

Developing the Infrastructure for a Survey Driven Database: Assessing Long-Haul COVID Patients pre and post Stellate Ganglion Block

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BACKGROUND

Long-haul COVID-19 (LHC) is a chronic illness which can occur following a SARS-CoV-2 infection. Conservatively estimated to affect over 65 million globally, with over 200 recorded symptoms, LHC poses a difficult challenge for post-pandemic public health. Due to symptom complexity, LHC is generally treated on a case-by-case basis. However, a promising treatment option is the **stellate ganglion block (SGB)** which is a form of nerve block said to “reset” the sympathetic nervous system. Case studies have shown SGBs to decrease the symptom severity of several LHC patients. As its popularity grows, consolidation of patient experience with the SGB is crucial for understanding whether this procedure has positive implications for public health.

POPULATION

The target population of the survey is adult LHC patients who underwent an SGB procedure at Neuroversion Pain Management Clinic. This clinic is based in Anchorage, AK, although some participants may have traveled from other locations due to the novelty of the treatment. Given that Neuroversion was the first to offer SGBs for LHC, with over 400 LHC-related SGB procedures performed to date, this clinic was an adequate target for learning more about patient experiences with post-COVID SGBs. Ultimately, the research done on the Neuroversion patient population is intended to contribute to the larger body of information concerning LHC treatment options.

ACTIVITIES

During Neuroversion Internship:

- Assisted with patient intake, vitals, pain management procedures, and scribed.
- Integrated a research component into the medical assistant internship: reviewed and collected literature on LHC, SGBs, and possible relationship between them.
- Underwent ultrasound assistance training to assist with SGB procedures and to see them firsthand.

Following Internship:

- Researched ethical consenting, laws relating to exempt clinical research, survey creation, and question design.
- Created an IRB-approved consent form and survey for the development of a formal body of information on LHC-related SGBs.
- Wrote protocol for the deidentification and storage of data such that survey response collection complies with IRB standards.

OBJECTIVES

- Gain understanding and knowledge regarding the topic; use the knowledge base to gain experience with long-haul COVID patients undergoing stellate ganglion block/s.
- Create a consent form and confidential survey to assess the demographics of the participant population and their wellness experiences pre and post SGB.
- Design organizational scheme for survey data to produce an LHC-SGB research database.

DELIVERABLES

CONSENT FORM | SURVEY | DATABASE GUIDELINES

DESIGN OF SURVEY

The survey was designed for the formation of a database usable for exploratory research. Future exploratory research focuses on three main questions:

- Who has access to the procedure?
- How do non-symptomatic factors affect procedure success?
- How do symptomatic factors affect procedure success?

The survey questions can be grouped into the six categories displayed in Figure 1. The breadth of question type allows investigators flexibility in answering the above questions.

