

Medicaid Integrated Care Management and ROI

AcademyHealth Research Meeting

June 4, 2007

Peter J. Fagan PhD

Supported by a grant from the Center for Health Care Strategies
through a Grant from the Robert Wood Johnson Foundation



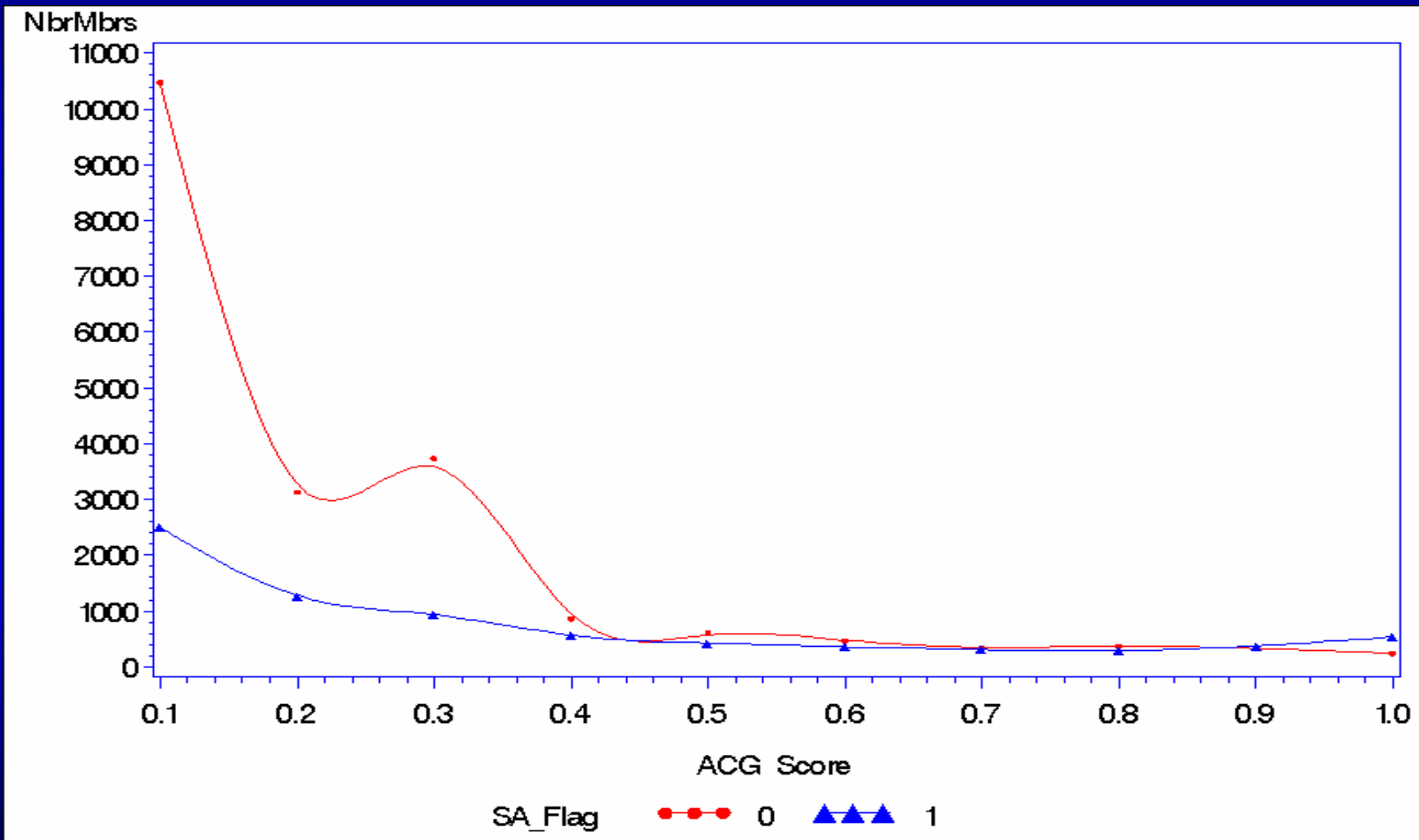
Co-investigators

- **Linda Dunbar, PhD**
- **Martha Sylvia, RN, MSN, MBA**
- **Michelle Hawkins, RN, MSN, MBA, CCM**
 - Johns Hopkins HealthCare LLC
 - Care Management Department
- **Kenneth Stoller, M.D.**
 - Johns Hopkins School of Medicine
 - Department of Psychiatry and Behavioral Sciences
- **Michael Griswold, PhD**
 - Johns Hopkins Bloomberg School of Public Health
 - Department of Biostatistics

Thanks to our CHCS Team

- Roxanne Batterden
- Wondella Brooks
- Peggy Buresh
- Donald Claxton
- Sherrie Cohen
- Liz Ferrugia
- Howard Garber
- Sheree Gordon
- Alan Grant
- Erica Jones
- Micki Jones
- Suzanne Kerpetenoglu
- Janet Koelsch
- Valerie Kirkland
- Cristina Lawrence
- Marlana Neumann
- Sarah Newsome
- Paula Norman
- Sallie Paige
- Martin Raffel
- Joanne Rease
- Laurie Russell
- Dave Wagner

