Answer Key to Suggested Activity Questions for Part 5

Reading   Nguyen BH, Stewart SL, Nguyen TT, Bui-Tong N, McPhee SJ. Effectiveness of
                 Lay Health Worker Outreach in Reducing Disparities in Colorectal Cancer
                 Screening in Vietnamese Americans. American Journal of Public Health.
                 2015;105(10):2083-9.

Questions

1. What was the primary research question of this trial?

    The primary research question of this trial was whether a community-based lay health
    worker intervention would increase self-reported colorectal cancer screening rates in
    Vietnamese American.

2. What was the primary endpoint? How was it measured?

    "The main outcome variable was participant report of ever having had a CRC screening
    test (screening status)."

3. What were the units of assignment in this trial?

    The units of assignment were the lay health workers.

4. What were the units of observation in this trial?

    The units of observation were the Vietnamese men and women recruited by the lay health
    workers.

5. What was the major design employed in this trial? Was it a single factor design? A cohort
    or cross-sectional design?

    This was a nested cohort design, with the same participants and lay health workers
    followed over time and data collected at baseline and at posttest.

6. Was any effort made to ensure that the units of assignment would be balanced across
    study conditions with respect to potential confounding variables?   Did the team employ a
    priori matching or stratification, or constrained randomization?.

    No. The article indicates that 16 lay health workers were recruited for each CBO, but the
    description of the randomization process does not say that the lay health workers were
    randomized from within the CBOs.

7. How would you characterize their approach to the analysis of the primary outcome? Did
    they used a mixed model? A randomization test? GEE? Another approach?

    "We used generalized estimating equation models in all analyses to account for participant
    clustering by LHW and correlated data between pre- and posttest on the same individual. In
    particular, we used bivariate generalized estimating equation models to assess the
    similarity between the study arms in participants' demographic characteristics and to
    compare the study arms regarding the main outcome (screening status at posttest) and

regarding the pre---post change (difference between pretest and posttest) in secondary outcome variables."

8.   Was the analysis approach was appropriate for the design and the data? What are the implications for the results?

     Yes. GEE is appropriate for analysis of data from a GRT when there are 20 or more groups randomized to each condition. In this study, there were 64 lay health workers, so 32 randomized to each condition.