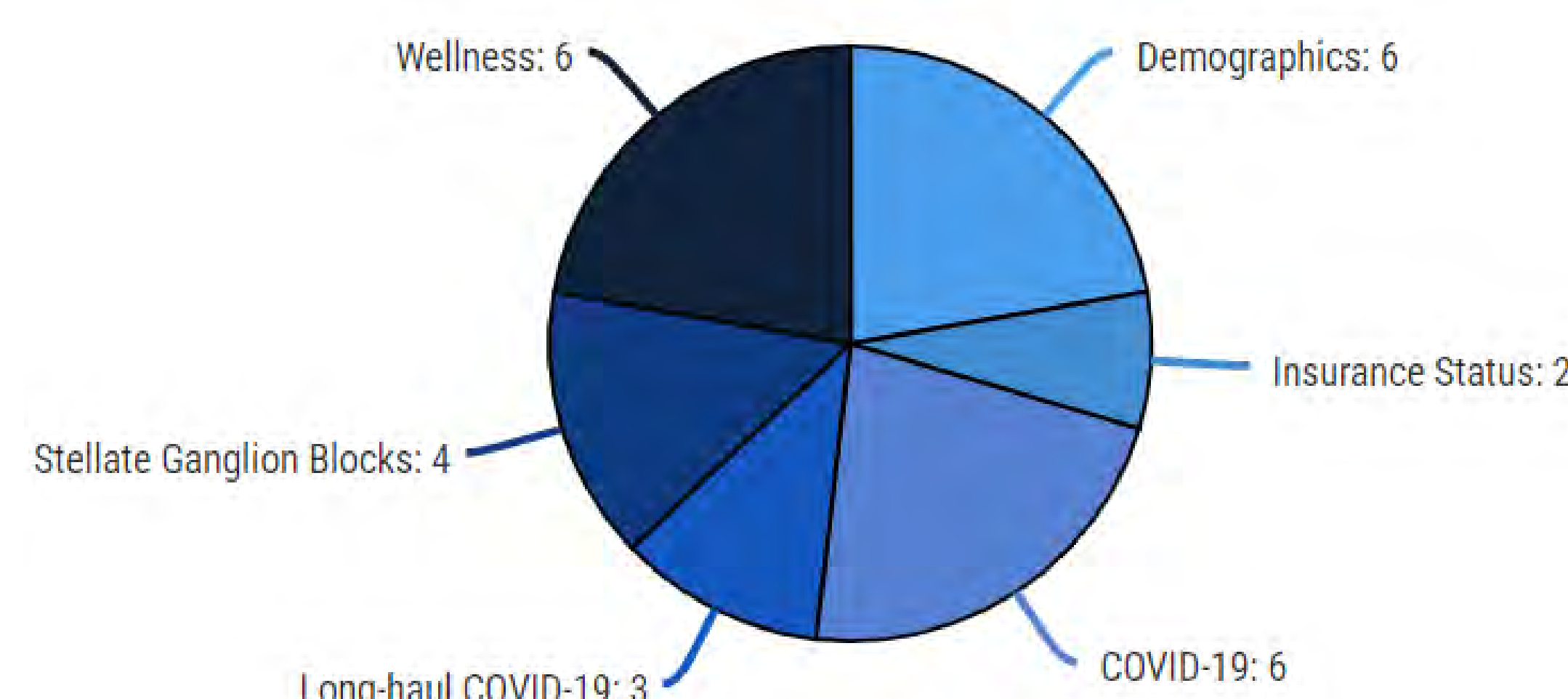


Figure 1— Breakdown of Question Types within Survey: Displays number of questions in each category.

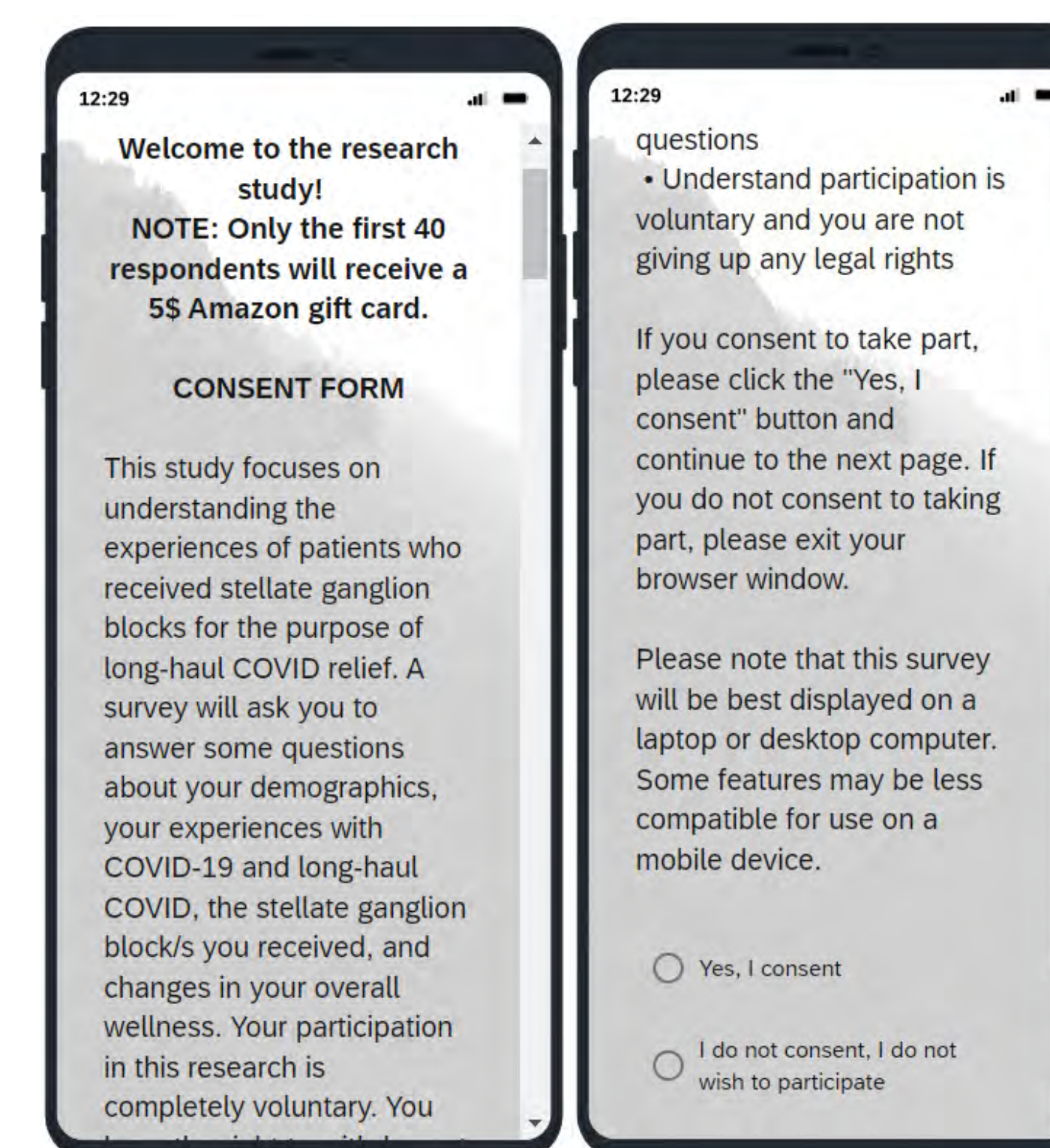


Figure 2— First and Last Sections of the Survey Consent Form: Images detail introduction and consent form response options.



