Primary Care Reform and the Provision of Care to Patients with Mental Illness.

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Background

- Resulted from collaboration with Mental Health and Addictions Unit, Health Program Policy and Standards Branch
- Interested in understanding the impact of primary care reform on residents with mental illness.

Relevant policy changes

- move from fee-for-service to capitation models of physician remuneration
- the addition of financial incentives for physicians to roster patients with serious mental illness
- the inclusion of funded mental health professionals in Family Health Teams.

Patient Enrollment Models

- All models involve patient rostering, financial incentives for the provision of preventive care and requirements for after-hours care
- Non-rostered patients continue to receive services from their physicians who are remunerated in a FFS fashion for these patients.
- Physicians they may de-roster patients who use outside care.
- In enhanced FFS, claims are paid in full
- In capitation models, remuneration is largely based on the age and sex distribution of rostered patients. They receive 10% of FFS claims for each service provided.
- Team-based capitation models provide salaries for health workers including psychologists and social workers.

Objectives

1) the rates of enrolment in primary care models by individuals with mental illness,
2) the association between primary care model types and health service use by patients with mental illness including outpatient visits, hospitalizations and readmissions, and
3) the association between receipt of financial incentives by providers and the rates of inclusion in primary care models for patient with severe mental illness.

Methods

- 18 years or older
- had at least one OHIP contact between April 1 2007 and March 31 2009
- were rostered to physicians belonging to a Patient Enrollment Model (PEM) on March 31, 2009

Databases

- OHIP/RPDB
- Client Agency Program Enrolment (CAPE)
- Ontario Diabetes Database
- Primary Care Payment Database
- CIHI DADs
- Ontario Mental Health Reporting System
- NACRS

Methods

- three types of models
  - blended capitation (FHNs, FHOs, and PCNs)
  - team-based capitation (FHTs)
  - or enhanced FFS models (FHGs)

- FHTs that included at least one of a social worker, psychologist or mental health worker were identified as having a mental health worker.

Methods

The study population was divided into three mental health categories using OHIP diagnostic codes:

(1) psychotic or bipolar disorders

(2) other mental illness

(3) no mental illness

Methods

Outcomes:

- Office visits (mean number of visits to PCPs, Any visit to psychiatrist, Mean number of psychiatry visits)
- ED visits (mean number of general and mental health specific ED visits per 100 rostered patients)
- Hospitalizations (likelihood of general or mental health hospitalization, mean number of general and mental health hospital admissions per 100 rostered patients, average length of stay)
- 30-day readmission rates

Analysis

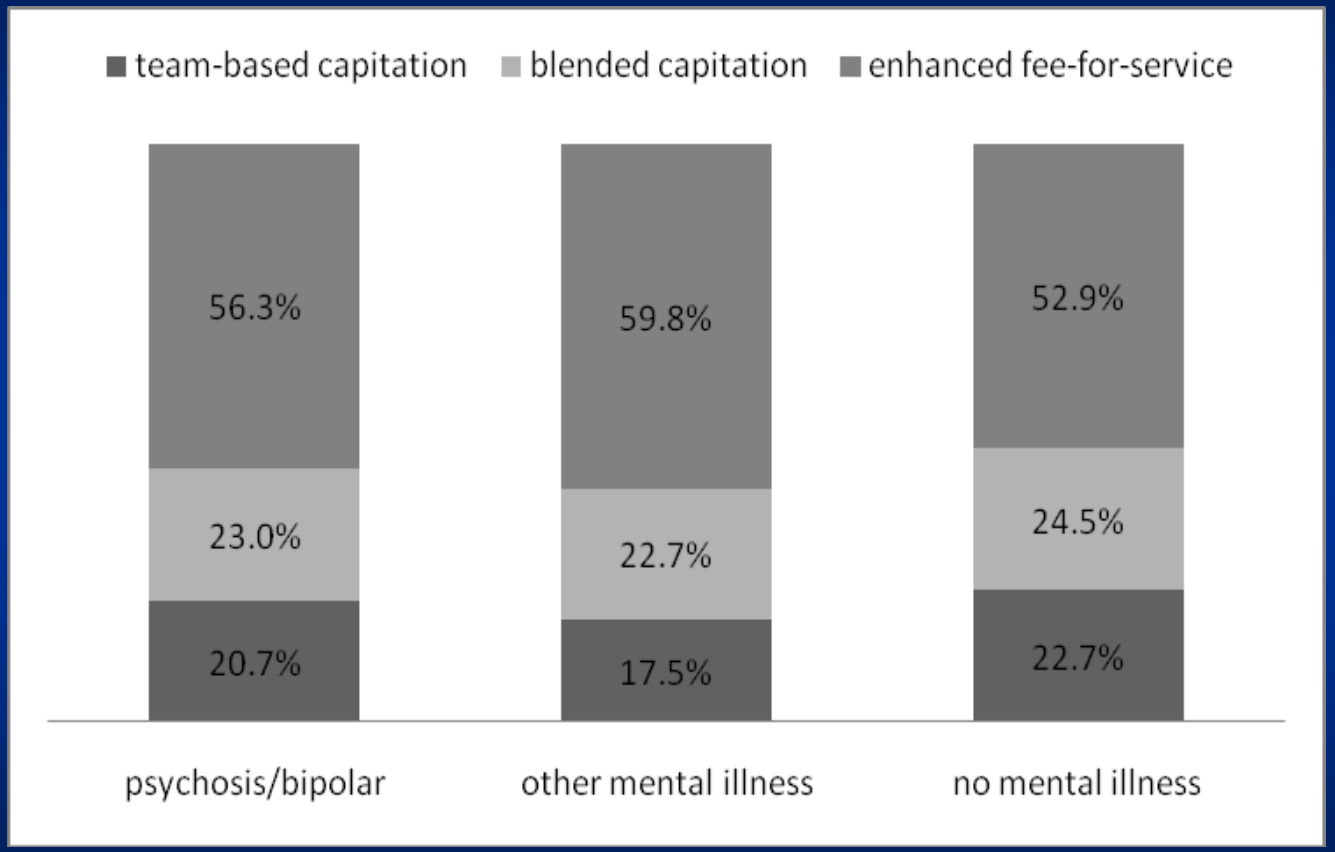
- We adjusted for patient age, sex, rurality, comorbid illnesses, diabetes, hypertension, and income quintile. Physician-level factors included years since graduation, time spent in group, Canadian or foreign medical graduate and practice size.
- We compared team-based capitation and enhanced fee-for-service against blended capitation, which we used as our reference category.

