CBME in Psychiatry Task Force

TASK FORCE REPORT

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CBME in Psychiatry
Task Force Report

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Executive Summary

The American Association of Directors of Psychiatry Residency Training (AADPRT) Task Force on Competency-Based Medical Education (CBME) in Psychiatry submits this report to the AADPRT Executive Council and for presentation at the 2025 Annual Meeting. CBME represents a significant shift in medical education, emphasizing specific competencies rather than time spent in training, aligning with patient needs and professional demands. Originating from early 20th-century medical education reforms and gaining momentum in the 1970s, CBME has been advanced by organizations such as the Royal College of General Practitioners, the Accreditation Council for Graduate Medical Education (ACGME), and many specialty boards. In psychiatry, CBME's structured learning pathways, outcome-focused training, and innovative assessment methods have dramatically reformed training programs, ensuring that graduates are competent and confident in their skills.

Eleven seminal articles highlight CBME's transformative potential in psychiatric education, exploring various dimensions such as assessment methods, implementation challenges, and innovative solutions. For example, the integration of competency-based assessment (CBA) and workplace-based assessment (WBA) enhances learner engagement and reliable decision-making. Frameworks such as entrustable professional activities (EPAs) have been widely adopted by many specialties, offer a practical approach to WBA, and have been identified in psychiatry through rigorous consensus processes. However, challenges like increased workload and systemic biases in assessment practices need to be addressed. The

articles advocate for the critical involvement of trainees in the development and refinement of CBME frameworks to ensure alignment with learner needs.

In a CBME framework, the goal of psychiatry training is to produce psychiatrists who can self-regulate their growth and readiness for unsupervised practice. This approach impacts curriculum, assessment, precision education, faculty development, and program resource needs. The curriculum under CBME focuses on clear, outcome-based goals and a learner-centered approach, encouraging programs to adapt to local needs and integrate assessments into clinical and non-clinical contexts. Assessments are multi-modal and conducted by multiple faculty members, ensuring a valid and reliable appraisal of competencies. Faculty development is crucial, requiring comprehensive training on CBME principles and methodologies, addressing implementation challenges, and gaining institutional support. Precision education tailors learning experiences to meet individual needs, supported by advanced learning analytics and technologies. This approach is proactive, predictive, personalized, and participatory, leveraging real-time data for immediate application and predictive analytics for customized interventions. Emerging technologies like artificial intelligence and natural language processing can revolutionize feedback and observation in clinical settings. Implementing CBME requires significant changes in resource allocation, including faculty time, information technology support, and administrative resources. National strategies and partnerships can help support resource-limited programs.

The Task Force's recommendations to AADPRT, the ACGME Psychiatry Review Committee (RC), and American Board of Psychiatry and Neurology (ABPN) to define learner outcomes using EPAs as the guiding framework. Outcomes for program leadership to advance and implement CBME have also been defined using an EPA framework. A roadmap for implementing CBME should consider both less resource intensive and more resource intensive initiatives, which will depend on an institution's context. A longitudinal faculty development program is essential. Training in learning analytics, a certificate program in CBME, and a repository of workplace-based assessment tools are necessary. Funding national, AADPRT member assessment champions and advocating for ABPN funding for CBME innovations can support these efforts. Advancing a research agenda for CBME in psychiatry and exploring the impact of generative AI on assessments are critical research priorities. The Task Force also advocates for a ABPN pilot for a national, centralized platform for assessments and learning analytics, recommends principles to guide the ACGME Psychiatry RC major program revisions in 2026, and advocates for a future, collaborative task force with our allied organizations to advance CBME.

In conclusion, implementing CBME in psychiatry training programs represents a transformative shift towards more outcomes-focused and flexible education. While promising in its potential to enhance clinical competency, the transition requires thoughtful planning, substantial resources, and continuous development and adaptation by all stakeholders involved.

Task Force Charge

To prepare a report for AADPRT's Executive Committee and Steering Committee and a presentation for the AADPRT 2025 Annual Meeting that addresses the following:

1. Briefly define CBME, including its origins, historical context, seminal articles, and primacy in psychiatry medical education reform.
2. Identify key features of CBME in 2024, including emerging and innovative GME models in the United States.
3. Describe the implications of these features for psychiatry training programs, including potential impacts on curriculum, assessment, precision education, faculty development, and program resource needs.
4. Provide recommendations on the priorities and guiding principles that should guide AADPRT, the ACGME major revisions of the Psychiatry program requirements, and ABPN.

Task Force Work Description

The task force met monthly from April 2024 to February 2025. A draft of the task force report was generated in January 2025. Feedback from external stakeholders included the AADPRT Steering Committee, AADPRT Assessment Committee, prior members of the 2023-2024 AADPRT Curriculum and Assessment Review Task Force, AADPRT Chair of JEDI Committee, AADPRT Chair of Small/Rural Programs Caucus, Chair of the AADPRT Artificial Intelligence Task Force, and external CBME experts (Benjamin Kinnear and Karen Hauer). The task force report was finalized in February 2025 and submitted to the AADPRT Executive Council for the AADPRT Annual Meeting 2025.

Task Force Report

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Section 1
Overview of CBME in Psychiatry

Introduction
The evolution of medical education has seen various pedagogical strategies come to the forefront to enhance the quality and effectiveness of training healthcare professionals. Competency-based medical education (CBME) represents one of the most significant shifts in this educational evolution. By emphasizing the acquisition of specific competencies rather than simply accumulating hours of experience, CBME aligns medical training more closely with patient needs and professional performance demands. We discuss the definition, origins, and historical context of CBME, with a particular focus on its application and importance in psychiatry education reform.

Defining Competency-Based Medical Education
CBME is an approach to preparing physicians for practice that is fundamentally oriented to graduate outcome abilities and organized around competencies derived from an analysis of societal and patient needs. It focuses on what learners can do in practice rather than the time spent in training. CBME has five core components, including:

- *Outcome competencies* (i.e., competencies required for practice are clearly articulated)
- *Sequenced progressively* (i.e., competencies and their developmental markers are sequenced progressively)
- *Tailored learning experiences* (i.e., learning experiences facilitate the developmental acquisition of competencies)
- *Competency-focused instruction* (i.e., teaching practices promote the developmental acquisition of competencies)
- *Programmatic assessment* (i.e. assessment practices support and document the developmental acquisition of competencies).

The framework is structured around the acquisition of defined competencies - integrative domains that include knowledge, skills, and attitudes necessary for effective practice. Milestones outline a roadmap for learning throughout a training program. These competencies and milestones are measurable and observable, making them assessable through various appraisal methods. In essence, CBME is designed to ensure that all learning contributes directly to the abilities required in clinical settings, thereby enhancing both educational outcomes and patient care.

Origins and Historical Context
The roots of CBME can be traced back to the early 20th century, specifically following the publication of the Flexner Report in 1910. While aspects of Flexner's work perpetuated racial disparities, the review of medical education in North America highlighted inconsistencies

and variabilities in training standards, advocating for a more structured and scientific approach to medical training and serving as a precursor to competency-based principles. It should also be noted that this report led to

However, the formal concept of CBME did not gain significant traction until the 1970s. During this period, medical educators and institutions began to recognize the limitations of time-based models, which primarily focused on the duration of education rather than the outcomes. This shift was partly driven by the need for a more reliable and standardized assessment of professional readiness.

CBME's Implementation in Health Professions

The implementation of CBME gained momentum in the late 20th century, particularly through the initiatives of organizations such as the Royal College of General Practitioners in the UK and later, the Accreditation Council for Graduate Medical Education (ACGME) in the United States. These bodies developed frameworks and standards that emphasized competency in various domains of medical practice, including (as defined in the United States) patient care, medical knowledge, professionalism, interpersonal and communication skills, systems-based practice, and practice-based learning and improvement.

Primacy of CBME in Psychiatry Education Reform

Psychiatry, with its complex interplay of medical knowledge, therapeutic communication, and ethical judgment, can benefit tremendously from a CBME framework. The field's unique attributes – ranging from rapidly evolving diagnostics to treatment modalities – present many opportunities for standardized, outcomes-based approaches. For example, psychotherapy and the development of the therapeutic alliance in patient care are skills sets that require direct observation and feedback for optimal development.

Organizations such as the American Board of Psychiatry and Neurology (ABPN) and ACGME have played pivotal roles in advancing CBME in psychiatric training. The ABPN has funded research in this space while the ACGME has established milestones and competencies that reflect the core skills required in psychiatric practice, thus ensuring that training is closely aligned with real-world demands. Despite advances in our field, other specialty boards and societies have made substantially more progress in the last decade in furthering CBME.

Impact and Outcomes of CBME in Psychiatry

The introduction of CBME in psychiatry has led to several key reforms:

- **Outcome-Focused Training:** By focusing on outcomes (such as the ACGME competencies and milestones), CBME ensures that psychiatric training programs produce practitioners who are competent and confident in their skills.
- **Structured Learning Pathways:** Training programs are now more structured, allowing residents to progress through stages from novice to expert, ensuring they meet specific milestones and benchmarks along the way.

- **Innovative Assessment Methods:** CBME has necessitated the development of new assessment methods such as OSCEs (Objective Structured Clinical Examinations), multi-source feedback, and direct observation which are better suited to evaluating a wide range of competencies and capturing performance in the clinical workplace. Entrustable professional activities (EPAs) have provided a pragmatic framework, complementary to milestones, to advance competency-based assessment in the workplace. EPAs focus on units of professional practice (e.g., managing behavioral emergencies, conducting a diagnostic psychiatric evaluation) that integrate a number of competency domains.
- **Personalized Learning Experiences:** CBME allows for more tailored educational experiences, supporting residents who may excel in certain areas while providing additional support where needed.

Challenges and Criticisms

Despite its benefits, the implementation of CBME is not without challenges. The approach is resource-intensive, requiring significant investment in faculty training and the development of new assessment tools, increased need for faculty time to support foundational approaches such as direct observation and feedback, and improved technology to manage data and information for trustworthy decision-making. Many concerns have been raised that time-variable learner trajectories, one logical result of CBME, present too substantial of a disruption to our regulatory bodies, financial payment systems, and clinical scheduling needs. Additionally, there is concern that the focus on specific competencies may narrow the scope of education and fail to address the holistic nature of psychiatric training.

Conclusion

CBME has revolutionized the field of medical education and psychiatry by providing a structured, outcome-focused framework that ensures the readiness of new practitioners. While challenges remain, the advantages of this educational approach – particularly in terms of producing competent, patient-ready professionals – are significant. As medical education continues to evolve, CBME will undoubtedly play a crucial role in shaping the future of psychiatric training, ultimately enhancing both practitioner competence and patient care outcomes.

