APPROACHES

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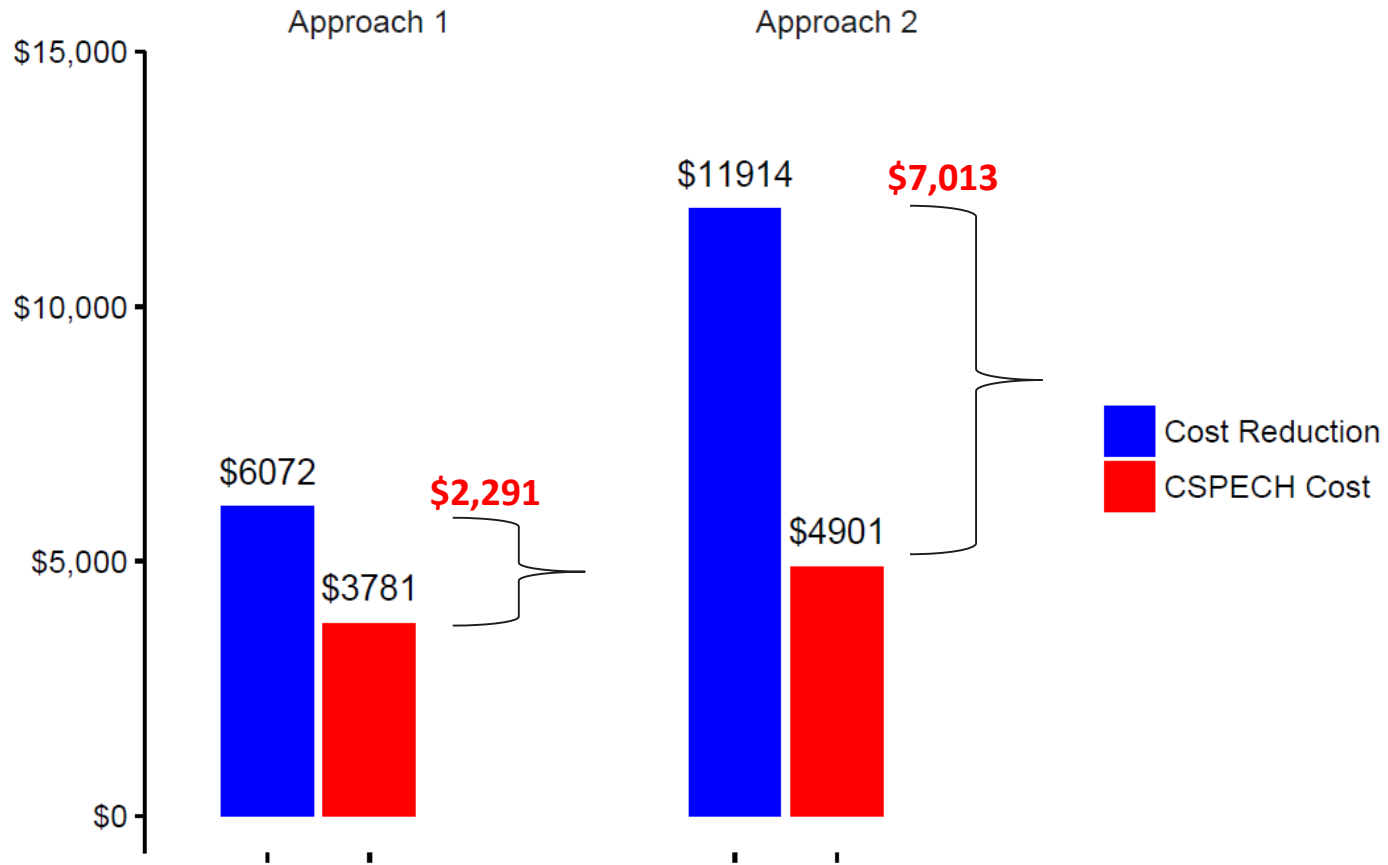
- Difference in members of cohort included
- Reliance on within-person (approach 1) vs between-person (approach 2) changes in costs
- Use of 2-years pre/post (approach 1) vs 1-year pre/post (approach 2)
- Despite differences, confidence intervals of each approach overlap significantly

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## QUESTION 2

To what extent do physical and behavioral health care cost reductions associated with CSPECH offset the cost of the program itself?

