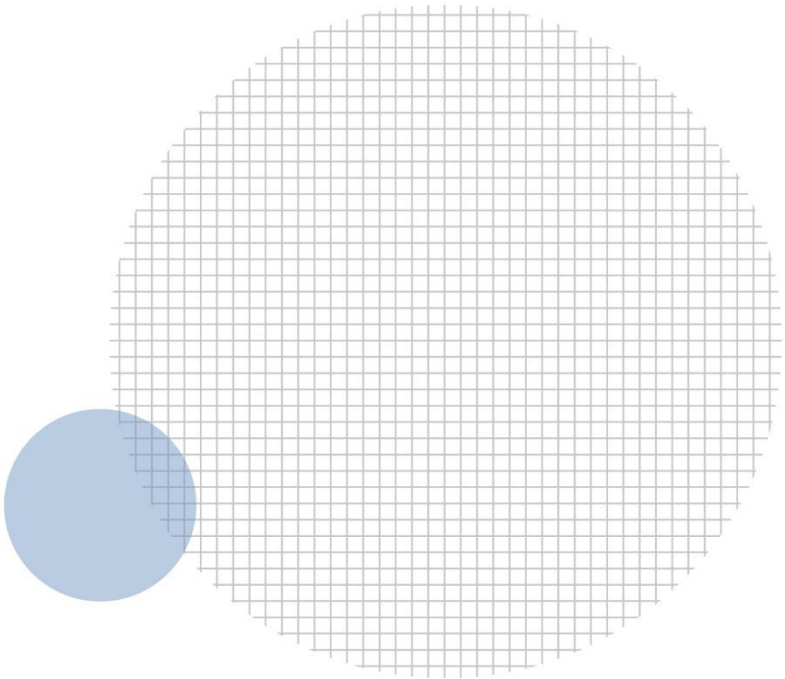
Institute for Healthcare Improvement

INNOVATION REPORT

Integrating Behavioral Health in the Emergency Department and Upstream



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How to Cite This Report: Laderman M, Dasgupta A, Henderson R, Waghray A, Bolender T, Schall M. *Integrating Behavioral Health in the Emergency Department and Upstream*. IHI Innovation Report. Boston, Massachusetts: Institute for Healthcare Improvement; 2018. (Available at ihi.org)

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This IHI innovation project was conducted from September 2017 to February 2018.

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Executive Summary

Emergency departments (EDs) throughout the United States lack the capacity to support individuals with a range of behavioral health needs, leading to poor outcomes and experience of care for individuals and families, overburdening ED staff, negatively impacting patient flow and throughput in the ED, and raising costs for health systems.

The primary aim of the two Institute for Healthcare Improvement (IHI) innovation projects described in this report was to identify gaps in care for individuals with behavioral health needs that present to the ED and best practices to fill those gaps; and to develop a theory of change and specific change ideas for integrating behavioral health care into emergency departments. The innovation projects also researched ways to bolster relationships with "upstream" community partners and resources to better support individuals in this patient population.

This report discusses barriers to integrating behavioral health in the ED; presents the results of a literature scan of existing models to address behavioral health needs in the ED and in communities; and identifies five drivers (emerging from six key themes from existing approaches) that form the building blocks of a theory of change for making improvements in this area.

Intent and Aim

The intent of the two IHI 90-day innovation projects (conducted from September 2017 to February 2018) was to develop a theory of change, change package, and measurement system that will be ready for testing. The aim was to identify best practices, gaps, and themes to develop a theory of change to integrate behavioral health into emergency departments. The goal is to develop a sustainable, scalable model that can be replicated across different US hospitals and health systems regardless of location (e.g., urban, suburban, rural) and access to psychiatric services.

The Institute for Healthcare Improvement is partnering with Well Being Trust on an initiative to improve the integration of behavioral health in the emergency department, including going upstream to build and leverage relationships with community partners working on providing crisis stabilization and a range of behavioral health and supportive services. This work includes developing content and specific change ideas (i.e., a change package) to integrate behavioral health and medical care within the ED; testing these changes within ten leading US health systems as part of an intensive 18-month Learning Community; harvesting learning, evaluating, and planning for scale within the participating health systems; and disseminating learning and building awareness throughout the initiative.

Background

Emergency departments across the US lack the capacity to support individuals with a range of behavioral health needs, leading to poor outcomes and experience of care for individuals and families, overburdening staff, negatively impacting patient flow and throughput in the ED, and raising costs for health systems. This is a well-known problem for many health systems, which only continues to worsen. The Agency for Healthcare Research and Quality (AHRQ) reports that one in every five visits to the ED (20 percent) is related to a mental health or substance abuse issue, a number that is even higher when considering patients who present with comorbidities and secondary behavioral health diagnoses.[1]

While the primary reasons for ED visits vary between regions, states, and health systems, national statistics from AHRQ indicate that the top five diagnoses for patients who present to the ED with a mental health or substance abuse concern are: alcohol-related disorders; mood disorders; anxiety disorders; schizophrenia and other psychotic disorders; and other substance-related disorders.[2] Between 2006 and 2014, the rate of mental health and substance abuse-related ED visits rose by 44.1 percent. This substantial increase in ED utilization for this patient population in the last ten years has disproportionately affected low-income communities; patients covered by Medicaid; women with substance abuse disorders; men suffering from anxiety, depression, and stress; and individuals diagnosed with bipolar and psychotic disorders.[3,4]

Some key issues facing health systems and patients include prolonged periods of "psychiatric boarding," where patients wait in the ED without treatment for a transfer to another care setting; lack of care coordination and care management; and few alternative options to the emergency department to prevent and address crises. Together, these issues contribute to poor patient outcomes and experience of care that may have recurring and serious consequences. Boarding in the ED can be days long while patients wait to be transferred to facilities that can provide the appropriate level of care; boarding can be traumatic for patients and their families due to the chaotic environment of the ED and the lack of treatment during their time waiting.

