How to Write an Abstract

What is an abstract?
An abstract is a brief summary of completed research.

What should an abstract include?
An abstract should include the following components:

1. **Background:** What is the motivation behind the research? Provide a short paragraph that details the background information.
2. **Objectives:** What problem are you attempting to solve? Provide reasons for conducting this research and what you hope to accomplish.
3. **Methods:** How did you go about solving this problem? Briefly describe the ways in which you conducted your research.
4. **Results/Outcomes/Improvements:** After completing the research, what did you learn? Present the results of your research.
5. **Significance/Implications/Relevance:** What are the implications of the research? Relate your results back to your objective.

Example of an abstract:

Background:
Even as resident work hours and sleep hours continue to improve, medical errors and patient safety present major concerns for graduate medical educators, as well as for patients. More effective clinical supervision is one possible answer, but little is known about how residents assess the adequacy of their supervision and how this relates to their medical errors.

Objectives:
This study reports recent data from a multispecialty sample of residents regarding their perceptions of the adequacy of their own clinical supervision, and seeks to identify factors related to these perceptions.

Methods:
In late 2009, the authors surveyed PGY-2 and PGY-3 residents within a selected set of internal medicine, surgery, pediatrics and obstetrics/gynecology programs concerning their prior year of training. These residents answered questions on various aspects of their work, sleep, and other activities. The index question for this report asked, “During the past year, how often, if ever, did you care for patients WITHOUT what you considered to be adequate supervision from an attending physician?” Six options (coded as 1-6) were provided, ranging from “Never” (1) to

“Almost daily” (6). In addition, residents were asked, “Do you believe that inadequate supervision resulted in your making a significant medical error at any time during your past year of residency?” (No, Once, More than once). Analyses included basic descriptive statistics and one-way analysis of variance.

Results/Outcomes/Improvements:
The final sample consisted of 634 residents representing 36 programs at 15 institutions, with an overall response rate of 83%. In response to the index question, 33.2% of residents stated that they had never worked without adequate supervision, and another 47.1% said it had happened less than once a month. Approximately 10% said that it had occurred at least twice a month, 5% at least once a week, 3.5% more than once a week, and 1% almost daily. Mean scores were similar across the four specialties. No significant differences were found for gender or training year. Aggregate ratings of inadequate supervision by program were negatively correlated with age, overall satisfaction, and time with attending. Positive correlations were found with total errors, presenteeism, serious conflicts with staff, and observing others working while impaired. Queried as to whether inadequate supervision had resulted in a significant medical error, 9.6% said this occurred at least once, and an additional 2.9% more than once. Those stating that their supervision was inadequate were significantly more likely to commit a medical error. There was wide variation in ratings of inadequate supervision across the 36 programs, with aggregate means ranging from 1.17 to 3.33. There was also substantial variation within individual programs.

Significance/Implications/Relevance:
Most residents do not perceive inadequate supervision to be a problem. Significant differences in ratings across programs, combined with substantial variation within programs suggest that, while some programs seem to offer better supervision than others, the problems that exist are due to individual-level issues within almost every program.