



Enhanced **M**easurement-**B**ased Care Effectiveness for **D**epression

A Canada-China Implementation Project



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Study Aims

- Identify barriers and facilitators to measurement-based care (MBC) in China
- Adapt a Canadian enhanced MBC (eMBC) program for the Chinese health care setting
- Compare the effectiveness of eMBC vs. standard MBC for physician implementation and clinical outcomes
- Build knowledge and capacity for scale up in China and beyond



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Phase 1 (1.5 years, 2018-2019)

- Set up a Chinese Project Action Group
- Conduct a comprehensive Situational Analysis
- Identify barriers and enablers to eMBC at patient, physician, clinic and system levels
- Create and pilot the eMBC tools
- Create and pilot the eMBC implementation program





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Past Year Milestones:

- **October 2019**

Finished a comprehensive Situational Analysis of the implementation environment for eMBC in Shanghai

- Online clinician survey (n=116)
- Online patient survey (n=309)
- In-person clinician interview (n=30)
- Patient focus group (6 groups, 19 participants in total)
- Secondary documents review (PRIME SA form, shortened SA forms for each mental health centre, workflow reports)

- **December 2019**

Developed an implementation tool using the Behaviour Change Wheel framework based on SA results. (comprehensive understanding of barriers and enablers to eMBC implementation from the perspective of patients, providers and the broader mental health system)

- **January – present, 2020**

Adapting the eMBC program for WeChat





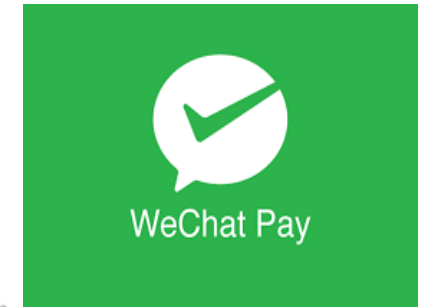
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Wechat Mini-Programs:

- **Wechat**
 - ❖ a Chinese multi-purpose messaging, social media, mobile payment app
 - ❖ with over 1 billion monthly active users
 - ❖ described as “China’s app for everything”
- **Wechat Mini Program**
 - ❖ programs used within Wechat
 - ❖ no need to download
 - ❖ easier to use and share with others

Create two WeChat Mini Programs for EMBED:

- **Outcome Measures Mini Program**
- **eMBC Mini Program (mood tracking and Feeling Better)**





