Infant specific-IgE, rhinovirus-C bronchiolitis, and incident asthma in MARC-35

(MARC-35.5)

SITE MANUAL OF PROCEDURES

Last updated: September 30, 2015

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GENERAL INFORMATION

Site Roster

The site PI should email the Project Coordinator Ashley Sullivan (*afsullivan@partners.org*) a roster of all study staff (including site-specific study coordinators) and their contact information. All study staff must be approved to work on the study by their local IRB.

Site Communication Plan

The EMNet Coordinating Center website (*www.emnet-usa.org*) has a section dedicated to MARC-35.5. This website has the study protocol, materials, and other relevant information available for viewing and download. All site PIs have a username and password that enables them to access password-protected materials.

Study-wide announcements will occur through email. Should all sites need to receive additional documents, we will alert site PIs and study coordinators via email and the documents will be made available on the EMNet website for viewing and download.

The EMNet Coordinating Center will schedule periodic calls with sites post-initiation to assess progress throughout the study.

Study ID assignment

All children enrolled in the original MARC-35 study have been assigned a unique, 6-digit Study ID number, which is the same Study ID number we use for the MARC-35.5 research exam. The Study ID number is made up of a 3-digit site number (assigned by the EMNet Coordinating Center) plus a 3-digit participant number.

Participant numbers were originally assigned sequentially based on enrollment date and time, as well as study year. For Year 1 enrollment (November 2011 to April 2012) we used numbers in the 100s; during Year 2 (November 2012 to April 2013) we used numbers in the 200s; and during Year 3 (November 2013 to April 2014) we used numbers in the 300s.

For example, the 26th patient from site 011 during the 2nd year of the study would have been listed as “011226.”

If you are uncertain of your site number or your participants’ study IDs, please email *afsullivan@partners.org*.

Form Completion Schedule

All participants who complete the exam will have the Scheduling Form and Research Exam Form forms completed by site study staff. Where applicable, the Adverse Event & Serious Adverse Event Form and the Deviation Form also should be completed.

Decision rules for conflicting results

In cases when there is conflicting documentation, reviewer should prioritize certain providers’ documentation based on the following rules:

- An Attending Physician’s documentation should be used over a Resident Physician’s documentation.
- Resident Physician over a Physician Assistant (PA) or Nurse Practitioner (NP)
- PA or NP over a nurse
- Nurse over a medical student

Miscellaneous

Times: Time notations should be made based on the 24-hour clock. Valid times should be recorded as 00:00 (midnight) to 23:59. Please note that 24:00 is not a valid time.

Unexpected findings during the exam: If the clinician detects any finding that he/she finds potentially concerning (e.g., unexpected atopic dermatitis, unexpected nasal polyp(s), and/or unexpected wheezing or crackles), the clinician will tell the parent to contact the child's primary care clinician for further evaluation.

Instructions for REDCap Data Entry

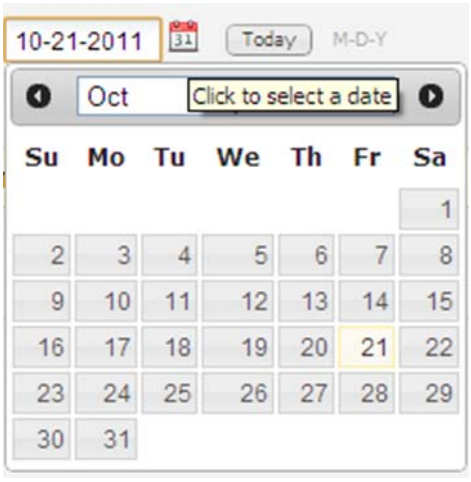
Selecting the correct Subject and Form for data entry
To begin data entry, click on the "My Projects" tab located at the top of the screen. Select the "MARC-35/WIND Study 42-Month Research Exam" project. Then, click on the "Add/Edit Records" icon located on the left side of the database screen. This will bring you to the screen where you can either select an existing subject (by Study ID). From the drop down list select the individual for whom you want to perform the data entry. This will bring you to the appropriate record and display the participant's data collection instruments, with red/yellow/green dots corresponding with forms with no data entered, that are incomplete, or that are complete. Select the appropriate form.

Pop-up Questions from Branching Logic
Forms in REDCap are programmed with branching logic so some questions will only appear on the screen when certain questions are answered in such a way to make them "pop up." In other words, some questions on the hard-copy form are "hidden" on the online version until they are prompted.

Variable Validation
Some questions have been programmed so that answers are only accepted after they have been validated. In the event that an invalid answer is typed into a response, a pop-up screen will appear with an error message, and a valid response must be entered.

'Other' Response
When the "Other" response is selected, a pop-up text box will appear that allows one to enter text to specify the response.

Dates
We recommend using the REDCap calendar feature to enter dates, rather than typing in dates. Click on the calendar function and click the date rather than typing the date. One also can click the "Today" button to enter the date on which the button is clicked.



Some questions require that the parent/legal guardian provide a date of an event (e.g., the date of a diagnosis of atopic dermatitis/eczema by a medical professional). For this type of question, the date variables of interest are the month and year, so please enter '01' for 'DD' (day) and record month and year based on the parent/legal guardian response.

Times
Click on the clock button to enter time. Another option is to click the "Now" button to insert the time at which the button is clicked. If you type the time, use military time format (HH:MM).

Required Responses
When saving a form, a pop-up screen will inform you if you have skipped any questions that are required. If you have skipped any questions or need to return to the form at a later date in order to complete it, please select "unverified" as the form status prior to saving the record. Please return to the skipped question(s) and provide a response.

If one is unable to provide a response because the information is unavailable (e.g., question not answered by parent), leave the question blank. When one is ready to save the form, choose "complete" as the form status prior to saving the record.

Saving Data
When saving each form, the form status must be categorized as "incomplete," "unverified," or "complete" as follows:

Click "Incomplete" if there are no data entered and you want to exit the form. You may also exit by clicking "cancel." The button for this form will remain red on the data entry event grid.

Click "Unverified" if any fields are pending responses (i.e., the form is partially filled out). The button for this form will turn yellow on the data entry event grid.

Click "Complete" only if all fields have responses. The button for this form will turn green on the data entry event grid. Please do not mark a form with no data entered into it as "complete."

Remember to click the "Save" or "Save and Continue" button when you are done regardless of whether the form is complete or incomplete. REDCap is programmed to time-out after 30 minutes; please be sure to save data frequently.

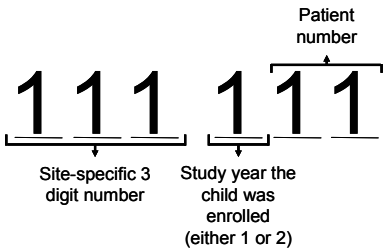
In particular, save data before trying to move to any new screens or forms! Do not click on the back or forward arrows at the top left hand portion of the screen (the browser arrows). Any unsaved data will be lost.

Specific Form Instructions

Scheduling Form

The scheduling form should be completed for any child who is eligible to participate in the exam at your site.

Scheduling Form

Question	*Instructions*
Parent/legal Guardian Availability & Allergy Information	
This section is completed by the **EMNet Coordinating Staff** and is referenced by your site for information on parent/legal guardian scheduling availability, medical/food/latex allergies, or other concerns.	
Study ID	This is a unique study identification number used to specify participant data and biological specimens. Each Study ID is made of a 3-digit site specific number followed by a 3-digit individual study participant number, which is the same Study ID number assigned to the child in the original MARC-35 study. If you are uncertain of your 3-digit site-specific number, email *afsullivan@partners.org*.  The first digit of the 3-digit individual study participant number indicates the year the subject was enrolled (either year 1, 2, or 3); the last two digits specify the number in which this child was enrolled. This Study ID is pre-populated in the REDCap Scheduling Form REDCap and appears at the top of the form. However, please re-enter the Study ID to confirm that you are in the correct participant record. Please also note that the Study ID must match the labels used for subsequent study forms and biospecimen samples.
Did the parent/legal guardian agree to child's participation in the exam?	Select 'Yes' if the parent/legal guardian agreed to participation in the research exam. Select 'No, declined participation' if the parent/legal guardian declined participation in the research exam. No further action on this form (or others) is required.

Question	***Instructions***
	Select 'No, parent/legal guardian not reachable' if: 1. At least 5 telephone attempts have been made over at least 3 days in the first week of trying to schedule the exam, with supplemental emails used (if parent/legal guardian has a working e-mail address); and 2. The parent/legal guardian continues to be unreachable after a minimum of 1 attempt via phone and email per month until the child is not longer eligible to participate in the exam (>59 months or >4.9 years). Use the 'Telephone Correspondence Log' and 'E-mail Correspondence Log' sections to document all communication attempts.
Will the exam be scheduled by hospital/clinic staff?	Select 'Yes, exam will occur at hospital/clinic site' if exam will occur at your site or another MARC-35 enrolling hospital or clinic. Select 'No, exam will be scheduled by EMNet Staff since exam will occur outside of hospital/clinic site' if the exam will occur outside of either your site or one of the other MARC-35 hospital or clinics. Select 'Other (specify)' if the way in which the exam will be scheduled/occur does not fit into either of the two prior categories.
Please specify 'other' way in which exam will be scheduled	If 'Other (specify)' selected for 'Will the exam be scheduled by hospital/clinic staff?' use the free text box to describe the way in which the exam will be scheduled and occur.
Ask parent/legal guardian: What are some good days or times of the week that you would be available to come in for the exam? Feel free to tell us times that would absolutely not work as well.	Use the free text box to describe in detail the dates and times that work best for the parent/legal guardian to come in for the exam, and also make notes of any dates and times that are *not* convenient.
Tell parent/legal guardian: I have a few questions to ask you about [child's name]'s allergies, in preparation for [child's name]'s exam. The people who do the exams typically	Read this to the parent during the telephone call accompanying the Scheduling Form, prior to asking the questions which follow.

Question	*Instructions*
like to have this type of information available ahead of time.	
Ask parent/legal guardian: does [child's name] have any known medication allergies?	Select 'Yes (specify)' if parent/legal guardian reports any known medication allergies for their child. Select 'No' if parent/legal guardian reports no known medication allergies for their child.
Ask parent/legal guardian: what are the specific medication allergies that [child's name] has?	If 'Yes (specify)' selected for 'Ask parent/legal guardian: does [child's name] have any known medication allergies?' use the free text box to describe the medication allergies in detail.
Ask parent/legal guardian: Does [child's name] have any known latex allergies?	Select 'Yes (specify)' if parent/legal guardian reports any known latex allergies for their child. Select 'No' if parent/legal guardian reports no known latex allergies for their child.
Ask parent/legal guardian: do you have any additional information to share with us on [child's name] latex allergies?	If 'Yes (specify)' selected for 'Ask parent/legal guardian: do you have any additional information to share with us on [child's name] latex allergies?' use text box to describe the latex allergies in detail. If there is no additional information shared by the parent, enter 'No additional information provided.'
Ask parent/legal guardian: does [child's name] have any known food allergies?	Select 'Yes (specify)' if parent/legal guardian reports any known food allergies for their child. Select 'No' if parent/legal guardian reports no known food allergies for their child.
Ask parent/legal guardian: what are the specific food allergies [child's name] has?	If 'Yes' selected for 'Ask parent/legal guardian: does [child's name] have any known food allergies?' use text box to describe the food allergies in detail.
Ask parent/legal guardian: do you have any special requests or concerns that are relevant to the exam?	Select 'Yes (specify)' if parent/legal guardian has any special requests or concerns regarding the exam to share with you. Select 'No' if parent/legal guardian does not have any special requests or concerns regarding the exam to share with you.
Ask parent/legal guardian: could you	If 'Yes (specify)' selected for 'Ask parent/legal guardian: do you have any special requests or concerns that are relevant to the

Question	*Instructions*
share these with us at this time, so that we can communicate them to the hospital/clinic staff?	exam?' use the free text box to describe these requests or concerns in detail.

