

Brown & Toland Physicians' **Reducing Inappropriate** **Variation in Care:** **Three Creative Approaches**

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2009 IHA Pay For Performance Stakeholders conference



Brown & Toland Physicians (BTP) Company Description

- Brown & Toland is a comprehensive, multi-specialty independent practice association (IPA) serving the residents of San Francisco and the Bay Area.
- Seven health plans (Commercial & Senior HMOs)
- 168,000 members



Program Objectives

- To identify patients at high risk for readmission and enrollment into Disease Management or Complex Case Management Programs
- To decrease readmissions
- To improve outpatient care with primary care physician
- Reduce Emergency Room visits for high risk patients
- Assess current health status of the member

The Programs

- ER Frequent Flyer Program
- Discharge Follow-up Program
- Intensive Home Medical Management

ER Frequent Flyer Program Description

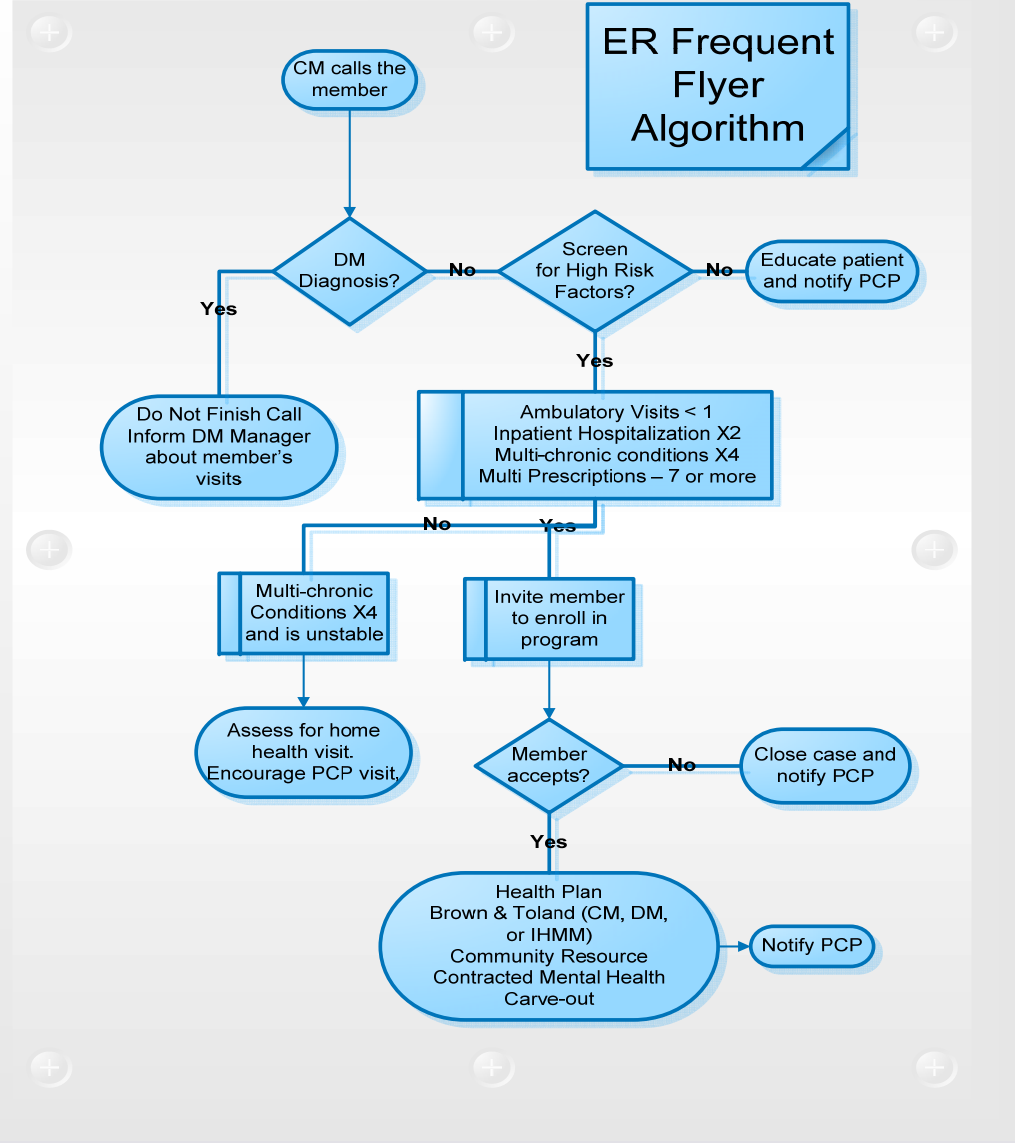
- Case Managers call patients with more than two visits to emergency departments within a six month period to assess:
 - Need of Brown & Toland's Case Management Program or Disease Management Programs (HIV, Asthma, CHF, or Diabetes)
 - Need of further education regarding accessing their PCP timely
 - Further notification to PCP when issues are identified
 - To assess current health status of member



ER FF Sample Questions

- Can you tell me why you went to the Emergency Department?
- When was the last time you saw your PCP?
- Do you have problems making an appointment with your PCP?
- Do you need help scheduling an appointment?