Morbidity and Substance Abuse in PPMCO

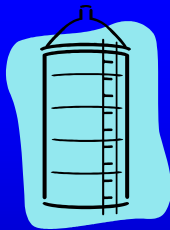


Project goals for Medicaid Plan

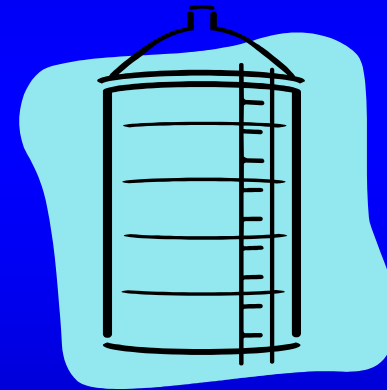
- Facilitate access of enrollees with high risk medical and history of substance abuse into SA treatment and promote retention in program
- Enroll the participants in appropriate Disease Management (DM) or Case Management (CM) program
- Track start-up and operational expenses of care management initiative

Challenges to reaching goal

- Case-finding challenge: Given limited care management and outreach resources, which substance abusing members should be targeted? 400 maximum with no new hires.
- Culture of silos:



Behavioral



Medical

- Tracking operational expenses: IS + entries

Intervention Group

- N = 400, => 21yrs, living in Baltimore City, Baltimore Co. or Prince Georges Co.
- Substance abuse disorder history
- ACG-PM score => 0.39. Selected highest 16% of possible 2,485.
- Excluded: HIV/AIDS, Pregnancy, End Stage Renal Disease, End of Life because already in specialized DM program and did not want to disrupt current program.

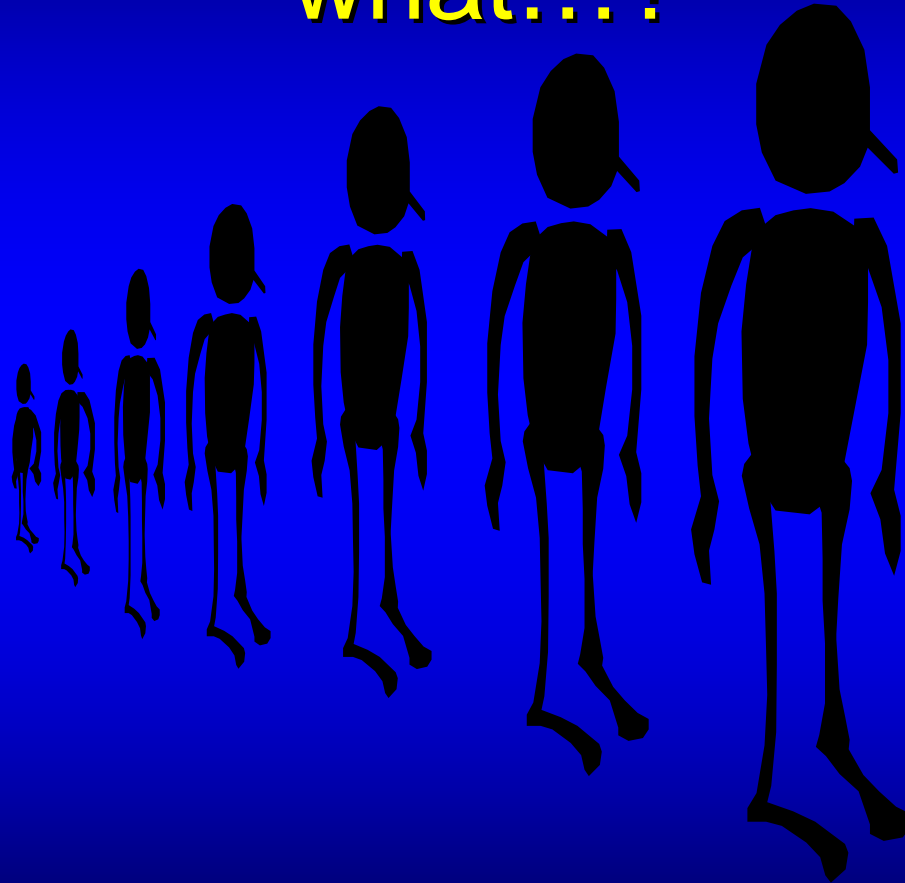
Comparison Group

- N = 203, => 21yrs, living in 12 MD counties excluding Intervention and Eastern Shore counties
- Substance abuse disorder history
- ACG-PM risk score cut-point was the same (=> 0.39) as the Intervention group
- Excluded: same disease management programs as Intervention

Comparison of Groups

	Intervention Group (N=400)	Comparison Group (N=203)
Age	46 (45,47)	46 (45,47)
Gender Female	65% (60,70)	71 (65,77)
ACG score	0.56 (.54,.58)	0.56 (.52,.59)

Targeted population, now what...?