PATIENT CHARACTERISTICS

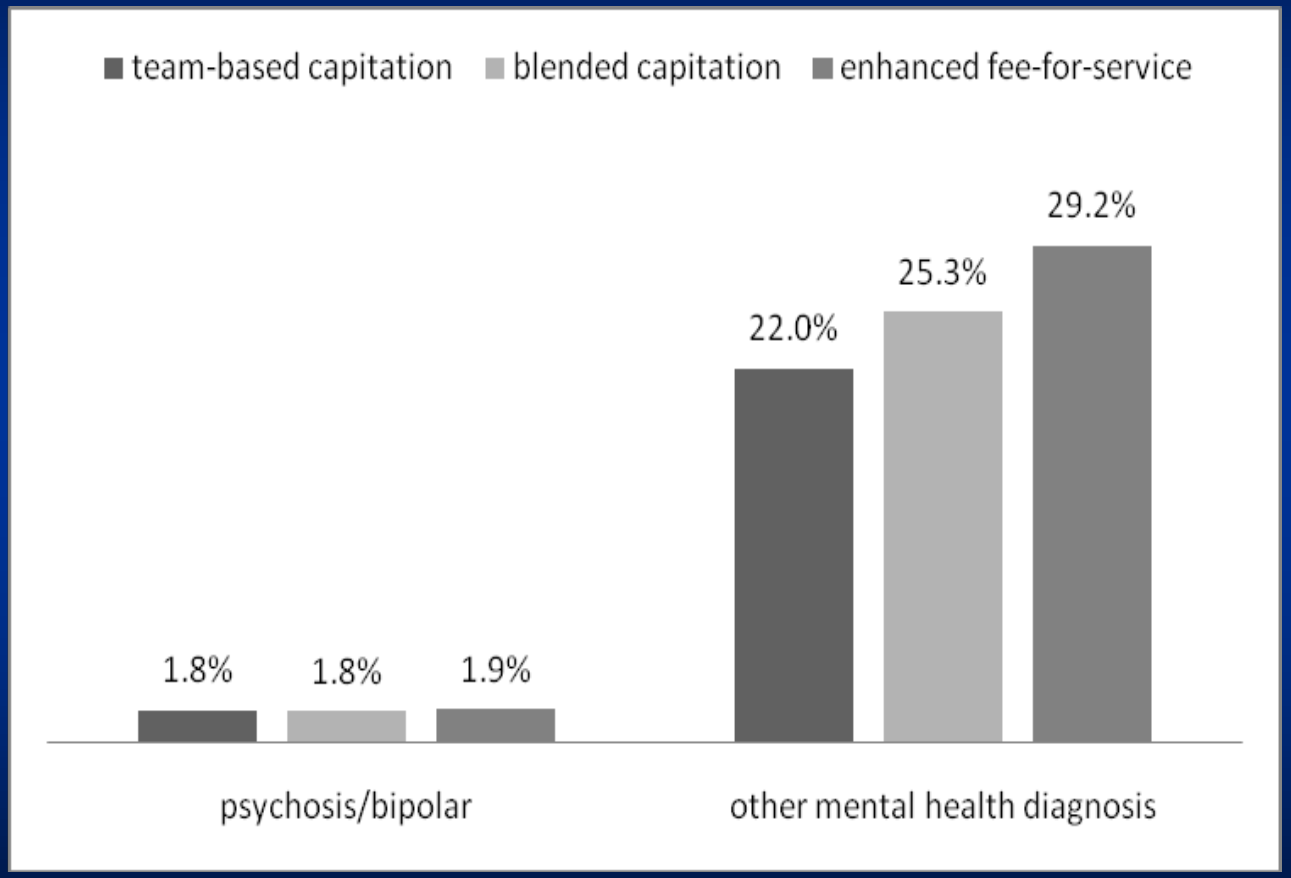
Patient Characteristics	Psychosis/bipolar	Other mental illness	No mental illness	Total
Patients (n, %)	106,489 (1.9%)	1,526,585 (26.8%)	4,073,307 (71.4%)	5,706,381
Age, mean	48.1	48.9	49.0	48.8
Female	58.0%	62.6%	52.5%	55.3%
Rural	9.7%	9.8%	12.2%	11.5%
Lowest Income	25.8%	18.1%	16.4%	17.0%
Highest Income	16.8%	21.2%	20.4%	21.7%
Diabetes	15.9%	11.6%	11.5%	11.6%
Hypertension	28.7%	30.4%	29.2%	29.5%
Comorbidity score, mean	5.2	4.7	3.0	3.5

ENROLLMENT RATES

PERCENTAGE OF ROSTERED PATIENTS BY ENROLLMENT MODEL TYPE AND MENTAL HEALTH GROUP.



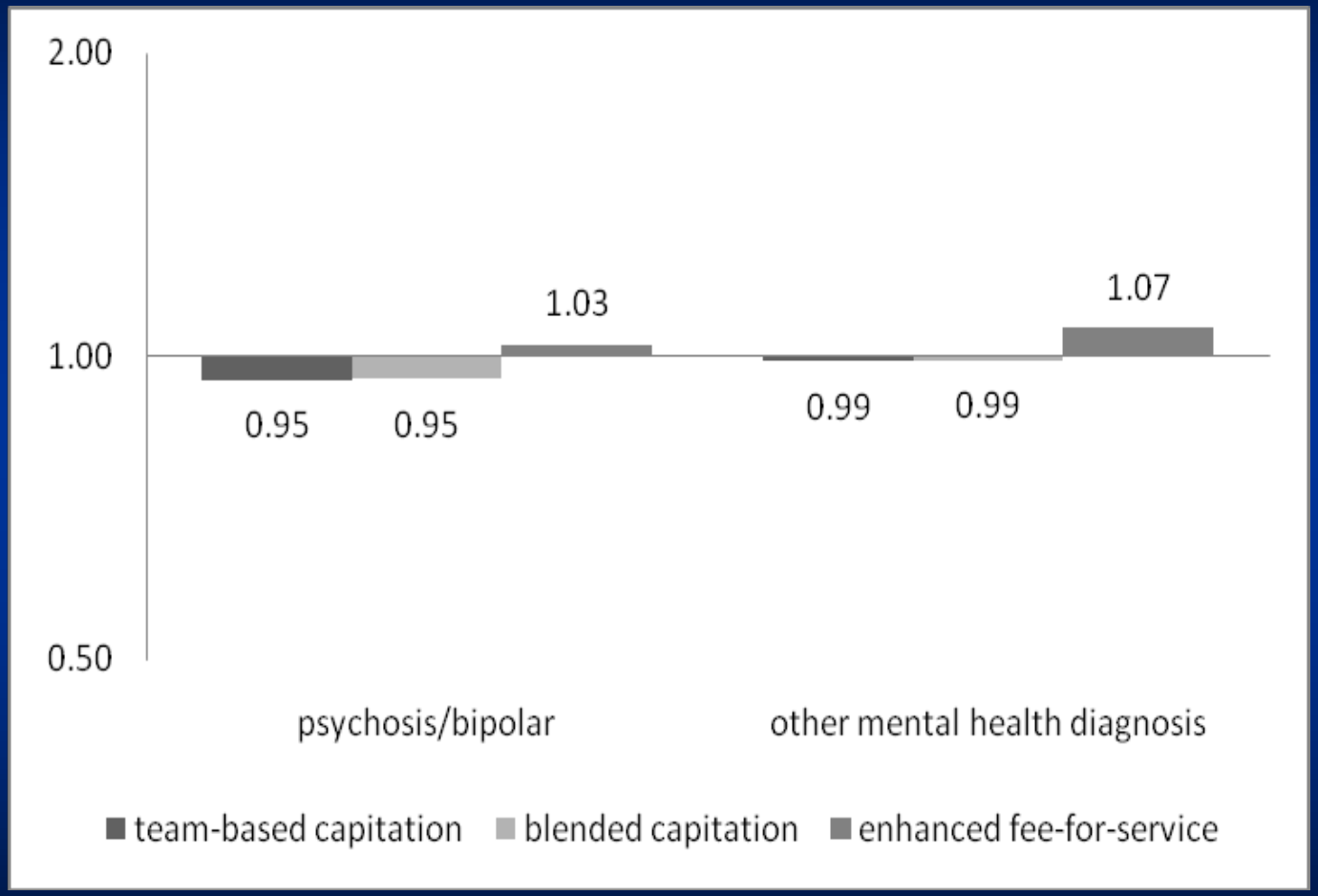
PERCENTAGE OF ROSTERED PATIENTS WHO HAVE A DIAGNOSIS OF PSYCHOSIS/BIPOLAR DISORDER VS. OTHER MENTAL ILLNESS BY ENROLLMENT MODEL TYPE.



