Centralized Reminder & Recall Postcards

Damon Ferlazzo, MPA
Deputy Section Administrator for Disease Prevention

Disclosures

- This presentation will refer to several commercially available software products and services, however, this is not an endorsement, merely a description
- The presenter (Damon Ferlazzo) has no conflicts of interests

Background

- Partnership with Pfizer and West
- Distributed over 93,000 immunization reminder and recall postcards
- Data from immunization information system (ShowMeVax)
- This program was attempted in 2011 but stopped due to a data quality issue, quarterly mailings were done in 2015
- The first reminder recall cards distributed were for children 19-35 months who were missing one dose from the 4:3:1:3:3:1:4 series
- Beginning in March of 2016, postcards were sent monthly

Missouri Department of Health and Senior Services
PO Box 570
Jefferson City MO 65102-0570
RETURN SERVICE REQUESTED

Missouri Department of Health and Senior Services
PO Box 570
Jefferson City MO 65102-0570
RETURN SERVICE REQUESTED

Dear parent/guardian:

Records show that your child may have missed a vaccine shot.

Please contact your child's doctor or health clinic to find out if you need to schedule an appointment.

This postcard is being sent by your child's health plan, health clinic, or health department.

Financial support for this communication has been provided by Pfizer Inc. No patient-specific information has been or will be provided to Pfizer.

Estimado padre o tutor:

Los registros muestran que posiblemente su hijo no haya recibido una vacuna.

Comuníquese con el médico o el centro de salud de su hijo para averiguar si debe programar una cita.

Este postal le envía el plan de salud o centro de salud de su hijo, o el departamento de salud.

Pfizer Inc proporcionó ayuda financiera para este comunicado. No se dio ni se dará información específica del paciente a Pfizer.

[illegible] ©2010 Pfizer Inc. All rights reserved. Printed in USA/August 2010

Process

Partnership
List Generation
Distribution
Return Tracking
Basic Analysis
Statistical Analysis

Partnership

- List Generator: Bureau of Immunizations / ShowMeVax (IIS)
  - Vital Records (death check)
  - State Printing (address verification only)
- Funding: Pfizer
- Distributor: West (Televox)

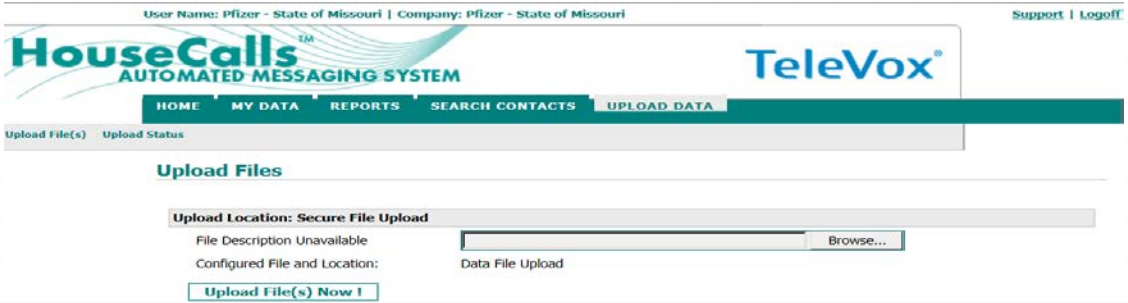
- Service and Data Sharing Agreement
- No individual client data ever shared with Pfizer

List Generation

- Generated monthly using SAS
- Initial list of clients
  - 19-35 months one dose away from completing 4:3:1:3:3:1:4 series
  - Recently turned 65 years old (stopped)
  - Well Child Visit reminder – 11 months (not discussed)
- National Change of Address (NCOA) system
- Deceased clients were identified and removed
- Clients who were sent cards that were returned to Bureau of Immunizations are removed from list

Distribution

- List (.csv) uploaded to secure Televox web portal
- First Name, Last Name, Address, City, State, Zipcode, letter “P” +

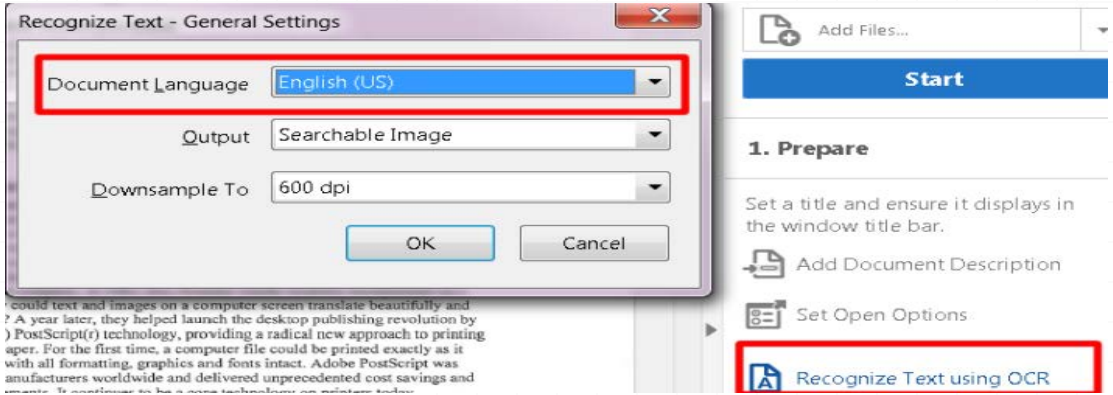


- Televox staff email/call if problem occurs
- Post cards received by client within one week

Return Tracking

- Postcards that have been sent with insufficient addresses are returned by the Post Office to the state immunization program

- A list of returned postcard ID numbers is generated by scanning cards – Adobe DC (Acrobat Pro) optical character recognition (OCR) is utilized



