

# Protected block time for teaching and learning in a postgraduate family practice residency program

Piera Jung BSN MA Maggie Kennedy MSN Mary J. Winder MD CCFP

## Abstract

**Objective** To explore the elements necessary for a high-quality educational experience in a family practice residency program with respect to scheduling, learning environment, and approaches to teaching and learning.

**Design** An interpretative, qualitative study using a generative-inquiry approach.

**Setting** The Nanaimo Site of the University of British Columbia Family Practice Residency Program.

**Participants** Fifteen physician instructors and 16 first- and second-year residents.

**Methods** Data were gathered from 2 qualitative focus group interviews with residents; 2 qualitative focus group interviews with physician instructors; and structured and semistructured observation of 2 in-class seminars, with a focus on residents' engagement with the class. Results were analyzed and categorized into themes independently and collectively by the researchers.

**Main findings** Protected block time for teaching and learning at the Nanaimo Site has been effective in fostering a learning environment that supports collegial relationships and in-depth instruction. Residents and physician instructors benefit from the week-long academic schedule and the opportunity to teach and learn collaboratively. Participants specifically value the connections among learning environment, collegiality, relationships, reflective learning, and the teaching and learning process.

**Conclusion** These findings suggest that strategic planning and scheduling of teaching and learning sessions in residency programs are important to promoting a comprehensive educational experience.

## EDITOR'S KEY POINTS

- Setting aside time for academic study in a family practice residency program allows students to focus on the learning experience and promotes collegial relationships.
- Communication and collaboration between residents and physician instructors lead to shared objectives and outcomes, and a more relevant learning experience.
- When students are engaged in interactive lessons, with a focus on real-life application rather than textbook instruction, they strengthen their clinical reasoning skills and develop a professional identity.

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# Période de temps réservée à l'enseignement et à l'apprentissage dans un programme postuniversitaire de résidence en médecine familiale

Piera Jung BSN MA Maggie Kennedy MSN Mary J. Winder MD CCFP

## Résumé

**Objectif** Déterminer les conditions requises pour une expérience éducative de haute qualité dans un programme de résidence en médecine familiale, pour ce qui est de l'horaire, du milieu d'apprentissage et des méthodes d'enseignement et d'apprentissage.

**Type d'étude** Étude d'interprétation qualitative à l'aide d'une enquête générative.

**Contexte** Le site Nanaimo du programme de résidence en médecine familiale de l'université de la Colombie-Britannique.

**Participants** Quinze médecins enseignants et 16 résidents de première et de deuxième année.

**Méthodes** Les données proviennent de 2 groupes de discussion qualitatifs tenus par les résidents; de 2 groupes de discussion qualitatifs tenus par les médecins enseignants; et de l'observation structurée et semi-structurée de 2 séminaires en classe avec un accent sur l'engagement des résidents à l'égard de la classe. Les résultats ont été analysés et classés en thèmes par les chercheurs de façon indépendante et collective.

**Principales observations** Les périodes de temps réservées à l'enseignement et à l'apprentissage au site de résidence de Nanaimo a permis de promouvoir un environnement d'apprentissage propice aux relations entre collègues et à un apprentissage approfondi. Résidents et médecins enseignants bénéficient de l'horaire académique hebdomadaire et d'une occasion d'enseigner et d'apprendre en collaboration. Les participants apprécient particulièrement les liens qui relient le milieu d'apprentissage, la collégialité, les relations, l'apprentissage réfléchi et le processus d'enseignement et d'apprentissage.

**Conclusion** Ces données suggèrent qu'une planification et une organisation stratégiques de l'horaire des séances d'enseignement et d'apprentissage dans les programmes de résidence sont importantes pour promouvoir une expérience éducative complète.

## POINTS DE REPÈRE DU RÉDACTEUR

- Réserver du temps pour l'étude théorique dans un programme de résidence en médecine familiale permet aux étudiants de se concentrer sur l'expérience d'apprentissage et favorise les relations entre collègues.
- La communication et la collaboration entre résidents et médecins enseignants aboutit à un partage des objectifs et des issues ainsi qu'à une expérience d'apprentissage plus pertinente.
- Lorsque les étudiants participent à des leçons interactives avec un accent sur les applications de la vie courante plutôt que sur des notions de manuels scolaires, ils améliorent leur raisonnement clinique et développent une identité professionnelle.

