THRIVE Site Feasibility Questionnaire Questions

Thank you for your interest in THRIVE! We are so grateful to you for your contributions to the project so far. In preparation for launching our multi-center study we are assessing enrollment feasibility across sites. We appreciate the time you will commit to completing this questionnaire. **Please complete all items to the best of your knowledge.** If you have questions about a specific item, and/or once you have **completed the questionnaire** please send to the THRIVE team at the following email address: email anest-THRIVEStudy@email.wustl.edu . If there are additional details about your site that would be important for us to consider, please outline these in a paragraph within **Attachment A**.

THRIVE Overview

THRIVE is a multicenter, parallel group, pragmatic comparative effectiveness, patient-level randomized controlled trial evaluating the superiority of propofol TIVA over inhaled volatile general anesthesia with respect to patient experience of recovery from anesthesia. This trial is funded by PCORI (Patient-Centered Outcomes Research Institute). We are planning to work with at least 12 MPOG enrollment sites to meet our recruitment goal of 12,500 patients across all sites. Recruitment is planned to start July 2023 and end July 2027. We have provided a brief description of the study (**Attachment B**) and the inclusion/exclusion criteria is located in **Attachment C**. We appreciate the contributions MPOG collaborators have already made in helping us to improve the study design; a few of these are summarized in **Attachment D**.

Anticipated staffing requirements

THRIVE sites will require sufficient staffing to support recruitment of patients and data collection. At a minimum, we anticipate this will require at least one engaged site PI and the majority of time for 2 FTE study coordinators. Sites may also find an engaged faculty co-investigator supporting the Site PI for anesthesia clinician (faculty, CRNA, resident) and surgeon engagement." Success in THRIVE will also be supported by a robust and active MPOG infrastructure, which include technical staff, data quality leaders, and regulatory affairs specialists.

Budget Considerations

Each MPOG site participating in the THRIVE trial will receive funding on a per patient randomized basis, which will support time for clinical faculty (~ 10-15% effort), research coordinators (~ 1.5 – 1.8 FTE), IT support (5-20%), and hardware. THRIVE will also provide fixed start-up costs and ongoing patient and clinician engagement support funds. The per participant payment structure is conceptualized to appropriately fund research activities associated with the running of the THRIVE trial at the site. For example, a site that enrolls 175 participants/year at ~$750/participant could potentially receive ~$131,250 direct costs for that year and ~$52,500 (~$300/participant) in indirect costs. PCORI has a 40% indirect rate limit.

Thank you for your interest in THRIVE!

https://mpog.org/thrive-info/

Sincerely,

Michael, Sachin, Mark, and Laura

Institution Name	
Proposed Site PI (Name, Degree, Phone, Email):	
On average, how much non-clinical time is available to the proposed site PI (days per month or % FTE) independent of THRIVE funding	
Proposed Lead Project Manager or Lead Research Coordinator (Name, Degree, and email)	
Department grants/contracts administrator (Name and email)	

Proposed Recruiting Location (s). Please choose the setting type next to hospital name. List each proposed location. Please add additional rows as needed

Facility Name and Address	**Surgical Setting Type**
	☐**Acute care hospital** ☐**Hospital for elective low-risk in-patient surgeries** ☐ **Ambulatory surgery center** ☐ **Other_____**
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	☐**Acute care hospital** ☐**Hospital for elective low-risk in-patient surgeries** ☐ **Ambulatory surgery center** ☐ **Other_____**

Which models of care best match your practice? (check all that apply)	**Applies**
Attending anesthesiologists working with residents/fellows	☐
Attending anesthesiologists personally performing without an in-room provider	☐
CRNAs/CAAs working under **medical direction** (1:4 staffing ratio or lower) by attending anesthesiologist	☐
CRNAs working under medical **supervision** (1:5 staffing ratio or higher) by attending anesthesiologist	☐
Other (please explain):	