Return Tracking

- Text copied from Adobe DC, pasted into Microsoft Excel, sorted, non-unique ID text discarded
- Future cards are never sent to these clients again

Basic Analysis

- Remove clients with returned postcards (16.5%)
- Portion of clients are now up-to-date
- Receipt of final dose within 4:3:1:3:3:1:4 series was evaluated monthly
- Progress was benchmarked to similar aged clients who were also missing one dose, but from a time period when postcards were not distributed
- Benchmarking groups were identified to prevent overlap with other reminder postcard initiatives

Basic Analysis

- Initial benchmarking month revealed significant *improvement* when sending postcards
- Seasonality may have played a part in the "one-away" card performance – up-to-date rates were higher between May and July
- Future months resulted in a large variance of difference

  March –Much Higher

  April – Slightly Lower

  May – Much Higher

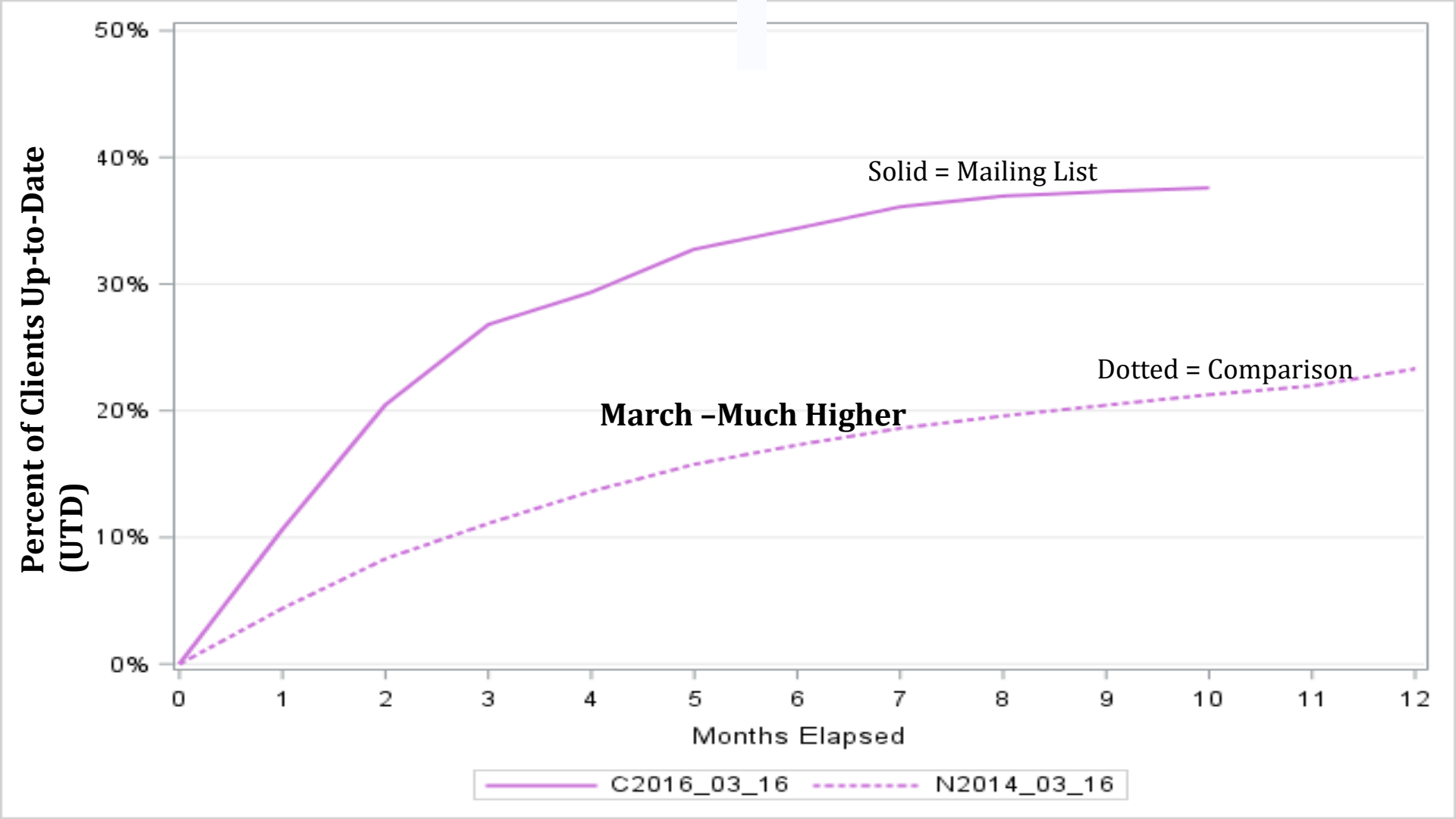
  June – Slightly Higher

