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The Recovering Together Initiative: Integrating Psychosocial Care into ICUs

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Abstract

More than 5 million patients are admitted to ICUs each year in the United States alone. ICUs are stressful environments given the patients' medical severity, family emotional experience,

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and staff burnout. However, psychosocial services are rarely offered and sustained in these settings. Multidisciplinary partnerships and innovative frameworks and services are needed to successfully integrate psychosocial care into these complex settings. To address this need, Massachusetts General Hospital developed the Recovering Together (RT) Initiative (2015–present) in its Neurosciences ICUs (Neuro-ICU). The hospital's aims were threefold: (1) to build a multidisciplinary collaboration to develop and sustain integrative care; (2) to implement a clinical, research, and training (CRT) framework to support patients, families, and staff; and (3) to develop an innovative, tailored evidence-based intervention for patient–caregiver dyads in the Neuro-ICU. The authors detail the process of developing the RT Initiative for the Neuro-ICU, including initial collaborations, psychosocial care implementation, and intervention development. This real-world approach to integrating psychosocial care in this setting was successful because of a strong multidisciplinary partnership, a feasible CRT framework, and funding to support the research and infrastructure. Physical proximity, consistent interactions and communication, mutual trust, and shared leadership priorities helped facilitate this integrated care approach. The findings provide practical guidance on how to integrate psychosocial care into medical settings. The authors hope that this approach is of value to clinicians, researchers, and health care systems working to develop and sustain integrated care models across complex medical settings.

Introduction

ICUs are specialized medical settings that provide 24-hour life-sustaining care to patients with life-threatening injuries or illnesses.¹ Each year, more than 5 million patients are admitted to ICUs in the United States.² ICU patients are a heterogeneous population — admitted for cardiac, neurological, respiratory, and acute illness and injury.² Family members often speak for patients and make challenging, emotionally charged decisions about their health care.³ This shift in roles, from loved ones to patient/caregiver, is difficult and emotionally taxing. Patients often feel helpless and dependent, whereas caregivers can be protective and fearful of the future.⁴ This stress can lead to family–staff conflicts, increasing pressures on staff to provide high-quality care while regulating their own stress.⁵ The combination of health crises, intense emotions, and role changes makes the ICU one of the most stressful units in the hospital for patients, families, and staff.⁶

Psychosocial resources and support are essential for patients, families, and staff in the ICU. Patients report clinically significant symptoms of anxiety, depression, and posttraumatic stress during ICU admission (approximately 24%, 43%, and 21%, respectively).⁷ Their family members also report clinically significant symptoms of anxiety, depression, and posttraumatic stress during admission (approximately 46%, 24%, and 17%, respectively).⁷ After discharge, approximately 30% of patients and families continue to experience emotional distress, as well as fatigue, insomnia, cognitive difficulties, and anticipatory grief for several years.⁶ This cluster of complications, known as post–intensive care syndrome (PICS) and PICS families (PICS-F), demonstrates the impact of critical illness on both patients and families.⁶ Because stress is interrelated between patients and their families, it can undermine patient recovery, caregiving quality, and overall health and well-being.^{8,9} Involving families in care and/or supporting them during the ICU stay can help decrease emotional distress,¹⁰ prevent PICS and PICS-F,^{6,11} and improve patient outcomes in several

respects: increased time out of bed during the ICU stay, less time on mechanical ventilation, and shorter overall hospital stays.¹²

Involved families can be challenging for staff. Families often want answers or reassurance that staff cannot provide given the uncertainty of patient health outcomes.⁵ Up to 50% of ICU staff report occupational burnout.¹³ Staff burnout is linked to increased care-associated infections, clinician attrition, and staff shortages.¹³ Support for staff is important because teamwork and resiliency can improve emotional distress, burnout, and quality of care.¹⁴

Many ICUs lack integrated evidence-based psychosocial services. A recent systematic review indicated that 37 integrated care frameworks have been developed, yet only 6% have led to clinical initiatives, because of a lack of guidance on how to implement them.¹⁵ To adapt to our ever-changing biopsychosocial health care landscape, we need to integrate theoretical frameworks into real-world practice; develop and implement efficient psychosocial interventions; and build successful multidisciplinary collaborations.

