**MCI DeM Aim 2, Study 3**

**Analytic Plan**

**Date created:** 11/01/19

**Date updated:** 12/10/19

**Aim 2. DETERMINE THE INFLUENCE OF MCI ON PATIENT AND STUDY PARTNER PREFERENCES AND PHYSICIAN RECOMMENDATIONS FOR AMI AND ISCHEMIC STROKE TREATMENT.**

We will conduct a multi-center, mixed methods study at the University of Michigan and Duke University using semi-structured interviews and surveys of MCI patients and study partners, as well as a national physician survey. We will explore patient, study partner and physician factors leading to treatment differences.

We will conduct a mailed survey of patients (50% MCI, 50% no MCI) and study partners (50% Black, 50% White in each group). Unexposed subjects from the qualitative study will be recruited. Patients with no MCI will be 1:1 matched to patients with MCI, by age, race and sex.

**Hypothesis:** MCI patients and study partners prefer less intensive treatment than patients with no MCI.

**STUDY SAMPLE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sample size** | **Patient** | | **Partner** | |
| **MCI** | **No MCI** | **MCI** | **No MCI** |
| Planned | 50  (50% AA) | 50  (50% AA) | 50  (50% AA) | 50  (50% AA) |
| Actual | *n*  (%) | *n*  (%) | *n*  (%) | *n*  (%) |
| AA=African American. | | |  |  |

**Participants:** Elderly patients and their study partners recruited from Duke and UM sites.

**Inclusion criteria (based on patient):**

* Has a diagnosis of MCI or no MCI (50% of sample in each group)
* Aged ≥65 years
* White (50% of sample) or Black (50% of sample)
* Received cognitive testing within the last 12 months
* Reads/speaks English
* Has a study partner ≥18 years of age who reads/speaks English, knows the patient well and can answer questions about them regarding medical treatment preferences

**Exclusion criteria (based on patient and study partner):**

* We will exclude participants with missing information on age, race or sex and those who do not meet the inclusion criteria outlined above.

**Study design:**

* Cross-sectional
* Sampling unit: Patient-study partner dyad
* Stratifying variables: study site (Duke vs UM), race (White vs Black), cognitive status (MCI vs no MCI)

**VARIABLES OF INTEREST**

**Dependent variables:**

* **Primary DV:** *Life-Support Preferences-Predictions Questionnaire (LSPQ) score*. 1 continuous variable with 24 items (Coppola, et al., 1999; Coppola, Ditto, Danks, & Smucker, 2001; Ditto, et al., 2001)
* **Secondary DVs:**
  + *General preferences for shared decision making (SDM)*. 1 categorical variable with 5 items, assessed by Degner control preferences scale (Degner, Sloan, & Venkatesh, 1997)
    - One item with 5-point Likert scale. 1) I prefer to make the decision about which treatment I will receive. 2) I prefer to make the final decision about my treatment after seriously considering my doctor’s opinion. 3) I prefer that my doctor and I share responsibility for deciding which treatment is best for me.4) I prefer that my doctor makes the final decision about which treatment will be used, but seriously considers my opinion.5) I prefer to leave all decisions regarding treatment to my doctor.
  + *Preferences for SDM in AMI and Acute Ischemic Stroke.* 8 categorical variables with 5 items
    - 8 questions asking subjects about the degree to which they would want to be involved in making medical decisions if they had an AMI or ischemic stroke using 5-point Likert scale (definitely want, probably want, unsure, probably do not want, and definitely do not want to be involved).
      * 4 decisions after AMI (coronary angioplasty, bypass surgery, outpatient cardiac rehabilitation, and cholesterol medicine)
      * 4 decisions after ischemic stroke (t-PA, carotid surgery, inpatient stroke rehabilitation, and anticoagulation medicine)
  + *Risk Perception.* 4 categorical variables with 5 items
    - 4questions asking subjects about their perceptions of 4 major health risks (fall, AMI, stroke and dementia) over the next 2 years using 5-point Likert scale (measures adapted from Weinstein et al. (2007)
* *Patient and study partners will complete the same survey but study partners will predict patients’ preferences for treatments (double check study partners were asked Degner about themselves and not patient). Analyses will be conducted for patients and study partners independently.*