Study Team		
For how many multicenter RCTs (across all funding sources) has the **PROPOSED SITE PI** served as a site lead or site sub-investigator over the past 5 years?		
Please describe the proposed site PI's past experience in this role and share how their special qualifications might benefit THRIVE:		
Please share the number of multicenter RCTs (across all funding sources) in which the SITE DEPARTMENT OF ANESTHESIOLOGY has participated as a recruiting site		
Please describe the proposed participating department's relevant past experience or special resources that will aid success in THRIVE:		
Do you anticipate any challenges in obtaining agreement from anesthesia teams or surgeons for randomization to TIVA versus GA for a majority of eligible cases at your institution? Please refer to Appendix B for eligibility criteria and D for intervention details.	☐ Yes	☐ No
If yes, please explain:		

Study staff and support		
	Number of staff in this role currently employed by your department	**Name(s) and highest degree(s) for current staff in role (please name up to 3 for each role)**
Research Coordinator		
Research Assistant		
Database administrator or SQL developer		
Other research staff		
How quickly might you be able to deploy available staff?		

Clinicians and Other Stakeholders: Please list members of your group that may fit these roles for the study.			
Study Team Member	**Name**	**Credentials**	**Clinical Role (if applicable)**
Co-Investigator			
CRNA liaison			
Certified Anesthesiologist Assistant (CAA) liaison			
Other:			

Technical Requirements	**Yes**	**No**
You have a staff database administrator or SQL developer familiar with the local MPOG install with committed FTE availability for the THRIVE project: a. Coordinate with local IT to fix hardware/server issues b. Running queries provided by MPOG support c. Upgrading and installation MPOG THRIVE software	☐	☐

You have a clinician familiar with the local MPOG configuration with 5% minimum committed FTE availability for the THRIVE project a. Updating variable mappings b. Checking and attesting to diagnostic results c. Verifying data through case validation d. PHI scrubbing and uploading	☐	☐
Monthly submission of data to MPOG that adheres to the minimum data requirements	☐	☐
The MPOG Import Manager is implemented and running for at least six months prior 7/1/2023	☐	☐
Your site is prepared to seek necessary approvals for new MPOG software which will upload PHI from your local MPOG database to the DCC for consented THRIVE participants	☐	☐
Community Engagement	**Yes**	**No**
Do you have a local Participant Partner willing to serve on the local research team or do you have the capability/capacity and willingness to recruit such a person? (Examples include: through CTSA, patient advisory panels, etc.) THRIVE will provide training.	☐	☐
Would you be willing to explore engagement with community partners in order to recruit/engage underserved populations?	☐	☐
Describe your experience with community and patient involvement in research:		

Patient Population							
Estimated demographics of perioperative patients (Percentage)							
Male %	Female %	Hispanic or Latino %	Black %	White %	Asian %	Native American or Native Alaskan %	Native Hawaiian or other Pacific Islander %

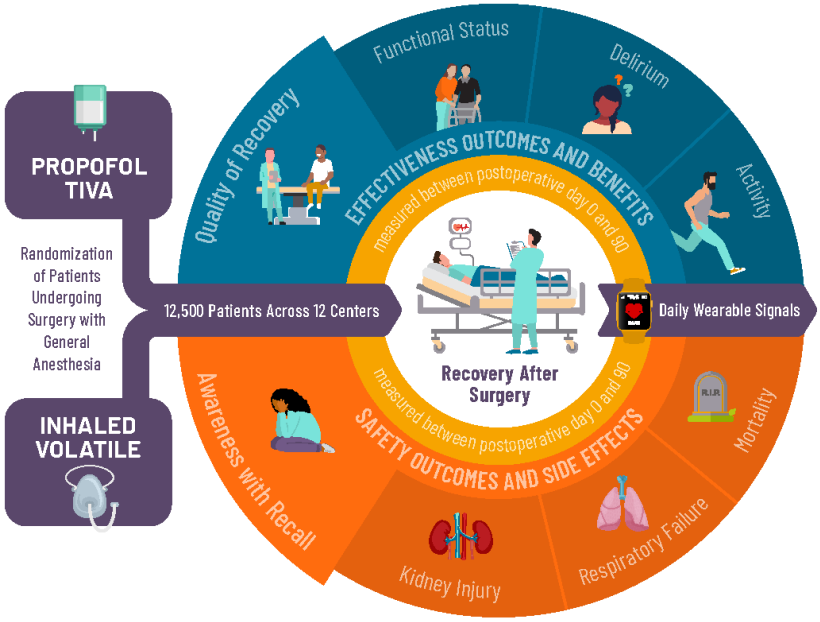
Infrastructure	**Yes**	**No**	**Unsure**
Your institution has an accredited IRB that meets at least semi-monthly	☐	☐	☐
Has your site previously participated as a relying site on multicenter research projects that use a single IRB model?	☐	☐	☐

