Closing Gender Gaps within LMICs: Subsidies are necessary but not enough

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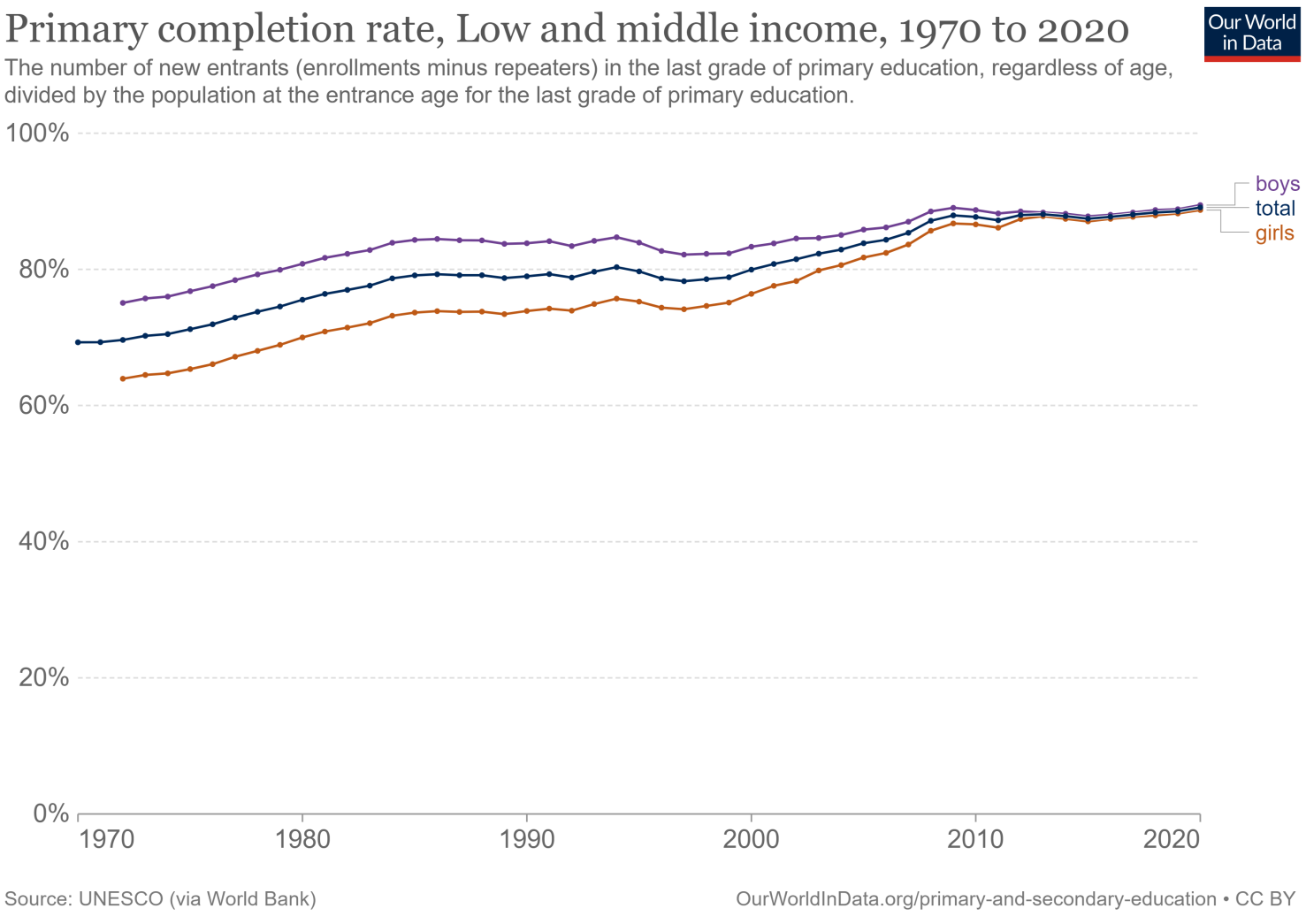
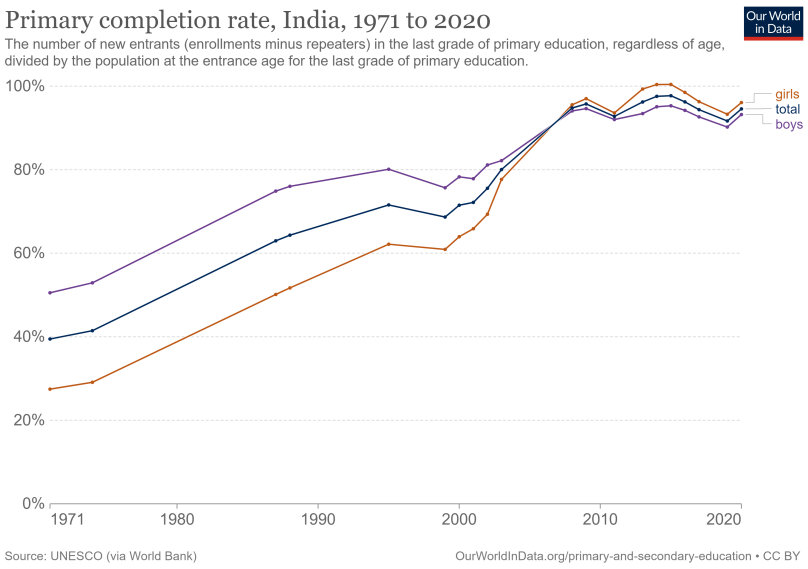
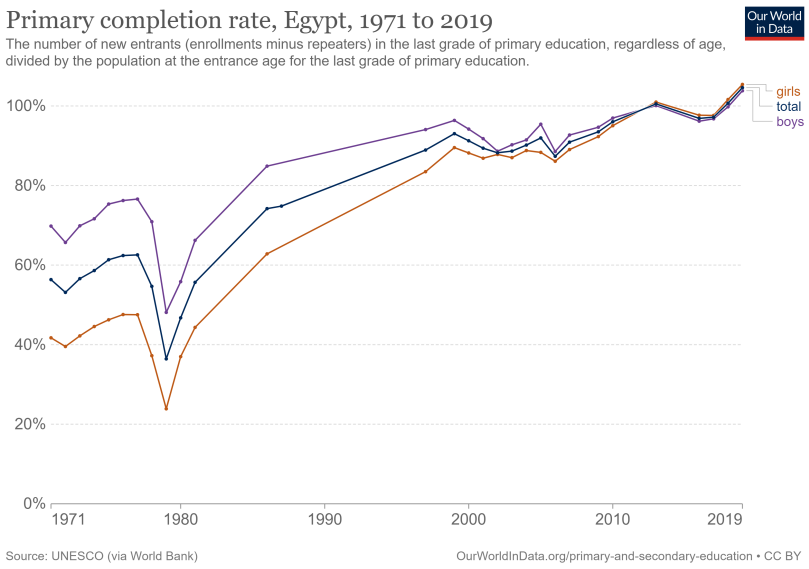
With Universal Free Primary Education, the gender gap in primary education completion has closed



Even in countries with strong gender norms





- Can the same success be repeated in health with subsidies for health care?

