



Iowa's Health Home Programs System Review

Iowa Medicaid Enterprise

October 29, 2018



Objectives

- Review Health Home Model Tiering (Tiers 1-8)
- Review General Analytic Methods
- Review Preliminary Analytic Results
- Limitations and observations



Iowa's Health Home Model Reimbursement

Per Member Per Month Reimbursement	
Tier 1 - CCHH	1 – 3 chronic conditions
Tier 2 - CCHH	4 – 6 chronic conditions
Tier 3 - CCHH	7 – 9 chronic conditions
Tier 4 - CCHH	10+ chronic conditions
Tier 5 - IHH	Adult Non-ICM
Tier 6 - IHH	Child Non-ICM
Tier 7 – IHH-ICM	Adult ICM
Tier 8 – IHH-ICM	Child ICM



General Methods

- 8 Sources of Data:
 - Institutional claims (Header and Detail)
 - Professional claims (Header and Detail)
 - Magellan (Institutional and Other)
 - Pharmacy
 - Member Eligibility/Demographics
- 3 Years

Magellan												Magellen End >>> >>> FFS Span >>> MCO / FFS																							
2015												2016												2017											
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36



General Methods

Analyses to Isolate Major Treatments

IHH – ICM	{	Tier 7 – IHH-ICM	Adult ICM
		Tier 8 – IHH-ICM	Child ICM
IHH	{	Tier 5 – IHH	Adult Non-ICM
		Tier 6 – IHH	Child Non-ICM
4 CCHHs	{	Tier 1 - CCHH	1 – 3 chronic conditions
		Tier 2 - CCHH	4 – 6 chronic conditions
		Tier 3 - CCHH	7 – 9 chronic conditions
		Tier 4 - CCHH	10+ chronic conditions



General Methods

– Quasi-Experimental Design

- 2 Cohorts - Treatment and Control
- BASELINE Period - \$PMPM average (15-month average)
- POST Period – Monthly Difference in \$PMPM costs
 “Change” or “Difference” = (Current \$PMPM – Baseline \$PMPM)

Magellan												Magellen End >>>			>>> FFS Span			>>> MCO / FFS																							
2015															2016												2017														
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36						
Case/Trmt BASELINE Period (up to 15 months)															Case/ Trmt POST Period (up to 21 months)																										
Control BASELINE Period (up to 15 months)															Control POST Period (up to 21 months)																										



General Methods

Repeated measures linear multiple regression

Dependent Variable:

Change in \$PMPM compared to Baseline 15-month average \$PMPM (Current PMPM – Baseline PMPM)

Independent Variables:

Cohort Group (TRMT or CONTROL)

Month

Cohort Group * Month

Baseline \$PMPM

Age at Baseline

Gender

LTSS – Long-term Services & Support

County of Residence

Multiple Chronic and Acute/Severity risk adjustment variables



General Methods

Risk Adjustment

“Case mix” “risk” “intensity” “severity” “sickness”
“complexity” “comorbidity” “health status” “controlled”

Contextual Use – risk adjustment used to isolate the relationship between the outcome of interest and the treatment provided by controlling for the effects of other relevant material

Outcomes = f (treatment, demographics, baseline, health status, setting)

Sources: Iezzoni L (Ed.). Risk Adjustment for Measuring Health Outcomes (3rd ed.). (2003). Chicago, Illinois: Health Administration Press.

Kane RL (Ed). (2006). Understanding Health Care Outcomes Research (2nd ed.). Sudbury, Massachusetts: Jones and Bartlett Publishers.



General Methods

Inclusion/Exclusion Criteria:

Exclude member Age < 2 years old

Exclude member with dual Medicare eligibility

Exclude member w/o “full” 15 months Medicaid eligibility in Baseline Period
and w/o \geq 15 months Medicaid eligibility in Post Period



General Methods

Chronic Conditions

Used in IHH Risk Adjustment or CCHH Control Cohort identification

Hypertension --- Essential Hypertension, Secondary Hypertension

Hyperlipidemia

Diabetes --- Without Complications, With Complications

Heart Arrhythmias --- Conduction Disorders, Cardiac Dysrhythmias

Arthritis --- Rheumatoid, Osteoarthritis

Osteoporosis

Cancer --- Head/Neck, Upper GI, Lower GI, Liver/Pancreas, Lung, Skin/Bone, Breast, Female, Male, Urinary, Brain/Nervous, Thyroid, Lymph, Leukemia, Other/Secondary, Malignant Neoplasm

Coronary Artery Disease (CAD) --- AMI, Atherosclerosis/Other Heart Disease



General Methods

Chronic Conditions

Used in IHH Risk Adjustment or CCHH Control Cohort identification

Chronic Obstructive Pulmonary Disease (COPD)

Chronic Kidney Disease (CKD) --- Nephritis/Nephrosis/Sclerosis, CKD

Congestive Heart Failure (CHF)

Asthma

Stroke --- Acute CV, Occlusion/Stenosis, Other CV, Transient Cerebral Ischemia

Dementia – only used to identify CCHH Control Cohort in CCHH analyses

Depression – only used to identify CCHH Control Cohort in CCHH analyses

Substance Abuse Disorder --- Alcohol-related, Substance-related

Schizophrenia - only used to identify CCHH Control Cohort in CCHH analyses

Parkinson's Disease



General Methods

Chronic Conditions

Used in IHH Risk Adjustment or CCHH Control Cohort identification

Multiple Sclerosis
Hepatitis
Sickle Cell Anemia
Cystic Fibrosis
HIV
Back Problems
Autism
Obesity
Hypothyroidism
Liver Disease/Cirrhosis/Other Liver Conditions (non-viral)



General Methods

Acute or Severe Events/Conditions

Used in Risk Adjustment or Global Exclusion

Maternal/OB --- Spontaneous Abortion, Induced Abortion, Postabortion complications, Ectopic Pregnancy, Other Pregnancy Compl, Hemorrhage, Hypertension, Early/Threat Labor, Prolonged Pregnancy, Diabetes/Glucose, Malposition/Malpresent, Fetopelvic Disproportion, Previous C-section, Fetal distress/Abnormal Forces of Labor, Polyhydramnios/Other Amniotic Cavity Problems, Umbilical Cord Complications, OB-related trauma, Forceps Delivery, Other Complications of Birth, Normal Pregnancy/delivery

