Disclosure to Participants

Activity Requires:
1. Completing the registration form,
2. Signing the “Sign – in” Sheet,
3. Attending the entire educational activity,
4. Participating in education activities instructed, and
5. Completing the participant evaluation.

Commercial Support:
This educational activity received no commercial support.

Disclosure of Conflict of Interest
The speakers and planning committee have disclosed no conflict of interest.

Non-Endorsement Statement
Accredited status does not imply endorsement by Department of State Health Services, Continuing Education Service Program of America Nurses Credentialing Center of any commercial product displayed in conjunction with this activity.

Off-Label Use
The speakers did not disclose the use of products for a purpose other than what it had been approved for by the Food and Drug Administration.

Expiration Date for Awarding Contact Hours
Complete the attendance sheet and evaluation by the end of the conference.
“...ever doubt that a small group of thoughtful, committed citizens can change the world; indeed, it’s the only thing that ever has.”
Montgomery County Crisis Care Coordination Project

Community Collaboration
The Problem
Increased Emergency Department and EMS Utilization

Decreased Inpatient Psychiatric Hospital Capacity

Lack of Continuity of Care Among Agencies
Introduction of Dr. Kovar
A 2005 survey by APA and NAMI revealed that 70 percent of ED physicians reported an increase in admitted psychiatric patients to the hospital through the ED.

Patients are boarded at the ED or hospital waiting from 1 hour to 24 hours for transfer to a specialized facility for care.
Psychiatric visits are a substantial and growing proportion of ED visits

- 5.4% of all visits in 2000
- 12.5% of all visits in 2007
American College of Emergency Physicians (ACEP) Survey

- 67% of respondents said mental health services had declined in their community during the previous year.
- 60% reported increased pressure on the front line, particularly because psychiatric patients consume provider attention, increase patient boarding, and force ambulance diversions.
Financial Costs of Suicide – Survey

- Which costs society more – homicides or suicides?
- How much does suicide cost society?
### Cost of Treatment for Non-Fatal Self-Harm

<table>
<thead>
<tr>
<th>Hospitalizations and Type of Cost</th>
<th>Self-Harm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number hospitalized</td>
<td>250,222</td>
</tr>
<tr>
<td>Medical costs</td>
<td>$8,183</td>
</tr>
<tr>
<td>Average</td>
<td>$2,047,479,000</td>
</tr>
<tr>
<td>Total</td>
<td>$14,102</td>
</tr>
<tr>
<td>Work loss costs</td>
<td>$3,528,529,000</td>
</tr>
<tr>
<td>Average</td>
<td>$22,284</td>
</tr>
<tr>
<td>Total</td>
<td>$5,576,008,000</td>
</tr>
</tbody>
</table>
Concerns of ED as Primary Intervention Site

- Negative perceptions of psychiatric patients
- Poor follow up and care coordination/referrals compared to other medical conditions
- Adverse events occur in EDs to include elopement, non-assessment and death
Is the Emergency Department the Best Treatment Choice?
Challenges for EDs

- Lack of defined protocols for care of psychiatric patients
- Lack of safe, monitoring space
- Lack of resources and time
- 30 percent experienced negative events
Challenges for EDs

- Lack of inpatient psychiatric beds
- Lack of outpatient psychiatric resources
- *Psychiatric hospitals require extensive labs and will not accept intoxicated persons*
Unable to provide the care needed to stabilize and treat

Patients are not linked to follow up care

Results in recidivism and repeated crisis presentations
Boarding refers to waiting in hallways or other emergency department areas for over 4 hours waiting for beds

Patients wait 3 times as long for care

The visits are 42% longer in duration than non-mental health visits
Patients 20 times as likely to stay 24 hours or more

79% of ED respondents were boarding psychiatric patients
“Work ups for mental health admissions are often unnecessarily cumbersome and slow the process in addition to the scarcity of available inpatient psychiatric beds”
Problem 2: Decreasing Psychiatric Bed Capacity

- 524,878 in 1970
Problem 2: Decreasing Psychiatric Bed Capacity

- 524,878 in 1970
Problem 2: Decreasing Psychiatric Bed Capacity

- 524,878 in 1970
Problem 2: Decreasing Psychiatric Bed Capacity

- 211,199 in 2002
# Civil vs Forensic Census Snapshots on Specified Dates from FY 2001 to Present

