Intervention for Youth Repeatedly Hospitalized with Complex Medical Conditions: NICH

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The Problem

- Doernbecher Children’s Hospital 2008-2011
- 279 youth hospitalized 2x
- 82 youth hospitalized 3x
- 148 youth hospitalized 4x
- 230 youth (4.5% of all patients)
  - 3+ hospitalizations
  - 27% of hospital charges or $67,000,000
  - 20% of admissions
  - More than 40% Medicaid
Show Me the Money

4.4 million hospitalizations
$31,000,000,000
Determined preventable or avoidable

Children accounted for 276,000
$737,000,000

Bending the Curve In Medicaid

- 2-4% of patients utilize 50% of medical resources

- **Triple Aim:**
  - Reducing costs
  - Improving health
  - Improving care

- **NICH (Novel Interventions in Children’s Healthcare):**
  - Intensive Behavioral Health
  - Case management
  - Care coordination

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Integrated Healthcare for Oregon Youth
(100,000+ youth on Medicaid)

Oregon Youth with Special Health Care Needs and Complex Medical Conditions on Medicaid
(20% – 20,000+)

High Utilizing Oregon Youth on Medicaid with Complex Medical Conditions
(2%-5% – 2000+)

⇒ NICH
NICH Families

- Marginalized by the healthcare system

- Children's health moves down on priority list because of families being heaped under a mound of psychosocial challenges
Care Coordination
- Attend Clinic Appointments
- Ensure Transportation to Clinic
- Adequate Medical Supplies
- Liaison Between Medical and Family
- Contact Prior to Hospitalization
- Care Ambassador/Navigator

Care Ambassador/Navigator
- Case Management
  - Working with School
  - Assistance with Job/Work
  - Interface with DHS
  - Access to Drug/Etoh Treatment
  - Assistance with DV Issues
  - Insecure Housing
  - Other Resources for the Family

Behavioral Family Systems Therapy
- Family-Based Problem Solving
- Communication Skills Training
- Family Roles and Structure
- Management of Family Conflict
- Establish Proper Supervision

NICH
- CF
- Diabetes
- ESRD
- Cancer
- Pain

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NICH Intervention

• 24/7 therapeutic support
• BFST – family-based problem solving
• Pragmatic & systematic behavioral intervention
• Case Management and Care Coordination across contexts
  – Medical
  – Social services
  – Community mental health
  – School
• School consultation
• Employment, social and life skills coaching

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Delivery of Care

• Inpatient
• Clinic
• Tele-health
  – Skype (1-2x/wk)
  – Text (daily)
  – Phone (daily)
• Home visits (weekly)
• Care coordination (daily)
• School visits (as necessary)
NICH Case

Parent with MH/Etoh Problems

Family Viewed by Healthcare Team as “Train Wreck”

Long History of Poor Adherence and High HbA1cs

High Degree of Family Conflict; Single Parent

Youth Not in School; Poor Parent Supervision; No Interactions with Peers

16 y o with T1DM
Systems Challenges

- Inpatient vs. Outpatient Medical Providers
- Disciplines
  - Physicians
  - Nurses
  - Social Workers
  - Child Life
- Insurance
  - Case managers
  - Medical directors
  - Beaurocratic systems
(More) Systems Challenges

- DHS
- Schools
- . . . .
Where the Rubber Meets the Road

- Establish rapport & get “buy in”
- Understand context & challenges
- Clarify expectations
- Determine next steps
- Pay attention to and reinforce “small wins”
- Serve as care ambassador
- Assist in re-engaging with care
- Support disease management & problem solving
- Titrate services

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Current NICH Diagnoses

- 5 Cystic Fibrosis
- 10 Chronic Pain
- 23 Diabetes
- 4 Cancer/GVHD
- 3 End Stage Renal Disease
- 9 Other
  - Eating Disorder
  - Spina Bifida
  - IBD
  - Preg/T1DM
## Financial Outcomes of NICH

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<th>Diagnosis</th>
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<th>YR During/Post NICH</th>
<th>Difference</th>
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The Cost of Care

- CF Clean Out
  - $30,000/2wks
- DKA
  - $15,000
- Dialysis
  - $44,000/yr
- Kidney Transplant
  - $269,000
- Asthma
  - $9,000
- Upper/Lower GI
  - $3,000
Medicaid Oregon CCOs

- 35 HealthShare
- 12 Willamette Valley CCO
- 5 DVIPA
- 3 Intercommunity Plus CCO
- 1 Out of pocket
- 3 Private insurance

- 59 patients total
- 40 on waiting list and growing everyday
- 9 counties served
NICH Moving Forward

• Interventionist in Central Oregon
• NICH contract with for 100+ high-utilizers
• NICH services to youth in southern WA hospitalized in Oregon
• Developing model for training and supervision of behavioral health consultants
• Adaptation of model to serve other populations
  – Piloting NICH as prevention model
  – Obesity, T2DM, and Medicaid
  – Mental health emergencies in the ED and PICU
  – NICU grads
  – Medically complex kids in foster care
  – Tiered approach to youth with recurrent/chronic pain
Case 1: Medical History

- 19 y/o female with:
  - Acute Myeloid Leukemia S/P bone marrow transplant
  - Chronic GVHD of mouth, gut, and skin
  - Multiple infections
  - Pulmonary Embolism s/p treatment
  - Bronchiolitis Obliterans
  - Chronic pain
  - Morbid obesity
Complicating Medical & Psychosocial Factors

- Borderline personality disorder
- Depression with previous suicide attempt
- Anxiety with history of frequent panic attacks
- Pseudoseizures
- Narcotic abuse
- Non compliance
- Social/caregiver stressors
NICH Presentations and Publications

Publications:


• Harris MA, Wagner D, Heywood M, Hoehn D, & Spiro K (under review). Treating the real cause of repeated DKAs in youth with T1DM: NICH work. *Diabetes Care*.

Abstracts:


Presentations:


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Questions?