

CP 3.3 MS/MS Acylcarnitine and Amino Acid Panels (Except PKU) – Follow-up for Initial Positives & All Diagnostic Results

POLICY: All MS/MS confirmatory testing is conducted at the state-contracted metabolic reference laboratory, unless special circumstances require quicker turnaround.

GENERAL INFORMATION:

Urgent Conditions

Positive values for the following conditions detected by MS/MS are called out to the ASCs by the NAPS labs prior to GDL review and prior to their appearance on the ASCs' Headline Case Screen, as documented in a Confirmation-of-Contact in SIS. Positives for the remaining conditions tested by MS/MS are not called out but appear on the ASCs' Headline Case Screen.

- Citrullinemia (CIT)
- Glutaric Acidemia Types I and II (GA-1, GA-2)
- Isovaleric Acidemia (IVA)
- Long-Chain Hydroxyacyl-CoA Dehydrogenase Deficiency (LCHADD)
- Malonic Acidemia (MAL)
- Multiple Carboxylase Deficiency (MCD)
- Maple Syrup Urine Disease (MSUD),
- Phenylketonuria (PKU)
- Propionic Acidemia/Methylmalonic Acidemia (PA/MMA)
- Medium Chain Hydroxyacyl-CoA Dehydrogenase Deficiency (MCADD)
- Very Long-Chain Hydroxyacyl-CoA Dehydrogenase Deficiency (VLCADD)

Panic Values

The NAPS laboratories are required to repeat the analysis of specimens having an initial positive MS/MS value that is extremely high, which is deemed a "Panic Value." Prior to repeating the test, the labs are to report the result to the ASC and enter a Confirmation of Contact in SIS. The ASC is to immediately initiate follow-up by carrying out this protocol.

Complex/Review Cases:

MS/MS result patterns that are too complex to be evaluated by the computer or the NAPS lab appear on the Headline Case Screen marked as "**Review**". These **do not require action by the ASC**. The MS/MS Reviewer at GDB checks these cases and may contact the ASC for information on the newborn's health status, feeding, or demographic and treatment information to ascertain the significance of the results. He may also ask the ASC which metabolic specialist/Special Care Center is most likely to receive the referral. The reviewer may gather additional data, may contact the metabolic specialist at the center most likely to receive referral and, in consult with the metabolic specialist make a determination about whether the baby will be classified as "positive" and referred to that metabolic specialist. The metabolic specialist may call the primary care physician or neonatologist or may

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request, instead, that the ASC staff or MS/MS Reviewer call. If the case is deemed positive, the Reviewer will call the positive case to the ASC and will place the case on the SIS Headline Case Screen for the appropriate ASC. The case will then be followed in the same manner as other positives.

ASSOCIATED FORMS/DOCUMENTS:

3.3.1 Quest Diagnostic Laboratory —Metabolic Confirmatory Testing Instructions

3.3.2 Quest Metabolic Test Request Form (TRF)

3.3.3 Quest Required Scope of Testing

3.3.4 Quest Patient Service Centers in California

3.3.5 General Information About Metabolic Confirmatory Testing for PCPs and Neonatologists

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PROTOCOL FOR INITIAL POSITIVE RESULTS: (For weekend expectations for call-out, see Section 6.9)

| Resp. Person | Action |
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| NAPS Lab | <p>As soon as possible but no later than the end of the same day, calls appropriate ASC to report positive screens for urgent conditions and panic values).</p> <ul style="list-style-type: none"> • Reports out confirmed result to ASC after repeat analysis of panic value. • Enters C of C into SIS. |
| GDSP MS/MS Reviewer | <ul style="list-style-type: none"> • Routinely checks all initial MS/MS results classified as “Review” Monday through Friday and makes a decision regarding the case status usually within 24 hours of the appearance on the Headline Case. • For cases under review, may call the ASC Coordinator and ask the coordinator to obtain information from the newborn’s birth hospital on the infant’s health status, feeding, or demographics. Also may ask ASC which metabolic center/specialist would receive the referral. • May consult with metabolic specialist to determine if the case should be deemed “positive”. • Changes status in SIS to “Positive” (requiring follow-up by the ASC) or “Out of Range” (no further action required; case drops off ASC Headline Cases). • If the status is changed to “Positive”, calls the ASC to notify them of the results and the interpretation. |
| ASC NBS Coord. | <ul style="list-style-type: none"> • As soon as possible but in no later than 24 hours after notification of a positive (with the exception of PKU, which may be called out within 48 hours of notification), calls the newborn’s physician and/or the hospital, if infant has not been discharged, to discuss the MS/MS results; asks for information on the infant’s health status. Discusses/facilitates immediate referral to a NBSP--approved metabolic center. On weekends contacts the on-call metabolic specialist to consult with the newborn’s physician. • For Panic Value suggestive of a screened disorder: Informs PMD and metabolic specialist that because specific test value is extremely high, 1) the test is being repeated and the result on the mailer will reflect the result |