Attachment A: Brief Summary of Additional Site Information

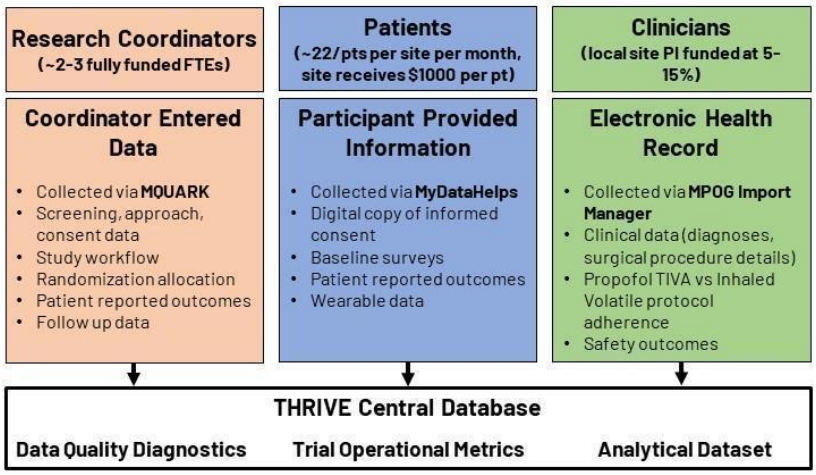
In addition to the Site Feasibility Questionnaire (SFQ) above, we invite you to write a brief paragraph in which you may choose to convey additional relevant information that might not be covered in the SFQ. This will be the first of many opportunities for involvement with MPOG in research and each opportunity will have areas for which your site may be ideal. The final selection of sites will be determined by THRIVE leadership and in conjunction with PCORI, our funder.

Attachment B: THRIVE One Page Summary

Patient population: Adult patients undergoing *elective* non-cardiac surgery (≥60 min) with general anesthesia (with LMA or ETT) will be eligible and 12,500 patients will be enrolled. Ambulatory and inpatient surgery are both eligible. **Exclusions:** Patients are excluded if they have a contraindication to propofol TIVA or inhaled volatile (for example, documented allergy to propofol, history of severe postoperative nausea or vomiting, concern for or history of malignant hyperthermia) or undergoing a surgery requiring specific general anesthesia option (for example, TIVA required for neuromonitoring). Centers, locations, or procedure groups with local clinical protocols recommending a specific maintenance technique (i.e., TIVA for ambulatory center surgery) will not be randomized.



Comparators: General anesthesia using one of two maintenance agents **1) PROPOFOL:** propofol maintenance *without* any inhaled anesthetics (volatile or nitrous oxide) **2) VOLATILE:** maintenance with any volatile anesthetics (*with or without* propofol or nitrous). All remaining aspects of care (specific volatile agent, opioid infusions, neuromuscular blockade, brain function monitoring, use of nitrous in the VOLATILE group, etc.) are up to the treating clinicians. **Outcomes**: **The primary effectiveness outcome** is the patient reported Quality of Recovery-15 score (QOR-15), an internationally validated scale of 15 questions that can be administered in person, electronically via smartphone or tablet, or over the phone. It will be administered at preoperative baseline, evening of surgery (POD 0), POD 1, and POD 2. **The primary safety outcome** will be intraoperative awareness with recall (via modified Brice interview), measured within 48 hours of surgery and POD 30. **The secondary outcomes** include delirium and disability. **Secondary safety outcomes** will be collected using existing EHR interfaces and include intraoperative hypotension, 30-day all-cause mortality, acute kidney injury, myocardial ischemia, and 90-day all-cause mortality.



