Addressing the Demand for Pediatric Mental Health Services

David Axelson, M.D.
Chief of Psychiatry and Medical Director of the Big Lots Behavioral Health Service Line,
Nationwide Children's Hospital
Clinical Professor of Psychiatry, The Ohio State University School of Medicine

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Learning Objectives

Describe the trends in youth suicide including presentation to emergency department for suicidal ideation and behavior.

Appraise the data supporting acute interventions for youth presenting with suicidal ideation to emergency or crisis services.

Evaluate the role of prevention interventions in the addressing the demand for pediatric mental health services.

The Burden of Pediatric Mental Illness

- 11% of children (ages 8 to 11) have or have had a mental illness with severe impairment
- 22% of teens (ages 13 to 18) have had a mental illness with severe impairment in their lifetime
- Only 50% of youth with a mental health disorder receive any behavioral health treatment

Potential Increased Prevalence of ADHD and Autism in Youth

- ADHD
  - 2009-11: 8.47%
  - 2015-17: 9.10%
- Autism Spectrum Disorder
  - 2009-11: 1.12%
  - 2015-17: 1.60%

Zablotsky B et al., Pediatrics (2019)
Increased Prevalence of Depression in Adolescence (ages 12-17)

Major Depressive Episode

<table>
<thead>
<tr>
<th>Year</th>
<th>2005</th>
<th>2017</th>
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<tbody>
<tr>
<td>Rate</td>
<td>8.7%</td>
<td>13.2%</td>
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Twenge et al., J Abnormal Psychology (2019)
National Survey on Drug Use and Health

Rate of Death by Suicide in US: Ages 10-19


- 69% increase since 2008
- 3rd leading cause of death in 10-19 year olds
- 80-90% of youth who complete suicide have a mental health diagnosis

Increase in pediatric mental health emergency visits

- All ED Visits: ↑11%
- Any Mental Health D/O: ↑60%
- Substance Use D/O: ↑75%
- Deliberate Self-Harm: ↑329%
Rate of Death by Suicide in US vs. Franklin County: Ages 5-19

More Behavioral Health Patients in the NCH ED

Boarder Daily Census
How to meet the demand?
Expand and improve the system of care?

- Population Health Approach

- Systems of Care that will have the maximum impact on the overall health of youth given the available resources

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Regional Need – Population Health

- 130,000 children & adolescents in NCH's service area
- 47,000 in Franklin County
- 28,000 in Primary Service Area
- 55,000 in Secondary Service Area

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How to expand pediatric behavioral health services?

- What will give the most “bang for the buck”?
- What will address the need at the Emergency Department?
- Serious mental health workforce shortage
- No clear evidence base for effective system of pediatric mental health care

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Behavioral Health Levels of Care – Care Continuum

Evidence for Levels of Interventions for Youth Suicide

Inpatient Psychiatric Hospitalization for Suicidal Youth

- Some promising preliminary data for Dialectical Behavior Therapy improving outcomes on inpatient units
- No controlled trials comparing inpatient vs. other options
Evidence Base: Outpatient Interventions for Suicidal Youth

- Dialectical Behavior Therapy for Adolescents
  - Decreased suicidal ideation initially but no difference at 3 year follow-up¹
  - Decreased suicidal ideation and attempts at 6-months but not 12-month follow-up²
- Attachment-Based Family Therapy
  - No difference compared to supportive therapy³
- Cognitive Behavioral Therapy
  - Large trial (n=147) ≠ compared to Treatment as Usual⁴
  - CB-Family Treatment showed potential benefit⁵

¹ Melhem L et al., J Child Psychol Psychiatry (2019)
² McCaughley E et al., JAMA Psychiatry (2018)
⁴ Esposito-Smythers C et al., J Child Psychol Psychiatry (2019)
⁵ Asarnow JR et al., J Am Acad Child Adolesc Psychiatry (2017)

We need a plan
We cannot wait for more data

NCH Board and Senior Leadership Charges Us to Develop a Plan

Evidence for Interventions in the ED for Suicidal Youth

- Family Intervention for Suicide Prevention vs. Usual ED care¹
  - CBT family session + telephone f/u contacts
  - ↑ likely to attend outpatient treatment (92% vs. 76%)
  - More outpatient visits (5.3 vs. 3.1)
  - No difference in clinical or functional outcomes

¹ Asarnow JR et al., Psych Services (2011)
Behavioral Health Strategic Plan

**Our Aspiration:**
To develop a national model for pediatric mental health care

- Expanding clinical access to pediatric mental health care
- Developing targeted prevention efforts
- Leading a coordinated, collaborative system
- Researching the causes and treatment of behavioral health conditions

**Intermediate Levels of Care**
- Integrated & Multi-specialty Programs
- Primary Care Integration
- Existing clinic, outpatient & community-based services

**Recruitment / Retention**
- Infrastructure
- Quality & Process Improvement: Operational Systems & Clinical Services

NCH Big Lots Behavioral Health Pavilion
Goals of Behavioral Health Pavilion

- Hub for Acute and Intermediate Levels of Care, Education, Research and Administration
  - Synergies of staffing
  - Interdisciplinary collaboration
  - Seamless transitions across levels of care
  - Integration of clinical, academic and research missions

