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Featured Topic: Mental Health

Applying Dialectical Behavior Therapy Methods to Personality Disorder Patients in Healthcare Settings

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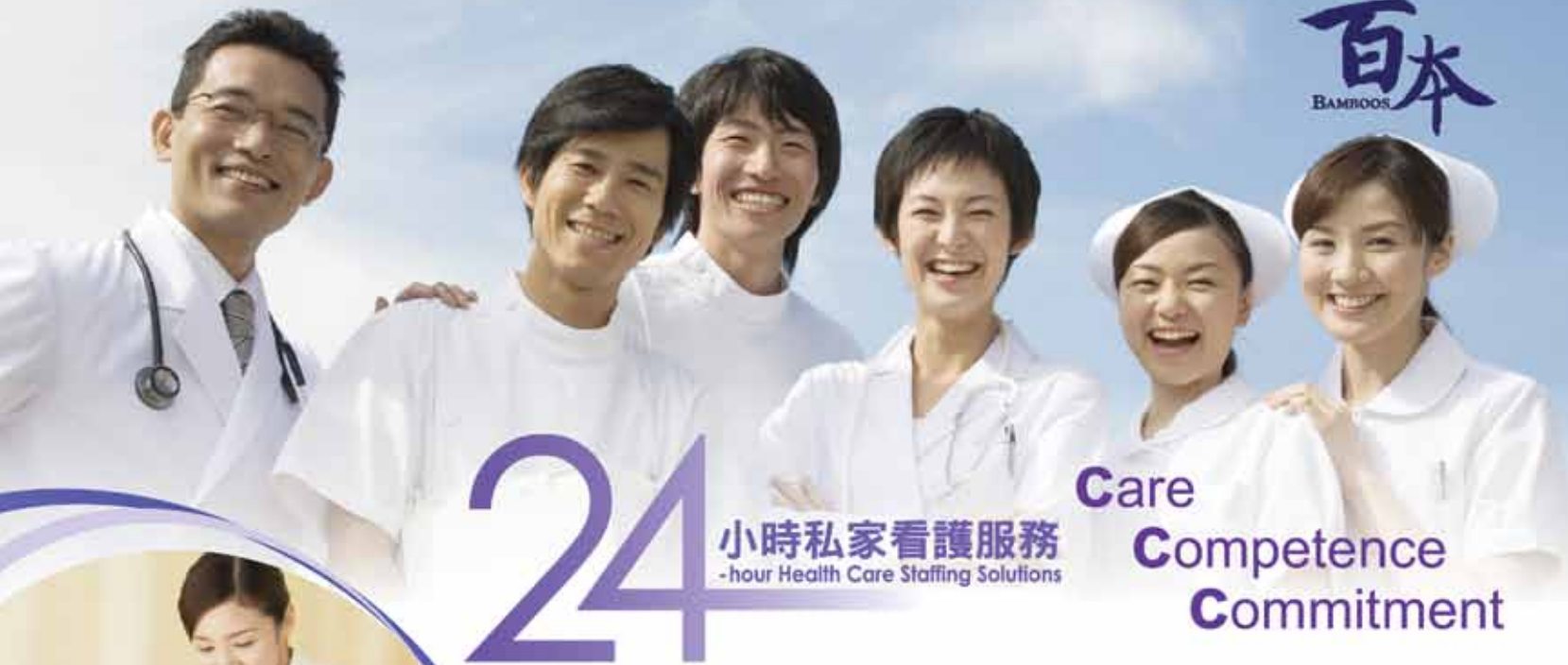Dr. Susan Miller Briggs
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A Word from the Editor in Chief

Prof. Jack Wong, Editor in Chief
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Asia Health Care Journal reached 3rd issue. We are also very pleased that a total of 20,000 copies were distributed so far. The journal and authors profile are getting very international e.g. we have Dr. Samson Tse from The University of Hong Kong, Dr. Axelrod & Dr. Lee from Yale University and Dr. Davidson from Yale University School of Medicine in this issue.

As mentioned before, we will have significant reform to attract more professionals to this journal. The chair of ARPA (Asia Regulatory Professional Association) will gather regulatory experts globally to contribute future articles. I will keep you update on the progress. Should readers have any suggestion, please feel free to contact me. Hope you enjoy the journal. ∎

Prof. Jack Wong
Asia Regulatory Professional Association

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Applying Dialectical Behavior Therapy Methods to Personality Disorder Patients in Healthcare Settings

Abstract

This article provides an overview of the principles and strategies of Dialectical Behavior Therapy (DBT), an increasingly popular treatment for individuals with severe personality disorders. Numerous randomized controlled trials support DBT's effectiveness for treating Borderline Personality Disorder (BPD) in outpatient therapy settings, and an increasingly large body of literature supports its application to other problems of emotion dysregulation and practice settings. As a flexible and principle-based treatment, DBT methods lend themselves for working with difficult-to-treat patients in a variety of healthcare environments. DBT is distinguished from traditional cognitive behavioral therapy in that it combines behaviorism, a technology of change, with Eastern principles of acceptance taken from Zen Buddhist practice. Dialectical philosophy is used to synthesize these change and acceptance strategies in order to support emotionally dysregulated patients to tolerate active clinical work, and to help therapists manage their emotional responses and maintain a compassionate understanding of challenging presentations. A clinical vignette illustrates how DBT principles and strategies are applied for orienting and engaging difficult-to-treat patients into treatment collaboration. Implications and potential benefits of applying DBT methods with difficult-to-treat patients in healthcare settings are discussed.

Applying Dialectical Behavior Therapy Methods in Healthcare Settings

Across medical settings, healthcare providers regularly encounter at least some patients who are difficult to work with because of their problematic ways of thinking, relating, behaving, and expressing emotions in and out of the treatment setting. For example, some patients may tend to blame others for their problems, they may engage in impulsive, self-destructive, and self-defeating behaviors including not following through with treatment recommendations, and they may be argumentative or have other intense and labile emotional expressions (Steinmetz & Tabenkin, 2001). Such individuals often have little insight into how their behavior creates difficulty for the medical providers who are attempting to help them, and they are rarely aware of how their behavior leads health providers to not want to work with them due to feelings of anger, frustration, resentment, hopelessness, or even fear for their own personal safety or fear that the patient may harm themselves. When such individual differences are stable across time and setting, that is, represent personality traits, and lead to impairments such as their difficulty participating in treatment, they may be consistent with a personality disorder diagnosis. Although recent years have seen significant advances in developing and validating treatments for personality disorders, few healthcare professionals are aware of how to access and apply their methods and strategies. This article will introduce personality disorder treatment methods that may be helpful for health providers who encounter such difficult-to-treat patients.

The formal diagnosis of personality disorders is somewhat complicated when applied in the Asian context given the different diagnostic systems concurrently in use. For example, Chinese psychiatrists are divided in using three different diagnostic manuals (Zou et al., 2008) including the American DSM-IV-TR (American Psychiatric Association, 2000), the International Classification of Diseases (ICD-10; World Health Organization, 1992), and the Chinese Classification of Mental Disorders-3 (CCMD-3; Chinese Psychiatric Association, 2001). This has occurred in part because Chinese psychiatrists were originally resistant to applying certain DSM diagnoses such as "Borderline Personality Disorder" (BPD) due to concerns that it was a vague construct and that some of its features (i.e., fear of abandonment, chronic feelings of emptiness) were not relevant to the Chinese (Jia, 1998).This state of affairs led to the creation of the alternative CCMD-3 diagnosis "Impulsive Personality Disorder" (See BPD and Impulsive Personality Disorder diagnostic criteria in Table1). This rejection of BPD is concerning because BPD is both one of the most severe and best studied personality disorders, with ever increasing research demonstrating the benefits of specialty treatments over standard practices of care (Stoffers et al., 2012). Also, research has clearly demonstrated that BPD is present among Chinese patients (Leung & Leung, 2009; Wang et al., 2012; Yang, 2002), and that the DSM-IV-TR, ICD-10, and CCM-3 criteria sets largely identify analogous disorders in Chinese patients (Lai et al., 2012).

Research on the prevalence of personality disorders suggests that they are found in 9.1% to 14.8% of the general community in the United States and Europe (Grant et al., 2004; Lenzenweger et al., 2007; Torgersen, Kringlen, & Cramer, 2001), and 4.1% in China (Huang et al., 2009). The prevalence rate of personality disorders among treatment-seeking individuals is much higher, including 31.4% to 52% of psychiatric outpatients (Keown, Holloway, & Kuipers, 2002; Zimmerman, et al., 2005), 40% to 70% of psychiatric inpatients (Stevenson et al., 2011; Hayward et al., 2006), and as high as 32%

in general healthcare settings (Hueston, Werth, & Mainous, 1999). Individuals with personality disorders report more complaints with physical health, greater utilization of general health services, and lower satisfaction with the services they receive (Olsson & Dahl, 2009).

Among the ten DSM-IV-TR personality disorders, BPD is recognized as particularly challenging to treat due to the ways in which this pathology makes it difficult for these individuals to engage in treatment, and the ways in which people encountering them, including healthcare providers, tend to criticize them or blame them for their problems (Markham & Trower, 2003) attribute them with negative intentions such as manipulation (Deans & Meocevic, 2006) or simply dislike them (Reiser & Levenson, 1984)). In addition, providers are likely to become distressed by the severity of their high risk behaviors such as 81% having a history of at least one episode of non-suicidal self-injury (Zanarini et al. 2005)), 68% having a history of suicide attempts (Soloff et al., 2000), and between 4% and 10% completing suicide (Black et al., 2004; Zanarini et al., 2005). Fortunately, there is evidence that educational interventions with health providers that emphasize compassionate understanding of BPD struggles and effective intervention strategies result in providers adopting more positive impressions of them (Krawitz, 2004; Shanks et al., 2011). Given that the difficulties associated with treating BPD exemplify many of the challenges providers experience with difficult-to-treat patients (Ma et al., 2009), the remainder of this article will focus on challenges associated with this particular disorder and on interventions drawn from the most strongly empirically supported approach to its treatment, Dialectical Behavior Therapy (DBT, Linehan, 1993a).

Dialectical Behavior Therapy (DBT)

DBT was originally developed by Dr. Marsha Linehan to treat chronically suicidal individuals (Linehan, 1993a). Linehan initially used traditional cognitive behavioral therapy; however, she found this to be unsuccessful because their extreme emotional sensitivity prevented these patients from tolerating a purely change-focused treatment. Realizing that the patients needed a treatment that could help them tolerate the treatment and the painful realities of their lives, and that the therapists also needed help finding and communicating acceptance of their patients' behaviors, Linehan added Zen Buddhist traditions principles and practices into her treatment. Dialectical philosophy captured how her treatment evolved from her thesis (cognitive behavioral strategies) to its antithesis (Zen acceptance) and their synthesis of a balanced dialectical behavior therapy. Dialectical synthesis is comparable to the Chinese Yin and Yang in which contrary forces are interrelated, influencing and completing each other to form a greater whole. As Yin and Yang show that darkness cannot exist without light, in DBT therapeutic change always occurs in a context of complete acceptance of the person just as they are, and acceptance of the person is always provided in a context of total commitment to improve functioning. For example, a problematic behavior such as non-suicidal self-injury is functional because it helps patients reduce emotional pain in the moment. At the same time, such self-harm ineffective because it leads to guilt and shame, and practical problems such as having to hide the scars or hurting relationships. This dialectical tension is resolved with a synthesis that on one hand validates the desire to reduce emotional pain, while on the other hand directs the patient to the need for using skillful means for negotiating psychological distress. Notably, Linehan developed all of the change-acceptance-synthesis methods for these difficult-to-treat, chronically suicidal patients without any intention of specifically applying them to BPD. Reportedly, she only learned of BPD when applying for grant funding and needing to identify a relevant diagnosis (personal communication). Therefore, DBT was not designed for treating BPD, but rather for engaging difficult-to-treat patients in productive treatment collaboration. For this reason there has been interest in applying DBT methods to other difficult to treat populations such as depressed older adults (Lynch et al., 2003), the chronically mentally ill (Koons et al., 2006), and difficult patients in hospital settings (Huffman et

al., 2003). It is also important to note that initial applications of DBT in East Asia have supported its potential for cultural and linguistic translation (Ono et al., 2011; Matsushita et al., In press; Swenson, 2000).

Specific aspects of the comprehensive DBT model that might help health care providers deal with difficult-to-treat patients include: 1) a biosocial model to help understand the origins of chronically emotionally dysregulated individuals; 2) orientation and commitment strategies to promote collaboration; 3) a heuristic for organizing the priorities of treatment; 4) behavioral change strategies to assist patients with problem solving and adopting new behaviors; and 5) validation strategies for helping patients tolerate change, as well as for helping providers experience an accepting attitude toward their difficult-to-treat patients.

Biosocial theory

Linehan's developmental model of chronic emotional dysregulation—which DBT understands to be the core difficulty of BPD—can help providers adopt a compassionate perspective of their patients' episodes of emotional dyscontrol. Further, this model can help providers avoid reacting to their patients in ways that are likely to aggravate such dysregulation. This biosocial transactional model describes the development and maintenance of emotion dysregulation in which an individual's biological emotional vulnerabilities including exquisite sensitivity, intense reactivity, and a prolonged return to baseline, meet with and further evoke invalidating responses from the environment in which the individual's emotional experiences and expressions are ignored, rejected, criticized, or pathologized. As the individual experiences these pervasive negative and critical responses from the environment, the person becomes increasingly emotionally sensitive and reactive, as to not get the opportunity to learn effective emotional regulation strategies and instead they alternate between fighting their own emotions to comply with the invalidating messages they receive (i.e., practicing self-invalidation), and expressing stronger emotional reactions which tend to get intermittently reinforced. That is, even a highly invalidating environment will tend to respond to an individual who is completely out of control at least some of the time. Over time, the individual becomes increasingly vulnerable to becoming dysregulatedm, and, as their emotional behaviors become more extreme, the environment naturally becomes increasingly invalidating.

Importantly, this biosocial transaction not only describes the etiology of the dysregulated behavior, but also its maintenance as such transactions are recreated in new contexts including the treatment setting. However, mindful of this model, the healthcare provider can 1) notice that the difficult-to-treat patient struggles with an intense and reactive emotional biology and has not learned sufficient skills for managing it, and 2) make efforts to avoid making invalidating responses that will push the patient and provider into vicious cycles of increasing vulnerability and invalidation. Further, just as invalidation can lead to negative emotional escalation, deliberate validation (described below) can help an individual to return to emotional equilibrium (Shenk & Fruzzetti, 2011) and re-engage in effective communication.

Orientation and commitment strategies

One of the major challenges for providers working with difficult-to-treat patients is establishing collaboration on the goals and methods of the recommended treatment. Unfortunately, such patients may argue with providers, refuse treatment recommendations, or fail to follow up with instructions. Not surprisingly, providers typically become frustrated with such behaviors. However, in DBT it is understood to be the provider's responsibility to adequately orient the patient to the circumstances that require treatment, the details of the treatment being recommended, and then to solicit the patient's motivation by walking them through the advantages and disadvantages (pros and cons) of proceeding with said treatment. The health provider always identifies how the proposed treatment relates to the patients "Live Worth Living" (LWL), which is essentially the life that the patient would like to maintain or to one day obtain. If a patient does not see

him or herself as having a LWL and does not see a path toward achieving it, then it can be expected that the patient will express hopelessness (and possibly even suicidality) and a reluctance to participate in the treatment offered. At such times it can become necessary to help the patient generate hope, which may involve assurance that they will be referred to mental health services that will actually help them address their life problems and that may be beyond the health services that are presently being offered.

Once the health provider has motivated the patient by connecting a proposed treatment to their LWL goals, the provider pulls for the patient's specific commitment to following treatment expectations (e.g., taking medications as prescribed, attending physical therapy appointments, etc.). Providers can then work to strengthen the patient's commitment by challenging them to think about the pros and cons of following specific recommendations. Attention is paid to highlighting the pros of participating and problem-solving the cons in order to minimize their potential for interference. Providers should also highlight ways in which doing without the treatment would not be viable (assuming this is true).   Linehan refers to this as highlighting "the freedom to choose and the absence of alternatives" (Linehan, 1993a). If the patient expresses a seemingly weak commitment, rather than making a direct plea for a stronger commitment, an effective commitment strategy is to play "Devil's advocate" by challenging the patient to defend their commitment by asking them why they've decided to participate or even by arguing against the patient's participation (Linehan 1993a). This typically leads the patient to come up with stronger reasons for committing. Should the commitment collapse under this pressure, the provider might need to briefly revert back to helping generate hope by expressing confidence in the treatment methods, the patient's capacity for participating, and/or reminding the patient of prior successes in meeting challenges. When a specific commitment to treatment is established, it is always helpful to assess potential problems that might interfere with following up on the stated commitment. Typically, there are two types of potential problems: 1) practical environmental problems such as lack of reliable child care, transportation, or time conflicts with other activities; and 2) negative emotional reactions or experiences, including social anxiety about new environments, depression, suspicions related to trying treatment, shame about oneself or one's own situation, or worrying about the stigma of being labeled as a patient. By orienting them to a wide range of possible problems, patients can become mindful about potential difficulties and the providers help them to solve the problems and minimize interference.