Virtual Rosters

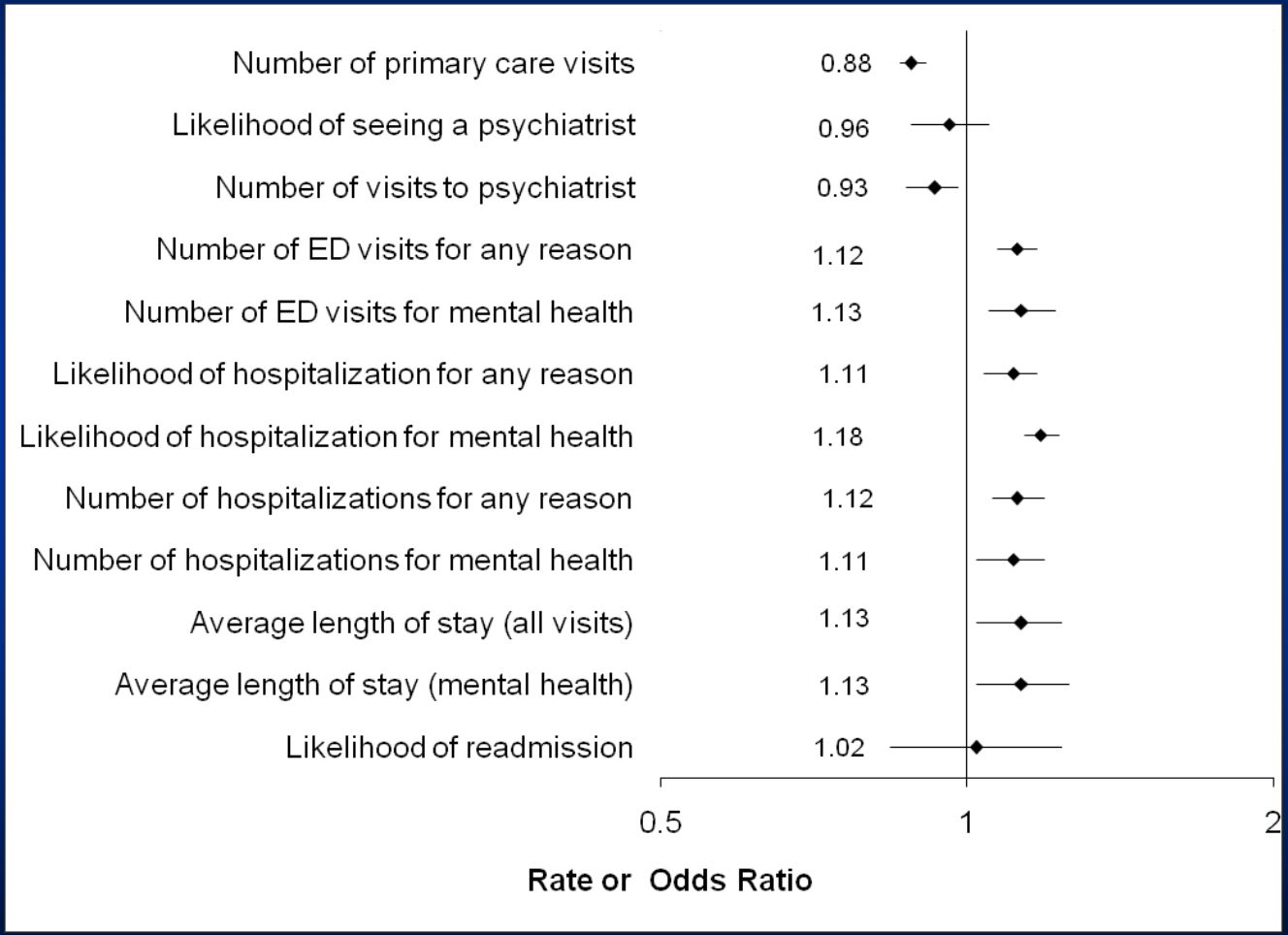
- For the next analysis we include non-rostered patients who belonged to physicians' "virtual rosters."
- Non-rostered patients were linked to participating physicians who had billed the most claims from a basket of 18 fee schedule codes that comprise primary care services.

Observed over expected ratio of rostering patients by mental health group and by enrollment model type.

