NOVA SCOTIA PRENATAL RECORD
COMPANION DOCUMENT

July 2007

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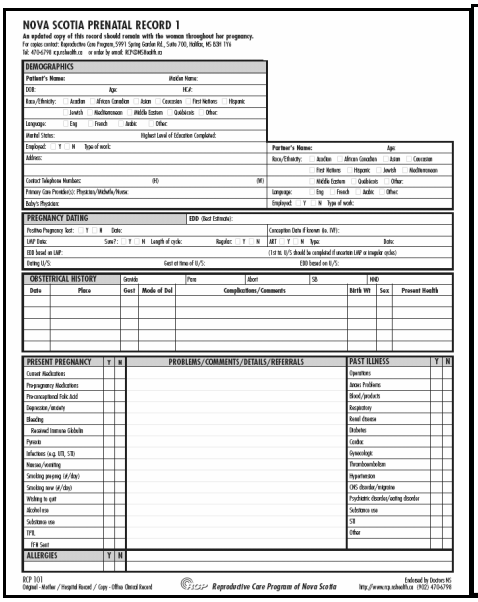
ASSEMBLING THE PRENATAL RECORD

The prenatal record will arrive to your office/facility in three separate duplicate sheets and requires assembly prior to use by the primary care provider. The sheets are numbered/titled in order: Nova Scotia Prenatal Record 1, 2 and 3. The third sheet is intended for ongoing documentation at each prenatal visit. If this sheet is completed, additional Nova Scotia Prenatal Record 3 sheets may be added as needed.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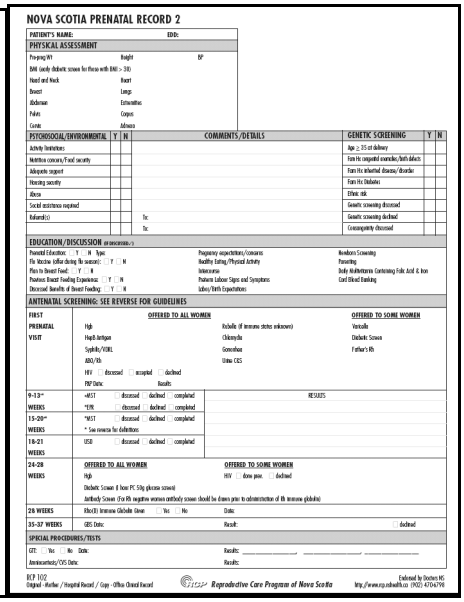
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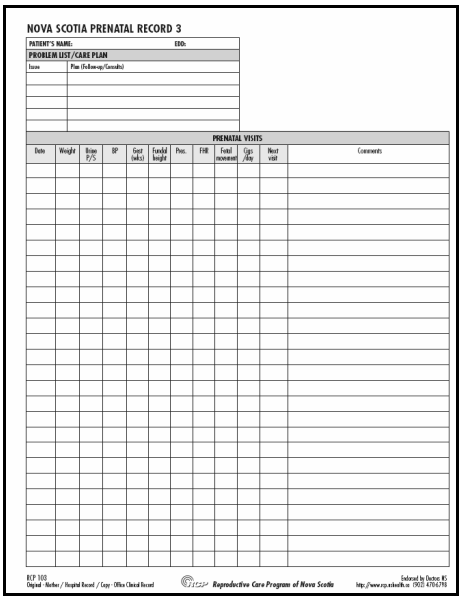
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If you require additional Nova Scotia prenatal record forms please contact:

Reproductive Care Program of Nova Scotia
5991 Spring Garden Road, Suite 700
Halifax, NS B3H 1Y6
Tel: (902) 470-6798
Email: rcp@nshealth.ca

Purpose: The NS Prenatal Record offers prenatal care providers a standardized format to document assessment, investigation and treatment during pregnancy. The prenatal record:

- Provides a systematic, sequential approach to prenatal care
- Provides information regarding screening and testing at specific gestational ages.
- Documents the prenatal care provided
- Provides information to referring physicians and other care providers
- Is a medico-legal document
- Is a teaching and research tool and is a data source for the Nova Scotia Atlee Perinatal Database
- Is a source of information to assess quality of care
- Is a means of maintaining a pregnancy-related problem list/care plan.
- **Is a record that the woman has the option to carry a copy of. (Many prenatal care providers offer a copy of the prenatal record to women after 36 weeks and some provide a copy for the entire pregnancy).**

The Reproductive Care Program of Nova Scotia would like to acknowledge the contributions of prenatal care providers throughout Nova Scotia who provided feedback during the revisions of the Nova Scotia Prenatal Record. In particular, we would like to thank the following:
Nova Scotia Prenatal Record Working Group: Dr. Heather Scott, Dr. Kim Murray, Fran Topple, RN, Heather Cameron, RN, Ronda Smith, RN, Annette Ryan, RN
Pilot sites: Obstetrical Clinics in Bridgewater and Yarmouth and the Perinatal Centre at the IWK Health Centre
Marilyn Muise, Program Manager, RCP
RCP Action Group
RCP Provincial Advisory Board

Glossary of Terms and Abbreviations

Patient: Biological mother of the fetus.

Partner: Partner is anyone the woman (patient) identifies as her partner. For the purpose of genetic screening, race/ethnic information is in regards to the biological father of the child.

Marital Status: May include single/divorced/common-law/married or any other partnership identified by the patient.

Highest Level of Education: The highest level completed by the patient.

- Some highschool
- Completed highschool
- Trade/business or community college
- University
- Other

Baby's Physician: Refers to the physician who will be caring for the baby after discharge from hospital. **Note:** This may be different from the attending family physician caring for the baby in the hospital.

EDD: Estimated date of delivery calculated by date of LMP and/or confirmed by ultrasound.

ART (Assisted Reproductive Technology): Procedures performed in a laboratory that includes handling of eggs, sperm, and/or embryos, which facilitate pregnancy. An example of ART is in vitro fertilization (IVF).

IVF (In-vitro fertilization): A method of assisted reproduction that involves combining an egg with sperm in a laboratory. If the egg fertilizes and begins cell division, the resulting embryo is transferred into the woman's uterus where it will hopefully implant in the uterine lining and further develop. IVF may be performed in conjunction with medications that stimulate the ovaries to produce multiple eggs in order to increase the chances of successful fertilization and implantation.

Gravida: Total number of pregnancies for this mother, including this pregnancy

Para: Total number of pregnancies that have resulted in a living child or children or in stillbirths which are greater than or equal to 500g or 20 weeks gestation. For twins, there is one pregnancy, therefore gravida is 1 and para is 1 (G_1P_1).

Abortus: Total number of pregnancies that were spontaneous losses (before 20 weeks gestation) or planned terminations

Stillbirth: Total number of fetal deaths born to this mother at or after 20 weeks gestation **OR** with a birth weight of 500grams or more.

NND (Neonatal Death): Early: neonatal deaths prior to 7days of age.
Late: neonatal deaths prior to 28 days of age.

LMP: First day of the last menstrual period as reported by the patient.

Consanguinity: A relationship between two people who are related to each other because they share a common ancestor: a "shared blood" relationship. For example, a relationship between two cousins. This should be investigated if there is history of an autosomal disorder.

TPTL (Threatened Preterm Labour): Uterine activity prior to 37 weeks gestation without cervical change that does not become preterm labour.

Preterm Labour: Uterine activity prior to 37 weeks gestation with cervical change.

fFN (Fetal Fibronectin): Glycoprotein found in cervico-vaginal secretions in response to inflammation or separation of the amniotic membranes from the decidua. Negative fFN after 24-35 weeks indicates a 98-99% chance that the woman will not deliver within 14 days.

GBS (Group B Streptococcus.): A bacteria that normally lives in the intestinal, vaginal and rectal areas. Approximately 15-40% of all healthy women carry GBS and are asymptomatic. Can be passed on to baby during delivery, therefore universal screening with a recto-vaginal swab between 35-37 weeks gestation is recommended.

Glucose Screen: The screening test for Gestational Diabetes Mellitus (GDM) is a 1-hour plasma glucose (1hPG) measurement following a 50g glucose load given at any time of the day. If the 1h plasma glucose (PG) is ≥10.3 mmol/L, GDM is confirmed. This screening test is often referred to as the Trutol™

GTT (Glucose Tolerance Test): If the 1hPG is 7.8 to 10.2 mmol/L, a 75-g oral glucose tolerance test (OGTT) should be conducted. If two or more plasma glucose values are equal to or exceed the following, GDM is confirmed: Fasting 5.3 mmol/L
1-hour 10.6 mmol/L
2-hour 8.9 mmol/L

A single abnormal value indicates glucose intolerance of pregnancy (IGTP).
See page 27 of this document for more information.

Amniocentesis: An ultrasound guided procedure in which a needle is directed in to the gestational sac and a sample of amniotic fluid is withdrawn. Women who have amniocentesis have an additional 1/200 to 1/400 risk of miscarriage.

CVS (Chorionic Villus Sampling): An ultrasound guided procedure in which a sample of chorionic villi is obtained either transvaginally using biopsy forceps or transabdominally using a needle. Women who have CVS have an additional 1% (1/100) risk of miscarriage.

Maternal Serum Testing (MST): These are blood tests that measure naturally occurring substances that are produced by all pregnancies. They are offered to all women. The first is completed between 9-13^{+6} weeks gestation and the second is completed between 15-20^{+6} weeks gestation.

Integrated Maternal Serum Testing (IMST): This test incorporates maternal age, first trimester maternal serum test (MST) and second trimester maternal serum test (MST) into a combined or integrated assessment

of risk for fetal chromosomal abnormalities (i.e.: Down syndrome), open fetal defects such as spina bifida and placental abnormalities.

Early Pregnancy Review (EPR): Women with specific risk factors and all women over age 35 years at their EDD should be offered an early pregnancy review in the Fetal Assessment and Treatment Centre (FATC) at the IWK Health Centre. An EPR is an ultrasound that reviews viability, dates, and early development and assesses for fetal abnormalities through specific markers, particularly a nuchal translucency. This review is best if used in conjunction with the maternal serum test for assessment of risk for Trisomy 21.

NOVA SCOTIA PRENATAL RECORD 1

An updated copy of this record should remain with the woman throughout her pregnancy.