**Independent variables:**

* **Primary IV:** *Baseline MCI* (clinical determination at each site; treated as binary)
* **Secondary IVs:**
  + **Demographic:** Age, sex, education, race, study site (Duke vs UM)
  + **Social support:** Marital status, any children, lives with child, child lives<30 miles away
  + **Health status:** self-reported health status, medical history (stroke, heart disease, lung disease, cancer and arthritis), depressive symptoms measured by PHQ-2, ADL limitations measured by 6-item scale from HRS, study partner-reported DSRS, patient MOCA score
  + **Experience with CVD and dementia:** contacts with: stroke, dementia, AMI
  + **Dyad characteristics:** Relationship to study partner, length of time known study partner, frequency of seeing study partner, frequency of talking to study partner
  + **Moderator:** race\*MCI

**ANALYTIC STEPS**

1. **Describe recruitment** (eligible subjects who agreed to participate) and compare characteristics between recruited and non-recruited patients using data from recruitment database.
2. **Quantify study completion** (recruited subjects who completed study) and compare characteristics between completers and non-completers using data from recruitment database.
3. **Generate dataset**, ensuring that data is organized in the appropriate format (e.g., long vs wide).
4. **Check data quality** by examining univariate distribution of predictors and outcomes. Deal with small cells, missing data, outliers, skewness and kurtosis as appropriate. Alter analytic plan as appropriate based on linearity and homoscedasticity of associations.
5. **Perform preliminary analyses** and generate a participant characteristics table. Analyses will include basic descriptive statistics and bivariate comparisons of characteristics by the grouping variable.

**Table 1A.** Characteristics of patients and partners examined in studies of MCI and treatment preferences.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Characteristic** | **Patient** | | | **Study partner\*** | | |
| **MCI**  ***n*=** | **No MCI**  ***n*=** | **P-value** | **MCI**  ***n*=** | **No MCI**  ***n*=** | **P-value** |
| Age, years | Mean±SD | Mean±SD | 0.### | Mean±SD | Mean±SD | 0.### |
| Education, years | Mean±SD | Mean±SD | 0.### | Mean±SD | Mean±SD | 0.### |
| MoCA, points | Mean±SD | Mean±SD | 0.### | Mean±SD | Mean±SD | 0.### |
| Race, % Black | % | % | 0.### | % | % | 0.### |
| Sex, % female | % | % | 0.### | % | % | 0.### |
| Site, % UM | % | % | 0.### | % | % | 0.### |
| Marital status |  |  |  |  |  |  |
| % Married | % | % | 0.### | % | % | 0.### |
| % Single | % | % | 0.### | % | % | 0.### |
| % Widowed | % | % | 0.### | % | % | 0.### |
| % Divorced | % | % | 0.### | % | % | 0.### |
| Children |  |  |  |  |  |  |
| % Has ≥1 child | % | % | 0.### | % | % | 0.### |
| % Lives with child | % | % | 0.### | % | % | 0.### |
| % <30 miles away | % | % | 0.### | % | % | 0.### |
| Contacts |  |  |  |  |  |  |
| % Stroke | % | % | 0.### | % | % | 0.### |
| % AMI | % | % | 0.### | % | % | 0.### |
| % Dementia | % | % | 0.### | % | % | 0.### |

\*MCI status is in reference to the patient associated with each study partner.