Child's Age Calculator

This is section calculates the age of the child in months at the date of the exam. The IDEAL age that we would prefer the exam to occur, whenever possible, is between age 42 months (3.5 years) and age 45 months (3.75 years); however, the exam may be conducted from age 36 months (3.0 years) to age 59 months (4.9 years). Completion of this section is optional.

Please enter the child's date of birth	Enter the date of the child's birth in MM-DD-YYYY format.
Please enter date of proposed exam	Enter the date of the proposed exam in MM-DD-YYYY format.
Child's age in months at date of proposed exam	This value is calculated automatically by REDCap. The resulting age will always appears in red regardless of whether or not it is within the required age window. For guidance on the appropriate age range for the exam, please refer to the ages listed under the 'Child's Age Calculator' section header.

Telephone Correspondence Log

The site/clinic staff must log both successful and unsuccessful telephone call attempts with the parent/legal guardian. Please note that call attempt #1 will be used below as an example for how to complete the fields, but that repeating fields exist in REDCap for call attempts #2, #3, and beyond.

Please make at least 5 telephone attempts over at least 3 days in the first week of trying to schedule the exam, with supplemental emails used (if parent/legal guardian has a working e-mail address). If one is still unable to reach the parent/legal guardian, please make a minimum of 1 attempt via phone and email per month until the child is not longer eligible to participate in the exam (>59 months or >4.9 years).

Was CALL ATTEMPT #1 made to parent/legal guardian?	Select 'yes' if CALL ATTEMPT #1 was made to parent/legal guardian. Select 'no' if CALL ATTEMPT #1 was not made to parent/legal guardian.
Hospital/clinic staff initials	Enter the initials of the hospital/clinic staff member conducting the telephone call. If the hospital/clinic staff member does not have a middle name, use X for the middle initial.

Question	*Instructions*
	Example: Jane A. Jones: J A J Sam Smith: S X S
Date and time of call	Enter the date of the call in MM-DD-YYYY format. Enter the time of the call in military time format (HH:MM).
Phone number called	Enter the 10-digit phone number dialed.
Name of call recipient	Enter name of call recipient in 'first name, last name' format. Example: Jane Smith
Relationship to child	Select 'Mother' if call recipient is the child's mother. Select 'Father', if call recipient is the child's father. Select 'Legal guardian' if call recipient is the child's legal guardian. Select 'Other (specify)' if the call recipient does not fit into any of the categories listed above (e.g., alternate contact).
Please specify 'Other'	If 'Other (specify)' was selected for 'Relationship to child', describe the relationship to the child in the text box.
Brief description of call	Use the free text to describe content of the telephone call.

E-mail Correspondence Log

The user logs all e-mail correspondence attempts with parent/legal guardian. Please note that e-mail attempt #1 will be used as an example below, but that repeating fields will exist for e-mail attempt #2, #3, and beyond.

Please make at least 5 telephone attempts over at least 3 days in the first week of trying to schedule the exam, with supplemental emails used (if parent/legal guardian has a working e-mail address). If one is still unable to reach the parent/legal guardian, please make a minimum of 1 attempt via phone and email per month until the child is not longer eligible to participate in the exam (>59 months or >4.9 years).

Was E-MAIL ATTEMPT #1 made to parent/legal guardian?	Select 'yes' if EMAIL ATTEMPT #1 was made. Select 'no' if EMAIL ATTEMPT #1 was not made.
Hospital/clinic staff initials:	Enter the initials of the hospital/clinic staff member communicating via e-mail.

Question	*Instructions*
	If the hospital/clinic staff member does not have a middle name, use X for the middle initial. Example: Jane A. Jones: J A J Sam Smith: S X S
Date and time of e-mail	Enter the date of the e-mail in MM-DD-YYYY format. Enter the time of the e-mail in military time format (HH:MM).
E-mail address of recipient	Enter email address of recipient in the following format: *janesmith@email.com*
Name of e-mail recipient	Enter name of e-mail recipient in the following format: Example: Jane Smith
Relationship to child	Select 'Mother' if e-mail recipient is the child's mother. Select 'Father' if e-mail recipient is the child's father. Select 'Legal guardian' if e-mail recipient is the child's legal guardian. Select 'Other (specify)' if the e-mail recipient does not fit into any of the categories listed above.
Please specify 'other'	If 'other' was selected for 'relationship to child', describe the relationship of the e-mail recipient to the child in the text box.
Brief description of e-mail	Use free text to briefly describe the content of the e-mail.

Scheduling the Exam

This section is completed by hospital/clinic staff after scheduling the exam and prior to the exam occurring.

Hospital/clinic staff initials	Enter the initials of the hospital/clinic staff member completing the form. If the hospital/clinic staff member does not have a middle name, use X for the middle initial. Example: Jane A. Jones: J A J Sam Smith: S X S
Were you able to successfully schedule	Select 'Yes' if you were able to successfully schedule the exam.

Question	*Instructions*
the exam?	Select 'No, parent/legal guardian not reachable' if the parent/legal guardian was not reachable after <u>*at least*</u> *5 telephone attempts have been made over at least 3 days in the first week of trying to schedule the exam, with supplemental emails used (if parent/legal guardian has a working e-mail address) and parent/legal guardian continues to be unreachable after a <u>minimum</u> of 1 attempt via phone and email per month until the child is not longer eligible to participate in the exam (>59 months or >4.9 years).* Document all communication efforts in the 'Telephone Correspondence Log' and 'E-mail Correspondence Log'. Select 'No, parent/legal guardian changed mind and would no longer like to participate in the exam' if parent/legal guardian is no longer interested in participating in the research exam. No further action is required for this form. Select 'No, other (specify)' if there is another reason (not specified above) for why the exam was not successfully scheduled.
Please specify 'other' reason exam was not scheduled successfully	If 'No, other (specify)' was selected for 'Were you able to successfully schedule the exam for [child's name]?' and use free text box to describe reason.
Please enter the date of the scheduled exam	If 'Yes' selected for 'Were you able to successfully schedule the exam for [child's name]?' enter the date of the scheduled exam in MM-DD-YYYY format.

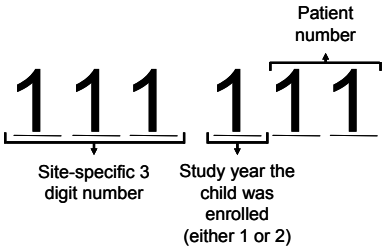
After Exam Has Occurred

This section is completed by hospital/clinic staff <u>after</u> the exam has occurred.

Did child and parent/legal guardian attend scheduled exam?	Select 'Yes, and exam is complete' if exam has successfully occurred. No further action is needed on this form. Select 'Yes, but participant must return to clinic in order to complete exam (specify)' if the exam occurred but some assessments were missing, which necessitate an additional visit to complete. Select 'No' if exam was not attended by child and parent/legal guardian.
Please specify why child must return to the hospital/clinic to complete the exam	If 'Yes, but participant must return to clinic in order to complete exam (specify)' was selected for 'Did child and parent/legal guardian attend scheduled exam?' use the text box to describe the reason in detail.
Please specify the	If 'Yes, but participant must return to clinic in order to complete

Question	*Instructions*
proposed date of the additional visit needed to complete the exam	exam (specify)' was selected for 'Did child and parent/legal guardian attend scheduled exam?' enter the date of the additional scheduled visit in MM-DD-YYYY format.
After the date of the additional visit to complete the exam has occurred, please indicate if the child and parent/guardian successfully attended the exam	Select 'Yes' if the child and parent/legal guardian successfully attended the additional visit. Select 'No' if the child and parent/legal guardian did not successfully attend the additional visit.
Since the additional scheduled exam was not successfully completed, please comment on plan to complete exam, including re-schedule date and any other relevant information	If 'No' was selected for 'After the date of the additional visit to complete the exam has occurred, please indicate if the child and parent/guardian successfully attended the exam,' use the text box to describe the plan in detail.
Were you able to re-schedule the exam?	If 'No' was selected for 'Did child and parent/legal guardian attend scheduled exam?': Select 'Yes' if the exam was successfully re-scheduled. Enter the new date of the re-scheduled exam in the previous section entitled 'Scheduling the Exam' under the field 'Please enter the date of the scheduled exam'. Select 'No' if the exam was not successfully re-scheduled.
Please indicate the reason exam was not successfully re-scheduled	If 'No' was selected for 'Were you able to re-schedule the exam?': Select 'Parent/legal guardian not reachable' if parent/legal guardian was not reachable by phone or e-mail after multiple attempts. Select 'Parent/legal guardian changed mind and would no longer like to participate' if parent/legal guardian did not want to participate in the exam component of the study. Select 'Other (specify)' if there is another reason (not specified above) that the exam was not successfully re-scheduled.
Please specify 'other' reason exam was not re-schedule	If 'Other (specify) was selected for 'Please indicate the reason exam was not successfully re-scheduled,' use the text box to describe the reason.

Research Exam Form

Question	*Instructions*
Informed Consent	
Study ID	This is a unique study identification number used to specify participant data and biological specimens. Each Study ID is made of a 3-digit site specific number followed by a 3-digit individual study participant number. If you are uncertain of your 3-digit site-specific number, email *afsullivan@partners.org*.  The first digit of the 3-digit individual study participant number indicates the year the subject was enrolled (either year 1, 2, or 3); the last two digits specify the number in which this child was enrolled. This Study ID is pre-populated from the REDCap Scheduling Form and appears at the top of the form. However, please re-enter the Study ID to confirm that you are in the correct participant record. Please also note that the Study ID must match the labels used for subsequent study forms and biospecimen samples.
Date of assessment	Enter the date of the research exam in MM-DD-YYYY format.
Hospital/clinic staff Initials	Enter the initials of the hospital/clinic staff member completing the form. If the hospital/clinic staff member does not have a middle name, use X for the middle initial. Example: Jane A. Jones: J A J Sam Smith: S X S
Child's first name	Enter the child's first name.
Child's last name	Enter the child's last name.