Motivation and commitment are revisited throughout the course of treatment as they will typically fluctuate with changing circumstances and the emotional state of the individual. When previously stated commitments are no longer present, providers may be tempted to assume that patients lied when making the prior commitment. Instead, it is suggested that providers evaluate obstacles that led to dropping the commitment and then engage in orientation and commitment work again as needed.

Prioritized treatment targets

Treating BPD patients can feel like facing a hurricane or typhoon because of the intensity of problems that keep coming up one after another, from suicidality and deliberate self-harm to dyscontrolled anger, to severe hopelessness, to eating disorders, to sleep problems, etc. To help providers organize their efforts in working with such complex, multi-problem patients, DBT developed a basic treatment plan made up of a predetermined hierarchy of treatment targets. This allows providers to quickly and confidently move to the most highly prioritized area of focus. The highest priority of treatment is always life-threatening behavior including suicidality, non-suicidal self-injury, health problems that create risk of imminent death, and homicidality. The next priority is significant therapy-interfering behaviors such as missing sessions, being argumentative with providers, and not following through with treatment recommendations. And the third highest priority is problems that could potentially interfere with basic stability in living, including presenting health problems.

Problem solving strategies

In working with difficult-to-treat patients, health providers may find it helpful to be prepared to assist them with problem solving by using structured strategies of behaviorism. Behavioral theory includes principles of classical, operant conditioning and observational learning (i.e., modeling), and from a radical behaviorist perspective, "behavior" is understood as anything an individual does whether it can be observed or not including thoughts, feelings, actions, and body sensations. To help change patients' ineffective behaviors, the provider begins by looking at the problematic behavior's development and maintenance, breaking associations leading to ineffective behaviors, and introducing alternative effective behaviors. Behavioral treatment hypothesizes that the maintenance of problem behaviors comes from skills deficits (i.e., the person does not know how to do a needed behavior); problematic thoughts or thinking styles; inhibiting emotions such as fear, guilt, or shame; or problematic environmental contingencies, such as people who are responsive to the patient's ineffective behaviors, or who are non-responsive or punishing to the patient's effective behaviors. By attending to the different possibilities that might explain a given patient's dysfunctional behavior, providers will be better situated to assist them with overcoming them. Providers working with difficult-to-treat patients are encouraged to become familiar with behavioral change techniques through reading, supervision, and continuing education, to apply common sense problem solving, and to make referrals to health care providers with relevant expertise and experience when needed.   Interested health providers might review the DBT skills training materials (1993b). These include modules covering mindfulness, interpersonal effectiveness, emotion regulation, and distress tolerance, which will be briefly described.

Mindfulness is the core skill of DBT, referring to observing, describing, and participating deliberately and fully in the present moment without judgments in order to be with reality as it is and to access one's intuitive inner wisdom or "Wise Mind." While these skills are drawn primarily from Zen Buddhism, they overlap with spiritual practices of all major world religions including Christian contemplation, Sufism, Hindu dhyana, Jewish mysticism, Tao, and the Buddhist Theravada and Mahayana traditions. Linehan very deliberately designed the DBT instructions and practices so that they have no references to any theological beliefs. Therefore, these mindfulness skills are as equally accessible to persons of any specific religion or those who are agnostic or atheist.

Interpersonal effectiveness skills involve tools for asserting oneself in ways that maintain relationships and self-respect. Emotion regulation skills focus on identifying, labeling, and accepting emotions, as well as methods of reducing the intensity of painful emotions and increasing positive emotions. Distress tolerance skills help manage distressing emotions and situations without resorting to impulsive actions and dysfunctional coping strategies, and accept painful situations and experiences radically with willingness to approach the demands of living.

Acceptance and Validation strategies

Acceptance and validation strategies are used to counter the emotional reactivity of the difficult-to-treat patients, as discussed above in relation to the biosocial model. This balancing is crucial for supporting the patient in regulating sufficiently to tolerate the process of change. Practicing acceptance and validation can also be extremely useful for helping the provider to remain grounded in an empathic and compassionate perspective. Validation is communicating acceptance, understanding, or legitimacy of the person or his/her behavior and experience. It normalizes and legitimizes the experiences of the individual, including his or her thoughts, emotions, wants, desires, beliefs, opinions, and sensations. Importantly, validating another's experience does not require one to agree with or condone their experience. For example, a 19-year-old single African American female called her therapist sharing that she had come up with a plan to work at a strip

club to earn money for a car, and that her family had learned about it. Not surprisingly, they responded with strong invalidating messages (e.g., "You better not work at any strip club! If you do, you had better not come back to this home!"). She shared that she reacted to this by screaming that she hated them and storming out of the house. She then complained to the therapist about how unfair and uncaring her family is. Although her therapist also had concerns about the risks inherent in her idea of working at a strip club and did not necessarily believe this would be the most effective path for reaching her life goals, the therapist could nevertheless validate the patient's desire to choose such work by saying "it makes sense that you'd want to work there because it would pay you better than any of your other jobs and you have really been struggling with financial issues," and "It sounds like it was really painful to hear your family threaten to kick you out." By starting from a place of validation, the therapist's communication led the patient to become more emotionally regulated and able to express her own thoughts about the downsides to her plan, as well as open to hearing therapist's concerns. After reviewing the pros and cons together, the patient was able to access her own wise mind intuitive response that such work would not be in her best interest. However, had the therapist gone directly to problem-solving (e.g., "It sounds like this plan has a lot of negative consequences"), the patient would likely have felt criticized, misunderstood, or ashamed, and would likely not have been able to engage in a productive, collaborative conversation.

Importantly, the therapist in this example validated "kernels of truth" in the patient's experience (i.e., that the work would pay well, that the patient did feel hurt by her family). However, the therapist was careful not to validate the invalid responses of the patient (i.e., that her family was actually being unfair, that their actions meant that they did not care for her). The therapist strategically focused on validating these kernels of truth until the patient was regulated and only then gently addressing invalid responses when necessary. Identifying kernels of truth in the face of invalid communications and behaviors can be challenging. One source of validity that is always an option is to validate emotions, as emotions are always valid from the perspective of the patient's perceptions—whether or not such perceptions are entirely valid themselves. Deliberate validation, particularly at times of heightened emotional vulnerability builds trust, safety, and support with patients, which strengthens the therapeutic relationship.

On the other hand, inadvertent invalidation is important for the providers to be careful of when intervening with difficult-to-treat patients. The biosocial model predicts that emotionally vulnerable presentations from patients will naturally pull for invalidation, putting providers at risk for such responses. It is important to note that invalidation does not necessarily imply being mean, cruel, abusive, neglectful, uncaring, or dysfunctional. It only means communicating in a way that does not demonstrate accurate understanding. For example, if a provider communicates, "don't worry about it, there's no need to be upset about it," when the patient feels upset, it is likely to be experienced as invalidating. Thus, health care providers are encouraged to be vigilant to unintentional invalidation and to go back and review conversations in which difficult-to-treat patients reacted to their communications to identify potentially invalidating messages. Reviewing verbal exchanges with a colleague in these situations can be helpful. The benefits of honing validation skills with difficult-to-treat patients will likely become apparent in their emotional regulation during contacts and in the provider's enhanced feelings of competence in working with them.

Case Illustration

The following therapy case example is presented to illustrate the application of the DBT methods with a difficult-to-treat patient. Demographic characteristics and presenting details have been altered to preserve the patient's identity.

"Ms. A." is a 25-year-old, single Malaysian student attending university in the United States, living with her brother who is also a student. She has one past ambivalent suicidal attempt, past non-suicidal self-injury by cutting, episodes of brief dissociation, and chronic social anxiety. She reported a history of sexual abuse by the hands of a male neighbor from ages 6 to 8, and that her parents did not acknowledge the abuse when she told them at age 13. She had received two years of prior non-behavioral therapy which she reported was supportive, but "didn't really help with my problems." Ms. A.'s presenting problem was "I want to learn to manage my emotions," which she related to her difficulties with self-injury, as well as difficulty trusting people and social isolation.

Ms. A. had a hard time engaging in DBT initially reporting that she did not feel connected with her therapist, not completing agreed upon therapy homework assignments, and episodes of becoming enraged at her therapist, demanding that the therapist be more attentive. These episodes included screaming and yelling at the therapist in session and on extended voicemail messages.

Ms. A. described her childhood as lonely due to her brother always being out with friends and both her parents working full-time. She identified herself as a "sensitive kid" that her parents did not pay attention to and she reported giving up trying to get their attention when they did not believe she had been abused. She found that self-harm behaviors soothed her emotional pain and this became her preferred method for managing overwhelming distress. She described never feeling comfortable with her emotions and learning to suppress them by "locking them away." However, she also described angry outbursts and dissociation when suppression failed her. She reported having difficulty keeping friendships due to social anxiety, clinging behaviors, and angry outbursts, and then relying on relationships with boyfriend who did not treat her well to avoid feelings of loneliness. She began expressing thoughts of dropping out of treatment shortly after starting due to not feeling understood by her therapist.

Biosocial formulation

The therapist used the biosocial model to help her consider how Ms. A.'s emotional vulnerabilities had likely been exacerbated during her childhood and how she clearly did not develop effective emotion regulation tools. Knowing about her experience of sexual abuse followed by a reportedly neglectful invalidating environment was also helpful for being sensitive to her reactivity to not being understood or attended to, and for her particular vulnerability to having dysregulated expressions of anger and desperate demanding behaviors.

Orientation and commitment

The therapist described the overall purpose of treatment as to help Ms. A. in reaching her long term goals, which she described as finishing her academic program and being successful in her future career while developing supportive social connections. She was oriented to the DBT approach to understanding suicidality as related to feelings of hopeless in reaching important life goals, and the rationale of organizing the treatment hierarchy around problems related to her safety from herself (suicide and deliberate self-injury), problems in treatment (the therapy relationship, following through on assignments, urges to quit treatment, and dysregulated anger toward the therapist), and then to specific problems that interfere with life functioning (dissociation, social anxiety, and problems with trust). The therapist then challenged Ms. A. to think about the pros and cons of her participating in this treatment. Her pros included 1) learning skills to manage her emotions, 2) understanding herself better, and 3) having resources to prevent her from acting impulsivity. Her cons include 1) time commitment and doing homework, 2) anxiety around trusting the therapist, and 3) shame about talking to someone who knows about her history of cutting herself. The therapist validated the practical concern about investing time and energy for treatment and paid extra attention to the patient's negative emotions (e.g. anxiety and shame) and tried to normalize and validate them (e.g., "It makes sense that you feel anxious about trusting someone new with feelings and personal information.")

Prioritizing targets on the treatment hierarchy

During the initial therapy sessions Ms. A. asked to get help with her social anxiety and isolation and she did not report any suicide-related or self injury actions or urges. However, there had already been several instances in which she had angry outbursts towards her therapist when she felt the therapist was not being sufficiently attentive. This included glaring at the therapist and shouting, "You're a rotten therapist! You're not listening! You only pretend to care about me!" In those situations, the therapist experienced escalated emotions, high physiological arousal, and clearly could not perform optimally. In addition to practicing her own mindfulness and distress tolerance skills (e.g., mindfulness breathing to bring down emotional reactivity), the therapist prioritized the yelling and quitting behaviors as the highest priority of treatment. The therapist first validated the patient's experience, including the kernels of truth that the therapist had not been perfect in understanding and attending to the patient's feelings, and that it made sense that the patient was considering quitting if she was having thoughts that the therapist would not be able to understand and respond to her (which the therapist did not in fact agree with). With this validation in place, the therapist reoriented the patient to the treatment hierarchy in which they had committed to addressing problems in treatment before they would attempt to work on the patient's problems related to stable life functioning (i.e., her social anxiety). The therapist invalidated the patient's invalid conclusions that she should quit by saying, "To find out if I'm capable of understanding you, you'll have to give me a chance by hanging around." Further, the therapist identified the negative consequences of the patient's ineffective behavior by saying, "When you scream at me, my mind goes blank and I actually can't really attend to what you're saying very well." Then, the therapist offered to assist Ms. A. in addressing her concerns in the situations when she felt misunderstood by helping her to apply interpersonal effectiveness skills saying, "Would you be willing to work with me on using communication skills to get what you want from me without these negative consequences?" When the patient agreed to this, the therapist applied problem solving to barriers to practicing interpersonal effectiveness skills with the therapist. Although Ms. A. initially demonstrated strong commitment to doing this work, her commitment waivered and it needed to be re-established several times over the next weeks by reminding her of how this new behavior related to her larger treatment contract aimed at reaching her Life Worth Living, and by reviewing the specific pros and cons of using her new skills. As Ms. A. practiced the emotionally painful work of asserting herself while feeling emotionally vulnerable, she became increasingly confident and capable of doing so, as well as increasingly confident in her ability to work with the therapist to tackle other behavioral challenges together.

Conclusion

Healthcare providers may find these methods of DBT to be useful for addressing the needs of difficult-to-treat patients who may have personality disorders that they will encounter in their various practice settings. It is hoped that these methods will assist providers in 1) better understanding such patients so that they might remain compassionate to their struggles, 2) organizing effective treatment plans to keep them from getting lost in the storms of complex, multi-problem patients, 3) giving them tools for soliciting patients' motivation and commitment to treatment, 4) directing them to options for problem solving dysfunctional responses, such as skills deficits, and 5) applying validation to help their patients to emotionally regulate and to help themselves from falling into ineffective patterns of invalidation and patient dysregulation. Although there are many complexities involved in working effectively with difficult-to-treat patients such as those with personality disorders, there is an increasingly large body of research suggesting that the methods presented here can lead to improved outcome, including enhancing patient and provider well being and treatment satisfaction.

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Table 1

Diagnostic criteria for CCMD-3 Impulsive Personality Disorder (CPA, 2001) and DSM-IV-TR Borderline Personality Disorder (APA, 2000)

CCMD-3 Impulsive Personality Disorder

A. The diagnostic criteria of personality disorder should be met

B. The predominant manifestations include affective outburst and marked impulsivity, plus 3 of following features:

(1) A marked tendency to quarrelsome behavior and to conflicts with others, especially when impulsive acts are thwarted or criticized.

(2) Liability to outbursts of anger or violence, with inability to control the resulting behavioral explosions.

(3) Inability to plan ahead.

(4) Difficulty in maintaining any course of action that offers no immediate reward.

(5) Unpredictable and capacious mood.

(6) Disturbances in and uncertainty about self-image, aims and internal preferences (including sexual).

(7) Liability to become involved in intense and unstable relationships, often leading to emotional crises.

(8) Recurrent threats or acts of self-harm.

DSM-IV-TR Borderline Personality Disorder

A pervasive pattern of instability of interpersonal relationships, self-image, and affects, and marked impulsivity beginning by early adulthood and present in a variety of contexts, as indicated by five (or more) of the following:

(1) Frantic efforts to avoid real or imagined abandonment.

(2) A pattern of unstable and intense interpersonal relationships characterized by alternating between extremes of idealization and devaluation.

(3) Identity disturbance: markedly and persistently unstable self-image or sense of self

(4) Impulsivity in at least two areas that are potentially self-damaging (e.g., promiscuous sex, excessive spending, eating disorders, binge eating, substance abuse, reckless driving).

(5) Recurrent suicidal behavior, gestures, threats or self-injuring behavior such as cutting, interfering with the healing of scars or picking at oneself (excoriation).

(6) Affective instability due to a marked reactivity of mood (e.g., intense episodic dysphoria, irritability or anxiety usually lasting a few hours and only rarely more than a few days.

(7) Chronic feelings of emptiness.

(8) Inappropriate anger or difficulty controlling anger (e.g., frequent displays of temper, constant anger, recurrent physical fights).

(9) Transient, stress-related paranoid ideation, delusions or severe dissociative symptoms.

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Core Elements of Mental Health Transformation in an Asian Context

Abstract

This article introduces the concepts of mental health transformation, recovery, and recovery-oriented practice, and offers suggestions for adapting these concepts for use in the Hong Kong, and broader Asian, context. Initial steps have been taken in Hong Kong to adopt the goal of recovery as the overarching aim of mental health services. These moves follow on developments in many Western and Australasian countries, and promise to bring about a substantial transformation of mental health care for the citizens of Hong Kong, perhaps providing a model for the dissemination of recovery to the broader Asian context. In order for this transformation to be both substantive and successful, however, significant modifications may need to be made to understandings of recovery and recovery-oriented practice for these concepts to be consistent with Asian cultural values and worldviews. This article begins to address this challenge.