- Stigma Breaking

- Patient and Staff Safety
  - "Zero harm"

- Forward Thinking
  - Ensure Best Outcomes
  - Encourage Engagement
  - Reduce Restraint and Seclusions
  - Attract and Retain Valued Employees

Crisis Services

- Reduce rate of admission to inpatient
- Increase patient and family engagement
- Improve transition to other levels of care
- Hopefully improve outcomes

- Psychiatric Crisis Department
- Youth Crisis Stabilization Unit
- Critical Assessment and Treatment Clinic
Psychiatric Crisis Department

- Safe, secure facility to assess youth in crisis
- Triage screens for medical issues and psychiatric status
- Most patients can be assessed in consult rooms
- Comfort room (padded, low stimulation)
- Extended observation suite (EOS) for high acuity patients and those requiring longer assessment
- Gross motor room in EOS

Psychiatric Crisis Department

- 24/7 coverage with licensed BH clinicians, nursing and pediatric medical physician
- 8 AM – 12 MID: child psychiatrist on site
- 12 MID – 8 AM: psychiatrist coverage by phone
- Goal is to have sufficient time and space to be able to determine optimal disposition

Youth Crisis Stabilization Unit (YCSU)

- Licensed as a medical unit
- Camera monitoring
- High therapist to patient ratio (1:2)
- Intensive therapeutic intervention
  - Goal of 4 hours per day
  - Individual and family sessions
- Psychiatry
  - Daily assessment and intervention
Youth Crisis Stabilization Unit - Core Elements

- Assessment
- Sequencing Crisis Event
- Family Therapy
- Individual CBT
- Parent Support
- Safety Planning
- Linkage
- Discharge Planning
- Treatment Planning
- Motivational Interviewing
- Psycho-Education

NO GROUPS OR MILIEU

YCSU Staffing Structure

- Psychiatry on site from 8a-5p
  - On call overnight
- Therapists on site from 9a-9p
  - Clinical Coordinator and Supervisor 8a-5p
- Nursing 24/7
- Parent Support Specialists
- Recreation Therapy 8a-5p

YCSU Outcomes

- 50 participants; Mean LOS 3.03 days
- 76% Mood disorder; 54% anxiety disorder; 56% prior suicide attempt
- 88% follow-up rate; 11% had subsequent suicide attempt

McBee-Strayer S et al., Child Adol Mental Health (2019)
Critical Assessment and Treatment Clinic

- Bridging from Inpatient Units, YCSU, Psychiatric Crisis Department
- Urgent referrals from Central Intake
- Masters Level Therapists
  - Individual
  - Family
  - Group
- Starting to integrate psychiatry

Primary Care Integration

Primary Care Integration with BH

- NCH Primary Care
  - Peds Psychology on site, integrated
  - Psychiatry e-consultation, psychosocial rounds
  - Educational as well as service
- Physician Direct Connect
- Project ECHO
Extension for Community Healthcare Outcomes

Goal: To equip clinicians everywhere to provide better care to more people right where they live through education and support.

Telementoring to increase capacity to help them manage specialty conditions in the primary care setting.

Different way to teach and confidence to take the next step with management.

Objectives for Child BH Project ECHO

• Expand the capacity of primary care providers to care for children with common behavioral health conditions using evidence-based medical and psycho-social intervention strategies

• Share knowledge of best practices in child and adolescent psychiatry with optimization of pharmacologic and non-pharmacologic resources

• Build relationships with primary care providers through open dialogue and communication to enhance care coordination and reduce professional isolation

Hub team

- Family advisor
- Social Worker
- Psychiatrist
- Pharmacist
- Psychologist
- IT support

Total 0.25 FTE combined
ECHO Structure

- Dates: 2nd and 4th Thursday of the month
- Time: Noon to 1pm
- Structure of the sessions
  - 10-15 minute discussion of identified topic
  - Case presentation and discussion
  - Questions
  - Recommendations

BH Knowledge and Competence before and after ECHO

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<td>Evidence-Based Interventions</td>
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Prevention
School / Community-Based Suicide Prevention Programs

- **Signs of Suicide (SOS)**
  - Three RCTs show 40-64% reduction in self-reported suicide attempts at 3-month follow-up\(^1\),\(^2\),\(^3\)
- **Youth Aware of Mental Health Program (YAM)**
  - At 12-months, Suicide Attempt Rate 0.75% vs. 1.37% in Controls\(^4\)
- **Garrett Lee Smith Youth Suicide Prevention Program**
  - SAMSHA funds multiple activities (gatekeeper training; outreach; screening; early intervention and linkage to treatment; means restriction)
  - Counties with GLS programs: Suicide rates are 0.9 per 100,000 less than expected after one year\(^5\)
  - 1.1 per 100,000 after two years\(^5\)

\(^3\) Aseltine RH et al., *BMC Public Health* (2007)
\(^4\) Schilling EA et al., *Suic Life Threat Behav* (2014)