We built a multidisciplinary partnership, the Recovering Together (RT) Initiative, in the Massachusetts General Hospital (MGH) Neurosciences ICU (Neuro-ICU) to develop and implement sustainable psychosocial care. The Neuro-ICU staff — Neuro-ICU Chief, Nursing Director, physicians, nurses, social workers — and the Center for Health Outcomes and Interdisciplinary Research (CHOIR) psychosocial team (principal investigator [PI], clinical psychologists, clinical psychology fellows, and clinical research coordinators), partnered to address the unmet emotional needs of patients, informal caregivers, and Neuro-ICU staff. The Neuro-ICU staff had expertise in the setting, and the psychosocial team had expertise in developing psychosocial interventions for medical populations. This interdisciplinary approach was necessary to integrate psychosocial services into this complex medical setting.

Our goals were to develop:

1. The infrastructure and collaborations necessary to build and sustain Neuro-ICU psychosocial care
2. A feasible clinical, research, and training (CRT) framework to support patients, families, and staff
3. An innovative, tailored evidence-based intervention for patient–caregiver dyads in the Neuro-ICU

Below, we describe the process of developing the RT Initiative from initial collaborations to implementation.

Building the Infrastructure and Collaborations

In organizational theory, integration is defined as a system with separate but interconnected elements that play complementary roles in pursuit of common goals.¹⁶ In uncertain or unpredictable environments such as the ICU, systems are complex and often become fragmented.¹⁷ Theorists argue that more complex environments require strong collaborations and unified efforts to meet demands.¹⁸ Because of the complexity of the Neuro-ICU,

forming strong collaborations and having shared goals was an important first step for integrating psychosocial care in this setting.

Establishing Purpose and Shared Goals

At MGH, Neuro-ICU clinic staff frequently observed high levels of stress among patients and families. This stress negatively impacted family–staff interactions and placed additional pressure on staff, which in turn affected their performance, morale, and turnover. To improve the culture of the unit and to reduce stress levels, the Neuro-ICU Chief contacted the CHOIR Founding Director, a clinical health psychologist who develops resiliency interventions for medical populations.

Leaders met regularly to identify barriers to and facilitators for integrating psychosocial care in the Neuro-ICU. Their aligned leadership priorities and formal meetings set the foundation for standardized coordination and integration.¹⁹

Identifying Barriers to Psychosocial Care in the Neuro-ICU

Leaders identified multiple barriers — administrative, logistical, and clinical — to integrating psychosocial care into the Neuro-ICU. These required creative problem solving.

From an *administrative perspective*, coordination across Psychiatry and Neurology departments was lacking. Scheduling psychosocial care was unclear, and, with the billing structure, psychological services during and after hospitalization led to a net financial loss for the hospital.

From a *logistical perspective*, after discharge, patients and their informal caregivers rarely followed up with outpatient psychosocial referrals because of physical and emotional barriers (e.g., transportation, time, unknown providers, and avoidance related to posttraumatic stress symptoms).

From a *clinical perspective*, we had no psychosocial interventions to address patients and caregivers' distress in the Neuro-ICU or to support their staff.

Assembling the Infrastructure

Because health care innovation often requires top-down support, the leaders must create a shared vision and develop a mutually beneficial partnership.²⁰ Relationships built on reciprocity and trust will facilitate teamwork to achieve shared goals.¹⁷ Our leaders built this trusting relationship among all involved parties through open communication, regular meetings, and shared resources, including time, space, and personnel.