*[Also include: depressed mood. ADL limitations, self-reported health status, medical history, study partner reported DSRS.] [Table 2A. Dyad characteristics.]*

1. **Perform missing data analyses** as appropriate.
   * Example approach by Davey & Dai (2019). *[Note: this approach was developed to guide the process of multiple imputation (MI). An assumption of MI is that the “missingness mechanism” has been explored. There are many patterns to consider in a multivariate context.]*

S1: Create dichotomous indicators for all variables with missing data

S2: Perform a principal component analysis on missing data indicators

S3: Determine the number of components (*k*) to retain using parallel analysis

S4: Extract components and calculate predicted component scores

S5: Dichotomize component scores (examine distribution or split at 0)

S6: Examine observed variables/missing data indicators by component score

S7: Predict dichotomized component scores from observed variables and/or missing data indicators (using logistic regression or similar method)

S8: Examine cross-tabs by dichotomized component scores if pattern unclear

S9: Consider examining cross-tabs by a stratifying variable if pattern still unclear

S10: Examine patterns by known characteristics of study design

Next steps: Repeat process using *k*-1 and *k*+1 and perform MI as appropriate.

1. **Perform statistical analyses**
   * Select the appropriate statistical methods, keeping in mind: Study aims, sample sizes and characteristics of IVs and DVs of interest (e.g., variable types, normality and variance). Primary, secondary and sensitivity analyses:
     + **Treatment preferences**
       - **Primary 1:** MCI status predicting patient summary LSPQ. Statistical method: linear regression. Covariates: patient and partner characteristics.
       - **Secondary 1:** MCI status predicting study partner summary LSPQ. Statistical method: linear regression. Covariates: patient and partner characteristics.
       - **Secondary 2:** Concordance within patient-partner dyads, quantified by intra-class correlation coefficients adjusted for dyad characteristics. Statistical method: linear mixed effects models. Covariates: dyad characteristics assessed.
       - **Sensitivity:** [Indicate sensitivity analyses that need to be performed.]
     + **Preferences for SDM**
       - **Secondary 1:** MCI status predicting patient agreement with Degner control preferences scale. Statistical method: Kruskal-Wallis. Covariates: patient and partner characteristics.
       - **Secondary 2:** MCI status predicting study partner agreement with Degner control preferences scale. Statistical method: Kruskal-Wallis. Covariates: patient and partner characteristics.
       - **Sensitivity:** [Indicate sensitivity analyses that need to be performed.]
     + **Preferences for SDM in AMI and Acute Ischemic Stroke**
       - **Secondary 1:** MCI status predicting patient willingness to be involved in SDM after an AMI (4 decisions proposed) and acute ischemic stroke (4 decisions proposed). Statistical method: Kruskal-Wallis. Covariates: patient and partner characteristics.
       - **Secondary 2:** MCI status predicting study partner willingness to be involved in making medical decisions after an AMI (4 decisions proposed) and acute ischemic stroke (4 decisions proposed). Statistical method: Kruskal-Wallis. Covariates: patient and partner characteristics.
       - **Sensitivity:** Sums of decisions proposed for AMI (4) and stroke (4) examined.
     + **Risk perception**
       - **Secondary 1:** MCI status predicting patient perceptions of 4 major health risks (fall, stroke, AMI, dementia) in the next 2 years based on measures adapted from Weinstein et al. (2007). Statistical method: Kruskal-Wallis. Covariates: patient and partner characteristics.
       - **Secondary 2:** MCI status predicting study partner perceptions of patient’s 4 major health risks (fall, stroke, AMI, dementia) in the next 2 years based on measures adapted from Weinstein et al. (2007). Statistical method: Kruskal-Wallis. Covariates: patient and partner characteristics.
       - **Sensitivity:** [Indicate sensitivity analyses that need to be performed.]
   * Perform primary, secondary and sensitivity analyses using the models specified. Examine diagnostic measures for each analysis performed. Models:
     + **M1 Zero order:** DV = patient MCI
     + **M2 Demographic:** DV = M1 + site + partner age + partner sex + partner education + partner race + patient age + patient sex + patient education + patient race
     + **M3 Social support:** M2 + partner marital status + patient marital status + patient children + patient lives with child + patient child <30 miles away
     + **M4 Health status:** DV = M3 + partner depressed mood + patient depressed mood + partner ADL limitations + patient ADL limitations + partner-assessed patient DSRS + partner health status + patient health status + partner medical history + patient medical history + partner MoCA score + patient MoCA score (check for co-linearity between DSRS and ADL limitations)
     + **M5 Experience:** M4 + partner contacts with stroke + patient contacts with stroke + partner contacts with dementia + patient contacts with dementia + partner contacts with AMI + patient contacts with AMI
     + **M6 Dyad characteristics:** M5 + patient relationship to study partner + length of time known study partner + frequency of seeing study partner + frequency of talking to study partner (check for co-linearity between frequency of seeing and talking to study partner)
       - Notes: 1. Multicolinearity will be examined and stepwise procedures will be used to reduce the number of covariates per model. Underlined covariates will be forced into models (patient demographics will be forced into models for patient analyses and partner demographics will be forced into models for partner analyses); 2. Race\*MCI will be examined as an addition to each model.
2. **Table and interpret results** as appropriate. Label all code and analytic datasets using unique identifiers and store them in a secure location (e.g., GitHub) following our new protocol.