After an individual is medically cleared, guidelines for assessment, triage, and treatment for a variety of behavioral health conditions within the ED are limited or not standardized, and ED staff often do not feel equipped to care for patients experiencing a psychiatric crisis.[5] Without appropriate training in evaluation and de-escalation, ED staff may overuse seclusion and restraints, augmenting the patient and family's psychological distress.[6]

The current state is also driven by a lack of sufficient psychiatric services within hospitals and poor connections with community-based services, which can provide behavioral health support. Operational capacity of US health systems has significantly decreased, with inpatient psychiatric beds dwindling to less than 50,000 nationally, while differing insurance and other legal and regulatory requirements add complexity to the system.[7] Reduced supply of beds and psychiatric resources, coupled with the increased likelihood of an inpatient admission, mean that patients with a behavioral health condition may spend three times as long in the ED as those without a behavioral health condition. This increases their overall length of stay (LOS) and likelihood of being transferred to another facility.[8]

At discharge, a clear, actionable disposition and connection to follow-up care are often lacking. A national study in the US showed that only 17 percent of patients have a follow-up care appointment set up prior to discharge, and that 37.4 percent of patients discharged for a mental health or substance abuse concern are readmitted or have a repeat ED visit within 12 months.[9] Only 19 percent of emergency physicians reported having a systematic way of identifying frequent psychiatric service utilizers, in order to better understand and address the longer term needs of these patients that might reduce their need to rely on the ED.[10] The lack of follow-up care and appropriate discharge planning, particularly planning that includes the patients' caregivers, can lead to adverse events such as heightened risk of suicide within 30 days of discharge.[11]

Data from a nationally representative survey of National Alliance on Mental Illness (NAMI) members showed abysmal patient and family experience in EDs. Seventy-eight percent of patients with a negative ED experience reported that the staff did not treat them with respect; 72 percent reported that the staff did not communicate effectively or listen to their concerns; 71 percent reported that the staff made them feel ashamed because of their mental illness; 68 percent reported that they were injected or restrained without consent when agitated; and 60 percent

reported that they waited over 10 hours to be seen by a mental health professional. Patients and family members reported receiving little information about their loved one, medications and side effects, and where to access mental health services. Primary contributors to negative experience included wait time and being left alone; criminalization and dehumanization; and lack of respect.[12]

From the health systems' perspective, the increased volume of ED visits related to mental health and substance abuse disorders and associated ED boarding increases pressure on staff and adversely impacts the overall flow and throughput in the emergency department. The cost to health systems of boarding in an ED has been estimated at $2,264 per patient, for an average ED stay of approximately 18 hours for a psychiatric patient. This estimate includes the opportunity cost of being able to serve other patients due to loss of bed turnover.[13] Furthermore, in dealing with an increased volume of patients at higher risk of agitation, health care worker safety is potentially at greater risk; a 2012 study showed that nearly 50 percent of ED workers had been physically assaulted.[6]

In addition to the aforementioned issues that drive poor patient outcomes and experience, numerous structural (i.e., related to policy, regulation, and/or payment) and non-structural barriers drive poor outcomes for individuals with behavioral health needs who present to the ED.

Structural barriers:

- Payment systems:
    - Inadequate reimbursement for inpatient and outpatient care, both in the commercial insurance space and Medicare/Medicaid
    - Mixed incentives and cost-shifting in different parts of the health care system
- Shortage of inpatient psychiatric beds; mismatch of supply and demand for beds
- Decreasing outpatient options for care
- Inadequate services (e.g., community-based behavioral health services) to divert patients from an ED visit to alternate sources of care
- Lack of dedicated space and beds for psychiatric patients in the ED
- Lack of shared accountability for patients between community mental health and ED

Non-structural barriers:

- EDs are set up to deal with medical acuity, not mental health crises
- Lack of or insufficient health system leadership commitment to making changes to better support behavioral health needs in the ED
- ED staff attitudes toward individuals with mental illness and substance use disorders (stigma around mental illness, "not my job")
- Lack of ED staff training and education on how to address patients with behavioral health concerns
- Lack of access to behavioral health expertise within the ED
- One-size-fits-all approach to behavioral health treatment in the ED
- Lack of clinical and practice standards and guidelines for many common behavioral health issues

Specific barriers will vary for different health systems. For example, large hospitals with designated psychiatric EDs or dedicated space for patients experiencing a behavioral health crisis will face different challenges from hospitals that are part of large health care systems with some access to psychiatry consults, or community hospitals that may have little access to psychiatric services. The geographic area (e.g., urban, rural, suburban), volume of patients with behavioral health needs, and types of populations served will also impact the barriers faced by health systems.

These two IHI 90-day innovation projects aimed to develop an approach that can be tailored depending on the needs and capacities of each health system and ED. There is a lot of work to be done to overcome these barriers, and these projects looked at strategies to address non-structural barriers and make recommendations for policy and regulatory changes to reduce structural barriers.

Table 1 describes the current state of behavioral health care in the ED versus an ideal future state, which guides the development of our theory of change.

Table 1. Integrating Behavioral Health in the ED: Moving from Current to Future State

Current State	Future State
Moving Toward Integration	
Siloed – each setting operates independently	Integrated – health care and community are one system
Patients and families try to navigate fragmented systems	System brings services to the patient at the point of care and coordinates care across settings
Refer and forget	Warm handoff to the next care setting, tracking the patient and providing regular follow-up
Moving Toward Standardized Processes and Trauma-Informed Culture in the ED	
Reactive crisis management	Proactive, standardized screening and treatment of a range of mental health and substance abuse needs
Mental health and substance abuse issues are not the ED's job	Mental health and substance abuse issues are part of routine work of the ED team
ED is a waystation between two options: hospitalization or discharge to home	ED provides effective care when appropriate
One-size-fits-all approach to treatment in ED	Acuity-based care pathways
Moving Toward Patients and Families at the Center of Care	
Families are rarely engaged and receive little information	Families are essential members of the care team
Measure efficiency	Measure patient-centered outcomes

Methods

The innovation projects included literature scans; interviews with experts and with family members; an in-person design day with IHI, Well Being Trust, and Providence St. Joseph Health System colleagues; and conversations with two health system teams to vet candidate measures.

We conducted a scan of the literature to examine the following topics:

- Clinical, operational, and financial features of different approaches to caring for patients with behavioral health needs in the ED
- Barriers and challenges to caring for patients with a range of behavioral health needs
- Different populations with behavioral health needs served by the ED
- Community-based crisis prevention and diversion programs (from ED to alternative sources of care)
- Integrated behavioral health care approaches
- Programs to extend the capacity of ED staff to address behavioral health issues
- Principles of trauma-informed care
- Peer support programs
- Measures tracked by programs to improve care in the ED for these populations

Our team also conducted 25 expert interviews with the individuals listed in Table 2. These key informant interviews captured a range of stakeholders in various settings and included health care professionals and leaders, mental health providers, researchers, policymakers and advocates, and, importantly, family members of individuals with behavioral health needs.

