

*Continued from 373*

does not despair the continuing seizures and mobility issues, but remarks on how the illness has allowed her to be home with Shelly and to connect with their friends.

### Linda and Shelly

Together they have had amazing times, particularly as adventurous and intrepid travelers—they have seen much of the world, including all seven continents. Travel has been a great passion for them and in view of their age difference they strived to do the difficult trips when they were young. As Linda quips, “I was planning to push Shelly in a wheelchair around art galleries and museums when he was unable to go trekking.” This will not happen. Shelly has always been crazy for sports. He loved to watch hockey and all sports on TV, but is now only able to listen to the play-by-play. Together Linda and Shelly played tennis, bicycled, hiked and walked, in Hawaii, on their exotic travels, and in Whistler. Linda describes their Whistler home as her Valium, loving the fresh air and the beauty of the mountains. Linda’s other haven has always been her kitchen, where, even on arriving home at 10:00 p.m. she loved to create a gourmet meal, or bake all night, to relieve the stress of her work. They share a love of animals, particularly cats. Appropriate for two hematologists, they named their last two cats Baso (basophil) and Eo (eosinophil).

Linda and Shelly are an extraordinary pair. When I asked each of them privately what their greatest joy was, they quickly named the other. When I asked what their greatest sadness was, it was that their partner was suffering, Shelly living in darkness, and Linda with an incurable condition.

Linda and Shelly are true unsung heroes who have cared for thousands of British Columbians, and who have taught innumerable learners who, no doubt, are better doctors and health care workers because of them. **BCMJ**

## The merit and agony of retrospective chart reviews: A medical student’s perspective

Participating in a chart review can be grueling, but the process provides many unforeseen benefits to medical students—far beyond the opportunity to add published research to your resume.

**Joanne Bleackley, BSc,  
So Youn Rachel Kim, BSc**

**A**s I flip through the history, lab values, orders, and surgery notes, my stomach gives a loud growl. Great. Another emergency note with illegible handwriting. I’ve been stuck in the chart room for nearly 5 hours—a dark, forbidden place where no natural sunlight or food is allowed. Here, in the security-guarded basement of a pediatric hospital, I am spending a beautiful spring in Vancouver.

The question of whether to participate in chart reviews is one that plagues many medical students. Is it simply a way to boost your CV in order to impress the CaRMs committee? Or is it a way to pursue the lofty quest for scientific truth? I’ve personally participated in three chart reviews over the course of 2 years, and many of my friends have spent their summers conducting the long and tedious chart review process. Speaking from personal experience, there is no doubt that many

clinically and scientifically important questions have been answered through retrospective chart reviews. But when reading each distinguished article in a respected paper, I wonder if anyone thinks about the labor of the medical students who have toiled behind the scenes. It takes incredible patience and dedication, flipping through pages and pages looking for information that sometimes simply isn’t there, and to decipher language that is still foreign to us. Too often, long hours of chart review feel like working on an automated and brainless assembly line, which contradicts the nature of medical students. Throughout this rigorous process, one hope persists in our minds: “Will this get published?”

Unfortunately, many chart reviews never end up being published for one reason or another, and one may wonder if they are a waste of time. Reviewing the charts of hundreds of patients over the course of 2 months or less, analyzing the data, and writing it all into a presentable paper is no easy task. Students think they will be able to continue the

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Ms Bleackley and Ms Kim are UBC medical students in the class of 2014.

work during school, which is unrealistic given our workload. Even if they do finish collecting the raw data and complete the analysis, research never works the way you want it to, and many results are statistically and realistically insignificant. If the research project is large enough that it will take more than 2 months of work, there is little hope of seeing the work come to fruition.

If chart reviews are so time-consuming and often futile, why would so many driven, goal-achieving medical students participate in them? Some may argue that the process of performing a chart review benefits a student in more ways than simply providing them with a published article with which to adorn their resume. The process of looking through charts, organizing the information, and forming conclusions about the data may be worth far more than the end result.

The review that had us sequestered in the chart room for so many beautiful spring days was a multi-centre chart review, and, as such, medical students would not be included on the author list in the final article if it were published. Our supervisor was forthright with this information from the start, and gave us the opportunity to back out if we chose. In the end, we decided it was an interesting topic and chose to participate, and we have not regretted it. We gained a great deal of experience in the chart review process that will undoubtedly aid us in the years of med school ahead. Here are some valuable things we learned.

### **Navigating the anatomy of a chart**

Medical charts can be intimidating when you first sit down and try to make sense of them. The sheer weight of them, combined with their confusing, colorful tabs, make them uninviting for anyone looking to delve into their inner sanctum of data. Initially, we had absolutely no idea of how

medical charts worked, and how to tell who wrote what, where, and why. The data collection from the first chart was painfully slow and took close to 2 hours.

As we looked over the list of more than 100 charts we were planning to review, we despairingly thought we were in it for the long haul. We were imagining countless hours trapped in the health records department. However, as we continued with the review, we quickly learned where each piece



**It takes incredible patience and dedication, flipping through pages and pages looking for information that sometimes simply isn't there.**

of information could be found in the emergency record, including the doctor's orders, the nurse's notes, and the pathology report. Soon, our process became smoother and more efficient. By the end of the review, 2 hours per chart had turned into 30 minutes per chart, and we were flying along.

### **The importance of proper documentation**

Through this process we discovered the importance of proper documentation. It is incredibly frustrating to look through a chart and not be able to find information that should be there. We now realize that in order to ensure the delivery of the best possible care, it is necessary to document every aspect of patient care appropriately.

### **A deeper understanding of the clinical process**

Reviewing charts gave us our first real glimpse into the clinical world of medicine. We were able to see for ourselves the process of the condition we were investigating—the differences in its clinical presentation and the basic algorithm of treatment. During the first 2 years of medical school it can be difficult to grasp the reality of medicine; for example, sometimes it feels like drugs are just names that need to be remembered. That feeling changes when you review real clinical situations firsthand. The choice of one medication or procedure over another takes on new significance, and it becomes clear how important it is to know the difference between these options. Of course, it would be impossible to do a chart review on every single disease and its clinical management, but the general framework provided by participating in a chart review is extremely valuable and applicable across many fields of medicine.

Looking back on the experience we gained during the chart review, our view now is quite different than that of the grumbling medical student. We gained invaluable experience through our participation and even feel that we have contributed in a small way to the medical profession. While the study may not bear our names, our mentor tells us that even before publication, the data analysis based on our work has piqued the interest of other researchers investigating clinical practice variation in Canada. We saw and experienced that variation firsthand. It was an important lesson, even in our early years of clinical training, that medical practice is anything but prescriptive or uniform. And we are left wondering, is variation in clinical practice a good thing? Sounds like a great idea for another chart review! **BBMJ**