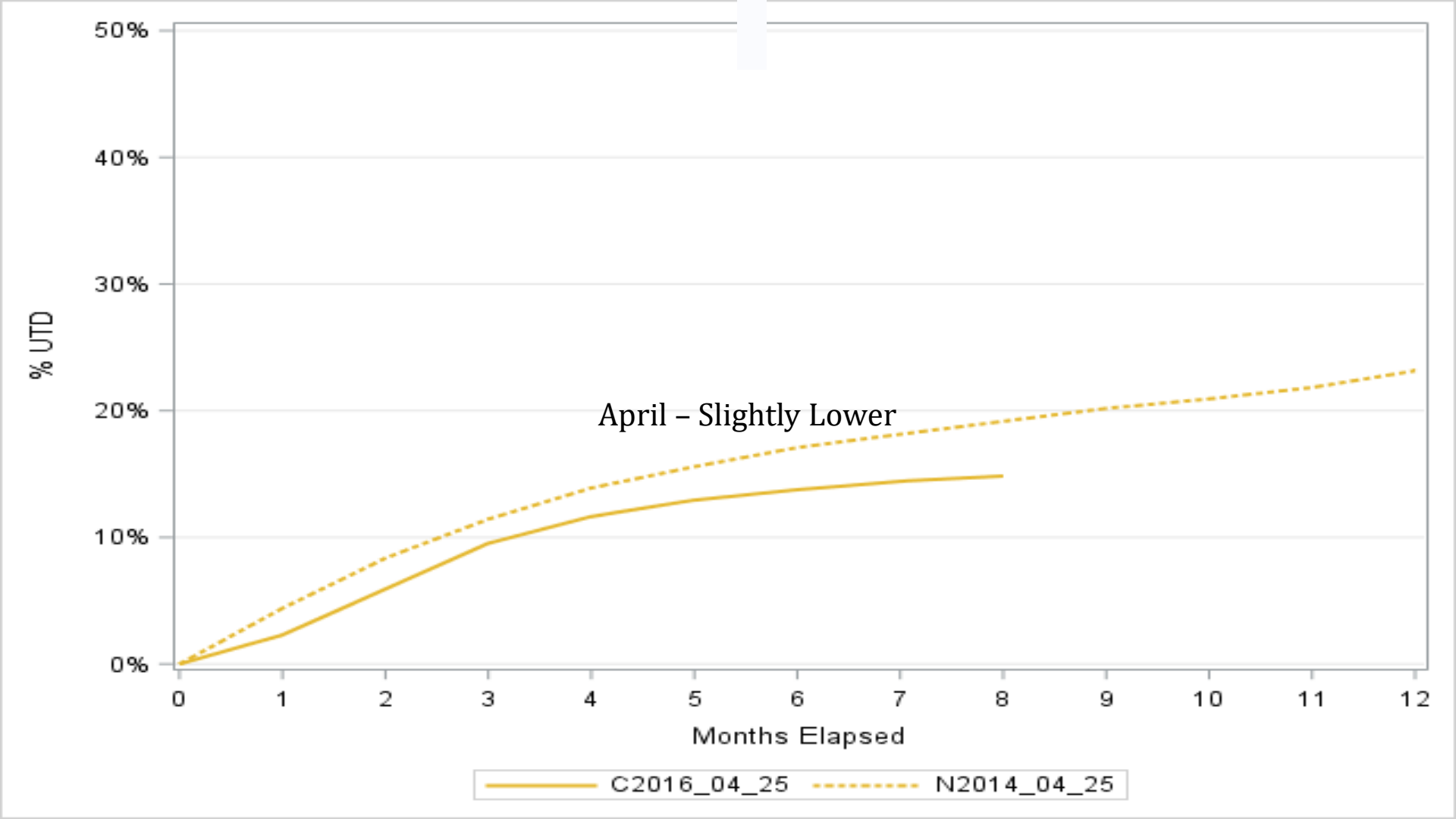
  July – Much Higher

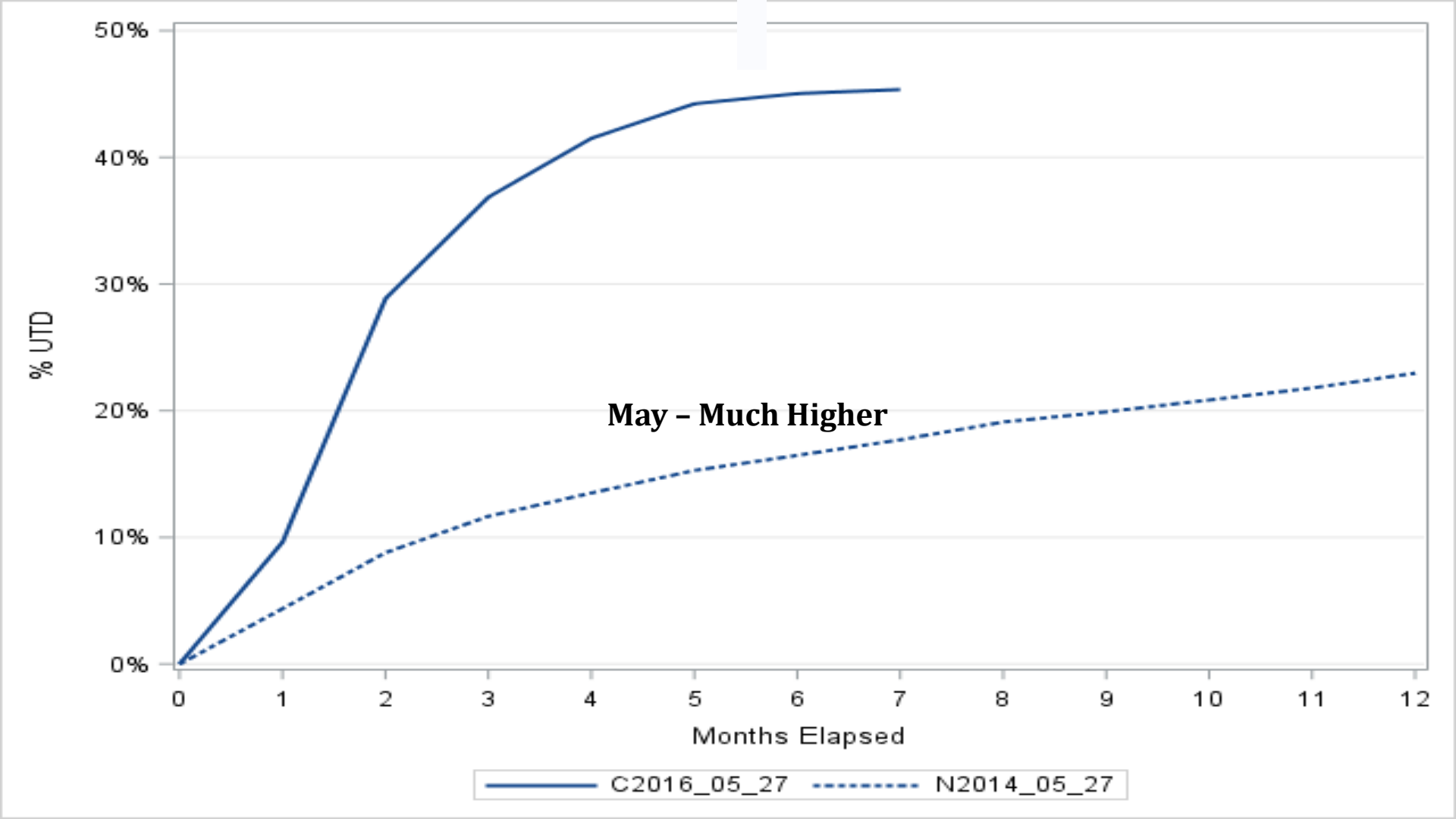
  August – Slightly Lower

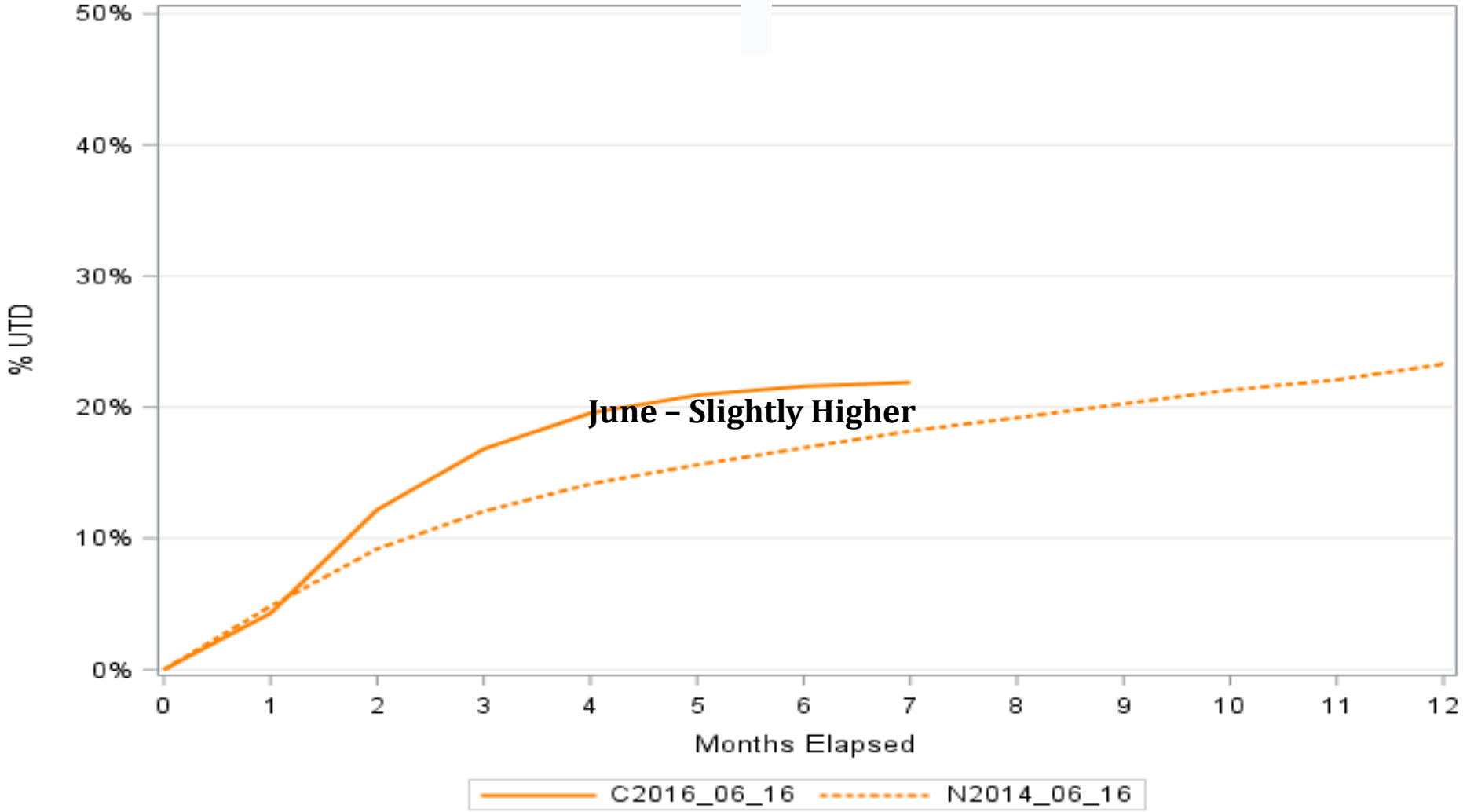
  September – No difference

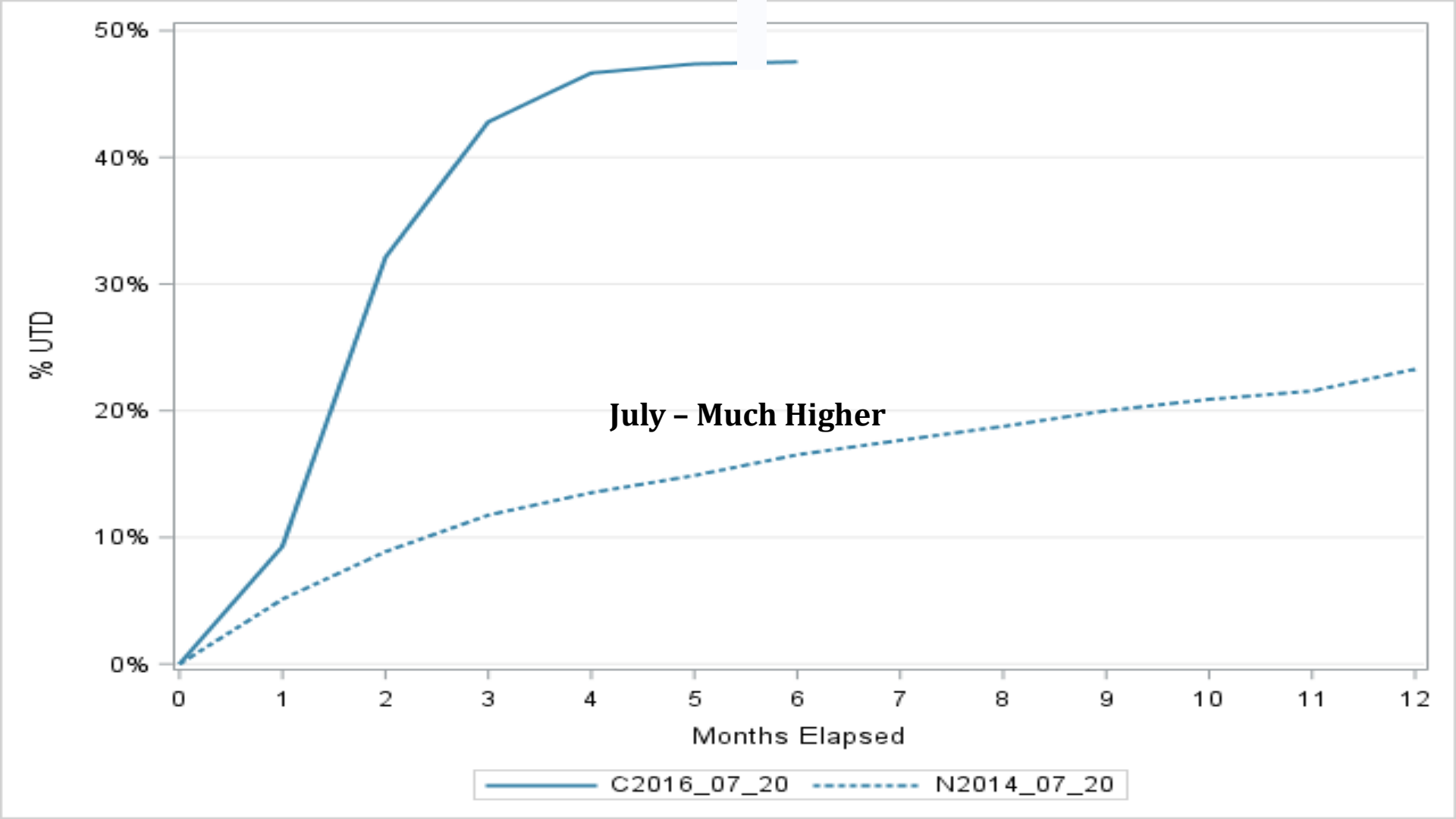
  October – No difference

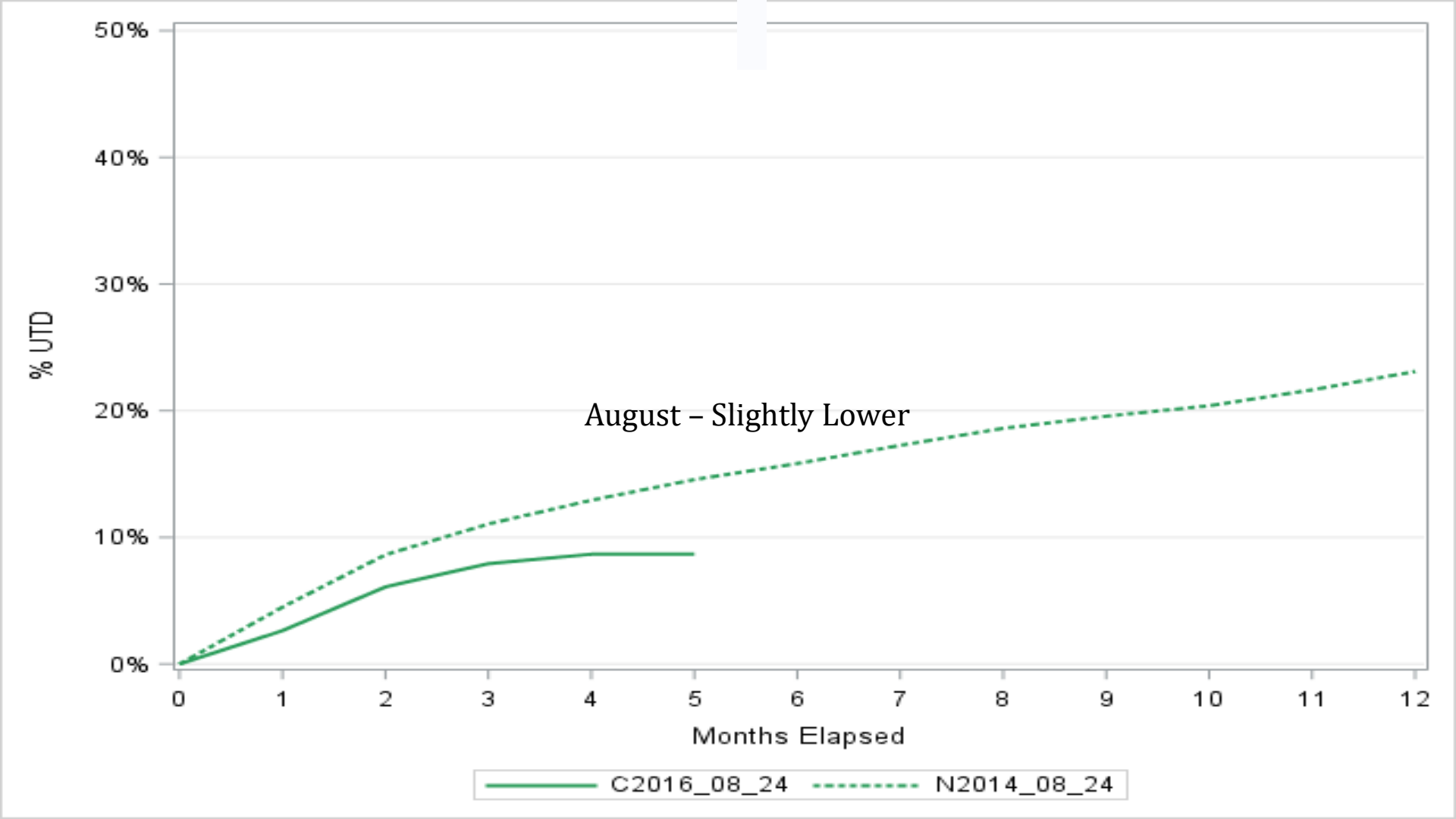