Table 2. Experts Interviewed

Name(s)	Organization
Timothy Adebowale	Neuropsychiatric Hospital, Ogun State, Nigeria
Margie Balfour	ConnectionsAZ
Chris Bouneff	National Alliance on Mental Illness Oregon
Lisa Braude, Ashley Yeats, Marian Girouard Spino, Kristen Woodbury	Beth Israel Deaconess Hospital – Milton and South Shore Mental Health
Susan Gabay	Parent, National Alliance on Mental Illness Advocate
Mary Giliberti, Teri Brister	National Alliance on Mental Illness
Lisa Dixon	New York State Psychiatric Institute & Columbia University
Enrique Enguidanos	Community Based Coordination Solutions, LLC

Name(s)	Organization
Madelyn Gould	Columbia University
Andrew Grover	YouthVillages
Andrew Herring	Highland Hospital
Susan Kirchoff	Oregon Health Leadership Council
Rishi Manchanda, Sadena Thevarajah	HealthBegins
Leslie Miller	Parent, Advocate, Physician
Karen Murrell, Yener Balan	Kaiser Permanente Sacramento
Rebecca Parker, Mike Gerardi, Loren Rives	American College of Emergency Physicians
Mary Peterson	George Fox University
Rikke Albert	East London NHS Foundation Trust
Vince Salvi, Sara Salvi	Parents, Advocates
John Santopietro	Carolinas Healthcare
Judy Troyer	Clinica Family Health
Christopher West	Seven Hills Hospital
David Westbrook, Greg Borders, Stephen Canova	Lines for Life
Glenda Wrenn	Morehouse School of Medicine
Scott Zeller	Vituity

90-Day Innovation Project Findings

While promising models exist, our research suggests that most hospitals and health systems across the US are not systematically integrating behavioral health care into their emergency departments. The literature on addressing mental health and substance abuse needs in the ED suggests that there are several models with different components that may be effective (see Table 3).

However, many existing programs focus on one part of the system — for example, only on screening, triage, treatment, or discharge — and the core components of an effective model are frequently discussed in an isolated and fragmented way. This often results in gaps and missed opportunities. Furthermore, despite the severity of these issues for health systems around the country, many of these approaches have seen limited uptake and spread. We believe that tying together these various elements represents a significant opportunity for improvement and innovation.

Emergency departments see patients from a broad range of age groups who have a wide variety of mental health and substance abuse issues, from self-harm and suicidality, first episodes of psychosis, and acute exacerbations of chronic problems (e.g., bipolar disorder and schizophrenia), to individuals who overdose on opioids, to physical manifestations of mental health issues (e.g., panic attacks related to depression and anxiety). Many patients in the ED have complex social needs (e.g., individuals experiencing homelessness) that are often closely tied to their mental health needs. While each patient has a specific set of needs, there are some systemic changes that can drastically improve the status quo for many groups of patients.

Existing Approaches in Emergency Departments

Within the ED setting, many of the models for integrating behavioral health care described in the literature focus on making modifications to the standard consult model, which often still relies on reactive consultation from a psychiatrist who periodically visits the ED. Use of this consult-liaison psychiatry model, coupled with inadequate psychiatric resources in the ED to facilitate timely consultations, is one of the reasons that patients with mental health and substance abuse needs wait for long periods prior to evaluation and treatment.

Improvements of interest in these studies typically focus on flow and efficiency within the ED, specifically on length of stay and triage of patients to the appropriate setting. Some models, such as Yale New Haven Hospital's Behavioral Intervention Team (BIT) approach, have created an embedded team to proactively integrate psychiatric services into general medical units, leading to significant reductions in length of stay when compared to units without the integrated team.[14] While the BIT model began in inpatient medical units, there is work underway to expand to EDs.

Some promising models within EDs that we explored included core components such as standardizing behavioral health screening and triage protocols in the ED; developing acuity-based pathways for these patients; creating dedicated space for observation of patients with behavioral health needs within or adjacent to the ED; and deploying integrated care teams to assess patient needs with greater efficacy and speed. In general, these approaches have the potential to standardize, scale, and spread to other settings in a relatively straightforward manner, provided the appropriate level of resources and infrastructure support are available, such as repurposing underutilized space in the emergency department.

Many health systems have piloted telepsychiatry services to augment ED staff capacity in settings where access to psychiatric care is limited. Although initial start-up costs may pose a barrier in some cases, many of these programs have met with success. Typically, a telepsychiatry model utilizes either a videoconference console or something as simple as a dedicated phone line that ED staff can use for on-demand consultation and evaluation of patients who present to the ED with behavioral health concerns. Utilizing remote resources can reduce the need to transfer patients with lower acuity needs, as well as minimize door-to-disposition time for all patients.

Additional innovations and improvements have been tested in the treatment and discharge phase, though further research is likely needed in this area. Some health systems have tested brief interventions to initiate buprenorphine treatment, attempting to get patients started and retained in treatment even before they leave the ED. Others have worked on improving care planning and follow up, establishing linkages to community-based mental health services and preventing subsequent visits to the ED. Importantly, many of the improved patient outcomes associated with universal screening and improved triage processes rely on being paired with improved discharge and follow-up processes, further emphasizing the need to make changes across the system to move beyond improvements in flow and efficiency measures.

Table 3 presents an overview of models discussed in the literature, the "active ingredient" in their particular innovation, outcomes observed in studies of the model, and how easily replicable or adaptable they might be in another setting.