One example of the need for such modifications is presented by the emphasis given to autonomy, self-determination, and personal choice in recovery and recovery-oriented practice in English-speaking countries. This individualistic focus on self-agency runs counter to the emphasis Chinese culture, in particular, places on social harmony and the central role of the family in influencing decision-making processes. A second example is provided by the role of peer support, in which an emphasis on egalitarian relationships may be viewed as a threat to the hierarchical structures endemic to Asian worldviews. Taking into account such cultural issues, the authors suggest three approaches to the transformation process that may be more acceptable within Asian contexts. These are to promote family-centered (as opposed to person-centered) care, emphasizing the social inclusion of persons in recovery as valued citizens of

their community, and understanding the role of peer support as building on the wisdom of "expert patients." Each of these is described briefly.

The notion of mental health recovery, and associated recognition of the need to "transform" mental health services to promote it, have rapidly gained both credibility and momentum in English-speaking countries over the previous decade (e.g., Le Boutillier, Leamy, Bird, Davidson, Williams, & Slade, 2011). There are also increasing indicators of the spread of the recovery concept to European countries such as France (e.g., Davidson, 2010; Greacen & Jouet, 2012), Italy (e.g., Davidson, Tondora, O'Connell, Lawless, & Rowe, 2012), the German-speaking constellation of Switzerland, Germany, and Austria (e.g., Amering, 2010; Burr, Schulz, Winter, & Zuaboni, 2013), and Scandinavia (e.g., Borg, 2009; Borg & Topor, 2007; Borg & Karlsson, 2011; Topor, 2004, 2011). Finally, there are provisional signs that this concept is beginning to have influence in shaping mental health services for Chinese migrants in Western countries (Chan, 2011), as well as in Asian countries per se (e.g., Chiu, Davidson, Lo, Yiu, & Ho, in press). For its part, the Hong Kong Hospital Authority has recently endorsed the application of recovery to mental health policy and taken a few initial steps forward in pursuing transformation.

But what relevance does such a concept, which was derived from the mental health consumer/survivor movement in the U.S., have for Asian culture broadly, and for Hong Kong in particular? Indeed, there are several aspects of the notion of recovery, as it has developed in the English-speaking world, which may not be consistent with Asian cultural values. This article seeks to identify those aspects of recovery and the transformation of mental health care to a recovery orientation that may require the most translation, or perhaps modification, to fit most constructively

within this context.

We will begin by briefly describing the concept of mental health recovery and the nature of the transformation required to promote it. We then will address specifically and in more depth two components of recovery that may at first appear foreign to Asian cultures. First is the individualistic version of recovery as it has evolved in the English-speaking world; a view of recovery that emphasizes autonomy, self-determination, and personal choice. We will suggest that processes of recovery may look different within different cultural contexts, and that, within Asian culture, recovery may be viewed more as a process of social inclusion that evolves within a family context. Second is the role of peers and peer support in empowering persons with mental illnesses to take charge of their own recovery. In this case, we will appeal to aspects of Chinese folk wisdom that suggest that persons with prolonged illnesses often develop their own expertise on living with such conditions that can be productively shared with others. As a result of these deliberations, we will suggest and describe three strategies for embedding recovery within Asian mental health systems: 1) promoting family-centered (as opposed to person-centered) care, that 2) emphasizes the social inclusion of persons in recovery as valued citizens of their community, and 3) channeling the wisdom of "expert patients" through peer support.

Recovery and recovery-oriented practice

The term "recovery" has two very different meanings in relation to serious mental illnesses such as psychotic and affective disorders, and it has been, in part, a confusion between these two terms that has accounted for skepticism among mental health practitioners (Davidson, O'Connell, Tondora, Styron, & Kangas, 2006). The first use of the term equates recovery with cure, and is similar to the meaning recovery has in other branches of medicine. This meaning has been referred to as recovery as an outcome (Anthony, 1993; Bellack, 2006), as recovery from mental illness (Davidson & Roe, 2007), and as "clinical recovery" (Slade, 2009). And while not everyone with a serious mental illness may enjoy this degree of full recovery – a recovery that leaves the person symptom free and with no residual impairments – this form of recovery has been found to be more common than was previously thought. A consistent body of longitudinal research carried out since de-institutionalization has found that between 45-68% of persons diagnosed with schizophrenia, for example, will experience significant improvements over time, with many recovering fully (Davidson, Harding, & Spaniol, 2005). Most of these studies found only 20-25% of any given sample experiencing a classic Kraepelinian course of deterioration over time, with some form of recovery more common than not (Carpenter & Strauss, 1991; Davidson & McGlashan, 1997; Harding, Zubin, & Strauss, 1987).

In contrast to this meaning of recovery as a clinical outcome, the second meaning of recovery refers to a process a person might enter into in order to reclaim or rebuild his or her life in the presence of an-going mental illness. This process form of recovery, which has also been described as recovery in mental illness (Davidson & Roe, 2007) or "personal recovery" (Slade, 2009), refers more to how a person goes about managing a mental illness than to the severity of the illness itself. It has been described as a highly personal, even unique, "journey" (Anthony, 1993; Deegan, 1996) that also may involve, as in the case of peer support discussed below, drawing on and making "good use" of one's experience of mental illness to help others as well as to live a more meaningful and fulfilling life.

Since traditional clinical measures do not capture the nature of such a personal journey, new measures have been developed to assess this second form of recovery using a combination of quality of life indicators and the degree to which the person feels he or she is able to pursue those aspects of life that he or she finds most meaningful. It is important to recall, however, that this form of recovery is not to be considered

an outcome per se (Davidson, Tondora, & Ridgway, 2010). A consensus development conference convened by the U.S. government in 2004 reached the following representative definition: the recovery process refers to "a journey of healing and transformation enabling a person with a mental health problem to live a meaningful life in a community of his or her choice while striving to achieve his or her full potential" (SAMHSA, 2006).

With two different meanings for the same term, it has been challenging to discern the implications of "recovery" for transforming mental health practice. What has been clear is that mental health systems have inherited a legacy of hopelessness and chronicity from Kraepelin and the 100+ years of institutionalization during which he observed people to deteriorate over time. With the closure of hospitals, the development of community-based systems of care, and the longitudinal research described above, it has become evident that a diagnosis of a serious mental illness need not be a death sentences. With the introduction of recovery, it becomes incumbent upon systems of care to shed this past of despair and dependency and to re-orient services to prepare people to manage, if not entirely overcome, these treatable conditions. Following on its consensus definition, the U.S. government identified ten core characteristics for care that is re-orienting to promoting recovery. These are: care should be self-directed, individualized and person-centered, empowering, holistic, strength-based, respectful, hopeful, incorporate peer support, acknowledge the personal responsibility each individual has for his or her own recovery, and take into account that recovery is not a linear process (SAMHSA, 2006).

Recovery within an Asian context

Many of these characteristics of recovery-oriented practice fit well within Asian cultures, some – like non-linearity – perhaps even fitting better in Asian cultures than in Western ones. Asian cultures are equally committed to respect for the dignity and worth of human beings, to holistic and strength-based care, and to conveying a hopeful attitude to persons in distress. The areas in which such a definition of recovery-oriented practice may be most challenged by, and challenging to, Asian cultures are the person-centered approach to what is considered the person's own responsibility for self-care and self-direction and the empowering role of peer support. We shall take each in turn.

The role of the family in Asian cultures

According to Confucian teachings, the 'Asian Self' is partitioned into 'ta-wo', the greater, or collective, self, and hsiao-wo', the lesser, individual, self. The Western self, in contrast, privileges the distinctiveness of each unique individual. This distinction between a collectivist or sociocentric society and an individualistic or ego-centric society has been confirmed empirically by studies in over 70 different countries (Hofstede, 2001). Hierarchical relationships within the Chinese extended family are evident in extremely complicated Chinese kinship terms (Huang & Jia 2000). In addition, a review of the hierarchical structure of power in Chinese families in Australia suggests that core family values serve to ensure family cohesion (Mak & Chan 1995). A strong family bond also leads to an abundant supply of social capital, which can be described as the "glue" that holds together societal norms, civic participation, and social networks that enhance mutual benefit (Chan, 2009). Social capital is an important asset, but it limits individuals' self-direction and autonomy. In the context of a person's recovery journey in Asian countries, then, a balance must be achieved and maintained between fulfilling one's personal goals, on the one hand, and satisfying in-group expectations, on the other. The mechanism for achieving this balance is the family, as the family is the locus for most decision-making and for the assumption and exercise of responsibility. It thus makes sense, we suggest, for the family, rather than the unique individual, to be the primary driver of health care decisions and of the recovery process as a whole.

Social inclusion and citizenship in Asian cultures

As another alternative to focusing exclusively on promoting individuation and autonomy, as Western approaches to recovery tend to do, we also suggest giving more weight to dimensions of recovery that may receive less attention in the American context but may be more consistent with Asian values. These are the dimensions referred to as that of "social inclusion" and/or "citizenship." Social inclusion, derived from "les exclus" in reference to marginalized groups that fell outside the social protections offered to most French citizens, has been proposed in the U.S. as a response to the lack of community inclusion and acceptance of persons with psychiatric disabilities. Social inclusion has been offered as a means of facilitating opportunities for persons with mental illnesses to make, and be recognized for, valued contributions to society. From the excluded person's perspective, Silver (2009) argues, a social inclusion approach offers inclusion by means of the values and expectations of the person's role in participating in his or her own recovery and being actively involved as a member of society—to which we now add "and one's family."

Proponents of social inclusion argue that the elimination of stigma is a necessary but not sufficient condition for personal flourishing in society: mental health systems, policy makers, and others must not only counter stigma, but must actively promote economic, social, and other mainstream opportunities for people with psychiatric disabilities. Further, with a social policy agenda of linking groups that are marginalized, social inclusion focuses on discrimination rather than stigma, arguing that changes in policies, funding, and laws that exclude persons with mental illnesses will open up new opportunities for such persons that, over time, will reduce stigma toward these individuals as they are increasingly seen not as "others" but as fellow members of society (Thompson & Rowe, 2010).

In a related vein, social science theory on citizenship focuses on participation and communal life (Durkheim, 1982; Tocqueville, 1934) and on the rights and obligations of individuals in relationship to the state (Marshall, 1964). Both aspects of citizenship, arguably, are essential to achievement of "a life in the community" that has been a goal of community mental health since its inception, and, more recently, of "personal recovery." Crabtree and Chong (2000) link citizenship with the relationship between individuals with mental illnesses and the state. Mental illness, they contend, can be an obstacle to full participation in society both directly, through its impact on individual functioning during periods of crisis, and indirectly, through lack of access to opportunities, stigma and discrimination, and other factors. Thus effective mental health care can be essential both for individuals and for the health of democratic societies.

In our own work, we have defined citizenship as a measure of the strength of people's connection to the rights, responsibilities, roles, relationships, and resources that society offers to people through public and social institutions and to relationships involving close ties, supportive social networks, and associational life in one's community. To be citizens, in this view, people must have material means, knowledge, skills, the ability to connect with others in common activity, and a sense of belonging and entitlement to exercise their rights and responsibilities in society (Rowe, 1999; Rowe, Kloos, Chinman, Davidson, & Cross, 2001; Rowe, Benedict, Sells, Dinzeo, Garvin, Schwab, Baranoski, Girard, & Bellamy, 2009; Rowe & Pelletier, 2012). A randomized controlled trial comparing outcomes for persons with mental illness and criminal justice histories receiving a citizenship intervention (a citizenship class followed by valued roles project in which participants "give back" to their communities), revealed that citizenship participants had significantly improved quality of life and reduced drug and alcohol use as compared to controls (Rowe, Bellamy, Baranoski, Wieland, O'Connell, Benedict,

Davidson, Buchanan, & Sells, 2007; Clayton, O'Connell, Bellamy, Benedict, & Rowe, 2012).

Other recent work has argued that such civic activities as voting are powerful means for facilitating the citizenship of people with mental illness (Chan & Chiu, 2007) and that human rights and citizenship can only be promoted by enhancing access to housing, work, and family life while eliminating stigma. Ware and colleagues (Ware, Hopper, Tugenberg, Dickey, & Fisher, 2007) stress the complementary need for persons with psychiatric disabilities to build and maintain the kind of reciprocal, caring relationships enjoyed by other members of democratic societies (e.g., as opposed to one-directional relationships with mental health practitioners). This line of research has been extended to community reintegration of discharged criminal offenders (Uggen, Manza, & Thompson, 2006).

Peer support in the Asian context

The deployment of persons in mental health recovery as mental health providers for other adults with serious mental illnesses has increased by leaps and bounds in the English-speaking world during the past decade, and has been endorsed as an integral component of the transformation of mental health care (DHHS, 2003). For the purpose of this discussion, we define "peer support" as involving persons with lived experiences of mental illness and recovery disclosing these experiences to others (i.e., their "peers") and drawing upon the knowledge, wisdom, and "streets smarts" they have accumulated through these experiences explicitly in their work of encouraging and supporting these peers in pursuing their own recovery.

While research on the effectiveness of peer support has lagged behind its broad adoption in practice, recent research has been encouraging. The unique contributions of peer support staff appear to be the instillation of hope through positive self-disclosure, helping clients move from seeing themselves as victims to being the heroes of their own life journeys (Davidson, 2003; Solomon, 2004); use of positive role modeling, including self-care of one's illness and use of experiential knowledge, or "street smarts," in negotiating social and human service systems (Solomon, 2004; Mead, Hilton, & Curtis, 2001); and trust, acceptance, understanding, and empathy paired with "conditional regard," that is, with the peer provider's ability to "read" a client based on having been in the same shoes he or she is in now (Mead, Hilton, & Curtis, 2001; Sells, Rowe, & Davidson, 2008). Through the combination of these factors, peer support staff are thought to "empower" their clients to become informed and activated users of mental health care in the service of their own personal recovery journey.

Rigorous research beginning in the mid 1990's has found that peer staff are able to: develop working alliances with so-called "difficult-to-engage" patients more quickly than non-peers (Sells, Davidson, Jewell, Falzer, & Rowe, 2006); contribute to decreased use of substances among individuals with co-occurring substance use disorders (Wexler, Davidson, Styron, & Strauss, 2006); decrease inpatient admissions and increase outpatient service use among high recidivist patients (Davidson, Stayner, Lambert, Smith, & Sledge, 1997; Davidson, Stayner, Chinman, Lambert, & Sledge, 2000; Sledge, Lawless, Sells, Wieland, O'Connell, & Davidson, 2011); decrease drug and alcohol use among those diverted from the criminal justice system (Clayton, O'Connell, Bellamy et al., 2012); and, finally, increase patients' sense of hope, control, and ability to effect changes in their lives, increase their self-care, sense of community belonging, and satisfaction with various life domains, and decrease their level of depression and psychosis (Davidson, Bellamy, Guy, & Miller, 2012).

A major challenge to introducing peer support into the Asian context, though, is that it is conceptualized primarily as an egalitarian relationship between two "peers" in which one person, who is already in re-

covery and presumably empowered, strives to "empower" the other to accept personal responsibility for his or her own care and, ultimately, his or her own recovery. As we have noted above, this emphasis on personal responsibility is problematic within a collectivistic and family-centered culture, in which responsibility is diffused across the family group and ceded primarily in the elder generation. Likewise, egalitarian relationships oriented toward "empowerment" will run into conflict with the hierarchical structures framing Asian culture and may be viewed as a threat to honored power relationships.

To overcome these two barriers, we suggest framing the role of peer support instead in relation to time-tested components of Asian folk wisdom revolving around the notion of the "expert patient." This notion is derived in part from the Chinese proverb '久病成醫' (jiǔbìngchéngyī), which literally means: "prolonged illness makes a doctor of a patient" (Wu ,1993, p. 1389). This traditional notion conveys well the premise that peer support providers have gained valuable knowledge and expertise through their own struggles with mental illness. In addition, the common Chinese phrase '同病相憐' (tóngbìngxiānglián), which means "fellow sufferers commiserate with each other" (Wu, 1993, p. 2541), addresses the key role that peer staff can play in building trust, exercising empathy, and providing acceptance and understanding for persons whose previous experiences of mental health care have been difficult, unhelpful, or even detrimental. The combination of empathy, trust, and acceptance with the accumulated knowledge and wisdom that comes from extensive life experiences of dealing with and overcoming mental illness provides an adequate basis for the value, and need, for the role of peer support in Asian cultures without appealing to notions of empowerment or personal responsibility.