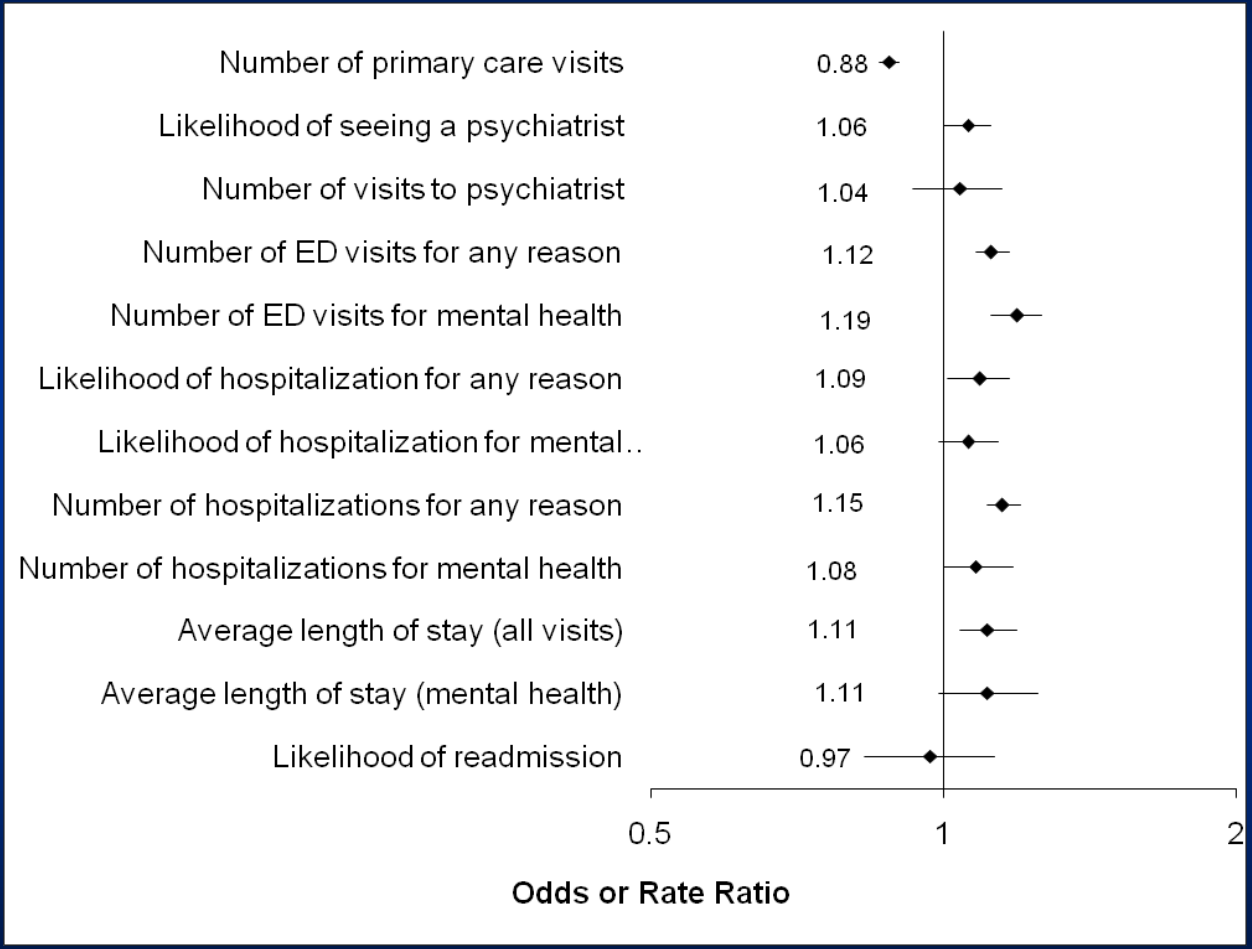


HEALTH SERVICE USE

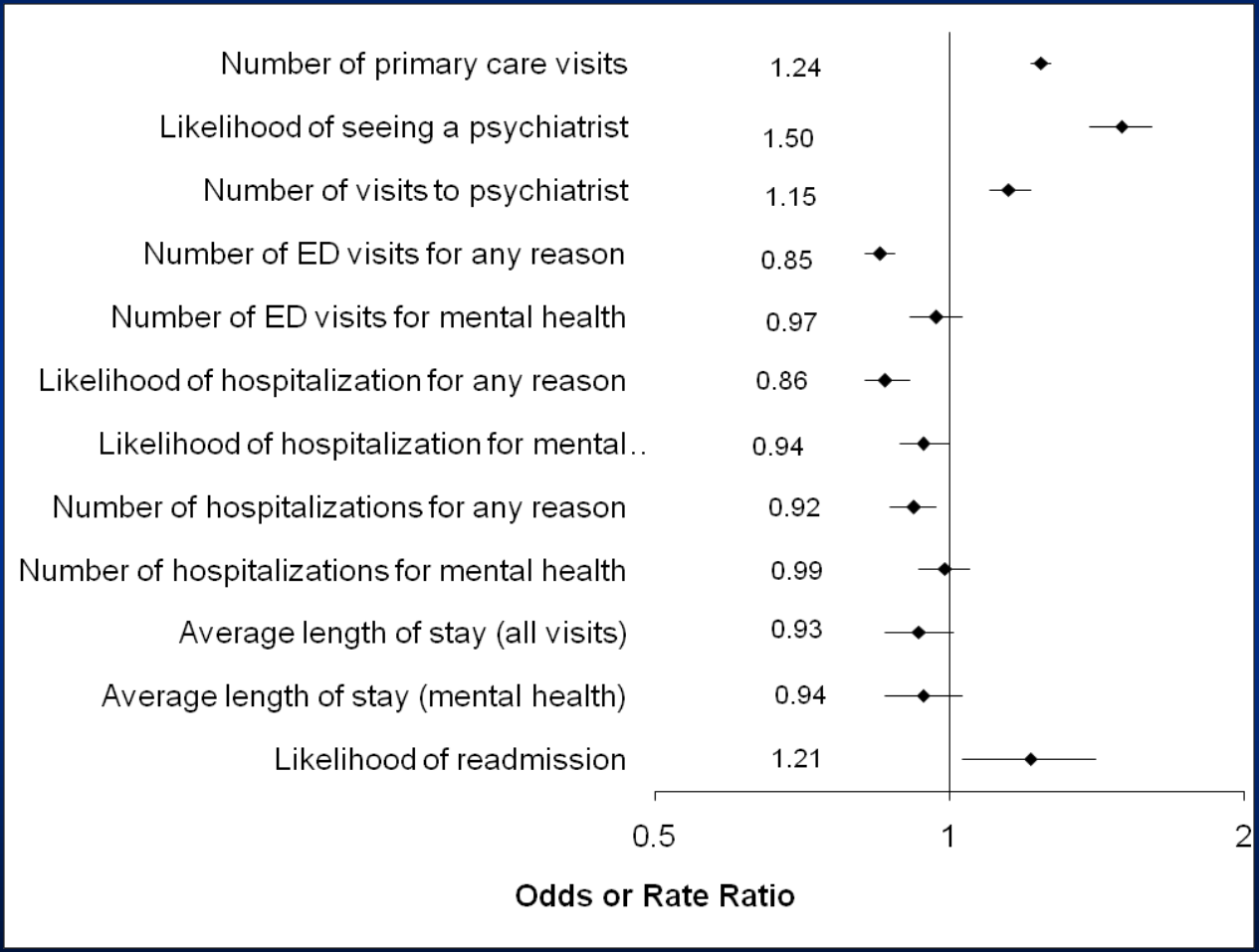
TEAM-BASED CAPITATION COMPARED TO BLENDED CAPITATION FOR PATIENTS WITH PSYCHOTIC/BIPOLAR DISORDER



TEAM-BASED CAPITATION COMPARED TO BLENDED CAPITATION FOR PATIENTS WITH OTHER MENTAL ILLNESS.