Table 3. Existing Models to Address Behavioral Health Needs within the ED

Model	Innovation ("Active Ingredient")	Outcomes/Evidence	Potential Replicability or Adaptation
Psychiatric consult in ED (i.e., the status quo in many health systems)	• Psychiatrist/mental health clinician will visit ED to consult with patients on a periodic basis • Often reactive rather than proactive	Current state: Results are frequently poor	• Lowest resource option • Likely only sufficient in contexts with lower volume of psych emergencies where mental health specialty does not need to be embedded in ED
Psychiatric "fast track" — programs focused on improving ED flow[15]	• Development of priority pathways for major mental health/substance abuse diagnoses, based on acuity • Integration of care by adding psychiatrist/LCSW to emergency care team	• 67% decrease in time to triage • 9% decrease in average length of stay • 14% decrease in use of restraints	• Process improvement innovations are replicable • Integration of additional psych/LCSW is resource-dependent
Psychiatric observation units[16,17]	• Separated unit within ED for psych patients, based on acuity • Psychiatrist is available on call 24 hours/day for evaluation • Allows for longer stays for detox and medication initiation, while patient waits for referral/discharge	• Length of stay (LOS) decrease from 8.4 hours to 5 hours • Increased patient satisfaction score from 76% to 82% • Reduced need for hospitalization	• Replicability is dependent on availability of underutilized space in hospitals • Periodic re-evaluation of patient under observation is needed
Telepsychiatry (varying models)[17,18,19]	• ED requests a virtual consultation on an as-needed basis • Community mental health provider, hospital with psychiatric resources, or telepsychiatry organization provides virtual evaluation/ recommendation via dedicated phone/videoconference	Ohio: • 10% shift in patients being discharged to home vs. inpatient admission • 26% reduction in average LOS in ED • 30% decrease in LOS for telepsychiatry patients admitted to inpatient setting South Carolina: • Telepsychiatry patients almost 3 times more likely to receive 30-day follow-up • Reduction in per patient cost by $1,418	• Replicable in communities with lower volume of behavioral health needs and in rural communities, low-resource settings • Start-up costs may be a barrier

Model	Innovation ("Active Ingredient")	Outcomes/Evidence	Potential Replicability or Adaptation
Brief intervention protocols[20,21]	• Brief intervention protocols (such as SBIRT) that include: 1) screening for patients who may not already be treatment-seeking 2) motivational interviewing 3) information on treatment options 4) referral to specialty substance abuse treatment • Performed by ED practitioners, or by in-house or contracted behavioral health specialists	• For those with alcohol abuse issues, the mean number of alcoholic drinks per week may be reduced through use of brief intervention protocols • Overall, mixed evidence on effectiveness in reducing alcohol abuse at 3, 6, and 12 months post-discharge	Further evidence needed to determine replicability, and appropriate role for conducting screening and intervention
ED-initiated treatment (buprenorphine)[22,23]	Brief intervention and rapid initiation of buprenorphine inductions in ED, followed by primary care follow-up	Patients who received buprenorphine + brief care intervention + referral and follow-up care were 1.5 to 2 times more likely to be engaged in treatment 30 days post-discharge	• Further evidence is needed to determine replicability • Training of staff on appropriate usage is needed • Potential to pair with "fast track"/diagnostic categories approach
Universal suicide screening[24]	• Model includes universal screening in the ED, coupled with providing resources and follow-up calls post-discharge • Patients are referred to prevention hotline if risk is detected in one year post-discharge	For patients with screening + follow-up calls: • 20% reduction in relative risk of suicide • 30% fewer total suicide attempts • No effect for just screening	• Easily replicable in EDs, provided there are resources to make follow-up calls • Can partner with local hotlines • Often low cost • Needs additional intervention beyond screening
Integrated care teams in the ED[25]	• Integrated team is a consistent presence in ED, providing proactive screening, case identification and management, peer support and education to other providers, and follow-up • ED team co-manages patient with medical team	In general medical units: • Higher psych consult rate for intervention vs. usual care group (22.5% vs. 10.7%) • Lower mean LOS (2.9 days vs. 3.8 days) • Reduction in LOS > 4 days	• Relies on availability of psychiatric (MD/APRN) resources • Cost analyses suggest there is an ROI to this approach in general medical units (4.2 ratio of financial benefit to cost).[26]

Existing Community-Based Models

Integral to any work to improve behavioral health capacity in emergency departments is the need for health systems to engage with community partners who are working on behavioral health crisis prevention and providing supportive services for individuals before a crisis brings them to the emergency department. In a well-functioning system, community-based services provide a first

line of support, reducing the volume of patients who end up in the ED by default. At the same time, the ED is better equipped to support patients with behavioral health needs who do end up requiring emergency services.

Behavioral health and related social needs can often be met in the community, leading to better quality and experience of care and lower costs than care provided within a health care setting. These "upstream" services and supports are essential to ensuring that individuals with behavioral health needs receive the right care, in the right place, at the right time, rather than needing to seek care in the emergency department by default.

Several models focus on diverting patients from the ED to an alternative source of care that is better suited to addressing behavioral health crises. Hospitals in some regions have established dedicated psychiatric emergency services, stand-alone programs specifically designed for patients with behavioral health needs, to provide support at these locations instead of in general hospital EDs. This model can successfully divert many patients from the ED, but it requires a large investment of capital for communities and is generally most appropriate in areas where there is a high volume of patients who would benefit from the services.

The significant investment in these standalone services can divert resources from other health care and community-based services, and, in some communities, the uptake of services may not result in a return on that initial investment. Similarly, 24-hour crisis centers also accept individuals from the community and offer longer-term observation, stabilization, treatment, and discharge planning. Both models rely heavily on successful partnerships with the community, including law enforcement, EMS, mobile crisis teams, and community-based mental health and substance abuse treatment providers.

In rural and medically underserved communities, mobile crisis teams and community paramedicine models have gained some traction. These approaches dispatch mental health professionals or upskilled EMS technicians to address patient needs right where they are, or transport patients to appropriate care settings. While, again, outcomes are varied, pilot studies show that these types of programs can divert patients away from the ED. Programs to divert patients from the health care system to more appropriate care settings may improve quality of care and even have financial benefit, yet research on crisis prevention and upstream models is still somewhat limited.

