

## “Formulation wars”: a novel formulation curriculum for residents and faculty

Catherine Hickey, Angela Penney, Kim St. John

### Summary

Biopsychosocial formulation remains an important skill for both residents and faculty. If it is not taught early and adequately, then residents fail to develop this skill. Despite a number of evidence-based teaching tools, residents continue to voice concern about when and how formulation is being taught in training programs. A survey in Canada showed that residents were dissatisfied with the current “status quo”. Structured teaching was deemed important; as was hearing supervisors formulate. Small group teaching was valued and early exposure was also considered beneficial. The purpose of our paper is to demonstrate a novel technique for teaching biopsychosocial formulation to psychiatry residents of all training levels. We detail a workshop we developed for both residents and faculty that combines faculty formulations with small and large group work. We recognize that this initial workshop was a small first step in changing the culture of formulation teaching. More studies are needed to determine exactly which teaching methods should be employed in a more robust and structured formulation curriculum.

**biopsychosocial, formulation, development, curriculum**

### INTRODUCTION

Formulating a biopsychosocial understanding of a patient remains a challenge for psychiatric residents and faculty alike. If it is not taught early and adequately then residents fail to develop this important skill. Formulation has traditionally been informally taught using the apprenticeship model during case conferences and in individual supervision [1]. However, the principles of competency-based education demand more than just an *ad hoc* approach to teaching. Competency-based educators must now develop robust curricula, which ensure that important de-

velopmental milestones are met in accordance with a trainee’s postgraduate level [2].

There have been several noteworthy attempts at formulation curriculum development. One group developed a reliable marking scheme for scoring the comprehensiveness of a formulation [3]. Another group used the *Psychodynamic Diagnostic Manual* to teach graduate-level psychology students to develop competency in four domains, including case formulation [4]. There is also a new, innovative formulation curriculum including a novel online module embedded in the National Neuroscience Curriculum Initiative from Yale [5]. This resource shows promise in engaging the learner in a novel, case-based approach that is learner centered and user friendly. However, Mace & Binyon [6] proposed that teaching formulation is challenging because “there is no generally agreed on format” to fol-

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Catherine Hickey, Angela Penney, Kim St. John: Memorial University of Newfoundland, Geriatric Psychiatry Day Hospital, Dr. LA Miller Centre, 100 Forest Road, St. John’s, NL, Canada A1A 1E5.

Correspondence address: drcatherinehickey@gmail.com

low and no agreed upon assessment tool or scale. As such, psychiatric learners continue to struggle in their approach.

Similar to the United States, the Royal College of Physicians and Surgeons of Canada has outlined the importance of acquiring formulation skills in their objectives of training in psychiatry [7]. In Canada, the approach to formulation has been greatly aided by Weeresekera's Multiperspective Brief Formulation [8]. Weeresekera developed a grid that encompasses the predisposing, precipitating, perpetuating and protective factors in each of the biological, psychological and social domains. Students have anecdotally reported that the grid is not only pragmatic but comprehensive; when used appropriately it can also inform a thorough biopsychosocial management plan. That said, the grid is only useful when residents employ it consistently throughout their training and get adequate feedback from peers and supervisors.

Despite the evidence for the above teaching methods and curricula, there appears to be a disconnect in the valuable resources that actually exist and those that are being taught on a regular basis in training programs. We base this assertion on the anecdotal reports that we have heard from our own residents time and time again.

Sensing these challenges, our group [9] initiated a survey on resident attitudes and experiences with formulation teaching and learning. Over 600 residents in English Canadian training programs were sent a questionnaire which asked about perceived strengths, weaknesses and ongoing challenges in learning formulation in their training programs. The survey contained a mixture of ten open – and closed-ended questions. The survey link was emailed to all English program directors in Canada and all but one program director distributed the link to their residents. 116/661 residents (ranging from PGY<sup>1</sup> 1–5) completed the survey; the response rate was 17.5%. The responses were coded by important themes. Overall, residents were dissatisfied with the current “status quo”. Structured teaching was deemed important; as was hearing supervisors

formulate. Small group teaching was valued and early exposure was considered beneficial.

## PURPOSE

The primary purpose of this project was to initiate change in how our residency program teaches formulation. We recognized that curricular change would be a long-term process involving multiple stakeholders and would not consist of a single “workshop” or event. That said, our group wanted to offer a beginning half-day workshop, embedded in the combined faculty/resident retreat, to announce a change in how we would teach this important skill on a going forward basis.