External Cause of Injury --- Cut/Pierce, Drown/Subm, Fall, Fire/Burn, Firearm, Machinery, Motor Vehicle, Cyclist, Pedest, Transport, Environment/Natural, Overexertion, Poisoning, Struck by, Suffocation, Adverse Effects of Medical Care, Adverse Effects of Medical Drugs, Other/Unspecified

Renal Dialysis

Hospice

NICU/ ICU / CCU

Organ Acquisition

Severity Indicator — Septicemia, Shock, Peritonitis/Intest Abscess, PE/DVT, GI Hemorrhage, Epilepsy/Convulsions, Coma/Stupor/Brain Damage, Respiratory Failure, Cardiac Arrest/Ventric Fibrillation



IHH–ICM Tiers 7 & 8 Analysis



IHH – ICM Analysis

Cohort Criteria

– Treatment

- Baseline - Tier 7/8 or CPT Code “99490” with modifiers “U2” or “U1”
- Post Period – no Tier 1-6 or CPT-coded Tiers 1-6

– Control

- Baseline - Not in Treatment cohort, IHH-relevant (SMI or SED) ICD-9/10 codes, and ≥ 1 Inpatient Hospitalization or ER Visit, and no Tier 1-8 or CPT-coded Tiers 1-8
- Post Period - no Tier 1-8 or CPT-coded Tiers 1-8



Iowa Department of Human Services

IHH-ICM – Full Dataset

Cohort	N
TRMT	1,746
CONTROL	24,020

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
\$388	\$540	\$692

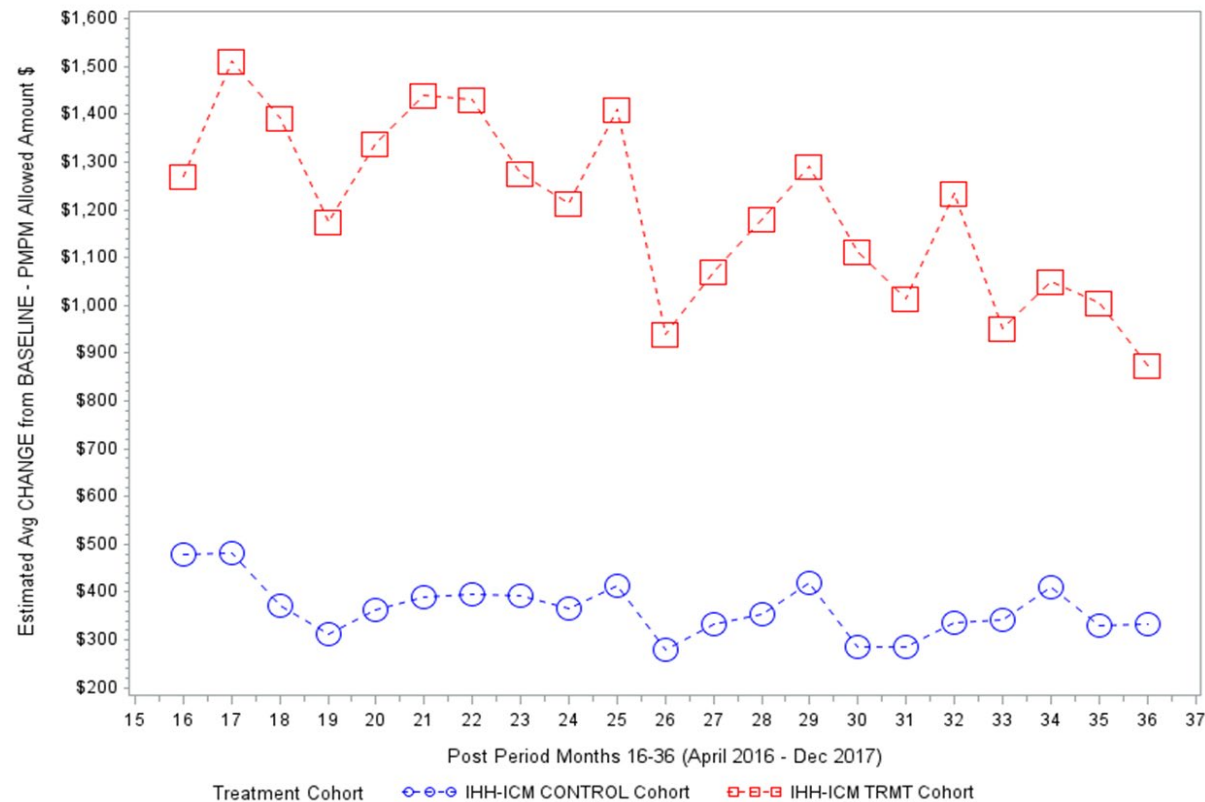
Other Notes:

Response profiles different

TRMT -\$22 CONTROL -\$4

IHH-ICM Treatment cohort are individuals, by definition, receiving either 1915(i) Habilitation Services or 1915(c) Children's Mental Health Waiver Services that individuals in the Control group are not receiving. These costs are reflected in the total costs in these data.