For copies contact: Reproductive Care Program, 5991 Spring Garden Rd., Suite 700, Halifax, NS B3H 1Y6

Tel: 470-6798 rcp.ashealth.ns... or order by email: RCPNSNS@ashealth.ca

DEMOGRAPHICS 1

Patient's Name: **Maiden Name:**

DOB: Age: HC#:

Race/Ethnicity: ☐ Acadian ☐ African Canadian ☐ Asian ☐ Caucasian ☐ First Nations ☐ Hispanic ☐ Jewish ☐ Mediterranean ☐ Middle Eastern ☐ Québécois ☐ Other:

Language: ☐ Eng ☐ French ☐ Arabic ☐ Other:

Marital Status: Highest Level of Education Completed:

Employed: ☐ Y ☐ N Type of work:

Address:

Contact Telephone Numbers: (H) (W)

Primary Care Provider(s): Physician/Midwife/Nurse:

Baby's Physician:

Partner's Name: Age:

Race/Ethnicity: ☐ Acadian ☐ African Canadian ☐ Asian ☐ Caucasian ☐ First Nations ☐ Hispanic ☐ Jewish ☐ Mediterranean ☐ Middle Eastern ☐ Québécois ☐ Other:

Language: ☐ Eng ☐ French ☐ Arabic ☐ Other:

Employed: ☐ Y ☐ N Type of work:

PREGNANCY DATING 2

EDD (Best Estimate):

Positive Pregnancy Test: ☐ Y

Conception Date if known (ie. IVF):

LMP Date: Sure?: ☐ Y ☐ N Length of cycle: Regular: ☐ Y ☐ N

ART ☐ Y ☐ N Type: Date:

EDD based on LMP: (1st tri. U/S should be completed if uncertain LMP or irregular cycles)

Dating U/S: Gest at time of U/S: EDD based on U/S:

OBSTETRICAL HISTORY 3

Gravida | Para | Abort | SB | MD

Date	Place	GA	Mode of Del	Complications/Comments	Birth Wt	Sex	Present Health

PRESENT PREGNANCY	Y	N
Current Medications		
Pre-pregnancy Medications		
Pre-conceptional Folic Acid		
Depression/anxiety		
Bleeding		
Received Immune Globulin		
Pyrexia		
Infections (e.g. UTI, STI)		
Nausea/vomiting		
Smoking pre-preg (#/day)		
Smoking now (#/day)		
Wishing to quit		
Alcohol use		
Substance use		
TPTL		
RH Sent		

PROBLEMS/COMMENTS/DETAILS/REFERRALS 4 6

PAST ILLNESS	Y	N
Operations		
Anaes Problems		
Blood/products		
Respiratory		
Renal disease		
Diabetes		
Cardiac		
Gynecologic		
Thromboembolism		
Hypertension		
CNS disorder/migraine		
Psychiatric disorder/eating disorder		
Substance use		
STI		
Other		

ALLERGIES 5

Y	N

RCP 101

Original - Mother / Hospital Record / Copy - Office Clinical Record

Reproductive Care Program of Nova Scotia

Endorsed by Doctors NS

http://www.rcp.ashealth.ca (902) 470-6798

Body Mass Index Table – Use Pre-Pregnancy Weight													
UNDERWEIGHT		NORMAL			OVERWEIGHT			OBESE		VERY OBESE			
WEIGHT		HEIGHT IN FEET/INCHES AND METERS											
LB	KG	4'8" 1.42m	4'10" 1.47m	5'0" 1.52m	5'2" 1.57m	5'4" 1.63m	5'6" 1.68m	5'8" 1.73m	5'10" 1.78m	6'0" 1.83m	6'2" 1.88m	6'4" 1.93m	6'6" 1.98m
100	45.4	22.4	20.9	19.5	18.3	17.2	16.1	15.2	14.3	13.6	12.8	12.2	11.6
105	47.6	23.5	21.9	20.5	19.2	18.0	16.9	16.0	15.1	14.2	13.5	12.8	12.1
110	49.9	24.7	23.0	21.5	20.1	18.9	17.8	16.7	15.8	14.9	14.1	13.4	12.7
115	52.2	25.8	24.0	22.5	21.0	19.7	18.6	17.5	16.5	15.6	14.8	14.0	13.3
120	54.4	26.9	25.1	23.4	21.9	20.6	19.4	18.2	17.2	16.3	15.4	14.6	13.9
125	56.7	28.0	26.1	24.4	22.9	21.5	20.2	19.0	17.9	17.0	16.0	15.2	14.4
130	59.0	29.1	27.2	25.4	23.8	22.3	21.0	19.8	18.7	17.6	16.7	15.8	15.0
135	61.2	30.3	28.2	26.4	24.7	23.2	21.8	20.5	19.4	18.3	17.3	16.4	15.6
140	63.5	31.4	29.3	27.3	25.6	24.0	22.6	21.3	20.1	19.0	18.0	17.0	16.2
145	65.8	32.5	30.3	28.3	26.5	24.9	23.4	22.0	20.8	19.7	18.6	17.6	16.8
150	68.0	33.6	31.3	29.3	27.4	25.7	24.2	22.8	21.5	20.3	19.3	18.3	17.3
155	70.3	34.7	32.4	30.3	28.3	26.6	25.0	23.6	22.2	21.0	19.9	18.9	17.9
160	72.6	35.9	33.4	31.2	29.3	27.5	25.8	24.3	23.0	21.7	20.5	19.5	18.5
165	74.8	37.0	34.5	32.2	30.2	28.3	26.6	25.1	23.7	22.4	21.2	20.1	19.1
170	77.1	38.1	35.5	33.2	31.1	29.2	27.4	25.8	24.4	23.1	21.8	20.7	19.6
175	79.4	39.2	36.6	34.2	32.0	30.0	28.2	26.6	25.1	23.7	22.5	21.3	20.2
180	81.6	40.4	37.6	35.2	32.9	30.9	29.1	27.4	25.8	24.4	23.1	21.9	20.8
185	83.9	41.5	38.7	36.1	33.8	31.8	29.9	28.1	26.5	25.1	23.8	22.5	21.4
190	86.2	42.6	39.7	37.1	34.8	32.6	30.7	28.9	27.3	25.8	24.4	23.1	22.0
195	88.5	43.7	40.8	38.1	35.7	33.5	31.5	29.6	28.0	26.4	25.0	23.7	22.5
200	90.7	44.8	41.8	39.1	36.6	34.3	32.3	30.4	28.7	27.1	25.7	24.3	23.1
205	93.0	46.0	42.8	40.0	37.5	35.2	33.1	31.2	29.4	27.8	26.3	25.0	23.7
210	95.3	47.1	43.9	41.0	38.4	36.0	33.9	31.9	30.1	28.5	27.0	25.6	24.3
215	97.5	48.2	44.9	42.0	39.3	36.9	34.7	32.7	30.8	29.2	27.6	26.2	24.8
220	99.8	49.3	46.0	43.0	40.2	37.8	35.5	33.5	31.6	29.8	28.2	26.8	25.4
225	102.1	50.4	47.0	43.9	41.2	38.6	36.3	34.2	32.3	30.5	28.9	27.4	26.0
230	104.3	51.6	48.1	44.9	42.1	39.5	37.1	35.0	33.0	31.2	29.5	28.0	26.6
235	106.6	52.7	49.1	45.9	43.0	40.3	37.9	35.7	33.7	31.9	30.2	28.6	27.2
240	108.9	53.8	50.2	46.9	43.9	41.2	38.7	36.5	34.4	32.5	30.8	29.2	27.7
245	111.1	54.9	51.2	47.8	44.8	42.1	39.5	37.3	35.2	33.2	31.5	29.8	28.3

<20: Wt gain of 28-40 lbs (1 lb/wk in 2nd and 3rd trimesters)

20-27: Wt gain of 25-35 lbs (0.75 lb/wk in 2nd and 3rd trimesters)

27-29: Wt gain of 15-25 lbs (0.5 lb/wk in 2nd and 3rd trimesters)

>29: Wt gain of no more than 15 lbs

For those patients with a pre-pregnancy weight greater than 245 lbs or 111.1 kg, there is an alternate imperial-only BMI chart in the companion document (Appendix H) that includes pre-pregnancy weight up to 328 lbs. The BMI may also be calculated using pounds and inches, multiply your weight by 703, divide by your height in inches, and then divide by your height again (lbs X 703/inches/inches)

OR

Using kilograms and metres, divide your weight in kilograms by the square of your height in metres (Kg/m^2)

NOVA SCOTIA PRENATAL RECORD 1

1. DEMOGRAPHIC INFORMATION

New topics added:

Race & ethnicity

Individuals of certain ethic groups have an increased risk of being carriers and of having a child with specific genetic conditions. Carriers of these conditions are generally healthy. In order to perform appropriate carrier screening, asking each partner's ethnic background is important.

May ask patient directly or patient may self-report (i.e.: if the patient is given the first page of the prenatal record to fill out the top portion prior to being seen by the prenatal care provider).

May ask partner race/ethnicity or can be reported by patient, if known.

Language

Added Arabic as it is becoming more prominent in NS

Baby's Doctor

Please include the name of the doctor who will care for the baby once mother and baby have been discharged from the hospital. If this is different from the in-hospital physician who is caring for the baby, please indicate the names of both physicians, if known.

2. PREGNANCY DATING

Prompts included for *pregnancy tests, LMP, cycle length/regularity, contraception history, ultrasound information and assisted reproductive technology.*

The LMP is the first day of the last menstrual period and is felt to be an accurate method of dating the pregnancy if the patient is certain about the dates and her periods are regular with a normal cycle length. Naegele's Rule: First day of LMP + 7 days minus 3 months.

Fetal heart tones (usually heard by Doppler between 7-12 weeks gestation) may also assist with clinical dating.

Ultrasound dating is only used if there is an uncertain LMP, cycles are irregular/long, the periods are abnormal and/or the patient was using oral contraceptives during conception.

Ultrasound dating may also be used if there is discordance between menstrual and ultrasound assessment. (i.e.: > 5 days difference in the first trimester or >10 days difference at the 18-20 week u/s). Re-dating should be done cautiously if patient is certain of LMP and cycles.

Accurate pregnancy dating is necessary as there are a number of prenatal tests that are offered only during certain weeks of the pregnancy.

3. OBSTETRICAL HISTORY

Similar to the previous record.
Opportunity to gather information about previous pregnancies, stillbirths, terminations, neonatal deaths etc. It is important to document gestational age at delivery, mode of delivery, weight of newborn, and any complications that might have occurred antepartum, intrapartum and/or postpartum.