Today's focus

- "Women Left Behind: Gender Disparities in Utilization of Government Health Insurance in India"
- Paper coauthored with with Radhika Jain (UCL)
- Exploits data from Rajasthan, but data from Tamil Nadu, Haryana and Andhra Pradesh suggest Rajasthan findings reflect a strong pattern across the whole of India

Motivation

- India is among bottom 5 countries for female health & survival
- Gender bias in health inputs $\rightarrow$ worse female health outcomes
- Serious welfare impacts: 63 million missing women, majority adults

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  - Free care for poor households at public and private hospitals
  - 2019 national program covers poorest 40% Indians
  - Ensuring universal, equitable access is key goal

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- **Does subsidizing hospital care reduce gender inequality in utilization?**

Overview

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  - Using granular data on 3.3M hospital visits over 3 years

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  - Reducing distance costs increases female levels of usage, but does not reduce gender inequality
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  - Female political representation reduces inequality by targeting female-specific costs, barriers
- Key insights
  - Gender-neutral subsidies increase female usage of social services but may not reduce disparities if males benefit as much
  - Achieving parity requires gender-targeted interventions to reduce barriers, improve women's position in society

Outline

1. Context and data
2. Large gender disparities in health care utilization
3. What drives gender disparities? A conceptual framework
4. Care-seeking costs deter female utilization
5. Does reducing care costs reduce gender disparities?
6. Targeting demand for female care: The effect of female political reservations
7. Conclusion

Section 1

Context and data

BSBY program

- Launched in 2015 in Rajasthan, India (pop ∼70M)
- Poor household members auto-enrolled (∼46M indivs)
- Free coverage of 1400 services, including tests, medicines, stay; no premium or copay
- Public + empaneled private hospitals (N∼1600, 2/3 private)
- Hospitals paid directly by insurer
- Similar to national PMJAY program covering 40% poorest Indians

Larger hospitals in big cities provide specialized services

Quality is typically higher in private than public hospitals

Kotputli (municipality between Jaipur and Delhi)

Figure: Private hospital

Figure: Public hospital

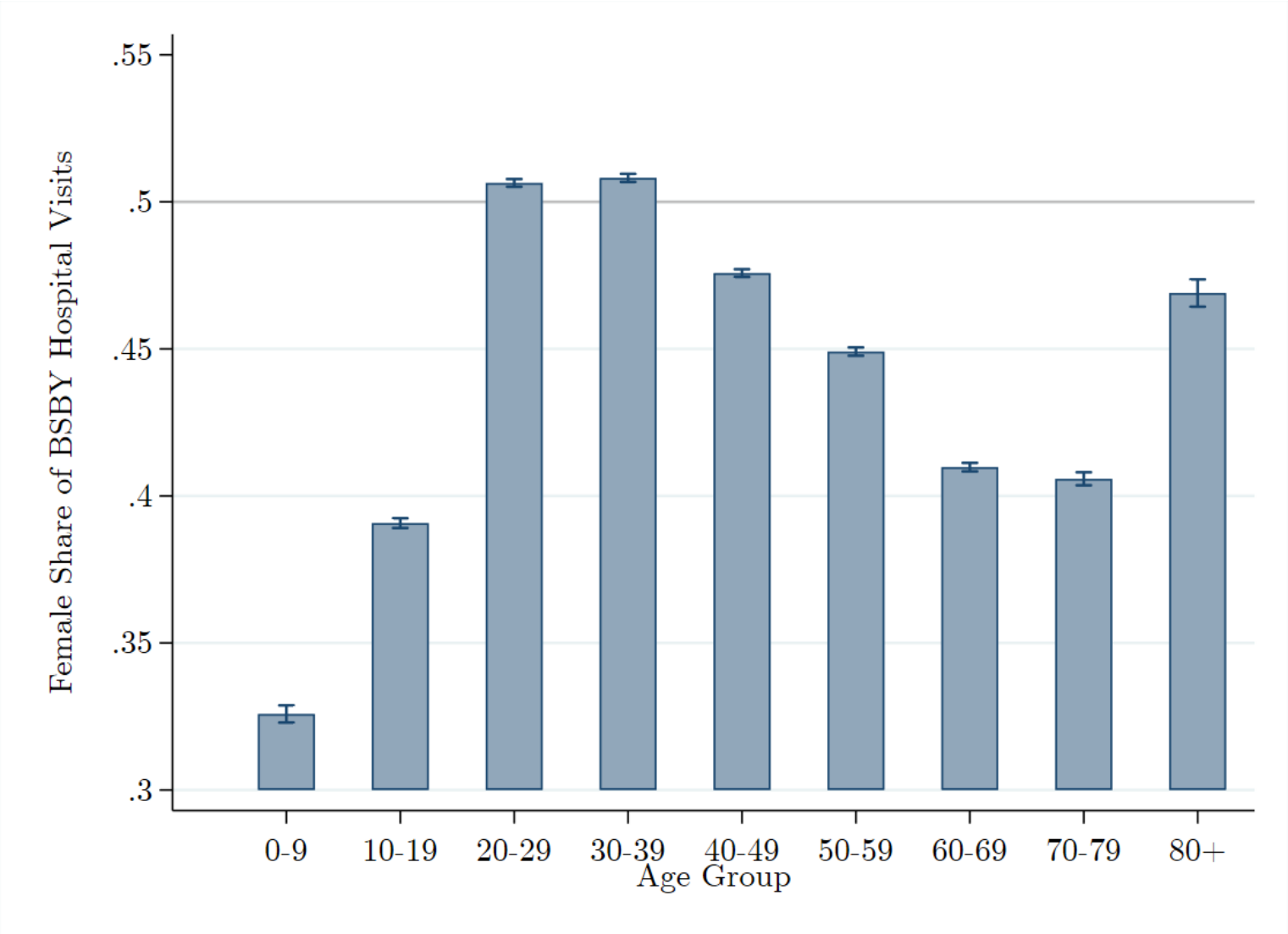
Data

- Insurance claims for every hospital visit Dec2015-Oct2019 (N=6M)
- Patient age, sex, contact; Hospital name, location; Service code, date ▸ 98% gender accuracy
- Exclude 2016, childbirth, and infant claims (N=3.3M)
- Geocode hospital, patient locations → calculate travel distance for every hospital visit (1600 hospitals, 2.3M visits)
- Link patient locations to population censuses; village electoral histories
- Household, village leader surveys: BSBY awareness, gender attitudes, village health activities

