

Lay Summary

The following group of questions must be answered in lay language or language that can be understood by those whose primary concerns and training are non-scientific. Technical terms should be avoided or explicitly explained. Do not respond with "see protocol" or "protocol attached". Symbols must be spelled out, for example, "greater than" or "less than".

3. Describe the purpose of the study/question(s) you are trying to answer (hypothesis).

This study will utilize the infrastructure and collective experience of the National Children's Study (NCS) to develop a visit assessment tool that can identify both major and minor birth defects that will clearly have implications for the evaluation and description of the human phenotype. A standardized assessment that has applicability in multiple settings is currently lacking, but would have a significant impact in the study of human genetics and clinical teratology. Despite the rapid expansion of knowledge in molecular genetics since the completion of the Human Genome Project, the ability to link molecular variation to phenotypic changes is hampered by the absence of systematic methods for assessing these differences.

4. How will you answer the research question(s)/what methods will you use (methodology)?

Dysmorphologists from each of the study centers will form a working group to develop the assessment tool. This work began in September of 2010 at all collaborating study centers after approval from the NCS Program Office. Using the series of publications on the Elements of Morphology from the American Journal of Medical Genetics as a foundation, the group is currently determining an appropriate scoring system for each feature to identify the following characteristics: 1) relevance as an indicator of genetic mutation and/or prenatal environmental effects; 2) ease of identification by field staff based on either objective measures or binary categorization of the feature (present versus absent); and, 3) ability for a feature to be photographically captured using two dimensional images. In an effort to maintain brevity of the assessment, the use of two-dimensional photographic capture of each relevant feature will be established as the gold standard. If a feature cannot be adequately assessed using photographs, both quantitative measures (objective measurements or binary categorization) and qualitative measures will be employed, with the former having priority.

The traits are being grouped into those requiring photography and those requiring direct visual assessment. Based on the photographs needed for the first group, a photographic protocol will be developed to ensure ease of administration, yet maintaining reliability across field staff. Issues such as camera specifications, lighting, camera angle, distance to the feature, and the state of the study participant (crying versus neutral face) will be addressed during this phase. The protocol for direct visual assessment will then be developed with considerations for necessary training, required tools such as rulers and tape measures, and availability of established normative values. The completion of this phase will result in the Dysmorphology Assessment Instrument (DAI). Field staff at each center will then be trained by the collaborating dysmorphologist on conducting the DAI. An evaluation of both trainer and trainee will be obtained after the training is completed.

In order to validate the photographic components of the DAI, a panel of dysmorphologists from all collaborating study centers will be asked to review a series of photos obtained from all sites. This activity is expected to begin in January of 2011 pending IRB approval, and will last up to 6 months. 10-15 non-NCS participants will be recruited from the newborn nursery. Approximately equal numbers of males and females infants will be recruited. The nursery staff including nurses, residents, and attending physician will be trained on introducing the study to parents of newborns admitted to the nursery. If the parents express interest, they will be given a permission to contact form to sign. The signed form will be provided to the unit secretary of the newborn nursery, who will contact the study staff. Study staff will then meet with the family to obtain informed consent and will proceed by taking at least 9 facial photos of the infant with an internal standard (an adhesive ruler placed on the forehead or temple). At least three photos will be obtained in each of 3 views (frontal, right profile, and left profile) in accordance with the current NCS infant photograph protocol. A ten-second video will be taken of infants' faces and diapered bodies. A brief physical assessment will then be conducted by trained researchers. A five-minute participant satisfaction survey will then be given. A blinded evaluation of the photographs will be performed by the panel of dysmorphologists to determine if they are adequate to evaluate each of the target features. The target

features will then be evaluated for its presence or absence, or quantification of the trait. The two testable hypotheses from these evaluations would be the validity of the photographic technique and the reliability of the assessment by photograph and video.

5. What, if anything, will participants be asked to do (procedures)?

Photographs will be taken of the infant's face, hands, and feet. We will also conduct direct visual assessment with measurement of facial features, hands, and feet. A ten-second video of infants' faces and diapered bodies will be captured.

6. How many months do you anticipate conducting this research after IRB approval is granted?

24

Participants - General Information

1. How many participants do you plan to enroll/charts do you plan to review?

50

2. How many do you anticipate enrolling/reviewing during the first year?

50

3. For multi-center studies, what is the total number of participants to be enrolled overall/charts to be reviewed?

300

4. Age-Range of participants (check all that apply)

- Newborn - 6 years
- 7 - 17 years
- 18 - 64 years
- 65+ years

5. Specific age range expected:

For example, "1-18 months" or "5-15 years".

0-12 months

6. Targeted Study Population: (check all that apply)

- Adults - healthy controls
- Adults - patients
- Impaired mental capacity
- Decisionally impaired
- Students K-12
- UMC students
- UMC employees
- Minors (under 18)
- Fetuses
- Pregnant women
- Parent/teacher/caregiver
- Critically ill (ER/ICU/CCU)
- Other

If other is checked please describe the population:

7. Protected Populations

Federal Regulations provide additional protections for "protected populations" and Federal Guidelines require special considerations for the inclusion of potentially vulnerable populations in research. Do you propose to include children, pregnant women and fetuses, prisoners, mentally, emotionally and/or developmentally challenged persons, minority groups and/or non-English speakers, participants 65 and older or a gender imbalance in this study?

