Superutilzer Analytics & Action

The Key to Value Based Care Success
Driving Health Care System Transformation

Healthcare Delivery System 1.0
Episodic Non Integrated Care
Fee for Service

Healthcare Delivery System 2.0
Accountable Care
Volume based payments -> performance-based Payments
Continuous quality improvement and measurement
Transparency

Healthcare Delivery System 3.0
Integrated Health
Full risk or capitated payments
Bundled payments across levels of care
Population health focus

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Disproportionate Cost for Members with Behavioral Health Comorbidity

- **Member Rank Percentile:**
  - 5%: 20%
  - 50%: 25%
  - 100%: 5%

- **Cost Percentile:**
  - 0.9%: 19.5%
  - 78.9%: 1.5%
How to get to Value Based Care?
“Vision without execution is hallucination.”
– Thomas Edison
The VBC Failures

• Remote RN Telephone Care coordination.
• All but 1 (health quality partners) of the first series of CMS Innovation grantees.
• Most ACOs
  – Average savings is around 2%
Why did these fail?

My theories:
1. [Handshake]
2. [Brain with cross]
3. [Fox, Chicken, House]
The Known Solutions

• Camden Coalition Hotspotter’s model
• Health Quality Partners
• Oklahoma ER high utilizer program
• Mary Naylor’s Transition Care Management program
What they did

- Targeted impactible high utilizers in the community
- Engaged in Home visits
- Tackled key social needs (food, housing, community, spirituality, safety)
- Aligned meds
  - Reduced total # of meds
  - Extra med checks post hospital/ER visits
How effective were they?

**Camden HotSpotters**
- 40% reduction in ER/Hospitalizations
- Used lay staff

**Health Quality Partners**
- Reduced hospitalizations by 33%
- Cut Medicare costs by 22%.

**Transition Based Care Management**
- NP based
- Saved around 20% of costs for high need Medicare patients at risk of rehospitalization

**Oklahoma ER utilization program**
- Decreased ER use by high users by 55%
Big Thought

Effective High Utilizer Care could solve the national budget crisis & keep our state Medicaid budgets solvent in perpetuity.
How do CMHCs best serve the 5% top high utilizers?
Impact of Behavioral Health Co-Morbidities on Medicaid Costs

- Asthma and/or COPD: $8,000
- Congestive Heart Failure: $9,488
- Coronary Heart Disease: $8,788
- Diabetes: $9,498
- Hypertension: $15,691

Costs for:
- No Mental Illness and No Drug/Alcohol
- Mental Illness and Drug/Alcohol

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About the 5%

- For SSDI Medicaid adults, 5% = 60% of costs.
  - 40% have MI and cardiovascular
  - 40% have MI and CNS;
  - 29% have MI and pulmonary disorders. (Kronick, Bella, Gilmer, 2009).
- Missouri 5% high utilizers = 85% had a mental health diagnosis. (Lewin Group)
If these aren’t our patients already, they should be.
Requirements for Value Based Care

- Transparent Outcomes
- Performance Based Management
- Transparent Communication

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What If...

- 21st century technologies?
- BA-level staff?
- Experience engaging persons with SMI & SUD?
- We could get next day data from partner MCOs?
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coactionHealth
Research-Based Proprietary Clinical Model
+
Super Utilizers ($35k+ yr health expenses)
+
High Intensity Wellness Coaching w/ RN On Call
+
Flexible Funds
+
Technology-Enabled Care
Goals

Engage all clients with their health home.

↓ Reduce unnecessary hospitalizations.

↓ Reduce unnecessary emergency department visits.

↑ Improve clients’ physical health

↓ Decrease clients’ social needs

↑ Improve clients’ experience of care

+ Determine value equation.

$ Obtain value based care contracts.

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**Vision**: To equip people who have complex healthcare needs with the tools, skills, and connections they need to:

- Engage with their health home
- Improve their physical and mental health
- Enjoy life

**Values**

With our coworkers, the people we serve, their loved ones, and the health homes we work with, we aim to be:

- Responsive
- Empowering
- Transparent
- Fun
Case Study: “Rebecca”

Results
• Lost **17 pounds**
• HgbA1c now in normal range (was in diabetic range).
• 1 ED visit 1st week. 1 ED visit 2nd month.
• Diabetes blood sugar is more stable.
• Switched from regular to diet coke.