Section 2

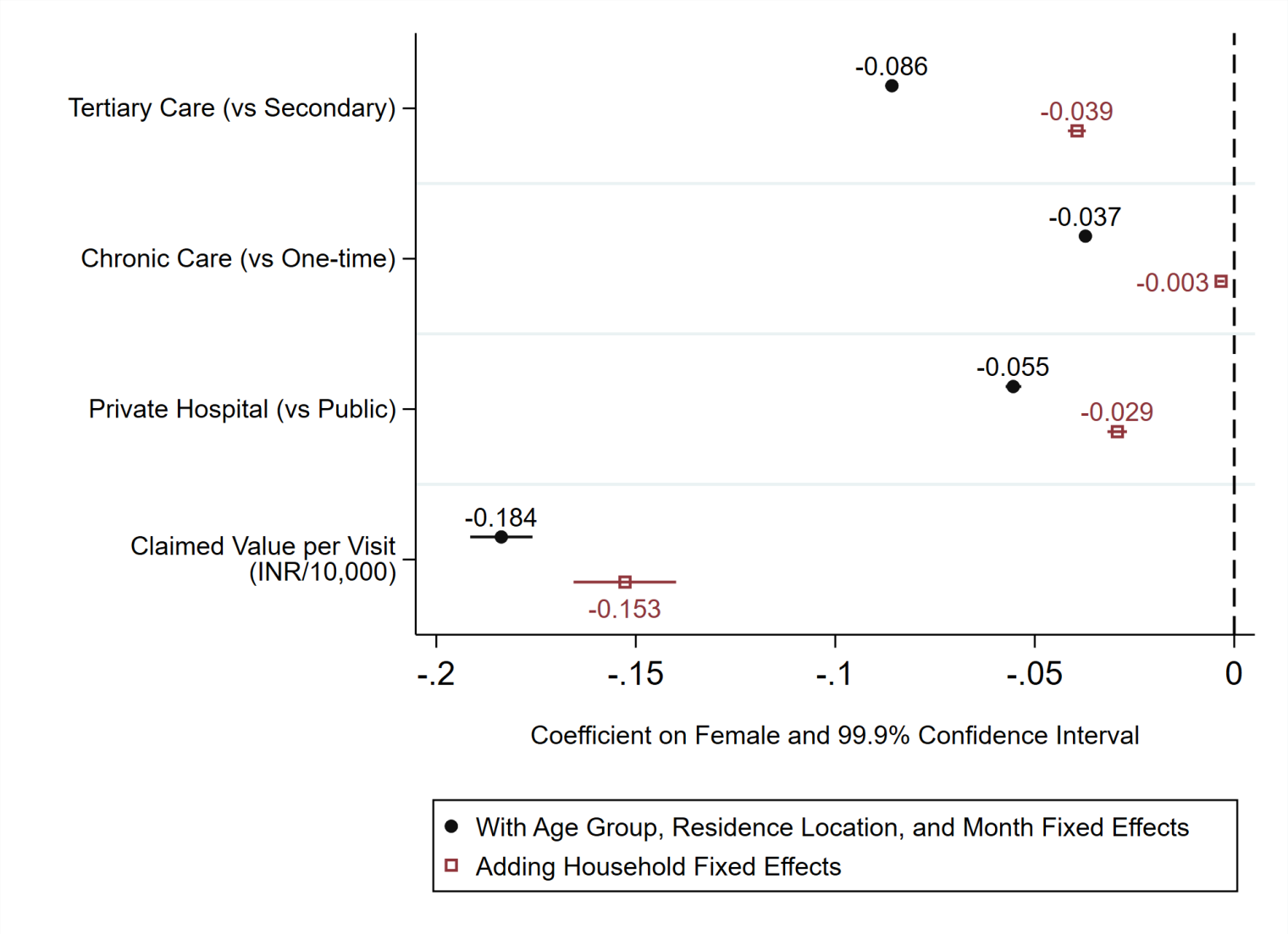
Large gender disparities in health care utilization

Large gender gap in hospital visits

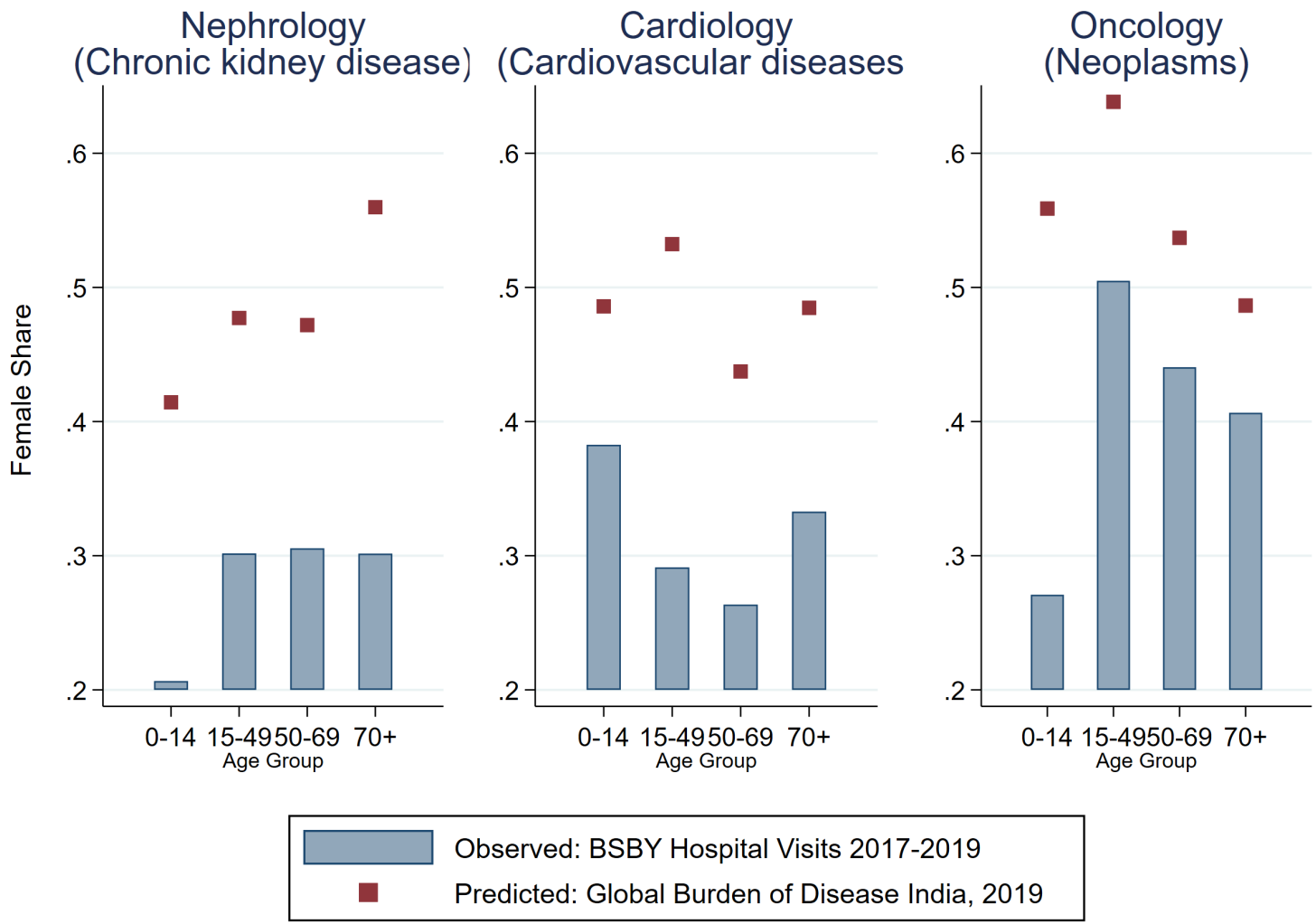


- Females account for 45% of visits, 33% for children, 43% for elderly
- Gaps larger in private, high-value care