Section 2
Seminal Articles in CBME in Psychiatry

Overview

Competency-based medical education (CBME) has emerged as a transformative approach aimed at addressing the gaps between traditional medical training and the actual skills required in clinical practice. This educational paradigm focuses on outcomes, emphasizing the acquisition and demonstration of competencies that are essential for effective healthcare delivery. All psychiatry educators must be familiar with these nine seminal articles that call for advancing CBME in medical education and psychiatry residency programs. These eleven articles explore various dimensions of CBME, including assessment methods, implementation challenges, and innovative solutions designed to enhance medical training. This collection highlights the shift from a time-based to a competency-based framework, illustrating the ongoing evolution and adaptation within medical education systems worldwide.

Article 1

Young JQ, Holmboe ES, Frank JR. Competency-Based Assessment in Psychiatric Education: A Systems Approach. Psychiatr Clin North Am. 2021 Jun;44(2):217-235.

In their comprehensive analysis, Young, Holmboe, and Frank (2021) address the critical shortcomings of traditional medical education, which often results in graduates ill-equipped to meet the demands of modern healthcare settings, leading to variable patient care outcomes and a high incidence of practitioner burnout. Their scholarly perspective piece advocates strongly for the integration of CBME and competency-based assessment (CBA), which they believe could fundamentally alter the landscape of medical training.

The paper meticulously outlines the objectives of CBA, which include enhancing learner engagement through continuous formative assessments and coaching, ensuring reliable decision-making in high-stakes environments through summative assessments, and facilitating curriculum improvements through ongoing program evaluations. These assessments are not just about judging competence but are designed to foster a deeper, more meaningful learning experience that encourages lifelong learning and adaptability.

A significant portion of the article is dedicated to workplace-based assessment (WBA), a critical component of CBA where trainees are evaluated in real clinical settings. This approach aligns with Miller's pyramid at the "Does" level, where the focus shifts from knowledge to action, reflecting a trainee's ability to apply learned competencies in real-world scenarios. The authors emphasize the necessity of continuous faculty development programs that equip educators with the skills to effectively implement and sustain these assessments.

Moreover, the paper discusses the role of learning analytics and dashboards in providing actionable insights that help tailor educational experiences to individual needs, thereby promoting self-regulated learning and professional growth. The authors also highlight the importance of having clinical competency committees (CCCs) characterized by a growth mindset and minimal assessment biases, which are crucial for the fair and effective evaluation of trainee competencies.

Ultimately, the success of CBME and CBA, as argued by the authors, would lead to a medical education system where learning is personalized, outcomes are trustworthy, and curricular innovations are embraced more readily, contributing to the overall goal of improving patient care through more competent and confident medical practitioners.

Article 2

Young JQ, Frank JR, Holmboe ES. Advancing Workplace-Based Assessment in Psychiatric Education: Key Design and Implementation Issues. Psychiatr Clin North Am. 2021 Jun;44(2):317-332.

Building upon the foundational concepts of CBME, Young, Frank, and Holmboe (2021) delve deeper into the nuances of WBA in psychiatric education. This paper explores the transformative potential of WBA, shifting the assessment focus from theoretical knowledge ("knows" and "knows-how") to practical application ("shows how" and "does") within clinical settings. This shift is crucial for psychiatric education, where the ability to interact effectively with patients and team members is paramount.

The authors outline several key design and implementation considerations for effective WBAs, emphasizing the necessity for these assessments to be valid, feasible, educationally effective, catalytic, and acceptable. Validity ensures that the assessments measure what they are intended to; feasibility relates to the ease of implementation without overburdening the faculty or disrupting the learning process; the educational effect concerns the assessment's ability to engage learners in educational pursuits; the catalytic effect focuses on the motivation and growth feedback provides; and acceptability pertains to the stakeholders' approval of the assessment processes.

They also discuss the importance of selecting an appropriate framework for these assessments, such as milestones or entrustable professional activities (EPAs), before developing specific WBAs. Such frameworks provide a structured path that guides both the assessment process and the developmental trajectory of the trainees.

Furthermore, the paper provides a detailed catalog of tools that could be employed for effective WBAs, alongside strategies for their implementation. These tools include direct observation, feedback mechanisms, and digital platforms for data collection, which collectively enhance the transparency and effectiveness of the assessment process. The

thoughtful integration of these elements ensures that WBAs not only assess but also significantly contribute to the educational growth of psychiatric trainees.

Article 3

Van Melle, Elaine PhD; Frank, Jason R. MD, MA(Ed); Holmboe, Eric S. MD; Dagnone, Damon MD, MSc, MMEd; Stockley, Denise PhD; Sherbino, Jonathan MD, MEd. A Core Components Framework for Evaluating Implementation of Competency-Based Medical Education Programs. Academic Medicine 94(7):p 1002-1009, July 2019.

In this research report, van Melle and colleagues identify the core components of CBME and propose a framework for evaluating implementation of CBME in education programs. The rapid adoption of CBME provides an unprecedented opportunity to study implementation. Examining "fidelity of implementation" – that is, whether CBME is being implemented as intended – is hampered, however, by the lack of a common framework. The article details the development of such a framework.

A two-step method was used. Frist, a perspective indicating how CBME is intended to bring about changes was described. Accordingly, core components were identified. Drawing from the literature, the core components were organized into a draft framework. Using a modified Delphi approach, the second step examined consensus amongst and international group of experts in CBME.

Two different viewpoints describing how a CBME program can bring about change were found: production and reform. Because the reform model was most consistent with the characterization of CBME as a transformative innovation, this perspectiv4e was used to create a draft framework. Following the Delphi process, five core components of CBME curricula were identified: outcome competencies, sequenced progression, tailored learning experiences, competency-focused instruction, and programmatic assessment.

Typically, implementation evaluation relies on the creation of a specific checklist of practices. Given the ongoing evolution and complexity of CBME, this work, however focused on identifying core components. Consistent with recent developments in program evaluation, where implementation is described as a developmental trajectory toward fidelity, identifying core components is presented as a fundamental first step toward gaining a more sophisticated understanding of implementation.

Article 4

Szulewski, Adam MD, MHPE, PhD; Braund, Heather PhD; Dagnone, Damon J. MD, MSc, MMEd; McEwen, Laura PhD; Dalgarno, Nancy PhD; Schultz, Karen W. MD; Hall, Andrew K. MD, MMEd. The Assessment Burden in Competency-Based Medical Education: How Programs Are Adapting. Academic Medicine 98(11):p 1261-1267, November 2023.

In their exploratory study, Szulewski et al. (2023) investigate the impact of CBME on the workload of residents and faculty across eight Canadian medical programs. The study

reveals that while CBME aims to enhance educational outcomes by focusing on the demonstration of competencies in clinical practice, it inadvertently increases the administrative and assessment-related tasks for all involved parties.

Through qualitative analysis, the authors identify several themes that underscore the challenges faced by programs in implementing CBME with fidelity. One significant issue is the absence of shared models or standards for performance, which leads to inconsistencies in how competencies are assessed and understood across different programs. Additionally, the study highlights difficulties related to workplace-based assessments, particularly issues with the direct observation of trainees, and the timeliness and quality of feedback provided.

In response to these challenges, the programs have implemented several corrective measures. These include revising the scales used for entrustment decisions, enhancing faculty development initiatives to better prepare educators for CBME, and formalizing the involvement of residents in the assessment process. Moreover, practical strategies such as the use of non-electronic versions of assessment forms and planned proactive assessments have been adopted to improve the direct observation and feedback mechanisms.

The study also addresses the operational challenges faced by CCCs in making decisions about resident progression. Efforts to streamline these processes include increasing resident collaboration with CCCs, moving assessments online for easier access and review, and organizing retreats for professional development and planning.

Overall, the findings from Szulewski et al. highlight the complex dynamics and substantial efforts required to effectively implement CBME. The study underscores the need for ongoing adjustments and innovations in assessment practices to alleviate the burden on faculty and residents and to ensure the successful realization of CBME's educational objectives.

Article 5

Phung A, Daniels G, Curran M, Robinson S, Maiz A, Jaqua B. Multispecialty Trainee Perspective: The Journey Toward Competency-Based Graduate Medical Education in the United States. J Grad Med Educ. 2023 Oct;15(5):617-622.

In their article, Phung and colleagues (2023) offer a unique perspective on the transition to CBME from the vantage point of the medical trainees themselves. This group of multispecialty trainees provides a historical context of GME and the quality issues that have driven the shift towards a competency-based approach. The narrative is enriched by the trainees' firsthand experiences and reflections on their active involvement in foundational meetings and discussions about CBME implementation.

The article emphasizes the critical need for trainee engagement in the development and refinement of CBME frameworks. Trainees are depicted not just as beneficiaries of

educational reforms but as co-producers of the educational process. This involvement is crucial for ensuring that the educational reforms are aligned with the actual needs and experiences of learners.

Significant concerns raised by the trainees include the timing of CBME implementation, the adequacy of faculty development, and potential biases in assessment processes. These issues highlight the complexities involved in transitioning to a new educational model and the need for careful planning and support to address these challenges effectively.

The trainees also discuss the importance of self-reflection and milestone assessments, which are pivotal in guiding the development of appropriate assessment tools and educational interventions in CBME. The article calls for more robust training in coaching and the creation of a psychologically safe learning environment to mitigate the risks of the transition failing to meet its objectives.

By providing a trainee-centered view of the shift toward CBME, Phung and colleagues underscore the necessity of involving learners in every step of the process, from planning and development to implementation and evaluation. This approach not only enriches the educational experience but also empowers trainees to contribute meaningfully to the evolution of medical education.

Article 6

Lucey, Catherine R. MD; Hauer, Karen E. MD, PhD; Boatright, Dowin MD; Fernandez, Alicia MD. Medical Education's Wicked Problem: Achieving Equity in Assessment for Medical Learners. Academic Medicine 95(12S):p S98-S108, December 2020.

Lucey and Hauer (2020) tackle the persistent and complex issue of inequity in the assessment of medical learners in the United States. Their analysis reveals how systemic biases in assessment practices not only disadvantage minority students but also perpetuate structural racism within the medical education system. The authors describe the challenge of achieving equity in assessment as a "wicked problem" due to its complexity and the interdependencies involved.

The article argues for a holistic reevaluation of assessment practices across three dimensions: intrinsic, contextual, and instrumental equity. Intrinsic equity focuses on the fairness and inclusivity of the assessment tools themselves; contextual equity concerns the environments in which learners are assessed; and instrumental equity relates to how assessment data are used to make decisions about learner progression and opportunities.