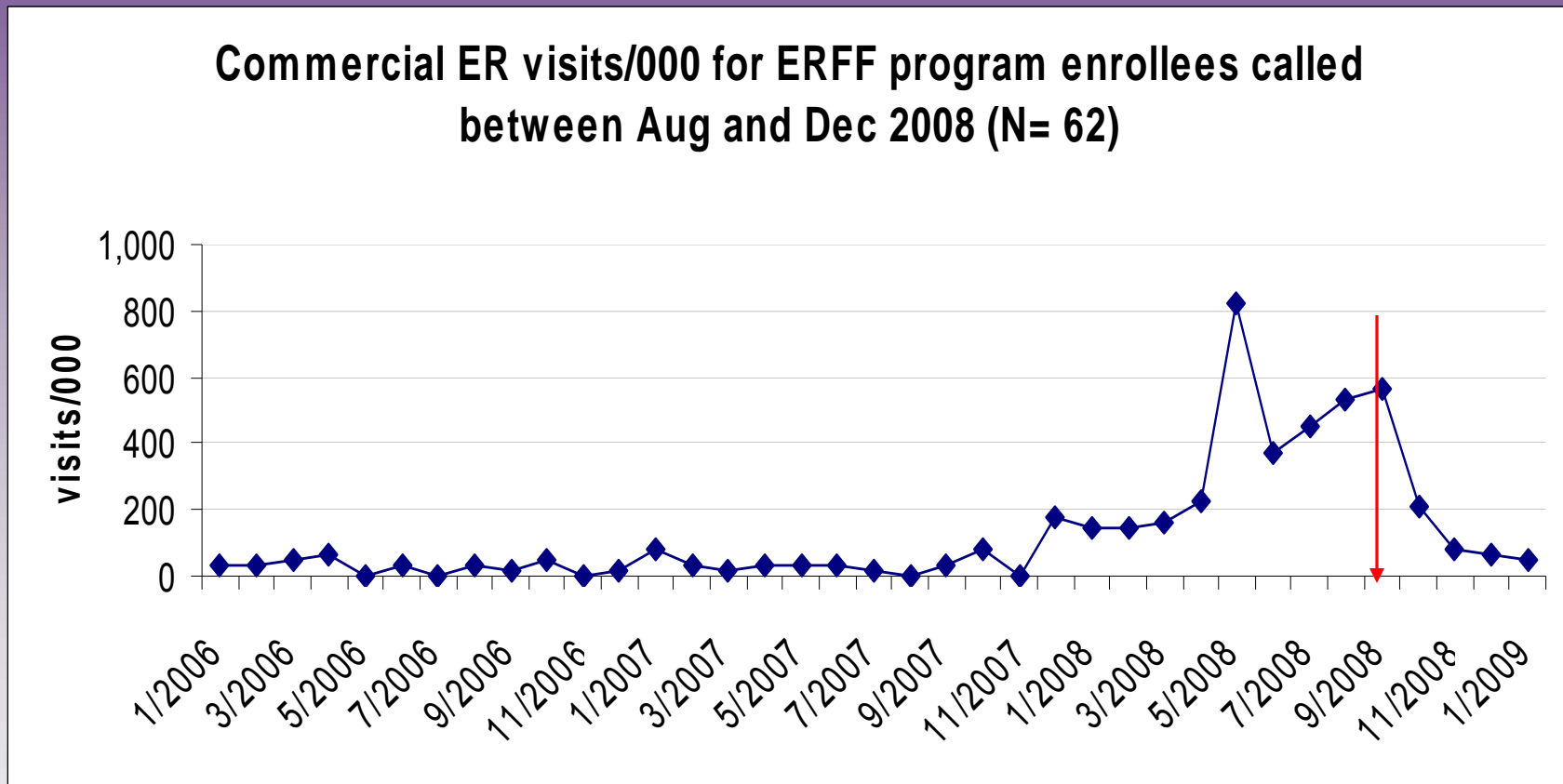
ER Frequent Flyer Algorithm



ER FF Interventions

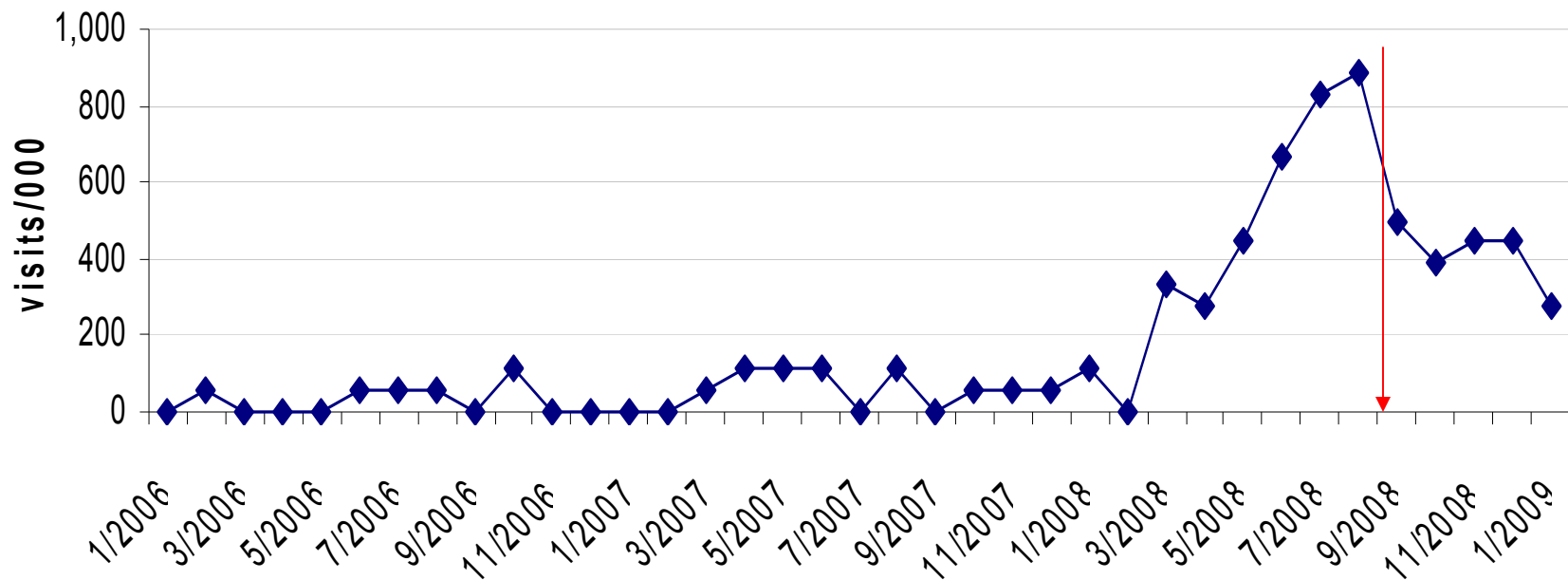
- Medication management
- Referrals to specialist
- Education on how to access PCP
- Encourage use of urgent care resources
- Enroll patients into programs: Case Management/Disease Management/Intensive Home Medical Management

ER Visits of Comm. ERFF Enrollees



ER Visits of Sr. ERFF Enrollees

Senior ER visits/000 for ERFF program enrollees called between Aug and Dec 2008 (N=17)



Summary ER FF

- Identify high-risk members
- ER visits are trending down for this group
- Redirection of patient care to more appropriate setting
- Not developed to address overall ER usage
- Targeted as a Case Management intervention
- Predictive Modeling to improve targeting
- New intervention to be implemented: patient education letter sent to members without a survey
- Collaborate with Quality Improvement on physician outliers with access issues.