11/9/2018





Iowa Department of Human Services

IHH-ICM – Excluded Acute/Severe Members Dataset

Cohort	N
TRMT	684
CONTROL	5,167

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
\$129	\$294	\$458

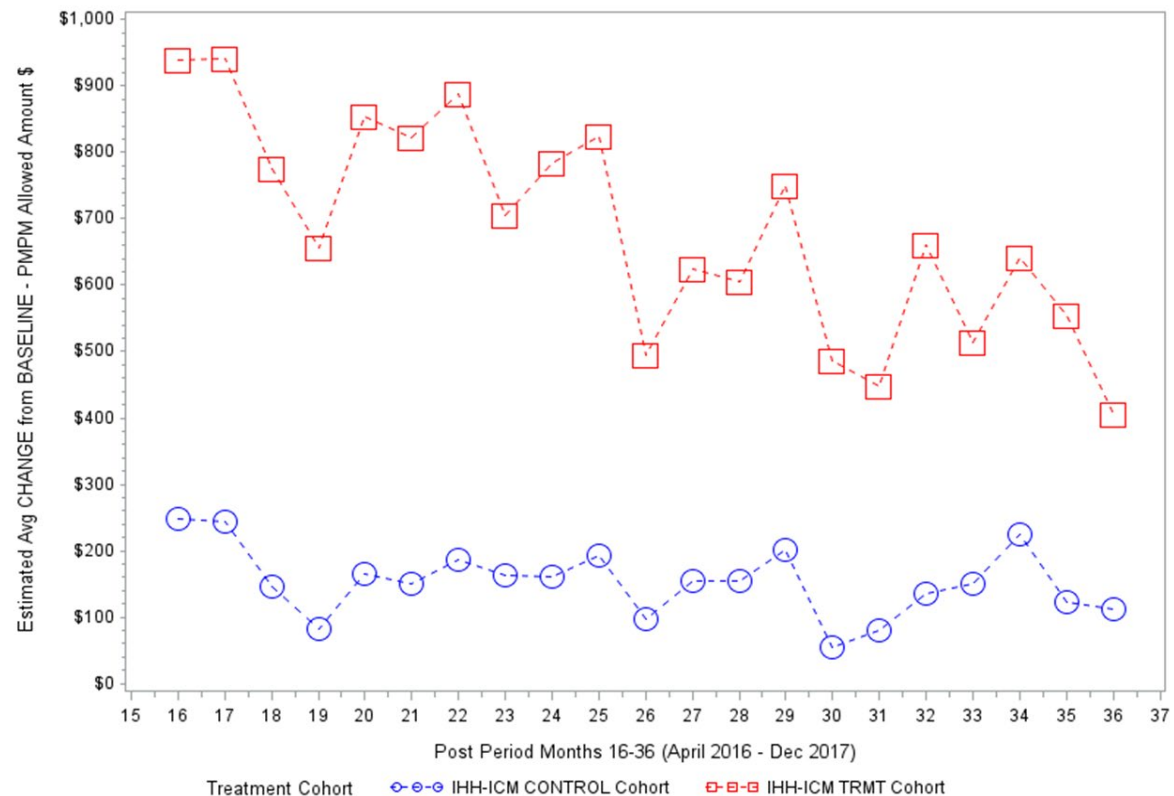
Other Notes:

Response profiles different

TRMT -\$21 CONTROL -\$3

IHH-ICM Treatment cohort are individuals, by definition, receiving either 1915(i) Habilitation Services or 1915(c) Children's Mental Health Waiver Services that individuals in the Control group are not receiving. These costs are reflected in the total costs in these data.

11/9/2018





IHH Tiers 5 & 6 Analysis



IHH Analysis

Cohort Criteria

– Treatment

- Baseline - Tier 5/6 or CPT Code “99490” with modifiers “TG” or “TF”
- Post Period – no Tier 1-4/7-8 or CPT-coded Tiers 1-4/7-8

– Control

- Baseline - Not in Treatment cohort, IHH-relevant (SMI or SED) ICD-9/10 codes, no Hospitalization/ER visit, and no Tier 1-8 or CPT-coded Tiers 1-8
- Post Period - no Tier 1-8 or CPT-coded Tiers 1-8



Iowa Department of Human Services

IHH – Full Dataset

Cohort	N
TRMT	10,110
CONTROL	12,334

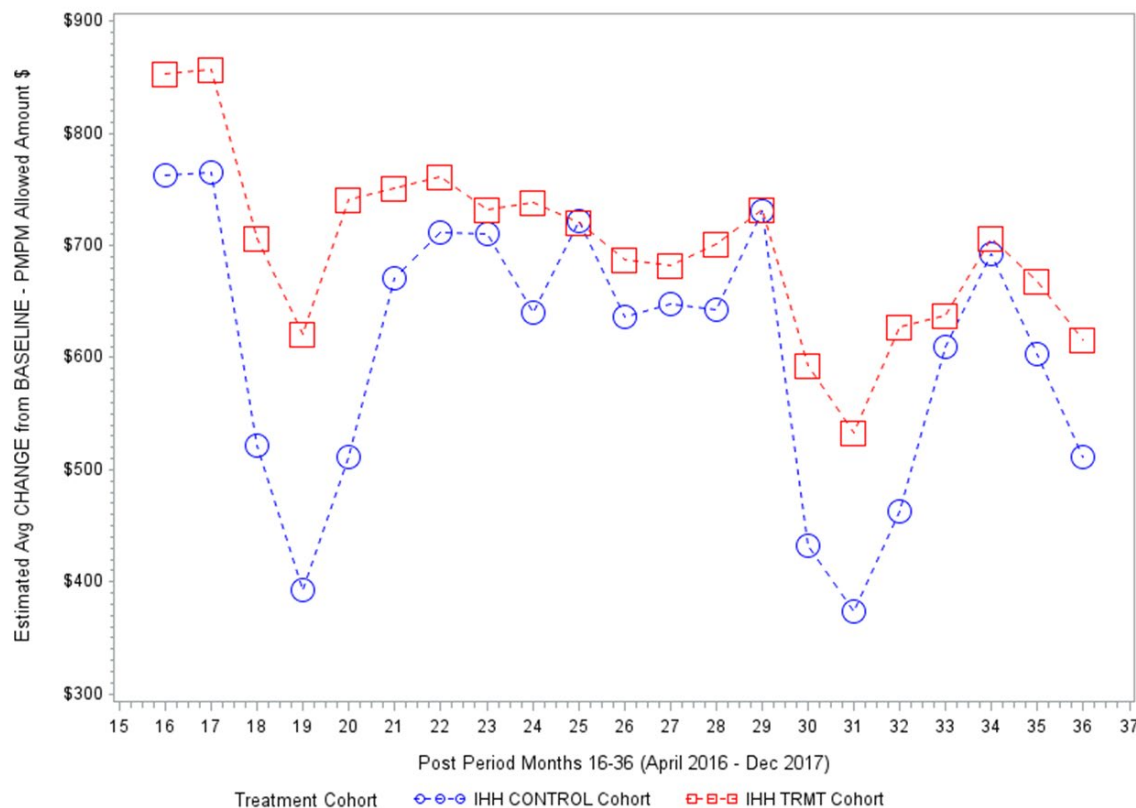
TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
\$49	\$104	\$159

Other Notes:

Response profiles different

TRMT -\$8 CONTROL -\$5

Months 18-20 and 30-32 (Jun-Aug)