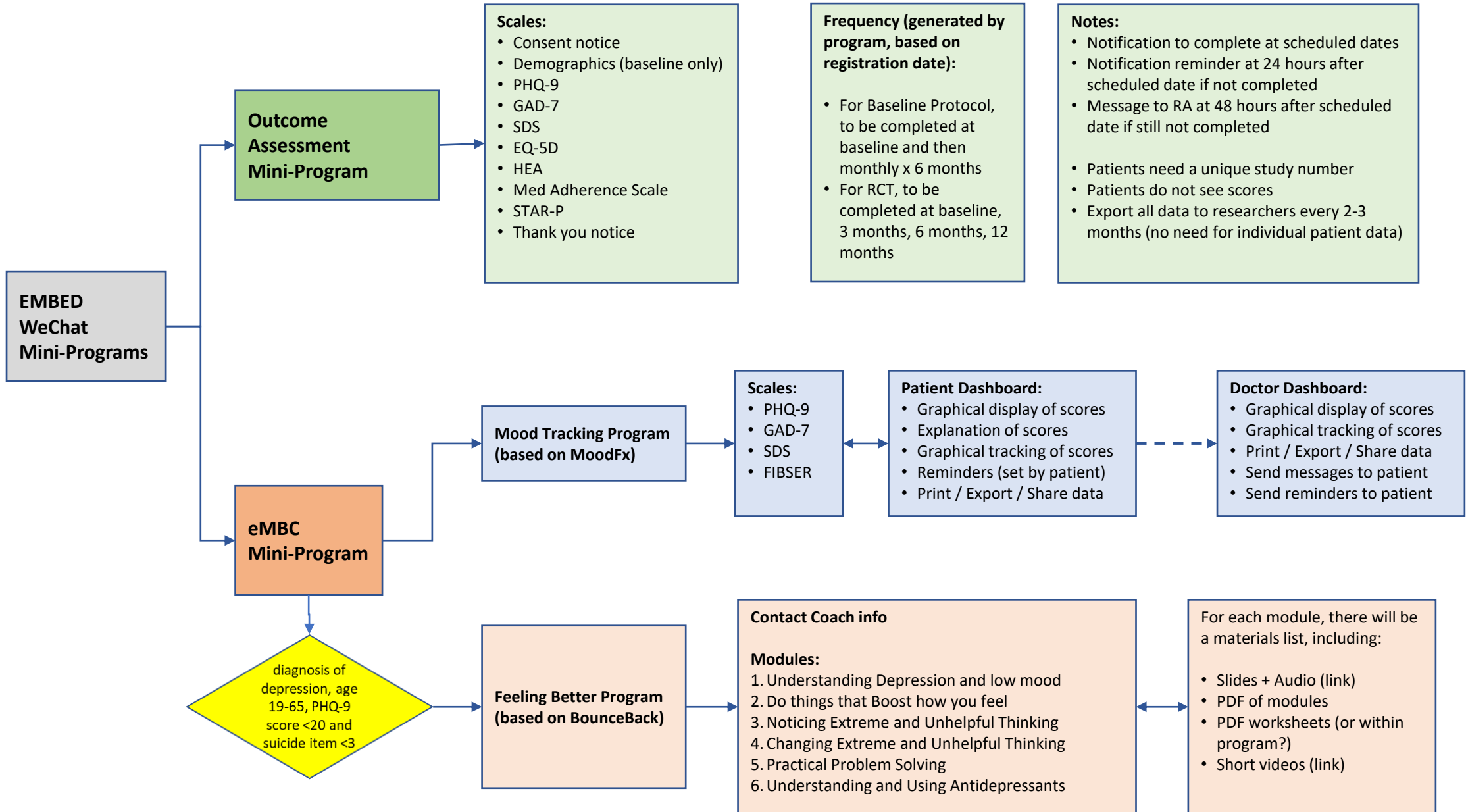
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Feeling Better Program (based on Bounce Back)

- Developed by Dr. Chris Williams, Professor at University of Glasgow, UK
- Adopted by the Canadian Mental Health Association (CMHA) British Columbia Division
- Evidence-based, low-cost, low-intensity, based on CBT
- Lay-coached, self-management
 - ❖ Self-management materials: slides with audios, workbooks, worksheets, videos
 - ❖ Video/phone coaching service
- Translation and adaptation for WeChat







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Next Steps:

- **Baseline Study:**
 - Use Outcome Measures mini-program
 - 300 participants (100 from each hospital)
 - Measures at baseline, 3 months, and 6 months
- **CME and MBC Training**
- **Bounce Back Training**
- **Cluster-randomized RCT**





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Phase 2 (3.5 years, 2021 - 2023)

- Conduct a cluster-randomized trial (RCT)
- Use an adaptive, hybrid implementation/effectiveness design
- Use mixed-methods for outcomes
- Outcomes at 0, 3, 6 and 12 months
- Qualitative outcomes with patients and clinicians





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Published Papers:

- Murphy JK, Michalak EE, Colquhoun H, Woo C, Ng CH, Parikh SV, Culpepper L, Dewa CS, Greenshaw AJ, He Y, Kennedy SH, Li XM, Liu T, Soares CN, Wang Z, Xu Y, Chen J, Lam RW. [Methodological approaches to situational analysis in global mental health: a scoping review. Glob Ment Health \(Camb\). 2019; 6:e11.](#)
- Wang Z, Ma X, Xiao C. Standardized treatment strategy for depressive disorder. In Fang Y (ed). [Depressive Disorders: Mechanisms, Measurement and Management.](#) Adv Exp Med Biol 2019; 1180:193-199.
- Chen J, Hu S. Individualized treatment strategy for depressive disorder. In Fang Y (ed). [Depressive Disorders: Mechanisms, Measurement and Management.](#) Adv Exp Med Biol 2019; 1180:219-232.
- Wang Z, Niu Z, Yang L, Cui L. Internet-based management for depressive disorder. In Fang Y (ed). [Depressive Disorders: Mechanisms, Measurement and Management.](#) Adv Exp Med Biol 2019; 1180:267-276.
- Yang XR, Chen J, Fang YR. [eMBC in Depression Treatment.](#) Journal of psychiatry, 2019, Vol 31, No. 3
- Ng C, Li V, Gratzler D, Lam RW. Global mental health and technology. In: Eyre H, Lavretsky H, Reynolds III C, Berk M (eds): Convergence Mental Health: A Roadmap Towards Transdisciplinary Innovation and Entrepreneurship. Oxford: Oxford University Press, 2020, in press.
- Yang XR, Murphy JK, Michalak EE, Yang T, Wang X, Liu J, Lu Y, Lin X, Su YS, Huang J, Wang ZW, Zhang P, Liu TL, Chen J, Lam RW, Fang Y. A survey of acceptability of e-mental health in outpatients with depression. Journal of Psychiatry/Jingshen Jixue, submitted.
- Yang T, Chen J, Lam RW, Fang Y, Xu Y. Mental health service challenges during the COVID-19 pandemic: Experience and best practices from China. Can J Psychiatry, submitted.

Papers in Progress:

- Hong RN, Murphy JK, Michalak EE, Yang T, Wang Z, Yatham LN, Lam RW, Chen J. Implementing measurement-based care for depression in clinical settings: Practical solutions for clinicians. Neuropsychiatric Disease and Treatment, in preparation.
- Murphy JK, Michalak EE, Colquhoun H, Burton H, He Y, Huang J, Huang L, Liu J, Liu TL, Su Y, Wang X, Wang Z, Xu Y, Yang L, Yang T, Yang X, Zhang P, Culpepper L, Dewa CS, Greenshaw AJ, Kennedy SH, Li XM, Ng CH, Parikh SV, Soares CN, Lam RW, Chen J. Barriers and facilitators to implementing measurement-based care in Shanghai: A situational analysis.
- Huang L, Yang T, Liu J, Murphy JK, Michalak EE, Wang Z, Yatham LN, Lam RW, Chen J. Mobile health applications for depression in China: A systematic review.
- Zhu M, Yang XR, Wang X, Hong RN, Liu J, Murphy JK, Michalak EE, Wang Z, Chen J, Lam RW. The efficacy of measurement-based care for depression: a meta-analysis of randomized controlled trials.
- Cheung B, Wang X, Liu J, Murphy JK, Michalak EE, Chen J, Lam RW. A patient and psychiatrist online survey of technology for measurement-based care for depression: China-Canada differences.

Presentations and Webinars:

- Jill K Murphy. COVID-19 and mental health in the Asia Pacific: Challenges, risks and opportunities. Association of Pacific Rim Universities (APRU) Global Mental Health Webinar Series. July, 2020.
- Raymond W Lam. Psychiatric care in a post-COVID world: Focus on virtual and digital mental health. Webinar for Middle East psychiatrists. June, 2020
- Raymond W Lam. Measurement-based care in China. Annual Congress of the Chinese Society of Psychiatrists (CSP), Nanjing, China. August, 2019.
- Jun Chen. Overcome the barriers to e-Health implementation - Introduction to the China-Canada EMBED project. Jiangsu Province Psychiatry Annual Conference, Nanjing, China. January, 2019.
- Jun Chen. Overcome the barriers to e-Health implementation - Introduction to the China-Canada EMBED project. The Yangtze River Delta Forum, Shanghai, China. November, 2018.
- Jun Chen. EMBED-A Canada-China implementation project. The Shanghai Forum, Shanghai, China, May, 2018.
- Raymond W. Lam. Standardized treatment for depression: Applying CANMAT guidelines. Depression Conference: Integration and Innovation, Beijing and Shanghai, China. April, 2018.
- Raymond W Lam. Functional recovery in depression. Grand Rounds, West China Hospital, Chengdu, and Kangning Hospital, Shenzhen, China. April, 2018.

Thank You