To address these issues, the authors propose a framework based on principles of organizational excellence, which includes redesigning assessment tools to be more equitable, transforming learning environments to support all learners, and using assessment data responsibly to ensure fair treatment of all students. They also advocate for

a robust research agenda aimed at identifying effective strategies for reducing bias and enhancing equity in medical education.

By highlighting the systemic nature of biases in assessment and linking them to broader social inequities, Lucey and Hauer call for a collective commitment to systemic changes in medical education. This involves redefining cultural norms within educational institutions, developing assessment systems that align with equity principles, and employing a range of tools and strategies that support this vision. The ultimate goal is to ensure that all medical learners, regardless of their background, receive fair and equitable treatment and have equal opportunities to succeed and contribute to the profession.

Article 7

Young JQ, Hasser C, Hung EK, Kusz M, O'Sullivan PS, Stewart C, Weiss A, Williams N. Developing End-of-Training Entrustable Professional Activities for Psychiatry: Results and Methodological Lessons. Acad Med. 2018 Jul;93(7):1048-1054.

Young et al. (2018) detail the rigorous process involved in developing EPAs for psychiatry, offering a methodological blueprint for other medical specialties considering similar initiatives. The development of EPAs is portrayed as a crucial step in aligning psychiatric training with the demands of clinical practice, ensuring that trainees are adequately prepared to perform specific activities at a level expected of new practitioners.

The three-stage process described in the paper emphasizes the importance of content validity, ensuring that the EPAs accurately reflect the essential tasks of the profession. This process involved extensive consultations with stakeholders, iterative testing and refinement of the EPAs, and careful consideration of the educational and clinical contexts in which these activities are performed.

The authors also discuss the challenges and lessons learned from this process, such as the need for broad consensus among educators and practitioners on what constitutes essential activities in psychiatry. They note that some potentially critical EPAs were not included in the final list due to the stringent criteria used, which could limit the comprehensiveness of the training.

Furthermore, the paper references other frameworks for developing EPAs in psychiatry, suggesting that while their approach has been beneficial, it is one of several possible methods. This acknowledgment points to the ongoing evolution of competency-based assessments in medical education, with each specialty adapting the general principles of CBME to its unique needs and contexts.

By providing a detailed account of the development of psychiatry EPAs, Young et al. contribute valuable insights to the broader discourse on CBME. Their work underscores the necessity of a methodical and inclusive approach to developing assessment tools that are not only educationally sound but also practically relevant to the needs of the profession.

Article 8

Hung EK, Jibson M, Sadhu J, Stewart C, Walker A, Wichser L, Young JQ. Wresting with Implementation: a Step-By-Step Guide to Implementing Entrustable Professional Activities (EPAs) in Psychiatry Residency Programs. Acad Psychiatry. 2021 Apr;45(2):210-216.

Hung and colleagues (2021) provide a practical and comprehensive guide for implementing EPAs within psychiatry residency programs. Their article outlines an 11-step process that is derived from the EPA toolkit developed by the AADPRT Assessment Committee, designed to aid programs in the seamless integration of EPAs into their existing structures.

The guide begins by emphasizing the importance of making a compelling case for EPAs, highlighting their potential to more accurately represent clinical competence compared to traditional methods. The authors advocate for EPAs as a framework that complements milestones by providing a more holistic view of a resident's capabilities within specific clinical contexts.

Subsequent steps involve adopting and adapting a predefined list of psychiatry EPAs, selecting appropriate entrustment scales, and ensuring transparency in the use and purpose of EPAs. The guide stresses that various assessment methods should be utilized to inform both ad hoc and summative entrustment decisions, with a clear communication strategy to ensure that residents understand how their performance is being evaluated.

The implementation process recommended by Hung et al. is iterative and includes continuous evaluation of the impact of the EPAs on learners, faculty, and the overall program culture. This reflective approach is crucial for identifying areas of improvement and ensuring that the EPAs effectively contribute to the educational goals of the residency program.

Faculty development is highlighted as a key area of focus, with the authors noting that significant resources should be dedicated to training educators on how to effectively integrate EPAs into their teaching and assessment practices. This includes understanding the dimensions of performance being assessed, the framework used for assessment, and how to incorporate this into everyday clinical supervision.

Overall, the article serves as an essential resource for residency programs looking to implement EPAs. It not only provides a step-by-step guide but also addresses common challenges and considerations, making it a valuable tool for enhancing the assessment and training of psychiatric residents.

Article 9

Young, JQ, Sugarman, R, Schwartz, J, & O'Sullivan, PS. Overcoming the challenges of direct observation and feedback programs: a qualitative exploration of resident and faculty experiences. Teaching and Learning in Medicine. 2020. 32(5), 541-551.

The article addresses significant challenges faced in CBME regarding direct observation and feedback. Prior studies have highlighted negative attitudes from both faculty and residents when being observed and giving/receiving feedback due to factors such as insufficient time, misaligned purposes, inadequate training, and low-quality feedback. These issues threaten the effectiveness of formative and summative assessments critical to CBME.

To address these challenges, the authors discuss the implementation of the Direct Observation Structured Feedback Program (DOSFP) within a psychiatry residency training program. The DOSFP incorporated several strategies recommended in the literature: protected time for direct observation and feedback, longitudinal supervisory relationships, validated assessment tools, ongoing training, and engagement monitoring. The study aimed to evaluate the impact of these strategies on goal alignment, relationship quality, and feedback credibility.

The DOSFP was implemented in an outpatient psychiatry clinic for second and third-year residents. The program scheduled dedicated supervision time each week, during which faculty observed patient encounters and provided structured feedback using validated tools like the Entrustable Professional Activity (EPA) app and the Psychopharmacotherapy-Structured Clinical Observation Tool (P-SCO). Faculty and residents received ongoing training on program goals, structured observation, and bidirectional feedback.

The study employed qualitative thematic analysis through semi-structured interviews with faculty and residents. Participants reflected on their experiences, and the interviews were coded to identify key themes.

Key findings included:

1. **Goal Alignment**: Both faculty and residents viewed the DOSFP as growth-oriented rather than judgmental. Residents recognized the feedback's formative and summative purposes but did not feel threatened by its summative aspect.
2. **Authentic Interactions**: Initially, residents felt self-conscious under observation, but over time, they became more comfortable and authentic in their interactions. Faculty took steps to support resident autonomy during observations.
3. **Strong Educational Alliances**: Longitudinal relationships between faculty and residents fostered trust and safety, enhancing the credibility and impact of feedback. Residents valued feedback from supervisors who knew them well and whom they respected.
4. **High-Quality Feedback**: The structured feedback tools helped faculty provide specific, actionable feedback. Residents appreciated immediate feedback based on direct observation and valued the protected time for feedback conversations.
5. **Feedback Credibility**: Feedback credibility was influenced by the faculty's professional attributes and the residents' desire to emulate them. However, residents

tended to discount feedback they disagreed with, indicating a need for strategies to help them reconcile conflicting feedback with self-appraisal.

The study concluded that bundling multiple strategies (e.g., multisource feedback, chart review, direct observation, longitudinal observation), as done in the DOSFP, could overcome many challenges identified in previous research. Despite some limitations, such as the single specialty context and lack of measured learning outcomes, the DOSFP showed positive impacts on goal alignment, relationship quality, and feedback credibility. These findings support further development of similar programs in CBME to enhance direct observation and feedback practices.

Article 10

Triola MM, Burk-Rafel J. Precision Medical Education. Acad Med. 2023 Jul 1;98(7):775-781.

Triola and Burk-Rafel (2023) introduce an innovative concept in medical education termed Precision Medical Education (PME). They define PME as a learner-centered approach that leverages data analytics and artificial intelligence to tailor educational interventions to the specific needs of each student in a personalized, proactive, predictive, and participatory manner. This approach aims to optimize learning outcomes by providing precise, timely, and relevant educational content and assessments.

The article describes how PME can be implemented through the systematic collection and analysis of longitudinal data on learners' performance and preferences. This data-driven approach allows educators to identify individual learning patterns and needs, enabling them to deliver customized educational resources and feedback that enhance learning efficiency.

The potential benefits of PME are vast, including improved learner engagement, faster progression for advanced learners, and more targeted support for those who are struggling. Additionally, PME can facilitate a more dynamic and responsive educational environment, where interventions are continuously adjusted based on real-time data.

However, the authors also discuss the challenges associated with implementing PME, such as the need for robust data infrastructure, concerns about data privacy, and the potential for increased complexity in educational planning. They emphasize the importance of addressing these challenges through careful design and implementation of PME systems, as well as ongoing evaluation to assess their impact on educational outcomes.

By proposing PME, Triola and Burk-Rafel contribute to the evolving landscape of medical education, offering a forward-thinking approach that promises to make education more personalized, efficient, and effective. This concept represents a significant shift towards a more data-informed and learner-centered educational model in medicine.

Article 11

Goldhamer MEJ, Pusic MV, Nadel ES, Co JPT, Weinstein DF. Promotion in Place: A Model for Competency-Based, Time-Variable Graduate Medical Education. Acad Med. 2024 May 1;99(5):518-523.

This article explores a novel model for GME known as Competency-Based, Time-Variable (CBTV) education. This model proposes that residency progression should be based on demonstrated competencies rather than predetermined time frames, allowing for more personalized and flexible training pathways.

The authors present the Promotion in Place (PIP) model as a practical solution to several barriers that have hindered the implementation of CBTV. These barriers include logistical challenges related to residency scheduling, regulatory requirements, and concerns about the readiness of residents to advance or graduate early.

PIP is designed to address these challenges by enhancing assessment processes, establishing clear criteria for advancement, and allowing for flexible adjustments to training based on individual competence. This model supports the concept of "sheltered independence," where residents deemed competent can assume attending-level responsibilities within their training institution while still receiving guidance and support.

The paper details a pilot study conducted to test the feasibility of the PIP model, which involved several GME programs. Although the pilot faced challenges, including limited participation and disruptions due to the COVID-19 pandemic, it provided valuable insights into the practicalities and potential benefits of the model. The authors argue that the PIP model could significantly enhance the flexibility and responsiveness of GME, allowing programs to better meet the needs of both residents and the healthcare system. They call for broader implementation and further research to evaluate the effectiveness and impact of this innovative approach to medical training.

By proposing and testing the PIP model, the authors contribute to the ongoing dialogue on how to more effectively align medical education with the competencies required for contemporary clinical practice, potentially transforming the structure and philosophy of residency training.