Percent of Clients Up-to-Date (UTD)
50%
40%
30%
20%
10%
0%
Solid = Mailing List
Dotted = Comparison
March –Much Higher
0
1
2
3
4
5
6
7
8
9
10
11
12
Months Elapsed
C2016_03_16
N2014_03_16

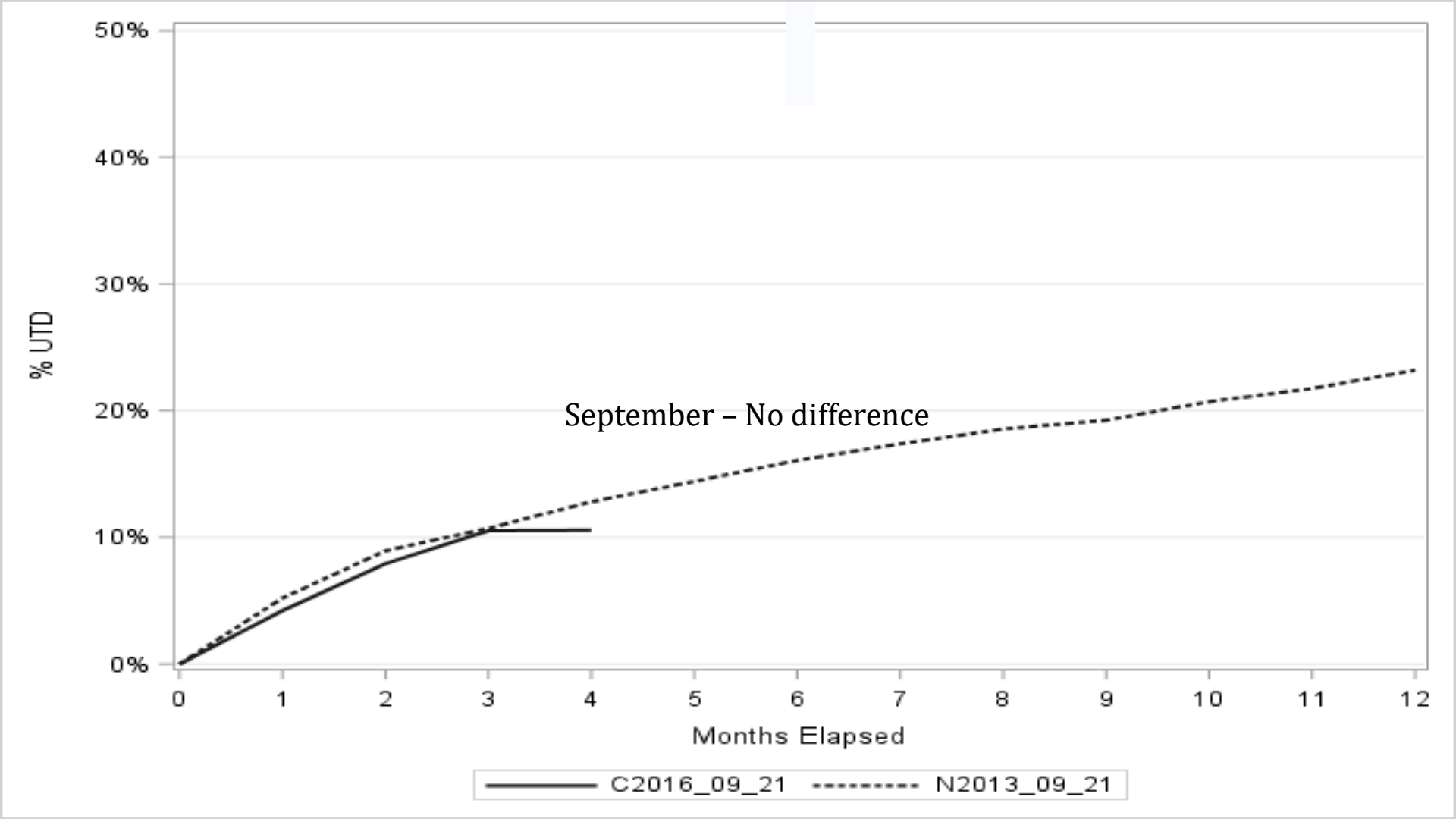

50%
40%
30%
20%
10%
0%
% UTD
April – Slightly Lower
0
1
2
3
4
5
6
7
8
9
10
11
12
Months Elapsed
C2016_04_25
N2014_04_25