Question	***Instructions***
Child's date of birth	Enter the date of the child's birth in MM-DD-YYYY format.
Parent/legal guardian first name	Enter the parent/legal guardian's first name.
Parent/legal guardian last name	Enter the parent/legal guardian's last name.
Relationship to child	Indicate the parent/legal guardian's relationship to the child from the following choices: Select 'Father' if the parent/legal guardian is the child's father. Select 'Mother' if the parent/legal guardian is the child's mother. Select 'Legal guardian' if the parent/legal guardian is the legal guardian. Select 'Other (specify)' if the adult present at the exam is not the child's father, mother or legal guardian. Please note that only the parent/legal guardian may provide consent for the exam. If the individual is providing informed consent at the time of the exam and is not the parent/legal guardian, please re-schedule the exam for a time when parent/legal guardian is available to accompany the child to the exam.
Please specify 'other'	If 'Other (specify)' is selected for 'Relationship to child' use free text box to describe the adult's relationship to the child.
Was informed consent for the exam obtained from the child's parent/legal guardian?	Select 'Yes' if informed consent for the exam was obtained from the parent/legal guardian. For exams that occur outside of one of the originally enrolling sites, consent may be obtained prior to the exam. In these cases, the EMNet Coordinating Center will provide the clinician performing the exam confirmation of informed consent. Select 'No' if informed consent for the exam was not obtained from the parent/legal guardian. If informed consent was not obtained, please do not proceed with study assessments at this time.
Please specify reason why parent/legal guardian declined consent	If 'No' was selected for 'Was informed consent for the exam obtained from the child's parent/legal guardian?' use the free text box to describe the reason in detail.

Question	*Instructions*
Please indicate the parent/legal guardian's answer to the (optional) genetic testing part of the study	Select 'Yes, interested in participating in the genetic part of this study' if parent/legal guardian agreed to participate in the optional genetic testing. Select 'No, not interested in participating in the genetic part of this study' if parent/legal guardian declined participation in the optional genetic testing.

Contact Information

Street address, apartment #	Enter the parent/legal guardian's street address and apartment number (if applicable) Example: 99 Main Street, Apartment #99
City	Enter city or town of the parent/legal guardian's residence.
State	Enter the state of the parent/legal guardian's residence using the two-letter state abbreviation. Example: Massachusetts would be 'MA.'
ZIP code	Enter numerical value for ZIP code of the parent/legal guardian's residence.
Primary phone number	Enter the parent/legal guardian's primary phone number. Example: (123) 456-7890
Primary phone type	Select the parent/legal guardian's primary phone type from the following options: Select 'Home' if the primary phone type is a home phone number. Select 'Work' if the primary phone type is a work phone number. Select 'Cell' if the primary phone type is a cellular/mobile phone number. Select 'Other (specify)' if the primary phone type is a phone number that does not fit into one of the existing categories.
Specify 'other' phone type	If 'Other (specify)' was selected for 'Primary phone type' use the free text box to describe the primary phone type.

Question	*Instructions*
Is there a second best phone number?	Select 'Yes' if parent/legal guardian indicates an alternate number. Select 'No' if parent/legal guardian indicates there is no alternate phone number.
Second best phone number	Enter parent/legal guardian's second best phone number. Example: (123) 456-7890
Second best phone type	Select parent/legal guardian's second best phone type from the following options: Select 'Home' if the second best phone type is a home phone number. Select 'Work' if the second best phone type is a work phone number. Select 'Cell' if the second best phone type is a cellular/mobile phone number. Select 'Other (specify)' if the second best phone type is a phone number that does not fit into one of the existing categories.
E-mail address	Enter parent/legal guardian's email address. Example: *janesmith@email.com* If the parent/legal guardian does not have an email address, enter "no email."
Are you planning to move or change any of your contact information (such as address, e-mail or phone) in the near future?	Select 'Yes' if the parent/legal guardian is planning to move or change their contact information in the future. Select 'No' if the parent/legal guardian is not planning to move or change their contact information in the near future.
Do you have some details to share with us at this time about the new contact information?	If 'Yes' was selected for 'Are you planning to move or change any of your contact information (such as address, e-mail or phone) in the near future?,' use the free text box to provide details.

Question	*Instructions*

Primary Care Clinician Information

This section applies to the information collected from the parent/legal guardian regarding the child's primary care clinician.

Name of primary care provider (PCP)	Enter the full name of primary care provider.
Name of PCP office/practice (if applicable)	Enter the name of primary care office or practice, if applicable.
PCP street address	Enter the primary care provider's street address, including apartment or suite number. Example: 99 Main Street, Suite #99 If the parent doesn't know the street address at the time of the exam, enter "unknown." Please try to complete the other address fields (e.g., city) even if the street address is unknown.
PCP state	Enter primary care provider's state using the two-letter state abbreviation. Example: Massachusetts would be 'MA.'
PCP ZIP code	Enter primary care provider's ZIP code.
Phone number of PCP	Enter the phone number of primary care provider. Example: (123) 456-7890
Fax number of PCP	Enter the fax number of primary care provider. Example: (123) 456-7890
E-mail address of PCP	Enter the e-mail address of primary care provider in the following format: *janesmith@email.com* If the PCP does not have an email address or the parent does not know the email address, enter "no email."

Asthma Specialist Information

This section applies to the information collected from the parent/legal guardian regarding the child's asthma specialist.

Does your child have an	Select 'Yes' if child has an asthma specialist.

Question	*Instructions*
asthma specialist?	Select 'No' if child does not have an asthma specialist.
Could you share as many details as you know?	If 'Yes' selected for 'Does your child have an asthma specialist?...' this question appears, prompting the user to ask the parent/legal guardian this question along with related follow-up questions.
Name of asthma specialist	Enter the full name of asthma specialist. Example: Jane Smith
Name of asthma specialist practice (if applicable)	Enter name of asthma specialist practice, if applicable. Example: Jane Smith Associates
Street address of asthma specialist	Enter asthma specialist's street address, including apartment or suite number. Example: 99 Main Street, Suite #99 If the parent doesn't know the street address at the time of the exam, enter "unknown." Please try to complete the other address fields (e.g., city) even if the street address is unknown.
State of asthma specialist	Enter the asthma specialist's state using the two-letter state abbreviation. Example: Massachusetts would be 'MA.'
ZIP code of asthma specialist	Enter the asthma specialist's ZIP code.
Phone number of asthma specialist	Enter the phone number of asthma specialist in the Example: (123) 456-7890
Fax number of asthma specialist	Enter the fax number of asthma specialist. Example: (123) 456-7890
E-mail address of asthma specialist	Enter e-mail address of primary care provider. Example: *janesmith@email.com* If the asthma specialist does not have an email address or the parent does not know the email address, enter "no email."

Question	*Instructions*

Flexural Dermatitis Exam

This section applies to the flexural dermatitis examination on the child and the associated questions for the parent/legal guardian.

Please ask parent/guardian:	This directive appears for the user as an instruction to ask the questions that follow.
In the past week, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?	Select 'Yes' if the parent/legal guardian reports that child has had itchy skin in the past week. Select 'No' if the parent/legal guardian reports that the child has not had itchy skin in the past week.
In the past year, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?	Select 'Yes' if the parent/legal guardian reports that child has had itchy skin in the past year. Select 'No' if the parent/legal guardian reports that child has not had itchy skin in the past year.
In the past week, has your child suffered from dry skin in general?	Select 'Yes' if the parent/legal guardian reports that child has had dry skin in the past week. Select 'No' if the parent/legal guardian reports that child has not had dry skin in the past week.
In the past year, has your child suffered from dry skin in general?	Select 'Yes' if the parent/legal guardian reports that child has had dry skin in the past year. Select 'No' if the parent/legal guardian reports that child has not had dry skin in the past year.
Think about your child's itchy and dry skin and when it generally gets worse. Does it generally get worse when the weather is cold?	If 'Yes' to EITHER 'In the past week, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past year, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past week, has your child suffered from dry skin in general?' OR 'In the past year, has your child suffered from dry skin in general?': Select 'Yes' if the parent/legal guardian reports that child's skin generally gets worse when the weather is cold. Select 'No' if the parent/legal guardian reports that child's skin does not generally get worse when the weather is cold.
Is your child's itchy and dry	If 'Yes' to EITHER 'In the past week, has your child

Question	*Instructions*
skin generally worse during a specific season (mark all that apply)?	had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past year, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past week, has your child suffered from dry skin in general?' OR 'In the past year, has your child suffered from dry skin in general?': Select 'Fall' if the parent/legal guardian reports that child's itchy and dry skin is generally worse during the Fall. Select 'Winter' if the parent/legal guardian reports that child's itchy and dry skin is generally worse during the Winter. Select 'Spring' if the parent/legal guardian reports that child's itchy and dry skin is generally worse during the Spring. Select 'Summer' if the parent/legal guardian reports that child's itchy and dry skin is generally worse during the Summer. Select 'No, all seasons' if the parent/legal guardian reports that child's itchy and dry skin is not worse during a specific season, but is itchy and dry during all seasons.
Has this skin condition ever affected the skin creases, and by skin creases we mean around the eyes, around the neck, fronts of elbows, behind the knees, or fronts of ankles?	If 'Yes' to EITHER 'In the past week, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past year, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past week, has your child suffered from dry skin in general?' OR 'In the past year, has your child suffered from dry skin in general?': Select 'Yes' if the parent/legal guardian reports that child's skin condition has affected any of the mentioned areas. Select 'No' if the parent/legal guardian reports that child's skin condition has not affected the mentioned areas.
Has your child ever been diagnosed by a medical professional with atopic dermatitis/eczema?	If 'Yes' to EITHER 'In the past week, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past year, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past week, has your child suffered from dry skin in general?' OR 'In the past

Question	***Instructions***
	year, has your child suffered from dry skin in general?': Select 'Yes' if the parent/legal guardian reports that child has been diagnosed by a medical professional with atopic dermatitis/eczema. Select 'No' if the parent/legal guardian reports that child has not been diagnosed by a medical professional with atopic dermatitis/eczema. Select 'Unsure' if the parent/legal guardian is not sure if child has been diagnosed by a medical professional with atopic dermatitis/eczema.
What was the approximate date of this diagnosis?	If 'Yes' to 'Has your child ever been diagnosed by a medical professional with atopic dermatitis/eczema?': Enter the approximate date of this diagnosis in MM-01-YYYY format. '01' should always be used for day, while year and month are based on the parent/legal guardian's response.
Clinician please examine the skin for atopic dermatitis/eczema at each of the following sites and indicate finding	This is a directive which prompts the clinician to examine the child for atopic dermatitis/eczema and record findings.
Around the eyes?	Select 'Yes' if child has atopic dermatitis/eczema around their eyes upon examination. Select 'No' if child does not have atopic dermatitis/eczema around their eyes upon examination.
Front of neck?	Select 'Yes' if child has atopic dermatitis/eczema on the front of their neck upon examination. Select 'No' if child does not have atopic dermatitis/eczema on the front of their neck upon examination.
Around the elbows?	Select 'Yes' if child has atopic dermatitis/eczema around their elbows upon examination. Select 'No' if child does not have atopic dermatitis/eczema around their elbows upon examination.
Behind the knees?	Select 'Yes' if child has atopic dermatitis/eczema