Table 4. Existing Community-Based and Diversion Models to Address Behavioral Health Crises

Model	Innovation ("Active Ingredient")	Outcomes/Evidence	Potential Replicability or Adaptation
Dedicated psychiatric emergency services (PES)[27]	• Stand-alone program solely dedicated to mental health crises, may be in hospital or community • Receives patients from community • Focus is on appropriate treatment, not just triage	• Divert over 70% of patients from hospitals/EDs by stabilizing at PES • Reduced ED boarding time by 80%, compared to state average	• Appropriate in areas with high volume of psych emergencies • High standalone operating costs and staffing needs • Can divert resources from hospital ED improvements

Model	Innovation ("Active Ingredient")	Outcomes/Evidence	Potential Replicability or Adaptation
Psychiatric urgent care centers (crisis centers)[17,28]	• 24/7 walk-in centers, staffed mostly with LCSWs • Often integrates peer support • Stabilization, treatment, and aggressive discharge planning to link with community-based and wraparound services	ConnectionsAZ: • 60% to 70% patients diverted from the ED or jail • 90 minutes door-to-doctor time • 1.5% use of seclusion/restraints	• Appropriate in areas with high volume of psych emergencies • Replicability relies on community partnerships (e.g., law enforcement) and policy environment
Integration of mental health into primary care[29]	• Several different models to integrate behavioral health capacity into primary care • Can include adding behavioral health staff to a primary care practice, collaborative care model, upskilling primary care providers and nurses in assessment/treatment/referral of major conditions, or co-locating a behavioral health provider within primary care	• Significant reductions in depression scores • Improvements in chronic medical conditions (e.g., diabetes) • Improved patient experience • Higher staff satisfaction • Reduced per capita costs	• Depends on model, available resources, and level of need in the practice, but becoming much more common in the US • Traditional operational and financial barriers are quickly being reduced
Mobile crisis teams[5,30]	• Mobile mental health professionals who provide crisis management, de-escalation, treatment, and linkage to community-based services • Paired with police in crisis intervention teams	Diversion of 70% to 95% of patients from ED to crisis stabilization unit or other appropriate community-based mental health service (without need for subsequent transport)	• Appropriate in rural communities and those with limited access to behavioral health care • Relies on having appropriate care settings to which patients can be diverted, in lieu of ED (i.e., 24/7 crisis center)
Community paramedicine[31]	Primarily uses upskilled EMS services deployed for screening, assessment, basic treatment, and triage of patients	North Carolina: • 32% of patients are diverted from ED, being treated on the scene or diverted to alternative facility • 15% did not require any kind of facility-based care • 7% required subsequent transport to ED due to acuity/emergency	• Appropriate in medically underserved communities • Relies on having appropriate care settings to which patients can be diverted, in lieu of ED • EMS needs additional training in mental health care
Peer support programs[32,33]	• Peer navigators and recovery specialists link patients to recovery, mental health, and social services in the community • Utilized in ED, outpatient, and inpatient settings to offer support, coaching, problem-solving, and self-management strategies • Peers may be contracted or in-house	• Can provide same or improved outcomes as trained health care professionals • Reduced use of inpatient services • Better engagement in care post-discharge • Higher levels of hope, empowerment	• Replicable in different settings • Effectiveness relies on clear role definition, integration with care teams, and deployment within a key window of opportunity in the ED post-crisis

Model	Innovation ("Active Ingredient")	Outcomes/Evidence	Potential Replicability or Adaptation
Contracted crisis care services[34]	• 24/7 on-call MSW and LCSW support whenever a patient presents to the ED with a primary behavioral health need • Assess patient, make recommendation to staff re: treatment and discharge plan, and follow patients to home to conduct safety/supervision planning and connect with social services • Intensive follow-up for 2 weeks after ED visit	Providence St. Vincent and Youth Villages pilot study: • 90% of patients in pilot study connected to outside treatment • Reduction in rate of pediatric boarding from 27.8% to 23% • Reduction in return ED visits within 30 days from 10.4% to 6.6% • Increase in median boarding time and cost per ED observation resource	• Further testing needed to determine replicability • Integration of contracted service providers into ED workflow is necessary • Hospitals may fund independently, or rely on pooled community funding mechanisms

Common Elements and Themes Emerging from Existing Approaches

The literature scan and expert interviews revealed six themes that form the building blocks of our theory of change for integrating behavioral health care into the ED. These themes encompass elements of existing models as well as some gaps we identified during the research, all of which are incorporated into our theory of change.

1. A cycle of fear among providers, patients, and families contributes to a negative culture and poor quality and experience of care in the ED.

The current culture in the ED is not conducive to supporting individuals with behavioral health needs. There are a few factors driving this negative culture. First, some ED providers do not view behavioral health as part of their scope of work and do not treat presenting issues, which cannot be easily "seen" on scans or tests, as equivalently serious to a physical health crisis. When behavioral health needs are viewed as "other" and "not my job," the quality of care and the patient and family experience of care suffers.

Second, ED providers have few, if any, guidelines to refer to in caring for this population of patients, and they often lack the training and education on how to best manage a variety of behavioral health issues, even if the issues are commonly seen in their EDs. Without education and guidance, providers are concerned about not knowing what to do and the potential for liability should an adverse event occur. Another type of fear that translates into patient care is related to the societal criminalization of individuals with mental health conditions. Staff members may be afraid that the patient will become violent or aggressive, and not treat the patient compassionately. This, paradoxically, can increase the likelihood of a patient becoming agitated, particularly if this poor-quality care also includes little to no communication and information about what is happening.

At the same time, patients and their family members are anxious about what is happening to them or their loved one. Families and patients are typically not kept well informed about what is going on and what to expect, and the environment in many EDs is chaotic, loud, and not conducive to individuals experiencing a mental health crisis. Both concerns may increase agitation and the

potential for violent incidents, feeding back into preconceptions about this population. Fear can also drive some outpatient medical and behavioral health providers to send patients to the ED, because the providers are not comfortable with crisis assessment and management.

This cycle of fear points to the need for EDs to create a trauma-informed culture to provide a significantly better environment for individuals with behavioral health needs. This will involve moving toward a new standard of care, beyond the medical model, that is based on needs and strengths of patients and families and incorporates principles of trauma-informed care (TIC). TIC is a strengths-based delivery approach, centered around principles that aim to provide safety and empower patients.[35] These strategies might include the following (and might be adapted from system to system): 1) leadership toward organizational change; 2) use of data to inform practice; 3) workforce development; 4) use of interventions to reduce use of restraints and seclusion; 5) improvement of patient and family engagement in care; and 6) debriefing techniques.[36]

2. Standardization and implementation of effective care processes for behavioral health care, from ED intake to discharge, is insufficient or absent.

