

VIEWPOINT

# Mental Health Services in Postcardiac Arrest Care



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## Background

Cardiac arrest survival rates are steadily improving [1]. However, after medical stabilization and hospital discharge, survivors rarely receive appropriate follow-up care to manage their cognitive, physical, and emotional challenges resulting from the arrest [1]. They, and their caregivers, are left without direction [1].

Cardiac arrest survivors who experience good neurologic recovery and their caregivers often suffer from chronic emotional distress [2, 3]. This distress is rooted in a sudden, near-death experience. It is sustained in survivors through persistent somatic reminders of their event (e.g., sensation of the implantable cardioverter defibrillator and its discharges, fatigue, hypersensitivity to changes in heart rate, etc.) and is sustained in both survivors and caregivers through fear of recurrence and lack of follow-up care to manage postarrest symptoms [4].

The caregivers of cardiac arrest survivors with poor neurologic recovery or disorders of consciousness also often struggle with chronic emotional distress [5]. Both a lengthy and uncertain hospital course and the pressure of acting as surrogate-decision makers while also managing external responsibilities can leave caregivers overtaxed and isolated [5]. These caregivers also experience ambiguous loss, such that the survivor is physically present but psychologically absent [5]. Caregivers of those who do not survive to discharge experience grief on top of the hospital-based distress.

Emotional distress postcardiac arrest undermines survivors' and caregivers' quality of life and drives survivors' morbidity, hospital readmissions, and mortality [2, 3]. To

address this urgent problem, the American Heart Association has called for the development of psychological services for this population [1]. Clinical psychologists can fill this need by developing tailored, evidence-based services that can be deployed by mental health clinicians along the continuum of postarrest care to support patients and caregivers.

Here, we describe services for survivors and their caregivers aimed at improving emotional distress and ultimately clinical outcomes downstream (Table 1). Through a triage system, in-hospital psychosocial services could be delivered by both staff currently available in the units (e.g., nurses, social workers, and nurse practitioners) as well as psychologists, depending on the level of need. Outpatient services would be led by mental health clinicians (e.g., mental health counselors, psychologists, as well as social workers and nurse practitioners who are trained in diagnostic assessment and provision of psychotherapy).

## Hospitalization

Mental health services in intensive care units (ICUs) are used sparingly, with providers often being hesitant to approach patients because of communication barriers secondary to critical illness and recovery and accurate identification of ideal timing for approach. Indeed, sensitivity over timing is important to ensure that the services are best used. For cardiac arrest survivors, mental health services should not be offered until patients are awake, alert, oriented, and communicative. Often, this may not occur until the survivors have been transferred to a lower level of care (e.g., stepdown).

For caregivers and families, we recommend mental health services be offered after an initial family meeting with the clinical team so that they are acquainted with the ICU and have voiced their initial medical questions and concerns. Again, timing is critical, and services can

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**Table 1 Outline of mental health services that can be offered along the postcardiac arrest care continuum**

	Nursing	Mental health clinicians <sup>a</sup>	Clinical psychologists	Neuropsychologists
Hospital services				
Emotional distress screening	X	X	X	X
Beside psychotherapy		X	X	X
Coping skills training	X	X	X	X
Brief neuropsychological assessment			X	X
Outpatient services				
Psychotherapy		X	X	X
Full neuropsychological assessment				X
Compensation strategies for cognitive impairment		X	X	X

<sup>a</sup> Mental health clinicians can include mental health counselors as well as social workers and nurse practitioners who are trained in diagnostic assessment and provision of psychotherapy

be offered to caregivers at any point after that initial family meeting. That said, given that caregivers and families are not “active patients,” we advocate that those who express an interest and a need be enrolled in the medical system so that they can be formally evaluated and receive the services described below.