The Director of CHOIR and the Neuro-ICU Chief secured internal and external funding from the MGH Henry and Allison McCance Center for Brain Health, the American Heart Association, and the National Institute of Nursing Research (R21- and R01-level grants) to develop, test, and implement a novel psychosocial intervention for patient–caregiver dyads in the Neuro-ICU.⁷ This intervention supported dyads both during hospitalization and over live video after discharge to improve continuity of care and accessibility. The Director of

CHOIR (PI) assembled a psychosocial team that included clinicians (clinical psychologists and post- and predoctoral clinical psychology trainees) and research staff (clinical research coordinators).

In addition, the Neuro-ICU Chief agreed to fund a member of the psychosocial team as a part-time licensed clinical psychologist for the unit to help implement the intervention, offer support to staff, and coordinate research and training efforts. The Neuro-ICU Chief gathered support from medical, nursing, and administrative unit staff to support this initiative.

Together, leaders agreed that it was important to have:

1. Neuro-ICU staff and the psychosocial team in physical proximity to increase daily interactions
2. Informal interdisciplinary consultations between Neuro-ICU staff and the psychosocial team to address patient, staff, and research challenges
3. Formal meetings with Neuro-ICU staff and the psychosocial team (e.g., bimonthly check-in meetings with the PI, nursing leaders, and study coordinators to problem-solve recruitment challenges; monthly meetings to update staff on psychosocial study progress, specific cases, and quotes from patients and families)
4. Shared communication outlets (e.g., psychosocial members received access to electronic medical records; teams used Voalte secure devices to discuss patients; psychosocial team shared updates on study progress in the Neuro-ICU newsletter)
5. Trainings for the psychosocial team on Neuro-ICU flow and for the unit staff on psychosocial role
6. Flexibility in study procedures to adjust to patient and clinic needs (e.g., abbreviated screening, session scheduling, and adapting materials to patient cognitive status)²¹

This interdependence of funds, human resources, knowledge, and skills was vital for building an integrated care model for the Neuro-ICU.²²

A CRT Framework

We developed a CRT framework to help overcome administrative, logistical, and clinical barriers to integrated care (Figure 1). Each component provided the funding, support, resources, relationships, and information to build psychosocial programming. Clinical services provided valuable psychosocial support to patients, families, and staff. Research helped us gather key information from stakeholders and assess the value of new psychosocial services. Training provided the infrastructure necessary to sustain this model of care and offered useful opportunities for clinical psychology trainees to gain experience in an ICU setting. Combining clinical work, research, and training helped make this model sustainable. Below, we describe each CRT component in more detail.

Clinical Component

We started integrating into the Neuro-ICU by offering clinical psychosocial services to patients, families, and staff. The part-time embedded clinical psychologist (0.2 full-time equivalent or approximately 1 day per week) conducted brief bedside assessments, delivered psychotherapy to patients and/or families (typically between four and six sessions per week), provided consultation for psychosocially complex patients (e.g., those suffering from behavioral issues or emotional distress), and led group support sessions for staff. The nursing director and clinical psychologist worked together to develop the content for staff groups.

Offering these clinical services helped establish a collaborative, reliable, and trusting partnership between the psychosocial team and the Neuro-ICU staff (physicians, nurses, social workers, specialty services, and administrators). An understanding of unit needs, accountability, predictability, and trust helped facilitate psychosocial integration into the unit.²³ Clinical experiences also informed research; our team learned what kind of intervention content and format would work best in this setting.^{24,25} The clinical psychologist met with psychosocial, medical, and nursing leadership regularly to optimize services and integration into the unit. This clinical work promoted a trusting partnership that set the foundation for our research and training components.^{26–28}

Research and Training Components

After the *clinical component* was introduced, we began the *research component*. We started with a prospective survey to better understand the risk and resiliency factors associated with emotional distress among patients and families. We then conducted qualitative interviews with staff to learn about the treatment needs and preferences of patients, families, and staff. These data helped inform the development of the RT intervention for patient–caregiver dyads. We then conducted a single-blind randomized clinical trial, comparing RT with an attention-matched educational control in the Neuro-ICU to test for feasibility, acceptability, and preliminary efficacy.