Question	*Instructions*
	behind their knees upon examination. Select 'No' if child does not have atopic dermatitis/eczema behind their knees upon examination.
Fronts of ankles?	Select 'Yes' if child has atopic dermatitis/eczema on the fronts of their ankles upon examination. Select 'No' if child does not have atopic dermatitis/eczema on the fronts of their ankles upon examination.
Do you recall the date you first noticed this skin condition?	If evidence of atopic dermatitis/eczema in at least one area above upon examination: Select 'Yes, recall date (specify)' if parent/legal guardian can recall the approximate date that he/she noticed the skin condition. Select 'Cannot recall date' if parent/legal guardian cannot recall approximate date he/she first noticed this skin condition. Select 'Never noticed before' if parent/legal guardian has never noticed this skin condition before.
What was the approximate date when you first noticed this skin condition?	If 'Yes recall date (specify)' selected for 'Do you recall the approximate date you first noticed this skin condition?' enter the date in MM-01-YYYY format. The day should always be listed as '01', while year and month are based on the parent/legal guardian's response.
Clinician ask parent/legal guardian: Now I'd like to ask you if you have ever used anything to treat your child's skin condition, both now (currently) and in the past. Has your child's skin condition ever been treated with the following products currently or in the past? (Check off all that apply)	If 'Yes' to EITHER 'In the past week, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past year, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past week, has your child suffered from dry skin in general?' OR 'In the past year, has your child suffered from dry skin in general?' OR there evidence of atopic dermatitis/eczema in at least one area based on clinical examination, ask the questions that follow.
CURRENTLY: Over the counter (OTC) products applied to the skin (e.g.	Select 'Yes' if parent/legal guardian reports that OTC products are currently being applied to the child's skin to treat the child's skin condition.

Question	*Instructions*
hydrolatum, Vaseline, Aquaphor, Cetaphil, Aveeno, Cortaid, Vanicream, OTC hyrocortizone, or other OTC steroid creams or moisturizers)	Select 'No' if parent/legal guardian reports that no OTC products are currently being applied to the child's skin to treat the child's skin condition. Select 'Unsure' if parent/legal guardian is not sure if OTC products are currently being applied to the child's skin to treat the child's skin condition.
IN THE PAST: Over the counter (OTC) products applied to the skin (e.g. hydrolatum, Vaseline, Aquaphor, Cetaphil, Aveeno, Cortaid, Vanicream, OTC hyrocortizone, or other OTC steroid creams or moisturizers)	Select 'Yes' if parent/legal guardian reports that OTC products have been applied to the child's skin in the past to treat the child's skin condition. Select 'No' if parent/legal guardian reports that no OTC products have been applied to the child's skin in the past to treat the child's skin condition. Select 'Unsure' if parent/legal guardian is not sure if OTC products have been applied to the child's skin in the past to treat the child's skin condition.
CURRENTLY: prescription products applied to the skin (e.g. prescription hydrocortisone, Elocon, Protopic, Elidel, or other prescription atopic dermatitis/eczema treatment)	Select 'Yes' if parent/legal guardian reports that prescription products are currently being applied to the child's skin to treat the child's skin condition. Select 'No' if parent/legal guardian reports that no prescription products are currently being applied to the child's skin to treat the child's skin condition. Select 'Unsure' if parent/legal guardian is not sure if prescription products are currently being applied to the child's skin to treat the child's skin condition.
IN THE PAST: prescription products applied to the skin (e.g. prescription hydrocortisone, Elocon, Protopic, Elidel, or other prescription atopic dermatitis/eczema treatment)	Select 'Yes' if parent/legal guardian reports that prescription products have been applied to the child's skin in the past to treat the child's skin condition. Select 'No' if parent/legal guardian reports that no prescription products have been applied to the child's skin in the past to treat the child's skin condition. Select 'Unsure' if parent/legal guardian is not sure if prescription products have been applied to the child's skin in the past to treat the child's skin condition.
CURRENTLY: Oral medications (e.g. Benadryl, Atarax, Zyrtec, Periactin, cerphalexin (Keflex), other allergy medication, or other	Select 'Yes' if parent/legal guardian reports that oral medications are currently being used to treat the child's skin condition. Select 'No' if parent/legal guardian reports that no oral

Question	*Instructions*
antibiotics)	medications are currently being used to treat the child's skin condition. Select 'Unsure' if parent/legal guardian is not sure if oral medications are currently being used to treat the child's skin condition.
IN THE PAST: Oral medications (e.g. Benadryl, Atarax, Zyrtec, Periactin, cerphalexin (Keflex), other allergy medication, or other antibiotics)	Select 'Yes' if parent/legal guardian reports that oral medications have been used in the past to treat the child's skin condition. Select 'No' if parent/legal guardian reports that oral medications have been used in the past to treat the child's skin condition. Select 'Unsure' if parent/legal guardian is not sure if oral medications have been used in the past to treat the child's skin condition.

Infant Dermatitis Quality of Life Index (IDQOL)

The Infant Dermatitis Quality of Life Index (1-3) is a brief, 10-question quality of life questionnaire administered to parents of children with symptoms of atopic dermatitis/eczema who have met at least one of the following conditions:

- 'Yes' to EITHER 'In the past week, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past year, has your child had itchy skin, and by itchy we mean scratching or rubbing of the skin?' OR 'In the past week, has your child suffered from dry skin in general?' OR 'In the past year, has your child suffered from dry skin in general?'; or
- There is evidence of atopic dermatitis/eczema in at least one area based on the clinical examination.

Before giving the IDQOL to the parent/legal guardian to complete, affix a pre-printed label to the questionnaire. If a pre-printed label is unavailable, write the study ID on the survey.

Was the IDQOL given to the parent/legal guardian to complete?	Select 'Yes' if the IDQOL was given to parent/legal guardian to complete. Select 'No' if the IDQOL was not given to parent/legal guardian to complete.
Please specify reason IDQOL was not given to parent/legal guardian	If 'No' selected for 'Was the IDQOL given to the parent/legal guardian to complete?' use the free text box to describe reason in detail.
Was the completed questionnaire collected from parent/legal guardian?	If 'Yes' selected for 'Was the IDQOL given to the parent/legal guardian to complete?':

Question	*Instructions*
	Select 'Yes' if the completed IDQOL was collected from parent/legal guardian. You will be prompted to enter the responses from the hard-copy of the IDQOL in REDCap. Select 'No' if the completed IDQOL was not collected from parent/legal guardian.
Please specify reason why the completed IDQOL was not collected from parent/legal guardian	If 'No' selected for 'Was the completed questionnaire collected from parent/legal guardian?' use the free text box to describe the reason in detail.
Over the last week, how severe do you think your child's dermatitis has been? i.e. how red, scaly, inflamed or widespread.	Based on the parent/legal guardian's response, select one of the following answers: 'Extremely severe', 'Severe', 'Average', 'Fairly good', or 'None'.
1. Over the last week, how much has your child been itching and scratching?	Based on the parent/legal guardian's response, select one of the following answers: 'All the time', 'A lot', 'A little', or 'None'.
2. Over the last week, what has your child's mood been?	Based on the parent/legal guardian's response, select one of the following answers: 'Always crying, extremely difficult', 'Very fretful', 'Slightly fretful', or 'Happy'.
3. Over the last week, approximately how much time on average has it taken to get your child off to sleep each night?	By "off to sleep each night," the questionnaire is referring to how long it takes your child to go to sleep after being put in bed. Based on the parent/legal guardian's response, select one of the following answers: 'More than 2 hours', '1 to 2 hours', 15 minutes to 1 hour', '0 to 15 minutes'.
4. Over the last week, what was the total time that your child's sleep was disturbed on average each night?	Based on the parent/legal guardian's response, select one of the following answers: '5 hours or more', '3 to 4 hours', '1 to 2 hours', 'Less than 1 hour'.
5. Over the last week, has your child's eczema interfered with playing or swimming?	Based on the parent/legal guardian's response, select one of the following answers: 'Very much', 'A lot', 'A little', 'Not at all'.
6. Over the last week, has your child's eczema	Based on the parent/legal guardian's response, select one of the following answers: 'Very much', 'A lot', 'A

Question	*Instructions*
interfered with your child taking part or enjoying other family activities?	little', 'Not at all'.
7. Over the last week, have there been problems with your child at mealtimes because of the eczema?	Based on the parent/legal guardian's response, select one of the following answers: 'Very much', 'A lot', 'A little', 'None'.
8. Over the last week, have there been problems with your child caused by the treatment?	"The treatment" refers to any treatment for dry, itchy skin, or atopic dermatitis/eczema. Based on the parent/legal guardian's response, select one of the following answers: 'Very much', 'A lot', 'A little', 'None'.
9. Over the last week, has your child's eczema meant that dressing and undressing the child has been uncomfortable?	Based on the parent/legal guardian's response, select one of the following answers: 'Very much', 'A lot', 'A little', 'None'.
10. Over the last week, how much has your child having eczema been a problem at bathtime?	Based on the parent/legal guardian's response, select one of the following answers: 'Very much', 'A lot', 'A little', 'None'.

Nasal Exam

This section applies to the nasal examination of the child and its associated assessments.

Please assess left and right nare for polyps and record findings: Are nasal polyps present in either the left or right nare?	Select 'Yes' if nasal polyps are present in either the left or right nare(s) of the child. Select 'No' if nasal polyps are not present in either the left or right nare(s) of the child.
Number of polyps in RIGHT nare	If 'Yes' to 'Are nasal polyps present': Select '0' if no polyps were present in the right nare. Select '1' if 1 polyp was observed in the right nare. Select '2 or more' if 2 or more polyps were observed in the right nare.
Number of polyps in LEFT nare	If 'Yes' to 'Are nasal polyps present':

Question	*Instructions*
	Select '0' if no polyps were present in the left nare. Select '1' if 1 polyp was observed in the left nare. Select '2 or more' if 2 or more polyps were observed in the left nare.

Nasal Swab Specimen

This section applies to the nasal swab specimen collection and its associated questions.

Was a nasal swab specimen collected?	Select 'Yes' if nasal swab specimen was collected. Select 'No' if nasal swab specimen was not collected.
Date and time nasal swab specimen collected	If 'Yes' to 'Was a nasal swab specimen collected?': Enter the date nasal swab specimen collected in MM-DD-YYYY format, followed by the time nasal swab specimen collected in military time format (HH:MM).
Date nasal swab specimen shipped	If 'Yes' to Was a nasal swab specimen collected?': Enter the date the nasal swab specimen was shipped in MM-DD-YYYY format.
Please specify reason why nasal swab specimen not collected	If 'No' to Was a nasal swab specimen collected?': Use free text to describe in detail the reason the nasal swab specimen was not collected.

Nasal Swab Questionnaire for Parent/Legal guardian

This section applies to the Nasal Swab Questionnaire administered to the parent/legal guardian and its associated questions.