Large gender gap in hospital visits

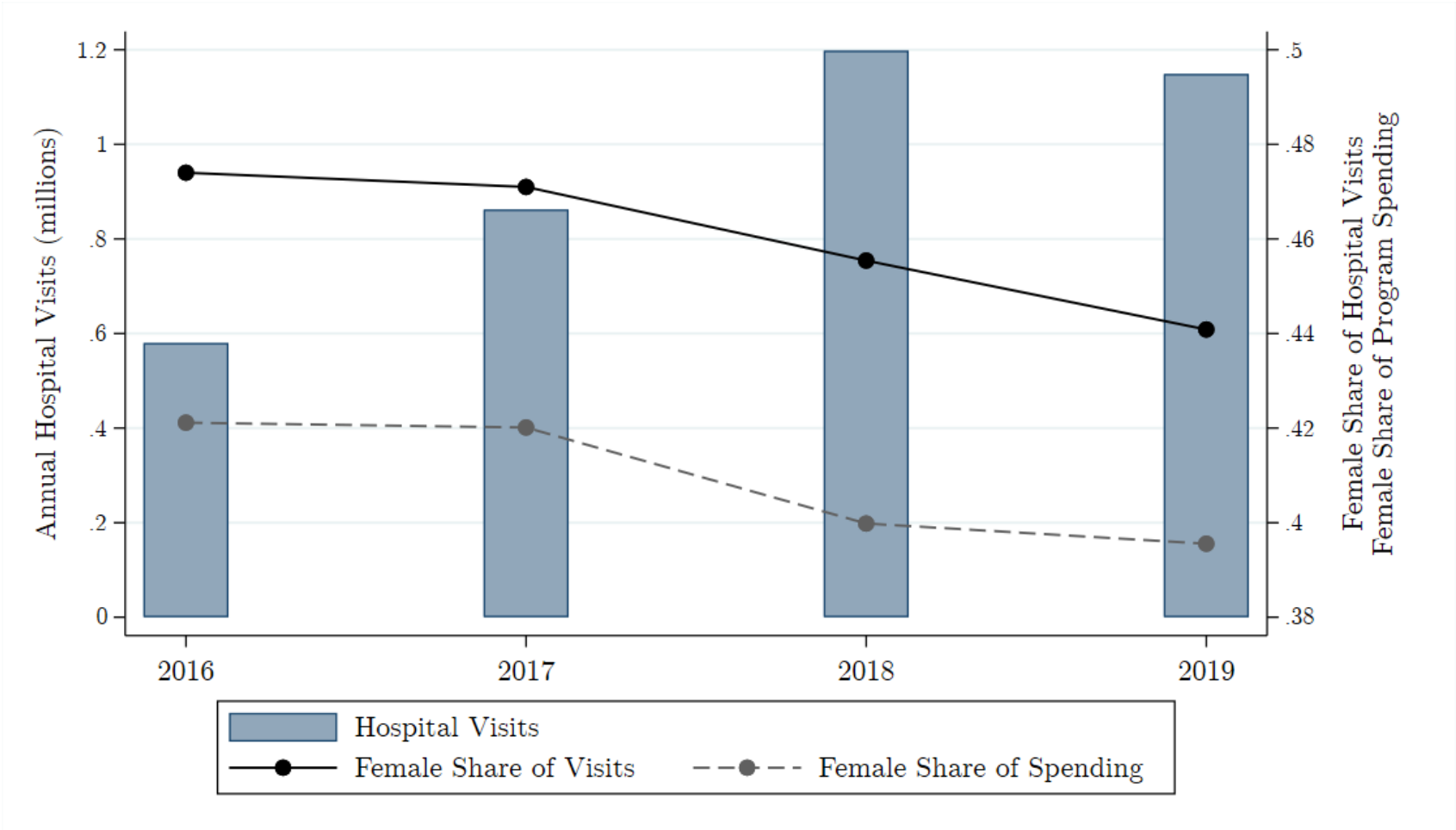


Gap unexplained by sex-difference in illness prevalence



- Females often *more* likely to be sick than males
- Estimate >200K missing female visits across 4 specialties in 3 years

Gap persists (increases) as total utilization increases



- Public spending is male-biased: 57% of BSBY compared to ∼44% in Medicaid, OECD countries

▸ Statewide

Section 3

What drives gender disparities? A conceptual framework

What drives gender disparities?

- Households get lower returns to female health
  - Low FLFP, old-age support etc
- Households place lower value on female health
  - Taste-based discrimination
- Care-seeking costs/barriers are higher for females
  - Women require escort, special transport
  - Hospitals mistreat women, not enough female doctors
  - Women under-report illness

Differential demand for male and female healthcare

- Household utility depends on returns to male & female health, preference for male health:

$$U(X, x_m, x_f) = \alpha X + \Big[R_m(x_m) + R_f(x_f)\Big] + \gamma(x_m)$$

- Household budget constraint depends on cost of care (for males & females), additional female-specific costs:

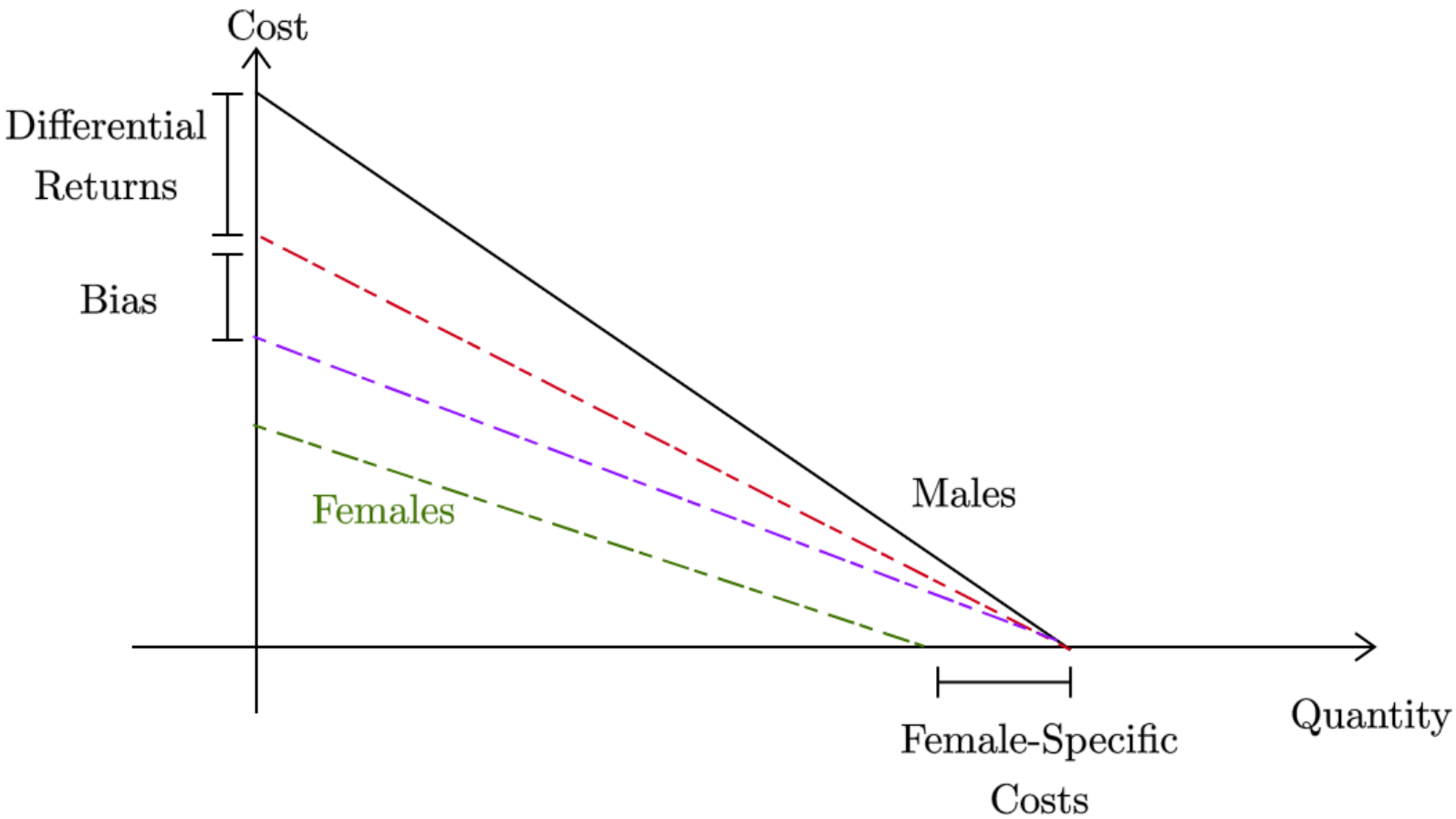
$$X + p(x_m + x_f) + c_f x_{x_f} = I$$

- First-order condition:

$$\frac{\partial R_m}{\partial x_m} = \frac{\partial R_f}{\partial x_f} - \gamma - \alpha c_f$$

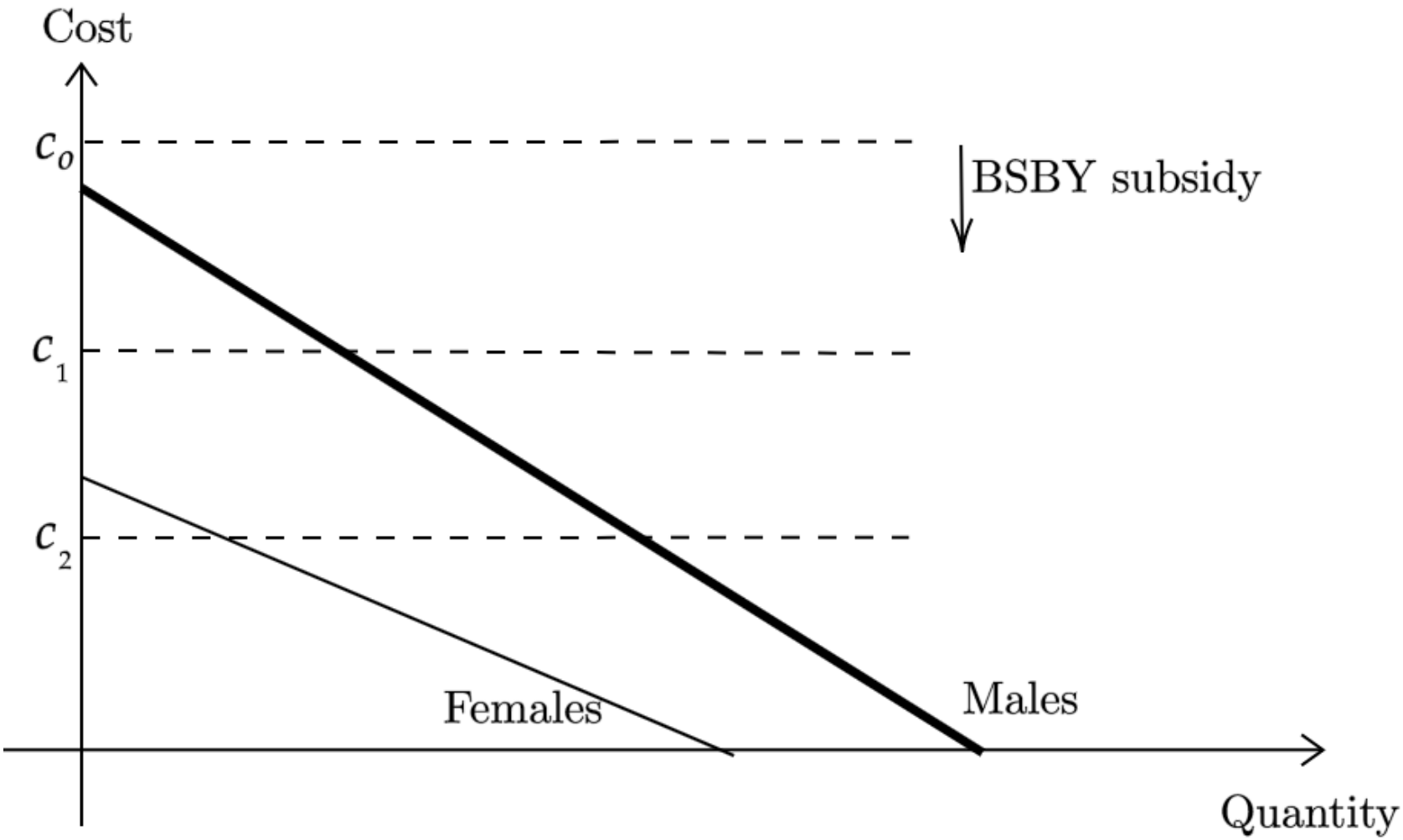
- Lower returns to female health; preference for male health $\rightarrow$ lower demand for female care at every non-zero cost
- Female-specific costs $\rightarrow$ lower demand for female care, even if "common" price is zero