Simultaneous to starting our research in the Neuro-ICU, we started the *training component*. The part-time embedded psychologist spent 2 to 4 hours per week training clinical psychology fellows (two to three trainees per year and a total of six trainees supervised across 3 years). Having trainees was mutually beneficial. With trainees, we were able to offer more services to patients, families, and staff and have more research support (assisted with data collection). The trainees gained valuable experience providing clinical care, conducting clinical research, and serving as part of a multidisciplinary team.

Taken together, this CRT framework is a cost-effective, efficient, and valuable way to provide psychosocial services in the ICU, develop new programming, and teach and train the next generation of health psychologists. We hope that this framework can serve as a model for sustainable psychosocial care in complex medical settings such as ICUs.

Developing a Neuro-ICU Psychosocial Intervention

A major goal of the RT Initiative was to develop a brief, tailored, dyadic psychosocial intervention for Neuro-ICU patients and families or other informal caregivers. This research provided the funding, resources, and personnel to support this initiative. Developing an evidence-based intervention for the Neuro-ICU can also inform effective and sustainable clinical psychosocial services across ICU settings. Below, we describe this programmatic research and how we integrated clinical services and training into this work.

Initial Prospective and Qualitative Studies

To inform our intervention, we first conducted a prospective, self-report survey to understand emotional distress trajectories and resiliency factors, such as coping skills and availability of social support, among patient–caregiver dyads in the Neuro-ICU and after discharge (3- and 6-month assessments). Findings indicated that emotional distress was prevalent, clinically elevated,^{25,29–31} and comparable to that of medical patients with other types of serious illness.³² Resiliency factors, such as mindfulness, coping, and dyadic interpersonal factors, were associated with lower emotional distress,³³ fewer postdischarge psychiatric symptoms at baseline and follow-up, and higher quality of life (QoL) for both patients and caregivers at follow-up time points.^{29,34,35} Consistent with the growing literature on dyadic coping in serious health conditions, both emotional distress and resiliency factors were interdependent (bidirectional) between Neuro-ICU patients and caregivers.^{25,29,30,36}

Next, we conducted two sequential qualitative studies³⁷ to develop the treatment content and study procedures necessary to pilot the initial version of our intervention.²⁵ Our qualitative interview scripts incorporated available literature on psychosocial interventions for dyads,^{9,38} as well as our own clinical observations of dyads from the unit. Interviews with 24 dyads and 15 Neuro-ICU nurses suggested that many dyads noted anxiety related to the uncertainty of patients' prognosis, fear of future medical events, negative emotions such as worry and guilt, and role changes (e.g., patient dependence on caregiver). We identified opportunities to deliver resiliency skills during the acute hospitalization and directly after discharge to promote emotional recovery. These skills included mindfulness practices, methods to manage worry, and ways to increase social support. Dyads and nurses agreed that a hybrid in-hospital/live video delivery would be valuable and accessible to patients and families. Further, an intervention delivered urgently after initial hospitalization would be ideal to help prevent chronic emotional distress.³⁷ These initial studies allowed trainees to learn how to use qualitative and quantitative methods and data (mixed methods) to develop a clinical intervention for a complex medical setting.

Designing the RT Intervention

Prospective study findings guided the iterative development of RT, a dyadic evidence-based resiliency intervention to reduce emotional distress in patients and caregivers. To optimize accessibility, RT was designed as a hybrid intervention, with in-person delivery in the hospital followed by live video delivery after discharge. RT treats patients and informal

caregivers together, in accordance with dyadic intervention models for acute neurological injury (ANI) onset.^{9,38,39} RT aims to reduce the risk of chronic emotional distress and improve QoL by building resiliency skills, including mindfulness, coping, communication skills, and engagement of social support.^{7,40}