Before giving the IDQOL to the parent/legal guardian to complete, affix a pre-printed label to the questionnaire. If a pre-printed label is unavailable, write the study ID on the survey.

Was the nasal swab questionnaire given to the parent/legal guardian to complete?	Select 'Yes' if the nasal swab questionnaire was given to the parent/legal guardian to complete. Select 'No' if the nasal swab questionnaire was not given to the parent/legal guardian to complete.
Please specify reason nasal swab questionnaire was not given to parent/legal guardian	If 'No' selected for 'Was the nasal swab questionnaire given to the parent/legal guardian to complete?' use the free text box to describe reason in detail.

Question	*Instructions*
Was the completed nasal swab questionnaire collected from the parent/legal guardian?	If 'Yes' selected for 'Was the nasal swab questionnaire given to the parent/legal guardian to complete?': Select 'Yes' if the completed nasal swab questionnaire was collected from the parent/legal guardian. Select 'No' if the completed nasal swab questionnaire was not collected from the parent/legal guardian.
Please specify reason nasal swab questionnaire was not collected from parent/legal guardian	If 'No' selected for 'Was the completed nasal swab questionnaire collected from the parent/legal guardian?' use the free text box to describe the reason(s).
Please enter the answers the parent/legal guardian provided on the hard copy of the Nasal Swab Questionnaire	This directive prompts the user to enter the answers the parent/legal guardian provided on the hard copy of the Nasal Swab Questionnaire into REDCap.
Does your child have a cough?	Based on the parent/legal guardian's response, select the appropriate answer: 'Yes' or 'No'.
If yes, is the cough (select one)	If 'Yes' selected for 'Does your child have a cough?' select the appropriate answer based on the parent/legal guardian response: 'Mild (mostly gagging)', 'Moderate (cough is significant, but not waking child at night)', 'Severe (cough that causes vomiting and/or wakes your child at night).'
Does your child have a runny nose?	Based on the parent/legal guardian's response, select the appropriate answer: 'Yes' or 'No'.
If yes, is the runny nose (select one)	If 'Yes' to 'Does your child have a runny nose?' select the appropriate answer based on the parent/legal guardian response: 'Mild (have to suction 0-4 times/day, or wipe every 2 hours or less)' or 'Severe (have to suction 5 or more times/day, or wipe every 1 or more times/hour)'.
Do you think your child has a fever (temp of 100°F or higher)?	Based on the parent/legal guardian's response, select the appropriate answer: 'Yes' or 'No'.
Is your child hoarse (muffled, scratchy voice)?	Based on the parent/legal guardian's response, select the appropriate answer: 'Yes' or 'No'.
Is your child breathing faster than normal?	Based on the parent/legal guardian's response, select the appropriate answer: 'Yes' or 'No'.

Question	*Instructions*
Do you think your child is "wheezing" (by wheezing we mean high-pitched whistling sounds when your child is breathing out)?	Based on the parent/legal guardian's response, select the appropriate answer: 'Yes' or 'No'.

Lung Exam

This section applies to the lung examination and its associated assessments.

Please measure and record the following values	This directive prompts the user to perform and record a series of assessments for the lung exam.
Please select units used to measure temperature	Select the units used to measure temperature from the following choices: '°F' or '°C'.
Temperature (Fahrenheit)	If '°F' selected for 'Please select and record the following values:' enter the numerical value of degrees in Fahrenheit.
Temperature (Celsius)	If '°C' selected for 'Please select and record the following values:', enter the numerical value of degrees in Celsius.
Conversion of Celsius to Fahrenheit:	If the numerical value of temperature in Celsius is entered for 'Temperature (Celsius)', a conversion to degrees Fahrenheit is automatically calculated by REDCap. The displayed value will always appear in red.
Systolic pressure	Enter the numerical value of the systolic pressure in mm Hg.
Diastolic pressure	Enter the numerical value of the diastolic pressure in mm Hg.
Heart rate:	Enter the numerical value of the heart rate in beats per minute.
Select units used to measure height	Select 'inches' if units of inch were used to measure height. Select 'centimeters' if units of centimeter were used to measure height.
Height (inches)	If 'inches' selected for 'Select units used to measure height' enter the numerical value of height in inches.
Height (centimeters)	If 'centimeters' selected for 'Select units used to measure height:' enter the numerical value of height in

Question	*Instructions*
	centimeters.
Conversion of height from centimeters to inches	If the numerical value of height in centimeters is entered for 'Height (centimeters)', a conversion to inches is automatically calculated by REDCap. The displayed value will always appear in red.
Select units used to measure weight	Select 'pounds' if units of pound were used to measure height. Select 'kilograms' if units of kilogram were used to measure height.
Weight (pounds)	If 'pounds' selected for 'Select units used to measure weight' enter the weight in units of pound.
Weight (kilograms)	If 'kilograms' selected for 'Select units used to measure weight' enter the weight in units of kilogram.
Conversion of weight from kilograms to pounds:	If the numerical value of weight in kilograms is entered for 'weight (kilograms)', a conversion to pounds is automatically calculated by REDCap. The displayed value will always appear in red.
Please listen to lungs and document findings	These directives instruct the user to perform auscultation on the child, and record the findings. Definitions of wheezing and crackles are provided as a reference below.
Clear to auscultation	Select 'Yes' if lungs are clear to auscultation. Select 'No' if lungs are not clear to auscultation.
Wheezing	Definition of Wheezing: A continuous whistling sound heard predominantly during expiration that is caused by narrowing of the lumen of a respiratory passageway. Select 'Yes' if wheezing is heard upon auscultation. Select 'No' if wheezing is heard upon auscultation.
Crackles	Definition of crackles: A discontinuous, inspiratory or expiratory lung sound, as opposed to a wheeze, which is continuous. Crackles are produced by air passing over retained airway secretions or the sudden opening of collapsed airways. Select 'Yes' if crackles are heard upon auscultation.

Question	*Instructions*
	Select 'No' if crackles are not heard upon auscultation.
Other lung sounds	Select 'Yes' if other lung sounds (not inclusive of wheezing or crackles) are heard upon auscultation. Select 'No' if other lung sounds (not inclusive of wheezing or crackles) are not heard upon auscultation.
Please specify 'other lung sounds' heard upon auscultation	Please describe the other lung sounds heard upon auscultation.

Blood Specimen – CBC/diff

This section applies to the complete blood count with differential specimen.

Was a CBC/diff ordered for real-time analysis at your local lab?	Select 'Yes' if a CBC/diff was ordered for real-time analysis at your local lab. A CBC/diff must be ordered for each exam. Select 'No' if a CBC/diff was not ordered for real-time analysis at your local lab.
Please specify why CBC/diff was not collected, and comment on plans for future blood draw attempts	If 'No' selected to 'Was a CBC/diff ordered for real-time analysis at your local lab?' use the text box to describe the reason and plans for future blood draws in detail.
If 'yes' selected for 'Was a CBC/diff ordered for real-time analysis at your local lab?' the user is prompted to answer the following questions:	
Collection date and time of specimen for the CBC/diff	Enter the date of the CBC/diff collection in MM-DD-YYYY format followed by the time of the CBC/diff collection in military time format (HH:MM).
% Hematocrit (HCT)	Enter numerical value for % hematocrit.
Hemoglobin (HGB)	Enter numerical value for hemoglobin.
Hemoglobin (HGB) units	Select the appropriate units of hemoglobin that correspond to your laboratory results from the following choices: 'g/dL', 'g/L', or 'mmol/L'.
Red blood cell count (RBC)	Enter the numerical value for red blood cell count.
Red blood cell (RBC) units	Select the appropriate units of red blood cells that correspond to your laboratory results from the following choices: '$x10^6/mm^3$', '$x10^6/\mu L$', or '$x10^9/L$'.
White blood cell (WBC)	Enter numerical value for white blood cell count.

Question	*Instructions*
count	
White blood cell (WBC) units	Select the appropriate units of white blood cells that correspond to your laboratory results from the following choices: 'x10^3/μL', 'x10^3/ mm^3', or 'x10^9/L'.
Platelet count (PLT)	Enter the numerical value for platelet count.
Thrombocyte/platelet (PLT) units	Select the appropriate units of platelets/thrombocytes that correspond to your laboratory results from the following choices: 'x10^3/μL', 'x10^3/mm^3', or 'x10^9/L'.
Absolute neutrophil count (ANC)	Enter the numerical value for absolute neutrophil count.
Absolute neutrophil count (ANC) units	Select the appropriate units for absolute neutrophils that correspond to your laboratory results from the following choices: 'x10^3/μL', 'x10^3/ mm^3', or 'x10^9/L'.
Absolute lymphocyte count (ALC)	Enter the numerical value for absolute lymphocyte count.
Absolute lymphocyte count (ANC) units	Select the appropriate units for absolute lymphocyte count that correspond to your laboratory results from the following choices: 'x10^3/μL', 'x10^3/ mm^3', or 'x10^9/L'.
Absolute monocyte count (AMC)	Enter numerical value for absolute monocyte count.
Absolute monocyte count (AMC) units	Select the appropriate units for absolute monocyte count that correspond to your laboratory results from the following choices: 'x10^3/μL', 'x10^3/ mm^3', 'x10^9/L'.
Absolute eosinophil count (AEC)	Enter numerical value for absolute eosinophil count.
Absolute eosinophil count (AEC) units	Select the appropriate units for absolute eosinophil count that correspond to your laboratory results from the following choices: 'x10^3/μL', 'x10^3/ mm^3', 'x10^9/L'.
Absolute basophil count (ABC)	Enter numerical value for absolute basophil count.
Absolute basophil count (ABC) units	Select the appropriate units for absolute neutrophil count that correspond to your laboratory results from the following choices: 'x10^3/μL', 'x10^3/ mm^3', or 'x10^9/L'.

Question	*Instructions*
% Neutrophils	Enter the numerical value of % neutrophils.
% Lymphocytes	Enter the numerical value of % lymphocytes.
% Monocytes	Enter the numerical value of % monocytes.
% Eosinophils	Enter the numerical value of % eosinophils.
% Basophils	Enter the numerical value of % basophils.

Blood Specimen – Red Top

This section applies to the red top (research blood) specimen.

Please answer the following questions regarding the red top research blood specimen	This directive instructs the user to complete the questions to follow on the red top (research blood) specimen.
Was a red top blood specimen collected?	Select 'Yes' if a red top blood specimen was collected. Select 'No' if a red top blood specimen was not collected.
Please specify why a red top blood specimen was not collected and comment on plans for future blood draw attempts	If 'No' selected for 'Was a red top blood specimen collected?' use the text box to describe reason why and comment on plans for future blood draws in detail.

If 'Yes' selected for 'Was a red top blood specimen collected?' the user is prompted to answer the following questions:

Collection date and time of red top blood specimen	Enter the date of the red top blood collection in MM-DD-YYYY format, followed by the time of the red top blood collection in military time format (HH:MM).
Total number of red top tubes collected	Select '1' if one red top tube was collected. Select '2' if two red top tubes were collected.
Please choose the appropriate category for your red top blood sample total volume	Select 'equal or greater than 4.5mL' if this corresponds to the volume of red top blood collected. Select 'less than 4.5mL' if this corresponds to the volume of red top blood collected.
Volume of red top blood	Enter the total volume of red top blood collected.