Conclusion

This brief review of recovery-related concepts of social inclusion, citizenship, and peer support leads us back to our initial question of whether such approaches, built upon notions of personal autonomy, empowerment, and responsibility, can still serve as bridges for bringing recovery from West to East. We suggest that these concepts can be bridging as long as they can be reframed in terms of the existing Asian values of collective participation and collective responsibilities of each to all and all to each, along with the associated folk wisdom that patients can accrue valuable knowledge and share this knowledge in a caring, compassionate way with fellow sufferers, resulting in a process of recovery that is more inclusive and social in nature than the American ideal of a "uniquely personal journey." By doing so, we are in fact reflecting the recovery-oriented strategies of identifying and building on existing personal and family strengths while taking culture into account, practicing the very principles that we are preaching.

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"Possible Selves": Concept and Applications for Individuals in Recovery from Mental Health Problems

Abstract

The concept of possible selves was proposed in 1986 and has since been implemented in many different contexts such as schools, prisons, career planning and sports training. This paper describes how the concept can be put into practice in mental health settings for people in recovery from severe and persistent mental illness. Future studies are required to establish the clinical utility and effectiveness of the proposed intervention.

Possible selves: Definitions and key elements

Possible selves, as a future-oriented element of the "self" system (including self-esteem, -concept, -efficacy and so on), have been defined as personalized representations of one's self in a future state. The term is used to indicate three components of such visions; hoped-for selves are what one hopes to be, expected selves are what one expects to be given the circumstances and feared selves are what one is afraid of becoming (Markus & Nurius, 1986). Possible selves represent a multifaceted vision which includes goals, aspirations, motives, fears and threats (Markus & Ruvolo, 1989). Their content may include both positive (hoped-for) and negative images (feared) components and these future-oriented selves may be set in either the near or distant future (Oyserman & Markus, 1990a).

Strategy is an important element of possible selves theory. By taking the necessary steps to implement strategies for attaining the hoped-for and expected, and avoiding the feared possible selves, individuals can become more involved in the effort to attain the desired goal and more confident of success (Markus & Ruvolo, 1989).

Balanced possible selves (Oyserman & Markus, 1990b) refers to a pair of possible selves containing both positive expectations and fears in the same domain (such as, "I expect to be employed in the next 10-12 months and I am afraid of being strapped for cash"). This paired construct is considered "in balance" and people with balanced possible selves are more engaged in the effort to attain the expected outcome and avoiding the feared possible self (Oyserman & Markus, 1990b).

Functions of possible selves

The concept of possible selves is a useful framework to help people manage changes in themselves. It has played a significant role in motivation, self-regulation and fostering one's own health and wellbeing.

Possible selves serve as strong motivators (Markus & Ruvolo, 1989) by building a bridge between self-concept and motivation (Markus & Nurius, 1986), which helps people form a vivid imaginative vision of attaining their goal. For example, with a hoped-for possible self of becoming a healthy person, one would be more likely to walk up several flights of stairs and eat healthily rather than to wait for the lift and consume junk food. The possible self of "a healthy me" serves as an incentive to engage in health-promoting behaviours.

Possible selves also serve as a component of the self-regulation process (Hoyle & Sherrill, 2006). They guide behaviour primarily through two important self-regulatory processes; self-efficacy and outcome expectancy (Barreto & Frazier, 2012). For instance, Hoyle and Sherrill (2006) use the possible selves concept to motivate university students to modify their health-related behaviours and lifestyle to close the gaps between their current and desired future selves.

Possible selves is also related to wellbeing (Sheldon & Lyubomirsky, 2006). Increasing one's awareness of a hoped-for possible self not only fosters a positive emotional state but is also an arousing or energizing process for the person (Cross & Markus, 1994). In an experimental study, Sheldon and Lyubomirsky (2006) show that imaging and visualizing best possible selves may boost positive affect and maintain positive mood. It has also been found that the salience of best possible selves is positively correlated with subjective wellbeing (King & Patterson, 2000; King & Raspin, 2004) and life satisfaction (King & Smith, 2004).

Possible selves and health

The relation between possible selves and health has been studied in several contexts such as chronic pain (Morley, Davies, & Barton, 2005), diabetes (Butler et al., 2011; Spensley, 2009), alcohol abuse (Quinlan, Jaccard, & Blanton, 2006; Stein, Roeser, & Markus, 1998) and excessive smoking (Freeman, Hennessy, & Marzullo, 2001; Stein et al., 1998). The concept of possible selves has been applied to explore the notion of self and coping with illness among individuals with mental health problems such as Alzheimer's disease (Cotrell & Hooker, 2005; Frazier, Cotrell, & Hooker, 2003; Haley, 2009), borderline personality disorders (Janis, Veague, & Driver-Linn, 2006) and depression (Allen, Woolfolk, Gara, & Apter, 1996; Penland, Masten, Zelhart, Fournet, & Callahan, 2000). For example, university students diagnosed with depression had more negative possible selves and also reported more avoidance coping strategies than their non-diagnosed counterparts (Penland et al., 2000). This study indicates that the presence

of positive possible selves within the cognitive self-schema might serve as a mediator of depression and coping with the stress associated with the illness.

Possible selves and recovery from mental illness

One might ask, however, how possible selves sustain effortful action to influence a person's recovery from mental illness? And what does "recovery" mean?

Health and illness do not form a single continuum, but rather are distinct states that can exist concurrently. Recovery is the bridge between the two that builds on the strengths of health to address the weaknesses of illness (Davidson, 2010). The concept of recovery has its roots in the addiction movement (Sterling, 2010) back in the mid-1930s. For the first time, recovery removed blame for the disease from the individual and empowered people to take control of their own health and wellbeing. Since the 1980s, the notion of recovery has gradually moved into the mental health field (Davidson, 2010). The two most popular definitions of recovery are the existential, subjective one and another which focuses more on control of symptoms, improved life skills and remedying cognitive dysfunction (Liberman, 2008). In the United States, the Substance Abuse and Mental Health Services Administration (SAMHSA) defines recovery as "a journey of healing and transformation that enables a person to live a meaningful life in a community of his or her choice while striving to achieve maximum human potential" (Substance Abuse and Mental Health Services Administration, 2006). The internationally renowned recovery activist and clinical psychologist, Deegan, suggests that the goal of recovery is not to become "normal" but to embrace the journey of becoming more deeply, more fully human (Deegan, 1988). While the concept of recovery has been progressively recognised by service users, clinicians, researchers and policy planners (Henderson, 2010; Slade, 2007), the international literature has been critical. Examples of contentious issues include the overuse of the term recovery, exaggerated claims for its occurrence and a lack of recognition of the tension between paternalistic mental health professions and the autonomy and rights of individuals recovering from mental illness (Ng, 2010; Satcher, 2010; Sterling, 2010). Accordingly, this brief paper describes how the concept of possible selves may potentially be employed as a recovery-enhancing practice. The mental health recovery movement has to move ahead and articulate specific therapeutic processes in order to achieve the desired outcomes.

In a recent study, Buckley-Walker and associates explored identity among individuals in recovery from severe mental illness and show that increased identification with one's "ideal self" reflected greater hopefulness in recovery (Buckley-Walker, Crowe, & Caputi, 2010). They suggest that helping individuals with mental illness to focus on their best selves and maintain a detailed image of them would increase their confidence to face the future with practical steps and sustain their active recovery efforts.

Possible selves-based intervention to promote recovery

Possible selves are instrumental in making personal changes because their content is flexible; they can liberate people from feeling trapped or restricted in their options (Plimmer & Schmidt, 2007). We make the following two suggestions.

1) Individual counselling

The application of possible selves in counselling may be useful in initiating certain change processes by engaging clients in two role plays – exploring negative and positive possible selves (Buirs, 1995). In counselling processes, the use of the construct of possible selves helps therapists display greater empathy to clients (Martz, 2001). In another study, practicing two homework exercises (to count one's blessings and visualise best possible selves) is shown to help increase and maintain positive emotions (Sheldon & Lyubomirsky, 2006).

2) Small group work

Based on the pioneering work of Pimmer and Schmidt (2007), we propose a brief, low-cost, seven-element approach to apply the possible selves concept to promoting mental health recovery. This is a community-based group programme which aims at promoting the development of possible selves pathways for individuals in recovery from mental illness by firstly helping participants articulate proximal and more distal possible selves goals and secondly formulating strategies to achieve them. The weekly group is conducted by mental health professionals or trained peer support workers. The programme lasts for a total of five weeks and each session is about ninety minutes long (with breaks), involving between six and eight members. The group is closed to ensure a sense of security and cohesiveness among members. Individuals with the following profile may benefit most from the proposed programme:

- Can sustain concentration for at least 20 minutes in a group setting;
- Able to participate in group discussion and enjoy listening to other people's recovery journey;
- Has difficulties (for reasons such as feeling isolated, low to medium level of motivation or a lack of information about what kind of support services are available in the community) making progress in the recovery process.

Most of the activities and sharing sessions can be held within the group but members who have difficulty following the process can access additional support from the facilitators outside the sessions.

Element 1: Portraying expected possible selves and meaning making This is the most important element of the proposed programme, as it helps members to identify their expected and feared possible selves. We suggest articulating the expected rather than hoped-for possible selves because this will help members to envision their near-future self after taking into account their circumstances (such as their aspirations, talents and what has held them back before). Members are invited to reflect on, and share thoughts about, two questions; "where have you been?" and "where are you going?" In order to put the discussion in context, the facilitator can encourage members to relate the questions to specific life domains, such as studies, work, relationships with people or oneself, hobbies and interests. Also, some members may choose to represent their thoughts and ideas in drawings and images (for example, by taking photos outside the group as a form of homework exercise before the next session). It is important to ensure there is enough time for group members to share; it is not uncommon for participants to find the discussion quite emotionally charged.

Element 2: Fostering a sense of mutual support and community The potential benefits of mutual support include sharing similar life experiences in making sense of mental illness-related experiences, regaining a sense of control that counteracts feelings of powerlessness, role modelling recovery, instillation of hope, providing more empathetic and relevant emotional support, sharing practical information and developing strategies for achieving possible selves. A sense of community also breaks down isolation and stigma and promotes a vision of inclusion.

Element 3: Identification of supported services and brainstorming various options This element is a mix of hard work and fun. The facilitators and members work together to report on the array of possible options and resources available in the community. Peer support workers with personal experience of mental illness can provide more detailed information and practical tips on accessing different services (such as where one can get affordable food, which vocational course offers better job prospects) than is normally available through formal mental health services. The fun part of this element is that the group can just brainstorm any of their wildest ideas to achieve the expected, and avoid the feared, possible selves. This will be enjoyable but also give members the freedom and opportunities to think outside the box.

Element 4: Evaluating the options and finding a match This element aims to "pave the way for change" (Plimmer & Schmidt, 2007). The previous stage set out to identify a range of options; this element aims to relate these

options to each member's envisaged self. This part of the discussion, which may also include role play, may result in goal-related actions rather than just talking about possible selves. The helpful hints or guiding questions are; "Is this really who you want to become?" "Does it feel right?" "What is required to achieve that expected possible self?" and "Are you prepared to take that course of action?"

Element 5: Focusing on strengths Strengths can be categorized on two levels (Norman, 2000). The first is the personal level, where the indicators of strengths are self-efficacy, realistic appraisal of the environment, social problem solving, sense of direction or mission, empathy, humour and adaptive distancing. The second is the interpersonal level, which contains, for example, positive caring relationships, positive family environment or other forms of intimate environment that help to foster resilience and strength. We add a third layer which is the strengths or resources embedded in one's neighbourhood and community such as sports facilities, public transport system and, perhaps, mental health services.

Element 6: Developing positive pathways This is about "structured planning" (Plimmer & Schmidt, 2007) which includes setting goals, identifying specific actions with small steps and timelines and finding ways to gauge if the goals have been achieved. The task of developing pathways or strategies has two functions. Firstly, strategies help individuals to focus on goals while anticipating setbacks through the planning process. Secondly, strategies increase persistence and commitment. When the strategies or pathways are detailed and concrete, members are more able to engage in sustained effort in pursuit of their possible selves. Working with members from a mental health background, the pathways have to remain flexible and adaptable to suit individuals' pace of progress and, in some cases, their fluctuating mental state.

Element 7: Celebrating the effort made and achievements This element should be left to the last session of the group programme. Affirming members' effort is an ongoing process and can be done as a "check in" in each group meeting. Another option is to arrange a "booster" session, perhaps four or six months after the last formal meeting, to provide members with continuous encouragement and suggestions.

Conclusion

Simply articulating a possible self is not enough to produce sustained effort and behavioural change. We need strategies to serve as pathways together with emotional and practical support (through individual counselling or small groups) to attain expected, and avoid feared, possible selves. We propose a descriptive framework for how the concept of possible selves can be utilized as a specific recovery-based practice. Future research should expand on studies to collect data on the programme process and outcomes which may provide further information on the design and implementation of such possible selves programmes.

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Genetic License
Sino-Luso 11 Opens Up Ways to Monetize Macau's Medical Potentials

By Christopher Cottrell

Aspit-cup, a white blood cell-bank, and DNA donor smart cards. Welcome to the potential future of high stakes money and medicine in Macau.

At least that was the impression I had this week whilst observing the 11th Sino-Luso International Medical conference. Launched in May 2011, the Sino-Luso International Medical forums by Dr. Manson Fok, dean of the faculty of health sciences at the Macau University of Science and Technology, these forums have a proven track record of brining some of the world's leading medical minds to Macau.

This week's forum at the MGM Grand was no exception.

Take, for instance, Professor Manuel Sobrino Simoes, director of the institute of molecular pathology and immunology at the University of Porto.

His humble yet highly penetrating presentation on the state of metagenetics could be summoned up in three small words: a spit cup. Or, more cheekily, the portmanteau of "spitomics," whereby one's druel yields invaluable information about one's genetic blue-print. "We can learn everything and heal people and even prevent crimes," says Professor Simoes.

Another example of the forums exceptional qualities can be summed up with one with one word: Californication. Well, at least the California part.

"I spent four years at Stanford years ago and in California we were the first ones to open up a white-cell blood blank so you can store your own healthy cells for when someone is young, like you, for when you are older, like me. That's why I mentioned California… you can apply the same model here in Macau,"says Professor Dominique Charron, director of hematology and immunology at the faculty of of medicine at Paris University Diderot.

Another compelling case: beyond the smart card. Ask Dr. Gregory Cheng, a consultant of hematology and oncology at MUST. He is keen to see both Macau and Hong Kong add health components to smart cards, which are commonly used for shopping or transport. With one's genetic coding embedded in these card, or in separate health cards, medical providers could instantly find better genetic matches for emergencies.

"It would only cost the Macau government 200 patacas for every citizen to have this done at MUST, for example. We could really take a medical lead on this," says Dr. Gregory Cheng.

And probably do so before any laws are enacted from preventing the private sector from doing so, he says.

In sum: another forum, another health dose of science for Macau, says Dr. Manson Fok.

"This is success for pushing Macau to become a strong in medical services. We are small, but we receive over 20 million visitors per year. Our medical services must improve," he says.

Beyond the 2020 Vision Macau's Medical Check-Up

By Christopher Cottrell

Last month, I gave a happy talk at the Portuguese Livraria bookshop off the Leal Senado. It was for Macau Closer magazine's book "10 Years of Gaming Success: 2002-2012."

I served as an editor for the book and it was nice to toast its launch with members of the Macau gaming community.

For my bit on the presentation panel, I talked about the chapter covering the "next ten years" of Macau. That was easier to write because I could just make it up, so to speak.

Well, not really. I could not invent the fact that Zhuhai will be a driving force for Macau's economics over the coming decade, starting with the opening up of the University of Macau campus on Henqqin island and the Hong Kong-Zhuhai-Macao bridge.

Nor could conjure up the fact that Macau itself is going a gradual medical sea-change. On the panel, I made a special point to plug the diversification of Macau through medicine: namely through the work of Dr. Manson Fok, dean of the faculty of health sciences at the Macau University of Science and Technology (MUST).

In the book, I note that the Sino-Luso International Medical Forums are forming a scientific spine for Macau's frontline medical providers and that Fok's work is paramount to the diversification of Macau diversification via medicine and medical tourism.

I noted that the Venetian has the Malo Clinic and that hopefully all the gaming interests would develop such services. They really should. After all, given the high minded scientists from Harvard to London to Paris to Beijing that the Sino-Luso forums are bringing in, the MUST training facilities are an optimal place for the gaming groups to send their own internal medical teams for enhanced skills. Plus, the forums are free to Macau health-care workers.