RT content was informed by our initial prospective and qualitative studies, clinical observations, and individual and dyadic theoretical frameworks.^{7,40} RT integrates evidence-based skills from cognitive behavioral and mindfulness-based therapies^{41–43} and teaches these skills through an interpersonal lens that accounts for dyad-specific challenges, including role changes and interpersonal communication challenges known to impact emotional distress after an ANI.^{9,38}

RT is a manualized treatment; that is, we developed a manual to ensure that clinicians delivered RT in a standardized way. However, we encouraged clinicians to flexibly tailor sessions to meet the dyads' specific needs.^{44,45} To accommodate patient transitions, we designed the first two sessions of RT to be delivered in person during the Neuro-ICU stay and to include skills relevant to all dyads regardless of the patient's medical diagnoses. The remaining four sessions are delivered after discharge, in a modular format over live video, chosen from a possible list of five sessions and delivered in the order determined by the needs of the dyad. The modular format allowed us to develop an intervention that can be applied to all dyads in the Neuro-ICU regardless of diagnoses and physical sequelae. RT includes "home practice" assignments for both dyad members to practice skills between sessions. Skills build upon one another from week to week.

We piloted RT with one dyad to refine intervention content and clinician delivery before conducting our feasibility trials.²⁵ Trainees gained experience in treatment development and refinement by adapting and iteratively refining program content and delivery to meet the dyads' needs.

Small Feasibility Study

With lessons learned from our initial RT pilot dyad, we tested the intervention and its manual in a small feasibility randomized controlled trial (RCT) ($N = 17$ dyads).²⁴ RT demonstrated initial feasibility (e.g., recruitment, measurement), acceptability (e.g., randomization, study procedures, treatment adherence), and satisfaction with patients suffering from stroke and informal caregivers.³⁴ Patients and caregivers who participated in RT exhibited reduced emotional distress from baseline to after intervention completion.³⁴ Although RT demonstrated initial evidence for feasibility and signals for improvement in this small feasibility trial, it highlighted opportunities to improve study procedures for our subsequent feasibility RCT.

Feasibility and Preliminary Efficacy Study

We conducted a single-blind RCT ($N = 58$ dyads) of RT versus an attention-matched placebo educational control: six educational sessions with a clinician matched for time and attention but with no sessions related to resiliency skills.⁷ We followed procedures similar to those of our small feasibility trial and added eligibility criteria to include patients

with a range of presenting conditions, including traumatic brain injury, stroke, infection, neuromuscular injury, and tumor resection. In this feasibility RCT, clinical trainees gained experience delivering manualized treatments (RT and educational control) and received weekly clinical supervision from the PI. We met National Institutes of Health (NIH) recommended feasibility and acceptability benchmarks^{46,47} for recruitment, data collection, adherence, credibility, expectancy, satisfaction, and fidelity.⁷ In other words, more than 70% of participants enrolled, completed assessments, completed at least four of six sessions, and reported higher than midpoint scores on credibility, expectancy, and satisfaction scales; more than 70% of sessions had 100% adherence from clinicians.²⁵ Effective recruitment and retention strategies included: using electronic medical records and Neuro-ICU staff to identify potential participants; screening participants with validated assessments; building rapport with participants during screening; ensuring interest during the informed consent process; having research staff on site 5 days a week; reminding participants of upcoming appointments; offering brief and flexible sessions; and building strong therapeutic alliance between clinicians and dyads.

RT was associated with statistically and clinically significant reductions in emotional distress, which were sustained through a 12-week follow-up. Participation in RT was associated with significant improvements from baseline to after treatment in several QoL domains, and these improvements were sustained through the 3-month follow-up. These QoL improvements were not seen for patients or caregivers in the control group.⁴⁰ Across both groups, dyads had similar emotional distress trajectories, such that patient and caregiver emotional distress outcomes and changes were significantly correlated at baseline, after the intervention, and during the follow-up.⁴⁸ These findings highlight both the interrelatedness of emotional distress and the benefits of intervening with dyad members simultaneously to prevent chronicity.⁴⁸ Taken together, our feasibility RCT suggested that RT could be scaled to help reduce emotional distress in dyads across Neuro-ICUs, consistent with broader RT Initiative goals.