Question	*Instructions*
collected (mL)	
As less than 4.5 mL of the red top was collected, was an additional blood draw attempted or scheduled?	If 'less than 4.5mL' selected for 'please choose the appropriate category for your red top blood sample total volume': Select 'Yes' if an additional blood draw was attempted or scheduled. Select 'No' if an additional blood draw was not attempted or scheduled.
Please specify reason additional red top blood was not attempted or scheduled for a future date	If 'No' selected for 'As less than 4.5 mL of the red top was collected, was an additional blood draw attempted or scheduled?' use the text box to describe the reason(s) in detail.
How many additional red top blood draws were attempted?	If 'Yes' selected for 'As less than 4.5mL of the red top was collected, was an additional blood draw attempted or scheduled?' select the value that corresponds to the number of additional red top blood draw applicable: Select '1' if 1 additional red top blood draw was attempted. Select '2' if 2 additional red top blood draws were attempted. Select '3' if 3 additional red top blood draws were attempted.
Volume of additional red top blood draw attempt (mL)	If any number selected for 'How many additional red top blood draws were attempted?' indicate the volume resulting from the additional blood draw attempt. If more than one additional red top blood draw attempts were made, indicate the combined volume from all additional attempts.
Total volume of red top blood specimen (original blood draw volume plus all additional draw volumes)	The total volume of red top blood specimen" is calculated automatically by REDCap. It adds the volume resulting from the original blood draw with the volume from any additional blood draw attempts. Example: Original blood draw volume: 2mL Additional blood volume volume: 4mL Total blood volume: 6mL (value automatically calculated and displayed).
Total number of serum	If 'Yes' selected for 'Was a red top blood specimen

Question	*Instructions*
(white top) cryogenic vials available	collected?' select the value that corresponds to the number of serum (white top) cryogenic vials available: Select '0' if no serum (white top) cryogenic vials are available. Select '1' if 1 serum (white top) cryogenic vials are available. Select '2' if 2 serum (white top) cryogenic vials are available.
Please specify why no serum (white top) cryogenic vials available	If '0' selected for 'Total number of serum (white top) cryogenic vials available' use the text box to indicate the reason in detail.
Total volume of serum (add all white top volumes) (mL)	If '1' or '2' selected for 'Total number of serum (white top) cryogenic vials available' indicate the total volume of all vials added together.
Total number of pellet (blue top) cryogenic vials available	If 'Yes' selected for 'Was a red top blood specimen collected?' select the value that corresponds to the number of pellet (blue top) cryogenic vials available: Select '0' if no pellet (blue top) cryogenic vials are available. Select '1' if 1 pellet (blue top) cryogenic vials are available. Select '2' if 2 pellet (blue top) cryogenic vials are available. Note: For participants who did not agree to the genetics portion of the study, the pellet will NOT undergo genetics analysis, but will be used for non-genetics testing so should still be recorded, stored, and shipped to MGH (see shipment instructions below).
Please specify why no pellet (blue top) cryogenic vials available	If '0' selected for 'Total number of pellet (blue top) cryogenic vials available' use the text box to indicate the reason in detail.
Total volume of pellet (add all blue top volumes) (mL)	If '1' or '2' selected for 'Total number of pellet (blue top) cryogenic vials available' indicate the total volume of all vials added together.

Protocol Deviation Report Form

Protocol deviations are reported using the Protocol Deviation Report Form in REDCap. Protocol deviation reports must include the deviation date, subject number, a brief description of the event, the reason for the deviation, and steps taken to resolve or avoid recurrence of the deviation.

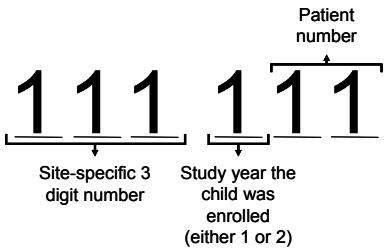
A major protocol deviation is any change, divergence or departure from the study design or procedures of a research protocol that affects the study participant's rights, safety, or well-being and/or the completeness, accuracy and reliability of the study data. Changes or alterations in the conduct of the study which do not have a major impact on the study participant's rights, safety, or well-being, or the completeness, accuracy and reliability of the study data are considered non-major protocol deviations. The deviation may be either on the part of the participant, the investigator, or the study site staff.

If there is a major protocol deviation, notify Ashley Sullivan (*afsullivan@partners.org*) immediately.

The following are examples of noncompliance with the protocol, Good Clinical Practice, or Manual of Procedure guidelines that must be reported:

- Forms or procedures not done or not completed as required;
- Blood specimen storage errors (e.g., supposed to be frozen, but was left sitting out);
- Informed consent not obtained prior to initiation of exam procedures;
- Failure to use the current approved version of the informed consent;
- Consent form is missing, or consent form was not signed and dated by the subject or appropriate legal guardian; and
- Protocol never approved by IRB or other IRB violations.

Protocol Deviation Report Form

Question	***Instructions***
Study ID	This is a unique study identification number used to specify participant data and biological specimens. Each Study ID is made of a 3-digit site specific number followed by a 3-digit individual study participant number. If you are uncertain of your 3-digit site-specific number, email *afsullivan@partners.org*.  The first digit of the 3-digit individual study participant number indicates the year the subject

Question	***Instructions***
	was enrolled (either year 1, 2, or 3); the last two digits specify the number in which this child was enrolled. This Study ID is pre-populated from the REDCap Scheduling Form and appears at the top of the form. However, please re-enter the Study ID to confirm that you are in the correct participant record.
Date of Report:	Enter the date in which the protocol deviation was reported. Use the MM-DD-YYYY format.
Date of Protocol Deviation:	Enter the date in which the protocol deviation occurred. Use the MM-DD-YYYY format.
Site	Select your site's name from the drop-down list: **APHC:** Arnold Palmer Hospital for Children **CCHMC:** Cincinnati Children's Hospital Medical Center **BCH:** Boston Children's Hospital **CHOP:** Children's Hospital of Philadelphia **CNMC:** Children's National Medical Center **Kosair:** Kosair Children's Hospital **Mercy:** Children's Mercy Hospital & Clinics **MGH:** Massachusetts General Hospital **Texas:** Texas Children's Hospital **DuPont:** Alfred I DuPont Hospital for Children **CHLA:** Children's Hospital Los Angeles **Pittsburgh:** Children's Hospital of Pittsburgh **Dallas:** Children's Medical Center of Dallas **Connecticut:** Connecticut Children's Medical Center **Dell:** Dell Children's Medical Center of Central Texas **Phoenix:** Phoenix Children's Hospital **Seattle:** Seattle Children's Hospital **Saint Francis:** Children's Hospital at Saint Francis **Other (specify)**: Please select this option if the exam location if it is not at one of the sites specified above.
Other (specify)	If 'Other (specify)' selected for 'Site' please enter the name of the exam location.
Investigator Name	If the exam took place at one of the m35 enrolling hospitals, enter the investigator's name (first and last name). If the exam too place at another location, enter the lead exam clinician's name (first and last name).
DAIT Protocol Number	The DAIT protocol number is R01AI114552. This number is automatically populated in REDCap.
Protocol Title or Short Name	The protocol title is "Infant specific-IgE, rhinovirus-

Question	***Instructions***
	C bronchiolitis, and incident asthma in MARC-35." This title is automatically populated in REDCap.
Did the deviation result in an Adverse Event?	Enter 'Yes' if the protocol deviation resulted in an adverse event. If so, also complete an AE & SAE Case Report Form. Enter 'No' if the protocol deviation did not result in an adverse event.
Did the deviation result in a Serious Adverse Event?	Enter 'Yes' if the protocol deviation resulted in a serious adverse event. If so, also complete an AE & SAE Case Report Form. Enter 'No' if the protocol deviation did not result in a serious adverse event.
Did the deviation result in subject termination of study follow-up?	Enter 'Yes' if the protocol deviation resulted in a termination of study follow-up for the subject. If so, notify Ashley Sullivan (*afsullivan@partners.org; 617-724-9712*) of the termination. Enter 'No' if the protocol deviation did not result in termination of the study follow-up for the subject.
Brief deviation description	Use the text box to describe the protocol deviation in detail. For examples of protocol deviations, please see Section 8 of the protocol.
Describe steps take to resolve or avoid recurrent of the deviation and procedures put in please to ensure protocol followed	Describe the steps taken to resolve or avoid this deviation in the future in detail, as well as the procedures put in place to make sure that the protocol is followed.
Does this deviation meet IRB reporting requirements?	Enter 'Yes' if the deviation meets your site's local IRB reporting requirements outside of continuing review reporting requirements (e.g., a major protocol deviation). Please review your IRB's policies to determine local IRB reporting requirements. Enter 'No' if the deviation does not meet your site's IRB reporting requirements or only needs to be reported at continuing review.
If yes, date IRB notified	If 'Yes' to 'Does this deviation meet IRB reporting requirements', enter the date in which the IRB was notified in MM-DD-YYYY format.

Question	***Instructions***
Signature/Date	If the deviation is a major protocol deviation, download a PDF of the form (upper left-hand corner of REDCap). Sign and date the form for your files. You do not need to send a signed/dated form to the EMNet Coordinating Center unless the deviation is a major protocol deviation.
I confirm that this form is complete	First confirm that the form is complete, and then enter the initials of the hospital/clinic staff member completing the form. If the hospital/clinic staff member does not have a middle name, use X for the middle initial. Example: Jane A. Jones: J A J Sam Smith: S X S

Adverse Event & Serious Adverse Event Case Report Form

Definitions

Adverse Event (AE) - Any occurrence or worsening of an undesirable or unintended sign, symptom, laboratory finding, or disease that is experienced during participation in the study and is related to a study procedure. If a medical condition is present at the time that the study participant is screened will be considered as baseline and not recorded as an adverse event.

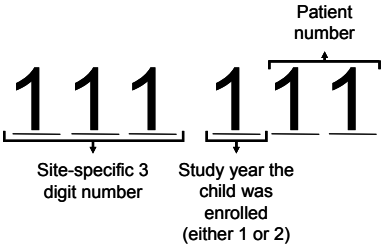
Serious Adverse Event (SAE) - Any adverse event that suggests a significant hazard, contraindication, side effect, or precaution.

Throughout the study all adverse events (serious and non-serious) will be recorded on reported on the Adverse Event Form in REDCap. The following tables explain what is required on every field for these forms. Please see Section 7 of the protocol for an explanation of what is considered an AE or SAE.

An adverse event will be followed until any of the following takes place:

a) it is resolved
b) participant is stable
c) a minimum of 30 days after participant is terminated from the study and the NIAID Medical Officer and the study investigators determine that follow-up is complete.