ENHANCED FEE-FOR-SERVICE COMPARED TO BLENDED CAPITATION FOR PATIENTS WITH PSYCHOSIS/BIPOLAR DISORDER



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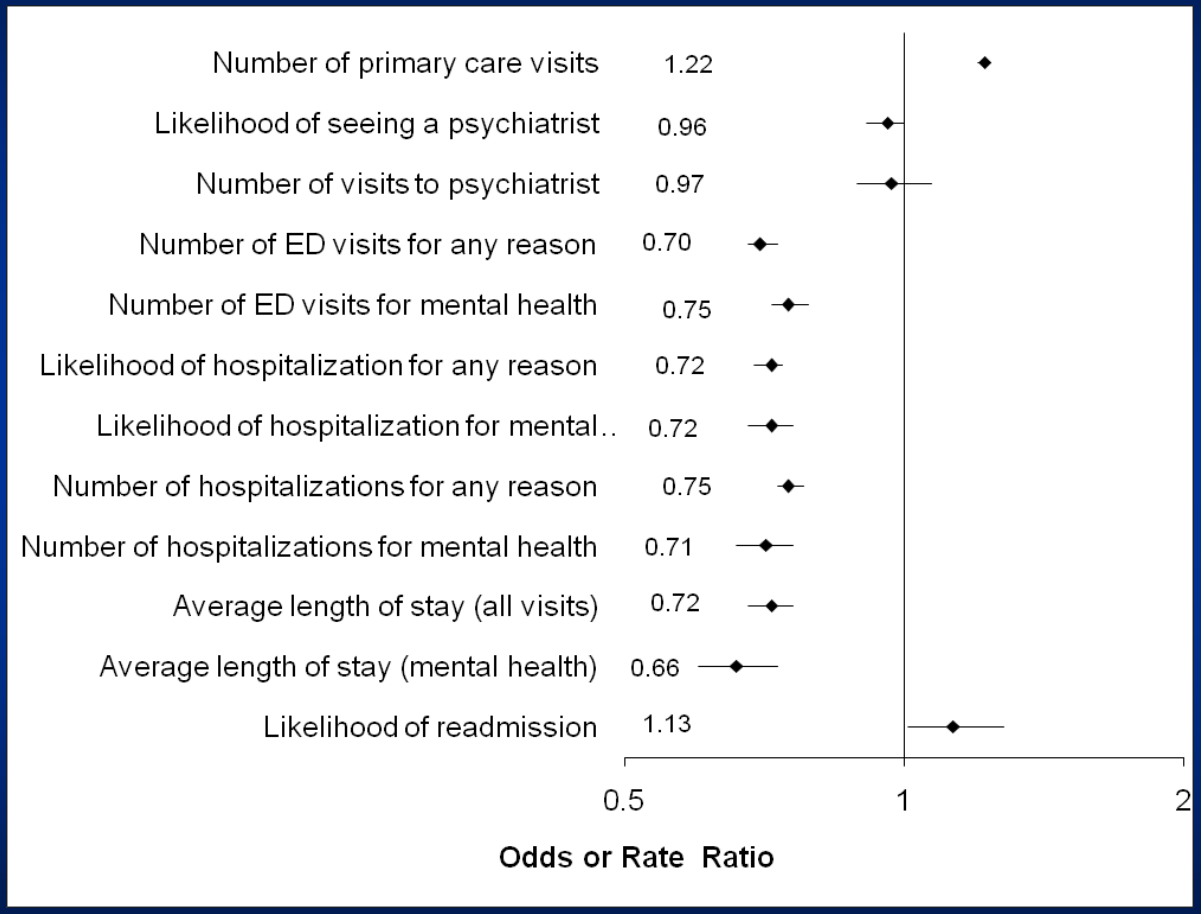
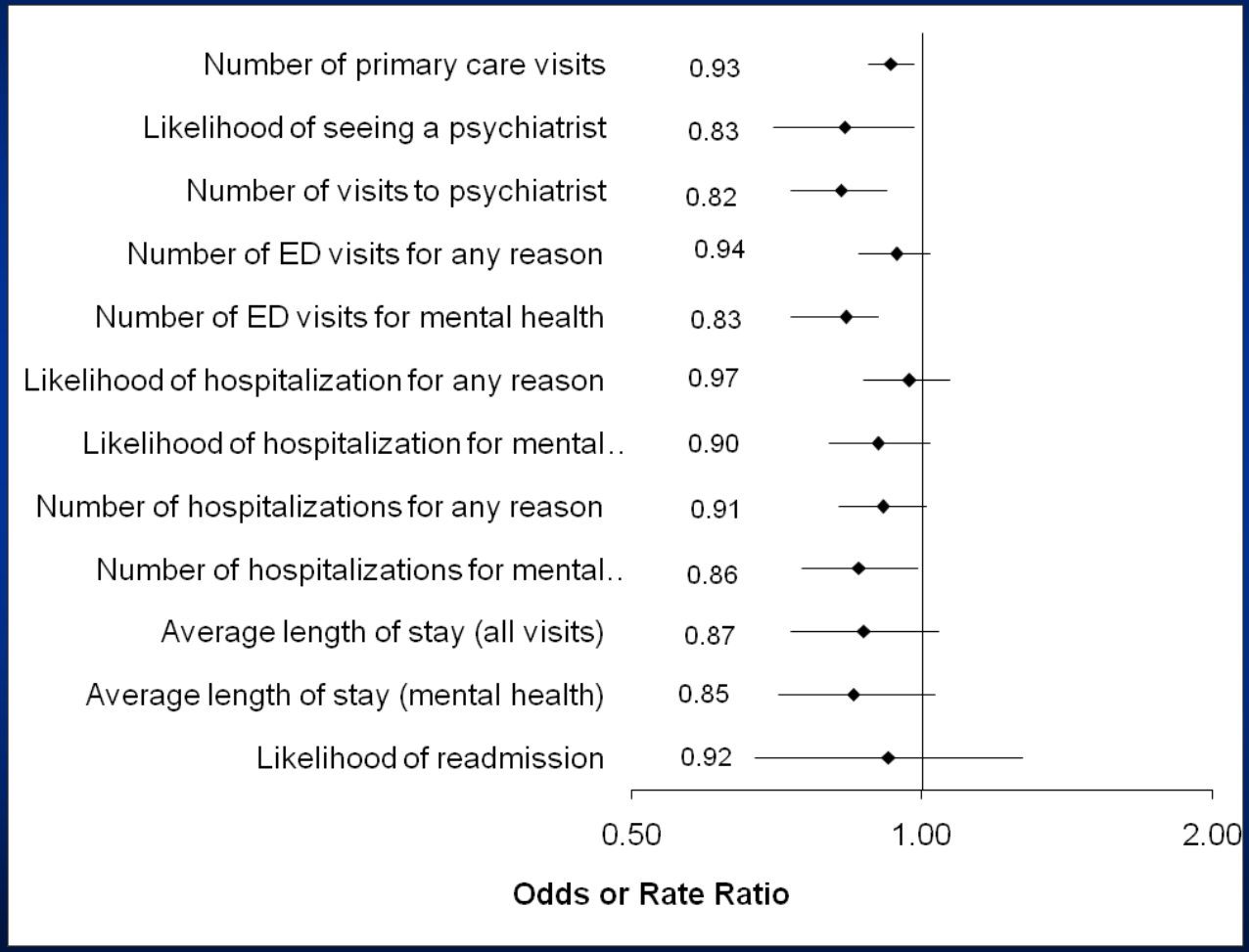


FHTS WITH MENTAL HEALTH WORKERS COMPARED TO FHTS WITHOUT MENTAL HEALTH WORKERS FOR PATIENTS WITH PSYCHOTIC/BIPOLAR DISORDER