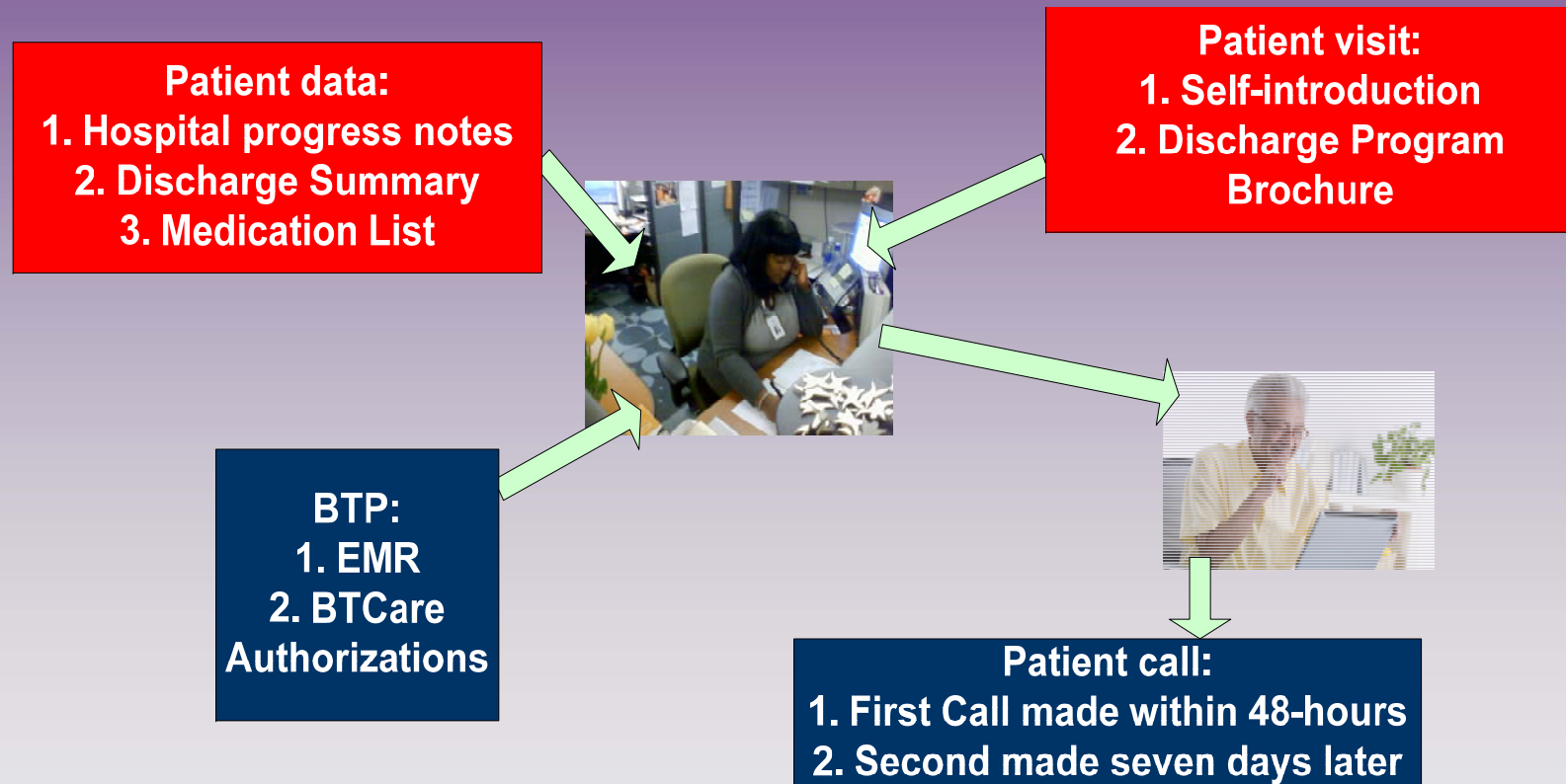
Limitations

- Regression to the mean
- No risk adjusted comparison group
- Small sample size
- Lack of urgent care centers as alternative to the ER

Discharge Follow-up Program Description

BTP Case Managers contact senior members upon discharge home from hospital or SNF to ensure coordination and continuity of health care as patients transfer between different levels of care.

Discharge Follow-up: Workflow



D/C Follow-up Sample Survey Questions

- Were you given and do you understand your hospital discharge instructions?
- Did you get your prescription(s) filled after you left the hospital? Are you still taking those medication(s)?
- Do you have a follow up appointment with your physician?
- Did you receive any medical equipment? Did you receive any home health services?

Senior Discharge Follow-up Program Analysis Methodology

- Study population: patients who received at least one follow-up call (if within 3 days of D/C)
- Intervention Date = date the first follow-up call was made
- Analysis period: 6 months pre/post intervention date (enrollees must have B&T eligibility throughout analysis period)
- Outcomes evaluated: Readmissions, ER utilization, Outpatient follow-up

Discharge Follow-up Program Population Characteristics

	Facility A	Facility B	Total
# UM*	138	72	210
Avg Age	78	77	78
% male	47%	46%	47%
Avg time to DCFU call (days)	3	3	3
Avg Risk**	6.2	5.8	6.1

*Unique Members

**Represents the morbidity burden derived from the Johns Hopkins ACG® Risk Adjustment System



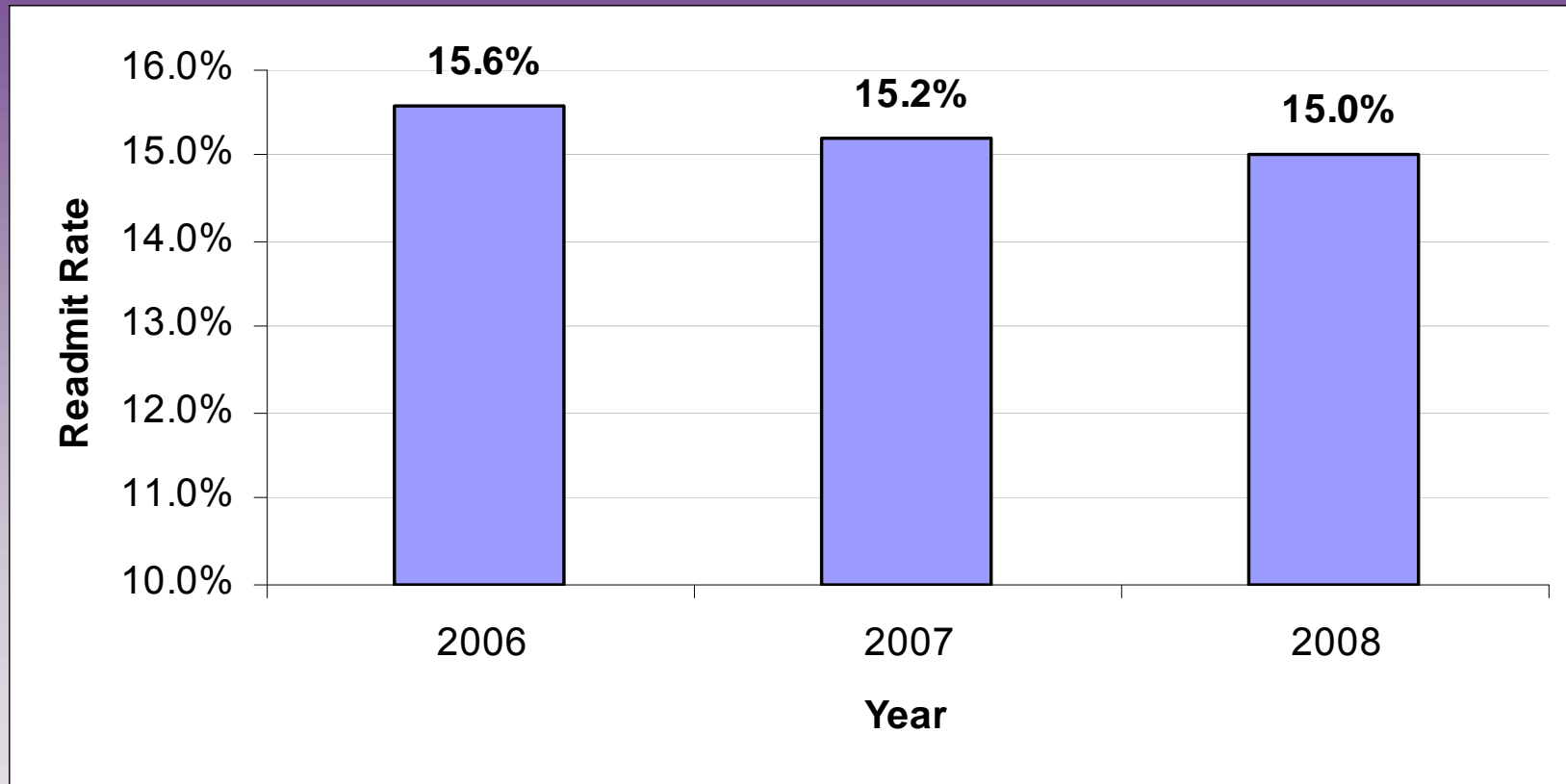
Discharge Follow-up Interventions (April 2008 – March 2009)