### Emotional Distress Screening

During hospitalization, hospital staff can conduct emotional distress screening using appropriate, validated measures for survivors and/or caregivers, which can help triage based on the level of emotional support needed. Those who screen positive for clinically significant distress can then undergo diagnostic interviews with a mental health clinician, which can yield diagnostic information and treatment recommendations for continued mental health care.

### Brief Psychotherapy Sessions

Mental health clinicians can provide brief psychotherapy sessions for individuals, patient-caregiver dyads, or groups of family members. Indeed, at Massachusetts General Hospital (MGH) we are conducting dyadic psychotherapy for those admitted in the neurosciences ICU (neuro-ICU) as part of the Recovering Together clinical trial [6]. We are also adapting this program for caregivers of patients with disorders of consciousness (the Coma Family Program) [7]. For cases in which patients and/or caregivers are not eligible for either program, we offer brief, single bedside psychotherapy sessions either in the neuro-ICU, stepdown unit, or via videoconference for caregivers of patients with disorders of consciousness. In these sessions, we tailor the therapy format depending on the social situation (e.g., individual psychotherapy for patients without caregivers, dyadic psychotherapy

for ineligible dyads, etc.) and their intervention needs (e.g., supportive therapy for processing distress, formal exercises for those seeking tools to manage stress, and, especially for caregivers of patients with disorders of consciousness, we intervene on distress associated with prolonged prognostic uncertainty, inability to communicate with their loved one, and coping with making difficult decisions on behalf of the patient).

Regardless of format, brief psychotherapy sessions can aid survivors and their families in managing acute distress and preventing the development of chronic distress. Additionally, these sessions can serve as a gateway for future and continued mental health treatment for those previously reluctant because of ambivalence or stigma.

### Coping Skills Training

Hospital staff and mental health clinicians can lead survivors and/or caregivers in coping skills training. By learning coping skills early, survivors and caregivers can draw on their skills to manage their acute, hospital-based distress and the challenges they will encounter after discharge. Skills can be particularly helpful for caregivers of survivors with disorders of consciousness to cope with the prolonged “limbo” period of ongoing prognostic uncertainty, and consequentially chronically heightened anxiety [5].

There is preliminary evidence that cardiac arrest survivors and caregivers engaging in mindfulness (living in the present), resilient coping (behaviors that facilitate effective adaptation), effectively using social support, and living with meaning and purpose experience reduced distress [4, 8]. These constructs can all be taught in a skills-based format, as in Recovering Together and the Coma Family Program [6, 7].

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### **Brief Neuropsychological Assessments**

Clinical psychologists can conduct brief neuropsychological assessments, which can identify survivors' cognitive strengths, weaknesses, and impairments. These assessments can indirectly reduce distress in both survivors and caregivers by identifying cognitive rehabilitation treatment targets as well as compensation strategies that survivors and families can readily employ to manage the survivors' cognitive symptoms and resulting distress. Although provision of a full testing battery may not be feasible during an inpatient stay, psychologists can still provide brief, yet comprehensive assessments (e.g., the Repeatable Battery for Neuropsychological Status) that can estimate a survivor's cognitive profile.

### **Posthospital Discharge**

#### **Outpatient Psychotherapy**

After discharge, mental health clinicians can provide tailored psychotherapy to facilitate adjustment to cardiac arrest survivorship. Therapy can be dynamic to meet survivors' and families' needs, which include skills-based or more formal approaches. Therapy can also focus on meaning and purpose (as recommended by long-term cardiac arrest survivors) [4] to guide survivors and families in living their "second chance at life" according to their values. Outpatient psychotherapy for bereaved caregivers would focus on grief, whereas therapy for those caring for survivors with disorders of consciousness could focus on ongoing uncertainty, transition to long-term caregiving, and ambiguous loss [5].

#### **Neuropsychological Assessment**

Full neuropsychological assessment conducted after discharge can identify ongoing cognitive impairments. For survivors who underwent brief neuropsychological assessment in the hospital, repeat assessment could identify changes in cognitive function since discharge. However, even if survivors did not undergo assessment in the hospital, a postdischarge assessment can be helpful in elucidating the survivor's cognitive profile once they have resumed life outside of the protected hospital environment.