Household demand for female care is lower

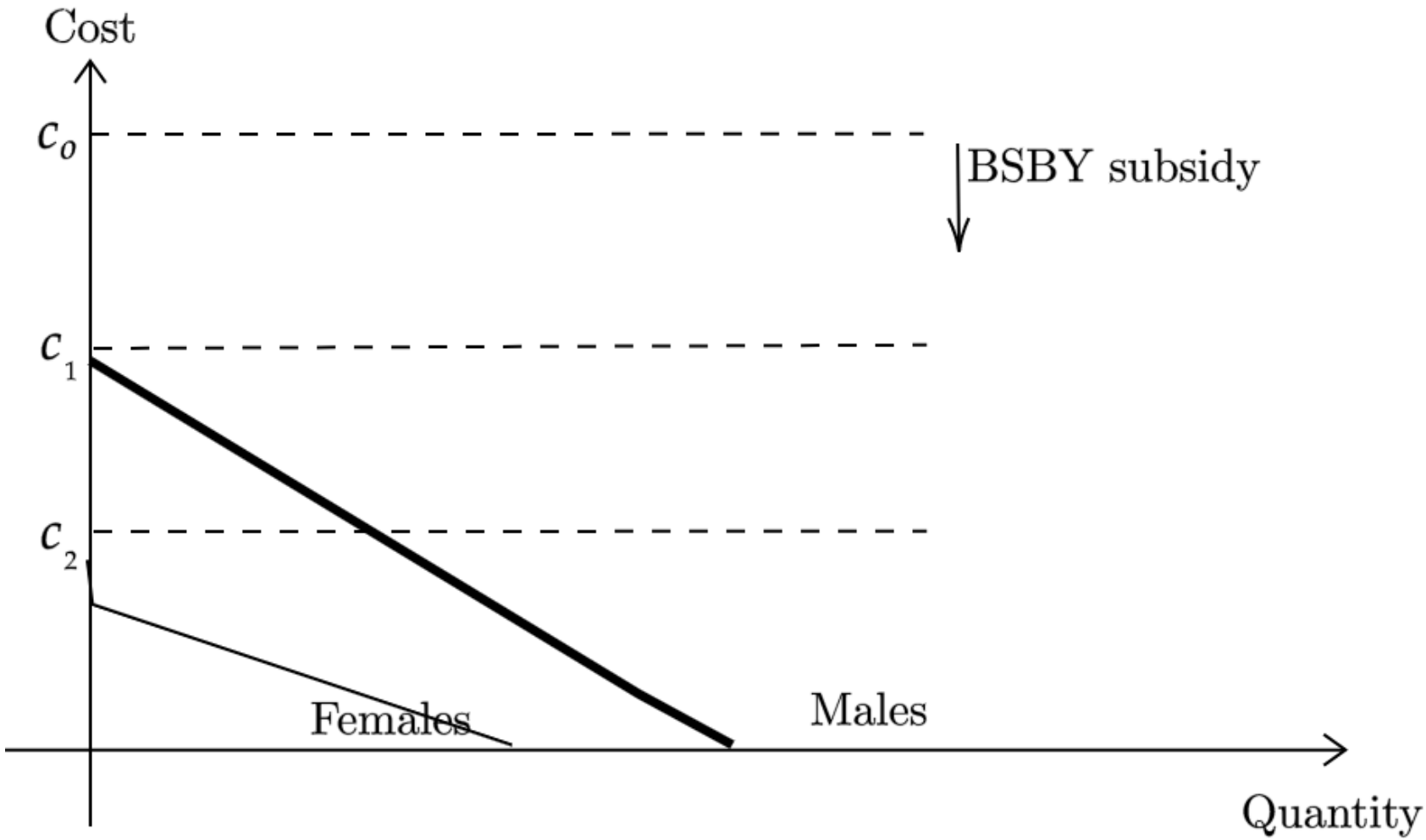


- Differential returns and bias → Qf lower at every non-zero cost
- Female-specific costs → Qf lower even at zero (common) price
- All three possible, but female-specific costs cannot explain disparities among children

Household demand for female care is lower...but large enough subsidy induces households to get care for females



But subsidy effects depends on household demand



Overall effect of lowering costs on gender gap depends on marginal household

- Household demand for female care is lower than for males (and more price-sensitive at many points)
- Households are heterogeneous in budget constraint, gender norms etc. $\rightarrow$ affected differently by subsidy
- Overall effect of subsidy increase on gender gaps depends on composition of households it induces to use BSBY
  - Marginal beneficiary may be male despite substantial subsidy

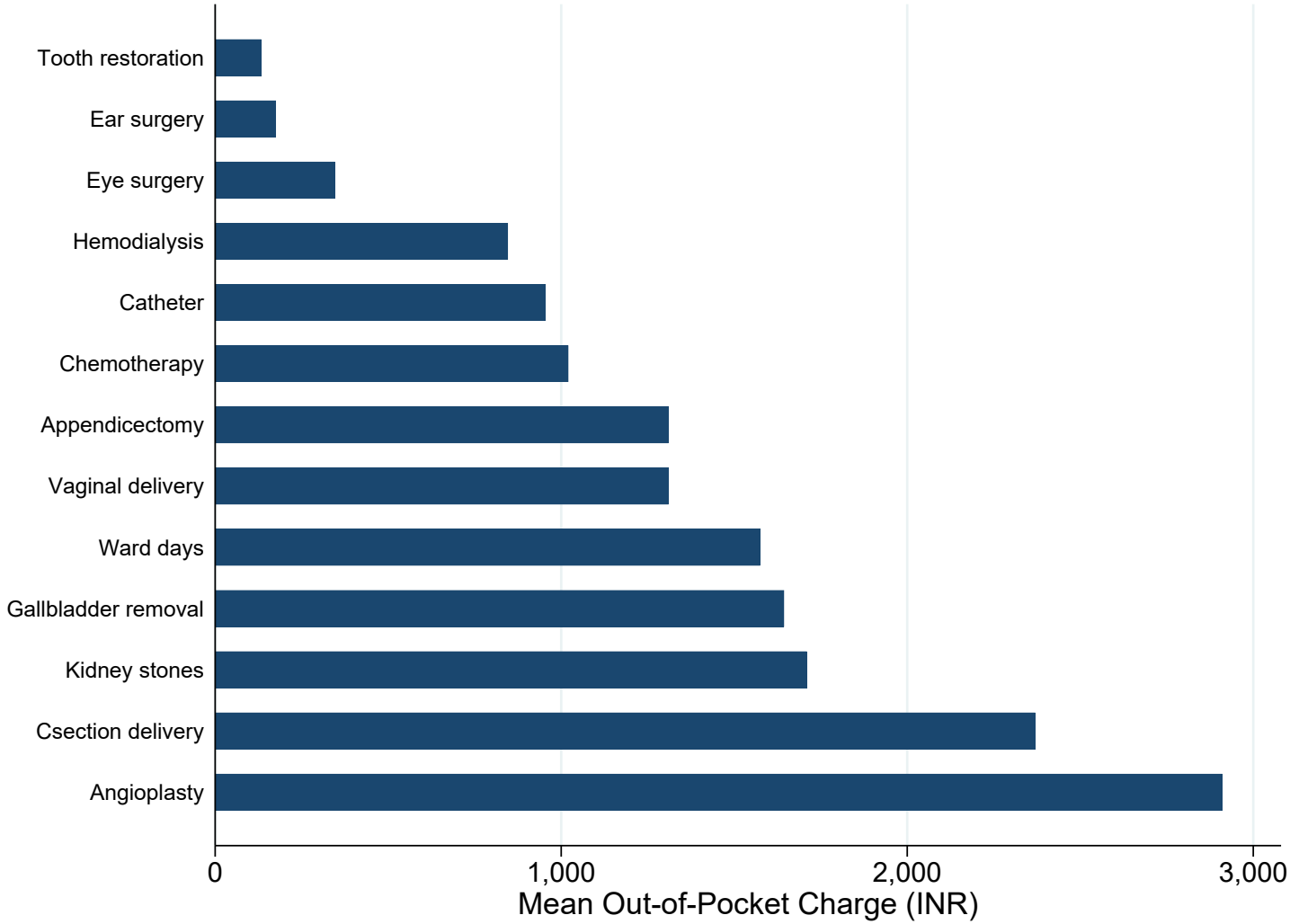
Three testable implications

- Female utilization will be lower and decreasing in care costs
  - Evidence from unauthorized hospital charges and travel distance
- Reducing costs will increase female usage levels...but may not reduce inequalities if marginal beneficiaries remain male
  - Evidence from hospital empanelments
- Directly targeting factors lowering female demand, alongside subsidies, may reduce gender gaps...and is required to achieve parity
  - Evidence from village female political representation