Methods: Quality Enhancement Initiative

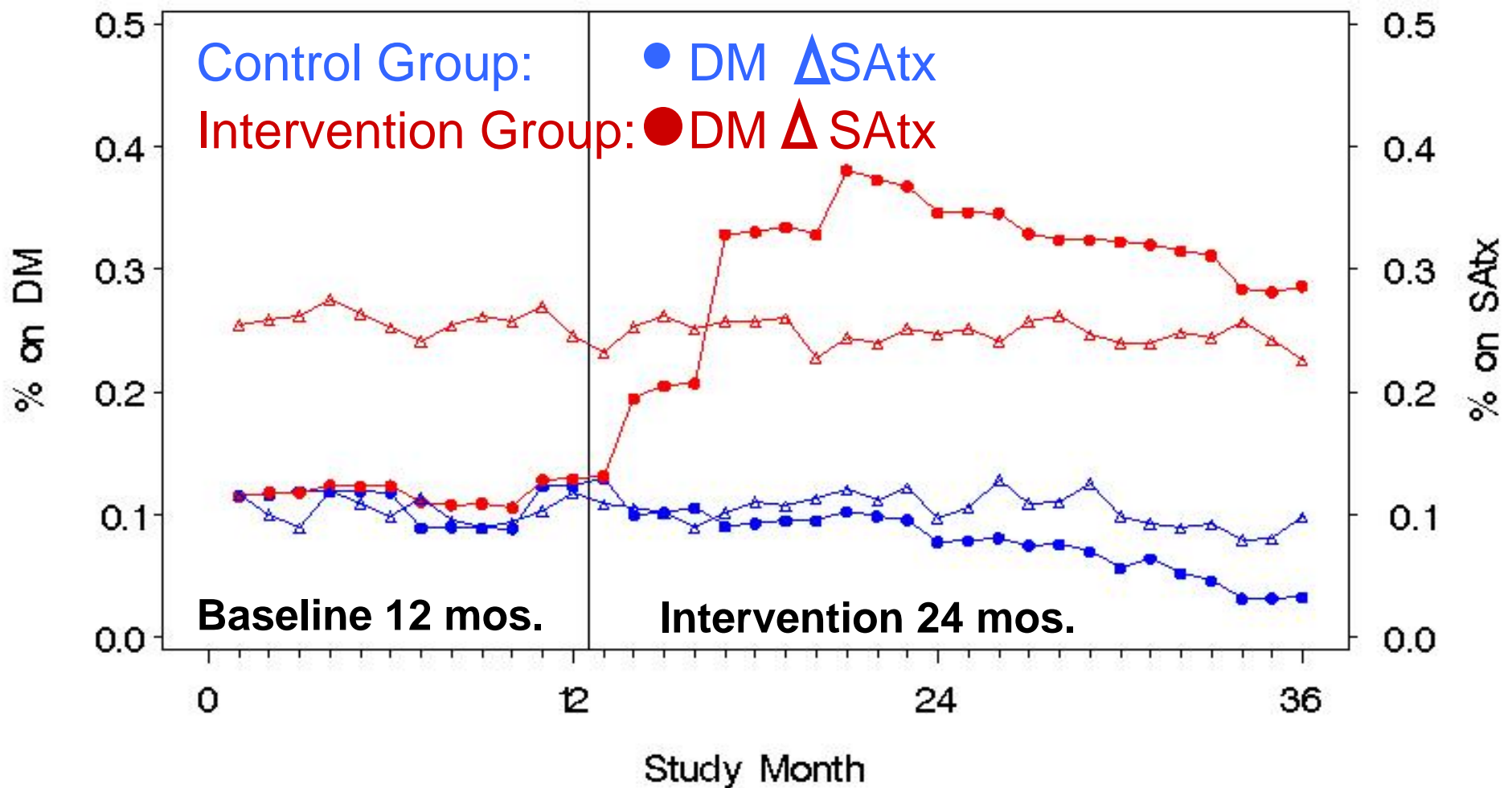
- **Training program** for both medical and substance care managers
- **Unitary point of outreach** and triage for the care management of members
- **Integrated** case/disease management and substance abuse services
- Development of **information systems** to allow read/write access to a patient database shared by all care managers.

Results?