Discussion

The purpose of the RT Initiative was to integrate dyadic psychosocial services into an ICU setting and to demonstrate its effectiveness in preventing adverse psychosocial outcomes in patients and their caregivers. The RT Initiative included a strong multidisciplinary partnership, CRT framework, and NIH-funded research to develop a psychosocial intervention for the Neuro-ICU. These components all helped to successfully implement psychosocial care into an ICU. Our integration was successful because of mutual trust, accountability, and shared responsibilities and resources across departmental leadership.^{15,18,22} Collaboration was facilitated by physical proximity, consistent interactions, formal and informal meetings, shared communication styles and priorities, and training and support for all team members.²¹ By sharing resources and offering mutually beneficial and cost-effective services (clinical care, evidence-based services, funding, and trainee experience), disciplines and leaders worked together to enhance the culture and outcomes of this health care unit.

Having a psychologist embedded in the unit part time helped facilitate collaboration and bring the medical and psychosocial teams together. The psychologist functions as a “boundary spanner,” or organizational liaison, and helps unify personnel.⁴⁹ Stationing a clinical psychologist within medical units allows for quicker referrals, access to highly trained providers, and greater continuity of care.⁵⁰ Clinical psychology services have been integrated primarily into primary care settings, yet are needed across specialty medical settings.⁵¹ Strong multidisciplinary collaborations are key for improving patient, family, and staff mental health, resiliency, and, in turn, health and well-being.

In fact, a 10-year analysis investigating the efficacy–effectiveness of European ICU studies states that organizational changes are needed to standardize and improve the quality of ICU care.⁵² This report describes the need for sustainable governance systems (structured norms, rules, and actions) to integrate medical and nonmedical providers. In other words, formalized and standardized collaborative care models are necessary to improve health outcomes and the quality of evidence-based care within ICUs. Consistent with this report, our initiative needed a strong multidisciplinary partnership and a standardized system of psychosocial care to integrate successfully into the Neuro-ICU. Our approach can help serve as a guide for integrative care models across specialized settings such as ICUs and postacute settings, where psychosocial services are not part of usual care. We encourage colleagues to build multidisciplinary partnerships that can help develop and sustain standardized integrated care across medical settings.

Future Directions

Currently, we are testing RT in a fully powered efficacy–effectiveness RCT (Figure 1, years 9+). We aim to recruit 225 participants over 5 years and to analyze outcomes both individually and dyadically.⁵³ We will also assess resiliency factors, mediators of change, and the impact of dyad members’ response to the intervention on each other. If effective, we hope to disseminate RT to other ICUs across the world to enhance health care outcomes. However, more work is needed to explore ways to overcome barriers that can impede dissemination and implementation.

Because our current psychosocial services are in the context of this RCT, clinicians are primarily funded through an NIH R01-level grant. Billing for inpatient psychosocial services is a challenge because of low reimbursement rates for nonmedical and preventative care, limits on number of same-day visits, lack of reimbursement for collaborative care, and difficulties with scheduling and documentation.⁵⁴ Creative models of billing are needed to help sustain integrated models of care in ICUs. These models could examine the sustainability of funding psychosocial providers’ time internally through the unit, billing as consultation services, or using outpatient billing structures for inpatient care. Future research should examine whether integrated care models help offset health care utilization rates and overall costs using electronic medical records. Demonstrating the cost effectiveness of this model would help demonstrate its value to health care administrators and leaders. Additionally, in the RT Initiative, staff were grateful for informal consultations and supports from psychosocial providers. With the rates of burnout continuing to increase, future work

is needed to develop, test, and implement formalized staff wellness and support programs across ICUs.