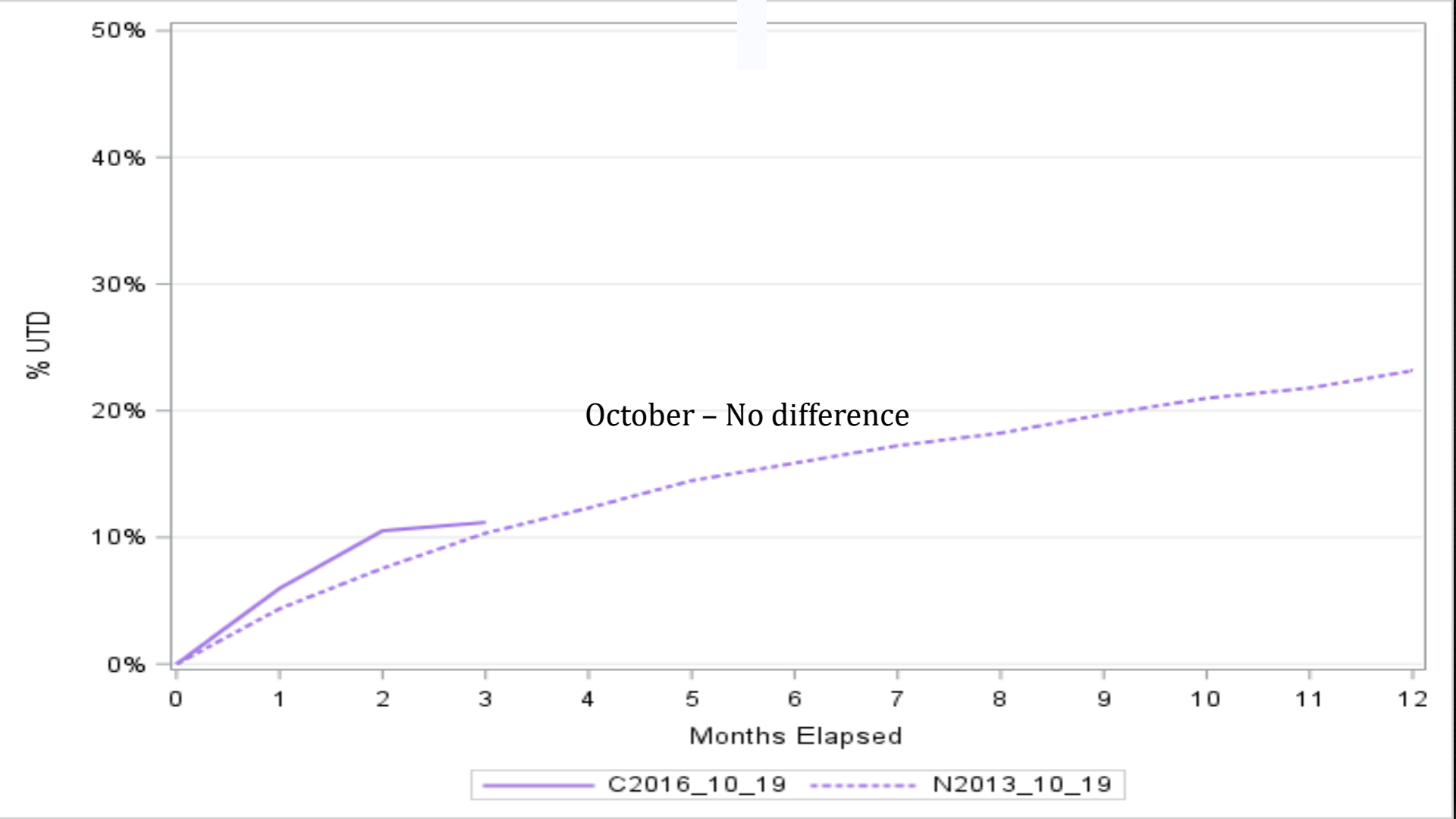

50%
40%
30%
20%
10%
0%
% UTD
May – Much Higher
0
1
2
3
4
5
6
7
8
9
10
11
12
Months Elapsed
C2016_05_27
N2014_05_27