What worked for Rebecca
• FitBit—Loves tracking her steps.
• I-Phone—Faithfully tracks food intake in FitBit app & uses HIPAA chat to engage with wellness coach.
• **Accompanied exercise was key for getting moving**
• Wellness Coaching – has seen doctor, gotten labs, improved nutrition, gotten follow-ups, & is working her wellness plan.
• Health Bucks
  – Swimsuit & Temporary Y pass
  – Yoga ball for watching TV
  – Hygiene items (toothbrush, soap)
Case Study: “Samantha”

Results
• 0 Hospitalizations
• 0 ER visits
• Diabetes is stabilizing

What worked for “Samantha”
• HIPAA video-chat de-escalation while in crisis mode. Note, in past crisis mode \(\rightarrow\) not monitoring diabetes \(\rightarrow\) shaky \(\rightarrow\) falls
• Wellness coaching for monitoring diabetes
• Centerstone Assistance: Electric Bill (had to pay for a funeral & would have been without electricity for the month).
• Health Bucks
  – Swimsuit, yoga ball, cockroach traps
From our clients’ voices

“Mike”

“Two years ago I was dying. A lung transplant was all that would save me, now I’ve miraculously gained 16% of my lungs back. I have an exercise program where I work out with a CPAT machine, and it has expanded my lungs back. The surgeons at Vanderbilt have no answer for what I’ve done, they're saying it's a miracle. No one’s gone from the 30's to gain their lungs back. [My wellness coach is] helping me push forward and not step back and think "well I'm dying I should give up…. The iPhone it is tremendous, and I recommend it. At night when I’m alone and not interested in TV and bored and depressed, I can pick up the phone, play a game, listen to some music, read about current events.”

“Sarah”

“I have lost 25 pounds since I started going. I have now gone from 260 (when I had my son) to 197, and had to buy new britches.”

“Laquita”

“I love [the technology]. I use it to help, not just as a phone. Using Hipaachat to talk to [my wellness coach] is amazing. It keeps me on track, it also helps me remember to exercise, and I enter all my food. It also helps if I don’t have a computer because I can look stuff up about food, and helping in the house (like how would a chemical react if I’m using it). I looked up how to get rid of cockroaches in my apartment.”
Client Satisfaction Results

- I feel moderately or very confident managing my condition: 100% (30 days) vs. 0% (Intake)
- I feel connected to my care team: 88% (30 days) vs. 0% (Intake)
Outcomes Results

• **NOTE** – *these are preliminary results from a feasibility study with 10 patients.*

• Hospitalizations
  – 0 hospital days during intervention.
  – Note: 13 days of hospitalizations in 3 months before the intervention.

• 5 ED visits during the intervention for 3 clients
  – No reliable comparison data for 3 months < intervention

• 55% decrease in areas of need on clients’ social needs checklists.
Lessons Learned

• Not all high utilizing patients want something like coactionHealth. Reasons clients chose not to participate include:
  – “I don’t want to spend 1-3 hours a week with a wellness coach. I will miss my favorite TV shows.”
  – “I can’t learn how to turn on this thing [i-phone].”

• Some clients are too sick for coactionHealth
  – One client received hospital visits and several home visits from our coach, but never could use the flexible funds or the technology tools since she was so deathly ill. She rejected skilled nursing & home health recommendations. She died recently due to complications from her diseases.
  – One client was very eager to participate but was repeatedly discharged from Davidson County hospitals to out of service area group homes and skilled nursing facilities outside of the county.
  – One client wouldn’t sign the technology release.

• We estimate that 50% of high utilizers will engage, and that this will probably benefit 2/3 of those engaged.
What data is required to produce actionable information enabling coactionHealth to improve the lives of our clients?
• Hospitalization/ER
  – Next day or better

• Physical Health Indicators

• Traditional EHR Data

• Activity Data

• Self Report Assessments
Who is likely to be hospitalized 30 days from today?
Currently we are able to predict 74.1% of hospitalizations that occur.

False positives are acceptable for clinical intervention (>90% Accuracy).
- Tested hundreds of predictors across millions of encounters.

- Settled on 22 predictors that are a mix of payer and EHR data.

- Now have a random forest model with a next day latency.

- Randomized clinical trial of the clinical intervention begins in November.
• Everyone is interested in a different set of data.

• Everything doesn’t have to be pulled together for clinical interventions to impact people’s lives.

• Interfacing is aggravating.
DEMO, if time permits.