Caring Contacts are brief, periodic messages that express unconditional care and concern that have been shown to prevent suicide, suicide attempts, and suicide ideation1–6 and are recommended by multiple clinical practice guidelines.7–9 Our website includes a useful video and popular press article that gives the flavor of this unique suicide prevention strategy: <https://www.uwcspar.org/caring-contacts.html>

While previous research has sent Caring Contacts by postal mail, our research team has developed a text message version, Caring Contacts via Text (CCVT), that has also demonstrated effectiveness on suicide attempt risk and, with its greater two-way communication, represents an innovative clinical approach to aftercare.10 Unlike most clinical interventions, contact with participants in Caring Contacts is not tied to their expressions of distress or risk, but instead on a predefined schedule such as weekly, monthly, or their birthday. As a result, the vast majority of replies (over 80%) are expressions of thanks, positive reports, or updates rather than indications of distress or risk. Caring Contacts replies from recipients need to receive prompt responses that convey caring, support, and connection. The majority of replies require little more than a “You’re welcome” or an emoji in response—but the unpredictability of the 1 out of 150 replies which needs immediate intervention makes clinical oversight of Caring Contacts a new and unfamiliar clinical process. There is certainly no equivalent in behavioral health care.

While receipt of a Caring Contact is a simple message for the recipient, assuring authors are sending messages to potentially hundreds of recipients simultaneously, on a predictable schedule, that messages are received, and facilitating prompt replies is not. Many organizations who express excitement about Caring Contacts are quickly dropping the idea in the face of what they believe to be insurmountable coordination and risk management difficulties. Other organizations are proceeding, but only sending a few letters, sending messages as appointment reminders, sending them in response to client distress, or otherwise implementing Caring Contacts without fidelity. Our colleagues in the VA11,12 and elsewhere have implemented Caring Contacts by postal mail, for which “senders” who are existing paid staff (i.e., medical support assistants) use spreadsheets to track who needs letters mailed when and facilitate authors, signatories or their representatives to respond to the infrequent replies (usually by phone call) to cards in the mail. By contrast, CCVT requires a technology platform to send text messages and the capacity to respond to replies (which were received 2/3 of the time in our research). In our research, we use an online messaging platform that costs thousands of dollars per year and is so complex and hostile to the user, we also need to pay oversight staff to assure fidelity and manage risk. Thus, an improved, robust technical infrastructure that can support authors and health care organizations to implement CCVT, and other versions of Caring Contacts, in a range of destination contexts, is critical to widespread adoption, implementation fidelity, and sustainability.

On the next page we summarize many of the tasks required in implementing Caring Contacts according to the core principles. I am envisioning technology that can do this - not necessarily that it is housed within the EHR itself - but more likely a technology that can speak with/through the EHR for purpose of documentation.

**Glossary:**

Recipient: the person receiving the messages

Author: the person from whom the Caring Contacts are sent. In research studies this was generally a research assistant or research clinician who had no ongoing relationship with the recipient. Authors could be current providers, but this may conflict with their ongoing care. Other authors might be suicide prevention coordinators, Veterans or other peer support, mentors in schools, etc.

Signatory: when the author is not someone who had met or is directly responding to the Caring Contacts. For instance, in the VA, cards are coming from the charge nurse and emergency department team or from the Veterans Crisis Line. In the Australian study, pre-printed cards with the names of the both the toxicologists who care for patients after a deliberate self-poisoning are sent although the recipient would likely only meet one of them.

Sender: a person who does the work to send the Caring Contacts who is not the Author (i.e., in larger systems like the VA, an administrative or other assistant may support the Author by actually sending the messages through creating a mail merge to bulk send messages, programming the messages into an online messaging platform, etc.)

Caring Contact: the card, email, text message or other contact sent to the recipient

Message: the content of the Caring Contact

Reply: is from the recipient

Response: is from the Caring Contacts author, signatory, designate in response to a recipient reply

**Tasks to accomplish:**

Sending the Pre-Programmed Messages:

* Pre-program a list of 8-25 messages to be sent on a specified schedule over the year – generally one the next day, then weekly or monthly, and tapering out to every 2-4 months.
* Potentially, each agency/community might culturally adapt the messages (e.g., Veterans, active duty military, American Indian/Alaska Native communities, Latinx youth) their organization will send. Additionally, within an organization, each author sending the messages may want to write their own pre-programmed messages based on the core message principles—so there could be multiple versions of the pre-programmed lists within and across organizations. (Note that this variation at the author level has not been empirically validated in any research study and has potential issues.)
* If Caring Contacts are coming by text message, the system needs to have a way of assuring these messages are being received and alert the author if there are message failures. We currently use an online messaging platform which tracked failures but authors have to regularly go and check to see what failed.
* Ideally, the system would have capacity to send emails or coordinate the sending of postal mail Caring Contacts. (In a current study, participants can choose text, email, or postal mail. Texts and emails are automatically sent by the system. We program system emails to prompt our study staff to send contacts via postal mail by sending an email a few days early (to account for time in postal service) that says please write the following message in a card and send to this participant to arrive on this date.)
* Medical systems have considered using eCare, MyChart, or similar options to send the Caring Contacts, which to them seems simple and appealing, but for the recipient, is neither. They will get a message that requires them to login to the system only to arrive at a message that says, “Hope you are doing well.” We doubt that recipients will have the simple positive response that is intended after the trouble of typing the login and password (especially on their phones), and we suspect they might just stop opening eCare messages. (This is, of course, an empirical question that we hope to answer with our planned Human Centered Design research.)
* Messages should not all be sent from the exact same time (e.g., 11am in our previous study) because it may increase the perception, when messages are viewed in sequence on a phone, that the message is autogenerated or that it is spam (e.g., in our current study we vary the send time between 11a-2p).
* Messages have to accommodate the time of the week – a message scheduled on Friday reads better as “hope you *had* a good week,” not “hope you *are having* a good week.” Our staff make these revisions manually for each Caring Contact when programming the messages.
* In a current study we are doing with native communities, our partners wanted messages that represented the seasons of the year and a holiday message. To coordinate this, we programmed an excel sheet with the timing of the messages relative to the seasons and holidays; with entry of the start date, it maps out the appropriate messages and highlights the seasons in colors so the staff see when which seasonal message should be sent. Once the messages are mapped out in excel, they then have to manually program each message into the system at the specified dates and times.
* This is not an automated intervention. There’s a real relationship (usually) in that contact author has met the recipient. The recipient (reasonably) expects the contact author is paying attention to their replies and expects the author will be sending the messages thoughtfully and with care – and this is already strained in pre-programming the messages. So, for the intervention to be experienced as caring, outgoing messages may need to incorporate the recipient’s replies or other information. Therefore, if the author becomes aware of new information about the recipient based on replies or other information, the pre-programmed messages need to have the capacity to be changed accordingly (e.g., they replied to a message that their father died, which would make the next scheduled message a few weeks later simply saying “hope all is well with you” inadequate). After responding to the recipient’s message of loss, the author should easily be able to view the next scheduled message to see when it will be sent and what it says so they can revise it immediately, rather than remembering to take action later.

Replies from Recipients

* This is a two-way communication intervention, so recipients can reply at any time.
* Outgoing scheduled contacts are sent earlier in the day to maximize the chance that replies come during that author’s business hours.
* The intention is that the messages are non-demanding, so pre-programmed messages are statements of care, concern, and support that don’t require a reply.
* To the extent that the author does not want to encourage an extended dialogue, the author can plan a delay of 1-2 hours when responding to messages containing positive or neutral content. (In our previous study, the mean number of messages back and forth, including the pre-programmed message that opened the exchange, was 3.5.)
* Nonetheless, 67% of the time in our study, participants replied to messages. The majority were positive or neutral or an emoji that required a comparable simple, polite response, but not immediately.

Author responses to Replies

* The system needs to make it easy for the author to send off a response. Currently, they have to go into the system and navigate to a set of pre-programmed replies, pick one that is close to what is needed, and tweak as appropriate before sending it. Ideally, this would be a phone or desktop app into which the author could just type a response and off it goes.
* For the majority of replies, the author is just sending an emoji or a “You’re welcome” or a “That’s great!” or a “Hoping things keep getting better this week”…
* When someone sounds like things are tough but not anything emergent, the typical response is a message of validation and caring. When appropriate, a separate second message is sent, assuring the recipient is aware of formal support or crisis resources available to the recipient (if they choose).
* Since many responses are pretty standard, pre-programmed options that can be sent as-is or edited can reduce the time for author to prepare a response – e.g., a message that has contact information for crisis help, a message that clarifies how to re-engage with care.
* However, some messages convey distress, bad news, or ambiguity, and how concerned an author should be will be based on knowledge and history with the recipient. When the author can readily access a brief summary of who the recipient is and what brought them to Caring Contacts (which we maintain in an Access database) and the history of the programmed messages, replies, and author responses to replies (which we can see in the online messaging platform), it is clear what kind of response is needed. The system needs a place to store the summary for quick access and a fast way to scroll through the message history so the author can quickly decide how to respond.
* Most authors/agencies’ initial concern is responding to recipient replies after hours and on weekends. Most clinics do not respond to recipient contacts at those times, instead orienting recipients on what to do when the clinic is closed. We argue the same should be true for Caring Contacts, which is a long-term psychosocial intervention, not a crisis intervention. In our study, the vast majority of messages came during work hours and it was cost-inefficient to have authors (or a backup clinician) on call for the 38% of the 1% of messages that were time-sensitive that came outside of business hours.
* A common strategy for managing after-hours replies is an “autoreply” or “out of office” message that includes who to call in a crisis. However, the vast majority of responses are positive or neutral, e.g., a happy face or thank you to a message that said, “Hope you are doing well.” We are concerned that such a response is invalidating, is inappropriate for 99% of replies, and will communicate that we expect them to be in crisis. Individuals with lived experience of suicidality on one study’s advisory board did not like this idea at all.
* We have considered whether natural language processing (NLP) might distinguish which messages warrant an “out of office” response—or alternatively, to be pushed through to an on-call author. That might be an ideal synthesis. We have also considered whether NLP might also recognize patterns in the replies that could give authors a warning that someone might be more distressed than is otherwise apparent. This can increase an author’s attention to their response.

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