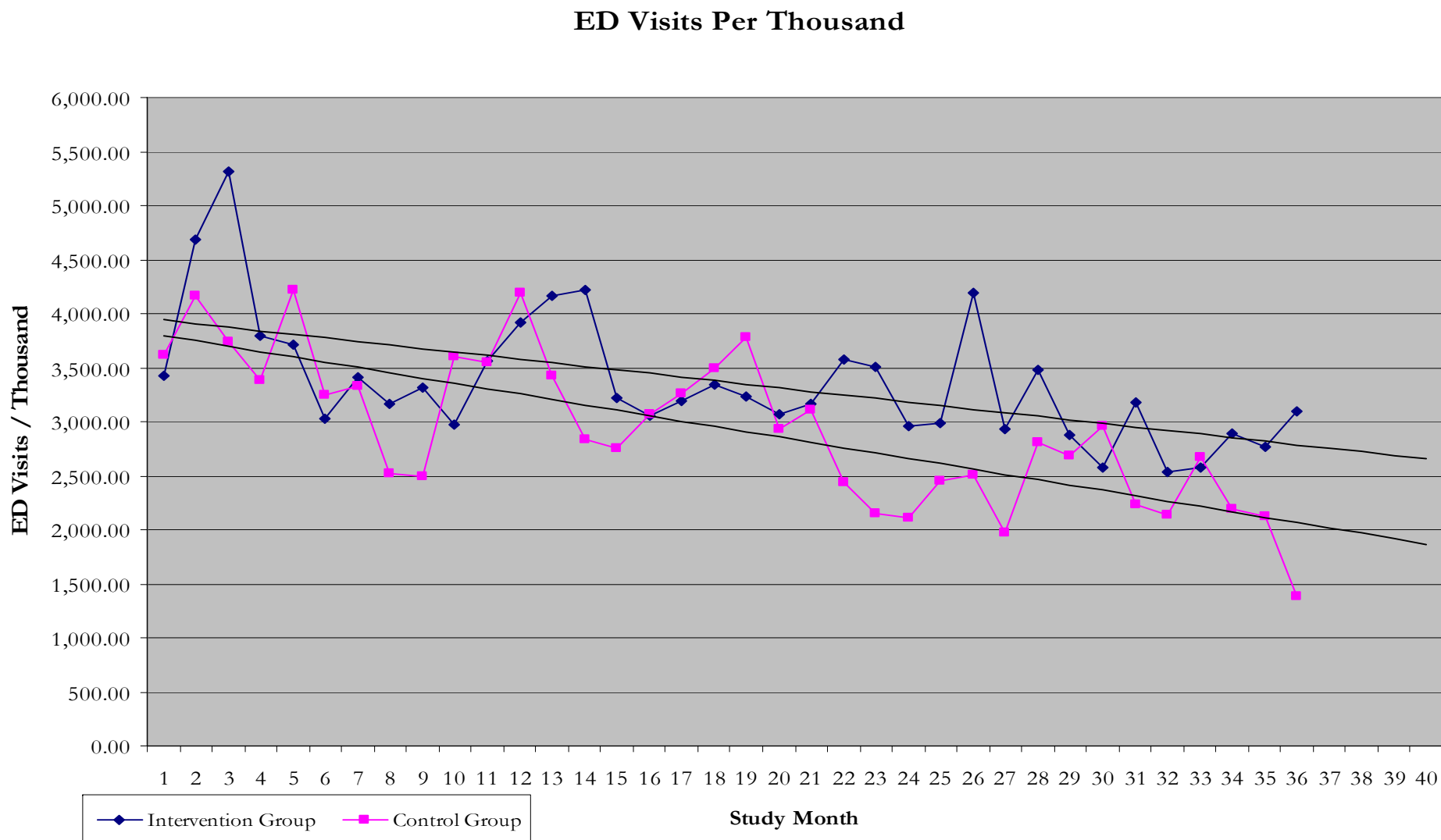


(c) Johns Hopkins HealthCare LLC

Percent of Patients Receiving Disease / Case Management and Substance Abuse Treatment

