



Accreditation Review Commission on Education
for the Physician Assistant, Inc.

Data Analysis and the Self-Study Report February 2020

Introduction

A robust ongoing self-assessment process allows programs to review the quality and effectiveness of their educational practices, policies and outcomes. This provides the program a practice that allows easy identification of program strengths and areas needing improvement. As a piece of the accreditation review process, the ARC-PA considers the documentation of the program’s critical analysis of its curriculum, institutional support, resources, faculty, students, and outcomes through the program’s Self-Study Report (SSR). The SSR is used by the commission to verify the program implements its process of self-assessment to identify strengths and weaknesses, leading to validation of current practice or the development of plans for corrective intervention.

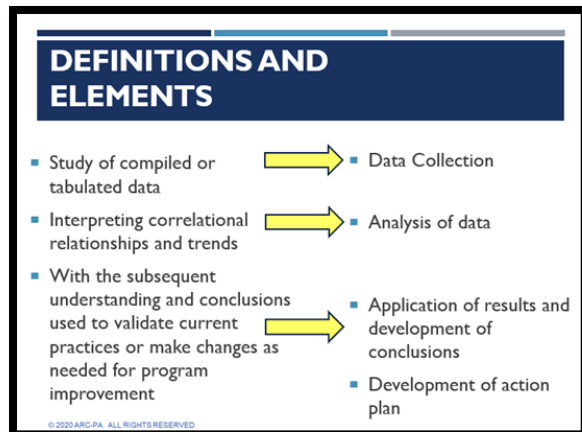
This document addresses the four components of data analysis and provides more information on the ARC-PA expectations and requirements for implementation and documentation of ongoing program self-assessment.

What is Analysis?

As defined by the ARC-PA, analysis is the study of compiled or tabulated data interpreting correlations and trends, with the subsequent understanding and conclusions used to validate current practices or make changes as needed for program improvement.

The Four Key Elements of Analysis

The ARC-PA’s definition of analysis directly relates to the four important elements of analysis.



1. The first element is the regular and ongoing **collection of data**. For ease of use and interpretation, the collected quantitative and qualitative data must be clearly displayed in tables and charts.
2. The second element is the **analysis of data**. This includes discussing and interpreting the correlations and trends relating the data to the expectations or issues of the program. This is to be demonstrated by succinctly written narratives which highlight the correlations/relationships and trends.
3. The third element is **application of results and the development of conclusions** based on the study of the data. These must be succinctly stated, showing the link between analysis and conclusions. This includes identification of strengths as well as areas in need of improvement.
4. The fourth element is the **development of an action plan** to operationalize the conclusions. Actions plans, too, must be succinctly stated and should logically result from the conclusions drawn from critical analysis of data.

ARC-PA EXPECTATIONS

Data Collection

The first piece of each appendix within the SSR addresses data collection. The ARC-PA asks programs to present a summary of the data collected relevant to each piece of the self-assessment process.

Some of this data must be displayed with the ARC-PA templates (e.g., Student Attrition, Number of final didactic course grades of C or below, Faculty and Staff Changes). It is important to read the instructions for each template and fill in the data according the ARC-PA directions.

In other instances, the program is asked to provide their own tabular or graphic display of data. When providing data display(s):

- The program must report quantitative data in aggregate and allow easy identification of trends over time. Data should support the support the analysis narrative.
- When incorporating relevant data from other appendices or other sources, e.g. PANCE system/task scores or student feedback, provide specific reference to other appendices or provide summaries of the data.
- If qualitative data was collected, it also must be summarized in the narrative or displayed in aggregate in an appendix.
- Programs should NOT include raw data in the SSR but should have raw data available for the site visit team.
- When applicable, response rates should be included in the display of data or noted in the data narrative.

Within the narrative, the ARC-PA asks the program to describe its process of collecting data. In some appendices the program may be required to answer more specific questions about the data. It is important that the program addresses each of the questions asked, within the SSR narrative. In addition, the program should describe the scope of the survey or evaluation instrument, type of responses (e.g. yes/no, multiple choice, essay), description of the scale (if applicable), and a description of how the presented data was compiled. When qualitative data is cited, the narrative should include the process by which the data was obtained, and describe its methodology for grouping, categorizing or quantifying qualitative data

Analysis of Data

The ARC-PA expects that the program will use the data it has collected and placed in the tables and templates (as provided by the ARC-PA or as provided by the program, if so asked), to discuss and interpret the correlational relationships and trends relating the data to the expectations or identified issues or concerns of the program. It expects the program to draw conclusions based on and related to the data and relationships of the data to the program expectations, issues or concerns.

In general, programs most often struggle with the documentation of analysis. Often times, the program is properly analyzing the data but find difficulty in providing a succinct but complete summary of its analysis within the SSR. The analysis narrative should include a description of the program studied the compiled data. It may include identification of areas above or below benchmark, trends over time, and correlational relationships.