Total Patients surveyed: 539

- Follow-up appointment issues: 14%
- Outpatient follow-up issues: 12%
- Medication issues: 8%
- Discharge instruction issues: 6%
- Case Management/Disease Management referrals: 11%



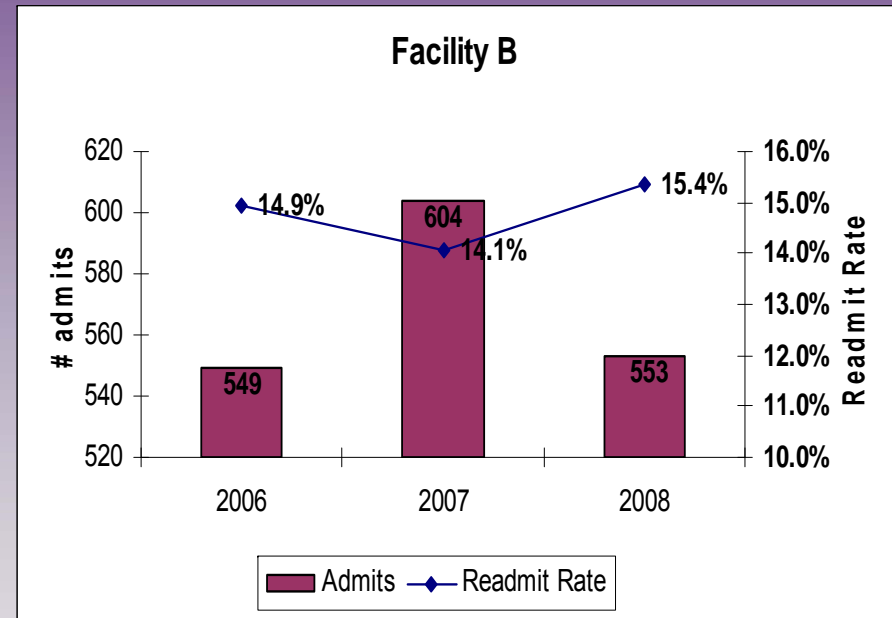
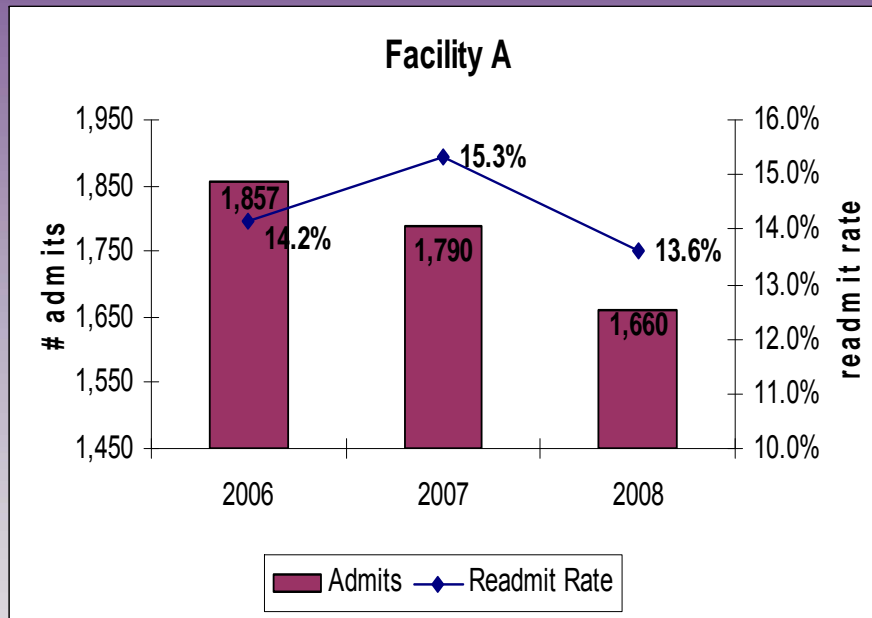
Overall B&T Senior Readmit Rate*