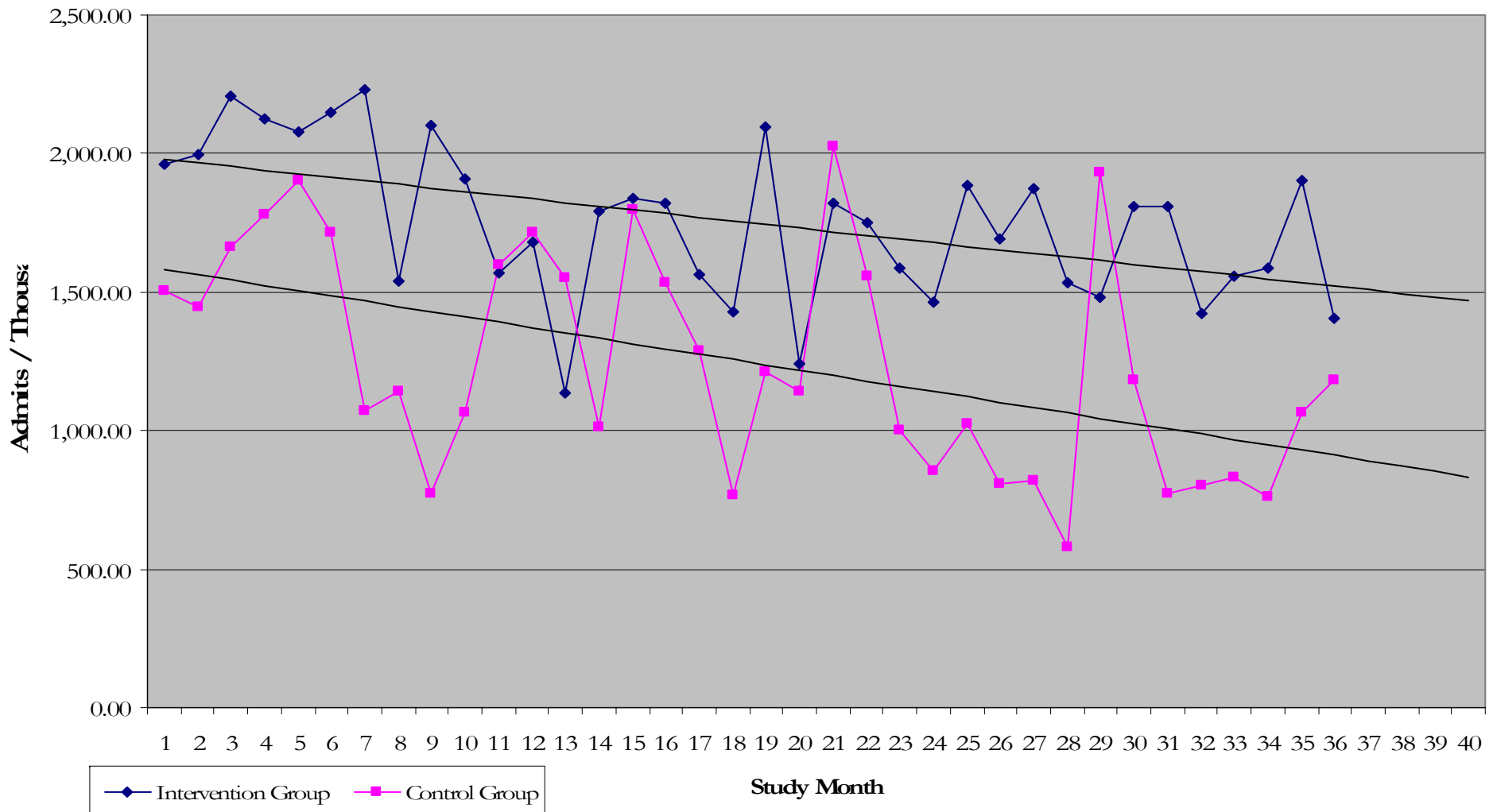


ED Visits Per Thousand by Study Month



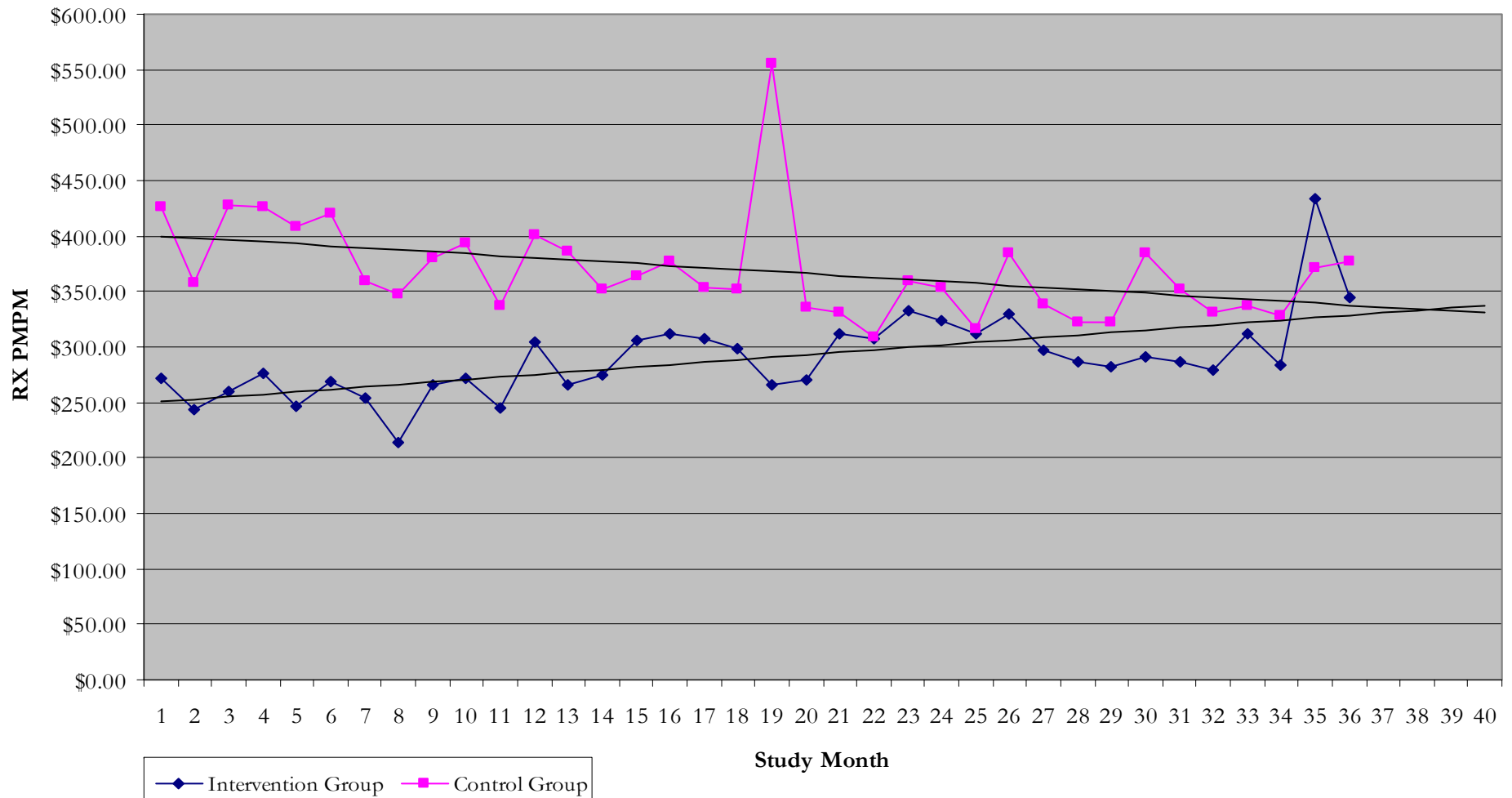
Admissions Per Thousand by Study Month