Section 4

Care-seeking costs deter female utilization

Care is not free: hospitals charge patients out of pocket



- 1/3 patients pay, \$30 on average (35% markup over BSBY reimbursement)
- Conditional on getting care, no difference in charges by gender

Female share of visits decreases in distance to hospital

	(1)	(2)	(3)	(4)	(5)
	Dependent Variable: Female Share of BSBY Visits				
	All	All	Under 15 years old	15-45 years old	46+ years old
Distance to nearest hospital(km/10)	-0.0176 (0.0010) {<0.0001}	-0.0190 (0.0011) {<0.0001}	-0.0108 (0.0029) {0.0002}	-0.0256 (0.0015) {<0.0001}	-0.0134 (0.0015) {<0.0001}
District Fixed Effects	Yes	Yes	Yes	Yes	Yes
Quarter Fixed Effects	Yes	Yes	Yes	Yes	Yes
Population Female Share	Yes	Yes	Yes	Yes	Yes
Full Location Controls	No	Yes	Yes	Yes	Yes
Observations	324,039	324,039	88,044	253,468	242,140
Unique Locations	43,626	43,626	43,626	43,626	43,626
Female share | Hospital within vill/town	0.511	0.511	0.373	0.569	0.470

- 10km distance increase $\rightarrow$ 1.9pp (3.5%) lower female share
- Children: 37% visits are female even at distance=0; 3% decrease with each 10km
- Cols 2-5 include rich location controls: urban, population, demographics, amenities, literacy, LFP, distance to towns, non-BSBY health facilities...

Households travel further for male care

	(1)	(2)	(3)	(4)
Dependent Variable	Coefficient on Female			
Distance to hospital visited (km)	-8.9087	-7.4339	-5.1155	-8.0815
	(0.0742)	(0.0701)	(0.1061)	(0.0909)
	{<0.001}	{<0.001}	{<0.001}	{<0.001}
Visited hospital nearest patient residence	0.0623	0.0428	0.0293	0.0732
	(0.0005)	(0.0005)	(0.0007)	(0.0007)
	{<0.001}	{<0.001}	{<0.001}	{<0.001}
Visited hospital in different district from residence	-0.07	-0.06	-0.04	-0.06
	(0.00)	(0.00)	(0.00)	(0.00)
	{<0.001}	{<0.001}	{<0.001}	{<0.001}
Age Group Fixed Effects	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes
District Fixed Effects	Yes	No	No	Yes
Residence Location Fixed Effects	No	Yes	No	No
Household Fixed Effects	No	No	Yes	No
Household Fixed Effects Sample			Yes	Yes
Observations	2,262,729	2,261,194	1,415,801	1,415,801
Unique Locations	37,986	37,986	37,986	37,986
Distance to hospital visited (km) | Male	53.733	53.733	51.240	51.240
Visited hospital nearest patient residence | Male	0.838	0.838	0.819	0.819
Visited hospital in different district | Male	0.361	0.361	0.350	0.350

- Households travel 7.5Km less for females (15% <males)
- Effects hold in specifications with HH fixed effects

Section 5

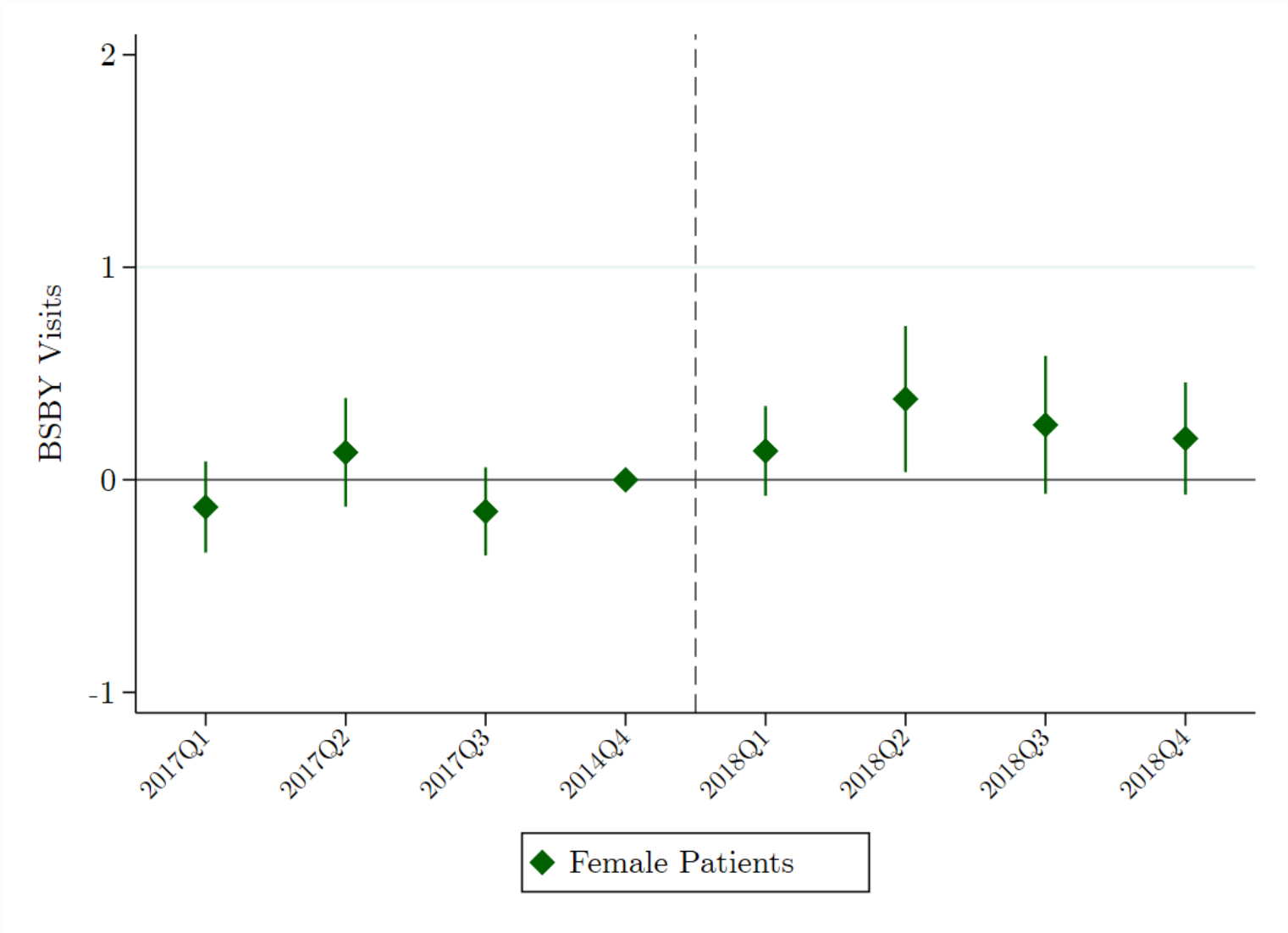
Does reducing care costs reduce gender disparities?