# NET COST OF CSPECH



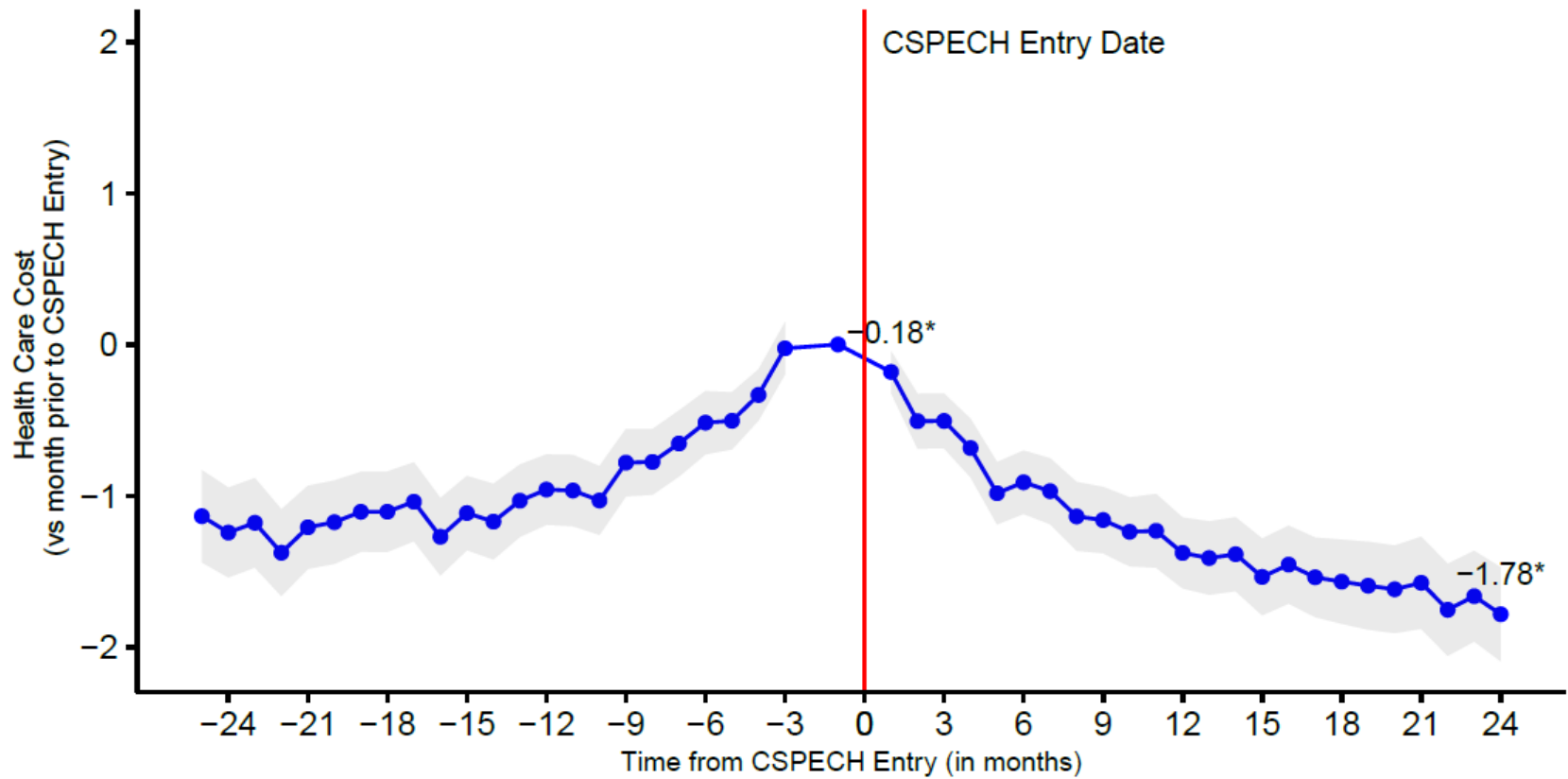
# IMPLICATIONS

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- Findings of health care cost reductions and net cost savings consistent with prior studies
- Especially important in context of a highly dynamic environment around use of Medicaid funds in a manner that acknowledges importance of social determinants of health, like housing status
- Accountable care organizations will be tasked with addressing social determinants of health & using funds to address housing stability may yield cost reductions
- Cost savings from CSPECH should be seen as a desirable collateral effect of a logical and humane response to homelessness



# ANALYTIC APPROACH 1



\* P <.05

Shaded gray area represents 95% confidence intervals.