Conclusion

These articles provide a deeper understanding of the significant shifts and innovations within CBME. Each article contributes unique insights and practical solutions to the challenges of implementing competency-based approaches, emphasizing the importance of adaptability, equity, and learner-centeredness in medical education. As medical training continues to evolve, these contributions highlight the potential for more personalized, effective, and responsive education that prepares medical professionals for the complexities of modern healthcare environments.

Section 3
Implications of CBME for Psychiatry Training Programs

Vision

All psychiatry residency programs must ensure that graduates meet the needs of today's (and tomorrow's) patients and communities by producing psychiatrists who can self-regulate their growth through trustworthy processes that determine and individualize readiness for independent practice. CBME provides a critical framework and set of guiding principles to meet this vision. CBME has impacts on psychiatric curriculum, assessment, precision education, faculty development, and program resource needs, summarized in each of their respective sections.

Curriculum

Key Takeaways

- **Defining Outcomes:** The curriculum in psychiatry training programs should focus on clear, outcome-based goals emphasizing the knowledge, skills, and attitudes that psychiatrists need to meet society's needs today. Curriculum design, driven by the needs of patients and society, should focus more on learning outcomes rather than the duration of time to achieve those outcomes, and should prepare learners for the next stages of their careers.
- **Local Adaptation:** Programs are encouraged to tailor the curriculum to meet local needs and conditions effectively.
- **Learner-Centered Approach:** Programs should educate learners about CBME and the significance of feedback, promoting a learner-centric approach where the curriculum adapts to individual progress, including the potential for time-variable paths dependent on the achievement of competence.
- **Integration and Flexibility:** Programs should integrate assessments into both clinical and non-clinical curricula that capture real-time medical knowledge and skills, reflecting advances in basic, clinical, and systems sciences. Furthermore, we must apply a continuous education quality improvement approach in order to remain flexible in advances in the learning sciences for knowledge and skill acquisition.

CBME has substantial impacts in psychiatry by establishing clearer, more tangible learning outcomes with a special focus on the skills graduates need to manage contemporary issues in the field today. This approach enables programs to design education that is not only reflective of global standards but also adaptable to local needs and contexts. By educating learners and faculty about the principles of CBME, programs foster a more engaged learning environment and meet the needs of society.

CBME's flexibility allows programs to adjust the curriculum to incorporate new scientific and clinical developments rapidly, ensuring that the education remains current and relevant. An essential aspect is the emphasis on learning outcomes rather than the duration of training, which encourages a more efficient and potentially accelerated learning process for those who demonstrate early proficiency. This approach necessitates the integration of meaningful assessment opportunities within the clinical and non-clinical curriculum, ensuring that assessments are frequent and reflective of real-time learner performance in various contexts.

Furthermore, psychiatric curricula must be dynamically oriented to address the evolving needs of patients and society, promoting an educational structure that supports flexibility, individualization, and customization according to the learner's progression. This ensures that each stage of training is robust and directly tailored to advancing the learner's skills, whether it requires remediation, role enhancement, or transition to independent practice.

Assessment

Key Takeaways

- **Enhanced Tools and Methods:** Psychiatry training programs should develop and implement diverse, validated assessment tools. This includes multi-modal assessments conducted by multiple faculty members at different times.
- **Faculty Development and Technology Use:** Training faculty on how to effectively use these new tools and technologies, such as dashboards for real-time feedback, is crucial. Leveraging technology like electronic health record (HER) analysis and other digital tools can reduce faculty burdens and enhance the assessment process.
- **Equity in Assessment:** Programs must focus on vetting assessments for bias and designing equitable systems of assessment for diverse learners.
- **Learning Analytics:** Programs should enhance their capabilities for learning analytics to provide accurate, actionable insights for both learners and faculty.
- **Future Roles of Assessments:** Programs should explore the potential role of patient outcomes in assessments and ensure that assessments are directly tied to the next learning steps for continuous improvement.

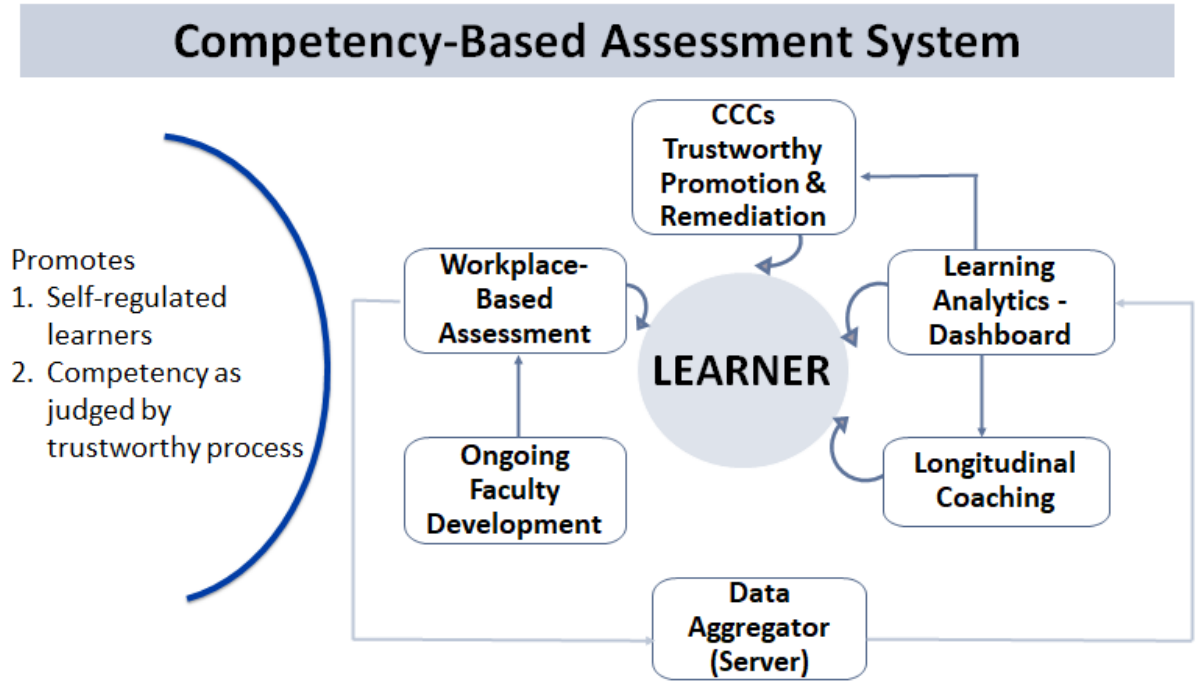
The shift to CBME demands a comprehensive overhaul of assessment methodologies. Utilizing assessment tools and introducing multi-modal assessment strategies are fundamental to this new paradigm. These assessments should be conducted by multiple faculty members and at different stages of training to ensure a valid and reliable appraisal of the learner's competencies. We now have several assessment tools with substantial validity evidence in psychiatry. More importantly, medical education research has discovered the key design features of workplace-based assessment tools. Further tool development is no longer the key need. There is a pressing need to implement a program of assessment that incorporates these tools and is feasible, educationally meaningful, and mindful of implementation costs. A comprehensive program of assessment will provide accurate insights into a trainee's performance and growth areas.

To effectively implement these tools, faculty development focused on assessment tool implementation is crucial. Training faculty on how to use new assessment tools effectively, including the use of technology such as dashboards for real-time feedback, is necessary for the success of CBME. The goal is to create a shared understanding among all stakeholders about the purpose and value of assessments, ensuring they are seen as integral to the learning process rather than mere bureaucratic necessities. Moreover, faculty and learners must be given the time for direction observation and feedback conversations. There are several models for this, but in the end, this requires financial investment.

The potential of integrating patient outcomes into the assessment process poses an interesting question for further exploration. Could the quality of patient care, as reflected through EHR data like tests ordered and medications prescribed, serve as a metric for assessing clinical competency? This approach would link educational outcomes directly to patient care, enhancing the relevance and applicability of the assessment process.

Figure 1 highlights six key components of a competency-based assessment program that promote self-regulated learners and competency as judged by a trustworthy process.

Figure 1
Competency-based assessment program



Precision Education

Key Takeaways

- **Tailored Learning Opportunities:** Programs should identify the right learning opportunities for the right learners at the right times, supported by advanced learning analytics and data visualization tools.
- **Four Key Principles:** The approach should be proactive, predictive, personalized, and participatory, with a focus on leveraging real-time data for immediate application and predictive analytics to customize interventions.
- **Technological Innovations:** AADPRT, ACGME and ABPN should explore the use of AI and natural language processing (NLP) in assessment. At the program level, these technologies may reduce time-consuming efforts currently needed in an optimal assessment program. For example, with the rise of virtual scribes in the clinical setting, there are emerging opportunities for AI-facilitated observation and feedback. As another example, generative AI may facilitate generating end-of-rotation global feedback based on ad hoc assessment data submitted throughout the learning period. Additionally, generative AI may facilitate generating a learner summary report based on assessment data and CCC discussions. At the national level, leveraging pooled data sets from across programs may allow for further insights on learner skill development and readiness for advancement.
- **Resource Challenges:** Significant resources will be required to implement precision education effectively. A national strategy or platform may be needed to support resource-limited programs.

Precision education under CBME tailors educational experiences to meet the specific needs of each learner at the optimal time. Implementing this approach requires sophisticated tools for learning analytics, data collection, synthesis, and visualization (such as dashboards). If these resources could be developed and supported at a national level, through national organizations such as AADPRT, ABPN, and ACGME, we could streamline efforts and provide economies of scale, rather than each program struggling to develop these capabilities independently.

The principles of proactive, predictive, personalized, and participatory learning form the cornerstone of precision education. Proactive and predictive analytics help identify learners who might benefit from targeted interventions, potentially before challenges become significant impediments. Personalized learning paths allow for a customized educational experience that adapts to the unique strengths and needs of each trainee. Participatory elements ensure that learners are active participants in their education, which fosters engagement and deep learning.

The role of emerging technologies such as generative AI and NLP in synthesizing large amounts of narrative assessment data could be groundbreaking. At the program level, these technologies may reduce time-consuming efforts currently needed in an optimal assessment program. For example, the use of virtual scribes in the clinical setting may evolve towards “virtual educators” and could revolutionize the way clinical care is observed and feedback is given, supporting busy faculty educators and enhancing the learning

process without the constraints of needing real-time presence. As another example, generative AI may facilitate generating end-of-rotation global feedback based on ad hoc assessment data submitted throughout the learning period. Additionally, generative AI may facilitate generating a learner summary report based on assessment data and CCC discussions. At the national level, leveraging pooled data sets from across programs may allow for further insights on learner skill development and readiness for advancement.