Moreover, there has to be more money in medicine than baccarat in China. Can you imagine the combined strength of both in one jurisdiction? With this, Macau could hand's down give Hong Kong a run for its money with medical services. The government could give out 80,000 patacas per year instead of 8,000 patacas. All residents could have state of the art medical services for free - as they should already, as is implied in the applaudable aims of socialism.

In fact, given the building of the bridge, it will be far easier for Hong Kong doctors to commute to Macau, just as they commute often from Lantau to central. By the way, the bridge will be landing at Lantau. The doctors can also live in any of the upmarket residential flats in Macau and in the new luxury towns Zhuhai is building.

These are topics I frequently raise when I chat with the doctors, such Prof. Helena Alves, director of the Central North Histocompatibility from the Ministry of Health of Portugal. She was in attendance for the 11th Sino-Luso International Medical Forum organized by Dr. Manson Fok at the MGM Grand.

She, like other doctors, are curious about how Macau is growing and what its needs are. Those needs are clear: better medical services, and better services while the baccarat economy of the next decade shows no signs of slowing down.

Developing a Risk-Based Air Quality Health Index

Environment Protection Department of Hong Kong Special Administrative Region Government is preparing to replace the existing Air Pollution Index (API) system with a new Air Quality Health Index (AQHI) system tentative in summer 2013, to better communicate to the public the health risks of air pollution and associated precautionary measures.

To kick off this project, a consultation session was carried out. Hong Kong Health Care Federation (HKHCF), Hong Kong Medical Association, The Medical Council of Hong Kong and other renowned medical associations were invited by the Environment Protection Department. Miss Linda Wills, chairman of executive committee, HKHCF attended the meeting and expressed views of HKHCF on the current API, at the same time provided health care advices.

The AQHI system is a health based system which reports the aggregated increase in hospital admission risks of the key air pollutants in a timely manner. It was developed by a group of researchers from Chinese University of Hong Kong, Hong Kong University of Science and Technology and Environmental Protection Department based on the Canadian approach.

Regarding the study, time series studies are performed to obtain the relative risks of hospital admissions for respiratory and cardiovascular diseases associated with four air pollutants: sulphur dioxide, nitrogen dioxide, ozone, and particulate matter with an aerodynamic diameter less than 10 mm (PM10). The sum of excess risks of the hospital admissions is calculated associated with these air pollutants. The cut-off points of the summed excess risk, for the issuance of different health warnings, were based on the concentrations of these pollutants recommended as short-term Air Quality Guidelines by the World Health Organization. The excess risks were adjusted downwards for young children and the elderly.

Health risk was grouped into five categories and sub-divided into eleven bands, with equal increments in excess risk from band 1 up to band 10 (the 11th band is 'band 10+'). Health warning messages are developed for the general public, including at-risk groups: young children, the elderly, and people with pre-existing cardiac or respiratory diseases.

The new system addressed two major shortcomings of the current standard-based system; namely, the time lag between a sudden rise in air pollutant concentrations and the issue of a health warning, and the reliance on one dominant pollutant to calculate the index. Hence, the AQHI represents an improvement over Hong Kong's existing API, and should be considered as a suitable replacement.

Jacky Kwan of Bamboos Professional Nursing Services Limited Named Young Entrepreneur Award at "DHL/SCMP Hong Kong Business Awards 2012"

South China Morning Post announced that Mr. Jacky Kwan, Chairman of Bamboos Professional Nursing Services Limited, has been chosen as at the 'DHL/SCMP Hong Kong Business Awards 2012'. He is currently the president of the Hong Kong Health Care Federation.

Professor Yue-Chim Richard Wong, the Chairman of "DHL/SCMP Hong Kong Business Award 2012" Judging Panel said, "Our panel of judges had many outstanding candidates to choose from. But there was a good convergence of opinion after much discussion and like previous years we were very impressed by the many qualities of the winners in leading their businesses to scale new heights in a challenging economic environment. Their contributions to the community and especially in making Hong Kong a vibrant business center in the world is being recognized by these awards. We are delighted that Hong Kong has so many talented and dedicated individuals in the business community. They are our pride."

The "DHL/SCMP Hong Kong Business Awards" judging committee also honored Mr Benjamin Hung, Executive Director and Chief Executive Officer of Standard Chartered Bank (Hong Kong) Limited, as the winner of the Executive Award; Mr. Girish Jhunjhnuwala, Founder and CEO of Ovolo Group Limited as the winner of the Owner Operator Award, and Mr. Liu Changle, Chairman and CEO of Phoenix Satellite Television Holdings Limited, named the Business Person of the Year. Cheung Kong Infrastructure Holdings Limited clinched the International Award. Hong Kong Air cargo Terminals Limited gained the Enterprise Award. China Everbright International Limited took home the China Company Award and Green Tomato won the SME Award.

"The DHL/SCMP Hong Kong Business Awards provide the opportunity to acknowledge the outstanding contribution by individuals and companies to the economic and financial well being of Hong Kong. I would like to congratulate all the winners in this year's event. We at DHL are constantly striving to raise the bar and grow alongside the Hong Kong business community since our establishment here 40 years ago. We will continue to invest in supporting organizations both large and small to grow their businesses around the world." said Mr. Ken Lee, Head of Commercial, Asia Pacific and Managing Director, Hong Kong, DHL Express.

"For 23 years, we've been celebrating the successes of amazing individuals and companies that have formed the fabric and vitality of what makes Hong Kong the city it is today," said Mr. Robin Hu, Chief Executive Officer of SCMP Group Limited. "The winners of the Hong Kong Business Awards this year overcame difficult times and uncertainty by showing vision, tenacity, entrepreneurial excellence and business leadership".

The "DHL/SCMP Hong Kong Business Awards 2012" judging panel was chaired by Professor Yue-Chim Richard Wong, who is Professor of Economics, The University of Hong Kong, and included representatives from The Hong Kong General Chamber of Commerce, DHL Express, The South China Morning Post, Junior Chamber International Hong Kong, The Chinese General Chamber of Commerce, The Hong Kong Trade Development Council, and The Hongkong and Shanghai Banking Corporation Limited.

The judging panel also included last year's winners – Mr. Peter Kwong Ching Woo of The Wharf (Holdings) Limited, Ms. Caroline Mak of The Dairy Farm Group, Mr. Arnald Ho of Print- Rite Holdings Limited, Mr. Kevin She of SC Logistics Co. Ltd, Mr. Andrew Kwok of Hutchison Global Communications Limited, Mr. Jane Tong of Giormani, Ms. Peggie Wai of Agile Property Holdings Limited and Mr. Joseph Chan of AsiaPay Limited. CPA Australia was once again a special advisor to the Awards program in 2012. They helped in defining the criteria for Awards and set KPI's to assist in the judging process.

Dr. Susan Miller Briggs, MD, MPH, FACS
Associate Professor of Surgery, Harvard Medical School
Director, International Trauma and Disaster Insitute, Massachusetts General Hospital, Boston, Massachusetts, USA
Dr. Susan Briggs established and became the first director of the International Medical Surgical Response Team (IMSuRT), an emergency response team, sponsored by Massachusetts General Hospital. She was graduated from Loyola University Chicago Stritch School of Medicine in 1974 and an M.P.H. in international health from the Harvard School of Public Health in 1998. She is an attending general and vascular surgeon and associate director of the trauma service at Massachusetts General Hospital. She is also an assistant professor of surgery at Harvard Medical School.

Triage in Mass Casualty Incidents: Current Concepts

Photo from http://jbanalytics.blogspot.hk

Introduction

Triage is the process of prioritizing casualties according to the level of care they require. It is the most important, and psychologically most difficult, mission of disaster medical response, both in the pre-hospital and hospital phases of the disaster.   Disaster triage is significantly different than conventional civilian triage. Disaster triage requires a fundamental change in the approach to the care of patients ("crisis management" care).

The objective of conventional civilian triage is to do the greatest good for the individual patient. Severity of injury/disease is the major determinant for medical care.

Crush Injury Victim (Haiti, 2010)

The objective of disaster triage is to do the greatest good for the greatest number of patients. The determinants of triage in disasters are, however, based on three parameters:
• Severity of injury
• Likelihood of survival
• Available resources (logistics, personnel, evacuation assets.)

The major objective and challenge of triage is to rapidly identify the small minority of critically injured patients who require urgent life-saving inter-ventions (10-25%) from the larger majority of non-critical casualties that characterize most disasters. In a mass casualty event, the critical patients with the greatest chance of survival with the least expenditure of time and resources are prioritized to be treated first.

Triage is a dynamic decision-making process of matching victims' needs with available resources. Many mass casualty incidents will have multiple different levels of triage as patients move from the disaster scene to definitive medical care. Disaster medical triage may be conducted at three different levels depending on the level of casualties (injuries) to capabilities (resources.)

Field triage (level 1)

Field triage, often the initial triage system utilized in disasters with mass casualties. is the rapid categorization of victims potentially needing immediate medical care "where they are lying" or at a triage site. Victims are designated as "acute" or "non-acute". Simplified color coding may be used.

Medical triage (level 2)

Medical triage is the rapid categorization of victims at a casualty collection site or fixed or mobile medical facilities by the most experienced medical personnel available to identify the level of medical care needed based on severity of injury. Triage personnel must have knowledge of the medical consequences of various injuries (e.gl burn, blast or crush injuries or exposure to chemical, biological, or radioactive agents). Color coding may be used:

Evacuation triage (level 3)

Evacuation triage assigns priorities to disaster victims for transfer to medical facilities. The goal is appropriate evacuation (by land or air) of victims according to severity of injury, likelihood of survival and available resources. Categories for medical triage and evacuation triage are the same.

Triage errors

Triage errors, in the form of over-triage and under-triage, are always present in the chaos of mass casualty events. Over-triage is the assignment of non-critical survivors with no life-threatening injuries to immediate urgent care. Under-triage is the assignment of critically injured casualties requiring immediate medical care to a delayed category.

The higher the incidence of over-triage of victims, the more the medical

system is overwhelmed. Under-triage leads to delays in medical treatment with increased mortality and morbidity. In mass casualty incidents, especially explosions, triage errors more commonly involve over-triage than under-triage. Medical providers often over-triage children, due to the emotional impact of injured children on medical personnel.

Triage pitfalls

Triage pitfalls which lead to over-triage and under-triage include the following:
- No triage training prior to the disaster among medical personnel
- No standardized triage system among medical responders
- Selection of a triage officer lacing in rapid decision-making and leader-

ship skills
- Failure to properly label patients by triage category. Leading to triage redundancy, increased errors and inefficiency.
- Lack of personnel, protective equipment and communication tools to facilitate efficient triage in mass casualty incidents.

Summary

Triage is never easy in disasters involving large numbers of casualties. Demand for resources always exceeds the supply of resources in a mass casualty incident. Triage is a dynamic process of matching patients' needs to available resources. The goal of triage is to rapidly identify those victims with the greatest chance of survival, given limited resources.

Prof. Li Xiguang（李希光）
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Director of Tsinghua University Institute of Health Communication
Deputy director of Tsinghua University Research Center for Public Health and member of various Experts Committees
Before he founded the journalism program of Tsinghua University, he was senior fellow at the Joan Shorenstein Center on the Press, Politics and Public Policy at the Kennedy School of Government of Harvard University, senior editor and director of the political, cultural and science desk of Xinhua News Agency as well as the Science and medical writer with the Washington Post. His latest books on public health include "The Media Handbook for Disease Control Workers", "The Media Book for Tobacco Control" and "The Media Book for HIV/AIDS Control" and he has received a number of significant national and international awards for his pioneering work in health and journalism education, including UNAIDS Awards for Outstanding Contribution to the Control of AIDS", "China's Best Health Educator", " China's Best Course of News Reporting and Writing", "China Top 10 Educator", etc.

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Study of Internet-based HIV Intervention Targeted on Men Who Have Sex with Men (MSM)

Study background

Men who have sex with men (MSM) population has become the focus of HIV prevention and control in China

The number of new HIV infectors is increasing in recent years. According to a joint assessment from the Ministry of Health, UNAIDS and the World Health Organization, till the end of 2011, China has 780,000 alive people living with HIV (PLHA), among them about 154,000 are AIDS patients. There are about 48,000 people newly infected with HIV and 28,000 AIDS deaths in 2011. Also in 2011, the State Council passed < Action Plan of HIV Prevention and Control in China(2011-2015)>, which showed the increasing importance and urgency of HIV prevention and control.

According to the data released by the Ministry of Health of China every two years, although the appearance of new HIV cases has become less frequent, the proportion of homosexual transmission showed dramatic increase. In 2009, the <Global AIDS Epidemic Report> released by the UNAIDS revealed that sexual transmission has become the main way of HIV transmission, and same-sex behavior accounted for 32.5% of the total number of propagation, which is much higher than 12.2% in 2007.

From 2008 to 2009, the CDC of 61 cities collaborated with local MSM communities and successfully carried out three surveys about MSM. More than 56,000 MSM participated. Statistical result showed that HIV infection rate in MSM CBOs is 5.0 percent, with southwest region such as Guiyang, Kunming, Chengdu, and Chongqing higher than 10 percent. In 2011, some

regions' infection rates exceeded 20%, which showed obvious increase compared with 0.4 percent in 2005.

The director of National Center for HIV/AIDS Prevention and Control Mr Wu Zunyou pointed out that HIV-infected groups are more decentralized than before and no longer concentrated in traditional high-risk groups such as injecting drug users. Infection rates of students and elderly men have increased significantly in recent years, making detection, prevention and treatment much more difficult. At the same time, about 90% (Liu Dalin) MSM would choose to marry because of traditional Chinese family value, and 40% -74% (Mr Wu) will have sexual relationships with females, which will facilitate the spread of HIV. Therefore, MSM population has become the focus of HIV prevention and control in China.

The necessity and feasibility of using the internet to prevent HIV among MSM

According to "the 29th China Internet Development Statistics Report" released in January 2012 by the China Internet Network Information Center (CNNIC), till the end of 2011, China has 513 million netizens and 38.3% internet popularizing rate. 55.9% Chinese netizens are males. There are 356 million mobile phone netizens, which accounts for 69.3% of all internet users. 58.1% mobile phone netizens are male. Mobile phone netizens have become an important part of Chinese Internet users.

Despite the fact that both officials and folks now hold more and more open attitudes towards MSM, they are still classified as "outliers" and receive pressures and even discriminations from all levels of society due to

the traditional Chinese family value. Social problems such as "Gay's wife" are best evidences. At the same time, we should notice that internet has replaced face-to-face communication places such as parks, restrooms and bars and become the main way MSM group making friends (e-dating), because of its anonymity, openness, and interactivity (Geyer, 2003).

In addition to being able to meet the demand for privacy, obtaining information independently and communicating with experts and authorities equally, internet can also provide platform to build mutually-support group / community, from which MSM individuals can feel a sense of belonging, communicate with people like them to acquire more information, get help and support both emotionally and psychologically, organize off-line activities, express personal demands and fight for personal rights. Relevant theoretical researches are abundant.

The necessity of internet intervention At present, there are five major biomedical approaches to prevent sexually transmitted disease (STD for short) and HIV, including vaccines, male circumcision, barrier methods (male or female condoms), external use microbicides (usually use with condoms) and drug treatment (Rotheram-Borus, Swendeman, & Chovnick, 2009). However, the effectiveness of biomedical methods is largely dependent on behavioral factors such as the continuity of medical care provided and adherence of patients to medical treatments (Rotheram-Borus, Swendeman, & Chovnick, 2009).

A successful HIV prevention and intervention project needs to satisfy the following factors: strengthen the motives for change, provide information for a specific group of people to solve specific problems, build emotional, cognitive and behavioral ability, screen external factors impeding change, and maintain this change by building social networks. (Rotheram-Borus, Swendeman, & Chovnick, 2009).

However, due to the restriction of cost, object size and medical resources, currently, biomedical HIV behavioral intervention (e.g, evidence-based treatment) fails to fully meet the factors mentioned above. In contrast, intervention and advocacy based on internet and mobile communication tools are more efficient. They can guarantee low cost, break geographical restrictions and expand the scale of target population.

Just offering convenient services and adequate health care resources are far from enough for HIV prevention workers. On one hand, China's MSM communities have become a secret underground society in the eyes of "outsiders". HIV prevention workers need to spend a lot of time and efforts to find MSM and then establish contacts. On the other hand, even if contacts are established successfully, it is extremely difficult to persuade MSM to accept HIV test. MSM are under so much psychological and social pressure that for any seemingly "risky" move that may bring their personal lives into public, they will show anxiety and fear, especially in an unfamiliar organization.

MSM have exceptionally high demand for privacy protection. Because they are often marginalized, discriminated and even stigmatized (WHO, 2011), MSM are always very careful, not only when they take initiatives to seek help, but also when they are found for intervention. One study showed that when in the choice of treatment, the priority MSM will consider is confidentiality, followed by the affordability of medical expenses, and the convenience of services (Onyango, Ouma, Birungi & Geibel, 2005).

