Director General Military Personnel Research and Analysis (DGMPRA), a research centre of Defence Research and Development Canada (DRDC), conducts research on a variety of military personnel issues. The results are used to support the development of personnel management policies and programs in the Canadian Armed Forces (CAF). Much research conducted by DGMPRA is based on data collected through personnel surveys with complex samples. Because many surveys have been administered repeatedly over the years, it is important to systematically review the survey methodologies before administering these surveys again in the coming years. A case study will be presented to illustrate the current practices in questionnaire development, frame development and sampling, data collection, non-response analysis and adjustment, estimation, and result dissemination. Challenges in methodology and newer techniques in sampling, non-response adjustment, and estimation will be discussed. The results of simulations using newer techniques in sampling, non-response adjustment, and estimation will be presented and compared to current practices. Finally, recommendations on next steps will be provided.