Faculty Development

Key Takeaways

- **Comprehensive Training and Support:** Faculty will need thorough training on CBME principles and methodologies, including how to use new assessment instruments and provide meaningful feedback.
- **Compensation and Time Allocation:** Programs and institutions will need to address the challenges of compensation for time spent on educational activities (assessment, supervision, coaching, etc.) and the potential loss of clinical revenue.
- **Institutional Buy-In:** Program leaders will need to garner support from top institutional stakeholders for investments in CBME and faculty development and aligning faculty professional goals with program goals to maintain morale and retention.

As psychiatric training programs transition to CBME, faculty development becomes a critical component. Faculty must not only understand the theoretical underpinnings of CBME but also how to practically implement its strategies. This involves a paradigm shift from traditional feedback methods (e.g., less direct observation, less use of structured feedback tools) to more detailed and constructive feedback mechanisms. Faculty must learn to use new assessment instruments effectively, manage their own anxieties about giving specific feedback, and more effectively integrate these educational responsibilities with clinical duties. Furthermore, faculty well-being and professional fulfillment must be monitored to prevent mismatches between faculty goals and program objectives, which could affect morale and retention.

Compensation models need to be reconsidered to ensure that faculty are not financially penalized for participating in educational roles, which may have impacts on RVU-generating activities. It is crucial to engage institutional leaders to secure support and demonstrate the educational value of investing in CBME. Specifically, it will be important to articulate and explore the long-term value of CBME, despite its short-term costs, including benefits to patient outcomes, customization of learner experiences, learner and faculty satisfaction, and improved trust in the medical profession for producing a competent workforce.

Program Resource Needs

Key Takeaways

- **Resource Allocation for Direct Observation:** Programs need to consider different resourcing strategies to allow faculty sufficient time for direct observation and feedback without impacting their clinical responsibilities.
- **Enhanced IT and Administrative Support:** Significant IT infrastructure and administrative support are necessary to manage CBME effectively, including compatibility with existing residency management software and potential use of new technologies.
- **Strategic Resource Planning:** Our national organizations need to provide a range of options for programs to gradually transition to CBME based on their resource levels and explore partnerships for research funding to support program-level innovation.

Adopting CBME requires significant changes in resource allocation within psychiatric training programs. Additional faculty time dedicated to direct observation and workplace-based assessments, enhanced IT support for learning analytics, and sufficient administrative resources are all necessary components. Programs must consider different levels of resource investment, from low-resource options like using existing faculty development days to high-resource options involving dedicated weekly time for competency assessments.

Smaller or less-resourced programs face particular challenges in adopting CBME. National recommendations, strategies, and platforms for sharing resources and expertise could be instrumental in supporting these programs. Additionally, there might be a need for research funding to support innovative approaches within CBME, potentially in partnership with organizations like the American Medical Association (AMA), Association of American Medical Colleges (AAMC), ABPN, American Psychiatric Association's Council on Medical Education and Lifelong Learning (CMELL), and the ACGME.

Conclusion

The implementation of CBME in psychiatry training programs represents a transformative shift towards more targeted, flexible, and outcome-oriented medical education. While promising in its potential to enhance clinical competency, the transition requires thoughtful planning, substantial resources, and a commitment to continuous development and adaptation by all stakeholders involved.

Section 4

Recommendations to AADPRT, ACGME Psychiatry RC, and ABPN

The task force offers 20 recommendations to advance CBME in psychiatry. Table 1 lists the 19 recommendations to AADPRT, ACGME Psychiatry RC, and ABPN.

Table 1

Task Force Recommendations	
Learner Outcomes and Framework	
1	Adopt EPAs as the framework for implementing CBME for learners.
Program Leadership Outcomes and Framework	
2	Define the outcomes, using an EPA framework, for program leadership to implement CBME in psychiatry programs
Resources	
3	Create a 1-year, 3-year, 5-year roadmap for programs implementing CBME, and include strategies for less resource intensive initiatives and more resource intensive initiatives
4	Create a faculty development program for program leadership to advance knowledge and skills to implement in CBME
5	Promote specific training in learning analytics for program leadership
6	Create a certificate program in CBME for program leadership
7	Create a repository of endorsed or recommended workplace-based assessment tools
8	Create a CBME toolkit for psychiatry program leadership
Engagement	
9	Co-create assessment activities with faculty, staff, and trainees
Funding and Investments	
10	Invest in the development of AADPRT assessment champions

11	Establish a faculty development assessment hub in psychiatry in partnership with the ACGME
12	Pilot a national, centralized platform for assessment, dashboards, and learning analytics in partnership with ABPN
Research	
13	Advance a research agenda of CBME in psychiatry
14	Advocate for a call from *Academic Psychiatry* on a journal series focused on CBME
15	Explore the strengths, weaknesses, opportunities, threats of how generative artificial intelligence (AI) can impact workplace-based assessment and other areas in CBME.
16	Conduct a cost analysis of CBME and the return on investment
Advocacy	
17	Advocate for the creation of a consortium group between members of AADPRT, AACDP, AAP, ADMSEP, ABPN, ACGME RC, and APA CMELL to further advance CBME
18	Advocate to the ACGME Psychiatry Review Committee considerations to guide their major revisions of the program requirements in Psychiatry
19	Advocate to the ABPN to adopt an EPA-based framework for learner readiness for advancement, rather than a time-based requirement
20	Advocate for competency-based, time-variable (CBTV) pilots, as they arise

Learner Outcomes and Framework

1. Adopt EPAs as the framework to implement CBME for learners.

Rationale: CBME in the United States starts with the six ACGME competency domains and related sub-competencies. To implement CBME, programs must choose their educational framework, such as milestones or EPAs. Based on the best available evidence from the education literature and large-scale implementation efforts in multiple specialties and across the globe, the task force recommends end-of-training EPAs developed for Psychiatry (Appendix 1). Published in *Academic Medicine* in 2018, this list of EPAs in psychiatry was developed through a robust consensus process in the United States with members from the ACGME, ABPN, and external experts. The EPA framework offers a practical approach to integrating competencies. Furthermore, EPAs will facilitate the development of curricula for learners.

Program Leadership Outcomes and Framework

2. **Define the outcomes, using an EPA framework, for program leadership to implement CBME in psychiatry programs.**

   Rationale: Starting with the end in mind, to successfully advance and implement CBME in psychiatry programs, AADPRT must define the outcomes for program leadership (i.e., program directors, associate program directors, program administrators, etc.). Defining outcomes will provide a clear goal and lay out a road map for program leadership to demonstrate their own competence in CBME. Similar to outcomes for learners, EPAs for program leadership offers a practical approach to integrating the necessary competencies of implementing CBME in programs. Furthermore, EPAs will facilitate the development of curricula (i.e., faculty development) and assessment strategies for program leadership. Based on the EPA literature, the task force recommends using an adapted entrustment scale for program directors and has generated a list of suggested EPAs (Appendix 2).

Resources

3. **Create a 1-year, 3-year, 5-year roadmap for programs implementing CBME, and include strategies for less resource intensive initiatives and more resource intensive initiatives.**

   Rationale: Implementing and advancing CBME will require an iterative process over a long period of time. There are benefits to the field for AADPRT to create a roadmap for programs. Recognizing that some programs are already adopting many best practices in CBME (e.g., frequent opportunities for direct observation and feedback, EPAs, etc.) while other programs are earlier in adoption, a roadmap will be helpful to all programs for long-term planning. Furthermore, we acknowledge that programs may be well resourced in certain areas (e.g., number of faculty) but not in others (e.g., access to technologies). We recommend that AADPRT articulate an exemplar roadmap, using a 1-year, 3-year, and 5-year timeframe, describing whether certain initiatives will require lower or higher resources. The resources needed may include access to financial investments, faculty time and size, data infrastructure, and analytical capacity. The roadmap is meant to be an example, as it will ultimately be the responsibility of the program to create an individualized roadmap based on its unique context and resources. Programs should tailor roadmaps based on how far along they are in adopting CBME and the resources they have to advance CBME effectively. We have provided one exemplar roadmap for consideration (Appendix 3). It may also be helpful for programs to consider doing this work with other programs (i.e. a buddy program) for peer consultation.

4. **Create a faculty development program for program leadership to advance knowledge and skills to implement in CBME.**

   Rationale: Curricula for program directors (i.e. faculty development) will be essential for program directors to advance knowledge and skills to implement CBME. We acknowledge that institutions vary in faculty development opportunities in CBME and there are only a handful of national resources, such as the ACGME assessment course and the Harvard Macy Institute course in assessment and evaluation, which are frequently beyond the means of smaller and less-resourced programs. AADPRT could serve as a leader in providing faculty development to program directors, tailored to the needs of psychiatry programs. There are several models to consider for faculty development. For example, faculty development could be conducted in-person or virtual and occur annually, periodically, or longitudinally. Additionally, AADPRT may have opportunities to partner with other organizations, such as the ACGME, given this organization's infrastructure, experts, and resources. Such a partnership might include sponsoring program directors to participate in ACGME faculty development offerings, such as the ACGME assessment course. Alternatively, a partnership might also include creating an assessment hub through the ACGME, facilitated by ACGME but coordinated through AADPRT (see Recommendation 11). If AADPRT considers expanding its longitudinal, virtual programming, a course in assessment might be highly beneficial to members. In articulating faculty development opportunities, the task force discussed that there are clear benefits in building a community of practice related to CBME. Opportunities to engage program leadership include providing certification (see Recommendation 6), incentivized participation through monetary sponsorship or scholarships, or provide CME or ABPN Continuing Certification credit.

5. **Promote specific training in learning analytics for program leadership.**

   Rationale: The task force recognizes that key components to advancing CBME and precision medical education entail familiarity with learning analytics. Learning analytics refers to the process of collecting, analyzing, and interpreting data from various sources related to a trainee's learning journey. The aims are to identify trainee strengths and areas for growth, ultimately aiming to optimize their development and progression towards competency by providing targeted feedback and interventions based on data-driven insights. Learning analytics is an under-developed area for most programs. We recommend that AADPRT showcase programs who are experimenting with and adopting learning analytic approaches and to offer trainings and consultations to programs.