*Readmits are attributed to the facility where the readmit occurred

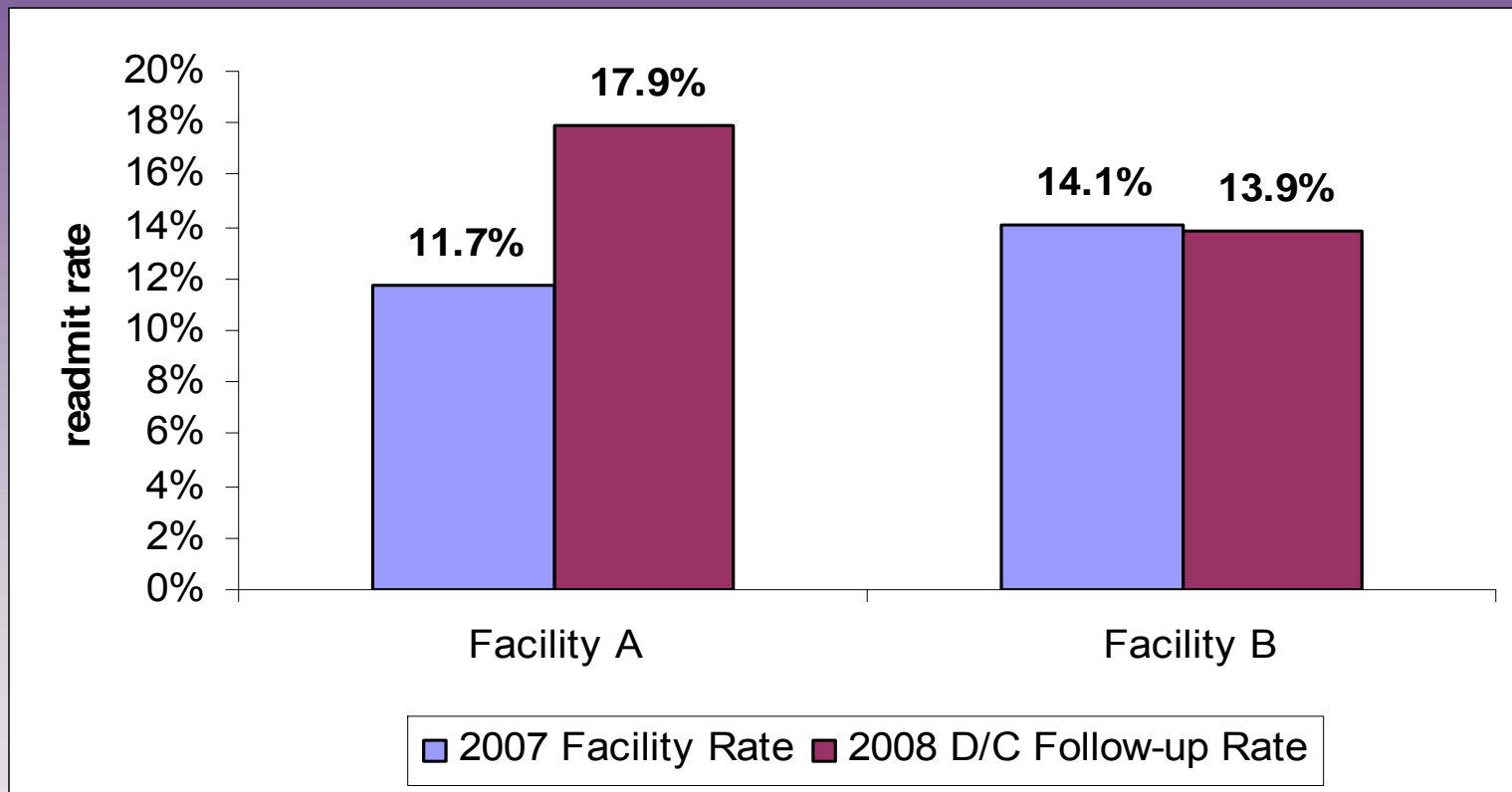


Non-Study B&T Senior Admissions vs. Readmit Rate* by Facility



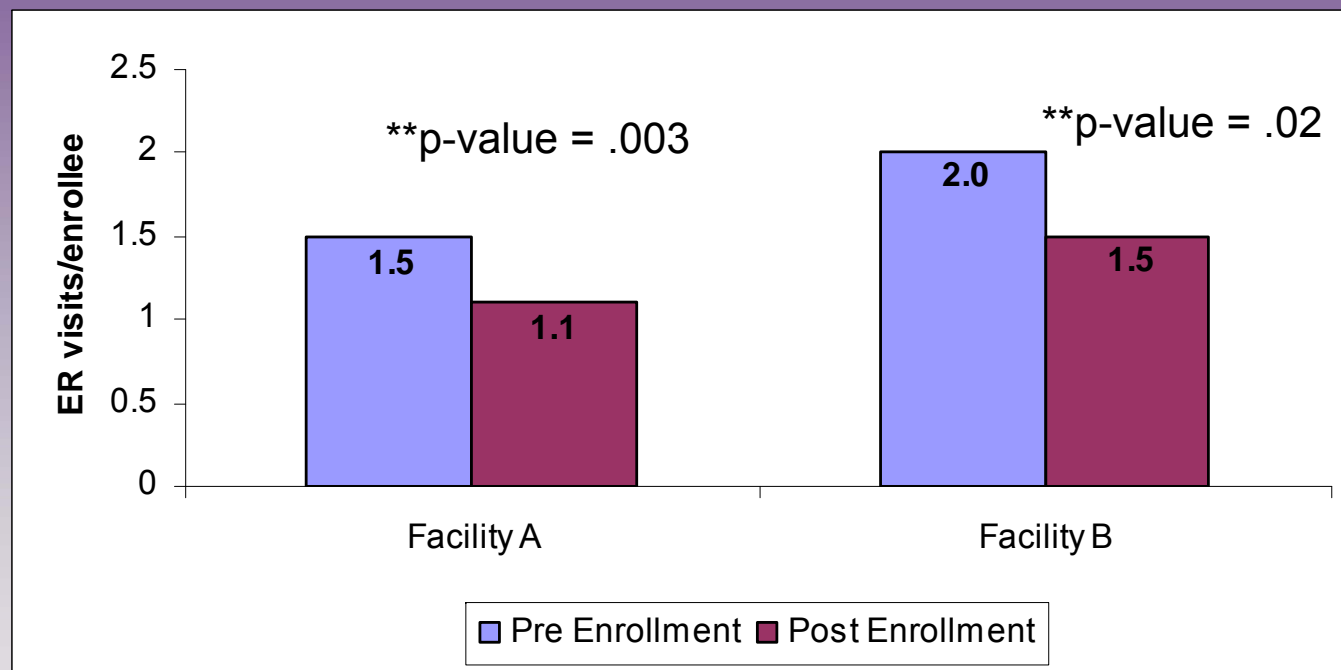
*Readmits are attributed to the facility where the index admit occurred
 The above is pre-enrollment data at the targeted facilities

Readmissions Rate Program Enrollees*



*Readmits are attributed to the facility where the prior admission occurred

Discharge Follow-up Program Impact on ER Utilization of Enrollees*



*Average number of ER visits per program enrollee

**Pre/post analysis performed using paired t-test methodology

Facility A & B Outpatient Follow-up Post Discharge Impact

	Facility A			Facility B		
	<i>Pre Enrollment</i>	<i>Post Enrollment</i>	<i>p-value</i>	<i>Pre Enrollment</i>	<i>Post Enrollment</i>	<i>p-value</i>
Average time to follow-up (days)	11.3	3.1	<.0001	11.6	3.0	<.0001
Median time to follow-up (days)	10.0	3.0		10.5	3.0	
% of admits with follow-up w/in 14 days	54%	71%	0.001	55%	86%	<.0001

D/C F/U Summary

- DCFU program had a favorable impact on ER utilization
 - Significant decrease at both facilities
- DCFU program had a favorable impact on the average time to follow-up at both facilities
 - Significant decrease in the average time to OP follow-up post D/C
 - Increased appointments occurred prior to day 15
- Impact on readmissions was not statistically significant. Minimal impact on readmits
- Implementation of readmission notification letter to PCP for 31 day readmissions.

Limitations

- Regression to the mean
- No risk adjusted comparison group
- All readmissions were analyzed
- Patients with cognitive impairments and/or limitations were included

Change Management

- Include all stake holders
- Incorporate feedback from the beginning
- Pilot program with small group
- Provide strong leadership to implement change process
- Develop competency of team members
- Develop champions for the cause
- Reward/Celebrate successes

Future Steps

- Analyze readmissions in more detail
- Identify target groups for more intense intervention

IHMM: History of Program

- 2005: Originally started as vendor program called Care Level Management
- May 2008: Bankruptcy of CLM
- 2008/2009: In aftermath, Brown & Toland with Health Net's financial assistance created Intensive Home Medical Management (IHMM) from failure of CLM



IHMM Criteria

- Must be a Health Net Senior member
- Access to care issues: homebound, bed bound, or insufficient access to PCP
- Has an advanced illness and not enrolled in hospice
- Hospital discharge requiring transitional care by home visiting physician
- PCP must agree with the referral



Components of Program

- Physician provides in-home care
- Physician directed in-home ancillary services such as lab, radiology, and home health
- Brown & Toland Case Managers provide telephonic care coordination support
- Brown & Toland Medical Director oversight

