



## **Steps to Organizing Prenatal Screening (IPS & MSS Quad)** **Information for Healthcare providers in Ottawa-Gatineau**

The objective of the Prenatal Screening Program is to provide all pregnant women in the Ottawa-Gatineau region the option of quality screening information about Down syndrome, open neural tube defects, and trisomy 18. The screens currently available are Integrated Prenatal Screening (IPS) and Quadruple Maternal Serum Screening (MSS Quad) with IPS being the more sensitive screening tool. Offering Prenatal Screening is standard of care.<sup>1</sup>

***Screening relies on accurate and complete requisitions. Incomplete requisitions may result in delays, false negative or false positive results.***

### **How do I organize IPS?**

#### **Step 1: Educate and offer screening to all pregnant patients**

Meet with the pregnant patient in the first trimester, discuss IPS, and provide the patient with an IPS pamphlet. If the patient chooses to have IPS, **give her two prenatal screening requisitions** (one for IPS part I, the other for IPS part II), ensuring that the demographics and clinical information sections are filled out on both copies.

**Tip:** If you send your patient to a private blood-drawing lab (like Gamma-Dynacare or MDS Labs), make sure you include the provincial requisition that the private labs need to recover their phlebotomy costs. This is the same requisition that they would need for any phlebotomy at a private lab - it is not specific to IPS. Remind your patient that she must bring the IPS requisition (and provincial requisition, where applicable) to her ultrasound and both parts of IPS blood work.

#### **Step 2: Refer for nuchal translucency (NT) ultrasound**

Make a nuchal translucency (NT) ultrasound referral, specifying that the measurement is for IPS, to one of the approved sites. The most up-to-date list of ultrasound sites certified to provide NT measurements is available on the Program's website ([www.cheo.on.ca](http://www.cheo.on.ca) > Programs & Services > Genetics > Prenatal Screening Program). Note: these ultrasounds are NOT available at CHEO.

You must **give the patient a regular ultrasound requisition** when booking the NT. The IPS requisition does not replace the ultrasound requisition.

Between 11<sup>+3</sup> and 13<sup>+6</sup> weeks by LMP, the patient brings her first requisition to the ultrasound provider. The NT, CRL and/or BPD are measured and written by the sonographer on the IPS part I requisition, which is returned to the patient. The sonographer writes the ideal date for her second trimester blood work on the IPS part II requisition.

#### **Step 3: 1<sup>st</sup> trimester blood work**

Usually the patient brings the IPS part I requisition to a blood-drawing laboratory for her 1<sup>st</sup> trimester blood work on the same day as the NT ultrasound. The laboratory sends the sample and requisition to the CHEO Biochemical Genetics Laboratory.

Note: due to the fact that the CHEO Lab address is printed on the requisition, many patients mistakenly arrive at CHEO to have their blood drawn. The CHEO blood-drawing facility is only for pediatric patients under the age of 8 thus **adults may not have their blood drawn for prenatal screening at CHEO. Please make sure that your patients are aware of this.**

#### **Step 4: 2<sup>nd</sup> trimester blood work**

At 15 weeks of gestation (up to 18 weeks + 6 days), the patient brings the IPS part II requisition to a blood-drawing laboratory. The laboratory sends the sample and requisition to the CHEO Biochemical Genetics Laboratory.

#### **Step 5: Results are usually generated within one week.**

You should receive the IPS risk estimate within one week of the 2<sup>nd</sup> blood sample. Screen positive results are called and faxed immediately to the referring health care provider. Screen negative results are sent by mail.

Please check your patient's clinical information and ultrasound dating *before* calling her with a screen result, and call our office if you spot anything that needs to be adjusted.

#### **FAQ: What happens if the patient forgets to have the 2nd trimester blood sample drawn?**

At 18+1 weeks, the prenatal screening laboratory will detect that the IPS-2 blood sample did not arrive in the Lab with an IPS requisition. At 18+1 weeks gestation, the IPS clerk will fax you a note informing you IPS-2 blood work has not arrived. After 5 days, a report will be generated using only first trimester PAPP-A and NT. First trimester report is associated with a lesser detection rate and an increased false positive rate for Down syndrome and for trisomy 18, and does not provide screening result for open neural tube defects.

#### **How do I organize MSS?**

##### **Step 1: Educate and offer screening to all pregnant patients**

Meet with the pregnant patient in the first or second trimester, discuss MSS Quad, and provide the patient with an MSS pamphlet. If the patient chooses to have MSS, give the patient one prenatal screening requisition ensuring that the demographics and clinical information sections are filled out.

##### **Step 2: 2<sup>nd</sup> trimester blood work**

At 15 weeks of gestation (up to 20 weeks + 6 days), the patient brings the requisition to a blood-drawing laboratory. The laboratory sends the 2<sup>nd</sup> trimester blood sample and requisition to the CHEO Biochemical Genetics Laboratory.

Note: due to the fact that the CHEO Lab address is printed on the requisition, many patients mistakenly arrive at CHEO to have their blood *drawn*. The CHEO blood-drawing facility is only for pediatric patients under the age of 8 thus **adults may *not* have their blood drawn for prenatal screening at CHEO. Please make sure that your patients are aware of this.**

##### **Step 3: Results are usually generated within one week**

You should receive the MSS Quad risk estimate within one week of the blood sample. Screen positive results are called and faxed immediately to the referring health care provider. Screen negative results are sent by mail.

Note that, for MSS Quad, a dating ultrasound is preferred to confirm that the blood sample was analyzed at the appropriate time. Please check your patient's clinical information and ultrasound dating *before* calling her with a screen result, and call our office if you spot anything that needs to be adjusted.

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<sup>1</sup> Wrongful birth litigation and prenatal screening. Piore M, Mykitiuk R, and Nisker J. CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne 179(10):1027-30 2008 Nov 4.