6. **Create a certificate program in CBME for program leadership.**

   Rationale: Certificate programs offer a tangible incentive for program leadership to demonstrate competence. A certificate program in CBME could allow AADPRT to monitor the proportion of program leadership who completed the requirements of the certificate and identify those who have not yet had the access or resources to obtain one. Certificate

programs also provide evidence of program leadership professional development. While there may be similar competencies for program faculty and administrators, the applications or these competencies will be different, and a certificate program should meet the unique needs of these groups. Furthermore, a certificate program can be useful to department chairs to support these efforts and for program leadership advancement and promotion.

7. **Create a repository of endorsed or recommended workplace-based assessment tools.**

   Rationale: One of the cornerstones of CBME is a robust repository of assessment tools, particularly workplace-based assessments. The aspiration is that assessments are frequent, multimodal, and educational meaningful. Programs vary widely in the assessment tools used. Moreover, faculty development resources for assessors are lacking. While customization of tools is necessary for successful implementation, it may be helpful for programs to have examples of assessment tools endorsed by AADPRT or recommended in certain circumstances or contexts and resources for faculty on how to use these tools effectively. We recommend that the AADPRT Assessment Committee showcase a variety of workplace-based assessment tools, such as clinical skills evaluation (CSE), direct observation and feedback, chart-stimulated recall, multisource feedback, etc.

8. **Create a CBME toolkit for psychiatry program leadership.**

   Rationale: Toolkits can be useful for programs to refer to in implementing CBME. Toolkits can make the case for CBME and offer a step-by-step guide in implementation. Building on the EPA toolkit developed by the AADPRT Assessment Committee in 2020, we recommend that the Assessment Committee create a CBME toolkit for program directors, offering specific content resources (e.g., assessment tools) and process resources (i.e. change management suggestions).

<u>Engagement</u>

9. **Co-create assessment activities with faculty, staff, and trainees.**

   Rationale: To be done successfully, CBME requires the co-creation of design, implementation, and evaluation efforts with faculty, staff, and trainees. For example, introducing a new WBA, collecting assessment data, and visualizing that data require strong collaborations between program directors and program administrators. As another example, a new WBA that is educationally meaningful requires input from trainees and endorsement by near peers. Some opportunities for co-creation with trainees include Program Evaluation Committees with more trainees, task forces with trainees, chief residents and chief fellows involved in the orientation of assessment activities, faculty development that is co-developed with trainees, and AADPRT

assessment workshops involving trainees. The same list could be applied to program administration staff. For programs that have educator tracks (or similar pathways) for trainees, engaging this cohort of trainees in CBME initiatives may be high yield.

Funding and Investments

10. Invest in the development of AADPRT assessment champions.

Rationale: AADPRT has only a handful of members that would describe themselves as assessment experts. To advance assessment and CBME, it will be important to create a coalition of AADPRT members who can serve as assessment champions to foster change. We recommend that AADPRT identify the number of champions in the organization that it would like to develop. AADPRT should provide funding to these champions to participate in advanced faculty development in CBME, such as through participation in the ACGME assessment course or the Harvard Macy assessment course. These champions could then serve in a train-the-trainer fashion, participate on the Assessment Committee, lead assessment workshops at AADPRT at annual meetings, and lead future programming (i.e. virtual, on-demand longitudinal faculty development series).

11. Establish a faculty development assessment hub in psychiatry in partnership with the ACGME.

Rationale: We acknowledge that our allied psychiatry organizations, such as the ACGME, are interested in advancing CBME. We recommend that AADPRT amplify its dialogue and partnership with the ACGME to establish a psychiatry assessment hub. In particular, we recommend that AADPRT partner with the ACGME to create a psychiatry assessment hub, based on the outstanding course that ACGME currently offers. This partnership could be a scalable way to train program leadership in CBME over time.

12. Pilot a national, centralized platform for assessment, dashboards, and learning analytics in partnership with ABPN.

Rationale: Programs currently use a variety of institutionally sponsored residency management software, such as MedHub and New Innovations. Despite advances in both these systems, they both have limitations in advancing CBME initiatives. As a national project, we imagine that a single, centralized assessment platform could not only substantially improve implementation and standardization of CBME but also offer robust analytic and research opportunities. Several specialty boards have made major investments in such a platform. That said, we acknowledge that residency management platforms used for assessment also provide other critical functions beyond assessment, such as rotation management and Medicare validation. Nonetheless, it may be intriguing to explore some of the potential benefits of a national, centralized assessment system, capable of data visualization to trainees and programs (i.e. dashboards) and amenable

to learning analytic tools. To advance this concept, we recommend that AADPRT advocate to the ABPN for pilot funding to support an initiative. A national, multi-site CBME pilot could further develop key CBME resources (curricular, assessment, learning analytics, faculty development, etc.). In partnership with the ABPN, these resources could be more effectively developed, implemented, and evaluated at scale. This would form the basis for developing more experience in our specialty and a suite of resources and learnings that could support national dissemination.

Research

13. Advance a research agenda of CBME in psychiatry.

Rationale: While the field of CBME has advanced substantially over the past decade, there are research questions that need to be raised in advancing CBME in psychiatry programs. AADPRT may play a crucial role in this research agenda to define some of the research questions relevant and unique to our field, including the need for more robust program evaluation with methods that are context sensitive. Additionally, AADPRT should continue to learn from the research in other specialties, for while there may be unique aspects of CBME in psychiatry, there are also many lessons learned from CBME implementation in other specialties. Funding for such research will need to be identified (e.g., AMA Change MedEd, ABPN, ACGME).

14. Explore the strengths, weaknesses, opportunities, threats of how generative artificial intelligence (AI) can impact workplace-based assessment and other areas in CBME.

Rationale: Generative AI, large language models, and natural language processing have tremendous applications around workplace-based assessments. For example, generative AI technologies can synthesize several narrative data points (i.e., frequent observation and feedback) and generate a summary narrative that can be used for global evaluation or end-of-rotation feedback. Generative AI can also monitor for bias in assessment narratives. The use of virtual scribes, powered by generative AI, can not only be useful for clinical note-writing but also provide feedback on clinician behaviors and augment traditional observation and feedback techniques of the clinical encounter. Despite many promising directions, generative AI also has the potential to amplify bias. These are just a few examples, and we anticipate over the next three years the applications of generative AI will exponentially grow. AADPRT should continue to support emerging pilots and research on how generative AI, large language models, and natural language processing can improve, augment, and amplify workplace-based assessments.

15. Advocate for a call from *Academic Psychiatry* on a journal series focused on CBME.

Rationale: *Academic Psychiatry* serves as an important platform for dissemination of emerging research, best practices, and innovations. AADPRT should advocate to the journal for a call on a series focused on CBME, with an emphasis not only on emerging research in psychiatry but also on implementation best practices (i.e., how programs are doing this, how programs are funding these efforts, etc.).

16. **Conduct a cost analysis of CBME and the return on investment.**

    Rationale: We recognize that while CBME holds many promises, successful implementation, evaluation, and sustainability requires an investment in resources (i.e., faculty time, financial investment, analytic support, technological support). Many department chairs will be evaluating CBME efforts against other departmental priorities. To advance CBME successfully, psychiatry departments will need to better examine these costs and benefits. It will be helpful for AADPRT, in partnership with the American Association of Chairs of Departments of Psychiatry (AACDP), to charge a small work group to explore a cost analysis of CBME (based on some of the required components) and to articulate the financial and non-financial returns on investment. This cost analysis may be critical to successfully advocate for departmental resources. For example, some of the costs of CBME might include an increase in dedicated faculty time for direct observation and feedback, the development of longitudinal coaching programs, new data management strategies to gather and visualize data, and new investments in learning analytics to predict better learning trajectories. That said, these costs could be outweighed by several long-term benefits. For example, there may greater faculty and resident satisfaction and wellbeing in the learning process. There may be more opportunities for residents to build skills in specialized areas, once competence in core areas has been achieved. There may be better patient outcomes, with graduates who have more effective diagnostic and therapeutic skills. There may be lower patient errors, leading to lower malpractice risks and improved patient satisfaction.

<u>Advocacy</u>

17. **Advocate for the creation of a consortium group between members of AADPRT, AACDP, AAP, ADMSEP, ABPN, ACGME Psychiatry RC, and APA CMELL to further advance CBME.**

    Rationale: In the United States, compared to other countries such as Canada, adoption and implementation of CBME is slow given the current regulatory and financial landscape. As a next step, we recognize tremendous value in AADPRT, AACDP, AAP, ADMSEP, ABPN, ACGME Psychiatry RC, and APA CMELL collaborating to advance these efforts. Advancing CBME will require a consortium, comprised of members from these seven organizations, to align strategy, share expertise, and aggregate authority to execute on some of the recommendations outlined in this task force report and to identify future, collective priorities. If competency-based, time-variable models are to become realized in the future, all six organizations, with input from the sub-specialty societies (American

Association of Addiction Psychiatry, American Association of Geriatric Psychiatry, American Association of Child and Adolescent Psychiatry, American Association of Psychiatry and the Law, and Academy of Consultation-Liaison Psychiatry), must be committed to engaging in collective efforts and pilots. The consortium group might consider partnering with Canadian colleagues, given their experiences with Competency by Design, a multi-year national change initiative designed to enhance CBME in residency training and specialty practice in Canada.

18. **Advocate to the ACGME Psychiatry Review Committee considerations to guide their major revisions of the program requirements in Psychiatry.**

    Rationale: The ACGME Psychiatry Review Committee will be embarking on a process to revise the program requirements in psychiatry in 2026. These major program revisions should consider advances in CBME over the past decade, with greater emphasis on prioritizing outcomes over process. The task force recommends the following principles for consideration to guide these efforts. Appendix 4 contains a full description of guiding principles and example implications to program requirements. These include:

    A. The requirements should emphasize outcomes over process.
    B. The requirements should consider leveraging existing training requirements towards newer requirements that align with CBME principles.
    C. The requirements should direct programs to intentionally design their assessment programs, incorporating best practices in programmatic assessment and explicitly articulate workplace-based assessments, ongoing faculty development, learning analytics, longitudinal coaching, and clinical competency committees.
    D. The requirements should provide programs opportunities for flexibility and adaptation to local needs and resources, while ensuring that the universal principles of CBME are achieved.
    E. The requirements should only include adding new requirements that have the potential for high impact to advance CBME.
    F. The requirements (i.e. in the Background and Intent or FAQ sections) should specify the resources necessary to comply with program requirements.