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The lessons learned during training in postgraduate family practice residency programs have a great effect on physician function and competence after graduation<sup>1-7</sup>; educators are therefore required to take a closer look at the structure and design of these programs. Recent literature recognizes that adult-appropriate learning strategies play a key role in the development of professionalism and decision-making and critical-thinking skills.<sup>8-10</sup> Some of the challenges inherent to medical education include the development of professional identity and, in particular, how to foster an attitude of life-long learning.<sup>11</sup> Many studies have demonstrated that the learning environment plays an important part in *how* students learn as well as in *what* they learn.<sup>4,6,7</sup> A reflective-practice approach when working with residents has been cited as an effective way to develop technically skilled, caring, compassionate, and ethical practitioners.<sup>12</sup> Although a substantial amount of literature has been devoted to medical education, curriculum redesign, distributed learning, and definitions and influences of mentorship and professionalism in medical education,<sup>10,13-17</sup> there is a paucity of research concerning the essential elements of protected block time (PBT) for teaching and learning during residency training.

This study was part of a multicomponent exploration of a family practice residency program in British Columbia. The University of British Columbia (UBC) Family Practice Residency Program has residency sites distributed over 12 communities, and the Nanaimo Site is one of its more recently created sites. Similar to other Canadian family practice residency programs, the Nanaimo Site offers supervised clinical experiences in hospital and in the community, with residents gaining an increasing level of responsibility over time. To enhance learning and to provide time for reflection and professional development, the program also comprises an educational component in the form of lectures, seminars, and workshops. However, the Nanaimo Site is unique among the UBC and North American family practice residency programs in that it schedules its formal learning component in discrete 1-week blocks every 2 months. During this PBT for teaching and learning, residents are relieved of all on-call responsibilities, allowing them to fully participate in scholarly activities so that the importance of reflective learning is emphasized. The focused time promotes relationship building and the sharing of clinical experiences, and encourages the integration of theory and practice.

The purpose of this qualitative study was to explore the effectiveness of PBT with respect to scheduling, quality of the learning environment, and approaches to teaching and learning. Using a generative-inquiry

approach, essential elements were identified. This study was approved by the research ethics boards of Vancouver Island University and UBC.

## METHODS

Data were gathered from 2 qualitative focus group interviews with residents, 2 qualitative focus group interviews with physician instructors, and in-class observation of 2 seminars. Purposeful sampling was used for the focus groups. Two focus groups, scheduled 2 months apart, were held with residents during their PBT sessions. Residents were recruited by e-mail invitation; all the family practice residents at the Nanaimo site (8 from first year and 8 from second year) consented to participate in both focus groups. Findings from the first residents' focus group were analyzed, categorized into themes, and presented back to the residents during the second focus group. This process enabled the residents to discuss and validate the themes that emerged from the first focus group and also provided opportunity for clarification.

In addition, 2 separate focus group interviews were held with the physician instructors. Physicians were recruited by verbal or e-mail invitation; all instructors were invited. Fifteen out of 60 physicians responded to the invitation. The questions were provided to the participants before the focus groups. Acting as moderators, the same researchers (P.J. and M.K.) posed questions to each of the focus groups in order to maintain consistency among the groups. Research associates sat in during the focus groups and recorded field notes. The focus group interviews were approximately 60 minutes in length and were audiotaped and transcribed verbatim.

In addition to the focus groups, 2 researchers who were not associated with the UBC Family Practice Residency Program obtained consent from the residents and physician instructors to attend 2 seminars in order to observe the teaching and learning process. The researchers used structured and semistructured observational strategies, with a focus on residents' engagement with the class.

All identifying information was removed from transcripts and field notes. The researchers organized, coded, and analyzed the transcripts and field notes independently, noted key words, and identified emerging themes. A face-to-face meeting was held to compare and contrast independent analyses. The results of the combined analysis were then circulated to the larger research team for secondary analysis, member-checking, and theme saturation. After several iterations, a final consensus on themes was reached.

## FINDINGS

Three interrelated themes emerged from the study.

### Time and space for learning

Residents and physician instructors agreed that having a dedicated block of time was both effective and the preferred approach to scheduling sessions for teaching and learning. Residents said they could truly focus on learning because they were not in the middle of their rotations or on call during PBT. They appreciated this freedom from extraneous responsibility, which enabled them to engage in a learning experience that was uninterrupted, consolidated, intense, and highly focused. One resident said, "I really like having a whole separate week that's just an academic week rather than having, let's say, half days throughout every week." Another stated, "[During PBT] I don't feel like I'm pulled away from other duties and I'm not thinking about other things that I may have to be doing or that didn't get done earlier in the day." A third agreed, "None of us are post-call or on call during the [PBT] time, so we're not falling asleep and we actually can just focus on our academics."

Physician instructors valued the flexibility of being able to choose the day or time for their teaching sessions that best fit their own practice schedules:

The one thing that's good is ... I can pick any day ... whereas if they picked the morning that was my [operating room] day, I wouldn't have another option .... So it might be that in a place the size of Nanaimo, having the block might actually mean that the residents *do* get more speakers and more specialists.