**DATA UTILIZED**

**[Master or recruitment] dataset used:** [Include the path(s) (file location and file name) of the master or recruitment data set(s) used to generate the final analytic data set for this study. PLEASE BE SPECIFIC.]

**Analytic dataset generated:** [Include the path (file location and file name) of the final analytic dataset used.]

**Statistical code generated:** [Include the path(s) (file location and file name) of the statistical code generated to create the analytic dataset(s) and run the analyses included in this study.]

**Variables for patient surveys**

|  |  |  |
| --- | --- | --- |
|  | **Variable in REDCap** | **Variable in analytic dataset** |
| **PRIMARY DV** | | |
| LSPQ (patient about self) | a\_1\_ch\_antibiotics  a\_2\_ch\_cpr  a\_3\_ch\_gallbladder  a\_4\_ch\_artificial\_fd  a\_5\_emph\_antibiotics  a\_6\_emph\_cpr  a\_7\_emph\_gallbladder  a\_8\_emph\_artificial\_fd  a\_9\_stroke\_antibiotics  a\_10\_stroke\_cpr  a\_11\_stroke\_gallbladder  a\_12\_stroke\_art\_fd  a\_13\_cancer\_antibiotics  a\_14\_cancer\_cpr  a\_15\_cancer\_gallbladder  a\_16\_cancer\_art\_fd  a\_17\_hattack\_antib  a\_18\_hattack\_cpr  a\_19\_hattack\_gallbla  a\_20\_hattack\_art\_fd  a\_21\_ad\_antibiotics  a\_22\_ad\_cpr  a\_23\_ad\_gallbladder  a\_24\_ad\_artificial\_fd | ch\_antibiotics  ch\_cpr  ch\_gallbladder  ch\_artificial\_fd  emph\_antibiotics  emph\_cpr  emph\_gallbladder  emph\_artificial\_fd  stroke\_antibiotics  stroke\_cpr  stroke\_gallbladder  stroke\_artificial\_fd  cancer\_antibiotics  cancer\_cpr  cancer\_gallbladder  cancer\_artificial\_fd  hattack\_antibiotics  hattack\_cpr  hattack\_gallbladder  hattack\_artificial\_fd  ad\_antibiotics  ad\_cpr  ad\_gallbladder  ad\_artificial\_fd |
| **SECONDARY DVs** | | |
| Preferences for SDM (patient about self) | b\_1\_decision | decision |
| SDM in AMI (patient about self) | c\_1\_angioplasty  c\_2\_surgery  c\_3\_heart\_rehab  c\_4\_cholesterol\_med | angioplasty  surgery  heart\_rehab  cholesterol\_med |
| SDM in Acute Ischemic Stroke (patient about self) | c\_5\_clotbusting\_med  c\_6\_sx\_on\_neck\_artery  c\_7\_stroke\_rehab  c\_8\_blood\_thinning\_med | clotbusting\_med  sx\_on\_neck\_artery  stroke\_rehab  blood\_thinning\_med |
| Risk Perception (patient about self) | d\_1\_fall  d\_2\_heart\_attack  d\_3\_stroke  d\_4\_dementia | falls\_f2yrs  heart\_attack\_f2yrs  stroke\_f2yrs  dementia\_f2yrs |
| **PRIMARY IV** | | |
| MCI | [original variable name] | [new variable name] |
| **SECONDARY IVs** | | |
| MoCA\* | [original variable name] | [new variable name] |
| Site\* | site | site |
| White, Black, Hispanic race (patient about self) | f\_3\_hispanic  f\_4\_race  sec\_f\_4a\_other\_race | Hispanic  race\_1  other\_race |
| Age (patient about self) | f\_1\_age | age |
| Sex (patient about self) | f\_2\_gender | gender |
| Educational attainment (patient about self) | f\_9\_education | education |
| Contacts with Dementia (patient about self) | f\_10\_dementia | dementia\_cfamily |
| Contacts with AMI (patient about self) | f\_12\_heart\_attack | heart\_attack\_cfamily |
| Contacts with Stroke (patient about self) | f\_11\_stroke | stroke\_cfamily |
| Marital status (patient about self) | f\_5\_marital\_status | marital\_statu |
| Children, children living with you, children living nearby (patient about self) | f\_6\_children  f\_7\_children\_lives\_with  f\_8\_children\_30\_mi | children  children\_lives\_with  children\_30\_mi |
| ADLs (patient about self) | e\_9\_walking  e\_10\_dressing  e\_11\_bathing  e\_12\_eating  e\_13\_out\_of\_bed  e\_14\_toileting | walking  dressing  bathing  eating  bed  toileting |
| Depressive symptoms (patient about self) | e\_7\_little\_interest  e\_8\_depressed | little\_interest  depressed |
| Health status (patient about self) | e\_1\_health | health |
| Medical history (patient about self) | e\_2\_stroke  e\_3\_heart\_disease  e\_4\_lung\_disease  e\_5\_cancer  e\_6\_arthritis | stroke  heart\_diseas  lung\_diseas  cancer  arthritis |