Internet advocacy and intervention can meet MSM's demand for confidentiality, therefore can facilitate relationship establishment between HIV prevention workers and target population (MSM), and motivate target population to seek services spontaneously, take self-protection and self-management.

Besides, a large number of studies have shown that MSM who use internet are at higher risk of infecting HIV. For example, a study of domestic gay website users (2006) pointed out that in demographic characteristics, MSM who use internet are becoming younger and have higher level of education overall. Furthermore, they tend to use condoms less frequently in sexual behaviors and have more casual sexual partners. All these facts show that MSM who use internet are high-risk groups of spreading HIV and intervention is particularly important for them. (Zhang, and Bi, Lv, Tang, Zhang, & Hiller, 2007).

The feasibility of internet intervention For HIV prevention and interventions targeted on MSM, there are two most crucial tasks: one is to detect infection as early as possible; another is to conduct patient follow-up. Internet can play an important role in both parts.

With regards to "early detection", although we lack studies and official data of the scales of domestic gay websites, an empirical study conducted in 2002 showed that there were already more than 500 gay websites in mainland China in 2002, and each website has thousands of users (Wang & Ross, 2002). Thus, internet, especially Gay Media, can gather MSM in different times and spaces together, thus reducing the difficulty of finding target population and offering tests.

Furthermore, according to the situations of popular gay websites provided by "Gay Media Collection" (see Figure 1), it is not difficult to find out that such websites usually have obvious geographical labels, possess functions including news (both domestic and foreign), photo albums, video, literature, chat rooms and community forums. They also have links to micro blogs and blogs and carry sales advertisements of gay related products. All these functions mentioned are highly attractive to MSM.

Those gay websites mostly aim at providing places for MSM to make friends and share emotional feelings of gay lives. They also publish basic knowledge of HIV prevention and HIV test information (such as Guang-Tong Web, Light blue, Green Gay Era, Sunny Zone, etc.), released in the form of links under titles, on right columns, or image ads links in the center. Among those forms, image ad links can best attract attention and there is a great chance that website visitors will get HIV prevention and control information inadvertently. Furthermore, repeated browsing can strengthen the subconscious attention to this problem.

Regarding to patient follow-up, "Dependency Theory" claims that feeling of dependence comes from two sources: one is acquiring effective information and forming a comprehensive and accurate understanding of the external environment; another is the need of getting guidance for individual behavior through communications with peers. Both sources ultimately serve the personal goal of adapting to the surrounding environment and making accurate response in order to obtain pleasure and satisfaction. Based on this theory, MSM who use internet will show continuous behavior of using internet because of "Media Dependency" (Morton, & Duck, 2000). Equipped with advantages such as confidentiality, timeliness and low-cost, internet provides convenience and possibility for interveners to "lock the target".

Issues on implementing internet-based intervention Some studies (Peter Korp, 2006) pointed out that the impact of internet intervention on doctor-patient relationship is actually empowering and "non-zero" (Korp, 2006), which means that both sides involved can take initiative and have control during intervention. The control that internet offers users includes: obtaining information and participating in treatment based on personal preferences, communicating with doctors and authorities equally and choosing favorite ways to answer, maintaining privacy of personal information and keeping the identity of vulnerable group secret.

The control that internet offers interveners include: providing, posting and certificating reliable scientific information; locating and approaching target population quickly and having administrative control over internet activities. Characteristics mentioned above can help us to understand the trend that in recent years, MSM HIV interventions are gradually transforming from philanthropic to commercial and professional in some countries.

In fact, internet intervention sets up a "black box" between the interveners and the intervened in which each part can put information, requirements and concerns, enabling them to communicate. The whole process involves only the "content", not the objects behind the content. It can be

seen that internet can avoid impact of social stereotypes on the intervention process and create value on the basis of protecting both parties' interests. A manifestation of this concept is that at present, some countries bring commercial mechanism to MSM HIV prevention and intervention.

Whether it is true that MSM who use internet are more initiative in understanding HIV prevention information than other MSM, different studies provided different results (Hooper, of Rosser, 2008). This disagreement is irrelevant to the internet itself, but it reminded the interveners that, no matter operated philanthropically or commercially, intervention must start from psychological needs of MSM. Only in this way we can present HIV prevention information in more attractive forms, introducing "eye-catching" product.

International experiences of internet MSM HIV prevention and intervention

In 2011, a set of comparative experiments showed that using SMS as a supportive service can increase the "stickiness" of a minority race / ethnicity during internet-based HIV prevention and interventions among MSM. (Khosropour & Sullivan, 2011).

In 2006, Netherlands conducted a study of a web game promoting condom use among MSM, including its design strategies, theoretical support and effects. The study explored the steps to design internet intervene procedure according to behaviors and psychological needs of MSM. This web game had 12,081 viewers, 9,508 players and 9,346 registered web users in only four weeks. The researchers also pointed out that the prize provided might have some incentive effects. (Kok, & Harterink, 2006).

In 2010, a study of internet intervention of Hepatitis B vaccination injection among French MSM showed that expressing possible obstacles and recommended solutions during information provision can help improve the effectiveness of internet intervention and reduce difficulties (Adam, Wit,, Baudoin, & the Barbier, 2010). Same experiences about providing complete intervention information also apply to internet HIV prevention and intervention.

Involvement of "China-Gates Program"

Facing China AIDS epidemic in recent years, especially the rapid increase of infection rate among MSM, the China Ministry of Health, the State Council AIDS Prevention Committee Office and the Bill & Melinda Gates Foundation signed the HIV Prevention and Control Program ("China-Gates Program" for short). This is a five-year project with a total fund of $50 million.

China-Gates Program's main strategies including prevention and detection among high-risk groups (relying on community-based organizations (CBOs) to mobilize, medical institutions to test, inform and consult), prevention and treatment of infesters and control of dissemination. The project advocates the collaboration between local CDCs, medical institutions and CBOs in order to achieve the integration services combing intervention and mobilization, testing and counseling and treatment and care. Till now, the project has covered one province and 14 cities, including Beijing, Tianjin, Shanghai, Chongqing, Shenyang, Harbin, Qingdao, Xi'an, Nanjing, Wuhan, Hangzhou, Changsha, Kunming, Guangzhou and Hainan.

Started in 2007, China-Gates Program has formed a series of implementation models in many places and has become the largest multi-level, systematic project in the field of MSM HIV prevention and intervention.

Most CBOs who are engaged in China-Gates Program use internet as one of the intervention approaches. The collaboration of CDCs, medical institutions and CBOs enhanced the professionalization, standardization and credibility of internet platforms. Those internet platforms were mainly started and organized by MSM previously. At the same time, originally the platforms were used for making friends and lack HIV prevention information. Now the situation has been improved.

Study purpose and application

Because China-Gates Program used different internet platforms (including general gateway information websites, micro blogs, chat rooms, QQ,

etc.), by analyzing the project's approaches and effects, this paper will sum up the experiences of internet MSM HIV prevention and interventions, and ultimately discuss the future direction of this area.

This study can not only fill the blank of domestic research, but also provide valuable references and guidance for scholars and practitioners in this field.

Scientificalness and feasibility of the study

This paper studies China-Gates Program, and can basically represent the existing practical experiences of internet MSM HIV prevention and intervention. At the same time, the abundant data China-Gates program accumulated provide the possibility of in-depth analysis.

Case analysis of internet intervention

Started in 2007, China-Gates Program has guided a large number of CBOs on MSM HIV prevention and intervention. In practice, these CBOs tried to use different kinds of internet intervention. The following paragraphs will analyze characteristics of different internet interventions, using practices of those CBOs.

MSM websites and online communities

In China-Gates Program, many CBOs have their own "MSM gateway websites", which are important platforms of HIV prevention and intervention. However, although gateway website is the "oldest" online communication form, it did not have the functions of health advocacy and intervention until five years ago.

In the past, China gateway websites were mostly used as platforms of entertainment, making friends and providing news and emotional stories, rarely involving health information such as STD and HIV prevention information. If one wants to know health related information, he/she needs to search professional websites established by CDC or medical institutions. However, health related professional websites tend to be monotonous and too professional to understand, thus lacking attractiveness to general public. If not sick, few non-professionals will have the interest to view these websites. As a result, STD and HIV prevention information can hardly influence "invisible" target population. It can be said that in the beginning of website development, neither MSM gateway websites nor health related professional websites advocated HIV prevention effectively.

The involvement of China-Gates Program changed this situation. One important mission of the project is to encourage more MSM to receive HIV test. Some CBOs and MSM website owners made appropriate adjustments to operation modes in order to take better advantage of websites' influences in HIV prevention and intervention. Those adjustments and innovations are reflected in the following areas.

Adjustments of website information Among websites established by CBOs who are engaged in China-Gates Program, the "Sihai Brothers" is in the forefront of innovation. "Sihai Brothers" is one of the most influential MSM websites in Qingdao City. Founded in 2001, it now has more than 500,000 registered users, 40,000 daily visitors on average. "Sihai Brothers" is Sihai Brothers and Health Work group's ('Sihai Group" for short) main platform of internet intervention.

Originally, Sihai Brothers was as entertainment and social-oriented MSM gateway website offering information for local MSM communities. Entertainment section and chat rooms were also active. In 2010, it was incorporated in China-Gates Program. After that, Sihai Brother successfully transformed into an internet base of providing HIV and STD prevention information, and established reliable mobilization system for test. (China CDC NCAIDS project Office, 2011).

In order to better provide health information, Sihai Brother reduced pure entertainment news and added information on STD and HIV prevention and Sihai Group activities. For example, the "activities" section on home page provides information on China-Gates Program, including a variety of health meetings and recreational activities. In the "Life" section, visitors can find information on "HIV prevention" and "Qingdao AIDS Association".

Guangtong website is another good case. As the platform of the Lingnan MSM Community Support Center, Guangtong is the "oldest" and most influential MSM website in China. From its establishment in 1998 to 2010, the website attracted more than 2.11 million unique visitors in Guangdong Province. Guangtong's sections include basic information, making friends, culture and art, community activities, etc., which made it a good communication platform for MSM. Besides, in order to better promote HIV intervention and prevention, the website opened up a special section called the "Red Ribbon", which offers comprehensive STD and AIDS related knowledge, such as routes of transmission, ways to prevent and treat.

These are all attempts to advocate HIV prevention by adjusting website information.

Establishment of interactive sections Guided by China-Gates Program, CBOs added interactive sections in their websites to be more influential.

For example, Guangtong established "experience exchange" section under the "Red Ribbon". In this way, website visitors can help each other via communication and mutual encouragement.

Similarly, Sihai Brothers opened up "Sihai online health consult" section. Website visitors with any questions can leave online messages, and the administrator will reply as soon as possible. In addition, Sihai Brothers offers online direct experts voice consultation from time to time. Another online voice communication activity is "infectors story-telling". Sihai Group invites syphilis, genital warts, and HIV infected individuals to share their own experiences, emphasizing the importance of prevention. This section will also invite relevant experts to provide technical support.

Interactive sections meet the counseling needs of website visitors to some extent: experts' technical guidance and communication between peers expend the scale of consultation, which is mainly on-site traditionally; In addition, since consultation content can be saved in internet server, Internet users can view counseling records anytime. In this way, answering one person's question is equivalent to answering many persons' questions, which obviously improved efficiency.

Online test-reservation service Online test-reservation service is also an extension of offline services. It greatly enhanced the initiative of target population. To be precise, enabling target population to decide when and where to receive HIV test reduces their resistance.

Visitors can find "MSM health test online reservation" service on the top of the homepage of Sihai Brother. According to Sihai Group, website's volunteers will confirm the test time and location with target population within 24 hours after reservation information being submitted through the system. When submitting the reservation information, users need to fill the "health monitoring registration form". This form contains 18 questions: 10 of them are related to basic personal information and test requirements, such as personal phone number, QQ number, preferred test time and location; 8 of them are related to behaviors, such as age of first intercourse (anal sex) with men, current sexual role, condom use of latest sex with men, whether had HIV testing in the past three months or not, etc..

According to the statistical data provided by Sihai Group, from the trial operation in June 2010 to April 2012, except a six-month suspend due to server failure, Qingdao Sihai online test-reservation system has a total of 364 users, 352 valid reservation made, and 313 who ultimately received test after tracked and contacted by volunteers.

The Lingnan MSM Group also provided 24-hour online test-reservation service through Guangtong website's "love test" section. After clicking on the "I want to have a test" button on the home page, users need to answer two questions: "whether had sex with men before" and "whether had HIV test in previous three months". Testing group only provides free HIV test service for those who did not have HIV test in the past three months. Therefore, these two questions can help the testing group to select target service populations. After being selected, users can choose test sites and time (same test site allows only one appointment every half an hour). The system will give reservation number automatically.

In order to ensure authenticity of reservations, users are required to provide real phone numbers and then verify the effectiveness by entering mobile phone confirmation code. After that, reservation numbers will be sent to users via text message. There is also a "guest book" on the reservation page on which users can see evaluations from those who have received test services. This arrangement can encourage more people to receive HIV test by word of mouth. In addition, during practical operation, in order to avoid the conflict between online and offline reservation, this team conducted a sectional management. For example, if 2pm-4pm will be used to serve those reserved online, then other periods will be used to serve those reserved via other methods, such as telephone reservation.

At present, "love test" reservation system is being debugged and expected to be in service in the near future.

Overall, experiences from Sihai Brothers and Guangtong website showed that by adjusting website contents rationally, strengthening interactive discussions and extending test services, we are able to transform pure MSM recreational dating websites into very valuable platforms to advocate for HIV prevention and intervention. Besides, websites' rich contends can attract more attentions from MSM, and previous website visitors are directly transformed to accessible target population, thus greatly expand the scale of target intervention population.

Chat rooms and instant messaging tools

Currently, most CBOs of China-Gates program have launched internet-based interventions. Online chatting tools (including chat rooms and instant messaging tools) are the most common used applications.

The anonymous feature of internet facilitated its popularity among MSM. Internet is regarded as a safe place by MSM because it provides them with a communication platform while blocking external pressures. Therefore, number of MSM using internet to socialize will continue increasing in the foreseeable future. (Rhodes, Bowie, & Hergenrather, 2003). Existing data indicate that many MSM find sexual partners through internet. Online chat tools are the most widely used. Thus, virtual spaces including chat rooms are very important areas need to be focused on when searching for target intervention population. (Liau et al, 2006; Ybarra, et al, 2007).

Among online chat tools, instant messaging is worth more attention.

Online chat has a variety of ways, and the forum is one of them. Users can post questions at their wills, but it takes time to wait for responses. The forum administrators do not have much control over contents posted. On the contrary, instant messaging is a timely communication tool, and users have better control over topics discussed. In addition, from a technical perspective, there are some technical barriers when establishing forums or public chat rooms, and maintenance costs are pretty high. In practice, more CBOs use instant messaging tools, especially QQ, to communicate with target population.

In China, the most widely used instant messaging tool is Tencent QQ. The latest data show that till September 30, 2011, there are up to 71.17 million active Tencent QQ users in mainland China. Tencent QQ has become the largest social networking tool in China, and the second largest in the world probably.

At present, almost all teams in China-Gates Program have their own QQ or QQ group. In fact, QQ and QQ group also play different roles.

QQ as one-to-one consulting platform The "empower" theory of internet has been introduced in previous paragraphs. Internet created stress-free space for users, especially for MSM. When communicating online, MSM will relax themselves and lower psychological precautions because there are no judgments from professional physicians. As a result, QQ becomes a favorable platform to consult.

A typical case is customer service QQ of Youth AIDS Prevention Services Center in Jing'an District, Shanghai ("AIDS Prevention Shanghai" for short). AIDS Prevention Shanghai joined China-Gates program in 2009

and began to try the multi-service strategy. They quickly discovered that MSM are increasingly dependent on internet. On March 2011, they established "MSM HIV prevention and treatment information platform", including customer service QQ.

AIDS Prevention Shanghai customer service QQ is an independent QQ account, named as "AIDS Prevention Shanghai" in reflect of its official property. Main function of Customer Service QQ is consultation, including basic AIDS knowledge, testing information, available help for PLHA and recreational activities. Although Customer Service QQ has just one account, many people have access to it to ensure instant answers to questions from QQ friends (i.e. service objects).