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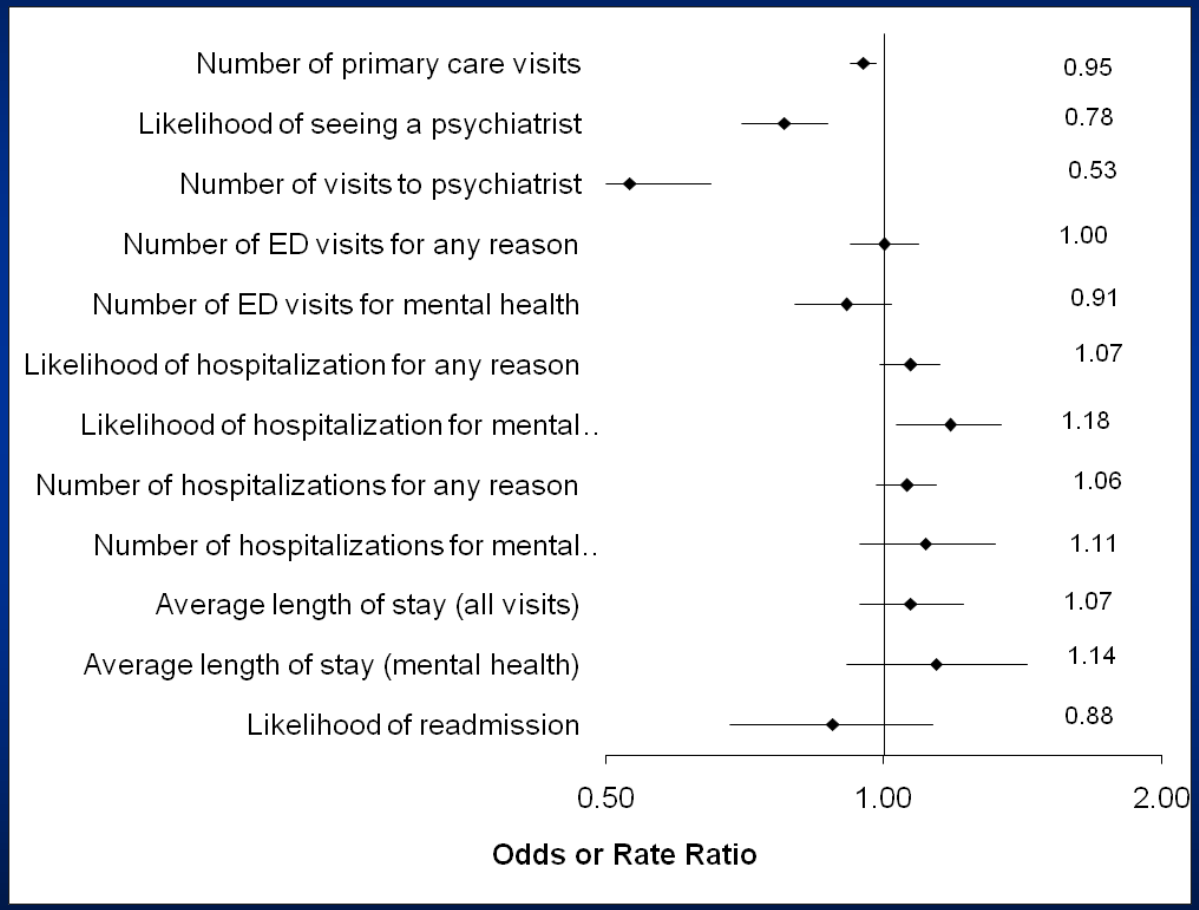
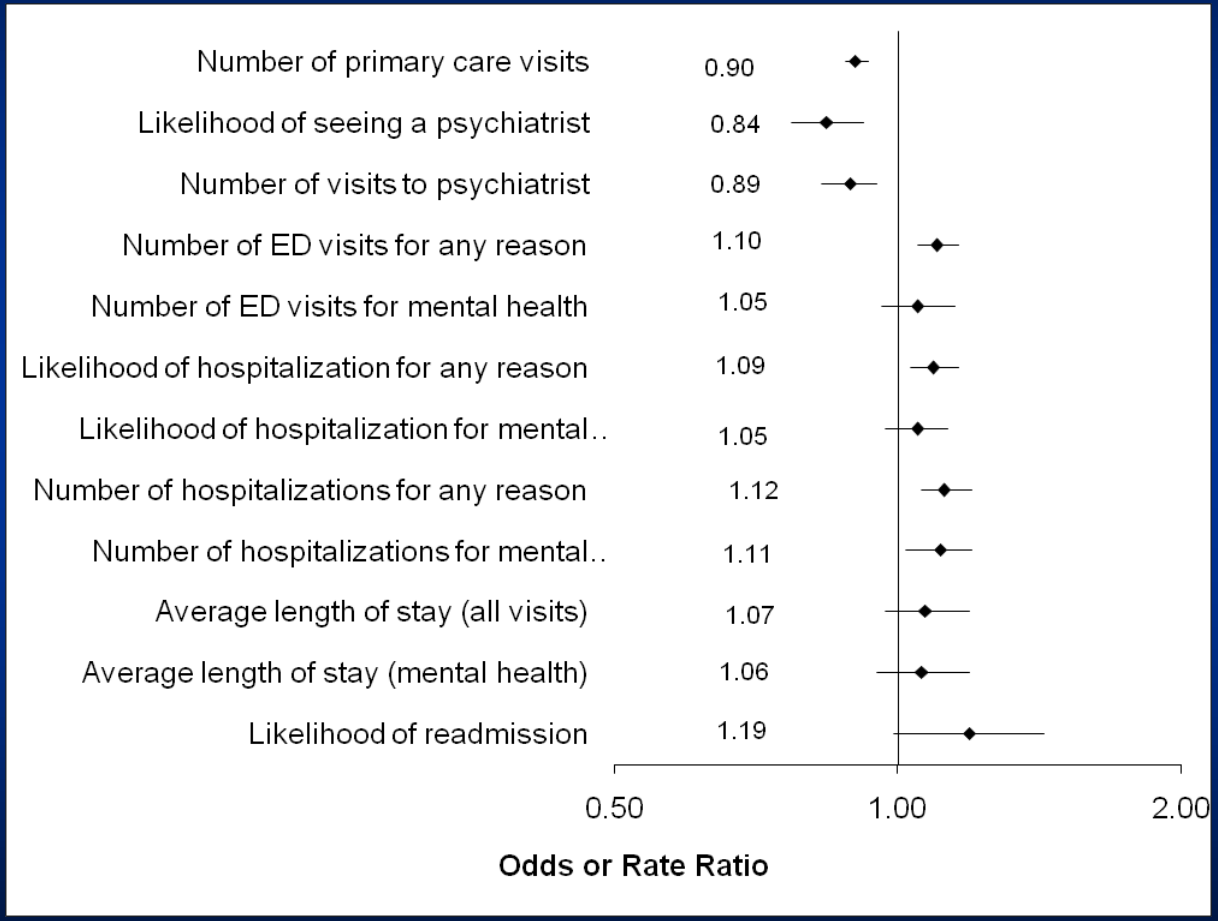
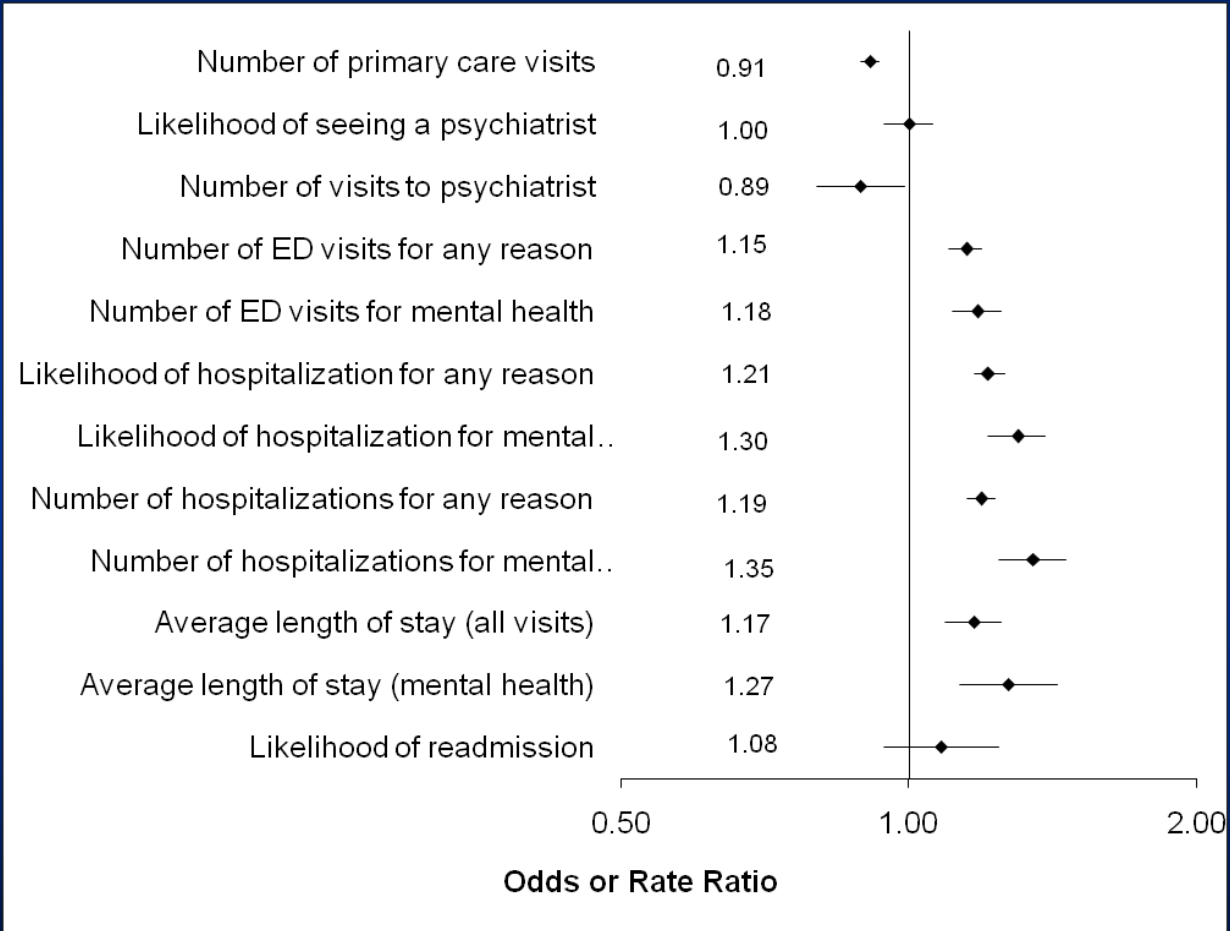


