

**Analyzing Texas Medicaid Claims to
Supplement Ongoing RCT:
*“Transforming Pediatric Healthcare
Delivery: Implementation and Impacts of a
Pediatrician-led, Coordinated Care System”***

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Collaborators

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Seton Collaborators

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- Proposal – Part 1 and Part 2
- Summary of Pediatric Coordinated Care System
- Summary of Texas Medicaid
- Preliminary analyses – Part 1
- Update on Part 2

Proposal – Part 1

Part 1 – Methods are needed to identify children according to level of medical complexity in administrative data and their corresponding use of resources.

The *Pediatric Medical Complexity Algorithm* (Simon et al., 2014) is a new, publicly available algorithm that identifies the small proportion of children with complex chronic disease in Medicaid claims and hospital discharge data.

The proposed purpose of Part 1 of this study was:

- 1) to apply this algorithm to Texas Medicaid data to determine the sensitivity and specificity of categorization based on medical complexity and
- 2) to summarize the use of resources for the different levels of complexity.

Proposal – Part 2

Part 2 - In order to validate the algorithm used on the Texas Medicaid claims data, we need a clinical gold standard that assesses complexity and chronicity of these diseases.

Seton has been working on a project that assesses children with complex diseases and has collected data on about 250 patients – most of whom (78%) have Texas Medicaid insurance.

The clinicians working on this project can identify which patients would fall into the three categories – and we can match these with our categories based on claims data, in order to determine the specificity and sensitivity of the algorithm.

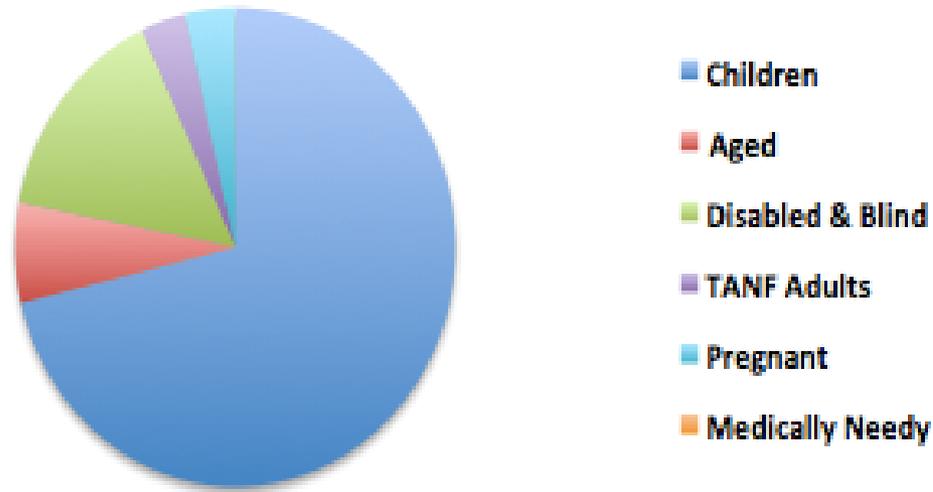
- This project aims to fundamentally transform pediatric health care delivery by positioning the pediatrician as the leader of a health care team comprised of a social worker, nurse case manager, and a community health worker in a family-centered process.
- The team implements interventions for patients with high medical and psychosocial complexity in five areas to promote: 1) healthy relationships in families and school; 2) academic success; 3) chronic disease self-management and self-care; 4) healthy transitions for adolescents and 5) mental health support and counseling via embedded child psychology/psychiatry expertise. T

- This RCT study will evaluate this new pediatric health care delivery model in medically complex children by randomly assigning 400 children with moderate-severe chronic disease to the pediatrician-led, coordinated care model and 200 patients to usual care. The outcomes we will evaluate include: child and family mental health; parent-child relationships and parental engagement in children's activities; school attendance and academic performance for children; chronic disease management in children with obesity, diabetes, and asthma and hospitalization due to complications, and transitions of adolescents to adulthood, including connections to school and work and independent living.

Texas Medicaid Numbers

- Approximately 3.6 million Texas Medicaid patients – 2.6 million are children

Percent of Medicaid Member Segments (2013)



- Prescription
- Inpatient
- Outpatient
- Eligibility

Patient ID is available on all datasets – these are merged by Dr. Richards and then de-identified before analyses.

One hospitalization per line of data

- Dates: Admission & Discharge available (Length of Stay)
- Primary Diagnosis plus 5-6 others
- Paid amount
- Diagnosis Related Group (DRG)

Dataset includes Emergency Room visits **One visit can be on several lines of data**

- One line of data for each procedure (examples: injection, therapy, or physician visit)
- CPT code
- ICD-9 diagnosis (up to 5) : DX1-DX5
- Date of visit
- Place of service
- Paid amount

One line of data represents one prescription that was paid for.

Our division **does not** have in-house access to **data** for **Prior Authorizations that were not granted, abandoned or reversed** prescriptions

- NDC
- Quantity
- Days Supplied
- Paid Amount
- Patient Age
- Patient Gender
- Drug Name/Strength
- AHFS (American Hospital Formulary Service Code- Class of Drug)

One line of data for each month that the patient is eligible

- Race/Ethnicity: Black/White/Hispanic/Native American/Asian/Unknown
- Age
- County of residence
- Dual eligible status

Definitions of complexity are:

'Complex Chronic':

- 1) more than one body system is involved, and each must be indicated in more than one claim, or
- 2) one or more conditions are progressive, or
- 3) one or more conditions are malignant

'Non-complex Chronic':

- 1) only one body system is indicated in more than one claim, and
- 2) the condition is not progressive or malignant

'Non-Chronic':

- 1) no body system indicators are present in more than one claim

Data on Texas Medicaid Children from previous study 2013 data for children taking anti-epileptics.

About 2,700 IDs with diseases of interest to determine if coding is valid and that we have variables needed in Texas Medicaid

Age: 0-18; Mean 7 years (SD = 5)

Race: 15% white, 10% Black, 52 % Hispanic, 23 % other or not coded.

Gender: 56% Male

Definitions of complexity are:

'Non-Chronic':

1) no body system indicators are present in more than one claim

'Non-complex Chronic':

1) only one body system is indicated in more than one claim, and

2) the condition is not progressive or malignant

'Complex Chronic':

1) more than one body system is involved, and each must be indicated in more than one claim, or

2) one or more conditions are progressive, or

3) one or more conditions are malignant

	N	%
Non-Chronic	290	10.76
Non-complex Chronic	612	22.70
Complex Chronic	1,794	66.54
Total	2,696	1.00

Update on Part 2

- Part 2 approved by both UT (November 2015) and Seton (January 2016)
- 190 Medicaid IDs sent to Medicaid to request data pull (January 2016)
- Waiting for data – have sent reminders – New Director of Medicaid and staff changes – but they say ‘soon’.