Attachment C: THRIVE Inclusion/Exclusion Criteria

Inclusion:

1. Age 18 years or older
2. Undergoing elective non-cardiac surgery expected to last ≥ 60 min requiring general anesthesia with a tracheal tube or laryngeal mask airway (or similar supra-glottic device)

Exclusion:

1. Inability to provide informed consent in English or Spanish
2. Pregnancy (based on patient report or positive test on the day of surgery)
3. Surgical procedure requiring general, regional, neuraxial anesthesia administered by an anesthesia clinician (anesthesiologist, CRNA, anesthesiology assistant) occurring within 30 days prior to or planned to occur within 30 days after surgery date
4. Contraindication to propofol TIVA or inhaled volatile (for example, documented allergy to propofol, history of severe postoperative nausea or vomiting, concern for or history of malignant hyperthermia)
5. Surgical procedures requiring specific general anesthesia option (for example, TIVA required for neuromonitoring).
6. Hospital approved, written protocol mandating a particular anesthesia technique
7. History of intraoperative awareness during general anesthesia
8. Planned postoperative intubation

Attachment D: THRIVE Design Feedback from MPOG Sites and Patient Stakeholders with Responses

Key elements of your feedback as well as feedback from our patient stakeholders that we have incorporated into the design include:

1) **Enrollment**
    a) **FEEDBACK:** Six centers enrolling 15,000 patients over a 4 ½ year period is too ambitious
    RESPONSE:
        i) We have expanded the planned number of centers to between 12 and 16, allowing a much more reasonable pace of enrollment
        ii) With 12 active centers enrolling patients for between 44 and 48 months (allowing for a ramp-up in year 1 and data analysis in year 5), each center would need to successfully enroll 28 patients per month.
2) **Reimbursement**
    a) **FEEDBACK:** Reimbursement should be linked to enrollment.
    RESPONSE:
        i) We have moved to a per-participant reimbursement system so that resources will be appropriately allocated.
        ii) Based upon preliminary enrollment data, we expect to reimburse each center as follows:
            (1) Initial set up cost in year 1: $5,000 - 10,000 (direct cost)
            (2) Per-participant consented and completing protocol: between $650 and $750 (direct cost) + site-specific indirect costs. PCORI has a 40% indirect rate limit.
            (3) We have increased coordinator FTE from 1.6 to 1.8
3) **Wearables and incentives**
    a) **FEEDBACK:** Clarity should be provided regarding participant incentives and wearable device integration
    RESPONSE:
        i) A wearable device (Fitbit for Android users, Apple Watch for iPhone users) will be offered to a subset of participants.
        ii) All participants will be able to earn incentives for participation and completion of required patient reported outcome instruments.
4) **Interventions**
    a) **FEEDBACK:** PROPOFOL TIVA – what is allowed/required with drugs and monitoring
    RESPONSE:
        i) Any intravenous adjunct (dexmedetomidine, ketamine, lidocaine, remifentanil, sufentanil, etc.) is allowed
        ii) No inhalational agent (volatile or nitrous oxide) is permitted. Even low concentration volatile or nitrous oxide is not permitted

iii) EEG-based monitoring: there will be flexibility in EEG-based monitoring; it is neither required nor prohibited. Local policy, patient needs, and clinician choices should drive the use of EEG-based monitoring.

b) **FEEDBACK:** Inhaled Volatile Anesthesia – what is allowed/required with drugs and monitoring

RESPONSE:

i) Any intravenous adjunct (including propofol) is allowed.

ii) EEG-based monitoring: there will be flexibility in EEG-based monitoring; it is neither required nor prohibited. Local policy, patient needs, and clinician choices should drive the use of EEG-based monitoring.