Ensure opportunity for private discussion with the woman to obtain accurate and detailed information.

4. PRESENT PREGNANCY

New topics added:
Pre-pregnancy and current medications
Depression/anxiety
GBS status
Nausea & vomiting
Wishing to quit smoking
Substance Use

Information formerly in this section that is now captured elsewhere on the form:

Age> 35 years
Ethnic risk
Plan to breastfeed
Healthy Eating/Activity

5. ALLERGIES

If additional space is needed please document in *Problems/Comments/ Details/Referrals.*

6. PAST ILLNESS

New topics added:
Respiratory
S*ubstance use*
Gynecologic history
If additional space is needed, please document in *Problems/Comments/Details/Referrals*

NOVA SCOTIA PRENATAL RECORD 2

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PATIENT'S NAME:		EDD:
PHYSICAL ASSESSMENT		
Pre-preg Wt	Height	BP
BMI (early diabetic screen for those with BMI > 30)		
Head and Neck	Heart	
Breast	Lungs	
Abdomen	Extremities	
Pelvis	Corpus	
Cervix	Adnexa	

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PSYCHOSOCIAL/ENVIRONMENTAL	Y	N	COMMENTS/DETAILS
Activity limitations			
Nutrition concern/Food security			
Adequate support			
Housing security			
Abuse			
Social assistance required			
Referral(s)			To:
			To:

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GENETIC SCREENING	Y	N
Age ≥ 35 at delivery		
Fam Hx congenital anomalies/birth defects		
Fam Hx inherited disease/disorder		
Fam Hx Diabetes		
Ethnic risk		
Genetic screening discussed		
Genetic screening declined		
Consanguinity discussed		

10

EDUCATION/DISCUSSION (IF DISCUSSED ✓)

Prenatal Education: ☐ Y ☐ N Type:	Pregnancy expectations/concerns	Newborn Screening
Flu Vaccine (offer during flu season): ☐ Y ☐ N	Healthy Eating/Physical Activity	Parenting
Plan to Breast Feed: ☐ Y ☐ N	Intercourse	Daily Multivitamin Containing Folic Acid & Iron
Previous Breast Feeding Experience: ☐ Y ☐ N	Preterm Labour Signs and Symptoms	Cord Blood Banking
Discussed Benefits of Breast Feeding: ☐ Y ☐ N	Labor/Birth Expectations	

ANTENATAL SCREENING: SEE REVERSE FOR GUIDELINES

11

	OFFERED TO ALL WOMEN		OFFERED TO SOME WOMEN
FIRST PRENATAL VISIT	Hgb	Rubella (if immune status unknown)	Varicella
	HepB Antigen	Chlamydia	Diabetic Screen
	Syphilis/VDRL	Gonorrhea	Father's Rh
	ABO/Rh	Urine C&S	
	HIV ☐ discussed ☐ accepted ☐ declined		
	PAP Date: Results		
9-13 WEEKS**	*MST ☐ discussed ☐ declined ☐ completed	RESULTS	
	*EPR ☐ discussed ☐ declined ☐ completed		
15-20 WEEKS**	*MST ☐ discussed ☐ declined ☐ completed		
	* See reverse for definitions		
18-21 WEEKS	USD ☐ discussed ☐ declined ☐ completed		
24-28 WEEKS	**OFFERED TO ALL WOMEN**	**OFFERED TO SOME WOMEN**	
	Hgb	HIV ☐ done prev. ☐ declined	
	Diabetic Screen (1 hour PC 50g glucose screen)		
	Antibody Screen (For Rh negative women antibody screen should be drawn prior to administration of Rh immune globulin)		
28 WEEKS	Rho(D) Immune Globulin Given ☐ Yes ☐ No	Date:	
35-37 WEEKS	GBS Date:	Result:	☐ declined

SPECIAL PROCEDURES/TESTS

GTT: ☐ Yes ☐ No Date: Results: _____, _____, _____

Amniocentesis/CVS Date: Results:

RCP 102
Original - Mother / Hospital Record / Copy - Office Clinical Record

Reproductive Care Program of Nova Scotia

Endorsed by Doctors NS
http://www.rcp.nshealth.ca (902) 470-6798

11

Guidelines for Antenatal Screening and Testing

First Prenatal Visit

- HgB, HepB antigen, Syphilis,
- Group/type and antibody screen
- Rubella: Do if immune status is unknown. Vaccination is recommended post partum if non-immune.
- Varicella: Do if there is no history of infection, vaccination, or positive serology. Vaccination is recommended post partum if non-immune.
- Human Immunodeficiancy Virus: HIV counseling is required, testing is voluntary.
- Urine C&S (or a urinalysis followed by a C&S if the analysis is positive)
- Cervical Cytology: if not done in the last 12 months
- Cervical screening for gonorrhea and chlamydia (see companion document for information about screening)
- Diabetes glucose screen (also known as PC50 or Trutol): Appropriate for women at risk for GDM. Risk factors include glycosuria, obesity, multiple gestation, previous GDM, previous LGA baby, history of unexplained stillbirth, family history of diabetes in a first degree relative, ethnic predisposition, polyhydramnios
- If twins or multiples suspected, ultrasound for chorionicity (plus or minus nuchal translucency as MST not applicable for multiple gestations)
- If uncertain LMP or irregular cycles, a 1st trimester dating U/S should be completed.

9-13^{+6} Weeks:	**MST:** 1st trimester maternal serum testing should be offered to all women regardless of age. Note: 2nd trimester testing must be performed in conjunction with 1st trimester testing for an integrated screen.
11-13^{+6} Weeks	**Early Pregnancy Review (EPR):** Women with specific risk factors and all women over age 35 years at their EDD should be offered an early pregnancy review (EPR) in the Fetal Assessment and Treatment Centre (FATC) at the IWK Health Centre. An EPR is an ultrasound that reviews viability, dates, early development and assesses for fetal abnormalities through specific markers, particularly a nuchal translucency. This review is best if used in conjunction with the maternal serum test for assessment of risk for Trisomy 21.
15-20^{+6} Weeks:	**MST:** 2nd trimester testing should be offered to all women regardless of age. **Integrated Maternal Serum Test:** This test incorporates maternal age, first trimester maternal serum test (MST) and second trimester maternal serum test (MST) into a combined or integrated assessment of risk for fetal chromosomal abnormalities, open fetal defects such as spina bifida and placental abnormalities. **Integrated Prenatal Test:** This test is the same as above but also includes the EPR in the integration
18-21 Weeks:	**Ultrasound:** should include fetal biometry, amniotic fluid volume, placentation, anatomical review for anomalies, and markers for fetal aneuploidy. (offered to all women)

24-28 Weeks:

- Repeat HgB
- Diabetes (glucose) screen: For all women, including those at risk for GDM whose initial screen was negative
- Antibody screen: For women who are Rh + (see below for Rh – women)
- HIV: Women at risk for HIV or those who declined first trimester screening should be offered this opportunity for screening.

Please note at 28 Weeks:	For Rh – women: Repeat antibody screen, regardless of partner's Rh type. If partner is Rh + or has an unknown Rh status, the antibody screen should be done prior to the administration of Rho(D) Immune Globulin.
35-37 Weeks:	Group B Strep: Vaginal/rectal swab by patient or physician

After 41 weeks

- Biophysical profile or NST and amniotic fluid volume
  OR
- Induction of labour

NOVA SCOTIA PRENATAL RECORD 2

7. PHYSICAL ASSESSMENT

New topic added:

Body Mass Index (BMI), metric and imperial chart found on the back of page 2 for your reference. This chart includes a maximum pre-pregnancy weight of 245lbs. Suggested weight gain based on pre-pregnancy weight is also included at the bottom of the chart.

An alternative imperial-only chart can be found in Appendix G. The BMI may also be calculated using pounds and inches, multiply your weight by 703, divide by your height, then divide by your height again.

OR

Using kilograms and metres, divide your weight in kilograms by the square of your height in metres.

The Nova Scotian population is at risk for a number of acute and chronic illnesses due to increasing rates of obesity (Fell, 2005). Obesity has significant associated maternal and perinatal health risks as well (Atlee Perinatal Database, 2005). Some of these risks include: gestational diabetes mellitus, hypertension, anesthetic risks, placental dysfunction and risk for cesarean section delivery (O'Brien, 2003; Nattingus, 1998; Ray, 2005). It is important for primary care providers to counsel women about strategies for healthy eating and activity during pregnancy as well as the appropriate weight-gain for each individual woman's BMI. The appropriate weight gain varies from woman to woman and should be based on the pre-pregnancy Body Mass Index (BMI), which reflects the mother's weight-to-height ratio. In general, optimal growth of the unborn baby occurs if women with a low pre-pregnancy BMI (< 20) gain more weight and women with a high pre-pregnancy BMI (> 27) gain less weight than women who enter pregnancy with a healthy body weight (BMI between 20 and 25). It is important that counselling regarding increased BMI and restrictive diets occur preconceptually. It is not recommended that pregnant women participate in energy or protein restricted diets during pregnancy, as this may be harmful to the developing fetus (Kramer, 2007).