Three kinds of groups will become friends with AIDS Prevention Shanghai Customer Service QQ: 1. those who have received services from Shanghai Y-AIS before and are willing to keep in touch. AIDS Prevention Shanghai gives information summary of these people to Customer Service QQ and contact them on a regular basis. 2. those who contacted AIDS Prevention Shanghai through other approaches (AIDS Prevention Shanghai has more than 400 platforms such as websites, Taobao, 400 hotlines, etc.) and showed willingness to keep in touch, but not yet received any offline services. 3. those informed of AIDS Prevention Shanghai by word of mouth, have not shown any demand, but are willing to keep in touch in preparation for contingencies.

Because there is no limit to how many friends one QQ account can have, AIDS Prevention Shanghai Customer Service QQ can try its best to find and contact target population, including those who have received services previously and those who are likely to receive in the future. AIDS Prevention Shanghai can send all kinds of activities information, such as HIV test activities and VCT activities, to its friends via group messages. The data of July 2011show that 40% of those attended VCT came to receive their first time VCT after seen QQ group messages.

In addition, since QQ consulting is a kind of one-to-one service, the privacy can be best protected, and the depth of conversation is increased correspondingly. This is extremely beneficial to the establishment of long-term and stable relationship between intervention agencies and the target population. Furthermore, when consulting with professional agencies, consulters are usually making "friends" at the same time. If consultants can provide professional advices at that point and stress bad consequences of high-risk behaviors, it is possible to prevent those behaviors. People tend to remember suggestions given just before taking actions more firmly. (Rhodes, 2004).

Therefore, providing consultation service for target population through Customer Service QQ is an effective way of intervention. AIDS Prevention Shanghai QQ can serve 20 to 30 clients every day, with 1 to 2 peaks monthly that can serve as many as 100 clients per day.

QQ group for managing categorically Because QQ groups contain category management function, they are more frequently used than customer service QQ accounts.

Chongqing Lan Yu Group was established in 2006 and joined China-Gates Program in 2008. QQ group is an important platform for them to communicate with target population. They manage and participate in three kinds of QQ groups: 1) HIV counseling QQ group; 2) MSM QQ group; 3) PLHA QQ group.

The work group has different management and intervention approaches for different types of QQ group.

HIV counseling QQ group is established by the work group. Without access threshold, users can join this QQ group as long as they need to consult AIDS or STD related information. Work group has more than one customer service account arranged consecutively in Arabic numerals, such as Chongqing Lan Yu Customer Service 1, Chongqing Lan Yu Customer Service 2, etc. Customer Service QQs are members of this QQ group to answer questions from group members in time. In order to improve service quality,

work group provides unified pre-service trainings for each customer server and set standard answers to frequently asked questions. Ensuring the professionalism of each answer, standardized consultation process improves clients' trust on the whole work group and avoids dependence on a fixed customer server.

There are two kinds of MSM QQ group: the first one is established and administrated by staff of Chongqing Lan Yu work group; the second one is established by the volunteers of the work group. Volunteers are mostly members of College Student Public Service Alliance. Therefore, the second kind of QQ group involves lager scale of people, covering almost all colleges and universities in Chongqing.

Similarly, PLHA QQ group can also be divided into two categories. One is QQ group established by work group. To protect PLHA, it has strict access threshold. Group members are those have been served by the work group previously. In this group, infectors communicate with each other about medical treatment experiences and life difficulties. This approach is called "peer education". Work group staff will also provide technical suggestions and solutions to problems mentioned. Another kind of QQ group is more open and has no rigorous restrictions of group members. In this way, even non-infected persons can be added to this group, as long as they have the needs of counseling.

QQ group administrators and customer servers will release advance notices of HIV test events and knowledge on STD or AIDS from time to time. They also provide MSM culture related consulting and organize meetings and friends-making activities through QQ group.

QQ group category will affect group members' "stickiness" to the group. According to data provided by the Chongqing Lan Yu Work group, group member turnover rate is the lowest in PLHA QQ group. PLHA tend to have great need for the work group, both emotionally and physically, which leads to high "stickiness". Turnover rate is slightly higher in MSM QQ group. However, work group will regularly organize meetings and activities (such as BBQ, picnic, spa, talking, etc.) to enhance relationships between QQ group members. As a result, MSM QQ group members are relatively stable. The highest turnover rate, about 35%, exists in HIV counseling QQ group. Members of this group have the lowest "stickiness". On one hand, some people will exit HIV counseling QQ group after consultations are done; on the other hand, QQ group has maximum member limitations (generally 500). For this reason, work group staff will regularly kick out long-term quilt users to make sure that people have consulting needs can be added into the HIV counseling QQ group.

Based on the analysis provided above, compared with QQ Service Account, QQ group is a more suitable way to manage members categorically and enhance relationship between work group and service target. However, QQ service account has comparative advantages in consultation.

From the experiences of the CBOs who are engaged in China-Gates Program we can conclude that online chat tools can not only expand the target population to achieve the goal of mobilization and monitoring, but also enhance relationship with the service target.

Microblog

The power of microblog The description of typical communication pattern in Web2.0 era is "user generated contents" (UGC) or "user created contents" (UCC). This form of communication pattern is also known as humanode spread: users generate information spontaneously by creating or processing contents already exist. Users can be commented and comment others, followed and follow others. Information network has extremely powerful vitality, relying on strong information ties and interpersonal links.

Both blog and forum belong to humanode spread, but if taking the speed of information generation, flow and dissemination as an evaluation criterion, microblog has obvious advantages: less words (limited to 140 words, easy to publish and read), more flexible presentation ways (letters, images, videos, audios, links, etc.), more diverse publishing platforms (PC, mobile

phones, iTouch, iPad, etc.) smaller information gap and stable information flow (currently many gateway websites have functions such as "share to microblog" and "binding"). Convenience brought by these advantages help to improve the vitality, creativity and interaction between users, making microblog a representative of the latest development direction of human-ode spread.

First real success of microblog is Twitter, brought out in 2006. The earliest successful microblog platform in China is Sina microblog, brought out on August 28, 2009. Then internet operators with large amounts of users such as Netease, Sohu and Tencent all started microblog busniess. According to CNNIC data, till end of 2010 China has 63.11 million microblog users, and this figure increased to 249 million on December 2011.Microblog usage rate among netizens increased from 13.8% in 2010 to 48.7% in 2011. Organically integrating three most social elements including information, users and relationship, microblog rapidly become an important platform for Internet users to acquire information and communicate.

Microblog's attractiveness to MSM Microblog's major attractiveness to MSM is the non-rival and openness of information. Microblog is a kind of media with characteristics called "anytime, anywhere, anything you like". Users can "follow" anyone to make he/she a fixed source of information. Through this process, microblog users can choose preferred information to build their own information network, forming a so-called "circle" culture. The intersections between circles can expand their ranges continuously. The establishment of microblog circle can be based on not only real-life friends relationship but also strangers with similar interests. Characteristics of "weakly associated" and "circle" are very meaningful for emotional appeals of MSM.

The diversity of dissemination roles is also very appealing to MSM. Microblog users are anonymous, which meet the privacy needs of MSM. On the other hand, the ability to access information on microblog is not linked with the release of information. In other words, users with different personalities and from different classes can all obtain information that is valuable to them, no matter they are information providers or microblog celebrities.

The third attractive feature is integration. As an open platform, microblog has the possibility of unlimited extension. Feathers such as real-time location publishing, classified collection, exclusive micro group, content search, vote, and recommend all help to extend information. As more and more humanized services applied to microblog platform, its integration power will continue increasing. In the beginning, microblog mainly meets the emotional needs of social, self-realization and self-respect, but as the "circle" becoming bigger like a "snowball", microblog can do much more than that. For MSM, microblog endows them unprecedented abilities of obtaining and using information. As a result, mobilization can be done in minimum cost, with no restrictions on time and space.

"Micro-power" cohesion, on one hand contributes to the communication of MSM, helping them to acquire recognition and support; on the other hand, has the potential for more social concern, changing social knowledge and attitude of the group. The beginning of this process will include a few active individuals in the field of MSM, then professional organizations will join in. Expanding from center to edge, microblog will eventually develop into the platform integrating individuals and information in the field of HIV intervention and prevention.

Current situation of msm individuals and CBOs using microblog Sina microblog is used as a sample here to analyze. Accounts clearly related to MSM are divided into four categories: First, MSM's personal microblogs; Second, care for MSM/HIV prevention NGOs' official microblogs; Third, MSM information microblogs for same regions or groups (e.g. students); Fourth, HIV prevention volunteers' or experts' microblogs.

Gay microblog circle is clearly isolated. Individual users in their microblogs mostly post contents related to their own gay life in forms of photos, pictures, videos, etc. They do not hide their sexual orientation (e.g. an ac-

tive user "Guo Sunny" with 6820 followers), and even their identities as HIV carriers (e.g. "HIVsmile" with 1370 followers). Meanwhile, MSM users usually follow microblogs publishing homosexual information or other male users who could cause sexual imaginatons (e.g, male model, fitness enthusiasts, etc.). MSM users rarely follow those popular microblogs in usual sense, such as stars and famous intellectuals, neither do they follow social hot topics. This "gap" phenomenon makes the MSM circle closely united--once a member has a new follower, the new follower's connections will quickly extend to the whole microblog gay circle, making it easier for HIV prevention CBOs to find target population.

In the China-Gates Program, some CBOs have already started to try to advocate HIV prevention via microblog, such as Shanghai youth HIV prevention ("AIDS Prevention Shanghai" with 17,102 followers and 2,083 microblogs), Chongqing Lanyu work group ("Chongqing Lanyu" with 1159 followers and 390 microblogs), Sihai Brothers ("Qingdao Sihai" with 688 followers and 1504 microblogs) and Lingnan Buddies ("Lingnan Buddies" with 587 followers and 93 microblogs).

At present, these CBOs put creating good images as a major task, aiming at informing more people about their work. First, the descriptions of the microblog accounts usually contain basic group information such as address, official website, QQ account number, hotlines, etc. Second, contents posted are focused on group activity announcements, HIV prevention and test information and frequently asked questions. For FAQs on health and test, the group will communicate in public. For private health problems, the group will hold one-on-one communication. In order to make the microblog more active and attractive, some CBOs will also post MSM news, fabulous pictures and entertainment contents.

However, no matter subjectively or objectively, microblog has not yet become the main communication platform for HIV prevention CBOs and MSM. Microblog is mainly carrying publicity and image shaping function, with huge potential to be discovered.

In fact, microblogs can be an important way of finding out target intervention population. For example, on March 15, a user named "- spirits –" posted a micro-blog saying that his friend Xiaohai had AIDS, "continue having a low fever, accompanied by a severe tinnitus". Another micro-blogger named "F anran" saw this content, forwarded and replied to "- spirits –" with necessary advice: "Tell him to go to CDC to get HIV confirmatory test should not stay up all night or keep a pet anymore! Government provides free drugs! AIDS has been classified as a chronic disease. The average life span in China is 75 years. Patients with Early diagnosis and treatment only live five months less than usual!" He also expressed a willingness to help him. He said: "If you need help, please private message me, I am a volunteer from Tianjin dark blue."

Practices have proved that with similar interactions mentioned above, HIV prevention group can find more people who need help. In this microblogging way, a group microblog account is not required. Group members, volunteers and even individual microblog users are all able to find people. All members of Chongqing Lan Yu Working Group have their own microblog accounts, so do many members of China-Gates Program. If all the individuals' powers are unified, combined with training on service awareness, microblog will make a greater difference.

Other explorations of internet-based intervention services

Use the online shopping platform to distribute condoms Using condoms during sex is an important way to prevent HIV. However, only advocating cannot change behaviors effectively, related services such as providing free condoms are also necessary.

AIDS Prevention Shanghai once provided free condoms in entertainment places for MSM. During the process, group members noticed that some people could not come to the site due to personal privacy or long distance, which greatly limited the size of population intervened. Therefore, AIDS Prevention Shanghai opened an online store on Taobao platform. One can

receive a parcel contains 14 condoms, 12 bottles of water-based lubricant and 2 bottles of oil-based lubricants by paying only 3-6 RMB shipping fee (depending on the distance).

The online-condom store effectively helped AIDS Prevention Shanghai enlarge the scope of the target service population. Data showed that from April to August, 2011, there were 217 people accepted the condoms provided by AIDS Prevention Shanghai. For 98% of them, it was their first time to receive agency services (China CDC NCAIDS project Office, 2011). These people spread like ions in society in the past, but now these scattered "ions" built connections with the group through Taobao platform and established trust during communication. They began to participate in off-line activities gradually and some even accepted the test service.

Easy to inform- platform to inform sexual partners anonymously "Test early, detect early, treat early" is very important for HIV prevention. By testing early, one can seek for professional treatments to prolong life once been detected sickness. Although HIV is spreading quickly among MSM, some of them still lack awareness of the risk of HIV infection, which leads to weak emphasize on detection. However, once they realize that they have high risk of exposure since their sexual partners are HIV positive, the situation may be different. According to an interview with seven HIV positive MSM, all of them hope to get reminder from their sexual partners (Fei Zhong, Huifang Xu, Weibin Cheng, Gang Meng, Fang Wen and Qi Liu, 2012). However, another research showed that although 50%-70% of PLHA are willing to inform their spouses, less than 10% will inform regular/ non-regular sexual partners (Fei Zhong, Huifang Xu, Weibin Cheng, Gang Meng, Fang Wen and Qi Liu, 2012). In China, based on the experiences of community workers, most MSM have multiple sexual partners and unstable relationships, making notification very difficult.

Using internet to inform anonymously helps to reduce difficulties of notification. According to a research, 80% of MSM hope dating websites can have anonymous notification system so that which they can inform their sexual partners their AIDS or STD situation. By enabling them to choose whether to include personal information or not, face-to-face notification can minimize the embarrassment. (Rotheram-Borus, Swendeman, & Chovnick, 2009).

Easy to inform, an internet and mobile-based anonymous notification platform developed by Guangzhou CDC and Guangzhou Xiaoqi Culture Communication Co., Ltd, satisfies the demand mentioned above.

Easy to inform (http://www.gztellthem.org) allows PLHA or STD patients to inform their sexual partners anonymously with simple operation. After entering the homepage of "Easy to inform", one can begin to use the notification function by simply clicking "leave a message anonymously". During the process, informers need to provide gender and type of diseases diagnosed, and can leave a private message optionally; then, they need to choose a way to inform—text message or e-mail, and provide contact information of their sexual partners. The system will send messages to their partners, reminding them log in to the website to check their health-related messages using the verification code included in text message or e-mail. The system message will not include any identifiable information such as name and contact information about the informers.

Logging in to the "Easy to inform" website, notification receivers can check personal messages, receiving practical health knowledge (including frequently asked questions about AIDS and other sexual transmitted diseases) and test information. Besides, as a one-stop service website, "Easy to Inform" has established a board of "extracting test report", so that users can check their reports online.

Compared to the notification based on the true identity, anonymous notification lower the threshold of informing between sexual partners, avoiding the embarrassment of face-to-face notification and partly removing the psychological barriers, promoting the notification between sexual partners ultimately.

Previous researches show that, from Dec 1, 2009 to Dec 31, 2010, 165 people have used the sexual partner information service on Easy to Inform. They sent 279 notification messages in total and 1.7 messages per person on average. Among those messages, 237 (84.9%) were about HIV infection, 99 (35.5%) were about STD, and 57 (20.4%) were about both HIV and STD. 23.7% of the receivers logged in to Easy to Inform TM to check their messages. This rate is similar to the rate of analogous informing systems in other countries (Fei Zhong, Huifang Xu, Weibin Cheng, Gang Meng, Fang Wen and Qi Liu, 2012).

Though without the newest statistical data, we can still predict that the use rate of Easy to Inform will increase a lot in the foreseeable future. For example, informing service could only be realized by text messages in the earlier version, which limited the user group. New version of 2012 added email informing service which expanded the scope of usage and actually realize "one can inform as long as he/she have access to the internet".

In the present, the promotion of "Easy to inform" is mainly by "word-of-mouth". How to integrate the route of transmission, increase the influence of "Easy to inform" will be the next challenges faced by the system.

Network applications aiming at improving "self-intervention" The Lingnan MSM Group has carried out several useful trials in internet MSM intervention. Other than websites, QQ, Weibo and Easy to inform, the group has also designed internet applications aiming at "self-intervention" of target population.

One application is an interactive game "Crossroad of Life". The game simulates real life of a MSM, and set multiple nodes in the story on which players need to choose the plot. For example, players need to choose whether to use condom or not when the MSM is having sex with his boyfriend and whether to have a HIV test after the sex. Different choices lead to different endings. Players will face their own endings based on their choices in the end of the game.

Although currently there are no data illustrate the direct influence on real behavior, target population can visually see the serious consequences from wrong behaviors through simulating real life in this game, which helps them to adopt correct behaviors in reality.

