

The Frontline Reports column features short descriptions of novel approaches to mental health problems or creative applications of established concepts in different settings. Material submitted for the column should be 350 to 750 words long, with a maximum of three authors (one is preferred) and no references, tables, or figures. Send material to Francine Cournos, M.D., at the New York State Psychiatric Institute (fc15@columbia.edu) or to Stephen M. Goldfinger, M.D., at SUNY Downstate Medical Center (smgoldfingermd@aol.com).

### **Bias Blaster: A Game to Beat Interpretation Bias in Psychosis**

People with psychotic disorders often suffer from social anxiety and self-stigmatization. Various interventions have been developed to tackle these problems, with varying effects. A promising new method is cognitive bias modification (CBM), a type of therapeutic training that targets and ultimately aims to modify harmful cognitive biases to provide a “cognitive vaccine” against negative appraisals. Research has shown that CBM training is effective in decreasing social anxiety among healthy persons with mild anxiety problems. Preliminary research results show that CBM is also a promising intervention for treating social anxiety and self-deprecating thoughts among patients suffering from psychosis. However, CBM training traditionally is a repetitive and boring computer task, and engaging patients to participate can be difficult.

In a focus group of clinicians, patients, and gaming developers, we discussed possible ways of making CBM training more attractive to people with a first episode of psychosis. In an attempt to meet the interests and preferences of our relatively young patient group, we developed a so-called serious game. Serious games are games designed for a serious purpose, combining training or education with fun.

Having a long tradition in the U.S. Army, where serious games were used for training in war situations, these kinds of games have recently emerged in health care. The purpose of our serious game is to offer an attractive computer environment in which people with a first episode of psychosis can train themselves to appraise social situations positively, with the goal of decreasing social anxiety and self-stigmatization.

In the game Bias Blaster, players are offered blocks of multiple ambiguous scenarios related to social anxiety and self-stigma that can be interpreted as positive or negative; for example: “You bump into an old friend on the street. He asks you what kind of job you have nowadays. You tell him that you receive a social welfare payment and that you are in therapy. The old friend looks at you, and you notice that he. . . .” Whereas a player might tend to complete the scenario automatically in a negative direction (such as, “thinks you’re weird”), the game offers a positive alternative (“sympathizes with you”). CBM sessions are made attractive by incorporating blocks of scenarios, which are illustrated like comics, as obstacles that players need to overcome in order to gain power in the game.

Our game follows the popular format of the online “bubble shooter” game in which players need to shoot all bubbles from a board, scoring as many points as possible. Bias Blaster has three difficulty levels from which players can choose. When the board is filled with bubbles and the player is at risk of the game’s ending, a special bomb can be charged to shoot many bubbles at once. The charging happens when players complete several CBM scenarios. The more CBM scenarios completed, the more the bomb is charged. Players can choose when and how much time they want to complete CBM scenarios and when they want to switch to shooting bubbles. The game points gained can be used to buy gadgets for and to upgrade an avatar representing the player in the game.

We conducted a pilot study with seven patients who played the game.

Results on the Gaming Experience Questionnaire showed that patients felt competent in playing and concentrating on the game but not very challenged by the game. Patients mentioned that “The game has a nice design and is pleasant to play,” and “The comics are funny” but that “The scenarios are very easy” and “The structure of the game levels is unclear.” With this feedback, we refined the game. The most important change was the way in which the game is introduced to patients. Instead of introducing Bias Blaster as a computer game with a serious purpose, we now emphasize that it is a therapeutic intervention with a game-like format. Our next step is to investigate the game’s effectiveness as part of a regular treatment program. Patients are instructed to play Bias Blaster once a week for 12 weeks. We have included the first 24 patients in a randomized controlled trial ([www.trialregister.nl/number/15417](http://www.trialregister.nl/number/15417)). Patients can play Bias Blaster at home or at the health care facility whenever they choose. Computerized interventions such as this one offer a promising way to supplement or perhaps replace more expensive face-to-face interventions.