**\****From the MCI-DEM\_Patient Surveys\_Mailing & Phone Call Tracking project.*

**Variables for study partner surveys**

|  |  |  |
| --- | --- | --- |
|  | **Variable in REDCap** | **Variable in analytic dataset** |
| **SECONDARY DVs** | | |
| LSPQ (partner about patient) | a\_1\_ch\_antibiotics\_v2  a\_2\_ch\_cpr\_v2  a\_3\_ch\_gallbladder\_v2  a\_4\_ch\_artificial\_fd\_v2  a\_5\_emph\_antibiotics\_v2  a\_6\_emph\_cpr\_v2  a\_7\_emph\_gallbladder\_v2  a\_8\_emph\_artificial\_fd\_v2  a\_9\_stroke\_antibiotics\_v2  a\_10\_stroke\_cpr\_v2  a\_11\_stroke\_gallbladder\_v2  a\_12\_stroke\_art\_fd\_v2  a\_13\_cancer\_antibiotics\_v2  a\_14\_cancer\_cpr\_v2  a\_15\_cancer\_gallbladder\_v2  a\_16\_cancer\_art\_fd\_v2  a\_17\_hattack\_antib\_v2  a\_18\_hattack\_cpr\_v2  a\_19\_hattack\_gallbla\_v2  a\_20\_hattack\_art\_fd\_v2  a\_21\_ad\_antibiotics\_v2  a\_22\_ad\_cpr\_v2  a\_23\_ad\_gallbladder\_v2  a\_24\_ad\_artificial\_fd\_v2 | ch\_antibiotics\_abp  ch\_cpr\_abp  ch\_gallbladder\_abp  ch\_artificial\_fd\_abp  emph\_antibiotics\_abp  emph\_cpr\_abp  emph\_gallbladder\_abp  emph\_artificial\_fd\_abp  stroke\_antibiotics\_abp  stroke\_cpr\_abp  stroke\_gallbladder\_abp  stroke\_artificial\_fd\_abp  cancer\_antibiotics\_abp  cancer\_cpr\_abp  cancer\_gallbladder\_abp  cancer\_artificial\_fd\_abp  hattack\_antibiotics\_abp  hattack\_cpr\_abp  hattack\_gallbladder\_abp  hattack\_artificial\_fd\_abp  ad\_antibiotics\_abp  ad\_cpr\_abp  ad\_gallbladder\_abp  ad\_artificial\_fd\_abp |
| Preferences for SDM (partner about self) | b\_1\_decision\_v2 | Decision\_pr |
| SDM in AMI (partner about patient) | c\_1\_angioplasty\_v2  c\_2\_surgery\_v2  c\_3\_heart\_rehab\_v2  c\_4\_cholesterol\_med\_v2 | angioplasty\_abp  surgery\_abp  heart\_rehab\_abp  cholesterol\_med\_abp |
| SDM in Acute Ischemic Stroke (partner about patient) | c\_5\_clotbusting\_med\_v2  c\_6\_sx\_on\_neck\_artery\_v2  c\_7\_stroke\_rehab\_v2  c\_8\_blood\_thinning\_med\_v2 | clotbusting\_med\_abp  sx\_on\_neck\_artery\_abp  stroke\_rehab\_abp  blood\_thinning\_med\_abp |
| Risk Perception (partner about patient) | d\_1\_fall\_v2  d\_2\_heart\_attack\_v2  d\_3\_stroke\_v2  d\_4\_dementia\_v2 | falls\_f2yrs\_abp  heart\_attack\_f2yrs\_abp  stroke\_f2yrs\_abp  dementia\_f2yrs\_abp |
| **PRIMARY IV** | | |
| MCI | [original variable name] | [new variable name] |
| **SECONDARY DVs** | | |