AE & SAE Case Report Form

Question	***Instructions***
Study ID	This is a unique study identification number used to specify participants and their biological specimens. Each Study ID is made of a 3-digit site specific number followed by a 3-digit individual study participant number. If you are uncertain of your 3-digit site-specific number, email afsullivan@partners.org.  The first digit of the 3-digit individual study participant number indicates the year the subject was enrolled (either year 1, 2, or 3); the last two digits specify the number in which this child was enrolled. This Study ID is pre-populated from the REDCap Scheduling Form and appears at the top of the form. However, please re-enter the Study ID to confirm that you are in the correct participant record.

Question	***Instructions***
Date of Report:	Enter the date in which the adverse event or serious adverse event was reported using the MM-DD-YYYY format.
Date of Event:	Enter the date in which the adverse event or serious adverse event occurred using the MM-DD-YYYY format.
Site	Select your site's name from the drop-down list: **APHC:** Arnold Palmer Hospital for Children **CCHMC:** Cincinnati Children's Hospital Medical Center **BCH:** Boston Children's Hospital **CHOP:** Children's Hospital of Philadelphia **CNMC:** Children's National Medical Center **Kosair:** Kosair Children's Hospital **Mercy:** Children's Mercy Hospital & Clinics **MGH:** Massachusetts General Hospital **Texas:** Texas Children's Hospital **DuPont:** Alfred I DuPont Hospital for Children **CHLA:** Children's Hospital Los Angeles **Pittsburgh:** Children's Hospital of Pittsburgh **Dallas:** Children's Medical Center of Dallas **Connecticut:** Connecticut Children's Medical Center **Dell:** Dell Children's Medical Center of Central Texas **Phoenix:** Phoenix Children's Hospital **Seattle:** Seattle Children's Hospital **Saint Francis:** Children's Hospital at Saint Francis **Other (specify)**: Please select this option if the exam location if it is not at one of the sites specified above.
Other (specify)	If 'Other (specify)' selected for 'Site' please enter the name of the exam location.
Site Investigator Name	If the exam took place at one of the m35 enrolling hospitals, enter the investigator's name (first and last name). If the exam too place at another location, enter the lead exam clinician's name (first and last name).
DAIT Protocol Number	The DAIT protocol number is R01AI114552. This number is automatically populated in REDCap.
Protocol Title or Short Name	The protocol title is "Infant specific-IgE, rhinovirus-C bronchiolitis, and incident asthma in MARC-35." This title is automatically populated in REDCap.

Attribution of Adverse Event

Study procedure:	Select 'Nasal Swab' if the AE/SAE is attributed to the collection of the nasal swab. An example of an

Question	*Instructions*
	AE is epistaxis within 24 hours of the procedure in which bleeding does not subside spontaneously within five minutes. Select 'Blood collection' if the AE/SAE is attributed to the performance of the blood draw. Examples are bruising at the puncture site larger than 2 cm diameter, bleeding from the puncture site lasting more than 5 minutes, or swelling at the puncture site larger than 2 cm. Select "Other" if the AE/SAE is attributed to an event other than a nasal swab or blood collection.
Please specify 'other' study procedure:	If 'Other (specify)' selected for 'Study procedure' use the free text box to describe in detail the other study procedure that led to an adverse event or serious adverse event.

Complete description of event

Complete description of event:	Use the free text box to describe the AE/SAE in detail.

Action

What steps do you plan to take as a result of the adverse event reported above?	Identify all steps taken as a result of the AE/SAE. Check ALL that apply. Check 'No action taken' if the AE/SAE does not result in any actions taken. Check 'Amend protocol' if the protocol will be changed. Check 'Amend consent document' if the consent forms will be modified. Check 'Inform current subjects' if the participants will be told that there was an AE. Check 'Terminate or suspend protocol' if the study will be terminated or suspended. Check 'Other (specify)' if another type of action is taken.
Please specify 'other' steps	If 'Other (specify)' was checked for 'What steps do

Question	*Instructions*
which you plan to take as a result of the adverse event reported here	you plan to take as a result of the adverse event reported above?', use the text box to describe the other steps in detail.

Investigator assessment of severity

Severity of adverse events will be graded according to the criteria from the National Cancer Institute's common terminology criteria. Select the severity category that applies to the AE or SAE from the categories below.

Grade	Descriptor	Definition
1	Mild	Asymptomatic or mild symptoms; clinical or diagnostic observations only; interventions not indicated.
2	Moderate	Minimal, local or noninvasive intervention indicated; limiting age-appropriate instrumental activities of daily living (ADL).
3	Severe	Severe or medically significant but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; limiting self-care ADL.
4	Life threatening	Life-threatening consequences; or urgent intervention indicated.
5	Death	Death related to the AE.

Relationship to study procedure(s)

Select the relationship of the AE or SAE to the study procedure from the following categories.

Code	Descriptor	Definition (guidelines)
1	Unrelated	The adverse event is clearly not related to study. The event is completely related to an etiology other than the study procedures (the alternative etiology must be documented in the study participant's medical record).
2	Unlikely	The adverse event is doubtfully related to study and likely to be related to factors other than study procedures.
3	Possible	The adverse event may be related to study procedure. There is an association between the event and study procedure and there is a plausible mechanism for the event to be related to the study procedure; there may be also an alternative etiology, such as characteristics of the study participant's clinical status and/or underlying disease.
4	Probable	The adverse event is likely related to study procedure. There is (1) an association between the event and the study

Question		*Instructions*
		procedure, (2) a plausible mechanism for the event to be related to the study procedure, and (3) the event could not be reasonably explained by known characteristics of the study participant's clinical status and or an alternative etiology is not apparent.
5	Definite	The adverse event is clearly related to study procedure. There is (1) an association between the event and the study procedure (2) a plausible mechanism for the event to be related to the related to the study procedure, and (3) causes other than the study procedure have been ruled out.

Resolution/stabilization of the event	Select 'Pending' if the event is currently unresolved or not stabilized. Select 'Complete' if the event is resolved and stabilized.

Expectedness

An adverse event is considered 'unexpected' when its nature, severity, or frequency is not consistent with the information that is provided in the protocol and is related to a study procedure.

Was this adverse event unexpected?	Select 'Yes' if this adverse event is unexpected. Select 'No' if this adverse event is expected.

Change in Severity

Note: if after completing this form the severity of adverse event changes, return and record the change here:	Use the text box to record the change in severity of the adverse event, if applicable.
Does this Adverse Event meet IRB reporting requirements?	The site Principal Investigator will ensure the timely dissemination of AE/SAE information, including expedited reports, to the IRB in accordance with local IRB regulations and guidelines. Please review your IRB's policies to determine local IRB reporting requirements. Enter 'Yes' if the adverse event meets IRB reporting requirements. Enter 'No' if the adverse event does not meet IRB reporting requirements.
If yes, date IRB notified:	If 'Yes' selected for 'Does this adverse event meet IRB reporting requirements?' enter the date that the IRB was notified in MM-DD-YYYY format.

Question	*Instructions*
Adverse Event or Serious Adverse Event	
Does this adverse event qualify as a serious adverse event?	Enter "Yes" if the AE qualifies as a serious AE (SAE). If the event is a SAE, it must be reported immediately to Ashley Sullivan (*afsullivan@partners.org*). Follow the other reporting responsibilities outlined in REDCap. Enter "No" if the event does not qualify as a serious AE.
Principal Investigator Signature	Principal Investigator Signature
Date	Date on which the form was signed.
I confirm that this form is complete.	First confirm that the form is complete, and then enter the initials of the hospital/clinic staff member completing the form. If the hospital/clinic staff member does not have a middle name, use X for the middle initial. Example: Jane A. Jones: J A J Sam Smith: S X S

SPECIMEN PROCEDURES

Nasal Swab Specimen Procedures

Supplies:

Nasal swab specimen labels
EXAKT-PAK One Pak shipping system
Cryogenic specimen vial with transport medium
Outer transport tube with absorbent material
Copan Pediatric FLOQ-Swab

1. Wash your hands before taking swab.
2. Tilt child's head back gently, with one hand to steady chin.
3. With the other hand, insert the end of a new swab into the front part of one of the nostrils.
4. Rub swab gently against the inner wall of the nostril, while getting a good sample of mucus if child has a runny nose at the time.
5. Remove the swab from the nostril, and using the same swab collect a swab from the other nostril.
6. Remove cap from specimen vial with transport medium.
7. Put the swab in the transport medium and break the shaft at the molded breakpoint.
8. Close the vial cap securely.
9. Remove the cap from the outer transport tube.
10. Pull up and separate the two ends of the absorbent material.
11. Insert the sealed specimen vial UPRIGHT into the plastic container inside the absorbent material folds.
12. Use your finger to gently push the vial fully into the container cavity.
13. Tuck in any excess absorbent material, keeping the ends within easy reach.
14. Screw the cap on tightly.

Specimen Labeling

Supplies:

Sample Nasal Swab Label

1. Verify the Study ID is correct, write the date (mm/dd/yyyy) and time (hh:mm) of sample collection on the label.
2. Place Sample Nasal Swab Label on the cryogenic vial.
3. Wrap a strip of clear tape around the whole tube, over the label, and over the cap to prevent the label from falling off.
4. Record the date (mm/dd/yyyy) and time (hh:mm) of sample collection in REDCap.
5. Place the container in the outer cardboard box.
6. Fold the flaps over to cover the container. Close the lid. It is NOT necessary to tape the box.

Specimen Storage

The nasal swab specimens will not be stored at the exam site. They will be shipped as soon as they are collected (same day).

Specimen Shipping

Note: Study personnel who package the nasal swab shipments do not need to have IATA certification and the packages do not need to have biohazard labels since the shipments meet all criteria to be classified as exempt human specimens.

Ship all nasal swab specimens collected during the exam on the same day, directly to the Massachusetts General Hospital using the provided pre-addressed, pre-paid, outer box via first class mail.

Before shipment, all sites should record the date shipped in the Nasal Swab Specimen section of the Research Exam Form in REDCap.

Massachusetts General Hospital (MGH) Procedures – Nasal Swab Storage

The nasal swab specimens will be stored at -80°C at MGH until funding is obtained to test these specimens. Upon receipt of funding, MGH will then ship all received specimens to the Respiratory Virus Diagnostic Laboratory at Baylor College of Medicine (Houston, Texas).