Admits Per Thousand

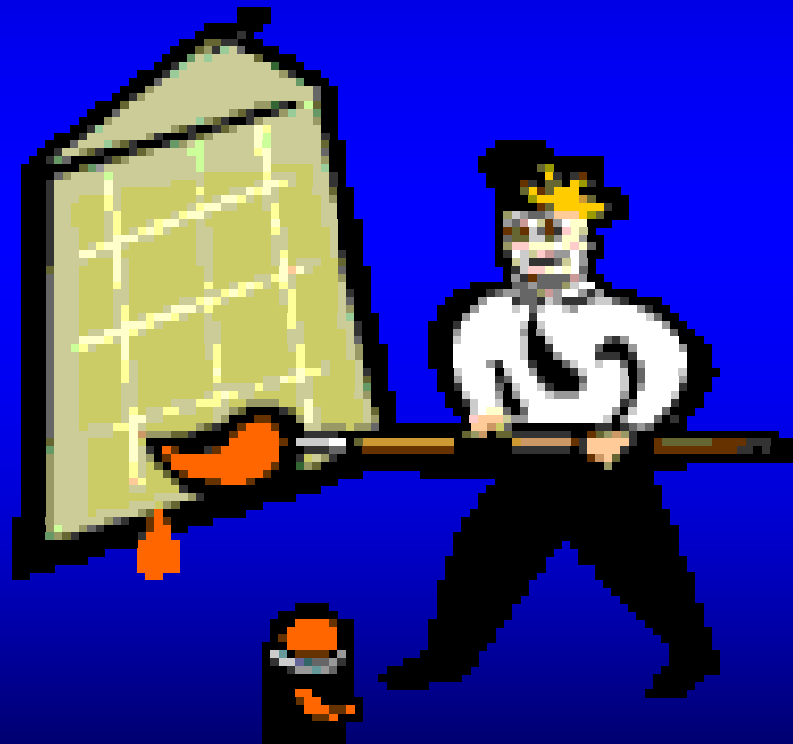


Pharmacy Costs PMPM by Study Month

Pharmacy PMPM



Is there a return on investment?

