The Prostate, Lung, Colorectal and Ovarian Cancer Screening Trial: The Operations Behind a Herculean Task

Aims & Scope:
The Prostate, Lung, Colorectal and Ovarian (PLCO) Cancer Screening Trial was a large, multi-center, randomized controlled trial designed to determine whether certain screening exams reduce mortality from prostate, lung, colorectal and ovarian cancer. Approximately 155,000 participants were enrolled between November 1993 and July 2001 at 10 US screening centers, and results were reported between 2009 and 2011. In addition to answering important questions in cancer screening, PLCO has and continues to contribute much knowledge in the areas of cancer epidemiology and cancer genomics.

The purpose of this thematic issue is to provide the research community with information on how PLCO, a massive and complex undertaking, was conducted. The papers included in this issue delve into numerous operational issues, including medical record abstraction; data quality assurance practices; and evolution of endpoint adjudication practices. One paper details biospecimen collection, processing, storage, management, and distribution; another discusses methods used to build strong working relationships among PLCO staff. The entire table of contents is listed below.

Why a thematic issue on methods and operations? Simply put, trials must be done well to provide accurate results. But there is a dearth of literature on how cancer screening trials are conducted. We wish to share our experience and knowledge with others who aim to conduct long-term research in healthy, older populations. In addition to cancer screening, the papers included in this issue have applicability to prevention research in cancer and in other chronic diseases.

Table of contents (first author):
1. The importance of publishing on clinical trial operations (PM Marcus)
2. A brief review of PLCO – (JK Gohagan)
3. Building successful relationships in PLCO: strategies and payoffs – (PM Marcus)
4. Managing multi-year recruitment activities in PLCO – (M Fouad)
5. The reliability of self-report in measuring contamination in PLCO – (LH Gren)
6. PLCO’s medical record abstracting process – (L Lamerato)
7. Changes in PLCO’s death review process over the course of the trial – (AB Miller)
8. The PLCO biorepository: creating, maintaining, and administering a unique biospecimen resource – (DM Carrick)
9. Data quality assurance practices in PLCO– (B O’Brien)
10. Information management and sharing in PLCO – (HM Rozjabek)
11. PLCO: A rich epidemiologic resource – (A Black)
12. The legacy and future of PLCO – (A Black)

Key words:
Mass screening, randomized controlled trials as topic, team science, adherence, compliance, medical record abstracting, cause of death assignment, biospecimens, biorepositories, genomics, data management, epidemiology, molecular epidemiology

Expected date of submission:
June 1, 2015