Blood Specimen Procedures

Blood Specimen Collection & Storage

Supplies:
Red-top vacutainer tubes
Lavender vacutainer tube
10mL white-top cryogenic vial
10mL blue-top cryogenic vial
WIND Study labels for red-top vacutainer tubes
WIND Study labels for white-top cryogenic vial
WIND Study labels for blue-top cryogenic vial
4ºC Refrigerator (standard refrigerator)
-80°C freezer (freezer must NOT be warmer than -70°C)
Biohazard bag or box

1. At the discretion of the clinician and parent/legal guardian, EMLA cream (lidocaine 2.5% and prilocaine 2.5%) or other topical anesthetic (e.g., LMX4 [lidocaine 4%]) will be applied to the skin to prevent pain associated with needle insertion.
2. In order to maintain vein patency and optimal blood flow, blood may be collected first into several syringes, followed by transfer to the appropriate vacutainer tubes for processing. Phlebotomists should defer to their local institutional procedures for specific directives on pediatric blood collection methods.
3. A phlebotomist will collect 0.5mL of blood in a lavender vacutainer tube, invert 8 to 10 times immediately after collection, and send it out for real-time analysis of complete blood count (CBC) with differential at their local hematology laboratory, following their usual procedures. Exam sites *without* a designated local hematology laboratory should contact Project Coordinator Ashley Sullivan (phone: 617-724-9712; e-mail: *afsullivan@partners.org*) the EMNet Coordinating Center prior to the exam to discuss how the CBC with differential will be performed.
4. The phlebotomist will attempt to collect 4.5mL to 14.5mL of blood in red-top vacutainer tubes, and invert 5 times immediately after collection. If the minimum red-top blood volume (4.5mL mL) is not acquired through the blood draw, another blood draw may be re-attempted or one may schedule another blood draw.
5. The red-top tubes will be labeled with the WIND Study tube labels including: sample type (blood), 6-digit study ID (xxxxxx), date (mm/dd/yyyy) and time (hh:mm).
6. Allow blood to clot for 15 – 30 minutes after collection.
7. The red-top blood specimen should be centrifuged at 3000 RPM at room temperature until the serum is fully separated from the pellet (approximately 10 minutes.
8. The serum supernatant will be siphoned off and placed into a cryogenic vial with a white cap and the remaining pellet precipitate will be transferred to a separate cryogenic vial with a blue cap. Please do NOT siphon too close to the top of the pellet when extracting the serum as the thin layer of white blood cells contains the DNA for testing.
9. The blue top and white top cryogenic vials will be labeled with the WIND Study labels including: sample type (serum or pellet), 6-digit study ID (xxxxxx), date (mm/dd/yyyy) and time (hh:mm).
10. A strip of clear cryogenic tape should be wrapped around each cryogenic vial to prevent the label from falling off.

11. Details about the collection, including volume, number of tubes, sample type, 6-digit study ID (xxxxxx), date (mm/dd/yyyy) and time (hh:mm) will be entered in REDCap.
12. Once the samples have been transferred to the cryogenic vials, if you plan to store samples in biohazard bags, please place each sample into its own separate specimen biohazard bag (i.e., the serum sample and the pellet sample will each be placed into their own separate biohazard bags).
13. Place the specimen on ice for transport to an -80°C freezer. For all participants, both the serum and pellet will be stored. For participants who did not agree to the genetics portion of the study, the pellet will NOT undergo genetics analysis, but will be used for non-genetics testing. Both the serum and the pellet tubes will be stored at -70°C or -80°C. Storage at 4°C (in standard refrigerator) for up to 24 hours prior to freezing at -70°C or -80°C is acceptable if necessary. If -70 or -80°C storage is not available, arrangements should be made with the EMNet Coordinating Center prior to the exam to discuss storage options.
14. Each specimen is stored in the -80°C freezer until samples are ready to be shipped. The EMNet Coordinating Center will notify sites when to ship out samples, so please keep samples on-site and DO NOT ship out until instructed to do so by the EMNet Coordinating Center.

Blood Collection Flow Diagram

<table>
<tr><td>Kit</td><td colspan="2">The WIND Study 42-month Exam Blood Kit
contains supplies for the blood draw</td></tr>
<tr><td>Collection</td><td>Complete Blood Count with Differential for real-time analysis at your <u>local</u> lab.

Collect blood in a lavender-top vacutainer tube.

Label according to institutional procedures for send-out to your local hematology laboratory.

  </td><td>Various Assays (e.g., IgE) for centralized analysis by WIND Study Team.

Collect blood in red top vacutainer tubes.

Label each tube with WIND Study labels <u>ONLY.</u> Each WIND Study label includes:
sample type (red top tube)
participant study ID
collection date
collection time
  </td></tr>
<tr><td>Processing</td><td>Invert tube 8 to 10 times immediately after collection.

Send out for real-time analysis at your <u>local</u> hematology laboratory, following your institutional guidelines.</td><td>Invert tube 5 times immediately after collection.

Allow blood to clot for 15 – 30 minutes.

Centrifuge blood at 3000RPM for 10min at room temperature.

Aliquot <u>serum</u> into <u>white cap</u> cryogenic vial.
 

Aliquot <u>pellet</u> into <u>blue cap</u> cryogenic vial.
 

Label each cryogenic vial with WIND Study labels <u>ONLY.</u> Each label includes:
sample type (serum <u>or</u> pellet)
participant study ID
collection date
collection time</td></tr>
<tr><td>Storage</td><td>Not applicable</td><td>Store both the serum (white cap) and the pellet (blue cap) in -80°C freezer. <u>Do not</u> ship samples until instructed to do so by the EMNet Coordinating Center.</td></tr>
</table>

Shipping of Serum and Pellet to Massachusetts General Hospital (MGH)

Note: Only lab personnel with IATA certification may package and ship the serum and pellet specimens on dry ice. Site PIs/lead clinicians should be present during the specimen mailing process to ensure that all specimens are included in the mailing, to give the necessary supplies to the person preparing the package, and to include the completed Blood Serum and Pellet shipment list in the mailing. Specimens will be shipped once designated by the EMNet Coordinating Center. Mindful of holidays, specimens should be sent only on Mondays, Tuesdays, or Wednesdays so that the specimens do not arrive on a Saturday, Sunday, or holiday. Prior to shipment, the shipment list should be matched against data in REDCap to ensure that all specimens are accounted for.

Supplies:
Sterile gloves
Biohazard bag(s)
Absorbent material
WIND Study 42-Month Exam Shipment List
5 lbs (2.27 kgs) dry ice (small pellets rather than large blocks)
Sample box
Styrofoam box (to hold dry ice and sample box)
Cardboard shipping box (to hold Styrofoam box)
Biohazard sticker or biohazard bag (for top of Styrofoam box lid)
Exempt Human Specimen label
Dry Ice shipment label

1. The EMNet Coordinating Center will notify sites when to ship out samples, so please keep samples on-site and DO NOT ship out until instructed to do so by the EMNet Coordinating Center. The Coordinating Center will provide the shipping address at the time shipping schedules are made.
2. Verify that your lab has received notification from the EMNet Coordinating Center that it is okay to ship out samples.
3. Put on sterile gloves and remove samples from freezer.
4. If each sample is not already in a biohazard bag, place the blood serum and pellet sample in a biohazard bag (only ONE sample per bag) with absorbent material, while noting on the Shipment List their inclusion. Place the biohazard bag(s) in sample box(es)
5. Add bubble wrap or foam padding around the bags for cushioning and put the lid on the sample box.
6. Place the sample box(es) in the Styrofoam box.
7. Completely surround the box with samples with the 5 lbs (2.27 kgs) of dry ice.
8. Insert padding around the sample box(es) and dry ice if there is additional space in the Styrofoam box.
9. Put lid on Styrofoam box and place into cardboard box.
10. Affix an orange biohazard sticker (or a bag that is pre-labeled with the universal biohazard symbol) to the Styrofoam box lid if one is not already present.
11. Put completed Shipment List in an envelope and place on top of Styrofoam lid.
12. Keep a copy of the Shipment List for your files and email a copy to Project Coordinator Ashley Sullivan (*afsullivan@partners.org*).
13. Seal cardboard box and affix the completed Dry Ice label, which is required to be on the box and also notes the weight of the dry ice.
14. On the FedEx label, be sure to check off “Dry Ice” and note the weight of dry ice.

15. Attach Exempt Human Specimen label near the Dry Ice label.

Ship samples (overnight) to:
Carlos A. Camargo, MD, DrPH
Attention: Ashley Sullivan
Emergency Medicine Network
Department of Emergency Medicine
Massachusetts General Hospital
125 Nashua Street, Suite 920
Boston, MA 02114
Phone 617-724-9712

FedEx is the preferred carrier for blood shipments. Please use the FedEx Priority Overnight service.

On the day that the specimens are sent, the site PI/lead clinician should email both Principal Investigator Carlos Camargo (*ccamargo@partners.org*) and Project Coordinator Ashley Sullivan (*afsullivan@partners.org*) the FedEx tracking number for the mailing.

MARC-35.5 (WIND Study) Research Exam Serum and Pellet Shipment List

WIND Study Site Number: __ __ __

Directions: Use this form to keep track of all samples for the WIND Study during storage and include a copy of this form when shipping. Use one line for each study ID.

	Study ID (X X X X X X)	**Serum included in shipment?**	**Pellet included in shipment?**	**Collection Date (mm/dd/yyyy)**	**Collection Time (hh:mm)**
1	__ __ __ __ __ __	☐	☐		
2	__ __ __ __ __ __	☐	☐		
3	__ __ __ __ __ __	☐	☐		
4	__ __ __ __ __ __	☐	☐		
5	__ __ __ __ __ __	☐	☐		
6	__ __ __ __ __ __	☐	☐		
7	__ __ __ __ __ __	☐	☐		
8	__ __ __ __ __ __	☐	☐		
9	__ __ __ __ __ __	☐	☐		
10	__ __ __ __ __ __	☐	☐		
11	__ __ __ __ __ __	☐	☐		
12	__ __ __ __ __ __	☐	☐		
13	__ __ __ __ __ __	☐	☐		
14	__ __ __ __ __ __	☐	☐		
15	__ __ __ __ __ __	☐	☐		
16	__ __ __ __ __ __	☐	☐		
17	__ __ __ __ __ __	☐	☐		

Laboratory Evaluations/Assays

Blood specimens: Allergen-Specific IgE, Total IgE, Genetic testing

CBC with Differential

The complete blood count with differential will be performed in real-time at the local laboratory of each site/clinician office, following their local guidelines. Results will be entered into REDCap.

Allergen Specific Immunoglobulin E (ASIgE)

The selection of items parallels the modified Asthma Predictive Index (mAPI) allergy testing as much as possible (4). Because the mAPI was performed on older children, skin prick testing was utilized. With our younger cohort, we will use ASIgE to help evaluate for major aeroallergens and food allergens; an approach agreed upon by the first author of the mAPI manuscript (personal communication with Dr. Theresa Guilbert, October 2008). This test will be performed using a Fluorescence Enzyme Immunoassay. (Package insert: ImmunoCAP System Specific IgE FEIA, Uppsala, Sweden Rev February 2005), Phadia Immunology Reference Laboratory (PiRL).

Total IgE

This test will also be performed using a Fluorescence Enzyme Immunoassay. (Package insert: Phadia CAP System IgE FEIA. issued August 2000, revised March 2006) Phadia Immunology Reference Laboratory (PiRL)

Genetic Testing

In accordance with the consent form, pellet specimens, which remain after centrifuging the blood and extracting the serum, are being collected for the purpose of establishing a DNA biorepository to examine the possible genetic causes of severe bronchiolitis, recurrent wheezing, asthma and related concepts. For those participants who have declined participation in the optional genetic sub-study, the pellet will be used to perform non-genetic testing covered under the consent.

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