While there is good work on different elements of care happening in some places around the country, widespread availability and dissemination of guidelines and standards has been limited. As described above, ED teams are often operating without clear guidance or protocols for a range of behavioral health conditions, which is very different from their processes for a variety of medical crises. This is true even for issues commonly seen in EDs and presents a significant area for improvement. Evidence-based guidelines from the emergency psychiatry literature and professional associations do exist for comprehensive assessment, triage, diagnosis, verbal de-escalation, psychopharmacology, and avoiding coercion, seclusion, and restraints; these standards need to be more widely disseminated and adopted.[6,37,38] And, where there are not effective practices, teams need to develop standardization and protocols wherever possible.

Within the ED, standardizing triage should be a focus. There are also opportunities for standardization in treatment and discharge. For example, ED physicians and nurses need to be equipped with more tools than just medication initiation, which is not particularly timely for a variety of conditions (e.g., selective serotonin reuptake inhibitors, or SSRIs, take several weeks to work). Some EDs spend time doing full psychiatric workups and developing comprehensive treatment plans. This should not be the focus of the ED, which should excel at triage and temporary symptom management as they do for medical conditions.

3. ED care teams lack staff with the right skills, and processes to support them, to care for individuals with behavioral health needs.

In addition to poorly standardized processes, many ED teams will need to optimize their own capacity to provide trauma-informed care for individuals with behavioral health needs. Capacity to provide care for patients with a range of behavioral health needs can be added in different ways such as developing integrated, multidisciplinary teams with new or existing psychiatric resources; adding telepsychiatry and virtual behavioral health teams; using CAT-MH (computerized adaptive testing); employing LCSWs who are familiar with and have strong relationships with community-based services; providing training and education for physicians and nurses in care guidelines and protocols; and contracting with community-based services, such as community mental health providers, to bring their specialized care into the ED.

4. Families are excluded in the current system.

Interviews with family members and representatives from the national office and local chapters of NAMI emphasized the multiple ways in which patients and their families are treated poorly in the ED. Not surprisingly, individuals and their family members are scared, too frequently receive no information about what is happening to them or their loved one, are disrespected by the current protocols in the ED (e.g., needing to undress; being put in a cold, windowless room; waiting for long periods of time with little communication or compassion), and need information, hope, and, of course, compassionate care.

Families are left out of nearly every part of the current care process in the ED, with little input and communication from ED intake through discharge and care planning. Families are an invaluable resource for the care team; they can inform assessment with their knowledge of patient history and the current state, and are often the ones charged with carrying a disposition plan forward post-ED discharge. This information from family members helps to guide the care team as they create tailored action plans.

The over-interpretation of HIPAA by care team members may also a be a factor in preventing transparent communication with families. This is particularly true for parents of adult children who are responsible for their care, yet legally may not be able to obtain critical information and provide consent for certain services on behalf of their child. During the design day held as part of the IHI innovation projects, an empathy exercise with three patient or family member personas further reinforced the need to incorporate the strengths and needs of patients and families into the design of care.

5. Care settings do not coordinate or communicate.

Different care settings often treat each interaction with a patient as a discrete episode with no continuity or communication with other providers and family members about the past or what happens after the patient leaves their care. As one interviewee noted, “No one connected the dots.” Patients and families are left to navigate a fragmented system and try to ensure that each new set of providers has the relevant information. Unfortunately, current payment systems often do not incentivize care coordination, and information sharing and confidentiality concerns around protected mental health information can create additional barriers.

Intensive care coordination and care management can reduce the risk of readmission for individuals with complex needs, including those with behavioral health needs. There are, however, numerous approaches from which to learn to improve coordination of care, with community health workers, care navigators, and peers, among other relatively lower cost and effective options to provide this type of support within EDs.

6. Programs to divert patients with behavioral health needs from the ED can be effective, but currently maintain separate systems.

As described above, some programs, such as off-site psychiatric emergency services and crisis stabilization centers, focus on diverting patients from the ED. These off-site services reduce crowding in traditional EDs and can provide a more therapeutic healing environment for patients and families. Positive outcomes observed with this approach include a less than two-hour ED boarding time and only 25 percent inpatient transfer rate from these facilities.[27]

There are, however, some drawbacks to this approach. It can perpetuate the siloed medical and mental health systems, continuing to discourage movement toward a whole-person view of health

that integrates the mind and body. Some communities are investing significant resources in building such centers, diverting resources from other parts of the system.

There will always be people seeking care in the ED, and focusing too many resources on diversion could adversely affect those seeking care in a non-specialized ED. Additionally, these models are difficult to replicate in resource-poor areas and may be of limited value in communities with a smaller population or with a lower volume of patients with behavioral health needs. Regulatory barriers may reduce demand for diversion programs; for example, in some states, police officers called to assist someone experiencing a mental health crisis are required to transport them to a hospital emergency department.

Other community-based programs (e.g., community-based paramedicine, mobile outreach teams, partnerships with law enforcement) can also add capacity to triage and treat by utilizing an approach of bringing these resources to homes and communities. This may be more appropriate in settings that are rural or medically underserved, where physical access to care is a challenge.