Iowa Department of Human Services

IHH – Excluded Acute/Severe Members Dataset

Cohort	N
TRMT	4,363
CONTROL	6,123

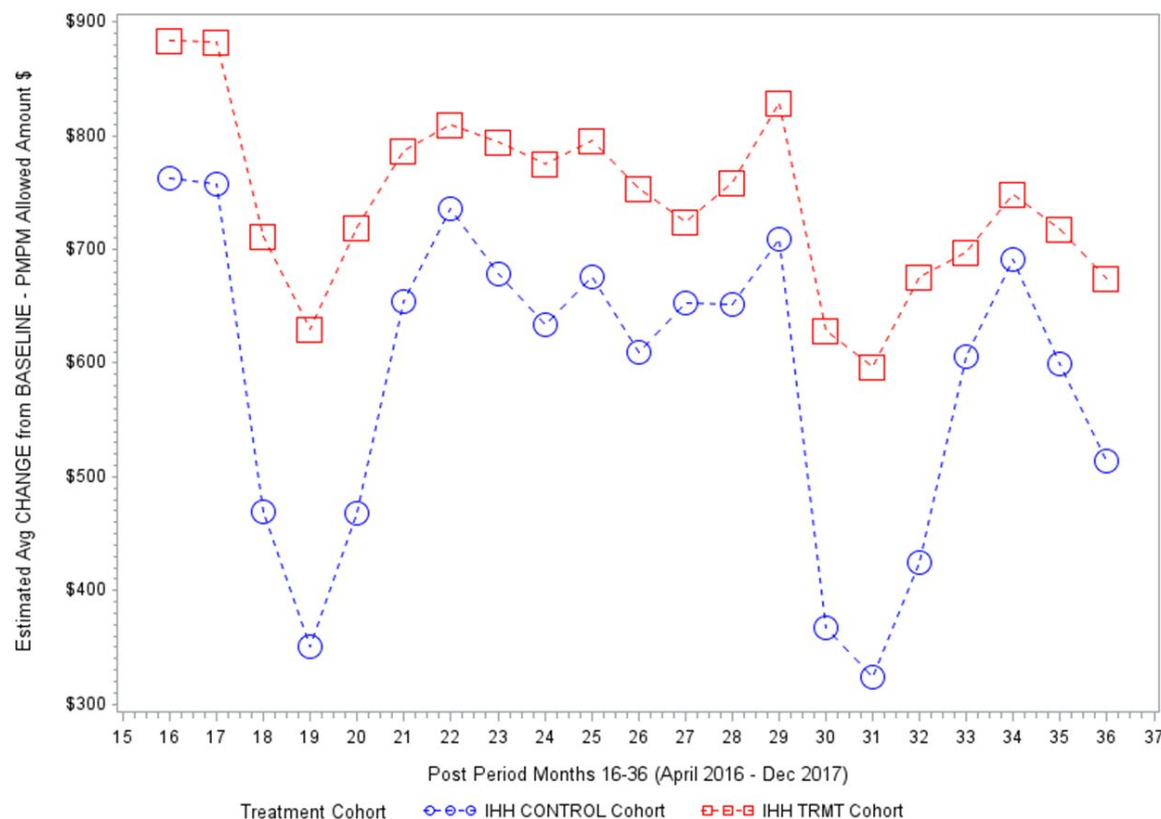
TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
\$101	\$160	\$220

Other Notes:

Response profiles different

TRMT -\$6 CONTROL -\$5

Months 18-20 and 30-32 (Jun-Aug)





CCHH Tier 1 Analysis

Chronic Conditions Count 1-3



CCHH Tier 1 Analysis

Cohort Criteria

– Treatment

- Baseline - Tier 1 or CPT Code “S0280” with modifiers “U1”, no Tiers 2-8 or CPT-coded Tiers 2-8
- Post Period – no IHH/IHH-ICM Tiers 5-8 or CPT-coded Tiers 5-8

– Control

- Baseline – Count of 1-3 Chronic Conditions, not in Treatment cohort, and no Tiers 1-8 or CPT-coded Tiers 1-8
- Post Period – no Tiers 1-8 or CPT-coded Tiers 1-8



Iowa Department of Human Services

CCHH Tier 1 – Full Dataset

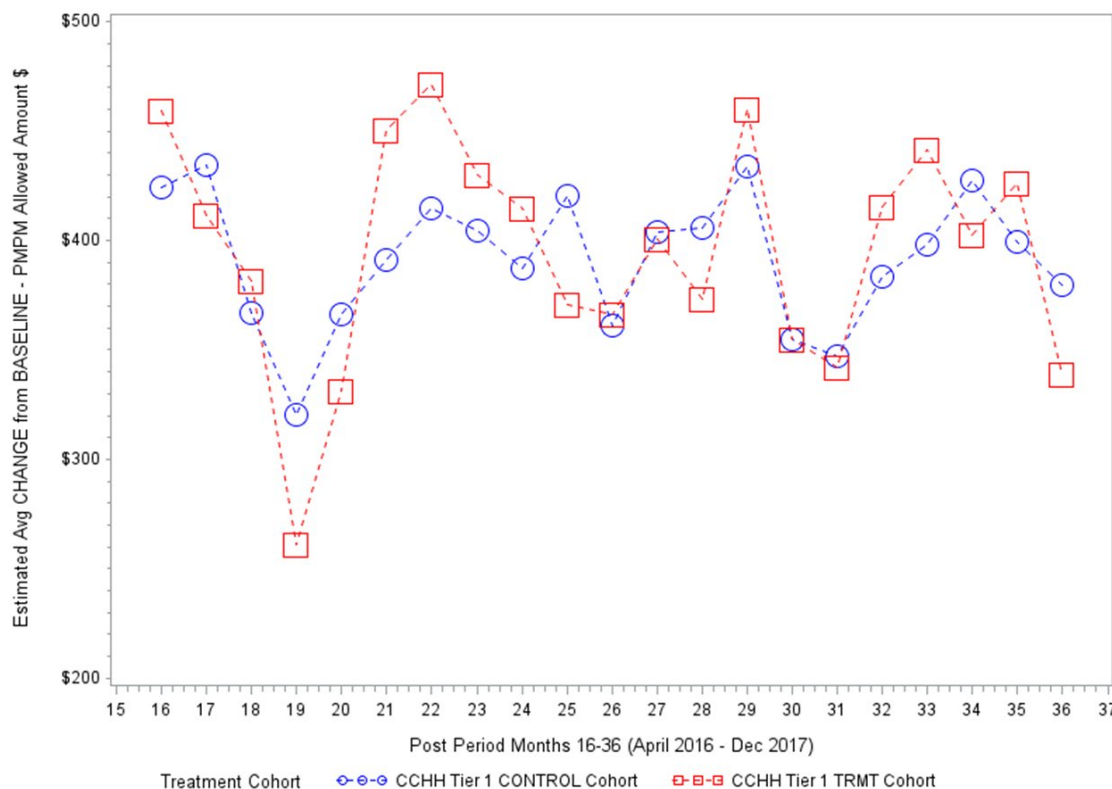
Cohort	N
TRMT	507
CONTROL	86,223

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
- \$65	- \$3	\$72

Other Notes:

Response profiles not different

Months 18-20 and 30-32 (Jun-Aug)





Iowa Department of Human Services

CCHH Tier 1 – Excluded Acute/Severe Members Dataset

Cohort	N
TRMT	294
CONTROL	39,003

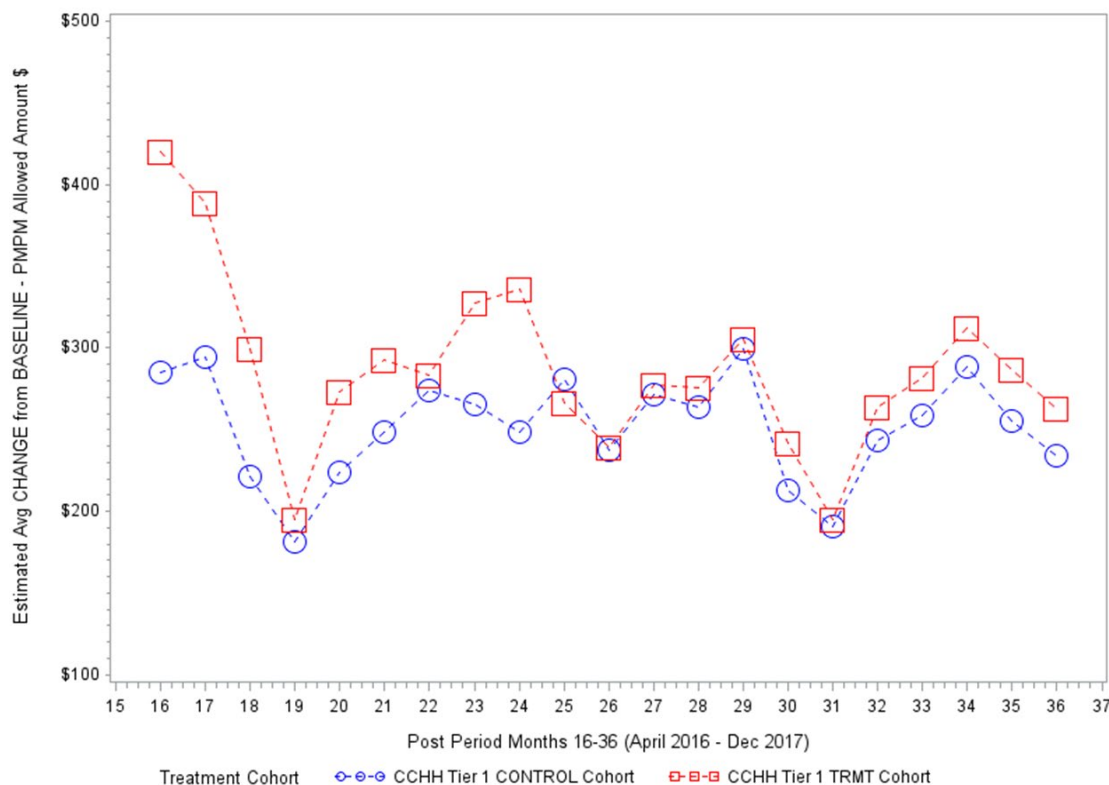
TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
- \$22	\$29	\$81

Other Notes:

Response profiles different

TRMT -\$3 CONTROL \$0

Months 18-20 and 30-32 (Jun-Aug)





CCHH Tier 2 Analysis

Chronic Conditions Count 4-6



CCHH Tier 2 Analysis

Chronic Conditions Count 4-6

Cohort Criteria

– Treatment

- Baseline - Tier 2 or CPT Code “S0280” with modifiers “TF”, no Tiers 1/3-8 or CPT-coded Tiers 1/3-8
- Post Period – no IHH/IHH-ICM Tiers 5-8 or CPT-coded Tiers 5-8

– Control

- Baseline – Count of 4-6 Chronic Conditions, not in Treatment cohort, and no Tiers 1-8 or CPT-coded Tiers 1-8
- Post Period – no Tiers 1-8 or CPT-coded Tiers 1-8