Intensive Home Management Pre/Post Methodology

- Enrollment requirements:
 - Homebound, Health Net senior
 - CLM enrollment date range: 1/1/06 - 1/1/08
 - ≥ 1 year of CLM enrollment
 - ≥ 1 year of B&T enrollment pre CLM enrollment
 - ≥ 1 year of B&T enrollment post CLM enrollment
 - Not deceased within 3 year analysis period
- Outcomes evaluated: Acute IP admits, ER visits, ALOS, Acute days

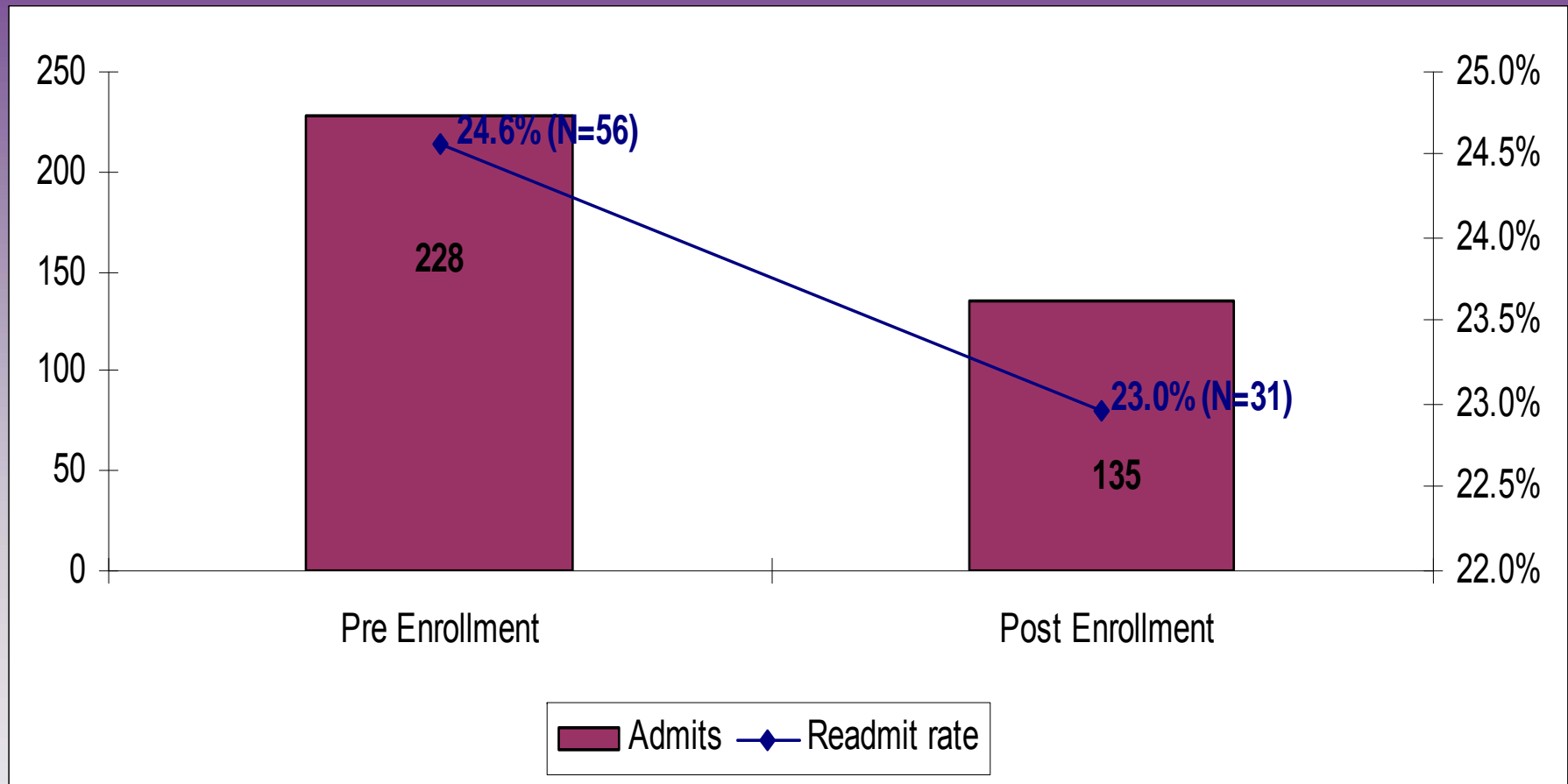
Population Characteristics

	<i>IHMM Participants</i>	<i>B&T Seniors*</i>
N	129	11,170
Average Age	82.9	76.4
% male	40.0	38.4
Avg ACG Risk Score	8.9	3.4