Identification of areas above and below a program's established benchmark is one step in the analysis process. Benchmarks identify the program's minimum threshold for performance. Prior to reviewing data, the program must determine at what level (or benchmark) they will consider the performance satisfactory. This implies that areas performing below the program identified benchmark will require additional analysis and potentially be identified as an area in need of improvement. This also implies that areas performing above the program identified benchmark may be potential program strengths. Within the SSR, the program should be clear in its identification of benchmarks and its rationale for selecting each benchmark. Although external data (university benchmarks, PAEA data) may be used, benchmarks should be program specific to account for the program's individual mission, needs and goals.

Another piece of the program's analysis process may include identification of trends over time. Although an area may be evaluated above a program's established benchmark, identifying downward trends in performance can assist the program in recognizing areas for improvement before a serious issue arises. Alternatively, trends in a positive direction can assist a program in recognizing effectiveness of areas in which action plans have been executed.

Finally, no piece of data should stand alone. Data from one area of program assessment can be utilized in the analysis of data from another area. For example, if student evaluations for an Anatomy course fall below benchmark, there may be an issue with the instructor, course resources, or lack of student preparation for the course. The exact issue may not be identified through analysis of the student evaluations alone. Data from the student evaluations may lead the program to suspect an issue with course instructor. However, the program will need to analyze data from other sources to more accurately identify the root cause and derive an appropriate conclusion and action plan. In this case, it may be necessary to assess the student evaluation of the instructors, overall student performance in the course, and student admissions data relative to anatomy prerequisites. The program may also rely on peer evaluations of faculty, student performance on individual exams within the course and faculty evaluation of the curriculum before drawing any conclusions about possible changes to the Anatomy course.

This integration of data analysis is essential to identify correlational relationships and provide a more comprehensive analysis of program outcomes.

Data also is filtered through the lens of the faculty's collective knowledge and experience, since faculty may have a different perspective than others. Programs are not expected to adopt modifications based solely on feedback from students or other stakeholders. This filtering must be described as part of the program's self-assessment process and explained in the narrative.

Application of Results and Development of Conclusions

The program's analysis narrative should conclude with an explicit summary of conclusions drawn. When documented appropriately, a complete description of the program's analysis of data will allow the reader to follow the program's process from data collected to identification of conclusions. Using the example above, if the program concluded that the Anatomy course director was not an effective instructor. The reader should know, through the analysis narrative, that the program explored other reasons for the poor student evaluations in the Anatomy course and the data provided in the SSR support the identified conclusions.

Development of conclusions is not limited to identification of areas in need of improvement. Strengths are areas in which the program exceeds its expectations. Similar to establishing benchmarks, a program may establish a target for identification of program strengths. It is not necessary to identify program strengths within each area of the SSR. However, a robust self-assessment process allows the program to identify areas of strength based on appropriate data analysis.

Development of an Action Plan

Any conclusion identifying an area in need of improvement should be followed with an appropriate action plan. Action plans must directly relate to the conclusion drawn, identify the person(s) responsible for implementation and a timeline for completion. In addition, action plans must have an expected outcome. This outcome will be the measure that the program should use to determine the effectiveness of the action plan.

Please note: The SSR requested by the ARC-PA also asks the program to list modifications that were made as a result of the program's ongoing self-assessment. **Modifications** are action plans that have been completed prior to the documentation of the SSR. Therefore, the subsequent evaluation of the effects of the modification may be documented within the data and analysis of the SSR. If a modification has been initiated but not completed, it should be listed under "areas in need of improvement".

RESPONSIBILITY

It is the program's responsibility to demonstrate compliance with the *Standards*. Programs are expected to document analysis in a clear, coherent, succinct narrative that shows the correlational relationships and trends used to arrive at the conclusions and plans. It is not the obligation of the site visitors or commissioners to combine fragments of data and sentences which may represent analysis into a coherent demonstration of compliance.

EXAMPLES OF WHAT THE ARC-PA DOES NOT WANT TO RECEIVE

- Raw data. Data must be provided as an aggregate summary.
- A restatement by the program of its process of self-assessment when asked to present analysis of data, a result of the process.
- Descriptions of process and elements of data collection, discussion and conclusion, and plans but no delineation of correlations or trends.
- Data as opposed to analysis. For example, the statement "Preceptors and employers of our graduates' comment that our students and graduates are extremely well prepared and make excellent employees," is a summary statement of qualitative data, not analysis.
- Scattered pieces of data not presented in a coherent manner, with conclusions and plans but no evidence of analysis.
- Program modifications made not based on analysis of collected data.
- Modifications that reflect routine maintenance of program functions. (e.g., replacing faculty, updating policies, continuing to admit qualified applicants)
- Areas in need of improvement that are not discussed or identified within the analysis narrative.