Another challenge to dissemination and implementation is having the personnel to deliver psychosocial care in ICUs. Our work revealed that using trainees to deliver care and using telehealth options can help support new integrated care initiatives. We are also currently collaborating with social workers embedded in the Neuro-ICU to extend the reach of the RT Initiative. Because social workers are embedded in most specialty medical settings, this collaboration could also inform sustainable integrated care approaches. In future research, we will assess the effectiveness of stepped-care models, in which the level of care offered depends on the severity of distress. In addition, we encourage colleagues to consider quality improvement (QI) initiatives to test new integrated approaches. QI initiatives are valuable in complex clinical settings because they do not require institutional review board approval, are meant to be adapted in real time, and use infrastructure currently in place. These initiatives can inform the adaptation of standardized procedures to specific units and, in turn, improve the quality of care delivered within these units.

We are currently applying this integrated care approach to other medical settings, including neurology clinics, orthopedic surgery, and the neonatal ICU. We hope that the RT Initiative can pave the way for sustainable integrated care programs and collaborations across medical settings.

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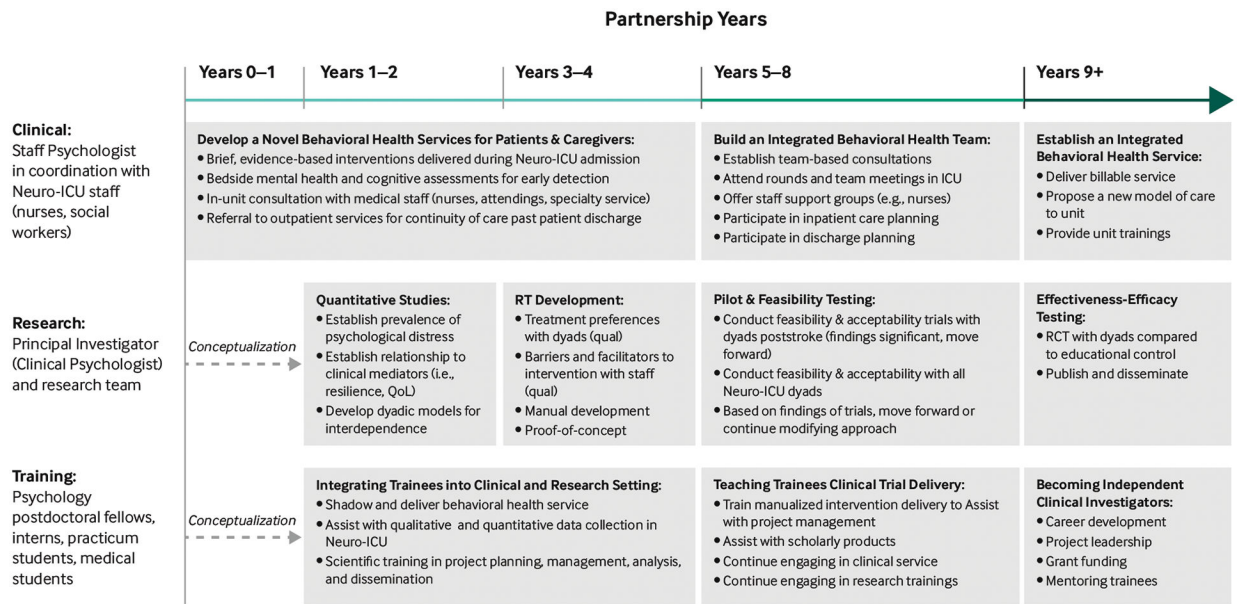


FIGURE 1. Clinical, Research, and Training (CRT) Framework for Recovering Together (RT) Initiative

We developed a CRT framework to help overcome administrative, logistical, and clinical barriers to integrated care.

Neuro-ICU = Neurosciences ICU, QoL = quality of life, qual = qualitative studies, RCT = randomized controlled trial.

Source: The authors

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