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| | <p>of the 2nd analysis and not the one being reported; 2) if there is a large discrepancy between the 1st and 2nd test, PMD will be informed. If confirmed result of a panic value is negative, informs involved physicians, documents actions in SIS case notes, and discontinues follow-up.</p> <ul style="list-style-type: none"> • For a panic value suggestive of a disorder for which the Program does not screen (e.g., Non-Ketotic Hyperglycemia): reports value to the metabolic specialist • Assists physician with referral to a NBSP-approved metabolic center (see Protocol 3.19 <i>Referral to CCS Special Care Centers</i>). • Alerts physician to watch for any signs and symptoms of the metabolic disorder, which, depending on the disorder, could include lethargy, poor feeding, vomiting, irritability, hyperventilation, hypothermia, enlarged liver, and abnormal lab tests (hyperammonemia, ketoacidosis, hypoketotic hypoglycemia; abnormal liver function tests). Recommends that fasting be avoided, and recommends if any symptoms occur while awaiting evaluation by the metabolic specialist, physician should immediately contact the SCC metabolic specialist to discuss the symptoms and treatment. • Unless primary care physician objects, contacts the SCC to notify staff of referral and requests that a metabolic specialist contact the PMD regarding follow-up. • Enters tracking events and case notes, as appropriate, in SIS. • Faxes or sends follow-up letter to physician confirming the MS/MS results on the baby and referral information, along with appropriate Star-G (Screening, Technology, and Research in Genetics) provider fact sheet located on the following website: www.newbornscreening.info/pro/prohome.htm • If the baby has been discharged from the hospital, also sends a letter to the parents notifying them of the need for referral to a CCS-approved metabolic special care center and includes the brochure “<i>Why Retest for Metabolic Diseases?</i>” • Makes referral to CCS regional office (See Protocol 3.19). • If the physician and the ASC coordinator are unable to contact the family within 3 – 4 days from the initial notification makes a referral to public health nursing and arranges for a home visit. |
| Metabolic Center/specialist | <ul style="list-style-type: none"> • Contacts PMD to discuss health status of newborn and follow-up for newborn referred to SCC. Determines if immediate visit at SCC is necessary. Schedules appointment as appropriate. • For a Panic Value reported that is suggestive of a disorder for which the Program does not screen: Determines course of action, including apprising the PCP, if follow-up is indicated. • At initial visit assists parent/guardian with completion of CCS application. • Faxes completed CCS application to local CCS office. |

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| | <ul style="list-style-type: none"> • Orders confirmatory/diagnostic laboratory testing through metabolic reference laboratory (Quest Diagnostics). • Provides information to family on where and when to go for specimen collection including location(s) of Quest Patient Service Centers. • Follows instructions for submitting test request form to Quest. • Bills family’s insurance/HMO for services at SCC. If claim is denied for diagnostic services, submits to CCS with written documentation of denial. • Bills CCS for diagnostic services per CCS guidelines. • Enters appointment status, Metabolic Service Record (MSR), and case notes, if appropriate, into SIS. |
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PROTOCOL FOR CONFIRMATORY TEST RESULTS:

| Resp. Person | Action |
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| State Metabolic Reference Lab (Quest) | <ul style="list-style-type: none"> • Reports results (positive and negative) for the urgent conditions (See list in General Information) within timeframes delineated in contract (See Section 3.9.3C for Quest Scope of Work and timeframes) to ordering metabolic specialist, followed by fax notification and mailed report. (Quest <u>will</u> report on nights and weekends.) • <u>Reports results for the other conditions</u> screened for by MS/MS within timeframes delineated in contract (see Exhibit A, Scope of Work for State Metabolic Reference Lab) to ordering physician, and to GDSP <u>via mailed report</u>. • Bills insurance as specified in state contract. May collect fees for testing, specimen collection and handling from any insurance plan, including Medi-Cal, for which the newborn or newborn’s family is eligible. May not bill the ordering physician or metabolic center (or the CCS program) for any of the work done as part of this contract scope of work. May not collect any co-payments or other fees from the families. |
| Metabolic Center | <ul style="list-style-type: none"> • As soon as possible but no later than 24 hours after notification, calls the newborn’s primary care physician with confirmatory results. For newly diagnosed newborns, or those newborns requiring additional testing, discusses necessary follow-up. • Develops treatment plan. • Sends follow-up letter to the PMD confirming PMD notification and recommendations, and includes appropriate informational brochure on the confirmed disorder. |

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| | <ul style="list-style-type: none"> • Enters follow-up information as appropriate in SIS via the Metabolic Services Report (MSR) per vendor agreement requirements. • Bills private insurance/Medi-Cal/CCS for non-laboratory services related to diagnostic evaluation. |
| ASC NBS Coord. | <ul style="list-style-type: none"> • Contacts metabolic center within five days of referral to metabolic center to determine follow-up plan and to verify that the center has contacted the PMD, unless information is already noted in SIS. • Upon request, sends appropriate informational brochure on the confirmed disorder to the PMD. • If the physician or metabolic center is unable to contact the family with the confirmatory results within one week from the initial notification, assist with initiating a referral to public health nursing and arranges for a home visit. • Reports any unusual occurrences such as missed cases, lost to follow-up cases, delays in contacting family, delays in analysis or reporting of confirmatory results, etc., of potential significance to the NBSS nurse consultant/ASC contract liaison. • <u>Child Protective Services Referrals:</u> If all resources have been exhausted and the family has failed to seek appropriate medical care, contacts the NBSB nurse consultant/ASC contract liaison to discuss the case prior to referral to child protective services (See Section 3.24). • Resolves case by: confirmed diagnosis and treatment, infant death, noncompliance, no response or lost to follow-up in SIS (See Section 3.21). |