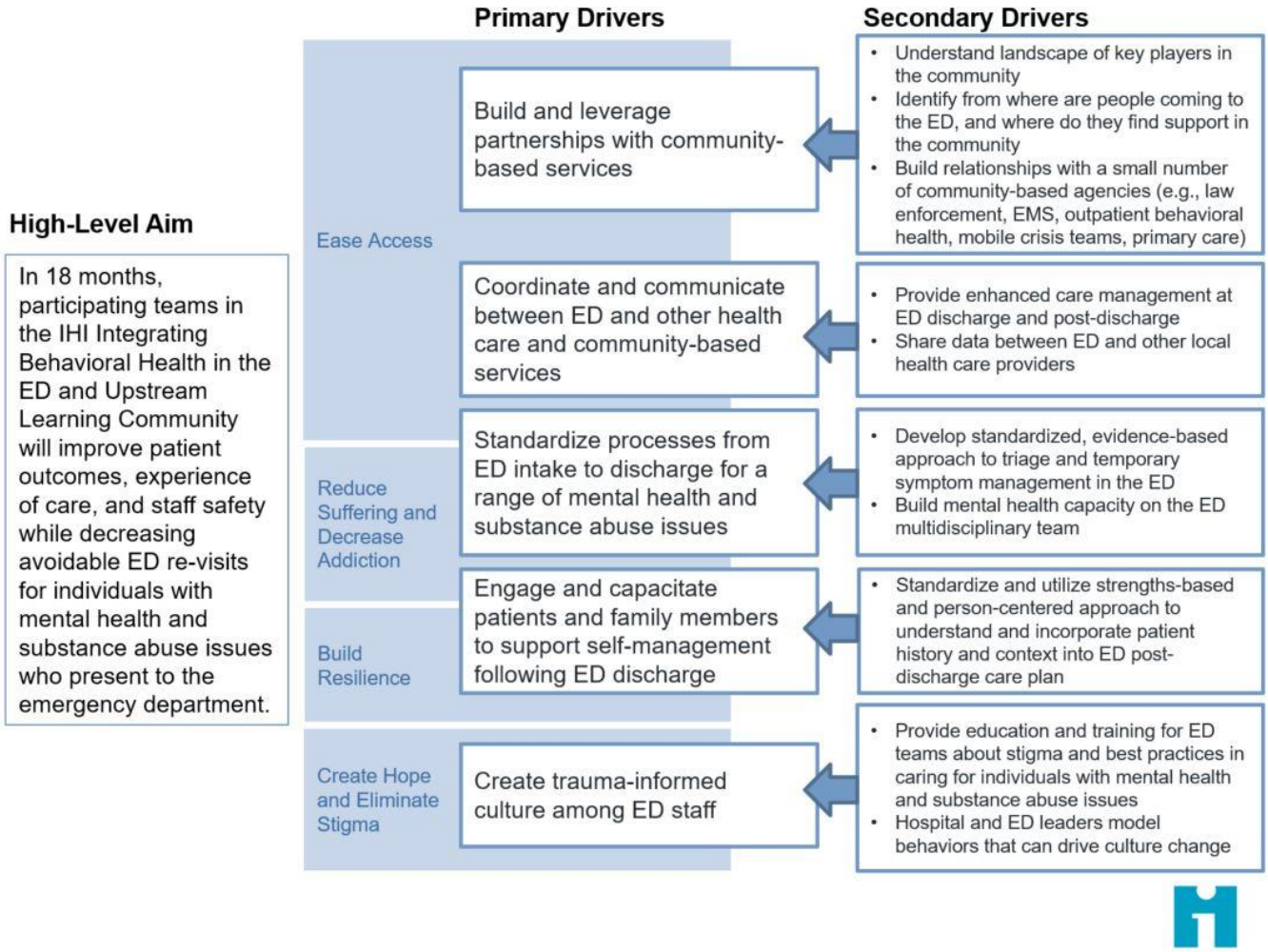
Theory of Change: Driver Diagram

Five primary drivers, derived from the six themes described above, form the basis of the driver diagram (see Figure 1) to guide this work.

1) Build and leverage partnerships with community-based services.
2) Coordinate and communicate between the ED and other health care and community-based services.
3) Standardize processes from ED intake to discharge for a range of mental health and substance abuse issues.
4) Engage and capacitate patients and family members to support self-management following ED discharge.
5) Create a trauma-informed culture among ED staff.

In Figure 1, these five drivers are overlaid on Well Being Trust's six strategic foci (condensed into four foci, as depicted in the figure: ease access, reduce suffering and decrease addiction, build resilience, create hope and eliminate stigma). This overlay attempts to show how the theory of change for integrating behavioral health in the ED is closely tied into the Well Being Trust's overall aims to improve mental health across the nation.

Figure 1. Driver Diagram for Integrating Behavioral Health in the ED & Upstream Learning Community



These drivers are in service of a high-level aim focused on improving patient outcomes, care experience, and staff safety while decreasing avoidable ED re-visits for individuals with mental health and substance use disorders who present to the ED. With this driver diagram as a guiding framework, we distilled a set of specific change ideas for each secondary driver (that, together, form a change package) that health systems in the Learning Community will test. Early learning and results from testing and refining the change package will be more broadly disseminated during the 18-month Learning Community. The health systems will be encouraged to work on multiple parts of the change package simultaneously, but where they begin will depend on their current work and aims.

The Learning Community change package is unique from other, previous work on addressing behavioral health needs in the ED in that it takes a systems approach to an issue that cuts across health care and community settings. By bringing together the best available evidence about what is effective in the ED, in community settings, and at the crucial intersections between health care and community-based services, the Learning Community aims to demonstrate that taking a systems approach can be more impactful than working only on individual parts of the system.

Building a Measurement System

Health systems track a variety of measures related to care for individuals with behavioral health needs in the ED. Most of these measures are focused on efficiency and flow rather than on more patient-centered outcomes. Since ED staff see patients for a brief period of time and care is focused on triage and temporary symptom management, it is challenging for EDs to track more longitudinal outcome metrics. From a larger list of 50+ possible measures, a smaller set of measures was selected for use in the Learning Community, based on the following selection criteria: the high potential for impact on patient outcomes, feasibility in collecting data for the measure, and the relevance of the measure in helping to assess the impact of the change package.

Required Measures

The Learning Community teams are required to report monthly data for six measures (see Table 5). These measures are being used to track progress toward the overall Learning Community aim: "In 18 months, participating teams will improve patient outcomes, experience of care, and staff safety while decreasing avoidable ED re-visits for individuals with mental health and substance abuse issues who present to the emergency department."

In addition to the six required measures, teams are also welcome to track additional measures aligned with their specific 18-month and 6-month aims, and with specific changes they are testing.

