

MedGap application guide – version 12.13.2023

The following 'application guide' covers the different sections of the MedGap application. We expect you to write the MedGap application yourself, though we recommend you work closely with your mentor, have your mentor review your application, and incorporate your mentor's feedback prior to submission. Below we include a description of the different sections of the application.

1. Personal statement (up to 1 page)

- There is no set format with the personal statement, though typically this will include information on the following: what drew you into research, why you want to pursue a research year in general, why you're interested in your research topic or your project in particular, why are you drawn towards your mentor in particular.

2. Research training plan and goals (up to 1 page)

- This section articulates what you will learn over the course of this research year and how you will learn it. This has no set format, though could potentially include the following general concepts. You could include information on activities to further your education with respect to research which could include coursework you intend to take (or audit), seminar series, lab meetings, conferences you plan to submit abstracts to or attend. You can include information about your mentor and how you plan to meet or interact with them (i.e. weekly meetings, etc.). If you are joining a larger research group or team you can describe the team and how this might benefit your training (learning from postdocs, grad students, residents, project scientists, etc.). You can describe skills or concepts do you hope to acquire over the course of this research year, and how do you hope this will impact your career moving forward. For example, for a project involving artificial intelligence with medical imaging the applicant could include a goal of learning about building a skillset of analyzing complex medical imaging data, and then discuss how this new skill is important for their future career. In general, try to explain how the different activities benefit your training as opposed to simply presenting a list.

3. Research proposal (5-page limit [not including references], 1.15 line spacing), will consist of the following sections

- **Specific Aims** (~0.5 page)
 - There are various formats to structure Specific Aims, though keep in mind that specific aims are the first research-specific portion of a grant application that reviewers will read. This is how you introduce the research idea to the reviewer. Different applications have different formats, though with this type of application the format will typically involve an initial paragraph giving a very brief overview/introduction to the research topic of interest, the gap in current knowledge, and why this is significant (i.e. how solving this problem will help patients, advance science, etc.). This initial paragraph is followed by 2-5 specific aims (typically listed as Aim 1, Aim 2, Aim 3...). Each aim typically includes a single sentence describing the aim. Sometimes aims will include the hypothesis of the aim. Sometimes you can follow the initial sentence with 1-2 additional sentences providing a little more description.
- **Background and significance of the work** (~1-1.5 pages)

- This section will describe relevant background information and also describe the importance of the problem in this project. It can help to highlight the “knowledge gap” you are proposing to study. In describing background you will typically reference existing research, though you do not need to provide an exhaustive literature review. Also, this section will often describe how this research will help patients, influence treatment, or generally how this research will help advance the field.
- **Research approach** (~2-3 pages)
 - This is the section where you describe in detail the study design and methods for how you plan to accomplish what you proposed in your specific aims. This larger section will oftentimes be broken down into smaller subsections. You can include figures, illustrations or tables if that makes sense (though these aren’t required). Research is often very complicated, though do your best to present the methods clearly, keeping in mind that reviewers may not be experts in this specific research domain (this is true for all grant applications, not just MedGap). The content of this section will vary substantially depending on the specifics of your research project, though in general this could potentially include the following:
 - With clinical research projects you will often describe the patients involved or give a description of the dataset used.
 - When studying biomarkers (lab-based, imaging-based, etc.) you will often describe the biomarker.
 - With basic/translational research you will describe the research methods used.
 - With most all studies you will include a description of how you will obtain and analyze the data. This will often include what types of statistical tests you propose to use and may include power calculations.

4. Mentor biosketch

- A biosketch is a standard form (5-pages or less) that highlights research qualifications of the mentor. This is something like a research-oriented resume. Most faculty involved in research will have a biosketch on hand. Some faculty (but not all) will edit portions (such as the personal statement portion of the biosketch) to help align their biosketch with your project. You can find more information in general on biosketches at the following: <https://grants.nih.gov/grants/forms/biosketch.htm>.