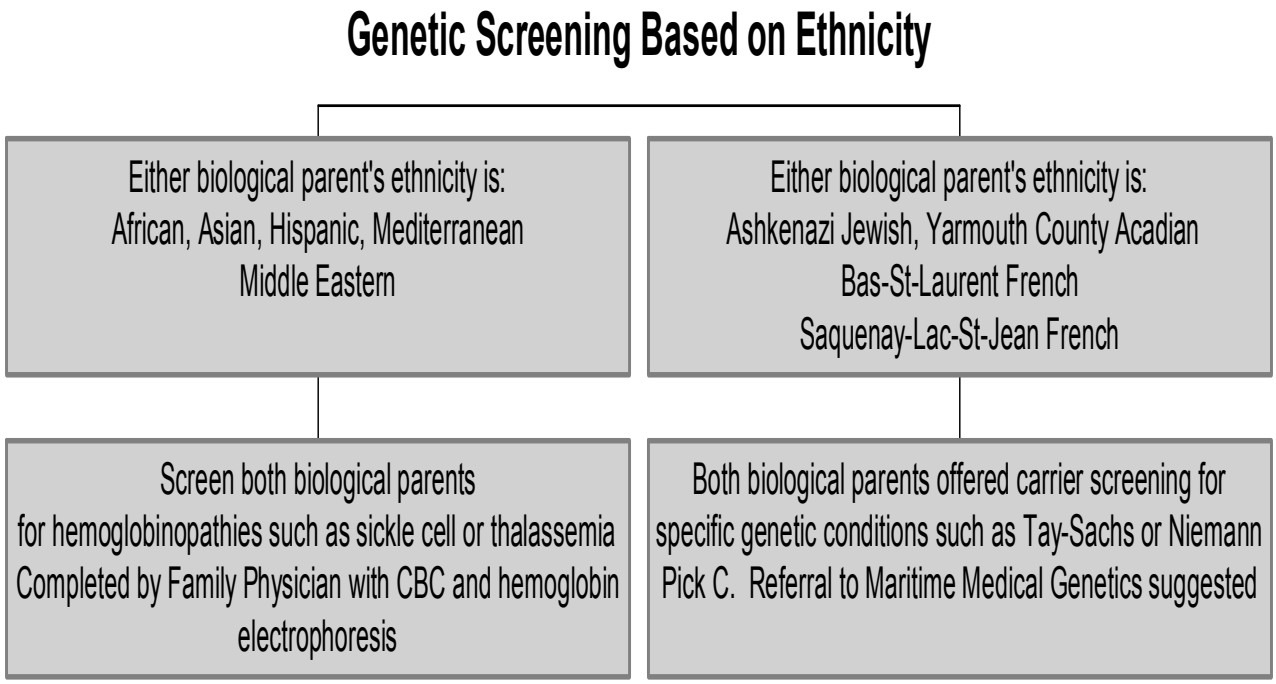
8. PSYCHOSOCIAL/ ENVIRONMENTAL

Information about housing, employment and social assistance can be obtained from the community services website at: http://www.gov.ns.ca/coms/ or the toll-free number 1-877-424-1177.

9. GENETIC SCREENING

Reasons for genetic screening may include:

- Family history
  - **Consanguinity** (if biological parents are related) should be discussed if family history of autosomal disorder.
- Previous child with a genetic condition or congenital anomaly
- Predisposition to certain conditions
- Carrier screening related to certain ethnic backgrounds
- Abnormal ultrasound finding
- Exposure to chemicals or medications during pregnancy
- History of miscarriages, infertility or stillbirth



Some genetic conditions associated with specific ethnicities include:

Ashkenazi Jewish: Canavan, Familial Dysautonomia, Tay- Sachs
Bas-St-Laurent French: Tay-Sachs
Saguenay-Lac-St-Jean French: ARSACS, COX-SLSJ, Cystic Fibrosis, HMSN, Tyrosinemia
Yarmouth County Acadian: Alström, Niemann-Pick type C

Further information and definitions of the above conditions are available on the **Maritime Medical Genetics** website at http://www.iwk.nshealth.ca click on *Care Services* then *M*, choose *Maritime Medical Genetics Service* or call (902) 470-8754. A genetic counsellor is available Monday to Friday 8:30am-4:30pm. A prenatal genetics referral form and a family tree template can be found in Appendix A.

10. EDUCATION/DISCUSSION

This section provides prompts for discussion and education related to pregnancy.

PRENATAL EDUCATION

Varies in format and content from district to district. This may include: prenatal classes, prenatal fairs, direct counselling from public health, community resource centres or information from another care provider.
May require referral to public health.

NEWBORN SCREENING

The **Nova Scotia Newborn Screening Service at the IWK Health Centre** offers newborn screening as a service to families with new babies. This service identifies newborns with certain serious disorders of body chemistry that are treatable. For further information please see the website at: http://www.iwk.nshealth.ca/index.cfm?objectID=3322B736-AC27-6644-E9E1-B683E787EA15. See Appendix A for a brochure on newborn screening.

PARENTING AND LABOUR/BIRTH/ PREGNANCY EXPECTATIONS

Helpful resources for parents and care providers may include:
Public Health education publications found at:
http://www.gov.ns.ca/hpp/publichealth/default.htm
The Society of Obstetricians and Gynecologists of Canada (SOGC) provide a resource for women, families and care providers entitled *Healthy Beginnings: Your handbook for pregnancy and birth.* Please see the website for further information:
http://www.sogc.org/healthybeginnings/
Health Canada has released a resource for women and families entitled *Sensible Guide to a Healthy Pregnancy* found at:
http://www.phac-aspc.gc.ca/hp-gs/guide_e.html

BREASTFEEDING

In Nova Scotia, we have adopted a provincial breastfeeding policy aimed at supporting and promoting breastfeeding and the Baby Friendly Initiative (BFI) throughout the province. It is recommended that:

- Infants are **exclusively breastfed for the first six months of life**, with continued breastfeeding to two years and beyond with appropriate introduction of complementary foods at six months (Canadian Pediatric Society)
- Healthy term **breastfed infants should receive a daily supplement of 400 IU of Vitamin D** until the infant is getting this level of Vitamin D from other dietary sources.
- The BFI recommends that **information not be distributed universally about formula feeding**.

There is a resource being developed by Public Health with detailed information for women and families who choose to formula feed.

If you would like more information about breastfeeding or would like to refer a woman for counselling regarding breastfeeding, please contact your local public health office.

HEALTHY EATING

Canada's Food Guide recommendations for women of childbearing age include:

- **Folic acid**: The recommended **dietary intake** of folate is 600 micrograms for women who are pregnant and 500 micrograms for breastfeeding women.
- **It is recommended that most women take supplemental folic acid:**
    - 0.4-1.0 mg at least 12 weeks prior to conception
    - 0.4-1.0 mg for the first 12 weeks of pregnancy
    - High-risk women (i.e.: family or personal history of open neural tube defects, those medicated for epilepsy) may require higher doses.
- **Iron:** Pregnant women should make sure they are taking a daily multivitamin that also contains an adequate amount of iron.
- **Calories**: Women need about 350 extra calories per day in the second trimester and 450 extra calories per day in the third trimester.

The amount of additional calories women need when breastfeeding depends on the rate of milk production and how much weight the woman loses. Generally, women need about 350 to 400 extra calories per day for the first year of breastfeeding.

ACTIVITY

A joint position statement by the Society of Obstetricians of Canada and the Canadian Society for Exercise Physiology recommends that:

- All women without contraindications should be encouraged to participate in aerobic and strength-conditioning exercises as part of a healthy lifestyle during their pregnancy.
- Reasonable goals of aerobic conditioning in pregnancy should be to maintain a good fitness level throughout pregnancy without trying to reach peak fitness or train for an athletic competition.
- Women should choose activities that will minimize the risk of loss of balance and fetal trauma.
- Women should be advised that adverse pregnancy or neonatal outcomes are not increased for exercising women.
- Initiation of pelvic floor exercises in the immediate postpartum period may reduce the risk of future urinary incontinence.
- Women should be advised that moderate exercise during lactation does not affect the quantity or composition of breast milk or impact infant growth.

See website address for full document:
http://www.csep.ca/communities/c574/files/hidden/pdfs/Joint%20SOGC_CSEP%20Guidelines.pdf

FLU VACCINE

Although universal vaccination of all pregnant women is not explicitly recommended in Canada, the Canadian National Advisory Committee on Immunization (NACI) recommends the following pregnant women be offered an influenza vaccination: all high-risk pregnant women, pregnant women who have chronic illnesses, or are health care workers or pregnant women who will deliver during the flu season and thus, be a household contact for the newborn.

In Nova Scotia, all pregnant women are encouraged to receive flu immunization to protect themselves and their newborn infant. All pregnant women in Nova Scotia are eligible to receive publicly funded flu vaccine.

11. ANTENATAL SCREENING/ TESTING

There are two types of prenatal tests available: screening tests and diagnostic tests. Screening tests include first and second trimester maternal serum testing, integrated maternal serum testing, early pregnancy review, ultrasound, and integrated prenatal testing.

Maternal Serum Testing (MST)*: These are blood tests that measure naturally occurring substances that are produced by all pregnancies. They are offered to all women. The first is completed between 9-13^{+6} weeks gestation and the second is completed between 15-20^{+6} weeks gestation.

Integrated Maternal Serum Testing (IMST)*: This test incorporates maternal age, first trimester maternal serum test (MST) and second trimester maternal serum test (MST) into a combined or integrated assessment of risk for fetal chromosomal abnormalities (i.e.: Down syndrome), open fetal defects such as spina bifida and placental abnormalities.

Early Pregnancy Review (EPR)*: Women with specific risk factors and all women over age 35 years at their EDD should be offered an early pregnancy review in the Fetal Assessment and Treatment Centre (FATC) at the IWK Health Centre. An EPR is an ultrasound that reviews viability, dates, early development and assesses for fetal abnormalities through specific markers, particularly a nuchal translucency. This test is best if used in conjunction with the maternal serum test for assessment of risk for Trisomy 21.

* Definitions also found on the reverse side of Prenatal Record 2.

Patients requiring additional screening or diagnostic tests beyond the maternal serum testing should be referred to the Fetal Assessment and Treatment Centre (FATC) at the IWK Health Centre. For information about FATC please call (902) 470-6654. A family risk questionnaire may be found in Appendix C.

Diagnostic tests include: CVS (chorionic villus sampling) and amniocentesis

CVS involves the removal of a small sample of placental tissue, chorionic villi, which contain cells of fetal origin. It is usually done between 11-13 weeks of pregnancy. The procedure is ultrasound-guided. Depending on factors such as the location of the placenta, this procedure may be done either by inserting a needle through the abdomen (like an amniocentesis) or by small biopsy forceps inserted through the cervical canal. CVS can detect a chromosome abnormality. In some circumstances it may also be used to detect other genetic conditions that have previously been identified in a family.

The results of testing take 2-3 weeks for chromosome abnormalities. For other genetic conditions the results can sometimes take a bit longer. The chance of miscarriage for any woman at this stage of pregnancy without CVS, is about 4%. Women who have a CVS have an additional 1% (procedure-related risk) chance to have a miscarriage.

Amniocentesis is an ultrasound-guided procedure in which a needle is directed in to the gestational sac and a sample of amniotic fluid is withdrawn. This fluid contains cells of fetal origin that are isolated and cultured in the lab. It is usually done between 16 to 18 weeks of pregnancy. An amniocentesis can detect a

chromosome abnormality. It may also be able to detect other genetic conditions for individuals whose baby has a higher risk.