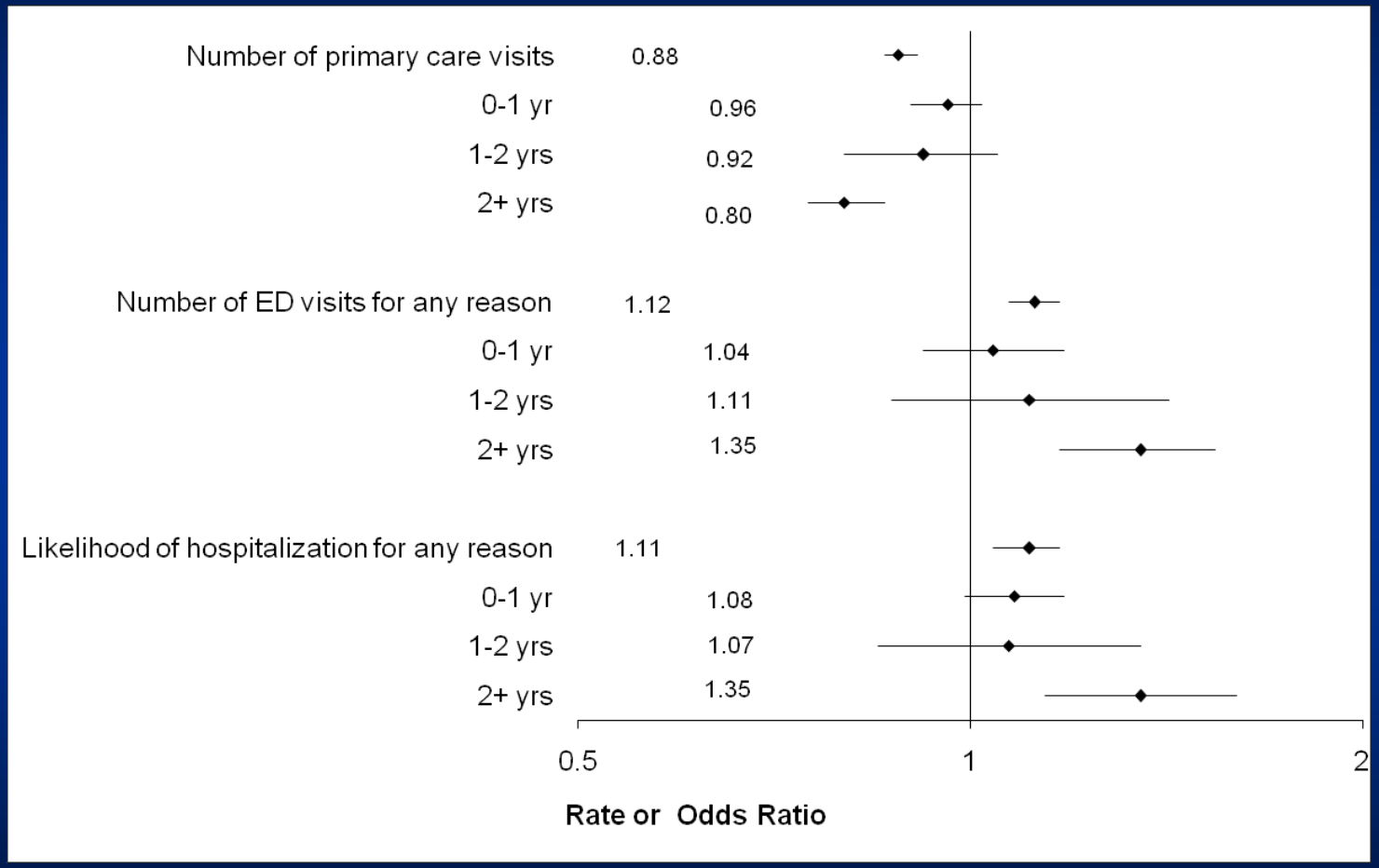
FHTS WITH MENTAL HEALTH WORKERS COMPARED TO ENHANCED FEE-FOR-SERVICE FOR PATIENTS WITH PSYCHOTIC/BIPOLAR DISORDER