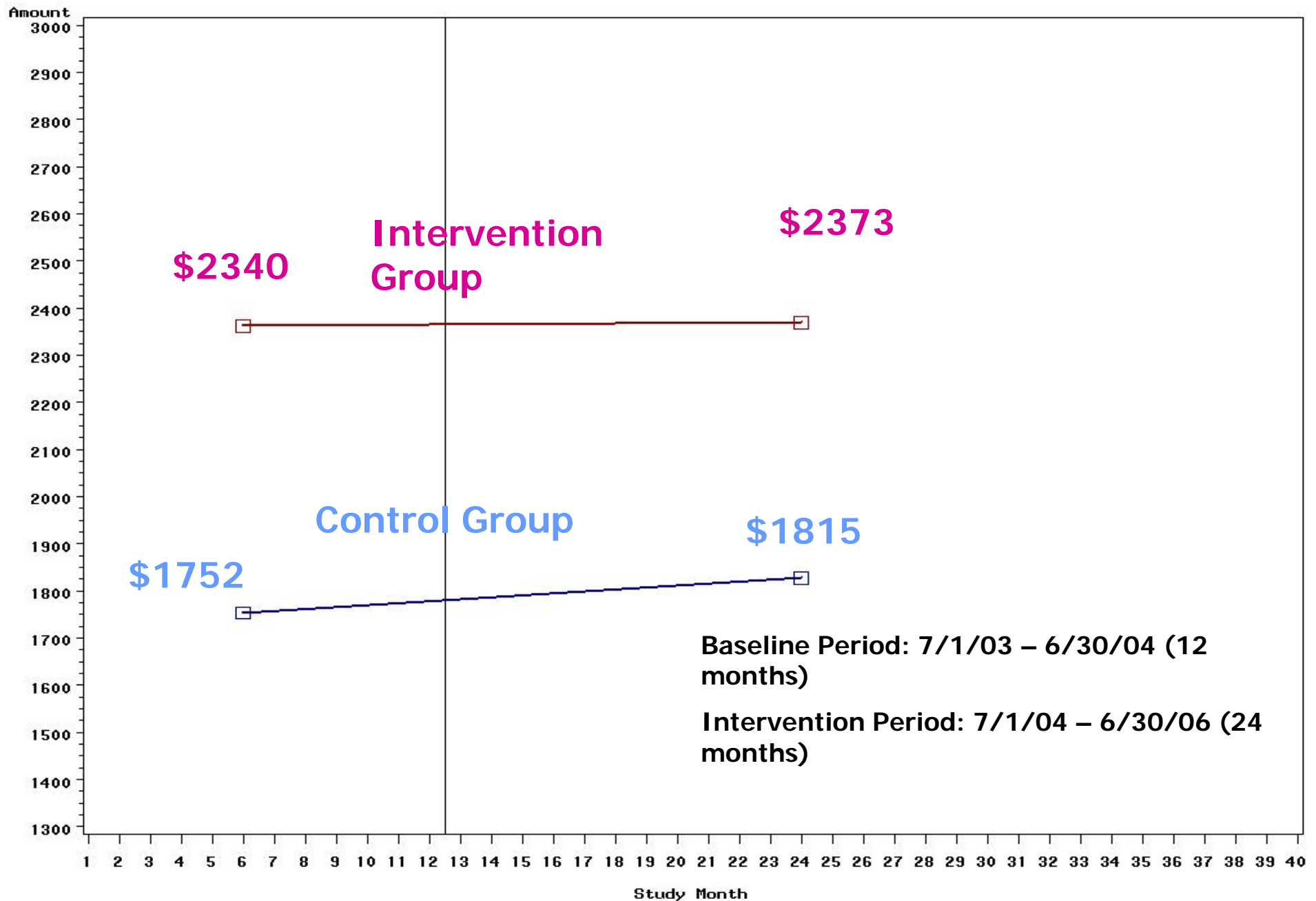


Project expenses

MCO Expenses

Project start-up expenses	\$40,276
24 month operational expenses	<u>\$237,318</u>
TOTAL PROJECT EXPENSES	\$277,594

Average Costs by Study Group over time (FFS+ Rx+ Enc)



Pre-post ROI

- Healthcare Expenses

PMPM expenses pre intervention:	\$2340
PMPM expenses intervention (24 mos)	<u>\$2373</u>
	\$ -33

- Member months in intervention period: 7,444
- Estimated Loss: Estimated monthly loss x months
 $\$ -33 \times 7,444 = (\$245,652)$

- ROI:

$$\text{Est. Loss} - \text{Intervention Exp} / \text{Intv. Exps} = - 3.26$$

Adjusted Pre-post ROI

- Healthcare expenses change:

Intervention group:	Increased	\$	32
Comparison group:	Increased		<u>64</u>
	Difference	\$	32

- Member months in intervention year: 7,444
- Estimated Savings: Estimated monthly savings x months $\$32 \times 7444 = \$238,208$
- ROI: Estimated savings / Total Expenses
 $\$238,208 / 277,594 = \mathbf{0.86}$

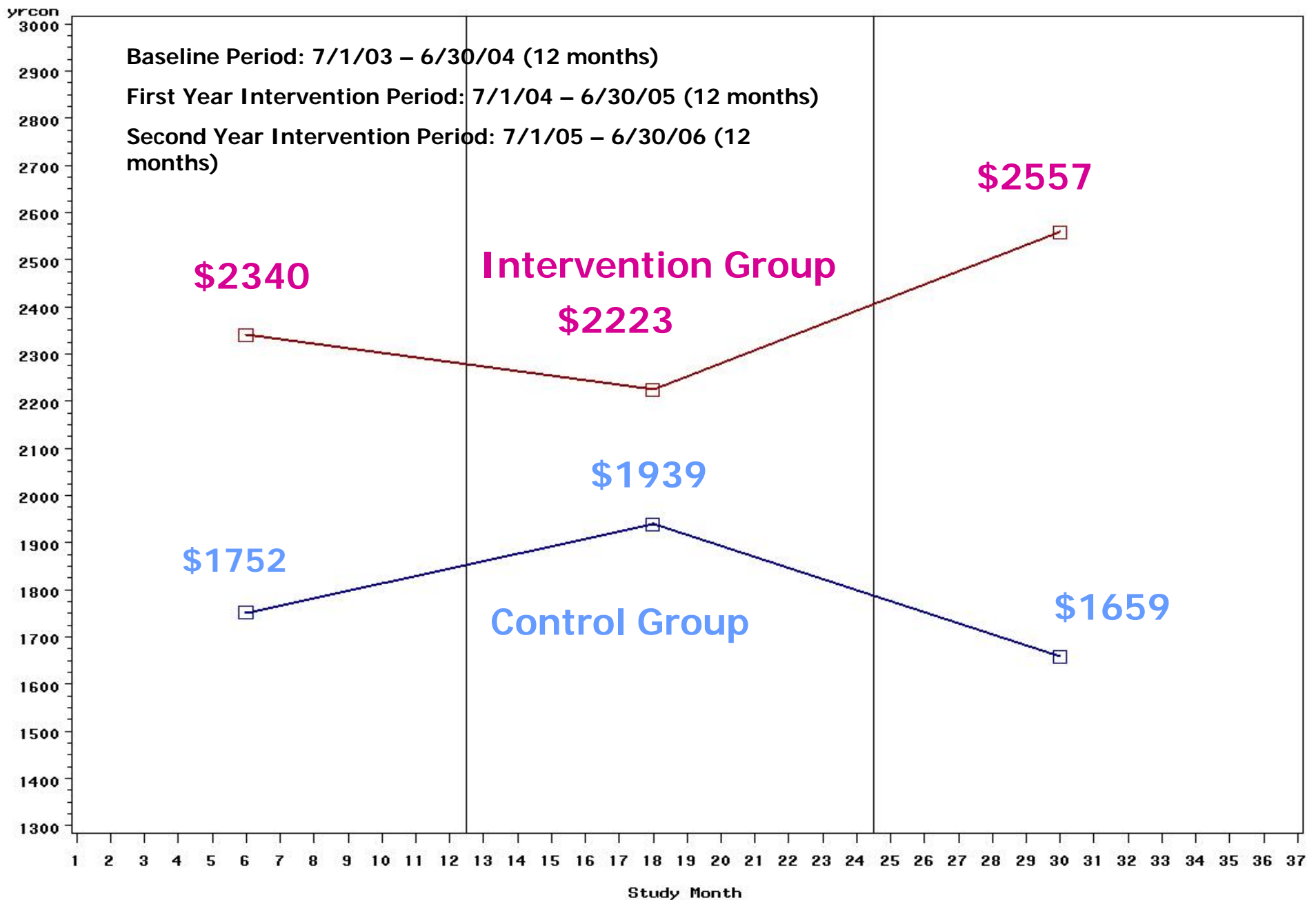
Marginal ROI, really?