For the residents, the PBT environment also facilitated the development of learning communities among cohorts of residents and family physicians. The social aspects of PBT fostered a supportive environment in terms of building collegiality and helped to create learning opportunities, thus reinforcing the notion of a community of learners. The residents pointed out the following:

There's also the social experience. Like, this week there were many birthdays and it's much easier when it's the academic week. We just meet together after the day, and you know, enjoy a restaurant and dinner ... which is really difficult to do when we're actually all on call at different times.

It's important ... support, debriefing about various situations, you know, specific to being a resident as well .... The [first-year residents] can connect with [second-year residents] and exchange notes on topics

like, "What's a good elective to do next year? How did you like your placement?"

Collegiality is really important ... with preceptors ... [and] with the whole community; but as a group of residents, we need to be collegial together.

The physician instructors mentioned that they appreciated the opportunity to present and share information with others on topics they were particularly passionate about. Both the residents and the instructors cited the formal and informal nature of the dialogue as an excellent means of learning about the culture of family practice. Physician instructors pointed out the following:

They want a family doc there as an observer to sort of give some feedback about the family medicine approach to whatever was being presented .... If you have a particular interest in giving a presentation, that's the one we get.

What they are getting here is the practical filter, because one thing that you don't really appreciate when you come out of medical school is what is likely and what's not likely.

Residents reported that when they were able to openly engage in dialogue with their peer group about clinical cases and the approaches that were employed, a great deal was added to their current knowledge base:

I like that sometimes there's [a] combination, like, they'll do a brief lecture, they'll say these are some key points, they'll give us a case about which we'll have to answer questions, and there might even be some hands-on activity or at least something controversial to discuss.

### Communication and collaboration

Both residents and physician instructors were committed to promoting optimal outcomes for learning and ensuring that the College of Family Physicians of Canada CanMEDS–Family Medicine framework of competencies and curriculum requirements were met.<sup>18</sup> This commitment was evident from the number of self-directed learning activities that residents engaged in, such as the "McMaster Modules" and the journal club:

So these [resuscitation rounds, McMaster Modules, case rounds, journal club] are things that we've started on our own because we felt we needed to do that. But it's because we had designated time during academic [PBT] week .... We wouldn't be able to do it another time.

The physician instructors expressed a consistent desire to share their knowledge and experiences with their future colleagues. They highlighted the benefits of open and continuous channels of communication to cultivate sound relationships and better address the learning needs of the residents and the program. One resident remarked that communication among and across partner groups was essential to ensuring that learning needs were identified and met:

I think it would make incredible sense to have someone, like a few residents on the [curriculum] committee ... and have a great conversation like this ... to say what [we] would change [about PBT], what are we missing. Better communication.

### Relevance and engagement

During the discussions, residents appeared to be motivated, self-directed learners who wished to set their own learning objectives in order to make the sessions relevant to their needs:

Sometimes, like, the topics that are chosen are not particularly what we would find useful .... It would be helpful to have [our] objectives be part of the learning objectives as well [for PBT]. An e-mail survey would be a good way to communicate potential learning objectives [for PBT sessions].

Resident A: It just has to do with the generation that we were trained in. So we get a lot of ... I don't know how to word it ...

Resident B: Touchy feely?

Resident A: Yes, okay, touchy feely stuff during our undergraduate years .... We would like to focus more on clinical stuff because we have only 2 years to learn these things.

Residents and physician instructors indicated their strong preference for situational and participatory learning methods (case studies, dialogue, peer teaching, small group discussions, hands-on sessions, etc). Residents said the following:

Teaching someone has a benefit beyond just teaching them a skill. It really forces you to reiterate concepts in your own mind and to learn ... to get a better mastery of the subject.

I like hands-on sessions and practice .... Sometimes it consists of only scenarios and role playing. It's not just learning a technical skill ... [but] something hands on just to kind of play with while they talk.

The residents valued educational sessions that communicated the purpose of the lesson and its relevance to

family practice. Understandably, the residents also preferred teaching or learning sessions that were tailored to their level of training. Said one, "I think learning has to be appropriate to our level of training ... not just in the amount of academic information, but in its content."

## DISCUSSION

Residents and physician instructors supported the week-long protected block as an effective way to provide teaching and learning sessions. Both groups emphasized how well the PBT enhanced the learning environment and cultivated the relationships necessary to support a more profound educational experience. These findings are consistent with earlier studies evaluating learning environments, student well-being, and quality of learning.<sup>8,19-21</sup> An organized and supportive learning environment is an effective means of promoting professional development in medical students.<sup>19</sup>

Residents viewed PBT as a much-needed break from their clinical duties and an opportunity to connect with peers and learn from one another's experiences. This time was recognized as being exceptionally valuable for cultivating collegial relationships and setting the foundation for future professional relationships. These views are consistent with Palmer's theories concerning the potential of learners to learn with and from one another, and the importance of creating a learning space to facilitate this process.<sup>22</sup> Wenger, McDermott, and Snyder<sup>23</sup> describe this process as a *community of practice*. Promoting the development of such a community is viewed as a novel way to manage rapid shifts in knowledge and information. When residents believe that they are a part of a community, there is a greater likelihood that they will call upon one another for help. They will also become more accustomed to the interactive process of information sharing.