FHTS WITH MENTAL HEALTH WORKERS COMPARED TO ENHANCED FEE-FOR-SERVICE FOR PATIENTS WITH OTHER MENTAL ILLNESS

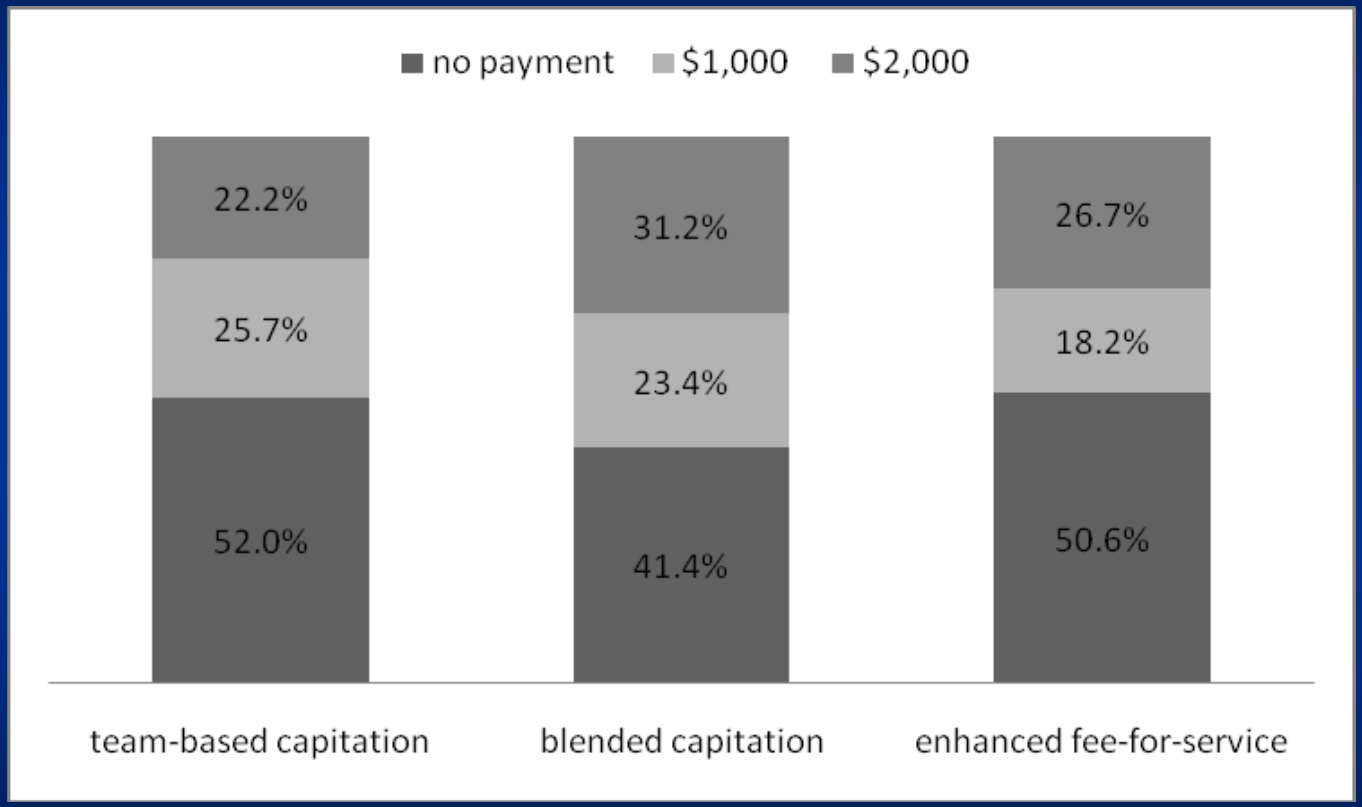


Explained by time in model? No.
Psychotic/Bipolar: Team-based vs Blended Cap

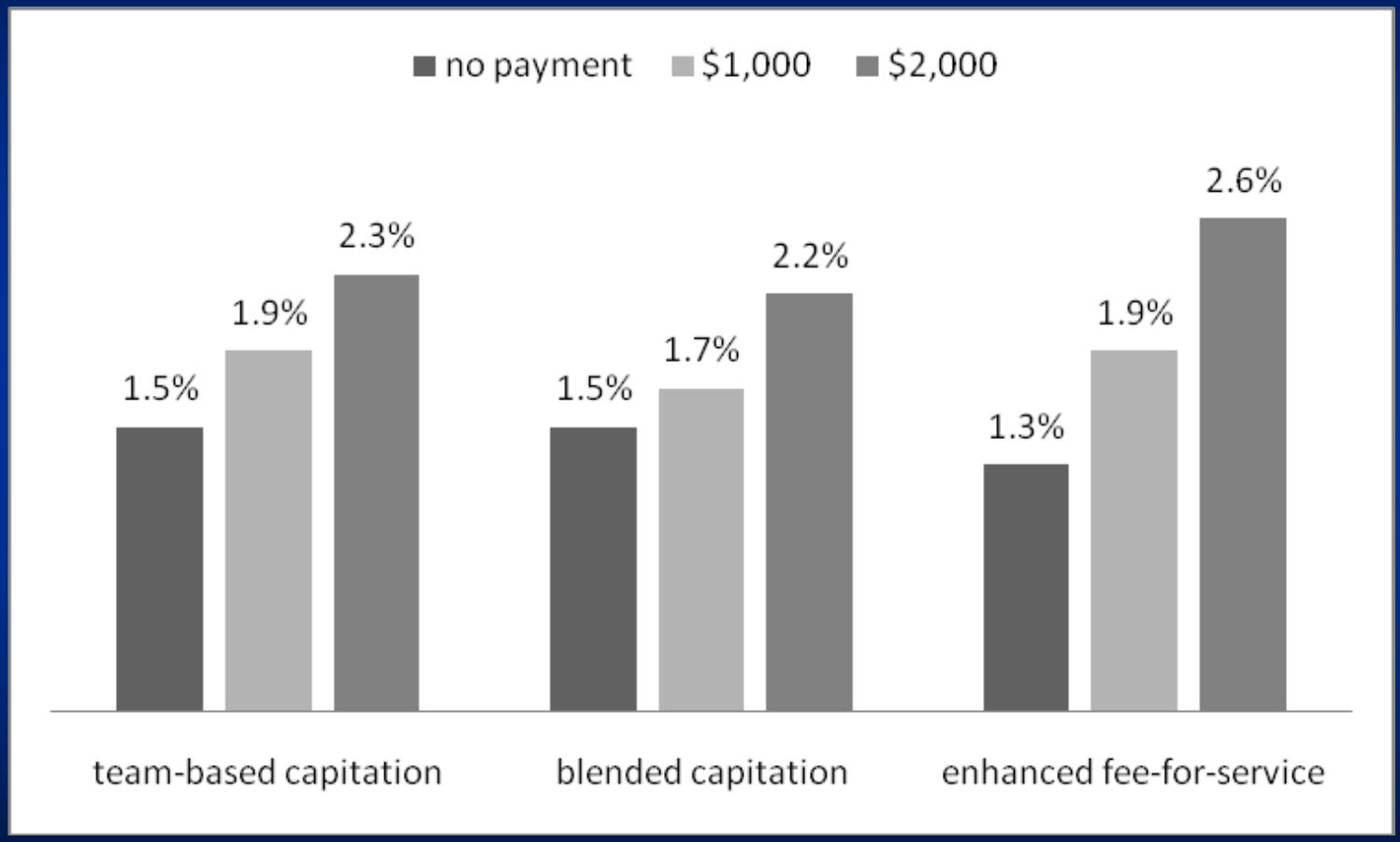


FINANCIAL INCENTIVES

PERCENTAGE OF PHYSICIANS WHO RECEIVED INCENTIVE PAYMENTS FOR ENROLLING PATIENTS WITH SERIOUS MENTAL ILLNESS BY AMOUNT OF PAYMENT AND ENROLLMENT MODEL TYPE



PREVALENCE OF PSYCHOSIS/BIPOLAR DISORDER BY ENROLLMENT MODEL TYPE AND RECEIPT OF INCENTIVES



DEROSTERING

De-rostering

- Patients in capitation models were about 10 times more likely to be de-rostered than patients in enhanced fee-for-service models
- Patients in capitation models who had more than 10 visits annually were 17 times more likely to be de-rostered than patients with 10+ visits in enhanced fee-for-service models.
- Likelihood of de-rostering:
  - psychosis/bipolar disorder : TBC =1.6%, CAP=1.7%
  - other mental illness : TBC & CAP= 1.2%
  - Hypertension : TBC & CAP =0.9%
  - Diabetes : TBC & CAP= 0.7%

Limitations

- Only 10% of claims were paid in the capitation models (shadow billing).
- Lower numbers of primary care visits may be attributable either to actual differences in service provision or to under-documentation of services by capitation physicians.
- Estimates of differences in the prevalence of mental illness between enrollment model types could be biased since our mental health groups were defined using physician claims.

Implications

- If incentive payments are insufficient to offset the financial cost of rostering patients with mental illness for physicians in capitation models.
  - higher payment amounts?
  - different incentives for enrolment and care of these patients
  - case-mix adjustment calculation to physician remuneration.

Implications

- Is quality of mental health care reduced when physician-patient contact is reduced?
  - limitations of our study design prevent us from drawing conclusions about a causal relationship between capitation and a lower quality of care for mental illness (not sure of which is cause/effect, or appropriateness of ER visits)

Implications

- the services provided by mental health professionals may be offsetting physician-provided services.
  - Cannot ascertain a causal relationship
  - Cannot ascertain the appropriateness of ED visits and hospitalization .

Future directions

- Need a longitudinal cohort approach to track health care use in association with model transitions over time.
- A study that includes the use of the "virtual roster", while complex, will allow us to draw conclusions about the effect of model membership on patient and physician behaviour with greater confidence.