Lessons Learned from the Pediatric Medical Home Program at UCLA

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■ History of Medicine
■ Demographics of pediatric patients
■ Pediatric Medical Home Program at UCLA
■ Lessons learned
■ What does the future hold?
A Brief History of Medicine

Last Angry Man → Explosion of Technology → Fragmentation of Care
Post World War II Advances in Medicine

942 - First successful treatment of a patient with penicillin
952 – First tests of Salk Polio Vaccine
954 – First kidney transplant
958 - First wearable external pacemaker
962 - First oral polio vaccine
967 - First human heart transplant
Changing Demographics of Pediatric Patients

- The percentage of patients with special health care needs has increased.
- Population is older as children with previously fatal diseases live longer.
- Older pediatric patients are often sicker
Patients are becoming more complex
Cost ($1000)

Patients

0 50 100 150 200

0 50 100 150 200 250 300 350 400 450 500 1000

1 501 1001 1501 2001 2501 3001 3501 4001 4501

100%
In the California Title V (CCS) Program 10% of patients utilize 90% of the program’s resources.

The CCS population comprises approximately 10% of all children in California.

10% of the children in the CCS program represent approximately 1% of all children in the state, and children in the CCS program are amongst the highest utilizers of medical care.

Thus, it is quite likely that 1% of children in California account for a substantial portion (perhaps as high as 60-75%) of the medical costs for all children.
The Medical Home Program at UCLA

- Applies the Principles of the Medical Home as outlined by the AAP in 2002
- Focusses on the Children with Multiple Chronic Conditions
- Resides in the General Pediatric Resident Continuity Clinic
Parents in Household

- 2 Parents: 59%
- 1 Parent: 41%

Gender Distribution

- Male: 43%
- Female: 57%

Primary Language

- English: 8
- Spanish: 10
- Portuguese: 1
- Zapotec: 1

Primary Language: English and Spanish are the most common, followed by Portuguese and Zapotec.
Number of Patients

Number of Specialists

- Two: 9
- Three: 6
- Four: 11
- Five: 3
- Six: 1
## Results

<table>
<thead>
<tr>
<th></th>
<th>Year Prior</th>
<th>Year After</th>
<th>Δ</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED Visit</td>
<td>1.1 ± 1.7</td>
<td>0.5 ± 0.9</td>
<td>-</td>
<td>0.01†</td>
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<tr>
<td>Urgent Care Visit</td>
<td>2.6 ± 3.3</td>
<td>3.3 ± 4.8</td>
<td>o</td>
<td>N.S.</td>
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<tr>
<td>Hospital Admissions</td>
<td>0.9 ± 1.7</td>
<td>1.1 ± 1.2</td>
<td>o</td>
<td>N.S.</td>
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<tr>
<td>Outpatient Visit</td>
<td>20.6 ± 15.7</td>
<td>24.9 ± 15.8</td>
<td>+</td>
<td>0.05*</td>
</tr>
</tbody>
</table>

* P value based on one tailed Wilcoxon rank-sign test
† P value based on one tailed paired t test
Results

- Box plots for the standardized score distributions on the Family Medical Home Index for the 7 English speaking families and the 15 Spanish speaking families.
- The overall mean for the English speaking families was lower (74.3) than the mean score among Spanish speaking families (82.8). There were no significant differences between the groups.
Lessons Learned

While complex patients will always require substantial outpatient and inpatient care, a comprehensive system of care coordination such as the Medical Home Project at UCLA can reduce medical costs by decreasing medical resource utilization.

Lessons Learned

Differential effects of language on family satisfaction scores can be eliminated by providing family centered bilingual care in the setting of a Medical Home

Can the Medical Home improve Value?
Tiers of Care

- Tier I
  - Well Children
  - Children with Acute Illness

- Tier II
  - Children with a single chronic condition
    - Children with a single serious condition > 1 year

- Tier III
  - Children with multiple chronic medical conditions
Plan of Care and Follow-up

Patient Complexity

Tier I

Individualized care plan

Care plan with:
• Goals
• Treatment Plan

Family education
• Self-management skills
• System navigation

Team based implementation of care plan
• Virtual teams with primary and specialty care

Tier II

Care summaries
• Integrated across specialties
• Written for family and providers

Huddles to review complex patients

Family support
• Program enrollment
  ➢ Financial
  ➢ Family support
• Assistance in obtaining DME and home health services

School coordination program

Case manager
• Distinct from care coordinator
• May be hospital or plan based

Tier III

Adapted from the work of an expert panel meeting organized by David Bergman, MD and convened by the Lucile Packard Foundation for Children’s Health, November 2010.
The Value Equation

Value = Outcome/Cost
Strategies to Increase Value

- 0-2%tile – Tier III
  - Care-coordination and management utilizing medical home principles

- 2-17%tile – Tier II
  - Chronic care management
  - Shared decision making
  - Patient education

- 17-100%tile – Tier I
  - Community based care
Future of the Pediatric Medical Home at UCLA

- We are actively expanding our Program in an attempt to determine the scalability of these results.
- The Program currently serves over 100 children with chronic disease and complex care coordination needs.
- Four Tier II conditions have been identified:
  - Asthma, Diabetes, Sickle Cell and IBD.
Medical Home Team

- Leslie Rabbitt
- Danika Pineda
- Cecelia Flores
- Irma Hernandez
- Julie Ramirez
- Siem Ia, RN-PNP
- Leslie Hamilton, M.D.
- Carlos Lerner, M.D.-M.Phil
- Ruey Chang, M.D.-M.P.H
- Paul Chung, MD-M.P.H.
- Ryan Coller, MD

Those whose ideas I have borrowed

- Atul Gawande
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- Clayton Christensen
- Carl Cooley
- David Bergma
- Gerald Green
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- Patrick Flynn
- AAP MHI-PAC