It usually takes 2-3 weeks to obtain the results of chromosome testing. Results for other genetic conditions may take longer. The risk of miscarriage for any woman at this stage of pregnancy is about 2-3%. Women who have an amniocentesis have an additional 1/200 to 1/400 chance of miscarriage. This additional risk is called the procedure-related risk.

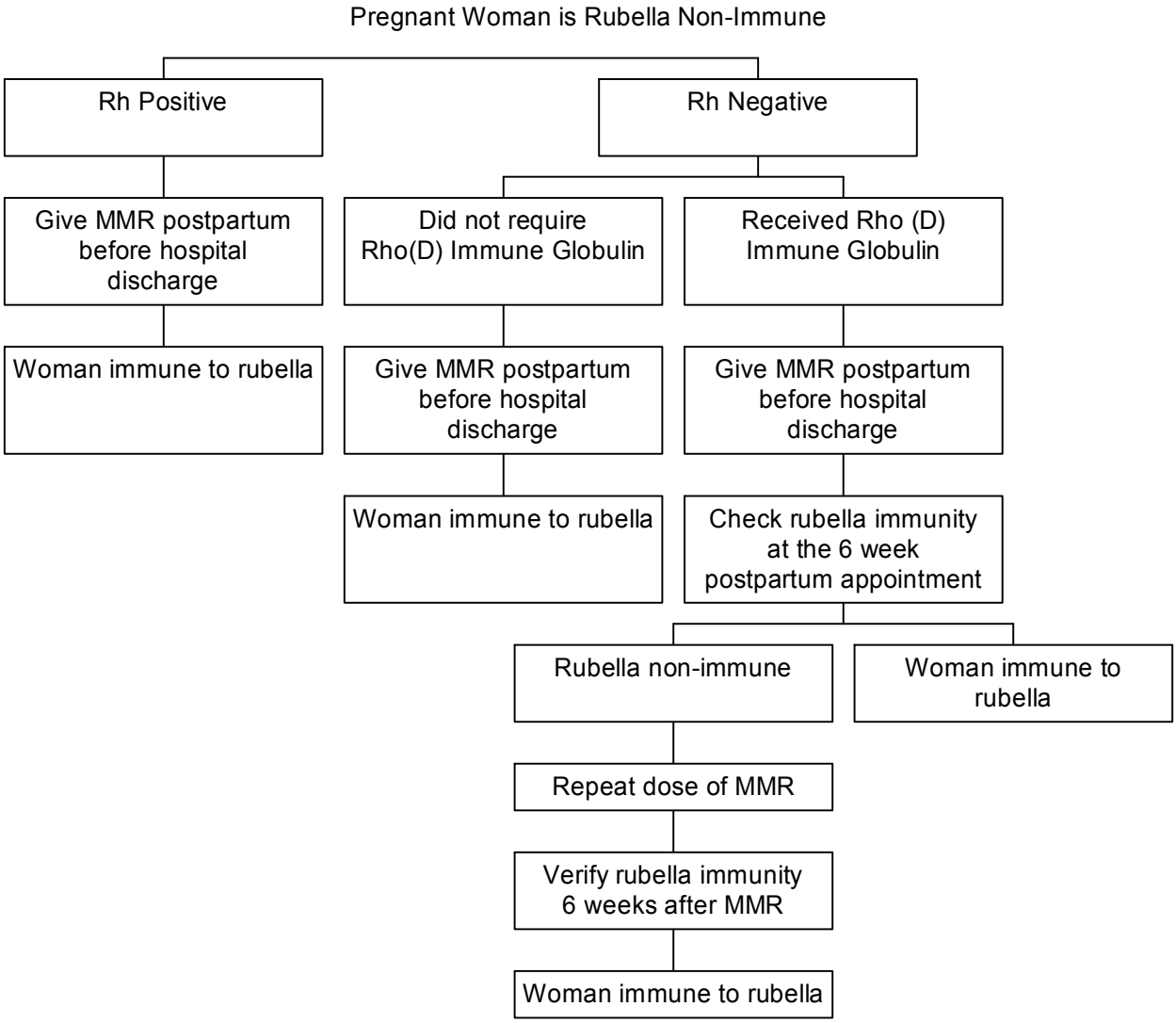
First Prenatal Visit	*For ALL Women*
HEMOGLOBIN	Recognition of anemia. Recommendations and education re: diet and/or vitamin and iron supplements may be indicated. Some research indicates that women with increased pre-pregnancy BMI may be at higher risk for postpartum anemia. A CBC also allows measurement of platelets. This may be useful information later in pregnancy.
HEPATITIS B SURFACE AG (HBsAg)	Recommended by the National Advisory Committee on Immunization. Seroprevalence HBsAg positive study in Halifax County (1990-1991) determined HBsAg screening is cost effective for the Nova Scotia population. Supported in the Canadian Immunization Guide, 2006.*
SYPHILIS SCREEN/VDRL	Incidence low but implications significant. Recent concern about increasing frequency in general population. Women at risk for sexually transmitted infections (STIs) should be screened again in the third trimester. Note: False positive screens may reflect the presence of Anti-phospholipid Antibody Syndrome which has serious implications in pregnancy.

*Hepatitis C (HCV) is more prevalent than Hepatitis B in Nova Scotia. However, routine screening for HCV is not recommended as there is no known therapy that prevents vertical transmission nor is there an intervention for the neonate.

- Please note that women who identify risk factors for blood borne pathogens during prenatal health screening should be screened for HCV (for more information contact the office of the Provincial Medical Officer of Health @ 424-8698).
- The Canadian Pediatric Society (CPS) recommends that children born to HCV-infected mothers receive HBV vaccine in the first month of life. Current information indicates that breastfeeding should not be discouraged in women who are HCV positive. However, the unequivocal safety of breastfeeding has not been established.

RUBELLA ANTIBODY TITRE

Counsel seronegative women about the risks if preconception was associated with exposure, there was exposure during pregnancy or status is not known. Vaccinate susceptible women in the postpartum. For those women who are Rh negative and rubella non-immune, rubella vaccination can be provided in the postpartum BEFORE hospital discharge. However, **for women who are Rh negative and varicella non-immune, they should receive their first dose of varicella vaccine at their 6 week postpartum visit and their second dose 4 or more weeks later.**



BLOOD GROUP (ABO) AND RH TYPE (ANTIBODY SCREEN)

Identify women who are Rh negative or have antibodies associated with Hemolytic Disease of the Newborn. Women with antibodies require regular testing,

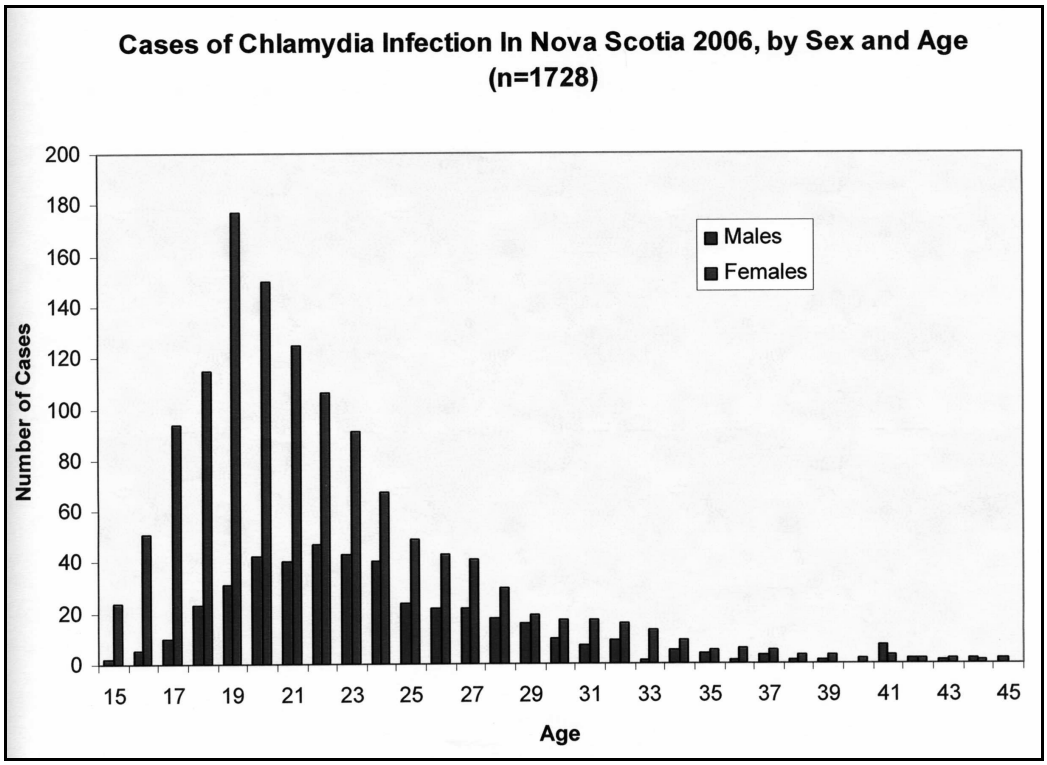
	regardless of Rh type (see Rh program of Nova Scotia guidelines in Appendix D or at http://rcp.nshealth.ca/files/RhGuidelines.pdf)
URINE CULTURE OR URINALYSIS	Identify women with asymptomatic bacteriuria. Treatment should be based on sensitivity. Culture if urinalysis positive. Urinary tract infections are significant complications in pregnancy as this increases the risk of pyelonephritis and preterm labour.
CERVICAL CYTOLOGY	Ideal opportunity to screen women who do not have regular Pap smears or if a Pap smear has not been done in the last 12 months. Cancer of the cervix is the most prevalent reproductive tract malignancy associated with pregnancy.
HUMAN IMMUNODEFICIENCY VIRUS (HIV) SEROLOGIC TESTING*	Requires appropriate pre- and post-test counselling and informed consent. Note that the ability of health care providers to identify those likely to be at risk for HIV has NOT been well demonstrated. There are a number of resources to assist prenatal care providers with information needed for pre- and post-test HIV counselling (see Appendix E for SOGC HIV Screening Recommendations or contact www.cma.ca or www.cfpc.ca).

HIV screening should be presented to all pregnant women as a recommended part of prenatal care. Although it is recommended, women have the right to decline HIV screening or any laboratory test offered. Prenatal care providers have an important role to play in stressing the importance of testing in preventing disease, in emphasizing that this is considered a standard of care for all women, and in helping to allay concerns about confidentiality and any perceived stigma associated with accepting HIV screening. Discussion regarding HIV screening and either acceptance or refusal of screening should be documented clearly on the prenatal record.