#### **Compensation Strategies for Cognitive Impairments**

Mental health clinicians and psychologists can work with survivors to identify compensation strategies for specific cognitive symptoms. For example, those with memory impairments can be taught how to effectively use to-do lists and reminder applications on their smartphones; those with processing speed impairments can be taught how to request to receive important information in written or audio-recorded formats. Compensation strategies

will vary depending on the survivor's cognitive profile, but ultimately these can reduce distress by teaching survivors and their caregivers how to manage or "work around" survivors' cognitive difficulties.

### **Changing the Culture of Mental Health Service Provision After Cardiac Arrest**

The most common model for in-hospital mental health service provision for postcardiac arrest patients and their families, that is, through billed psychiatry consults and/or through salaried mental health clinicians that do not bill, is not conducive to sustainable mental health care. Further, as discussed above, postdischarge coordination of mental health services is fragmented, and typically the responsibility falls on survivors and caregivers to locate and establish care.

To address these issues, we propose a paradigm shift in which mental health clinicians can bill for their inpatient services and connect survivors and caregivers to postarrest or post-ICU clinics for continuity of care. Postarrest and/or post-ICU clinics could adapt primary care models that use a shared medical visit paradigm, whereby mental health visits are conducted after the medical check-in and are billed as bundled care. By enabling mental health clinicians to bill in both settings, they can take ownership as providers and sustain their services.

Infrastructure for such a paradigm shift is beginning to take place in the neuro-ICU at MGH and through the University of Pittsburgh Medical Center's postcardiac arrest service (PCAS). At MGH, in addition to our psychosocial trials in the neuro-ICU [6, 7], we offer single bedside psychotherapy sessions to those who do not qualify for our trials or who are not interested in participating. To increase accessibility and reach, we offer to conduct our sessions over videoconference for those who could not otherwise attend in-person visits (e.g., caregivers who work during business hours). To continue offering these services in the long term after our trials end, we would need to be able to bill for our inpatient services. That said, we have taken the steps to begin developing a billable outpatient clinic for caregivers and dyads.

At the University of Pittsburgh Medical Center, clinicians developed a multidisciplinary PCAS [9] that bills as an inpatient service line and includes emergency physicians, neurointensivists, cardiologists, advanced practice providers, and social workers. The PCAS also offers consultation regionally via telemedicine, which considerably increases their reach to provide access to regionally underserved populations. Incorporating additional resource into the bundle (i.e., billable mental health services), as well as through billable, remote outpatient therapy after discharge could allow mental health providers to sustain themselves in such a model.

Forming relationships with critical care providers and staff and a vested interest in improving survivorship for patients and families have been key ingredients to establishing mental health infrastructure in both locations. Importantly, it will take creative billing models, such as allowing for mental health clinicians to bill for inpatient services or adapting the bundled care approach, to sustain these programs and others across the country.

## Summary

There is a critical need to support the emotional well-being of cardiac arrest patients and their families. Early distress screening, brief and long-term therapy interventions, and neuropsychological assessment can fill this gap. Embedding mental health services in postarrest standard of care is both novel and necessary to improve emotional distress and quality life. This is a marked shift from focus on *just* survival to discharge.

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## Author Contributions

AMP—conceptualization, drafting, critical review. SMP—conceptualization, critical review. AMV—conceptualization, critical review. The final manuscript was approved by all authors.

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## Conflicts of Interest

Alexander Presciutti and Sarah Perman are both unpaid committee members of the Cardiac Arrest Survivor Alliance. The authors report no other potential conflicts of interest.

## Ethical Approval/Informed Consent

Our Viewpoint did not analyze any data, and thus institutional review board review, informed consent, and use of a reporting checklist are not applicable.

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