Let's ask the statistician....

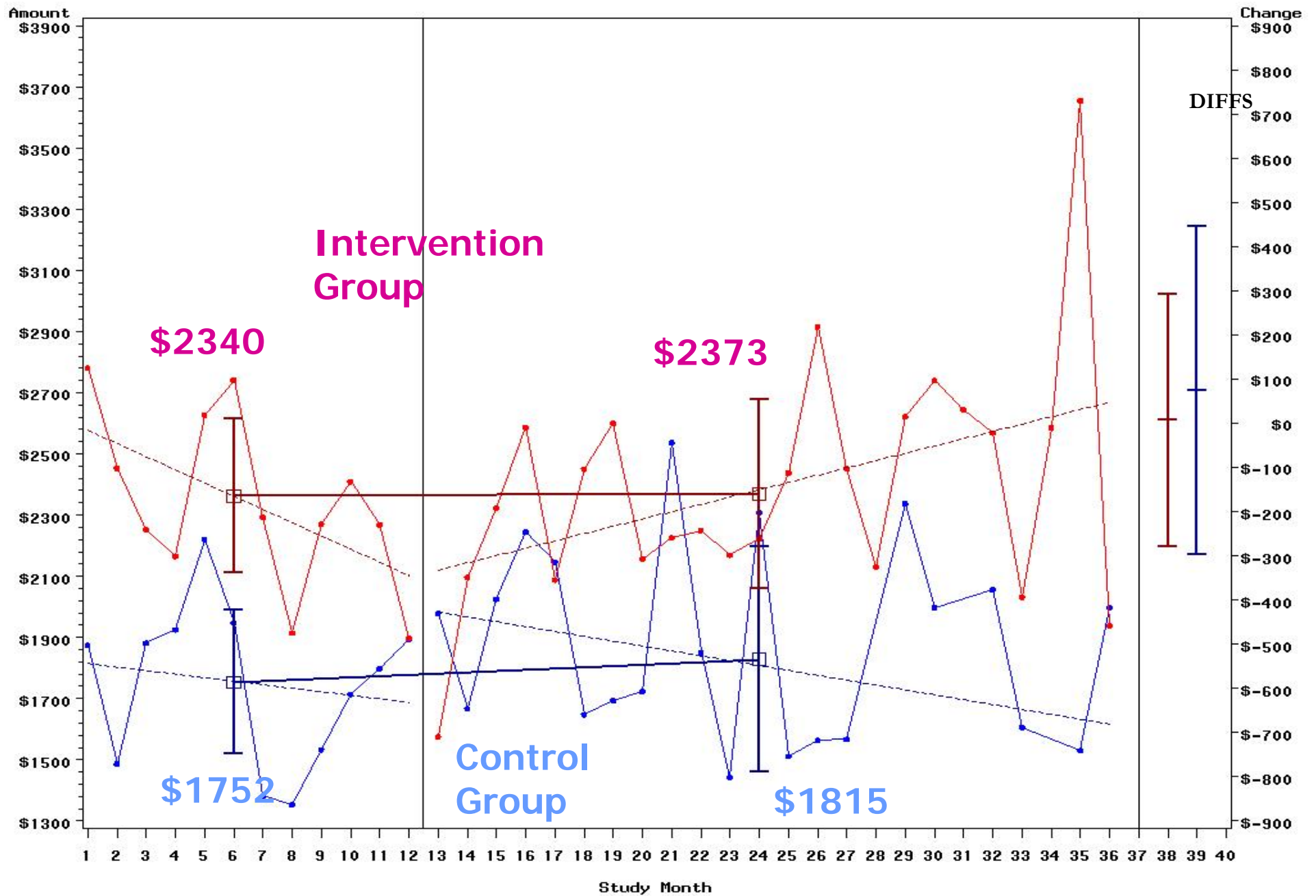


(c) Johns Hopkins HealthCare LLC

Average Costs by Study Group over time (FFS+ Rx+ Enc)



Average Costs by Study Group over time (FFS+ Rx+ Enc)



Conclusions

- Similar QEIs can be undertaken with expectation of minimal cost risk
- Trend analysis should complement ROI report
- Case management can engage similar population in DM/CM; SA Tx remains a challenge
- Further research need of identifying and implementing care management team core competencies in serving this population

Contact information

pfagan@jhmi.edu

Peter J. Fagan, PhD

Director of Research

Johns Hopkins HealthCare LLC

6704 Curtis Drive

Glen Burnie, MD 21060

410 424-4958