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**Signs of Suicide (SOS)**

- Train all adults to identify depression symptoms and warning signs for suicide
- Teach action steps to students and adults when encountering suicidal behavior
- Increase student awareness and help-seeking
- **Acronym (ACT)**
  - **A**cknowledge
  - **C**are - show that you care
  - **T**ell a trusted adult

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**Advantages of SOS**

- Implemented by school staff
- Engages existing supports including school staff, parents, peers, community
- Universal screening for depression and suicidal ideation (questionnaire and peer nomination)
- Increases dialogue around mental health
  - Reduces stigma
- **Sustainable**
**NCH Signs of Suicide Implementation**


- 43,227 students
- 8,457 Yes Response Cards (22.8%)
- 6,099 Positive Depression / Suicide Screens (17.5%)
- 11,283 Triage Assessments (26.1%)
- 1,411 Risk Assessments (3.3%)
- 259 Crisis Referrals (0.6%)
- 2,127 Treatment referrals (4.9%)
- 8,457 Yes Response Cards (22.8%)
- 6,399 Positive Depression / Suicide Screens (17.5%)

**PAX Good Behavior Game**

- Evidence-based universal prevention model for elementary school students
- Teacher-driven, implemented in the classroom
- Applies basic behavioral core principles
- Game-like reward system
- Encourages development of self-management skills, emotional regulation and pro-social behavior

**PAX Good Behavior Game**

Improved Outcomes...
- Up to 75% reduction in disruptive and inattentive behaviors in the classroom
- Up to 60% fewer discipline referrals
- Improved academic standardized test scores
- 20-30% reduction in special education
- 15% more likely to graduate from high school
- 32% reduction in juvenile and adult criminal acts
- Up to 50% reduction in suicidal ideation

Substance Use Prevention...
- 68% reduction in tobacco use
- 35% reduction in alcohol dependence
- 50% reduction in other substance use
Prevention:
*PAX Good Behavior Game*

2013-2014

2014-2015

2018-2019

Over 2,500 students in 16 schools reached

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Preschool Prevention

- Statewide Ohio Preschool Expulsion Prevention Partnership Hotline
- Preschool Classroom Consultation expanded to 25 Centers in central Ohio counties
- 2 Master Trainers for 16 county region providing trainings on early childhood development, social and emotional learning, ECMH and required training for Ohio ECMH professional credential
- Implemented Triple P (Positive Parenting Program) an evidence-based parenting training group.
- Provided free training throughout 16 county region – funded by OMHAS
- Implemented Child Parent Psychotherapy, new evidence-based practice for families with children up to age 3

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Center for Suicide Prevention & Research

- New Federal Research Grants Totaling > $3 Million
- Publications in Leading Journals

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Decision Continuum for Suicidal Youth
presenting for Crisis Assessment

Definite discharge from Psychiatric Crisis Department (PCD) / Emergency Department (ED) for outpatient follow-up

Equipoise for discharge from PCD/ED vs. YCSU/Inpatient Equipose vs. YCSU vs. Inpatient

Definite not discharging from PCD/ED

Definite Inpatient

PCORI Grant  NIMH Grant

2020-2023 BH Strategic Plan

Goals

1) Decrease death rate by suicide in Franklin County youth (ages 5-19) by > 20% from 2015-2017 baseline average rate of 3.4 per 100,000 to 2.7 per 100,000 in 2020-2022.

2) Increase the percentage of new Behavioral Health patients scheduled within 30 days of referral from 2018 baseline of 35% to 45% in 2022.

3) Recruit two Behavioral Health research investigators, with at least one who has expertise in mood disorders, autism, anxiety disorders or disruptive behavior disorders, by December 2022.

Key Principles

- Burning platform
  - Pediatric mental health crisis and youth suicide
- Think systemically and build care continuum
- Prevention as part of care continuum
- Interdisciplinary teams are required
- Coordination with other providers (BH, primary care, pediatric subspecialists)
- Outcome Measures relevant to population health
- Telehealth is a Wild Card (Could be great if used well)
Challenges

- Hard to measure outcomes – more patients not necessary better outcomes
- Recruiting, training and retaining personnel
- Getting different disciplines into One Team
- Building culture during rapid growth
- Developing academic and research mission
- Faculty burnout
- Managing hospital expectations regarding BH patients
- Documentation burden – inefficient EHR
- Need to leverage technology more in care
- Reimbursement complicated and insufficient
- Build it, and they will come...
  - Seeing more kids, but outpatient access for non-urgent patients is 3-5 months
- Community partnerships are hard to do

Thanks

- NCH Board
- NCH Senior Leadership
- NCH Behavioral Health Team
- NCH Planning Team
- Erica Logan, Ujjwal Ramtekkar

APPENDIX
Partners for Kids
NCH’s Accountable Care Organization

- Partnership between NCH and >1,400 providers caring for children
- 501(c)(3) Charitable organization
- Responsible for improving the quality of care and lowering costs for >330,000 children
- Full financial risk through the 5 managed Medicaid plans as an “intermediary organization”