Figure 4 — QR Code Link to Full Consent Form and Survey Preview

LESSONS LEARNED

- Recognized and studied the severity of LHC and its effects on post-pandemic global health.
- Observed and aided with a novel treatment method to combat LHC.
- Discovered study startup steps and timelines for the formation of a survey-based research project.
- Improved knowledge on ethical research conduct and data management for human clinical research.

PUBLIC HEALTH IMPLICATIONS

This survey database infrastructure will allow for the procurement of knowledge on a novel treatment option for Long-Haul COVID. In the scope of global health, verifying the success of SGBs could increase procedure availability, possibly altering wellness and quality of life for millions of people. Impacts on wellness go beyond individual health, as factors such as the ability to work or spend time with family have far-reaching implications for health in society. Conversely, negative survey results regarding the SGB procedure could be an indicator that further research or alternative treatment is necessary.

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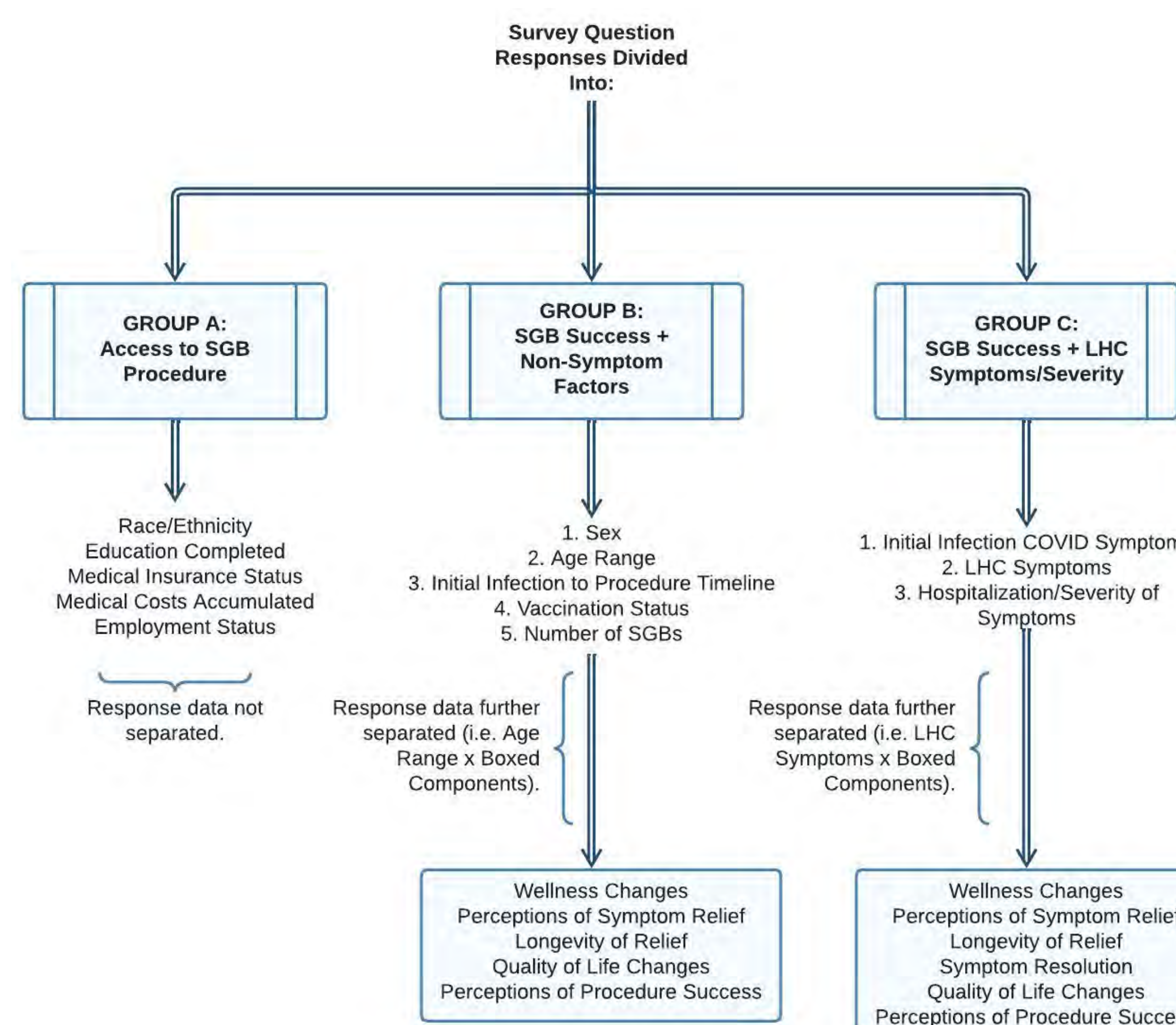


Figure 3 — Database Organizational Scheme: Describes how survey data will be organized to allow for exploratory research while prioritizing respondent confidentiality.