Table 5. ED & UP Learning Community Required Measures

Measure	Category	Sub-Category	Description	Numerator	Denominator
Percentage of patients who report resolution to the mental health/substance abuse issue for which they presented in the ED	Outcome	Patient Outcomes	Percentage of patients who respond "yes" to the question (asked to the patient at ED discharge as part of clinical process): "Has the reason you came to the ED been resolved?"	Total number of patients reporting issue has been resolved	Total number of patients with mental health/ substance abuse issues who present in the ED
Percentage of ED patients with mental health/ substance abuse issues admitted to inpatient unit	Outcome	Patient Outcomes	Percentage of patients with mental health/substance abuse issues admitted to inpatient unit	Total number of patients with mental health/substance abuse issues who present at the ED and are admitted to inpatient unit	Total number of patients with mental health/ substance abuse issues in ED
Average time in minutes per day that restraints are used on patients in the ED	Outcome	Patient Experience	Average time in minutes for all patients with mental health/substance abuse issues in the ED for whom restraints are used	Total number of minutes restraints are used in ED for patients with mental health/substance abuse issues	Total number of ED patients with mental health/ substance abuse issues for whom restraints are used

Measure	Category	Sub-Category	Description	Numerator	Denominator
Total number of patient assaults on ED staff	Outcome	Experience of Care: Staff	Count of patient-to-staff assaults, where assaults are defined as a violent physical or verbal attack	Total number of patients with mental health/substance abuse issues who assault staff in the ED	N/A
Total number of patients with ED re-visits within 7 days of discharge	Outcome	ED Re-visits	Count of patients re-visiting ED within 7 days after discharge	Total number of patients with mental health/substance abuse issues who re-visited ED within 7 days after discharge	N/A
Average ED length of stay (in minutes) as broken out and defined by the following: • **Average total time (in minutes) from initial presentation in the ED until medical stabilizing process is complete and patient is waiting for mental health evaluation or disposition** • **Average total time (in minutes) from when patient is ready/waiting for mental health evaluation until mental health evaluation or disposition plan has been completed in the ED** • **Average total time (in minutes) from completion of mental health evaluation/ disposition plan to discharge from ED**	Process	Driver: Standardize ED Processes	Break out ED length of stay (in minutes) into three measures: both as initial diagnostic for areas to focus on and to track progress on standardizing processes	Average time in minutes for each of the three processes (reported as three distinct average times in minutes)	N/A

Test Measures

Given the innovative work of the Learning Community, seven additional test measures (see Table 6) were identified, based on their potential impact on outcomes and as possible leading indicators for improvement. They are considered "test" measures as Learning Community teams will help test and refine how these measures are defined and collected. As teams focus their efforts on specific drivers and testing specific change ideas, they are also helping test and refine measures related to this work (e.g., considering which measures are most relevant for each driver and change idea, data collection approaches).

Table 6. ED & UP Learning Community Test Measures

Measure	Category	Sub-Category	Description	Numerator	Denominator
Total number of suicide deaths and overdose deaths 72 hours post-ED discharge	Outcome	Patient Outcomes	Count of suicide deaths and overdose deaths 72 hours post-ED discharge for patients with mental health/ substance abuse issues (Note: Data will be challenging to obtain, so could include as part of follow-up calls test, with the objective of getting qualitative data about what could be improved to help prevent risk of suicide post-discharge.)	Total number of suicide deaths and overdose deaths 72 hours post-ED discharge among patients with mental health/ substance abuse issues who presented to the ED	N/A
Patient experience of care 3-point index (respect, listening, communication)	Outcome	Experience of Care: Patients	Percentage of ED patients who respond 4 or 5 (using 5-point scale, where 5 is highest) to all 3 survey questions: 1) Degree to which ED staff treated me with respect; 2) Degree to which ED staff listened to my concerns; 3) Degree to which ED staff communicated the course of care and treatment plan effectively	Total number of ED patients with mental health/ substance abuse issues who responded 4 or 5 for all 3 survey questions	Total number of patients with mental health/ substance abuse issues who submitted the survey form
Percentage of code greys that result in use of patient restraints	Leading Indicator	Patient-to-Staff Assaults Driver: Trauma-Informed ED Staff	Percentage of code greys that result in use of patient restraints	Total number of code greys involving patients with mental health/substance abuse issues that result in the use of restraints	Total number of code greys
Percentage of patients with mental health/ substance abuse issues who have made a follow-up appointment with a community-based care provider within 30 days after ED discharge	Leading Indicator	ED Re-visits Driver: Partnerships with Community-Based Services Driver: Coordinate Between ED and Other Services	Percentage of patients with mental health/ substance abuse issues who have made a follow-up appointment with a community-based provider within 30 days after ED discharge	Total number of patients with mental health/ substance abuse issues who have made a follow-up appointment with a community-based provider 30 days after ED discharge	Total number of patients discharged from ED with mental health/substance abuse issues who were referred to a community-based provider

Measure	Category	Sub-Category	Description	Numerator	Denominator
Percentage of patients who have successfully completed their first appointment with a community-based care provider post-ED discharge	Leading Indicator	ED Re-visits Driver: Partnerships with Community-Based Services Driver: Coordinate Between ED and Other Services	Percentage of patients who completed their first appointment with a community-based provider following ED discharge	Total number of patients with mental health/ substance abuse issues who completed their first appointment with a community-based provider post-ED discharge	Total number of patients discharged from ED with mental health/substance abuse issues
Percentage of families of ED patients with mental health/substance abuse issues who respond 4 or 5 to survey questions to assess experience of ED care (Qualifier: When indicated by patient preference; exclusions when no family with patient)	Process	Driver: Support Self-Management Post-ED Discharge	Percentage of family members who respond 4 or 5 (using 5-point scale, where 5 is highest) to all 3 survey questions (given to family members at patient discharge from the ED): 1) Degree to which family participated in or received a care plan; 2) Degree to which family feel engaged in care; 3) Degree to which family are confident in what to do next post-ED discharge	Total number of families of patients with mental health/ substance abuse issues who respond 4 or 5 to these 3 survey questions at time of ED discharge	Total number of family members of ED patients with mental health/ substance abuse issues who submit survey form
Staff safety perception	Balancing		Percentage of ED staff who respond 4 or 5 (using 5-point scale, with 5 being the highest) to the survey question: "As a result of the changes that have been implemented, I feel safer in caring for ED patients with mental health/substance abuse issues."	Total number of staff who respond 4 or 5 to the question of feeling safer as a result of implementing change ideas	Total number of staff who submit survey form

Conclusion and Next Steps

Successful implementation of the theory of change described in this report would represent a significant step toward providing safer, higher quality, more effective care for patients with behavioral health needs who present to the ED. The changes will hopefully also spark a shift in mindset for ED teams regarding how to care for a marginalized and uniquely vulnerable population of patients. The approach described in this report, which incorporates elements of successful existing models and also focuses on changing entrenched systems, will require testing and refinement to understand what does and does not work, and the specific, measurable impact it can have on patients, families, health systems, and communities.

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