One aim of our workshop was to offer a forum in which residents could witness the faculty engaged in formulating patients. Another aim was to engage residents and faculty in providing formative feedback to the faculty offering formulations. Thirdly, we wanted to engage both residents and faculty in small group work, not only to learn the skills of formulation but to work on collaboration. And finally, we wanted the entire experience to be fun and humorous – thereby promoting formulation as an enjoyable exercise rather than one to be avoided and dreaded.

## WORKSHOP STRUCTURE

A small faculty planning group met early on to discuss the design and development of the learning activities. After some collaboration, an outline was agreed upon. First, a brief “introduction to formulation” lecture was given by one of our faculty group. The purpose of this presentation was not to provide an exhaustive review of the various types and associated theoretical frameworks of formulation. Rather, formulation “basics” were reviewed and a general approach to formulation (using Weeresekera's grid) was suggested.

The entire group was then given a document detailing a “psychiatric case”. The various cas-

<sup>1</sup> PGY – short for postgraduate year, refers to a North American numerical scheme denoting the progress of postgraduate dental, medicine, podiatry or pharmacy residents in their residency programs. It is used to stratify responsibility in most training programs and to determine salary. The grade of the resident is denoted with a numeral after the PGY designation, such as PGY-3 for a third-year resident

es included fictional characters from movies and television. The identity of each case was concealed. After the group had a chance to read the case history, one faculty member read the case aloud, a second faculty member organized the formulation on a grid (using a flip chart) and the entire group watched. Following this, the second faculty member formulated the case.

The entire resident and faculty group was then asked to provide formative assessment on the faculty formulation. This was done in two ways. Firstly, open dialogue was encouraged. And secondly, an audience response system (also known as ARS or "clicker technology") was employed. All participants were invited to rate the formulation on a scale of 0–10 in each of the domains of style, content and flow.

Such use of technology has been shown to increase audience engagement and to allow participants to express their true thoughts and feelings [10]. Once all participants "voted", results were instantly shown on a bar graph on the screen. Afterwards, all participants were encouraged to guess the identity of the case. Following the first faculty formulation, the exercise was repeated with the second faculty member who formulated a second case.

After the faculty concluded their demonstration of formulation, we then asked all participants to break out into small groups of about 5–6 members. Each group consisted of a blend of residents and faculty of varying degrees of seniority. Each group was given a "psychiatric case". Again, these cases included fictional characters. Examples of fictional characters were Jasmine (from the movie "Blue Jasmine"), Nina (from the movie "Black Swan"), Don Draper (from the series "Mad Men") and Tony Soprano (from the series "The Sopranos"). Each case was picked by the organizing committee because of the rich biopsychosocial undertones made explicit in the character's history. Each small group was encouraged to "break down" the tasks of formulating (such as predisposing, precipitating, perpetuating and protective factors) and assign one member to focus on each task. Each group was also asked to assign one member to present the formulation to the larger group.

Following the small group work, each group presented their formulation and all other groups were invited to work together to guess the iden-

tity of the case presented. At the end of all of the formulations, each group submitted their "best guess" as to all of the case identities. Results were tabulated and one group was declared the "winner" of the formulation wars. A small prize was awarded to the group for their successful performance.

## FEEDBACK RECEIVED

Overall, feedback from this event was positive. On reading narrative comments from participants, several themes emerged. What residents appreciated most was interacting in small groups and working with faculty. Albeit informal, participants enjoyed the formulation competition. The interactive and collaborative nature of the event was seen as positive.

## LESSONS LEARNED

Not all feedback was positive. Some learners requested more time for the small group interactions. Others requested that the workshop be spread out over a longer period of time (an entire day). Our room was not equipped with a microphone and this was noted by eight participants. Smartphones were not prohibited during the event and some participants complained that other participants used them to Google the case identities. This was deemed unfair.

There was conflicting feedback on whether or not we should have more didactics or more small group learning. Overall, though, participants voiced a strong desire to have this type of teaching more often and with more participants (only a minority of all faculty attended). The organizing committee concluded that the "Formulation Wars" idea was a useful one and promoted many important ideals implicit in the goals of our training program. However, studies are needed to determine exactly which teaching methods should be employed in a more robust and structured formulation curriculum.

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