Please note: Anonymous testing for HIV is available in Halifax at the Halifax Sexual Health Centre (formerly known as Planned Parenthood) http://www.halifaxsexualhealth.ca/ and in rotating sites in Cape Breton through the AIDS Coalition of Cape Breton (1-877-597-9255 or http://www.accb.ns.ca/pages/HIVTestinginNS_files/frame.htm).
All provincial laboratories can accommodate both nominal testing (sample labelled with identifying information) and non-nominal testing (sample identified by a numeric code or initials). Breastfeeding is contraindicated in women who are HIV-positive.

CERVICAL SCREENING FOR GONORRHEA OR CHLAMYDIA	Universal screening has not been done in the past. There are still many primary care providers across Canada who do not screen universally but do so based on women who are symptomatic or considered at risk for STIs (e.g. < 25 years of age, multiple sexual partners, previous STD – see Centre for Disease Control

recommendations for focused screening). However, the rates of chlamydia in particular have been increasing in the last several years.



While still controversial, there is fair evidence to support screening pregnant women during their first trimester for chlamydia and to treat as required (Davies and Wang, 1996). Neither the Society of Obstetricians of Canada nor the American College of Obstetricians and Gynecologists recommend universal screening of chlamydia and/or gonorrhea. Therefore, prenatal care providers must consider the evidence and the woman's risk factors and history in determining whether or not screening is appropriate.

DIABETIC SCREEN

Those at risk for gestational diabetes (glycosuria, obesity, maternal age ≥ 35, previous gestational diabetes mellitus, hypertension, previous large for gestational age (LGA) baby, history of unexplained stillbirth, family history of diabetes in a first degree relative, member of an ethnic group predisposed to diabetes [e.g. First Nations women], polyhydramnios) should consider glucose screening as early in pregnancy as feasible.

If the 1-hour pc plasma glucose is:

≤7.8 mmol/L, it is normal

≥7.8mmol/L but ≤10.2 mmol/L, a full 2 hour 75g oral glucose tolerance test (OGTT) is recommended

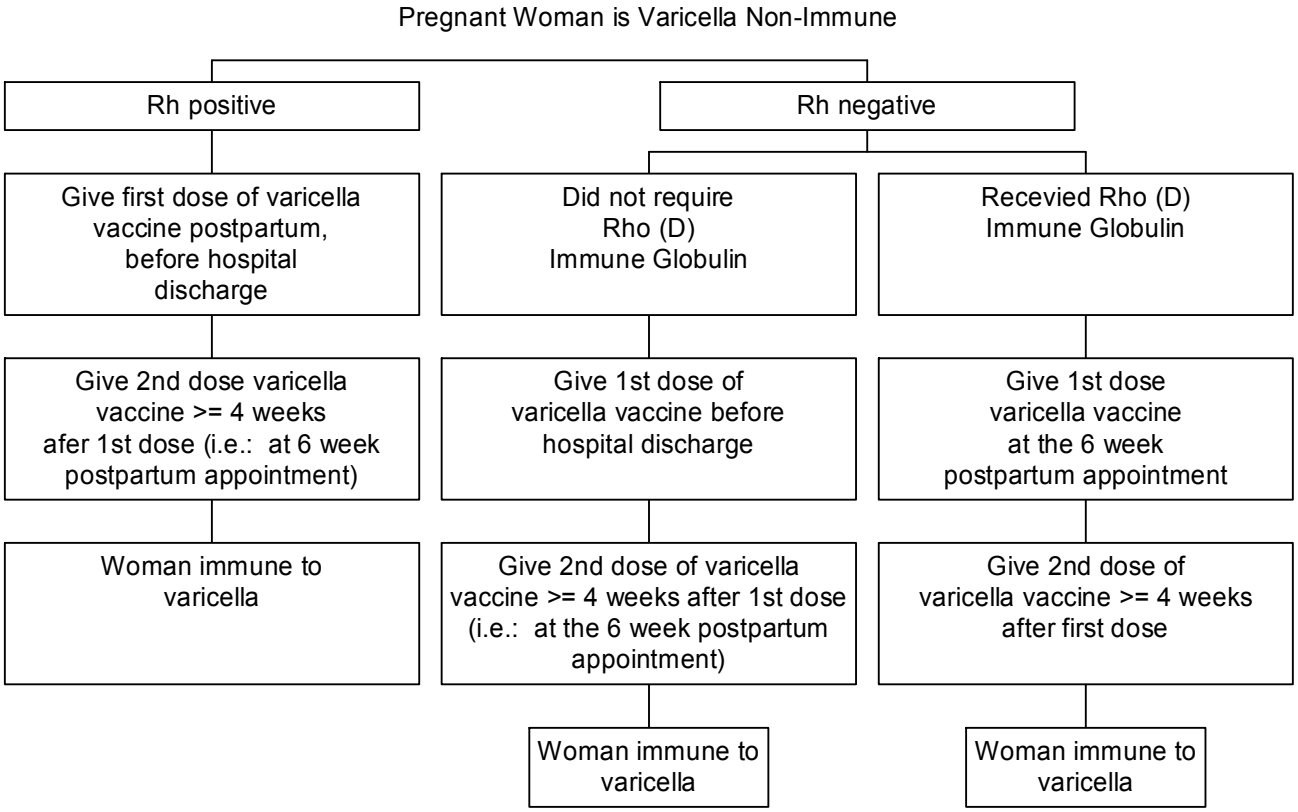
≥10.3mmol/L, GDM is present and the OGTT is unnecessary and contraindicated.

First Prenatal Visit	*For Some Women*

VARICELLA

Screening tests should be completed for all women whose immune status is uncertain or unknown.

- ***All women who are varicella non-immune should be vaccinated in the postpartum period but the timing is dependent on Rh status***



NOTE: If a woman is Rh positive, she should receive rubella and/or varicella as needed in the immediate postpartum period while still in hospital. If the woman is Rh negative and has received WinRho, the rubella vaccine should be given before hospital discharge but the varicella vaccine should be delayed until their 6-week postpartum visit. The first dose of varicella vaccine can be given at the 6-week visit and the second dose should be given 4 or more weeks later.

BABYS' BIOLOGICAL FATHER'S Rh STATUS

If the woman is Rh negative and the father is Rh negative, the baby will also be Rh negative and

WinRho™ will not be required. This only applies when the certainty of paternity is known.

9-13^{+6} weeks: First Trimester MST and EPR
15-20^{+6} weeks: Second Trimester MST
18-21 weeks: Second Trimester Diagnostic Ultrasound

MATERNAL SERUM TESTING
EARLY PREGNANCY REVIEW
AND DIAGNOSTIC ULTRASOUND

There are detailed definitions for **first trimester and second trimester maternal serum testing (MST)** and **early pregnancy review (EPR)** included on the reverse side of the prenatal record page two. This testing is in keeping with current practice across the country, the testing guidelines were developed in consultation with experts in this area and they are in keeping with prenatal testing guidelines were released from the SOGC in 2007.

http://www.sogc.org/guidelines/documents/187E-CPG-February2007.pdf

- The first MST may be offered between **9-13^{+6} weeks gestation**. It is offered to all women regardless of age.
- The second MST may be offered between **15-20^{+6} weeks gestation** and should also be offered to all women regardless of age. It is important that second trimester MST be performed in conjunction with the first trimester MST in order to obtain an integrated test.
- At **18-21 weeks gestation** all women should be offered a diagnostic ultrasound.

24-28 WEEKS

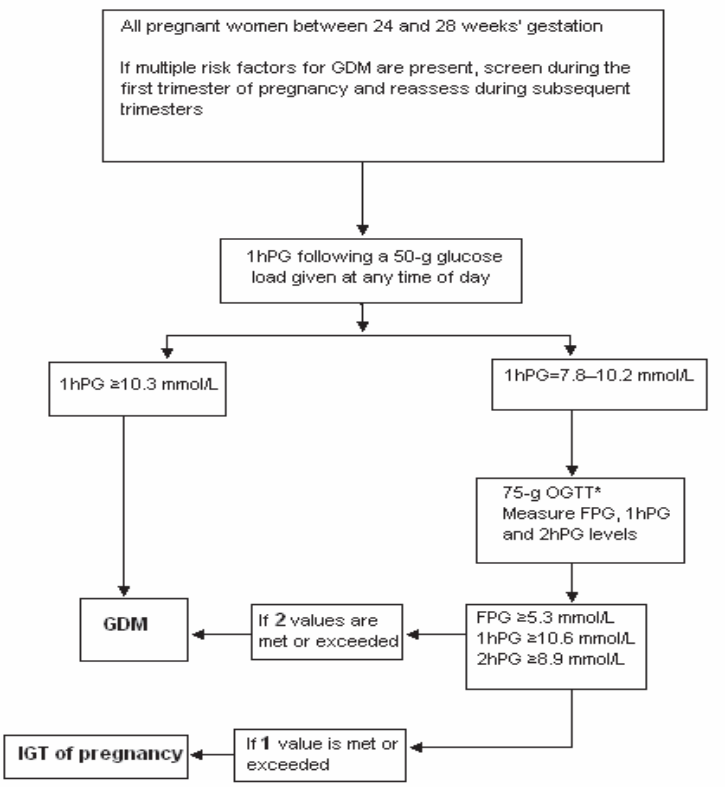
For ALL Women

REPEAT HEMOGLOBIN

Recognition of anemia. Recommendations regarding diet and/or vitamin supplements may be indicated.

DIABETIC SCREEN

Both the SOGC and the Diabetes Care Program of Nova Scotia recommend universal screening. Women with known risk factors should have early screening and possibly a repeat screen



For further information see the Diabetes Care Program of Nova Scotia website for guidelines on gestational diabetes. http://www.diabetescareprogram.ns.ca/pdf/DCPNSPregScreen2006.pdf

For Rh positive women:

REPEAT THE ANTIBODY SCREEN

To determine the presence of antibodies. Many women with antibodies identified during pregnancy are Rh positive. Implications for fetal and neonatal health warrant repeating the antibody screen in these women (coordinate with other lab tests if possible).

