The Multicenter Perioperative Outcomes Group (MPOG), a consortium of more than 60 hospitals across more than 22 states, is seeking applicants from **active MPOG member centers** for the 1-year MPOG Outcomes Research Fellowship. As a leader in perioperative research, performance improvement, and digital innovation, MPOG offers applicants a unique mentored education experience. Fellows can choose one of two pathways: onsite at the MPOG coordinating center (University of Michigan, Ann Arbor, MI) or a hybrid experience while staying at their home institution, which must be a member of MPOG. A minimum of 50% non-clinical time devoted to MPOG fellowship activities is required. Fellows will participate in monthly didactics led by MPOG coordinating center and participating site faculty. The fellowship includes the following learning objectives:

- **Research informatics**
    - Gain experience working with different electronic health record ontologies (eg ICD, CPT)
    - Understand various common data models (MPOG, OMOP) to store EHR data
    - Understand the MPOG data onboarding process, including data extract infrastructure, clinical content mapping, data validation, and data diagnostics
    - Establish options for patient matching across data sources (eg MPOG, surgical registry, claims)
    - Understand differential privacy risks and research limitations with different data types
    - Develop computed research phenotypes based upon EHR data
- **Large dataset analysis**
    - Identify research questions well-suited for observational data analysis
    - Identify research questions that should *not* be addressed using observational data analysis
    - Understand missing data significance and handling options
    - Use physiological monitoring artifact reduction techniques
    - Identify the strengths and weakness of other complementary perioperative large datasets
    - Apply the appropriate research methods checklist (STROBE, RECORD, CONSORT)
    - Identify specific statistical analysis technique advantages and disadvantages
- **Performance measurement and improvement**
    - Understand the Delphi process for quality metric specification development and consensus building across a national collaborative
    - Gain understanding of SQUIRE guidelines for healthcare improvement reporting

The applicant may choose to emphasize one objective (Informatics, Large dataset analysis, or Performance measurement). All fellows will engage in a Practicum Capstone Project, executing an MPOG- based clinical research project or quality metric development feasible using solely the MPOG standardized data file.

To achieve these learning objectives, MPOG fellows will actively participate in several MPOG activities, including but not limited to: site onboarding, quality metric development and validation, research phenotype development and validation, scientific facilitation, statistical analysis design, and manuscript preparation.
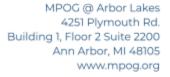
Required qualifications:
- Valid immigration status and work authorization at an MPOG center before fellow's expected start date
- Completion of medical doctorate degree (MD, MBBS, MBChB, or equivalent)
- Minimum 50% protected non-clinical time devoted to fellowship (documentation by chair required)
- Identification and letter of support from a faculty mentor at the applicant's local MPOG center

Preferred qualifications:
- Postgraduate training in anesthesiology or surgical residency
- Experience with observational dataset analysis for research or quality improvement
- Coursework in epidemiology or clinical research

Salary support and professional development funding sources will vary based upon hybrid vs onsite pathway. Fellows may choose to apply concurrently to the University of Michigan NIH T32 Postdoctoral training program or to a relevant T32 program at their home institution. Please email a cover letter, current CV, letters of support, 1-page research plan (analogous to NIH-style Specific Aims page), and 1-page training plan (analogous to K/IARS/FAER Training Plan) as an application packet to mpog-research@med.umich.edu by the deadline indicated on the MPOG website.

Frequently asked questions

Q: *The information page states "a research or QI plan based upon the existing standardized data file" is required. What exactly does that mean?*
A: You can find more information about the standardized data file via MPOG's website and in the user guide, as well as included phenotypes and quality measures. We expect the selected fellow to use the Standardized Data File as the basis of their research project.

Q: *Will a set day per week be required for MPOG work (i.e. every Tuesday) or is it flexible? How many hours/days should I plan to devote to the fellowship per week?*
A: 50% non-clinical time commitment is expected, so approximately 2.5 days per week. We will work closely with the fellow and home institution to determine a flexible schedule which does not conflict with their clinical schedule. MPOG currently has standing Monday meetings, which would be beneficial (but not mandatory) for the fellow to attend.