Yes No

8. Inclusion and Exclusion Criteria

8a. Briefly summarize the inclusion criteria:

Newborns and infants in the newborn nursery, at the 6 month well-child check, or at the 12 month well-child check will be included.

8b. Briefly summarize the exclusion criteria:

Children older than 12 months will not be included.

9. Participant demographics

9a. Gender of participants:

- Male
 Female
 Both

9b. Are there any enrollment restrictions based on gender, pregnancy, or childbearing potential?

Yes No

9c. If yes, please explain the nature of the restriction(s) and provide justification.

9d. Are there any enrollment restrictions based on race or ethnic origin?

Yes No

9e. If yes, please explain the nature of the restrictions and provide justification.

9f. Anticipated on-site enrollment by ethnicity and race (check only those that you reasonably anticipate enrolling):

- Black or African American
 Hispanic or Latino
 Native Hawaiian or other Pacific Islander
 American Indian or Alaskan Native
 Asian
 White

If you plan to enroll non-english speaking participants the informed consent and assent document(s) must be translated into the appropriate language and back-translated into English by individuals with the appropriate level of expertise, and included with this submission, or

submitted with a request for change.

The documents should be attached to the submission under the Documents tab.

Recruitment

1. Recruitment Strategies

Describe the recruitment strategies you will use for each group of participants, including where and when materials will be posted/published, and specifically list each type of recruitment material that will be used:

10-15 non-NCS participants will be recruited from the newborn nursery. Approximately equal numbers of males and females infants will be recruited. The nursery staff including nurses, residents, and attending physician will be trained on introducing the study to parents of newborns admitted to the nursery. If the parents express interest, they will be given a permission to contact form to sign. The signed form will be provided to the unit secretary of the newborn nursery, who will contact the study staff. Study staff will then meet with the family to obtain informed consent and will proceed by taking at least 9 facial photos of the infant with an internal standard (an adhesive ruler placed on the forehead or temple). At least three photos will be obtained in each of 3 views (frontal, right profile, and left profile). A ten-second video will be taken of the infant's face and diapered body. A brief physical assessment will also occur. Families will be given the option of a \$25 cash incentive or a similarly-valued baby item (fleece blanket, bib, etc). A blinded evaluation of the photographs and video will be performed by the panel of dysmorphologists to determine if they are adequate to evaluate each of the target features.

Attach a copy of all recruitment materials to be used in the Documents tab, e.g. advertisements, bulletin board notices, flyers, radio or television ads, newspaper ads, GroupWise e-mails, intranet screen saver, letters, phone scripts, or URLs.

Please note, the IRB and Public Affairs must review and approve all materials prior to use.

2. Approach to potential participants

Specifically explain who will approach potential participants about the research, when, how and where, and what will be done to protect participants' privacy in this process:

The nursery staff including nurses, residents, and attending physician will be trained on introducing the study to parents of newborns admitted to the nursery. If the parents express interest, they will be given a permission to contact form to sign. The signed form will be provided to the unit secretary of the newborn nursery, who will contact the study staff. Study staff will then meet with the family to obtain informed consent. If the family is non-English speaking, the hospital translator will be paged to provide translation for the informed consent process.

Please note, initial contact of potential participants identified through a records search must be made by the official holder of the record, i.e. primary physician, therapist, public school official, or a member of the primary care team.

Hospital policy requires that "[p]atients identified as possible candidates for research studies be approached by the attending physician or a member of the health care team of record to ask for authorization to disclose the patient's name to the principle investigator or research coordinator of the applicable study. If authorization is given, this information will be documented in the

patient's medical record and the research personnel will be contacted. If the patient chooses not to be considered for the study, neither the patient's name nor any of the patient's information will be given to research personnel. The patient's refusal will also be documented in the patient's medical record."

[The University Hospitals and Clinics Administrative Policy and Procedure Manual ADM/R-7 II B](#)

3. Incentives for identifying participants

Are there any incentives (monetary or non-monetary), finders fees or recruitment bonuses being offered to anyone for identifying potential participants, or connected with participant enrollment or completion of the research study?

Yes No

If yes, please describe:

\$25 monetary incentive (gift card) or similarly valued item.

4. Institution funding based on # of participants

For sponsored studies, will the institution receive funds based upon the number of participants enrolled?

Yes
 No
 N/A

If yes, please describe, including amount:

5. Payments for participant enrollment/completion

For sponsored studies, is the study sponsor offering any payments connected with participant enrollment (per capita payment) or completion of the research study that will be paid directly to the research staff, including the Principal Investigator?

Yes
 No
 N/A

If yes, please describe, including amount:

6. Charges for research-related procedures

Will participants be charged for research-related procedures?

Yes No

If yes, please explain. (This information must be included in the consent document.)

7. Costs in addition to standard treatment

Will it cost participants more to be in the study than to receive standard treatment?

Yes
 No
 N/A This is not a treatment study.

If yes, please explain. (This information must be included in the consent document.)

8. Participant compensation

Will participants be compensated?

Yes No

If yes, please complete the next three items. (This information must be included in the consent document and the amount must be prorated.)

8a. Method of Payment

Cash
 Check

8b. Please describe the pro-rated amount the participant will receive for each completed visit or portion of the study, including when payment will occur.

\$25 gift card or similarly valued item.

8c. If the participant completes the entire study what is the total amount of payment he/she will receive?

25

9. Compensation for research-related injury

Is compensation available for research-related injury?

Yes No