<table>
<thead>
<tr>
<th>Date</th>
<th>Civil</th>
<th>Forensic_Pts</th>
<th>Total_Pts</th>
<th>%Forensic</th>
<th>%Civil</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/21/2001</td>
<td>2054</td>
<td>399</td>
<td>2453</td>
<td>16%</td>
<td>84%</td>
</tr>
<tr>
<td>1/21/2002</td>
<td>1847</td>
<td>480</td>
<td>2327</td>
<td>21%</td>
<td>79%</td>
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<tr>
<td>1/21/2003</td>
<td>1817</td>
<td>550</td>
<td>2367</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td>1/21/2004</td>
<td>1631</td>
<td>560</td>
<td>2191</td>
<td>26%</td>
<td>74%</td>
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<tr>
<td>1/21/2005</td>
<td>1667</td>
<td>603</td>
<td>2270</td>
<td>27%</td>
<td>73%</td>
</tr>
<tr>
<td>1/21/2006</td>
<td>1596</td>
<td>671</td>
<td>2267</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>1/21/2007</td>
<td>1557</td>
<td>781</td>
<td>2338</td>
<td>33%</td>
<td>67%</td>
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<tr>
<td>1/21/2008</td>
<td>1520</td>
<td>818</td>
<td>2338</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>1/31/2009</td>
<td>1487</td>
<td>832</td>
<td>2319</td>
<td>36%</td>
<td>64%</td>
</tr>
<tr>
<td>1/31/2010</td>
<td>1473</td>
<td>871</td>
<td>2344</td>
<td>37%</td>
<td>63%</td>
</tr>
<tr>
<td>1/21/2011</td>
<td>1397</td>
<td>876</td>
<td>2273</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>5/31/2011</td>
<td>1444</td>
<td>870</td>
<td>2314</td>
<td>38%</td>
<td>62%</td>
</tr>
</tbody>
</table>
Problem 3: Lack of Adequate Care Coordination

“The deliberate integration of patient care activities between two or more participants involved in a patient’s care to facilitate the delivery of health care services”
Care Coordination

- Value of outcomes recognized by trauma centers and cardiac control programs

- “Many significant parallels between models of community cardiac care and control and suicide prevention and control”
Chain-of-Survival
SAMHSA Guidelines

- Prompt access to care
- Interventions and coordination
- Provision of definitive care
- Referral
- Prompt follow-up
- Rehabilitation
Make continuity of care principles a major part of the foundation anchoring a transformed system for providing mental health care in America.
Divert from EDs

Utilize Alternative Crisis Programs

Develop Effective Continuity of Care Among Agencies
Solutions

- Divert from ED
  - Simplify medical clearance

- Utilize alternative crisis programs
  - Implement rapid patient transfer to PETC

- Improve continuity of care
  - Jointly develop referral protocols
Questions of Feasibility

- Can you simplify medical clearance without risking patient safety and increasing liability?
- Can we streamline patient transfer processes with so many different participants involved?
- Can we create referral protocols that are easy to follow and lead to appropriate diversions?
Dr. Kovar
Medical Clearance

- Determine if the patient’s symptoms are caused or exacerbated by a medical illness?
- Assess and treat any medical situation that needs acute intervention, and
- Determine if the patient is intoxicated, thereby preventing an accurate psychiatric evaluation.
Efficacy of Lab Tests

- False positive laboratory results found to be 8 times more frequent than true positives.

- Extensive, routine laboratory testing is unnecessary.

- When carried out, laboratory testing should be guided by the patient’s clinical evaluation.
Drug Screens

- A survey in 2001 found that almost half of ED physicians thought it was unnecessary

- Multiple studies have found no effect on disposition
Alcohol

- Acute intoxication may impair the ability to conduct a valid psychiatric examination

- Alcohol intoxication can mimic or alter psychiatric symptoms and delay proper patient disposition

- Generally, psychiatric facilities will not accept transfers of inebriated patients.
No evidence-based data identifies a specific blood alcohol level for commencing psychiatric evaluation

Cognitive function should be assessed with each patient individually and this should be the basis for initiating the psychiatric interview
FOCUS POINTS

• There is a need for medical clearance protocol of psychiatric patients presenting to acute care settings.
• There is controversy concerning the need for testing as part of the medical clearance process.
• This medical clearance protocol can reduce costs but not patient throughput times when the protocol is applied to the emergency medicine setting.
The presence of the following factors suggest extensive testing yields little value:

- *Negative physical exam*
- *Past psychiatric history*
- *Normal vital signs*
Consensus Protocol

- A team of psychiatrists and other physicians developed a protocol

- Did not require routine laboratory testing

- Need for testing based on clinical indicators

- Included psychiatric assessment and clinically indicated physical assessment
Findings

- Significant reduction in testing costs
- No significant reduction in ED throughput times
- Suggested the lack of significant throughput times due to patient transfer delays rather than lack of improved ED clearance efficiencies
Heather
Montgomery County Community Care Coordination Project

- Included Montgomery County Hospital District (MCHD) EMS, Conroe Regional Medical Center (CRMC) and Tri-County Services
Key Ingredients

- Time commitment and perceived value
- Representation of appropriate leadership and expertise
- Willingness to compromise
- Collaboration/partnership
- Problem-solving
- Coordination & Planning
- Monitor, review, follow-up and improve
- **EFFECTIVE COMMUNICATION**
Numerous preliminary meetings
Identified common goals
Translated common goals into deliverables
Planned implementation
Provided training
Reviewed performance
Modified protocols as needed
Common Goals – 4 Ds

- Diversion - Improve patient access to immediate psychiatric interventions
- Decrease utilization of unnecessary community resources
- Develop effective care coordination processes
- Deliver efficient, effective, quality care
Collaboratively developed:

- Medical exclusionary criteria
- EMS referral protocol
- Law enforcement protocol
- Emergent screening form
- Hospital protocol for patient transfer
Implementation

- Provided training to EMS, hospital, law enforcement and Tri-County staff on implementation of protocols

- Utilized “mock” trials to identify appropriate cases for transfer

- Integrated psychiatric protocol into existing conceptual framework similar to trauma and cardiac protocols
Implementation

- "Tested" protocol with a few individual cases and provided immediate review and feedback on the success of the referrals

- Gradually increased the number of referrals

- Shared data and outcomes in ongoing workgroup meetings
Problem-Centered Process Model

- Agenda Setting
- Solution Formulation
- Procedural Adoption
- Implementation
- Assessment/Modification
Impact on MCHD EMS

Montgomery County Hospital District
Emergency Medical Services

Standard Delegated Orders
May 27, 2011
Impact on MCHD EMS

- Emphasis on improved patient outcome
- Increased EMS availability
- Increased cost savings
- Ability to generate revenue
- Increased competencies for psychiatric assessment and intervention
Psychiatric Transports to PETC

![Graph showing the number of psychiatric transports to PETC from October to July. The graph indicates fluctuations in the monthly numbers, with peaks in April and July, and troughs in December and February.](image)
EMS Turnaround Time by Hospital

Turn Around Times by Destination

<table>
<thead>
<tr>
<th>Hospital</th>
<th>Average Turn Around Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conroe Regional Medical Center</td>
<td>25</td>
</tr>
<tr>
<td>ICES Tri-County Services</td>
<td>10</td>
</tr>
<tr>
<td>Kingwood Medical Center</td>
<td>30</td>
</tr>
<tr>
<td>Memorial Hermann - The Woodlands</td>
<td>25</td>
</tr>
<tr>
<td>St. Lukes - The Woodlands</td>
<td>30</td>
</tr>
<tr>
<td>Tomball Regional</td>
<td>30</td>
</tr>
</tbody>
</table>
Psychiatric Transports

Annual cost savings: $35,000
EMS Psychiatric Transport

- 10% of all EMS transports are psychiatric-related
- Under triage – 3 (1.3%)
  - VERY SAFE PROTOCOL
- Over triage to CRMC – 5 (2.2%)
  - EASY TO FOLLOW PROTOCOL
- Over triage to Other Facilities
  - Estimated at 33%
    - Distance to Facility
- 44% Admitted to facility
- 41% Discharged
- 12% Private psychiatric facility
- 3% Returned to hospital
Impact on ED
Impact on ED

- Cost savings for expensive lab tests

$338,840 from September 1, 2011– May 1, 2012

- Decreased psychiatric length of stay by $\frac{1}{3}$rd

- Opportunity cost savings – increased bed availability for acute medical conditions
Impact on ED

- Increased knowledge regarding suicide risks
- Improved care coordination and transfer process
- Specialized support for ED providers
- Decreased legal liability
ED Patient Length of Stay

Hospital Drop Time - Conroe Regional

[Graph showing the length of stay from 7/1/2008 to 7/1/2011 with markers for mean, UCL, LCL, and the actual data points over time.]


30
35
40
45
50

Mean
UCL
LCL
Goal
ED Impact - Length of Stay

**Bed Availability Increase of 1,400 Hours per Year**
ED Diversion Data

Length of Stay Data

<table>
<thead>
<tr>
<th>Year</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Value</td>
<td>5</td>
<td>6</td>
<td>4</td>
<td>3</td>
</tr>
</tbody>
</table>
ED Diversion Data

Length of Stay Data

- 2007
- 2008 (CRU Opened)
- 2009
- 2010
Psychiatric Emergency Treatment Center (PETC)
Funding provided by MCHD

Increased appropriate referrals

Greatly improved relationships with community stakeholders

Collegial cooperation/integration

Patients are provided more immediate and appropriate treatment and care
FY 12 PETC Average Daily Census (ADC)
CRU/CSU Admissions- 4 Year Trend

CRU/CSU Admissions

2009

2010

2011
Barriers

- Time and resources
- Turnover
- Billing/revenue generation
- Data silos
- Transition from status quo
- Proprietary boundaries
Sustaining This Innovation

- Increase staff incentives to divert
- Test a specialized EMS psychiatric team as primary responder to calls
- Ensure ability to produce reliable data
- Formalize the process (create MOUs)
Sustaining This Innovation

- Extend best practices to other hospitals in the service area
- Publish results and cost savings
- Obtain third-party reimbursement for PETC services
Video presented here
Q & A Session

Dr. Jay L. Kovar, MCHD Medical Director

Dr. Jonathan Sneed, PETC Medical Director

Heather Robison, Director of Crisis and Access Services, Tri-County Services
Jay Kovar, MD, FACEP
jkovar@mchd-tx.org

Jonathan Sneed, DO
jonathans@tricountyservices.org
936-538-1106

Heather Robison, MA, LPC-S
heathert@tricountyservices.org
936-521-6413


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