| MoCA\* | [original variable name] | [new variable name] |
| Site\* | site | site |
| White, Black, Hispanic race (partner about self) | g\_3\_hispanic\_v2  g\_4\_race\_v2  sec\_g\_4a\_other\_race\_v2 | hispanic\_pr  race\_1\_pr  other\_race\_pr |
| Age (partner about self) | g\_1\_age\_v2 | age\_pr |
| Sex (partner about self) | g\_2\_gender\_v2 | gender\_pr |
| Educational attainment (partner about self) | g\_10\_education\_v2 | education\_pr |
| Contacts with Dementia (partner about self) | g\_11\_dementia\_v2 | dementia\_cfamily\_pr |
| Contacts with AMI (partner about self) | g\_13\_heart\_attack\_v2 | heart\_attack\_cfamily\_pr |
| Contacts with Stroke (partner about self) | g\_12\_stroke\_v2 | stroke\_cfamily\_pr |
| Marital status (partner about self) | g\_5\_marital\_status\_v2 | marital\_statu\_pr |
| ADLs (partner about self) | f\_9\_walking\_v2  f\_10\_dressing\_v2  f\_11\_bathing\_v2  f\_12\_eating\_v2  f\_13\_out\_of\_bed\_v2  f\_14\_toileting\_v2 | walking\_pr  dressing\_pr  bathing\_pr  eating\_pr  bed\_pr  toileting\_pr |
| Depressive symptoms (partner about self) | f7\_little\_interest  f8\_depressed | little\_interest\_pr  depressed\_pr |
| Health status (partner about self) | f1\_health | health\_pr |
| Medical history (partner about self) | f2\_stroke  f3\_heart\_disease  f4\_lung\_disease  f5\_cancer  f6\_arthritis | stroke\_pr  heart\_diseas\_pr  lung\_diseas\_pr  cancer\_pr  arthritis\_pr |
| Patient DSRS (partner about patient) | e\_1\_memory  e\_2\_speech\_and\_language  e\_3\_reg\_of\_fam\_members  e\_4\_orientation\_to\_time  e\_5\_orientation\_to\_place  e\_6\_decisions  e\_7\_social\_and\_community  e\_8\_activities\_and\_respons  e9\_personal\_care  e10\_eating  e11\_urination\_and\_bowels  e12\_place\_to\_place | memory\_abp  speech\_and\_language\_abp  reg\_of\_fam\_members\_abp  orientation\_to\_time\_abp  orientation\_to\_place\_abp  decisions\_abp  social\_and\_community\_abp  activities\_and\_respons\_abppersonal\_care\_abp  eatinglevl\_abp  urination\_and\_bowels\_abp  place\_to\_place\_abp |
| Dyad characteristics (partner about dyad) | g\_6\_relationship  g6a\_other\_relationship  g\_7\_relationship\_yrs  g\_8\_frequency\_seen  other\_freq  g\_9\_speak\_with  g9a\_freq\_spoken\_to | relationship\_pr  other\_relationship\_pr  relationship\_yrs\_pr  frequency\_seen\_pr  other\_freq\_pr  speak\_with\_pr  freq\_spoken\_t\_pr |