Effect of private hospital empanelment

- Administrative push to increase access, empanel more hospitals in 2018Q1
- Lowered distance to nearest hospital for many villages

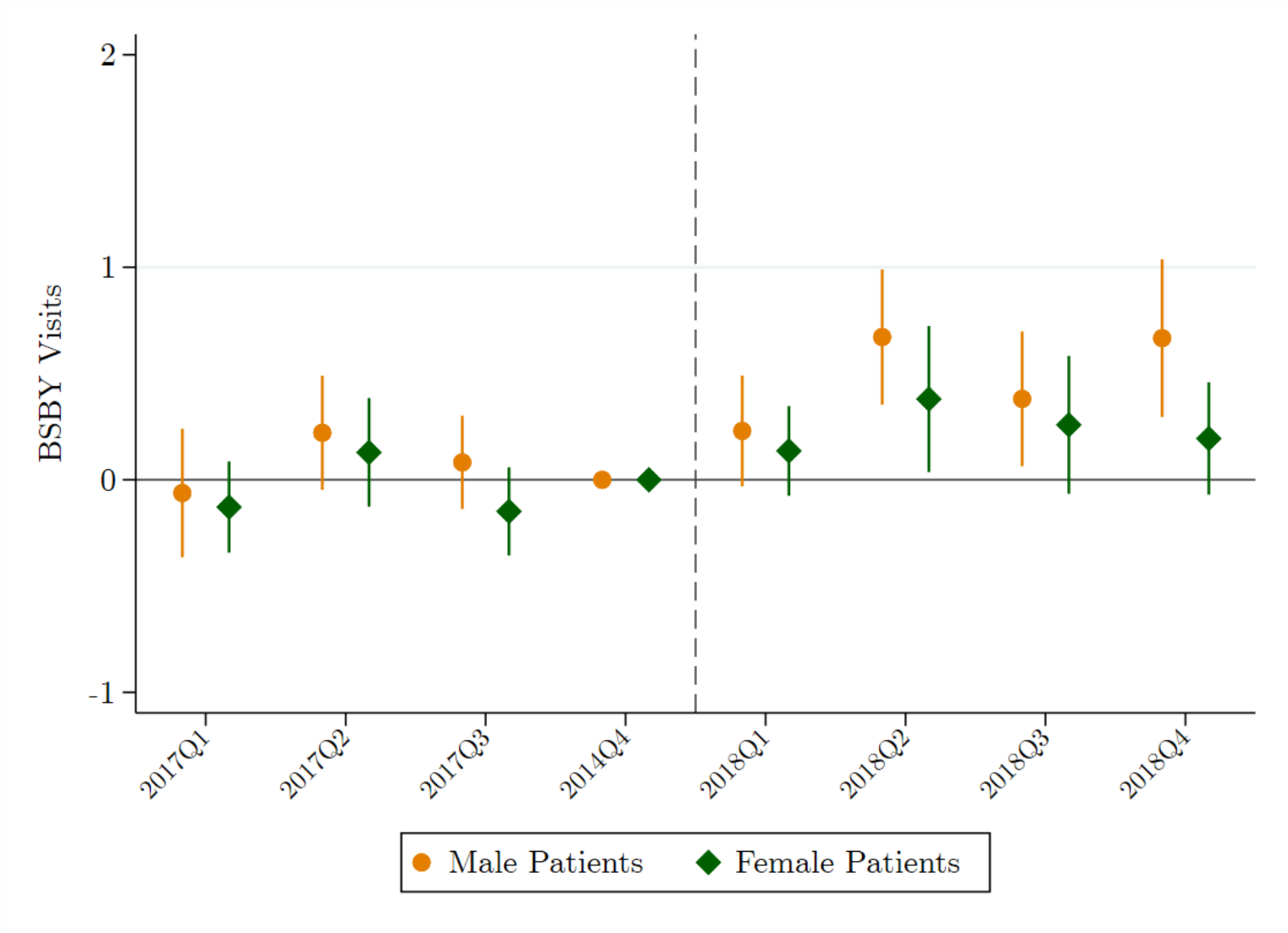
- Event-study analysis of effect of empanelment on male, female visits
- Identify villages with nearest private hospital 25-30km in 2017
  - Treatment: Locations that got hospital within 20km in 2018Q1
  - Control: Locations that did not through 2018Q4
  - Entropy balancing on location characteristics (demographics, SES, amenities, access)
- Additional analysis
  - Long-run effects: Control = those untreated through 2019Q3
  - Heterogeneity by cost reduction: Split sample by whether got hospital within 10-20km or within 0-10km

Lowering distance cost increases female usage



- Distance to private hospital decreased 20km (∼60%)
- ∼15.5% increase in quarterly female visits

...as well as male usage



- Distance to private hospital decreased 20km (∼60%)
- ∼15.5% increase in quarterly female visits...19% for males

Section 6

Targeting demand for female care: The effect of female political reservations

Long-term exposure to female leaders reduces gender gap modestly

- Context
  - Gram panchayats (GPs): village elected councils responsible for local public goods & services
  - 1/3 of Sarpanch (head) seats randomly reserved for females $\rightarrow$ induces 90pp$\uparrow$ in female Sarpanch
  - Use 3 terms of reservations $\rightarrow$ up to 15yrs of exposure
  - Prior studies show effects on gender attitudes, investments in girls

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  - Use 3 terms of reservations $\rightarrow$ up to 15yrs of exposure
  - Prior studies show effects on gender attitudes, investments in girls
- Effects:
  - Female share of BSBY visits increases among children, adults
  - But effects are small, take 10+ years exposure, not among elderly
  - Mechanisms: maternal/child health investments, female agency $\rightarrow$ factors that lower female demand

Long-term exposure to female leaders reduces gender gap modestly

	(1)	(2)	(3)	(4)
	Dependent Variable: Patient is Female			
	All Claims	Under 15 years old	15-45 years old	46+ years old
Number of times GP reserved	0.0031	0.0103	0.0089	-0.0044
	(0.0021)	(0.0029)	(0.0031)	(0.0028)
	{0.129}	{0.000}	{0.004}	{0.117}
Age Group Fixed Effects	Yes	Yes	Yes	Yes
Month Fixed Effects	Yes	Yes	Yes	Yes
Patient District Fixed Effects	Yes	Yes	Yes	Yes
Specialty Fixed Effects	Yes	Yes	Yes	Yes
Observations	1,969,980	149,553	970,391	850,036
Female share | Never reserved	0.492	0.326	0.549	0.445

Long-term exposure to female leaders reduces gender gap modestly

- Implications:
  - Policies to strengthen position of women can have complementary effects on how much females benefit from other programs
  - But changing attitudes is slow, incremental process

Main take-aways

- **Large gender disparities persist within a UHC program**
- **In presence of gender bias, costs of using social programs exacerbate disparities**
  - Hospital charges, distance worsen gender gap
- **Gender-neutral subsidies increase female utilization levels but may not decrease disparities because males benefit as much**
- **Reducing disparities in use of social programs requires gender-targeted interventions to lower female-specific costs directly**
  - Female political reservations reduce gap by targeting female-specific barriers

Thank you!