Iowa Department of Human Services

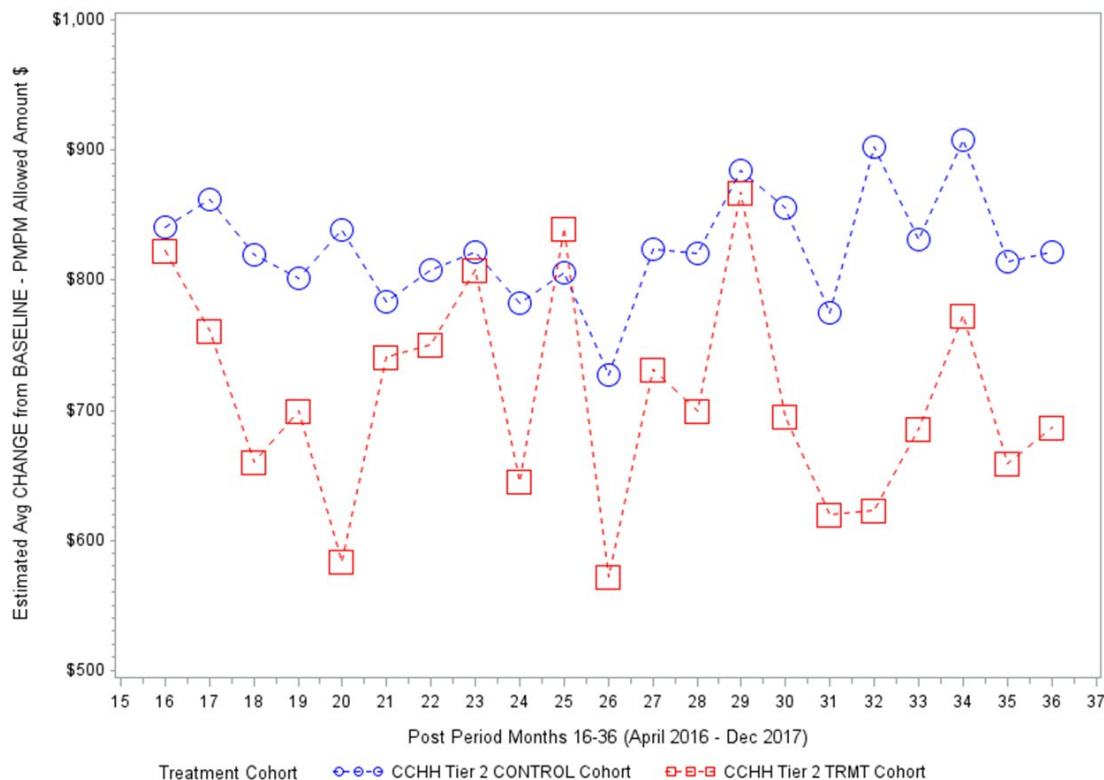
CCHH Tier 2 – Full Dataset

Cohort	N
TRMT	443
CONTROL	16,654

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
- \$217	- \$114	- \$11

Other Notes:

Response profiles not different





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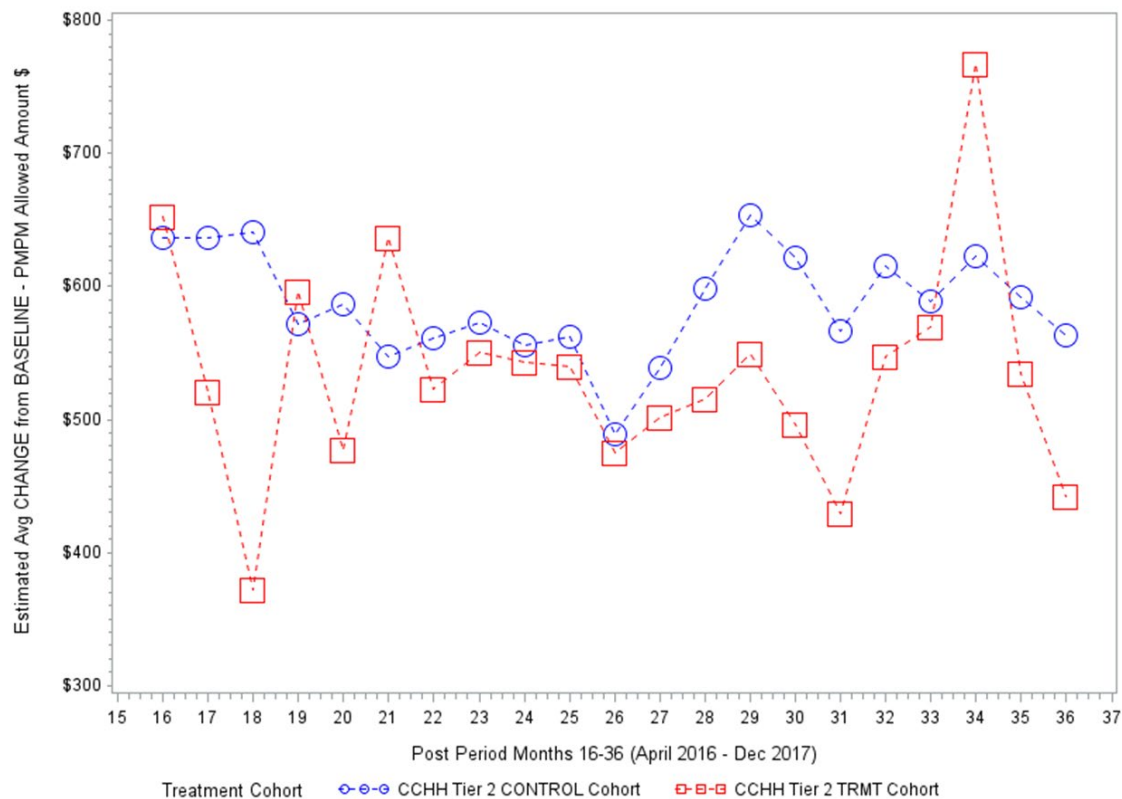
CCHH Tier 2 – Excluded Acute/Severe Members Dataset

Cohort	N
TRMT	157
CONTROL	5,505

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
- \$136	- \$40	\$56

Other Notes:

Response profiles not different





CCHH Tier 3 Analysis

Chronic Conditions Count 7-9



CCHH Tier 3 Analysis

Chronic Conditions Count 7-9

Cohort Criteria

– Treatment

- Baseline - Tier 3 or CPT Code “S0280” with modifiers “U2”, no Tiers 1-2/4-8 or CPT-coded Tiers 1-2/4-8
- Post Period – no IHH/IHH-ICM Tiers 5-8 or CPT-coded Tiers 5-8

– Control

- Baseline – Count of 7-9 Chronic Conditions, not in Treatment cohort, and no Tiers 1-8 or CPT-coded Tiers 1-8
- Post Period – no Tiers 1-8 or CPT-coded Tiers 1-8