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### **Psychiatric Advance Directives in Traditional Health Systems**

Psychiatric advance directives allow people with mental illnesses to state their mental health treatment preferences in advance of a psychiatric emergency when patients are unable to communicate their wishes. The directives facilitate mutual collaboration between consumer and provider even

under the most stressful circumstances. The past ten years have seen mounting consumer demand, mental health advocacy, and public policy endorsement for psychiatric advance directives but limited implementation, particularly within general health care settings based on a traditional medical model.

To broaden implementation and to aid the development of recovery orientation within a behavioral health system, we introduced psychiatric advance directives at St. Luke's–Roosevelt Hospital Center, a tertiary care teaching hospital in New York City. In its pilot phase, the project serves patients at highest risk of contact with emergency services.

The first hurdle, or challenge, in our process to institute a psychiatric advance directives program was to be sensitive to the nature and timing of decision making within corporate systems. We implemented the directives program over nine months in 2012–2013. The program was novel as well as a challenge to traditional paternalism, and launching it required collaboration of several units within the hospital, including the departmental chair's office, the chief of psychiatric inpatient and emergency services, hospital legal counsel, and the software designer of our electronic health record (EHR). Although our project had its beginnings in 2008, a confluence of subsequent events created opportunity to bring the effort to fruition. Specifically, these were a persistent education of staff and administrators on recovery-oriented practice, the hiring of a peer specialist to advance this commitment, and the emergence of a Joint Commission standard requiring that these directives be honored and recommending that they be offered in behavioral health settings. Especially with enhanced regulatory incentive, administrators could justify resources for the project. Psychiatric advance directives were thus endorsed as a patient-authored tool to guide treatment and minimize coercive and

adversarial situations during episodes of acute disabling illness.

The second hurdle was to develop a directives document that patients and clinicians considered straightforward and brief. We tailored a template used by the State of Florida. Gaining active collaboration with hospital counsel was indispensable in order to ensure that our directives form was consistent with state laws regarding advance directives.

The third hurdle concerned practical details of formulating psychiatric advance directives with patients. We used a facilitated directives model whereby patients delineate treatment preferences and optionally identify a mental health care advocate in collaboration with a facilitator who has no professional role in their care. Our facilitator is a peer specialist who educates patients that these directives are communication tools and expressions of self-efficacy. An introduction to psychiatric advance directives is integrated into Copeland's Wellness Recovery Action Plan (WRAP) course. This group process provides opportunity for consumers to share concerns and discuss aspects of the directives; they also have an opportunity to become well acquainted with the peer specialist/facilitator. At WRAP termination, the facilitator schedules individual sessions with anyone who expresses interest in completing a directives document. During the initial pilot round, all six participants opted to compose a set of directives that ideally should be revised every 12 months.

An additional challenge encountered during this process was patients' surprise by, and sometimes distrust of, the novelty of a heightened collaborative approach. One person chose not to have the completed directives scanned into the EHR but wished to rely on personally furnishing it to an emergency service; another ultimately addressed her provider directly to express dissatisfaction with and curiosity about a recent inpatient admission, fostering a more robust working relationship.

Finally, another issue among some socially isolated patients was difficulty in finding someone available to be a mental health care advocate. This is one area where peer-run organizations could consider offering special "peer advocate" outreach to help close this gap, which could diminish disaffiliation among patients and bolster hope.

The fourth hurdle concerned access and enforceability: how to ensure that directives are accessed and honored by providers in emergencies. In New York State, psychiatric advance directives have legal status equal with a standard health care proxy. However, because psychiatric advance directives have yet to proliferate, we counseled patients that theirs could be guaranteed only at our own hospital, where the emergency department and inpatient services are supportive of the program. In our EHR, an "alert" that directives exist was programmed onto the opening page, cueing emergency staff to open the document. In the first four months after implementation of the program, one psychiatric advance directive has been accessed to guide the patient's care in the psychiatric emergency department and inpatient service. A second round of the WRAP directives course is now under way with five new participants. We are optimistic that this program will fill a growing need for patients.

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