Protected block time for teaching and learning in residency is part of the process of strengthening clinical reasoning skills and developing a professional identity.<sup>12</sup> For example, when residents have the opportunity to describe and reiterate their learning experiences through case presentations, they move from limited learning—such as reproducing information—to sophisticated learning, which encourages a greater awareness of their own professional identity.<sup>12,24</sup> When residents presented cases to one another, they were able to openly question or challenge assumptions. This exchange of information resulted in a high level of engagement that has been shown in previous studies to promote more profound and long-standing learning.<sup>25,26</sup> The Carnegie Foundation for the Advancement of Teaching recently published an analysis of medical education,<sup>25</sup> in which they recommend the individualization of the learning



process, its alignment with outcomes, and the integration of formal knowledge with clinical experiences. They also emphasize habits of inquiry and innovation, with a focus on the development of professional identity.

Medical education is undergoing a shift from acquisition of knowledge to competency and application, with the focus on *learning* rather than on the traditional paradigm of rote *teaching*.<sup>16,27,28</sup> This shift is further accelerated by attributes of the “Internet generation,” in that learners have unlimited access to information through online resources and databases.<sup>29</sup> Seminars that focus predominantly on detailed content, basic sciences, or statistics are regarded as being less effective, as are sessions that are excessively long, out of sequence, and at levels that are either too basic or too advanced for the learners.

Vella identifies a number of adult learning principles such as “needs assessment, sound relationships, and respect for learners as decision makers.”<sup>30</sup> Clearly, the strengths of the Nanaimo Site program include the enthusiastic expression of interest among the residents and physician instructors in identifying their learning needs and preferred instructional methods. All groups spoke of the need to increase open dialogue among all partners (residents, physician instructors, and program directors). Currently, program goals and objectives are available to all partners. Making these goals and objectives central to discussions among members of the learning community can enable the residents to gain a greater understanding of the curriculum as a whole. In addition, these discussions can help reveal the connections between the relevance of teaching sessions and the reality of family practice.


Hafferty and Watson<sup>28</sup> highlight the strengths of building learning communities that are based on the principles of adult learning and that enable students to have some control over the assessment, planning, implementation, and evaluation of their educational programs.<sup>28</sup> Clearly, physician instructors and residents recognized the importance of collaboration in order to mutually identify learning goals and anticipated outcomes, and worked together to schedule PBT sessions and coordinate the preferred selection of instructional methods and materials. Communication among members of the learning community is recognized as being crucial to continued excellence in teaching and learning.

## Limitations

The primary limitation of this study was the small size of the sample of residents and instructors who participated. Protected block time was a pilot project unique to the Nanaimo Site, implemented in order to explore an innovative type of engagement in medical learning. Until other programs are developed with a similar scheduling format or the Nanaimo Site program has achieved a

longer history, meaningful conclusions cannot be drawn about PBT for teaching and learning, and the results cannot be generalized to all residency programs. However, the findings from the residents’ and physician instructors’ focus groups are cohesive and collectively support the effectiveness of this particular program. Although a semistructured approach was used in the researchers’ observations of in-class seminars, interpretations of the observations were subjective and open to bias.

## Conclusion

Four broad program recommendations can be made based on the results of this study. First, scheduling a specific block of time for teaching and learning supports residents’ ability to learn and improves their well-being. Therefore, continuing or implementing protected, structured block learning sessions should be encouraged. Second, time should be set aside for open communication among all partners in a family practice residency program in order to enrich knowledge acquisition and help build collaborative relationships. Third, programs should support the use of discussion-based learning activities to promote active and interactive engagement among the residents. Fourth, programs should build upon existing research in education to promote ongoing excellence in teaching and learning. Further research on PBT for teaching and learning during residency programs is warranted to better understand the value of this innovative approach. 

**Mrs Jung** and **Ms Kennedy** are professors in the Faculty of Health and Human Sciences at Vancouver Island University in Nanaimo, BC. **Dr Winder** is Clinical Assistant Professor in the Department of Family Practice at the Nanaimo Site of the University of British Columbia Family Practice Residency Program.

### Contributors

All authors contributed to the concept and design of the study; data gathering, analysis, and interpretation; and preparing the manuscript for submission.

### Competing interests

None declared

### Correspondence

**Mrs Piera Jung**, Vancouver Island University, Faculty of Health and Human Sciences, 900 Fifth St, Nanaimo, BC V9R 5S5; e-mail [piera.jung@viu.ca](mailto:piera.jung@viu.ca)

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