Iowa Department of Human Services

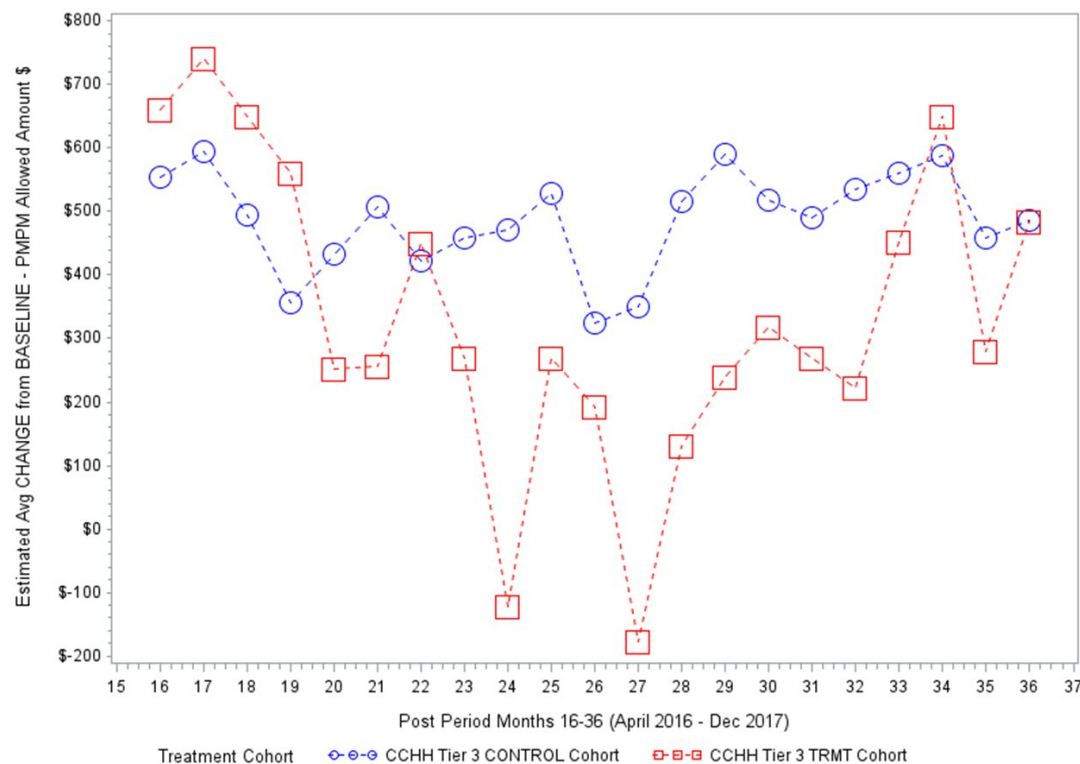
CCHH Tier 3 – Full Dataset

Cohort	N
TRMT	169
CONTROL	3,685

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
- \$507	- \$153	\$201

Other Notes:

Response profiles not different
1 Outlier removed – TRMT case





Iowa Department of Human Services

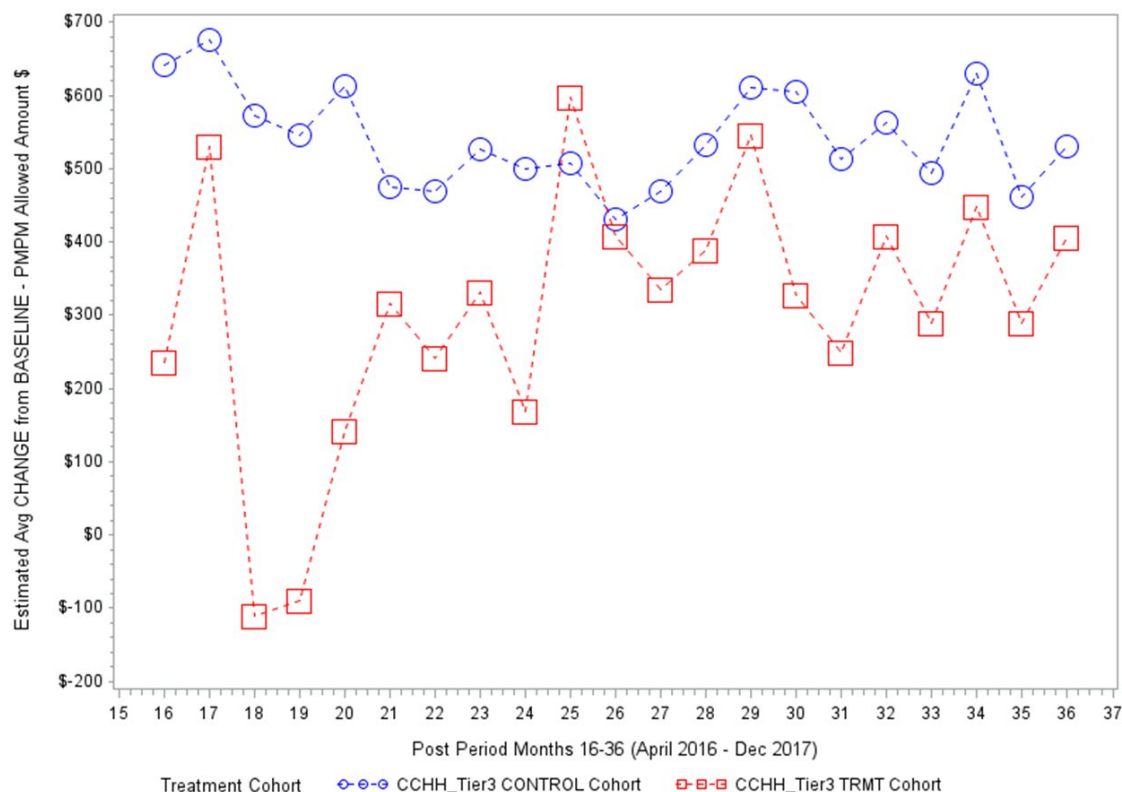
CCHH Tier 3 – Excluded Acute/Severe Members Dataset

Cohort	N
TRMT	40
CONTROL	791

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
- \$563	- \$234	\$95

Other Notes:

Response profiles not different
1 Outlier removed – TRMT case





CCHH Tier 4 Analysis

Chronic Conditions Count 10 or more



CCHH Tier 4 Analysis

Chronic Conditions Count 10 plus

Cohort Criteria

– Treatment

- Baseline - Tier 4 or CPT Code “S0280” with modifiers “TG”, no Tiers 1-3/5-8 or CPT-coded Tiers 1-3/5-8
- Post Period – no IHH/IHH-ICM Tiers 5-8 or CPT-coded Tiers 5-8

– Control

- Baseline – Count of ≥ 10 Chronic Conditions, not in Treatment cohort, and no Tiers 1-8 or CPT-coded Tiers 1-8
- Post Period – no Tiers 1-8 or CPT-coded Tiers 1-8