For Rh negative women:

REPEAT THE ANTIBODY SCREEN

Rh negative women require Rho(D) Immune Globulin at 28 weeks gestation unless the partner's Rh status is **definitely** negative. If partner is Rh positive or has an unknown Rh status, an antibody screen should be done prior to administration of Immune Globulin. Women who develop antibodies associated with Hemolytic Disease of the Newborn (HDN) need careful follow-up. See Rh Program guidelines for Rho(D) Immune Globulin recommendations related to testing and management. (Appendix D) (coordinate with other lab tests if possible).

For SOME Women

HIV COUNSELING AND SCREENING

If HIV was not discussed, completed or declined during the first prenatal visit, this is an opportunity for primary care providers to counsel women about HIV testing.

28 WEEKS

Please see Appendix D for guidelines for Antibody Screening and Rho (D) Immune Globulin Administration (WinRhoSDF™).

35-37 WEEKS

GROUP B STREPTOCOCCUS (GBS) SCREEN

Should be completed between 35-37 weeks. Women who agree to screening for GBS should have a culture done from a single swab first to the vagina then to the rectal area.

- If the woman has a known allergy to penicillin, SOGC recommends noting this on the requisition and requesting sensitivity testing for clindamycin and erythromicin.
- Since GBS colonization status can change, the SOGC recommends repeating the GBS culture after 5 weeks. Some clinicians may decide to delay collecting the GBS swab to 36 weeks so that the results will be valid until 41 weeks gestation. **If a woman goes into labour and her culture result is > 5 weeks old, her GBS status should be considered unknown.**
- SOGC recommendations found in Appendix F

POST TERM MANAGEMENT (41 WEEKS)

The following tests are appropriate for certain pregnant women and/or certain clinical situations:

Test/Assessment	**Time (weeks)**	**Comments**
Biophysical profile and/or Non-Stress Test (NST)	41 weeks	After 41 weeks, current information suggests that women should be offered induction of labour. Care should be taken in assessing the evidence for gestational age beyond 41 weeks. Some women may elect to delay induction. If expectant management is chosen, a biophysical profile is indicated between 41-42 weeks and twice weekly thereafter. If a biophysical profile is not available, ultrasound examination to determine amniotic fluid volume and a non-stress test is an acceptable alternative. Women should also understand the importance of adequate fetal movement.

NOVA SCOTIA PRENATAL RECORD 3

PATIENT'S NAME:	EDD:
PROBLEM LIST/CARE PLAN	
Issue	Plan (Follow-up/Consults)

12

13

PRENATAL VISITS

Date	Weight	Urine P/S	BP	Gest (wks)	Fundal height	Pres.	FHR	Fetal movement	Cigs /day	Next visit	Comments

RCP 103
Original - Mother / Hospital Record / Copy - Office Clinical Record

Reproductive Care Program of Nova Scotia

Endorsed by Doctors NS
http://www.rcp.nshealth.ca (902) 470-6798

12. PROBLEM LIST/CARE PLAN

In this section, care providers are encouraged to include physical and psychosocial issues that pertain to perinatal care. Examples include: gestational diabetes, history of depression, community service involvement with previous children, advanced maternal age, previous cesarean section, preeclampsia, placental location, Rh status, GBS status etc.

13. PRENATAL VISITS

The basic prenatal visit not including relevant discussion about antenatal screening and testing is comprised of maternal weight assessment, urine dip for protein and glucose, blood pressure monitoring, gestational age in weeks, measurement of fundal height, fetal presentation (using Leopold's maneuvers), auscultation of fetal heart sounds, query about fetal movement, number of cigarettes per day if applicable and the date of the next prenatal visit.

The initial prenatal visit should occur as soon as pregnancy is suspected in order to offer comprehensive antenatal screening.
After the initial visit, the Society of Obstetricians and Gynecologists of Canada recommends women with **low-risk pregnancies** see the prenatal care provider every 4-6 weeks up to 30 weeks gestation, every 2-3 weeks after 30 weeks gestation and every 1-2 weeks after 36 weeks gestation until labour occurs or up until 41 weeks when a post-dates assessment should be conducted (i.e. : biophysical profile or induction of labour, see pages 28 for more details).
Women with risk factors in pregnancy should be seen more frequently.

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Appendix A Newborn Screening

What is this service?

The Nova Scotia Newborn Screening Service at the IWK Health Centre offers testing for new babies to identify newborns with certain rare, serious disorders of body chemistry that are treatable. The vast majority of babies in Nova Scotia are healthy at birth. However, occasionally a baby is born with a disorder that may be dangerous to his/her health. Early diagnosis and treatment can result in normal growth and development. It can also prevent many of the medical problems associated with these disorders.

Who is tested?

All newborns within Nova Scotia. Most parents want to be informed and participate in decisions about what is important to their baby's health, so they can be sure that their child receives the best medical care available. Testing newborns for these disorders is an important part of good healthcare.

How is my baby tested?

A few drops of blood are taken from your baby's heel in the first two days of life, usually before he/she goes home from hospital. The blood is placed on a special type of absorbent paper and sent to the laboratory at the IWK Health Centre for testing.

How much will these tests cost?

These tests are free of charge.

Why should my baby be tested?

Babies with these disorders often appear perfectly normal at birth and are generally from healthy families. These disorders are quite rare, and your baby will not likely have any of them. However, by the time problems arise; permanent damage may already have been done. The safest thing to do is to have your baby tested. If one of the disorders is present, your baby can begin treatment immediately.

What is my baby being tested for?

Tests are carried out for several disorders. These disorders can be effectively treated if discovered early in life.

Your baby will be tested for the following common disorders:

PKU (Phenylketonuria)
This disorder is caused when a baby's body is not able to break down the amino acid, phenylalanine that is found in the protein of foods. If detected early and the baby is started on a special low protein diet, severe brain damage can be prevented.

Congenital Hypothyroidism

This disorder is caused by the lack of thyroid hormone, which can lead to poor growth and mental development. If found early and treated with thyroid medication, a child will grow and develop normally.

MCAD (Medium Chain acyl-CoA Dehydrogenase) Deficiency

Babies with MCAD deficiency are healthy under normal circumstances. However, they can become very ill, or even die, during illnesses when the child does not eat properly. These complications are prevented with simple dietary measures such as frequent feedings during illnesses.

Other disorders include:

- Carnitine Reuptake Deficiency
- CPTI and CPTII (Carnitinepalmitoyl Transferase Type I and II)
- CTL (Carnitinepalmitoyl Translocase Deficiency)
- GAI and GAII (Glutaric Acidemia Type I and II)
- Homocystinuria
- Isovaleric Acidemia
- LCHAD (Long Chain Hydroxy acyl-CoA Dehydrogenase Deficiency)
- MSUD (Maple Syrup Urine Disease)
- VLCAD (Very Long Chain acyl-CoA Dehydrogenase Deficiency)

How will I be given test results?

Your baby's test results are sent back to your family doctor and/or the hospital where the baby was born. You will not be called if they are normal (negative). If additional testing is needed to determine if your child has one of these disorders, your family doctor is informed immediately. If you are notified that your baby needs additional testing, do not delay. In many cases, the repeat test will show that your baby is, in fact, not affected.

I was called and told that my baby's test needs to be repeated. Does this mean my baby has a disorder?

Not always. There are several reasons why your baby's doctor may have asked to have your baby retested including:

Unsatisfactory specimen: There was not enough blood to complete all the required screening tests, or the sample does not work for other reasons.

"Too Early" specimen: If the blood specimen was taken before your baby was 16 hours old, a second sample will have to be taken as soon as possible to ensure accurate test results.

Abnormal Test Result: An initial positive test result does not mean that your baby has a disorder. It does mean that your baby needs further testing to determine whether or not he/she has one of these disorders.

What does a "negative" test result mean?

A negative test results means your baby does not have any of the disorders he/she was screened for. Newborn screening only provides information about certain rare disorders of body chemistry. It is very important for your baby to have regular check-ups with your family doctor. This is an opportunity for you to talk about any concerns you have about your baby's health.

The Nova Scotia Newborn Screening Service is designed to identify babies with rare, serious disorders within a few weeks of birth. This service has been available to Nova Scotia families since 1979. Currently 99.9% of babies born in the province are being tested.

As a parent, you can help to assure the health of your child and of the next generation by participating in the Newborn Screening Service.

Appendix B Prenatal Genetics Referral & Family Tree Template

IWK Health Centre

PRENATAL GENETICS REFERRAL (This form is for Physician use ONLY)

★*Along with your **referral letter**, include any relevant family history, test results, etc., that would ensure **prompt triage** of this form.*

FAILURE TO PROVIDE REQUIRED INFORMATION WILL DELAY THE PROCESSING OF THIS REFERRAL.

Patient Information: (PLEASE PRINT CLEARLY)

★NAME: _____

★ FRANCOPHONE: Y _____ N _____ ★MAIDEN/OTHER NAME: *(if known)* _____

★DATE OF BIRTH: (dd/mm/yy) _____

★PROVINCIAL HEALTH CARE #: _____ **EXPIRY DATE:** _____

★ADDRESS: _____

_____
(postal code please)

★HOME PHONE:_____ **★WORK/OTHER:** _____

★LMP: _____ **★EDC:** _____ **★G** ____**★ P** ____ **★ SA** ____ **★ TA** ____

★Blood Type: _____**★Had Ultrasound?** _____ **★Date:** _____

PARTNER/SPOUSE: _____ **DATE OF BIRTH:** _____

NEXT OF KIN (if other than spouse): _____
(First and last name please) *(Address & Phone number)*

★REFERRING PHYSICIAN: _____ **★** _____
(First and last name please) *(Phone number)*