19. **Advocate to the ABPN to adopt an EPA-based framework for learner readiness for advancement, rather than a time-based requirement.**

    Rationale: EPAs are being adopted by many specialties, such as surgery. Numerous studies have demonstrated that EPAs offer a pragmatic framework for competency-based learner assessment. EPA adoption has varied by specialty. Adoption in psychiatry has been slow, in part because the ACGME Psychiatry RC and the ABPN have not invested in EPAs, resulting in many programs overly relying on milestones largely because they have to report on them twice a year to the ACGME. Milestones are characteristics of the individual, while EPAs focus on the professional tasks relevant to

the specialty. EPAs have been shown to be better aligned with entrustments and decisions occurring in the workplace. We recommend that the ABPN adopt an EPA-based framework for readiness for advancement (i.e. completion of a curricular activity) and de-emphasize time (i.e. the number of months on a rotation) as the proxy for competence. As an initial move towards more contemporary measures of competence, AADPRT and the ABPN could sponsor a successful CBME pilot, using EPAs as the guiding framework and grounded in evidenced-based CBME elements (workplace-based assessments, faculty development, dashboards, coaching, and re-engineered clinical competency committees). A pilot would be useful to the field for us to study its benefits, limitations, and costs compared to the current time-based approach. A CBME pilot using EPAs does not necessarily mean that time is not still important; the total time for training does not need to be shorter, and in fact, the total time may be longer depending on the trainee. However, the advancement and promotion of trainees, based on competence, may allow trainees to have opportunities for greater autonomy, individualization, and specialization.

20. Advocate for competency-based, time variable (CBTV) pilots, as they arise.

Rationale: While there are many foundational elements of CBME programs will need to develop in order to make implementation successful, if programs and our regulatory environment lay this foundation, then we can imagine a future in which CBTV pilots may be possible. The ACGME's Advancing Innovations in Residency Education (AIRE) program is an example of ways to explore new training models and we should continue to take advantage of these opportunities. The field of medicine is already starting to see innovative pilots, such as promotion in place (as described by Goldhamer). AADPRT should continue to advocate for CBTV pilots, so that we can identify potential solutions given the historical funding, health system, and regulatory issues which arise in implementing CBTV pilots. This can be done on a smaller scale such as enabling learners who have achieved certain milestones or EPAs to adjust their schedule or their role on a given rotation.

Appendix 1
End-of-training EPAs in psychiatry

Appendix 2
Exemplar CBME implementation roadmap for programs

Appendix 3
Considerations for ACGME Psychiatry RC major program revisions in psychiatry

Appendix 4
EPAs for program leadership in advancing CBME in psychiatry

Appendix 1

End-of-training Entrustable Professional Activities (EPAs) in Psychiatry

The EPA Task Force through AADPRT developed a list of essential EPAs for Psychiatry. Refer to the list of essential EPAs, the descriptions, and related competencies.

- AADPRT EPA Task Force List of Psychiatry EPAs

In summary, the 2018 list of EPAs is:

a. Conduct a psychiatric diagnostic evaluation
b. Manage psychiatric emergencies
c. Manage psychiatric patients longitudinally
d. Manage a patient's psychiatric conditions with medications
e. Manage transitions in care
f. Provide supportive psychotherapy
g. Provide cognitive behavioral therapy
h. Provide psychodynamic psychotherapy
i. Manage involuntary commitment and treatment
j. Assess and manage decision-making capacity
k. Provide psychiatric consultation to other clinicians or services
l. Apply quality improvement methodologies to one's patient panel or clinical service
m. Lead an interprofessional health care team

A brief list of EPA titles and descriptions can be found here:

- Brief List of AADPRT Psychiatry EPA Titles and Descriptions

In developing this list, AADPRT employed a national task force on a three-stage process from May 2014 to February 2017 to develop EPAs for psychiatry. In stage 1, the task force used an iterative consensus-driven process to construct proposed EPAs. In stage 2, the task force interviewed four nonpsychiatric experts in EPAs and further revised the EPAs. In stage 3, the task force performed a Delphi study of national experts in psychiatric education and assessment. All survey participants completed a brief training program on EPAs. Quantitative and qualitative analysis led to further modifications. Essentialness was measured on a five-point scale. EPAs were included if the content validity index was at least 0.8 and the lower end of the asymmetric confidence interval was not lower than 4.0.

Appendix 2

Entrustable Professional Activities (EPAs) for Program Leadership to Advance CBME in Psychiatry

Part 1: Entrustment Scale

Stage	**Pre-Action**	**Direct Guidance**	**Consultation**	**Independent**	**Champion**
Description	In this stage, program leadership either do not have the bandwidth to advance CBME in their programs or are gathering information to prepare for change	In this stage, program leadership advance CBME in their programs through direct guidance from regulatory bodies or recommendations from local (institution) or national groups (AADPRT)	In this stage, program leadership advance CBME with the support of consultation from local or national experts and champions	In this stage, program leadership implement, evaluate, and refine CBME initiatives independently without the support of external consultation	In this stage, program leadership serve as CBME champions to others, providing consultation and adding new knowledge to CBME in psychiatry
Potential Resources	• Identifying seminal articles in CBME • Participating in AADPRT workshops (in person and virtual) • Participating in institutional workshops	• Applying AADPRT toolkits (e.g. EPA) • Applying ACGME toolkits (e.g. CCC) • Analyzing and applying seminal articles in CBME • Participating in AADPRT workshops (in person and virtual) • Participating in ACGME and AAMC workshops • Participating in institutional workshops	• Soliciting informal consultation from peers or institution • Soliciting formal consultation from Assessment Committee • Participating in AADPRT workshops (in person and virtual) • Participating in institutional workshops	• Completing AADPRT assessment certificate • Completing ACGME course in assessment	• Leading AADPRT workshops (in person and virtual) • Leading ACGME and AAMC workshops • Contributing to scholarship in CBME in psychiatry

Part 2: Proposed EPAs

EPA		Core Functions
Core		
1	Construct an outline of a comprehensive **program of assessment** for the training program	• Describe the key literature in programmatic assessment. • Describe the key literature in CBME. • Conduct an appraisal of the program's current approach to learner assessment. • Construct an outline of a comprehensive program of assessment, including an inventory of assessment tools, where they are situated in the curriculum, their purpose, how their information is provided to learners, faculty, and CCCs, and how that information is used for decision-making. • Decide on whether or not to implement entrustable professional activities as a complementary approach to ACGME milestones.
2	Develop a 1-year, 3-year, and 5-year **roadmap** to advance CBME in program	• Outline a 1-year, 3-year, and 5-year roadmap to advance CBME given the current readiness and resources in the program, including initiatives and needed resources • Articulate a change management plan for the proposed initiatives in the roadmap
3	Advocate for and secure **resources** to advance CBME in program	• Conduct a needs assessment of the current resources, including institutional culture, health system and education program buy-in, financial investments, faculty time, data systems, and technology opportunities • Identify the resources needed to execute initiatives in the roadmap. • Advocate for resources, partnering with department, school, and health system leaders.
4	Identify, implement, and evaluate **workplace-based assessments** in program	• Describe the key literature in workplace-based assessments. • Define current workplace-based assessments, such as structured observation and feedback, chart-stimulated recall, multisource feedback, PRITE, etc. • Identify validated assessment tools in psychiatry. • Identify the workplace-based assessments needed in the program. • Implement workplace-based assessments. • Evaluate the validity, reliability, feasibility, cost, and educational impact of workplace-based assessments and engage in continuous process improvement.
5	Coordinate ongoing **faculty development** and learner orientation activities to effectively implement assessments in program	• Develop a faculty development plan for all educators in the program to implement workplace-based assessments and participate in the CCC. • Develop learner orientation activities for learners to appreciate the rationale, purpose, and procedures for assessments.
6	Leverage **data**, assessment platforms, data visualization,	• Describe the key literature in precision medical education. • Establish workflows to organize assessment data.

	dashboards, learning analytics, and other technologies for learners, faculty, and program	• Identify opportunities for data visualization. • Establish dashboards for learners, coaches, and program. • Apply learning analytics to support learner competency development • Identify technologies (i.e. artificial intelligence) to support assessment program
7	Implement a **coaching** program to support longitudinal competency development and promote self-regulated learners	• Describe the key literature in coaching. • Establish a coaching program to support longitudinal learner competency development • Support coaches through ongoing faculty development
8	Implement, evaluate, and refine **Clinical Competency Committees** (CCCs) that support trustworthy judgements for promotion and guidance for learners on growth or remediation	• Describe the key literature on running an effective CCC. • Identify a diverse group of faculty to serve on the CCC. • Establish CCC workflows and group agreements. • Provide data and data visualization to CCC to support trustworthy judgements for promotion. • Support CCC faculty through ongoing faculty development. • Monitor for bias and inequities in assessment.
9	Engage in continuous improvement to promote **equity** in assessment for learners	• Describe the key literature in equity in assessment. • Engage in continuous improvement to identify bias and inequities at the interpersonal, group, and systems levels. • Support faculty development to minimize bias, particularly for learners from groups under-represented in medicine.
Aspirational		
10	Implement competency-based, **time-variable** (CBTV) innovations for learner progression, as regulatory, financial, and clinical structures allow	• Describe the key literature in CBTV innovations in GME. • Ensure trustworthy judgements for learner promotion. • Identify financial and clinical resources needed for time-variable innovations. • Identify subsequent roles following learner competency attainment. • Evaluate effectiveness and impact of CBTV innovations.