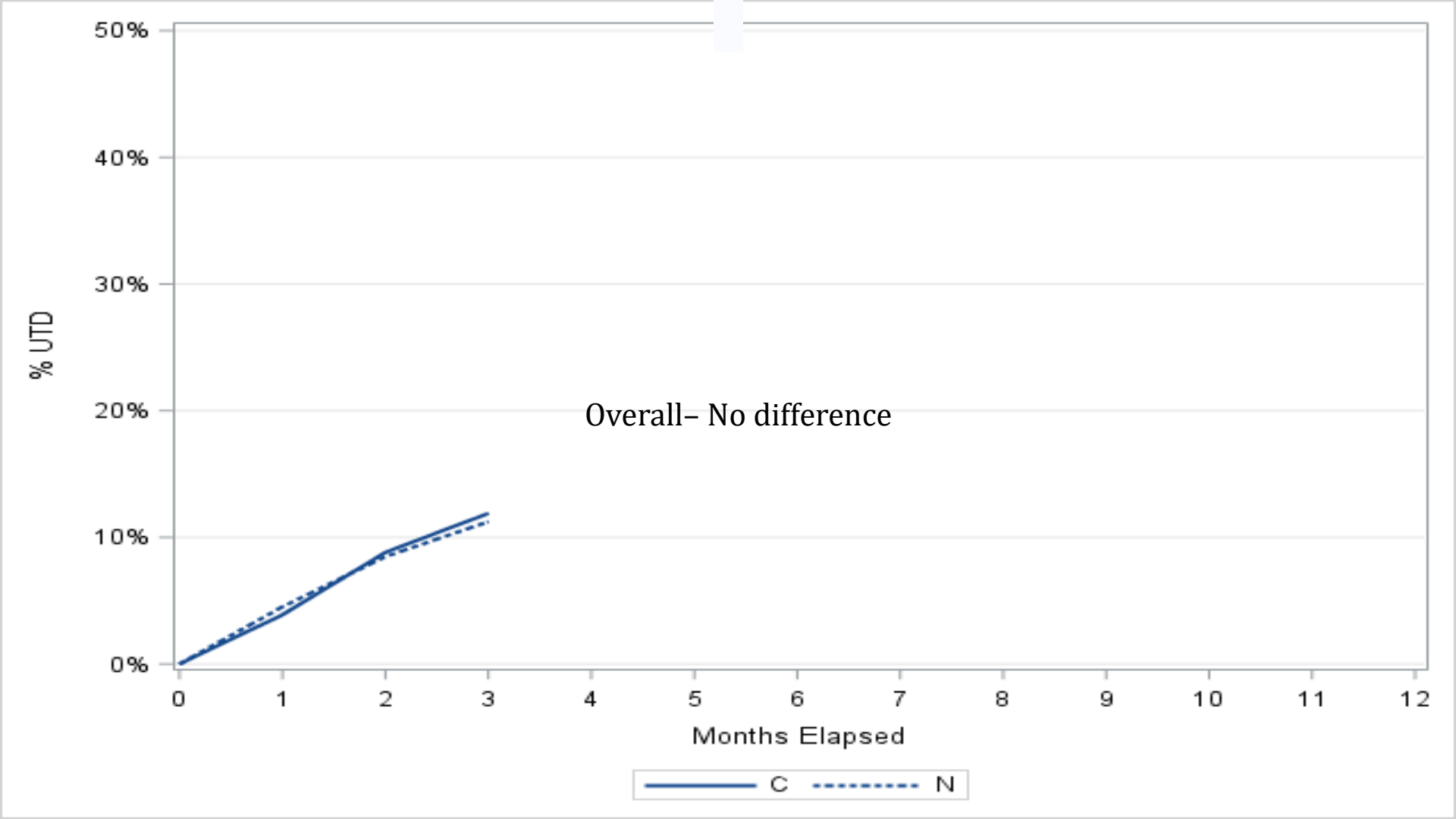

50%
40%
30%
20%
10%
0%
% UTD
June – Slightly Higher
0
1
2
3
4
5
6
7
8
9
10
11
12
Months Elapsed
C2016_06_16
N2014_06_16


50%
40%
30%
20%
10%
0%
% UTD
July – Much Higher
0
1
2
3
4
5
6
7
8
9
10
11
12
Months Elapsed
C2016_07_20
N2014_07_20

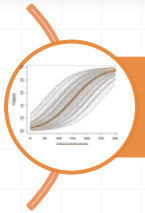

50%
40%
30%
20%
10%
0%
% UTD
August – Slightly Lower
0
1
2
3
4
5
6
7
8
9
10
11
12
Months Elapsed
C2016_08_24
N2014_08_24


50%
40%
30%
20%
10%
0%
% UTD
September – No difference
0
1
2
3
4
5
6
7
8
9
10
11
12
Months Elapsed
C2016_09_21
N2013_09_21


50%
40%
30%
20%
10%
0%
% UTD
October – No difference
0
1
2
3
4
5
6
7
8
9
10
11
12
Months Elapsed
C2016_10_19
N2013_10_19

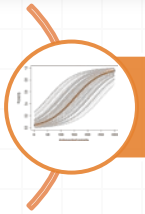


Overall– No difference



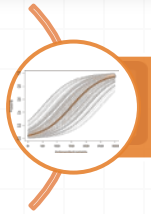
Statistical Analysis

- Gather clients and group similar clients' demographics:
  - Race & Ethnicity (White)
  - Rural/Urban (Census Tract)
  - Medicaid or sCHIP status
- Perform Logistic Regression
- Logistic regression was used to determine the probability a relationship between a binary (up-to-date / not up-to-date) dependent variable (outcome) and several independent predictive variables
- Ideally there would be a measurable, positive, statistically significant relationship between postcard receipt and up-to-date status within three months



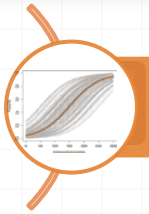
Statistical Analysis

- Results
  - Receipt of card was associated with an “increase” in likelihood between 5% and 20% that an individual patient would be up-to-date in three months
  - Takeaway: very small impact overall



Statistical Analysis

- Limitations
  - Incomplete data
    - Registry not complete
    - Delay in data entry (especially from billing data)
  - Selection bias
    - Only children with valid addresses included
    - Only children with non-returned cards included



Statistical Analysis

- Limitations Continued
  - Seasonality
    - Flu season
    - Back-to-school
  - Comparison groups span different times
  - Unable to track parent contact with providers
  - Limited set of explanatory variables

Public Health Implications

- Proximity to clients is important
- Evaluating public health programs is worth the effort
- Timing may impact expected outcomes
- Benchmark progress
- Multiple data points
- Evaluation is an on-going cycle
- Opportunity to update addresses
- Future partnership with direct immunization providers

Questions / Comments

Damon Ferlazzo, MPA

Section for Disease Prevention
Deputy Administrator

Damon.Ferlazzo@health.mo.gov