Another internet application called "Rainbow healthy Life" is also developed by the Lingnan MSM Group. This application helps target intervention population to self-assess the infection risk online, and offers recommendation of changing behaviors. Developers noticed that most active MSM in Guangdong Province have accepted propaganda of HIV prevention, the rate of awareness about basic AIDS knowledge is as high as 90%. However, situations such as high incidence of high-risk behavior, low rate of condom use and low rate of VCT still exist. Main reason is the inaccurate awareness of the true risk of their own HIV infection, thus leading to inadequate motivations to change behaviors.

In order to strengthen the motivation of detection and allow target population to have a direct perception of their HIV infection risk, Guangdong STD and AIDS Prevention Association and Guangtong Website developed "Rainbow healthy life" jointly, which is the first self-assessment system of infection risk for MSM group in China. Based on the suggestions from experts and community workers, developers listed different factors for infection and allocated related weights. When someone starts to self-assess, the system will allocate data by questionnaire and weight them, then generate HIV infection risk. Most importantly, the system will offer "Electronic prescriptions" to change personal behavior according the risk level, including 1) comprehensive assessment of personal infection risk; 2) rank of risky behaviors and their possible consequences; 3) suggestions on changing behaviors. Therefore, when users get their self-assessment results, they will have accurate awareness of their HIV infection risk and change behaviors accordingly.

Moreover, the system has been designed to take feasibility into account, thus it will generate a verification code after each assessment to facilitate

follow-up after testing done by VCT clinic.

Currently, the system is under test and specific effects have not shown yet. But the idea of encouraging "self-intervention" is still worth learning. "Self-intervention" can not only stimulate the motivation of detection to the largest extent, but also save lots of labor cost due to its internet-based nature.

Currently, these internet applications can only be found in Guangtong website, which limits the range of target intervene population. Developers can consider using other methods such as microblog to reach out to more people.

Conclusion

According to experiences of internet intervention from China-Gates Program, internet intervention can be divided into two categories roughly: the first one is the extension of conventional off-line intervention services, including using websites to propagate AIDS knowledge, providing consulting services through online chat, using microblog to announce group activities and "look for people" and using Taobao platform to enlarge the scope of free condom provision; the second one is the use of new technology platform to promote innovated interventions, including online test-reservation, "Easy to inform" AIDS and STD notification system, "Rainbow healthy Life" online self-assessment of infection risk for MSM, "Crossroad of Life" interactive real-life simulating game, etc.. These applications changed conventional intervention models and increased target population's initiative, changing behaviors finally.

As we can see, internet intervention is the expansion and useful complement of conventional intervention services. The use of new internet media can help expand channels and scale of HIV prevention. The development of new internet technology can help strengthen the effect of mobilization and change target population's behaviors.

However, internet intervention cannot replace conventional intervention. Especially if we want to better maintain close contacts with target population, we should not use internet intervention only.

The CBOs usually use internet as the first step of intervention due to its low cost and high efficiency. However, internet technology is more like a tool. In a complete intervention process, it is very important to expand the service from online to offline, from virtual space to practical work. In another word, the core of intervention is the service provided by the group.

AIDS Prevention Shanghai is now implementing the "informationized platform for MSM HIV prevention and control". We can see from the project's strategy graph that the main purpose of interventions such as QQ, hotlines and text messages, is to increase the scale of target population, and to establish a database of them. Once the contacts with the target population are built, the work should be transformed from motivating target audience to providing test services. On one hand, they make sure the high quality of test services. On the other hand, target audience will be referred to other services based on their different needs. To meet the requirements of offline services, the group needs to cooperate closely with local CDC and medical institutions, and this is not able to be accomplished by online intervention alone.

There are more limitations about online intervention. Not all areas are suitable for expanding to online services, such as care for PLHA. There is a lack of outstanding cases in this field so far. The major reason is the conflict between the needs of this kind of work and the features of online services. When trying to provide care for PLHA, the CBOs need to strictly manage the information about the identities of the infected, while at the same time protect their privacy. Although the internet allows the users to communicate anonymously, but as a public tool, this risk of exposing privacy will increase if PLHA communicate by using real identities. As a result, not all HIV prevention services are suitable to be put online.

To draw a conclusion, in HIV prevention and treatment, internet inter-vention plays the biggest role in mobilization of test and advocacy for behavior change. It can not only effectively help enlarge the scope of target population, but also urge them to take useful actions, such as to reduce high-risk behaviors, to accept HIV test, etc... The experiences of internet intervention from China-Gates Program are worth wildly adopted and served as a base for innovation. Only through reasonable use of internet resources and tools, can we achieve better results in HIV prevention and control.

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Using Social Entrepreneurship Models to Expand Sexual Health Service Delivery In Asia: A Review of Progress and Challenges

MSM Sexual Health Epidemic

Over the last decade, sexually transmitted diseases (STDs) incidence rates have been on the rise across the world and especially in Asia. The World Health Organization estimates that there are more than 150 million new curable sexually transmitted infections in South and Southeast Asia each year [1]. In China, syphilis and gonorrhea incidence rates have increased at an average annual rate of 52.7% and 11.4% respectively from 1990 to 1998 [2]. Men who have sex with men (MSM) bear a disproportionate burden of HIV/STD, and recent evidence suggests that they also face substantially higher risks for HIV and syphilis infection in many parts of Asia [3]. MSM have also been reported to be 19 times more likely to be infected with HIV compared to the general population [4]. A reason explaining this is that syphilis increases the risk of HIV acquisition [5] and transmission [6,7], and MSM are at increased risk for both STDs. Hence, MSM co-infected with syphilis and HIV have some of the highest HIV transmission probabilities. A large body of literature demonstrates that MSM are key drivers of STD/HIV spread, playing an important role in onward disease transmission [8]. As a result, UNAIDS/World Health Organization has issued HIV prevention and treatment guidelines focused on MSM [9]. A 2011 UN Resolution also identified expanding MSM sexual health services as a strategic HIV priority, highlighting the need for sustainable solutions.

Despite recognition of this the pervasive HIV/STD epidemics among MSM, most national HIV/STD prevention and sexual health programs have failed to effectively reach and link them to clinical services. Some estimates suggest that over 90% of MSM globally lack access to the most basic sexual health services [10], fuelling the persistence and in many cases rapid expansion of HIV and syphilis epidemics. Even when services are available, MSM face stigmatization and do not trust health care providers. Culturally sensitive, financially sustainable, and acceptable approaches for expanding access to quality HIV/STD prevention, treatment and care services for MSM are needed now more than ever and must be prioritized.

Conventional Health Service System

Currently, sexual health services for most-at-risk-populations are guided by vertically organized public health and medical systems across Asia. This conventional method of centralized service delivery relies on centralized public clinic-based service delivery, uni-sectoral implementation and vertically organized support ranging from the national and state to local public health structures. Engagement with horizontal partners such as community based organizations (CBOs) is minimal. The conventional health service systems organize short term projects averaging from six to twelve months and are financed by public funds. Despite the success of the conventional health service system in handling other health problems and disease outbreaks, this system has not been successful in curbing the spread of syphilis/HIV and reaching out to the MSM who are at risk. The failure of the conventional syphilis/HIV testing delivery systems to adequately reach MSM has been well described in both qualitative [11] and quantitative [12] systematic reviews. The Global HIV Prevention Working Group estimates that only 9% MSM globally have access to a basic package of sexual health services [13]. Sub-optimal access to MSM sexual health service is observed in a range of Asian nations [14], including Thailand [15], Vietnam [16], and India [17,18] A 2011 report found that approximately 2% of total HIV prevention spending was targeted to MSM in 42 low and middle income countries [19]. Several factors can explain the why the conventional health service system has not been effective (Text Box 1).

First, syphilis and HIV service implementation administered by local government agencies follows the standard public health approach and fail to engage the most-at-risk-populations [3,14] especially MSM. Homosexuality and related high-risk behaviors remain highly stigmatized in many regions of the world especially in Asia, and this has created a roadblock for widespread implantation. In some instances, conventional health care systems do administer HIV/syphilis programs targeted at MSM. India's Ministry of Health administers such as programmes through a division called National AIDS Control Organization (NACO). However, these conventional MSM HIV/syphilis programs are focused on men who self-identify as gay, leaving out the potentially large portion of MSM who do not identify as gay but have undiagnosed syphilis or HIV infection. Hence this excludes a large portion of MSM from accessing high-quality syphilis/HIV services. In addition, opt-out testing policies in clinical settings have been thwarted by high rates of refusal among some MSM subgroups as well as suboptimal clinic-seeking behaviors [12]. Together, many conventional MSM HIV/syphilis programs have not achieved their targets.

Secondly, the global economic crisis has forced governments to cut back on many public health services. International HIV assistance declined from US$ 8.7 billion in 2009 to US$ 7.6 billion in 2010 [20]. The Global Fund, one of the major sources of support for community-based HIV organizations, recently announced there will be no new projects until 2014. These constraints are particularly difficult in the face of an increasing demand for effective, sustainable, and culturally sensitive sexual health services targeting MSM, and come at a time when

the pipeline of behavioral and biomedical prevention strategies is most promising.

Social Entrepreneurship (SE) Approach

Urgent responses are needed to address the pervasive and inadequate engagement, testing, and linkage to care among MSM. Recognizing the failure of the conventional health services approach, we propose a social entrepreneurship (SE) approach in which local multi-sectoral networks enable decentralized and destigmatized community-driven sexual health services [21]. SE provides a powerful systems approach to identify new implementation models and strategies by using entrepreneurial principles (including social marketing, micro-enterprise, conditional cash transfers, and public-private partnerships) to promote the sustainable and innovative use of human, fiscal, and technological resources for social benefit [21]. The field of SE formed in the 1980s and was later galvanized by Bill Drayton's organization, Ashoka: Innovators for the Public [22]. Social entrepreneurship has been successfully applied to poverty alleviation, best described in the context of Bangladesh's Grameen Bank [23]. This microfinance organization provided small loans to the poor, providing a scalable and sustainable mechanism for poverty alleviation. In Cambodia, 1001 Fontaines is another successful model that has provided affordable drinking water to over fifty thousand people by providing sand filtration and solar-powered water purification technologies to village entrepreneurs, and encouraging them to sell and distribute the water.

Empowering community-based organizations

Applying this approach to sexual health service delivery has the potential to draw greater resources and accountability to the CBOs that have the trust, access, and relationships with MSM necessary to change sexual health services. The SE approach brings together local horizontal partners (CBO leaders, medical doctors, entrepreneurs, legal/regulatory experts, communication specialists) who are necessary to fashion a sustained sexual health program. The approach aims to decentralize delivery within the community via multi-sectoral networks and horizontal collaborations (e.g., between community-based organization (CBO), medicine, enterprise, legal, and communication partners). With its focus on community responsiveness, innovative service delivery models, and ensuring financial sustainability for service provision, the SE approach could significantly alter the landscape of sexual health service delivery for MSM in settings where service access, uptake, and quality are severely limited.

Building networks

A key in the SE approach involves the creation of horizontal multi-sectoral networks between traditional and non-traditional stakeholders, enabling access to a wider range of resources. A broad array of expertise and technical assistance are essential for building comprehensive local syphilis/HIV services for MSM. These may include, but are not limited to, partnerships with local businesses, healthcare providers, laboratories, and social care services. For example, by leveraging the power of professional marketing and entrepreneurial partnerships, social marketing tools (e.g. targeted outreach, mobilization, Internet based marketing, health campaigns) can help identify subgroups of at-risk MSM and design tailored messages to improve HIV/syphilis test uptake, diagnosis, and linkage to care. Bangkok Rainbow is a thai MSM NGO that has partnered with Camfrog, a popular video chat platform, to provide HIV education to the many young Thai MSM who go online to meet people. Such approaches have also been widely used for tobacco cessation through music sites and social media, but rarely for MSM sexual health promotion. In addition, the global network of specialists within these collaborations will provide continuous updates and support to the local networks regarding the clinical, technological and financial aspects of service provision. Providing greater agency and resources to CBOs will also generate a clearer voice for MSM who are most affected by syphilis and HIV infection, and also create MSM-friendly health services. A SE approach to syphilis/HIV testing is not a simple CBO "capacity building" exercise, but rather strategically link CBOs to a larger set of technological and entrepreneurial expertise that will allow CBOs to have both greater responsibility, more robust internal governance structures, and greater access to technological advances given their current access to at-risk MSM.

Ensuring financial sustainability

Another advantage of the SE approach is its long term financial sustainability. MSM CBOs in low and middle income nations have limited budgets that depend on transient external programs and foundation support. These uncertain financial structures limit the scope of their partnerships and the breadth of their service delivery programs. Expanding the financial sustainability of MSM CBOs will allow them to provide more comprehensive sexual health services. Both micro-enterprise and conditional cash transfers are SE approaches that could be used to promote uptake and monitoring of syphilis/HIV. Micro-enterprise uses seed money to encourage small businesses that could be evaluated both in terms of health and entrepreneurship outcomes. Conditional cash transfers incentivize safe sex by providing small amounts of cash for negative STD/HIV results among high risk individuals. These strategies require seed funds, but in the mid to long term are cost-neutral or cost saving. In China, hybrid CBO-clinic sites have successfully piloted revenue-generating sexual health projects [21]. These small scale pilots have sold condoms, online advertisements, and clinical services to at risk populations. Building local networks will also serve to give MSM CBOs greater agency as they build an acceptable and sustainable business model. The development of sound financial and governance systems is also ensured through the SE approach because CBOs will be accountable to their counterparts.

HIV and syphilis testing in non-traditional venues

Next, the SE approach provides the opportunity to introduce novel and low-cost testing technologies faster and on a larger scale. Simple, rapid, inexpensive, point-of-care HIV and syphilis tests that do not require reagents or trained personnel are now commercially available [24]. While traditional public health programs have focused on placing these STD tests in clinics, a growing body of literature shows how these tests can be accurately and safely performed in non-clinical settings. Moving point-of-care diagnostics away from clinics and into non-governmental organizations, sex venues, and other informal settings will require guidance and input from a diverse group of partners (MSM community, medicine, enterprise, legal, and communication advisors) outside of the traditional service delivery system. In addition to point-of-care diagnostics, there is now a robust toolkit of behavioral and biomedical interventions to prevent HIV [25], including pre-exposure prophylaxis and potentially anti-retroviral therapy as prevention. Understanding how best to procure, distribute, utilize and evaluate these new technologies within communities where they are needed most, will be key elements for transforming the health and well-being of MSM, and can be achieved within the SE approach.

Balancing benefits and risks

Applying the SE approach to enhance sexual health service delivery for MSM in middle-income countries represents a major, potentially transformative innovation. It therefore incurs several potential risks that can be pro-actively identified and mitigated. Political risks include regulatory problems vis-a-vis procurement of point-of-care diagnostic tests and their use in non-clinical settings. There might also be problems with local stakeholders and local healthcare officials. Incorporation of legal and regulatory expertise into local SE networks early on would help mitigate this risk. Financially, some potential risks are that the SE sexual health services program might lead to increased competition among CBOs and antagonize rival businesses with different business models, leading to potential business failures and tax confusion. Appropriate auditing practices and monitoring of services is important to ensure that SESH is sustainable. Another limitation is that SESH might interfere and jeopardize existing effective MSM programs. Partnerships and working relationships with existing program

managers and local political leadership is crucial in engaging MSM effectively.

Conclusion

In conclusion, persistent and expanding HIV/STD epidemics among MSM in Asia demand urgent action. The conventional approach to promote sexual health focuses on centralized clinic-based service delivery, unisectoral implementation and vertically organized support. Unfortunately these approaches have failed to engage a large portion of most-at-risk-populations, especially MSM who have a higher HIV/STD incidence compared to the general population [4], who face stigma and discrimination, and lack prioritization within national HIV/STD control programs. With increasing globalization, migration, and Internet connectivity, MSM communities are increasingly visible, vocal and engaged, even when not adequately represented in national HIV prevention or sexual health service programs. Many MSM CBO directors have assumed leadership roles in their national and global HIV responses and are increasingly the main points of contact for other vulnerable subpopulations, yet their organizations often lack the financial and organizational expertise to provide comprehensive MSM sexual health services. Incorporating social entrepreneurship approaches to enhance current CBO-led activities targeting MSM has the potential to radically transform and accelerate the organization and implementation of HIV and syphilis control services for MSM. This bottom-up approach empowers communities, strengthens CBO infrastructure, builds local partnerships, creates financially sustainable models, and accelerates access to innovative diagnostic technologies. It has the significance, innovation and potential to be a game changer in the MSM sexual health field.

Text Box 1

Tipping Point for Social Entrepreneurship Approaches.
1) Economic Downturn and Need for Sustainability
2) Increasing Recognition of the Contribution of CBOs in Sexual Health
3) Availability of Simple Rapid Tests that can be Used Outside Clinical Settings

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