



Newborn Screening State Emergency Plan for Time Critical Testing Limited Staff

The Colorado Newborn Screening Program (CONBSP) is required by statute to operate 6 days a week to provide testing and reporting of time critical disorders. To ensure timely testing of critical samples, in the event of a loss of a significant number of testing personnel, time critical disorder assays will be given priority for daily testing. This document serves as a basic outline for completing testing. Under emergency circumstances staffing hours and days may change to fit the requirements of providing these essential services. As an example seven day a week testing may be required to aid with the completion of testing for non time critical disorders. Shifts greater than eight hours may also be required. Staff are to evaluate the testing needs, use this document for guidance, follow laboratory safety, and maintain laboratory quality.

1. Time Critical Assays

- a. First screen samples for MS/MS disorders, GALT, IRT, T4, TSH, and 17OHP are the time critical assays that will be run daily. IRT is not a time critical disorder, though little efficiency is lost running the assay with the other GSP analytes. All first screen assays will be punched daily, if not run controls should be punched and plates stored at 2-8 C.
- b. First screen samples for SCID, SMA, CF DNA, Biotinidase and Hemoglobin testing are not considered time critical and will be run on a varied schedule at least once a week depending on daily sample volume to staffing.
 - i. SCID/SMA: It is preferred that these samples would be isolated to DNA and frozen daily at a minimum. Punching the samples and controls into plates to maintain at 2-8 C for 2-4 days is acceptable. Addition of a Sunday run may be helpful. One staff member can process and run a large number of prepared plates.
 - ii. CF DNA: CF DNA testing can be worked into daily testing. List review will be important. Scientists should evaluate the risk of samples that don't receive a 2nd screening sample. The period of time a list is pulled for should be adjusted to allow CF DNA to be run on slower days and for fewer times a month.
 - iii. Biotinidase: Testing should be started on Monday, Wednesday, and Friday nights to be read the following morning. Staff can evaluate this schedule depending on the workflow.
 - iv. Hemoglobin: First screen testing for hemoglobin should be worked into the daily schedule of days with low sample volume. Multiple days of first screen samples may be run on low volume days. Confirmation IEF gels should be run at minimum one day a week. Staff should evaluate all other assay needs, while considering that if time is available completing a gel earlier in the week may be beneficial since sample volume can be unpredictable.
- c. Second screen samples for CAH, T4, and TSH will be of a lower priority than first screen samples. Second screen samples for Hemoglobin's will be of lowest priority. Second screen samples for previous positives will have the highest second screen priority and will be evaluated daily for addition to first screen testing.

- i. Since CAH, T4, and TSH are currently tested on the GSP limited processing is required after punching samples and controls. The GSP instruments will already be set up for testing of first samples. Every other day testing should be achievable. Clearing of backlogged 1st screen samples will be the priority on busy days.
 - ii. Hemoglobin testing for second screen samples is of little clinical importance. Focus of these samples will be for previous abnormalities only until staffing levels return to normal.
- 2. Demographics and Reporting
 - a. Accessioning response. If data entry staff are unavailable staff will maintain the slips for data entry, call outs and result review.
 - b. Scientists, HPIII's, and PA will help with demographics entry.
 - c. Scientist will review slips with results to verify data prior to calling out results.
 - d. Report printing daily for HL7 and Ereports messaging. Physical report mailing will be reduced to low volume days.
 - e. ACT sheets are in google and branded with our information if unable to reach specialists.

Greg Bonn

MT(ASCP)

Newborn Screening Operations Manager
P 303.691.4026 | F 303.691.4008 | Cell 720.830.8992
8100 Lowry Blvd., Denver, CO 80230
gregory.bonn@state.co.us