Iowa Department of Human Services

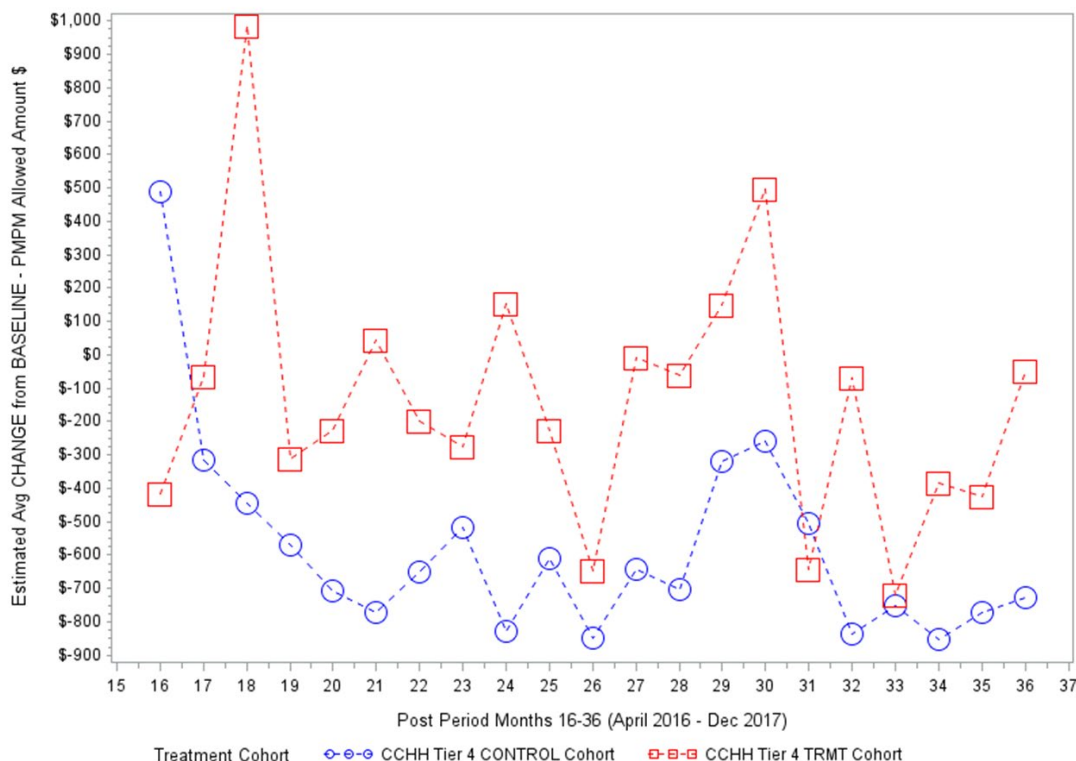
CCHH Tier 4 – Full Dataset

Cohort	N
TRMT	91
CONTROL	774

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
- \$298	\$439	\$1,176

Other Notes:

Response profiles not different
 3 Outliers removed – All TRMT cases affecting Months 26-29





Iowa Department of Human Services

CCHH Tier 4 – Excluded Acute/Severe Members Dataset

Cohort	N
TRMT	28
CONTROL	55

TRMT Cohort compared to CONTROL Cohort		
LCL (95% C.I.)	Diff in Means	UCL (95% C.I.)
- \$427	\$298	\$1,022

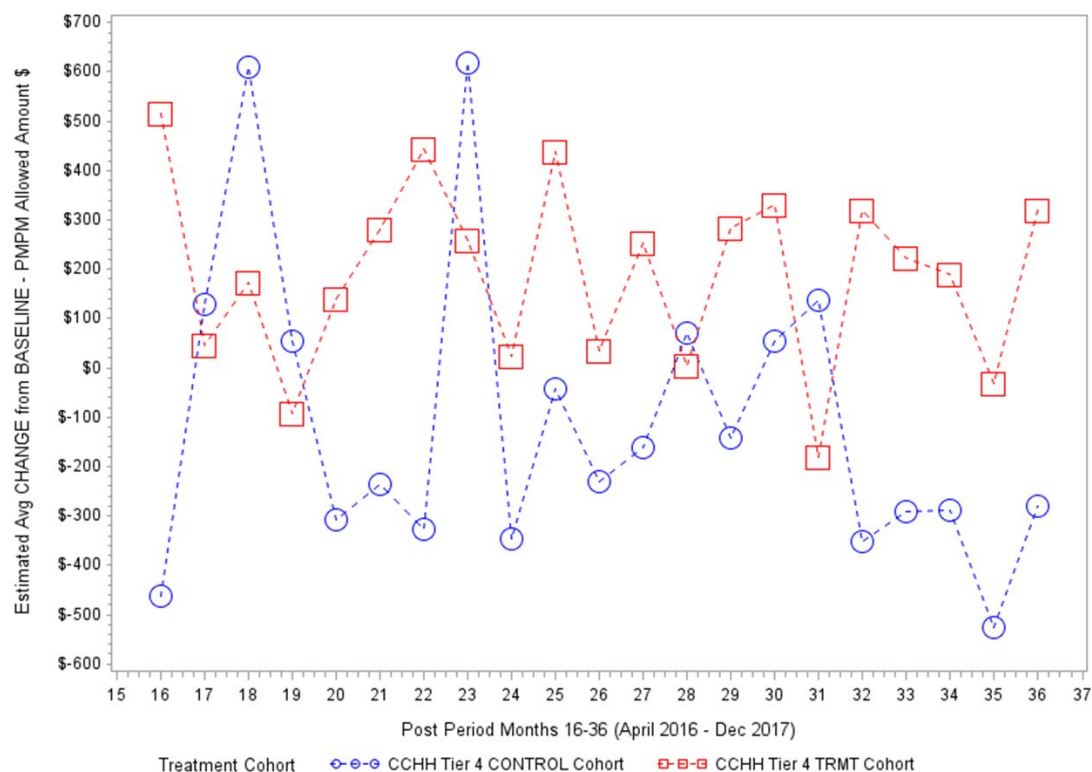
Other Notes:

Response profiles not different

2 additional outliers removed –

1 TRMT case and 1 CONTROL case affecting Month 18

11/9/2018





Limitations

- Analyses are preliminary
- Claims data - analyze outcomes
 - Limits to accuracy, completeness
- Lack of structures/processes that capture critical detail related to –
 - accounting for treatment/non-treatment status
 - well-defined/documented definitions for treatment criteria



Feedback





Wrap Up

A yellow sticky note is tilted and appears to be stuck to the background with a piece of grey tape at the top left corner. The text "Thank You!" is written on it in a blue, hand-drawn, sketchy font.

Thank
You!