

## Referral Pathway for Congenital Hypothyroidism Abnormal Screen Result

**Critical CH screen result (abnormal)  
OR  
Double borderline CH screen result (repeat borderline)**

**Alberta Newborn Screening Laboratory**

- Makes referral to pediatric endocrinology speciality clinic (ACH, Stollery)
- Faxes preliminary results sheet (critical CH result or double borderline CH result) and diagnostic follow-up form
- Documents referral actions

- Locates infant's responsible family physician, pediatrician or midwife to inform them of referral to the pediatric endocrinology speciality clinic (ACH, Stollery)
- Faxes preliminary results sheet (critical CH result or double borderline CH result), CH condition fact sheet, and diagnostic follow-up form regardless if the patient is to be followed by the pediatric endocrinology speciality clinic or the infant's responsible family physician, pediatrician or midwife
- Documents actions

**Pediatric endocrinology speciality clinic**

- Contacts responsible family physician, pediatrician or midwife to determine who will contact family as soon as possible (same day or next day), and arrange follow-up testing and management
- *(as needed)* Discuss clinical algorithm with family physician, pediatrician or midwife if they are arranging family contact, follow-up testing and/or management
- Uses clinical algorithm for critical or double borderline CH screen result to
  - (both critical and double borderline result)** Order serum TSH and fT4 for confirmation of the abnormal screen
  - (critical result only)** Immediately initiate treatment without waiting for abnormal screen confirmation by TSH and fT4 results
  - (double borderline result)** Initiate treatment after abnormal screen confirmation by TSH and fT4 results
- *(as needed)* Completes diagnostic follow-up form and returns to the Alberta Newborn Screening Laboratory

**Family physician, pediatrician, midwife**

- Receives contact from pediatric endocrinology speciality clinic and determines who will contact family as soon as possible (same day or next day), and who will arrange follow-up testing and management
- *(as needed)* Receives clinical algorithm for critical or double borderline CH screen result from pediatric endocrinology speciality clinic and follows recommendations of speciality clinic
- *(as needed)* Completes diagnostic follow-up form and returns to the Alberta Newborn Screening Laboratory

**Alberta Newborn Screening Laboratory**

- Confirms CH diagnostic testing has been initiated by monitoring Netcare for TSH and fT4 results
- Receives completed diagnostic follow-up form with diagnostic outcomes from pediatric endocrinologist, responsible physician, pediatrician or midwife
- Documents results and closes case

**Definitions:**

**Congenital hypothyroidism (CH)** is the state of inadequate thyroid hormone production in the newborn. A confirmed CH abnormal screen is based on laboratory result values of thyroid stimulating hormone (TSH) and free thyroxine (fT4), family history and clinical assessment.

A **critical CH screen result (abnormal CH screen result)** means a newborn blood spot screen with TSH results >50mIU/L.

A **double borderline CH screen result (repeat borderline screen result)** means an initial newborn blood spot screen and repeat newborn blood spot screen, both with TSH results of 25-50mIU/L.