Suggested Faculty Development Activities for EPAs

	EPA	Faculty Development Activities and Resources
1	Construct an outline of a comprehensive **program of assessment**	• Relevant literature • Program for assessment templates in psychiatry • External consultation
2	Develop a 1-year, 3-year, and 5-year **roadmap** to advance CBME in program	• CBME in psychiatry task force templates • External consultation
3	Advocate for and secure **resources** to advance CBME in program	• AADPRT workshops • ACGME workshops • AAMC workshops • External consultation
4	Identify, implement, and evaluate **workplace-based assessments** in program	• Relevant literature • AAMC toolkits (i.e. MedBiquitous) • AADPRT-sponsored assessment tools repository • AADPRT workshops

		• ACGME workshops • External consultation
5	Coordinate ongoing **faculty development** and learner orientation activities to effectively implement assessments in program	• AADPRT workshops • ACGME workshops • External consultation
6	Leverage **data**, assessment platforms, data visualization, dashboards, learning analytics, and other technologies to support learners, faculty, and program	• Relevant literature • AADPRT workshops • ACGME workshops • External consultation
7	Implement a **coaching** program to support longitudinal learner competency development and promote self-regulated learners	• Relevant literature • AADPRT workshops • AAMC workshops • ACGME workshops • External consultation
8	Implement, evaluate, and refine **Clinical Competency Committees** (CCCs) that support trustworthy judgements for promotion and guidance for learners on growth or remediation.	• Relevant literature • AADPRT workshops • ACGME workshops • External consultation
9	Engage in continuous improvement to promote **equity** in assessment for learners	• Relevant literature • AADPRT workshops • ACGME workshops • AAMC workshops • External consultation

Suggested Assessment Activities for EPAs

	EPA	Assessments and Work Products
1	Construct an outline of a comprehensive **program of assessment**	• Creation of an outline of a program of assessment • Feedback of this outline from an AADPRT assessment champion
2	Develop a 1-year, 3-year, and 5-year **roadmap** to advance CBME in program	• Creation of a roadmap • Cost analysis of the resources required to implement the roadmap • Feedback of this roadmap from an AADPRT assessment champion
3	Advocate for and secure **resources** to advance CBME in program	• Cost analysis of the resources required to advance CBME in program • Identification of funding for required resources
4	Identify, implement, and evaluate **workplace-based assessments** in program	• Evidence of workplace-based assessments that are aligned with the literature • Critical appraisal of the validity, reliability, feasibility, cost, and educational impact of workplace-based assessments

5	Coordinate ongoing **faculty development** and learner orientation activities to effectively implement assessments in program	• Evidence of faculty development activities • Evaluation of the effectiveness of faculty development activities • Evidence of learner orientation activities • Evaluation of the effectiveness of learner orientation activities
6	Leverage **data**, assessment platforms, data visualization, dashboards, learning analytics, and other technologies to support learners, faculty, and program	• Evidence of leveraging data for assessment, including visualization tools, dashboards, learning analytics, and adoption of emerging technologies (i.e. artificial intelligence) • Critical appraisal of the effectiveness of the use of this data and emerging technologies on educational outcomes
7	Implement a **coaching** program to support longitudinal learner competency development and promote self-regulated learners	• Evidence of a coaching program • Evidence of faculty development activities for participants of the coaching program • Evaluation of the effectiveness of faculty development activities for participants in the coaching program
8	Implement, evaluate, and refine **Clinical Competency Committees** (CCCs) that support trustworthy judgements for promotion and guidance for learners on growth or remediation.	• Evidence of CCC policy and procedures • Critical appraisal of CCC strengths, weaknesses, opportunities, and threats
9	Engage in continuous improvement to promote **equity** in assessment for learners	• Critical appraisal of bias in assessments • Evidence of implementation efforts to address inequities in assessment

Appendix 3

CBME Implementation Roadmap

The table below articulates a 1-Year, 3-Year, and 5-Year CBME implementation roadmap for an exemplar program. Each of the initiatives have been categorized into one of six domains, including:

1) Program of assessment
2) Workplace-based assessment tools
3) Faculty development
4) Data application
5) Coaching
6) CCCs

We acknowledge that substantial resources may be necessary to embark on any of these initiatives. Programs have varying access to financial investments, faculty time and size, data infrastructure, assessment expertise, access to technologies, and analytical capacity. Some CBME implementation initiatives may require a higher investment in resources (designated as **high** in the table below) or a lower investment in resources (designated as **low** in the table below). The high and low designations in this exemplar will vary depending on the resources of any given program.

Domain	**Year 1**	**Year 3**	**Year 5**
Program of assessment	• Describe the key literature in programmatic assessment (low). • Describe the key literature in CBME (low). • Conduct an appraisal of the program's current approach to learner assessment (low). • Construct an outline of a comprehensive program of assessment, including an inventory of assessment tools, where they are situated in the curriculum, their purpose, how their information is provided to learners, faculty, and CCCs, and	• Refine the outline of a comprehensive program of assessment, including an inventory of assessment tools, where they are situated in the curriculum, their purpose, how their information is provided to learners, faculty, and CCCs, and how that information is used for decision-making (low). • Implement EPA-based pilots (high).	• Refine the outline of a comprehensive program of assessment, including an inventory of assessment tools, where they are situated in the curriculum, their purpose, how their information is provided to learners, faculty, and CCCs, and how that information is used for decision-making (low). • Monitor the effectiveness of EPA-based pilots (high).

	how that information is used for decision-making (low). • Decide on whether or not to implement entrustable professional activities (EPAs) as a complementary approach to ACGME milestones (high).		
Workplace-based assessment tools	• Describe the key literature in workplace-based assessments (low). • Define current workplace-based assessments, such as structured observation and feedback, chart-stimulated recall, multisource feedback, PRITE, etc. (low). • Identify validated assessment tools in psychiatry (low). • Identify the workplace-based assessments needed in the program (low). • Identify apps for ease of use in the workplace for direct observation and feedback (high).	• Implement new workplace-based assessments (high). • Implement apps for ease of use in the workplace for direct observation and feedback (high). • Evaluate the validity, reliability, feasibility, cost, and educational impact of workplace-based assessments and engage in continuous process improvement (low).	• Implement new workplace-based assessments (high). • Refine apps for ease of use in the workplace for direct observation and feedback (high). • Evaluate the validity, reliability, feasibility, cost, and educational impact of workplace-based assessments and engage in continuous process improvement (low).
Faculty development	• Attend AADPRT annual meeting and/or virtual workshops on CBME in psychiatry (low). • Discuss CBME topics in the PEC agenda (low). • Develop a faculty development plan for all educators in the program to implement workplace-based assessments and participate in the CCC (low). • Develop learner orientation activities for learners to appreciate the rationale, purpose, and procedures for assessments (low). • Attend AADPRT annual meeting and/or virtual workshops on CBME in psychiatry (low). • Advocate for PD/APD/PA (if needed) dedicated time and funding to attend professional development	• Incorporate 1-2 best practices at institution from national faculty development offerings in CBME (high). • Host a faculty development retreat on CBME for core faculty (high). • Engage an AADPRT assessment consultant to provide a review of CBME implementation initiatives (low).	• Implement consultant recommendations (high). • Host a faculty development retreat for core faculty and the broader faculty group on CBME (high). • Complete certification in CBME for select program leadership (high).

	• Host topics in CBME during faculty development opportunities for core faculty (low).		
Data application	• Describe the key literature in precision medical education (low). • Establish workflows to organize assessment data (high). • Identify opportunities for data visualization and learner dashboards (high).	• Review workflows to organize assessment data (low). • Implement opportunities for data visualization and learner dashboards (high). • Identify technologies (i.e. artificial intelligence) to support assessment program (high). • Integrate learner analytics in education decision-making (high).	• Improve workflows to organize assessment data (low). • Improve opportunities for data visualization (high). • Implement technologies (i.e. artificial intelligence) to support assessment program (high). • Continue to integrate learner analytics in education decision-making (high).
Coaching	• Describe the key literature in coaching (low). • Review AADPRT workshops on coaching programs (low). • Advocate for resources to pilot a coaching program to support longitudinal learner competency development (high).	• Establish a coaching program to support longitudinal learner competency development (high). • Support coaches through ongoing faculty development (high).	• Refine coaching program to support longitudinal learner competency development (low). • Support coaches through ongoing faculty development (high).
CCC	• Describe the key literature on running an effective CCC (low). • Describe the key literature in equity in assessment (low). • Identify a diverse group of faculty to serve on the CCC (low). • Establish CCC workflows and group agreements (low). • Provide data and data visualization to CCC to support trustworthy judgements for promotion (low). • Support CCC faculty through ongoing faculty development (high).	• Improve data and data visualization to CCC to support trustworthy judgements for promotion (high). • Support CCC faculty through ongoing faculty development (high). • Engage in continuous improvement to identify bias and inequities at the interpersonal, group, and systems levels (high).	• Improve data and data visualization to CCC to support trustworthy judgements for promotion (high). • Support CCC faculty through ongoing faculty development (high). • Engage in continuous improvement to identify bias and inequities at the interpersonal, group, and systems levels (high). • Support faculty development to minimize bias, particularly for learners from groups under-represented in medicine (high).
Suggested Resources	• Identifying seminal articles in CBME • Participating in AADPRT workshops (in person and virtual) • Participating in institutional workshops	• Applying AADPRT toolkits (e.g. EPA) • Applying ACGME toolkits (e.g. CCC) • Analyzing and applying seminal articles in CBME • Participating in AADPRT workshops (in person and virtual)	• Completing AADPRT assessment certificate • Completing ACGME course in assessment • Leading AADPRT workshops (in person and virtual) • Leading ACGME and AAMC workshops

[redacted]		• Participating in ACGME and AAMC workshops • Participating in institutional workshops	• Contributing to scholarship in CBME in psychiatry

Appendix 4

Considerations for ACGME Psychiatry RC Major Program Revisions in Psychiatry

	Considerations	Example Implications to PRs
1	The requirements should emphasize outcomes over process.	• As allowed by the ABPN, permit programs piloting EPAs to report on both EPAs and milestones • Require examples of the outcome monitoring employed by programs. • Less emphasis on time-based requirements (e.g., number of months on a service) as a proxy for competence.
2	The requirements should consider leveraging existing training requirements towards newer requirements that align with CBME principles.	• Encourage programs to recognize the different functions that occur in the supervision relationship (skill supervision, competency coaching, mentorship) and specify this in program requirement background and intent section. • Expand the definition of supervision to include not only skills (e.g., psychotherapy, caseload management) supervision but also supervision as coaching. • Include requirements in training in coaching and assessment for faculty in the common program requirements. • Psychotherapy supervision and competency coaching are inter-related but separate functions, and faculty will require separate skills.
3	The requirements should direct programs to intentionally design their assessment programs, incorporating best practices in programmatic assessment and explicitly articulate workplace-based assessments, ongoing faculty development, learning analytics, longitudinal coaching, and clinical competency committees.	• Increase frequency of direct observation and feedback with a commensurate increase in dedicated faculty time required per number of resident assessments. • Require faculty training in the recognition and mitigation of bias in assessment.

4	The requirements should provide programs opportunities for flexibility and adaptation to local needs and resources, while ensuring that the universal principles of CBME are achieved.	• Length of training experiences should be flexible based on a learner achieving competence, with alternative training experiences in advanced or other specified areas. • Program requirements should include descriptions of equivalent methods to assess and report outcomes. ○ Equivalencies could be provided via FAQs
5	The requirements should only include adding new requirements that have the potential for high impact to advance CBME.	• One example of a high impact requirement is increasing direct observation and feedback
6	The requirements should acknowledge the resources necessary to comply with program requirements.	• Explicit emphasis must be placed on and time provided for faculty development. • One example of a high resource initiative is the development of a platform for learner data aggregation and visualization (e.g. dashboard) and the use of data analytics for predictive purposes.