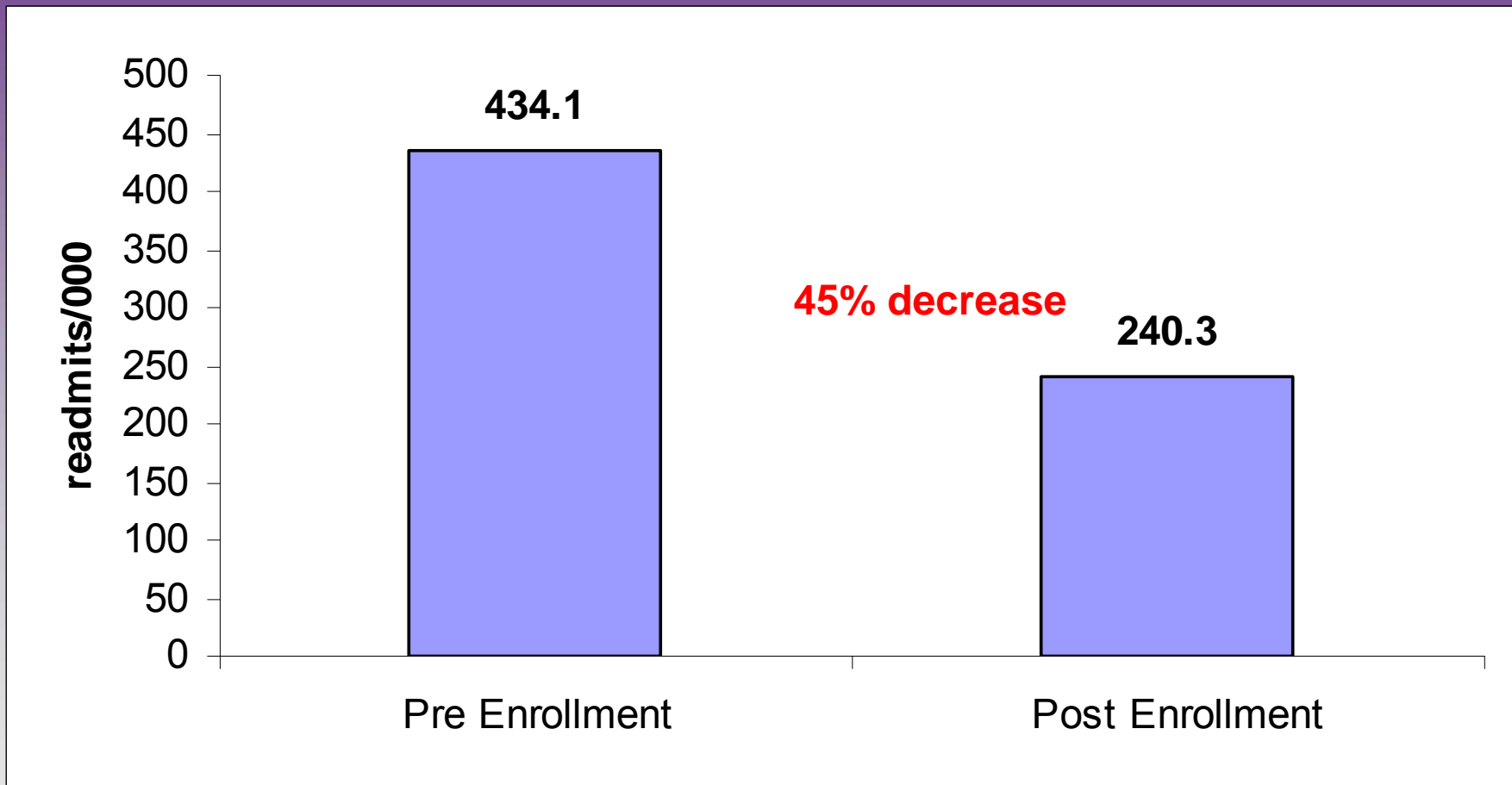


*Avg for B&T seniors over study period

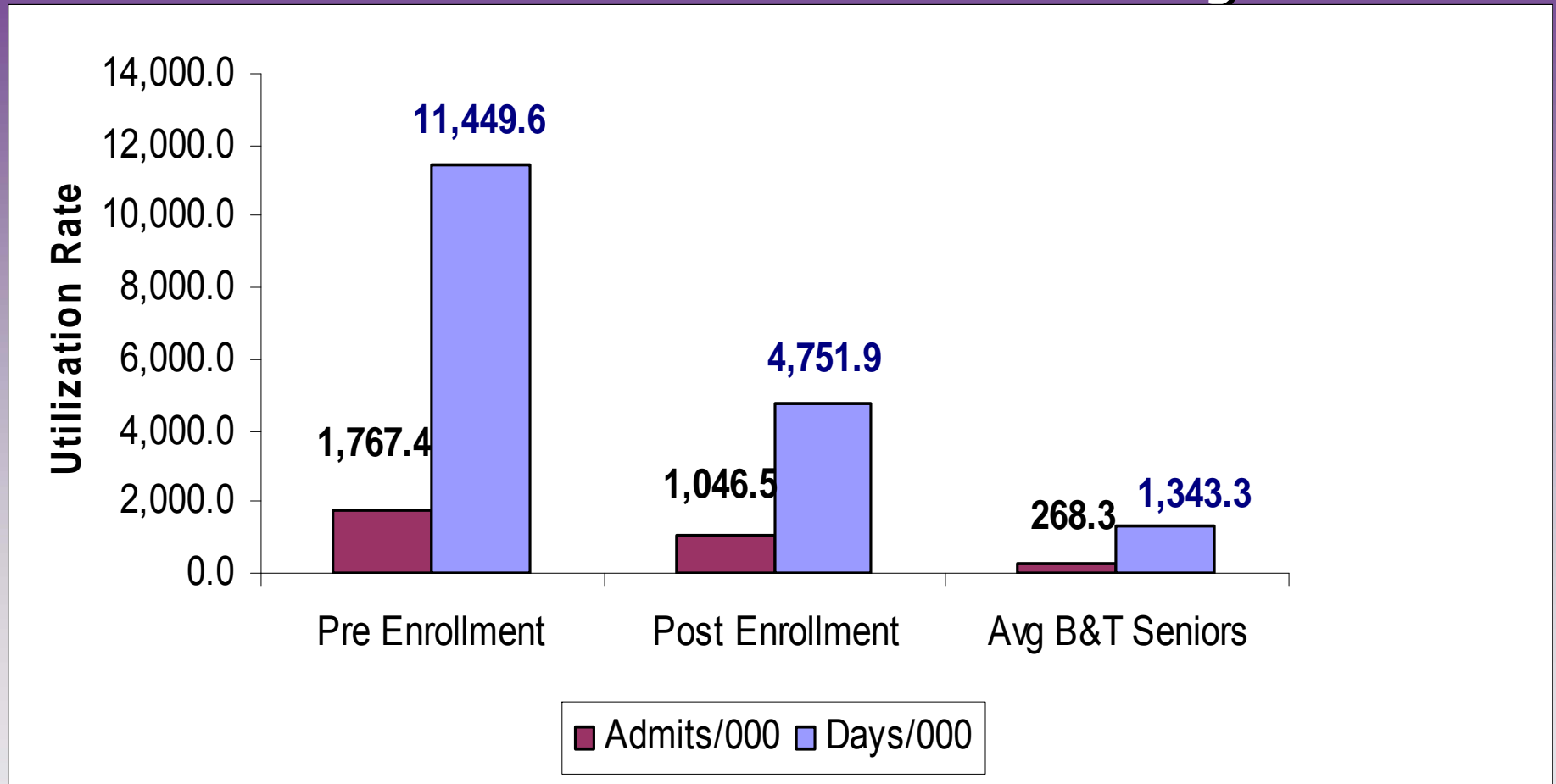
Admissions vs. Readmission %



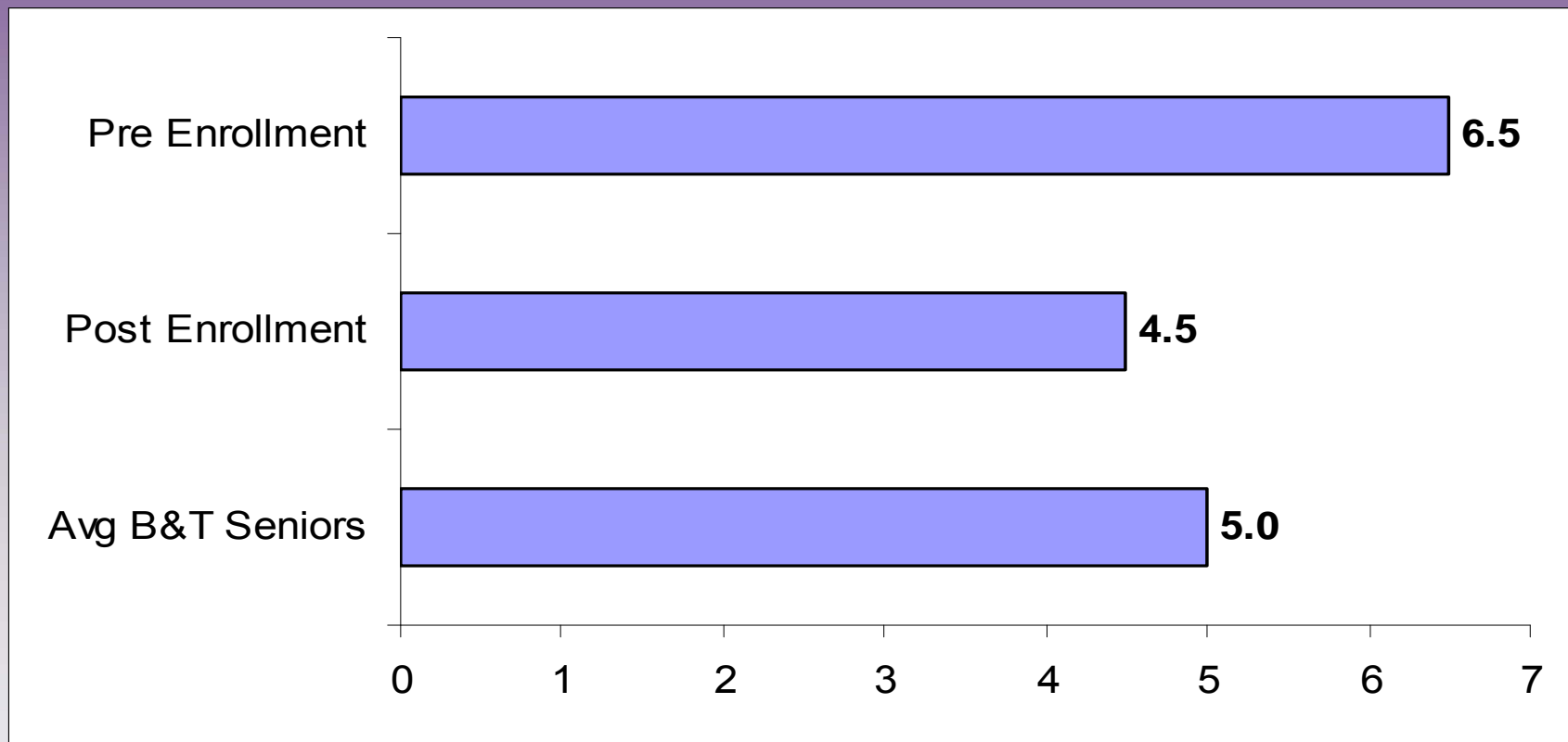
Readmission Rate



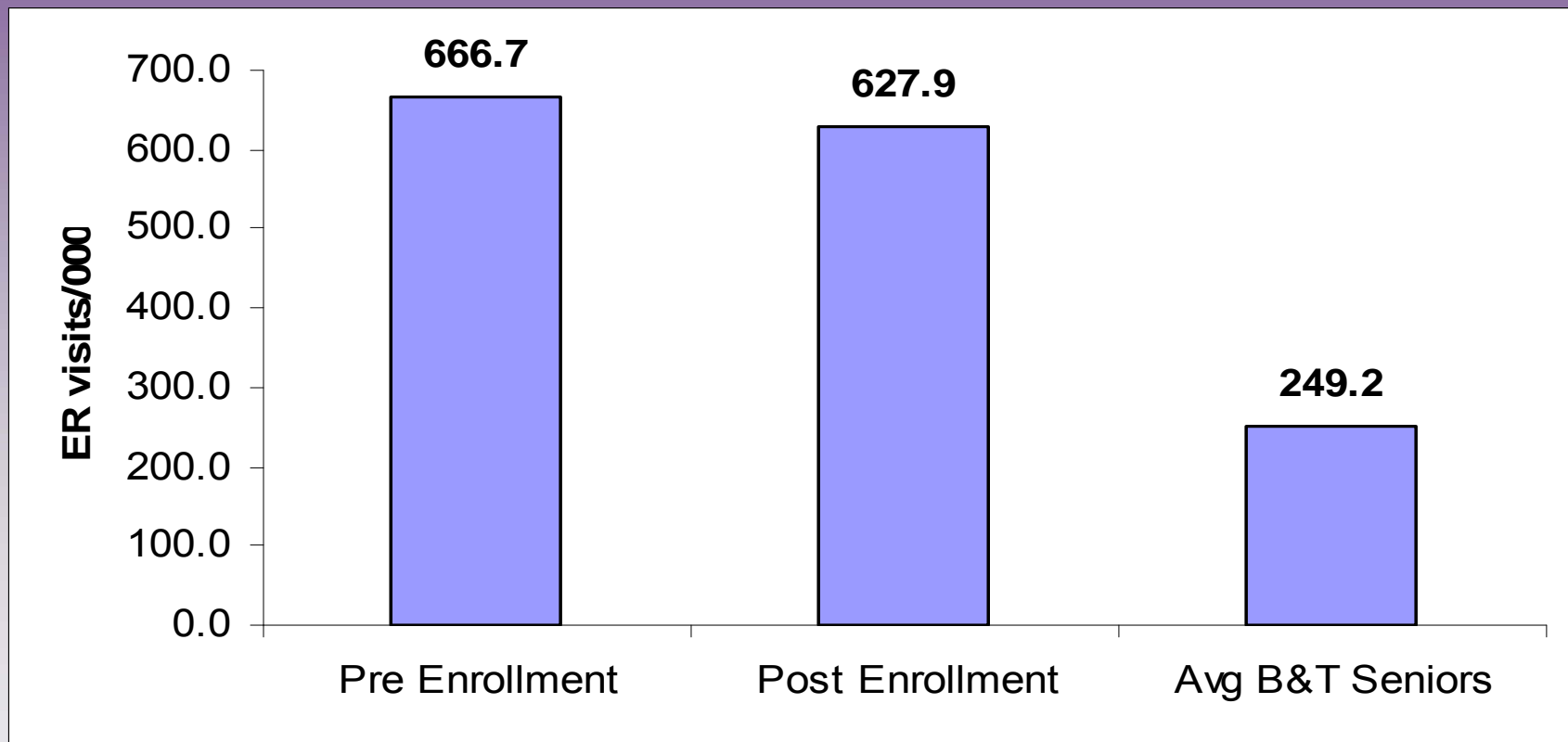
Admissions and Bed Days



Average Length of Stay



ER Utilization



Pre/Post CLM Enrollment Statistical Analysis*

Utilization Outcome	Confidence Interval	p-value
<i>Admits</i>	<i>(-1.08, -0.37)</i>	<i><.0001</i>
<i>Readmits</i>	<i>(-0.37, -0.02)</i>	<i>0.03</i>
<i>Bed Days</i>	<i>(-9.71, -3.68)</i>	<i><.0001</i>
<i>ALOS</i>	<i>(-3.6, -2.0)</i>	<i><.0001</i>
ER Visits	(-0.17, 0.25)	0.72

*Pre/Post analysis was performed using paired t-test methodology



Summary

- IHMM favorably improves utilization outcomes:
 - Significant decrease in admissions ($p < .0001$)
 - Significant decrease in readmissions ($p = .03$)
 - Despite negligible impact on readmission %
 - Significant decrease in bed days ($p < .0001$)
 - Significant decrease in ALOS ($p < .0001$)
 - ALOS post program enrollment is below that of B&T average for seniors
- IHMM had nominal effect on ER utilization

Limitations

- Regression to the mean
- No risk adjusted comparison group
- Small sample size
- Programmatic changes during study period

Acknowledgements

- Tuan Hua MD; Lead Physician, IHMM
- Jill Jardine; Analyst
- Linda Johnson RN, BSN, MHA