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Team Based Learning Approach for Instructing Medical Clerkship Students on how Neuroscience is Transforming the Treatment of Depression and Suicidal Ideation

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Abstract

Objective

Embed neuroscience teaching into psychiatry clerkship through a process that engages students in complex, real problem solving. The teaching session will demonstrate how basic and clinical research is transforming the treatment of depression.

Background

- Psychiatry is a discipline of neuroscience and psychiatric disorders have a neurobiological basis. Yet, psychiatry continues to struggle with issues of stigma that prevent patients from seeking adequate treatment which in turn can lead to dire consequences.
- Medical students are great vehicles for bringing about positive change. Instilling in them a life-long appreciation of the tight link between neuroscience, brain research and psychiatry can help them become better clinicians/physician scientists and life-long ambassadors. They can then thoughtfully educate the public and future health professionals about how **psychiatric illnesses are, in fact, disorders of the brain.**
- YSM curriculum blends neuroscience teaching into Psychiatry in the first year very effectively but not as well in the rest of the curriculum
- Clinical experience during clerkship exposes students to multiple psychiatric treatments and their merits/demerits – a fertile ground for blending neuroscience teaching with instruction on drugs in the pipeline.

Methods

A TBL session based on discussion and decision-making will be used for the proposed learning exercise. The TBL session being developed has the following key features:

- **'Backward Design'**: Decide what students should be able to do at the end of the session or clerkship. Then decide what they need to know.
- Session activities progress through **Bloom's levels** -remembering, understanding, applying, analyzing, evaluating and creating
- **Knowledge acquisition/knowledge application process** is repeated several times during the session

Conclusions

The proposed TBL is in line with the following '**Guiding Principles for Renewing the YSM Curriculum**':

1. **Integration** Basic, clinical, and social sciences are integrated throughout all years of the curriculum. This requires that:

Basic scientists and clinicians plan and teach together to assure that the curriculum repeatedly emphasizes and demonstrates the importance of the basic sciences in understanding and practicing clinical medicine.

The TBL session will achieve the following '**Overarching Goals of the Curriculum**'

2. Mechanisms and Treatment of Disease

Students acquire knowledge at the molecular, cellular, organ-system, whole body, and societal levels, and integrate this knowledge with clinical science and skills to diagnose and treat disease.

8. Physician as Scientist

Students learn to approach medicine from a scientifically minded perspective and are educated and mentored by leading scientists. This prepares them for careers in biomedical science and as medical practitioners, and to become the next generation of medical scientists and leaders in academic medicine.

References

The Essential Elements of Team-Based Learning Adapted from Chapter 1 of Michaelsen, L., Sweet, M. & Parmalee, D. (2009) *Team-Based Learning: Small Group Learning's Next Big Step. New Directions in Teaching and Learning*, 7-27.