



APSA
American Pediatric
Surgical Association
Saving Lifetimes

Survey Guidelines for the American Pediatric Surgical Association (APSA)

Introduction

Research surveys are an effective tool for collecting evidence-based data regarding the beliefs, practices, and knowledge of surgeons.¹ Surveys are utilized in many aspects of health care, and can be applied to the surgical field in order to focus efforts to improve specific aspects of surgical care.² Information that is gathered from surgeons can be used to shape the future of surgery by helping to establish recommendations for patient care, providing guidance in the design of clinical studies, and focusing efforts in policy change that will benefit the healthcare of patients.²

Background

There are several aspects of survey design that must be considered when developing a self-administered questionnaire that will yield accurate and useful research data.^{1, 3-4}

Purpose

This report identifies guidelines for the design and development of physician surveys that will be considered for administration to pediatric surgeons via the APSA Outcomes and Evidence-Based Practice Committee.

1) Defining Objectives

- a) **Specific Aims:** 1 paragraph on what the study is supposed to accomplish, target population, outcomes, types of associations being investigated. **THIS NEEDS TO BE CLEAR.**
 - i) Epidemiologic Survey
 - ii) Attitudes/practice patterns of surgeons, patients
 - iii) Knowledge assessment
- b) **Sample Size:** In most cases it is assumed that this will be the APSA membership.
- c) **Statistical methods for analyzing data.**
 - i) List of variables to be measured
 - (1) Dependent variables for measures of central tendency
 - (2) Independent variables to understand patterns of association and distributions
 - (3) Control variables
 - ii) Analysis plan: Statistical models for evaluating the listed variables (e.g. regression, t-test, etc.)

2) Survey Design

- a) **Selection of Survey Mode:** Researchers should explain decision for the selected mode, with understanding of the limitations and benefits of each mode specific to the aims of this study.
 - i) Self-Administered

- ii) Researcher administered
 - (1) Telephone
 - (2) In-person
 - iii) E-mail/Internet (It is assumed that the majority of surveys to the APSA membership will be via this modality)
 - iv) Mailed
- b) Preliminary question design
- i) Focus groups: Focused discussions with people in the study population (this could even be partners in your practice). General idea of the focus groups is to clarify perceptions, feelings, and experiences related to that which is to be measured e.g. defining commonly used and/or misused terms, what assumptions can be made about sample background knowledge, etc. Researchers should describe the content of these focus discussions.
- c) Drafting questions:
- i) Many surveys have already been created/validated. There are several online resources for this, and using questions from previously validated surveys can save time.
 - ii) Question content.
 - (1) A question must be easily understood by the target audience. Decrease ambiguity.
 - (2) A question should be interpreted with relative ease the first time it is read. Clear wording.
 - (3) A question should only able to be answered one way. Increase consistency.
 - (4) A question should be written so that it yields answers to the question that you want to ask. Increase accuracy.
 - (5) A question should limit the additional information participants must rely on in order to give an accurate response.
 - (6) A question that yields the same answer by the same subject in all survey modes. Reliability.
 - (7) A question should avoid the use of leading words or phrases. Decrease bias.
 - iii) Validate questions
 - (1) Pilot the instrument in a subset of the sample population (again, partners in practice can be useful for this), and revise questions according to feedback. Researchers should describe this process, including the number of subjects in the pilot sample, and descriptive characteristics of the pilot sample. Researchers should re-administer the revised tool to the pilot sample, with time estimates (mean with standard deviation) required to complete the survey.
 - (a) Survey length. The ideal survey length will vary according to the topic being studied. A researcher must consider the appropriate length of a survey that will yield the maximum information within an appropriate time period. All surgeons are inundated with a variety of emails, phone calls, pages, faxes, business notifications etc. throughout the day. The researcher has a responsibility to design a questionnaire that will effectively allow the surgeon to complete the survey in one sitting and motivate the responder to complete the entire questionnaire. There is evidence to

indicate response rate for surveys administered to physicians is associated with the questionnaire length.⁵ Although there are no standard lengths for physician surveys, in general, 1,000 words, or 5-10 minutes is best.

(b) Question order. The question order can affect the answers that are given by participants. In general the question content should attempt to avoid phrasing that may be leading-if a question is asked in way that implies a certain answer should be given is considered leading. The question content may not use suggested phrasing however the information provided in questions given earlier in the survey may in fact lead a participant to answer a particular answer for subsequent questions.

(2) Other online tools can help to evaluate question content e.g. <http://mnemosyne.csl.psync.memphis.edu/quaid/quaidindex.html>. This website is for the Question Understanding Aid (QUAID).

3) IRB Approval

Prior to conducting any survey, the appropriate approval through institutional board review should be completed according to the standards of the human subjects division for the research institution of the researcher.

4) Examples of questions with poor content and good content:

Poor content	Good content
a. Where do you practice pediatric general surgery?	a. In what state do you practice pediatric general surgery?
b. What kind of practice do you have?	b. Is your current surgical practice academic, or private?
c. Please indicate the majority of patient types you see in an average week.	c. Please select which age group represents greater than 50% of your patient type seen in the office setting.
d. How long have you been in practice?	d. What year did you complete pediatric surgery fellowship training?
e. Do you always do a "time-out" prior to the incision?	e. Please indicate the percentage of time that a "time-out" is completed prior to your incision time in the OR.
f. If a patient has a complication after a hernia repair how many patients remained in the hospital longer than the planned length of stay?	f. In the past 6 months, have you had an intraoperative complication from a hernia repair? If yes, please estimate the % of the patients with complications that remained in the hospital at least one day longer than the original planned length of stay.

References

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3. Sprague S, Quigley L, Bhandari M. Survey design in orthopaedic surgery: getting surgeons to respond. *J Bone Joint Surg Am* 2009;91 Suppl 3:27-34.
4. Field TS, Cadoret CA, Brown ML, et al. Surveying physicians: do components of the "Total Design Approach" to optimizing survey response rates apply to physicians? *Med Care* 2002;40:596-605.
5. Jepson C, Asch DA, Hershey JC, Ubel PA. In a mailed physician survey, questionnaire length had a threshold effect on response rate. *J Clin Epidemiol* 2005;58:103-5.

Book resources

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Dillman Don A, Smyth Jolene D, Melani Christian Leah. *Internet, mail, and mixed mode surveys: The tailored design method*. 3rd Ed. New Jersey: John Wiley and Sons, 2009.