**ROLES AND TIMELINE**

**Table 1R.** Determination of authorship by study contribution.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **[Author A]** | **[Author B]** | **[Author C]** | **[Author D]** | **[Author E]** | **[Author F]** | **[Author G]** |
| **Study design** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| **Statistical analysis** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| **Manuscript preparation** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| **Manuscript revision** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| **Public responsibility** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| ***Total*** | **%** | **%** | **%** | **%** | **%** | **%** | **%** |
| Each author’s percentage contribution in each category is entered into the grid.  Authors are listed in descending order of their total percentage contribution. | | | | | | | |

**Table 2R.** Assignment of benchmark tasks and ideal completion dates.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Benchmark task** | **Subtasks** | **Team member(s)** | **Target date** | **Completion date** |
| *Pre-submission* | | | |  |
| Study design | Create concept | DA Levine, MD | [Date] | [Date] |
| Design study | DA Levine, MD | [Date] | [Date] |
| Statistical analysis | Draft analytic plan | H Kimmel, MPH  RT Whitney, PhD | [Date] | [Date] |
| Quantify recruitment | RT Whitney, PhD | [Date] | [Date] |
| Quantify completion | RT Whitney, PhD | [Date] | [Date] |
| Generate dataset | RT Whitney, PhD | [Date] | [Date] |
| Check data quality | RT Whitney, PhD | [Date] | [Date] |
| Perform analyses   * Preliminary * Missing data * Primary | RT Whitney, PhD | [Date] | [Date] |
| Review code | M Kabeto, MS  A Galecki, PhD | [Date] | [Date] |
| Report findings | [Name, title] | [Date] | [Date] |
| Manuscript preparation | Draft initial manuscript | [Name, title] | [Date] | [Date] |
| Prepare for publication   * Select target journal * Update formatting * Create cover letter | [Name, title] | [Date] | [Date] |
| Review final documents |  |  |  |
| *Post-submission* | | | |  |
| Journal correspondence | Submit final documents | [Name, title] | [Date] | [Date] |
| Revise and resubmit | [Name, title] | [Date] | [Date] |
| Public responsibility | Handle press requests | DA Levine, MD | [Date] | [Date] |
| Handle reader questions | DA Levine, MD | [Date] | [Date] |

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