Q: *What does the didactic aspect to the fellowship program look like? Are there established lectures given by the MPOG team or mostly on-the-job type of learning?*
A: It will be a combination of pre-recorded videos, virtual training, and on the job learning. Some lectures may look like expanded versions of the "Tips and Tricks" videos on the MPOG website.

Q: *Will there be an on-campus requirement for those choosing to be virtual? If so, are those days already established?*
A: There is no on-campus/in-person requirement, however, we encourage that the selected fellow attends all virtual MPOG meetings such as monthly PCRC meetings, the MPOG retreat, and quarterly ASPIRE meetings as they are able.

Q: *What kinds of "letters of support" are required?*
A: We recommend sending two letters of support, one from your primary mentor for the planned MPOG project, and one from your department chair stating that the 50% allocation of non-clinical time will be planned.

Q: *Does this have to be an in-person fellowship at the MPOG Data Coordinating Center (DCC)?*
A: No, the fellow may remain at their home institution and complete the fellowship activities remotely or hybrid.

Q: *What is the duration of the fellowship?*
A: The fellowship will be a minimum of 12 months in duration.

Q: *Who pays for the fellow's salary?*
A: If hybrid or remote with the primary physical location outside of the DCC, the home institution will support the fellow salary. If an onsite experience at the DCC with faculty clinical responsibilities, the DCC may support the salary for qualified applicants.

Q: *Can clinical responsibilities be integrated into the fellow year?*
A: Yes, a maximum of 50% clinical time (e.g., 2 days per week OR + on call responsibility) is allowed.

Q: *Can a resident serve as a fellow during their anesthesiology residency?*
A: Yes, anesthesiology residents can apply for the fellowship, but are responsible for obtaining appropriate approvals from their local program director. Clinical activities will not be available at the MPOG DCC.

Q: *Will this fellowship result in a degree?*
A: Applicants may choose to incorporate the fellowship activities into a local or DCC graduate degree program. That degree program would be separate from the fellowship and is not currently sponsored using fellowship resources.

Q: *Is this fellowship an ACGME approved fellowship?*
A: No, an ACGME approved clinical informatics fellowship is not currently offered as part of the MPOG research fellowship. For those eligible for the "legacy" or "grandfathered" informatics certification, its activities do serve as informatics work.

Q: *How many fellowship positions are available?*
A: Multiple positions may be available if some of the fellows are using the hybrid or remote option. Only one in-person DCC fellow is currently planned for the upcoming academic year.

Q: *Who qualifies as a faculty mentor?*
A: Any active faculty (Assistant Professor or above) at the applicant's local MPOG site involved in research activities.

Q: *Is a research or QI plan required in the application?*
A: Yes, the applicant must provide a 1-page research or QI plan (analogous to an NIH-style Specific Aims page) based upon the existing standardized data file and other documentation on the MPOG website. This plan may be refined during the first 3 months of the fellowship and will then be approved by the MPOG PCRC or Quality Committee.

Q: *Is a training plan required in the application?*
A: Yes, the applicant must include a 1-page training plan and goals, analogous to a K/IARS/FAER Training Plan.

Q: *Is the duration or timing of the fellowship flexible?*
A: We recommend a minimum of a 12-month fellowship, aligned with the academic year (July – June). However, this is some flexibility possible in the start date (i.e., could be August or September)

Q: *Where can I learn more about the Standardized Data File used for the Practicum Capstone Project?*
A: You can find more information about the standardized data file via MPOG's website and in the user guide, as well as included phenotypes and quality measures.

Q: *Can I be enrolled in as a T32 fellow while participating in the MPOG fellowship?*
A: Yes, current and future T32 fellows can include the MPOG fellowship as part of their T32 postdoctoral training activities as long as the host institution is supportive of the arrangement.

Interested applicants should contact the coordinating center at mpog-research@med.umich.edu. Completed applications are due by the deadline indicated on the MPOG website; the proposed start date is July of the same calendar year, finishing by June of the following calendar year.