★REFERRING PHYSICIAN's ADDRESS: _____

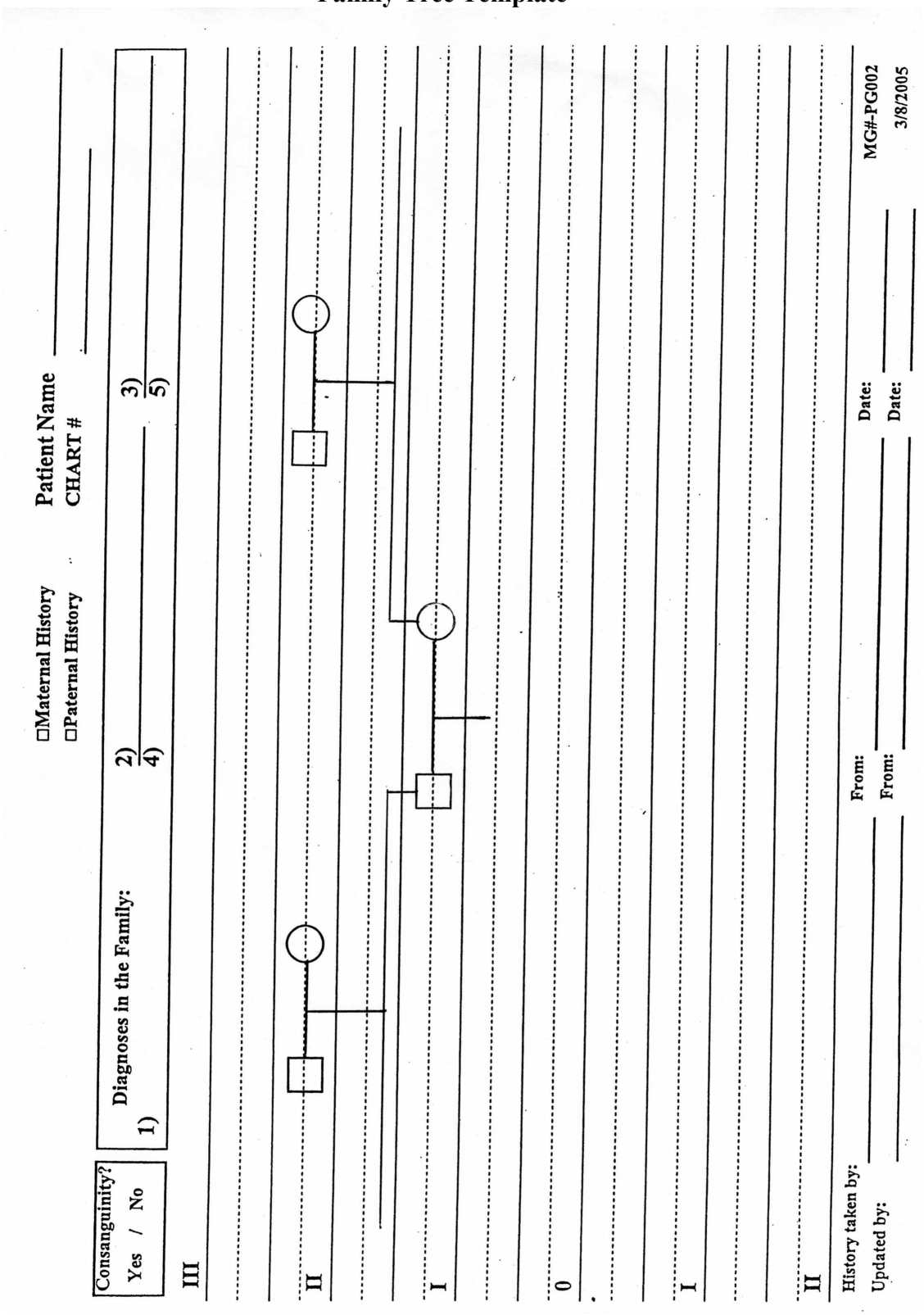
★REASON FOR REFERRAL: _____

_____

FAMILY PHYSICIAN: _____
(First and last name please, if known)

PLEASE FAX ALL REFERRALS WITH REQUIRED DOCUMENTATION TO:
Maritime Medical Genetics Service, IWK Health Centre
5850/5980 University Avenue, PO Box 9700 Halifax, NS B3K 6R8
FAX #:(902) 470-8709 Phone #(902) 470-8754

Family Tree Template



Appendix C Family Risk Questionnaire

IWK Health Centre

PRENATAL FAMILY HISTORY QUESTIONNAIRE

The purpose of this form is to determine whether any additonal testing or information should be offered to you during your pregnancy. Please complete this form and bring it with you to your appointment. This form will become part of your permanent record at the IWK Health Centre.

Mother of baby: Full Name_____

Date of birth_____ Ethnic Origin (ancestry) _____ Occupation_____

Please list any personal health problems (present or past) _____

Are you and the baby's father related? (example: Cousins) If so please describe how?_____

Father of baby: Full Name_____

Date of Birth_____ Ethnic origin (ancestry)_____ Occupation_____

Please list any personal health problems (present or past)_____

Your Children:

List the names, ages and any health problems (present or past) of any previous children.

Note: If the child has a different mother or father from this baby, please indicate.

_____

_____

_____

_____

PREGNANCY HISTORY:

When did you find out you were pregnant (approximate date or weeks gestation is fine)_____

Was this a planned pregnancy? ☐No ☐Yes

Are you a smoker? ☐No ☐Yes If yes, how many cigarettes a day do you smoke?_____

Have you consumed any alcohol during your pregnacy? ☐No ☐Yes
Please indicate the number of drinks per week._____

Were you taking any medication or drugs prior to finding out you were pregnant?
☐No ☐Yes (please provide names)_____

Have you been taking any medication or drugs since learning you were pregnant?
☐No ☐Yes (please provide names)_____

Were you taking folic acid prior to or during pregnancy? ☐No ☐Yes
When did your start? _____

Form # 4880 07/01 Page 1 of 2 PERMANENT RECORD Prenatal Family History Questionnaire
Women's and Maternity Services

FAMILY HISTORY:

Please indicate "yes" or "no" using a check mark (✓) . Does anyone in your (the baby's mother) or the baby's father's family have any of the following conditions? By family we mean - brothers, sisters, children, parents, aunts, uncles, and cousins. If yes, please provide details (how is person related to you, type of condition etc).

CONDITION	NO (✓)	YES (✓) Please provide details.
Mental retardation or learning disability		
Down syndrome		
Other chromosome abnormality		
Facial malformation (example: cleft lip and/or palate)		
Neural tube defect (example: spina bifida, anencephaly)		
Heart problem		
Kidney problem		
Neurological disorder (example: brain or nerve problem or mental illness)		
Deafness and eye problems		
Bone disorder/abnormal limbs (example: dwarfism, multiple fractures)		
Muscle problems (example: muscular dystrophy)		
Hormone problems (example: thyroid/diabetes)		
Stomach & bowel problems		
Blood disorder (example: hemophilia, sickle cell anemia)		
Cystic Fibrosis		
Cancer (under the age of 50)		
Two or more miscarriages		
Stillbirth or early childhood death		

Are there any conditions in either side of the family that were not mentioned here but that you are concerned about? If so, please describe them here.

_____

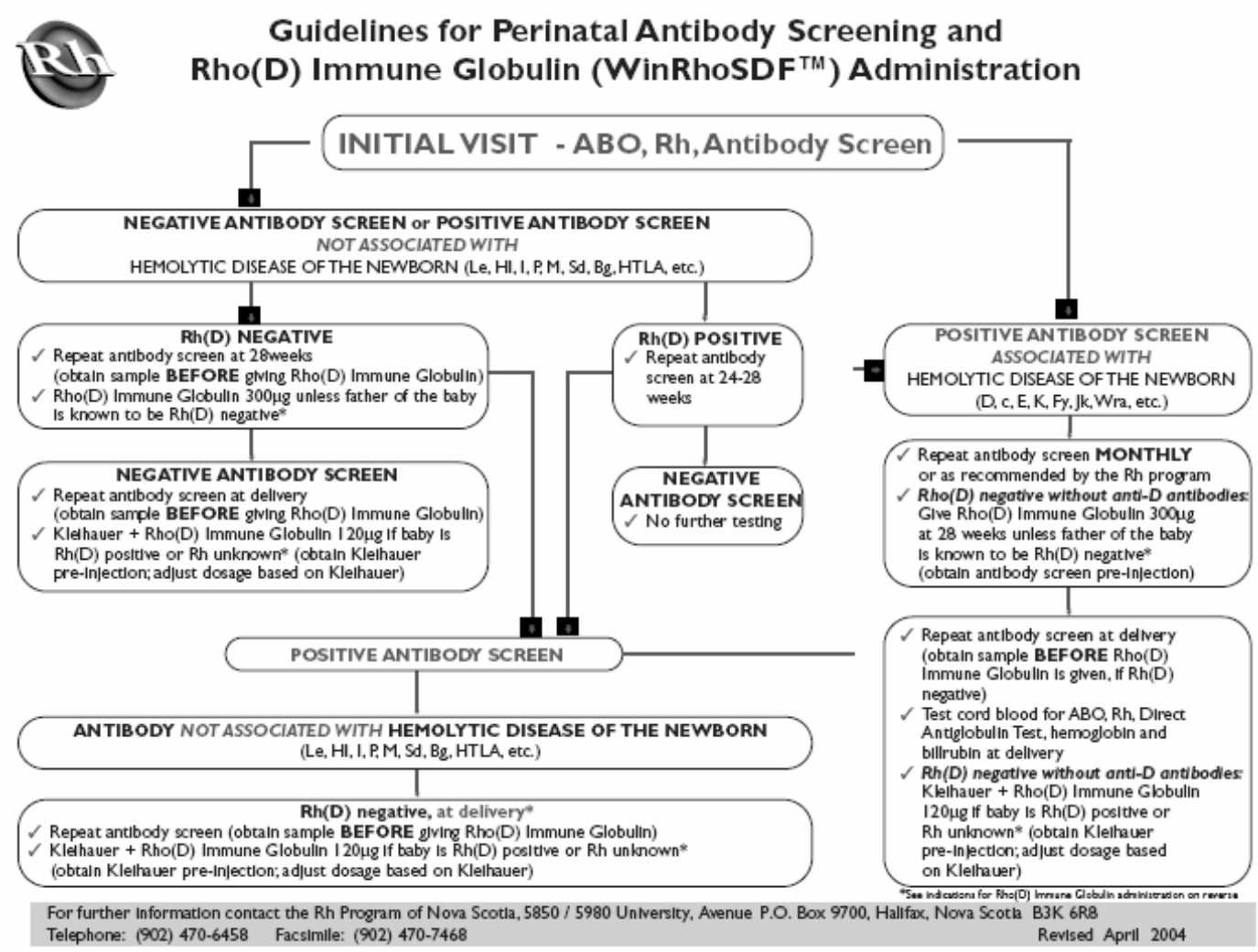
Has anyone in your family been seen by genetics? If so, please describe why:

_____

What questions or concerns would you like to have answered during your appointment?

_____

Appendix D Rh Guidelines



Rho(D) Immune Globulin (WinRho SDF™)
Indications for administration to Rh(D) negative women (without allo anti-D antibodies) unless father of the baby is known to be Rh(D) negative:

✓ Always obtain antibody screen *BEFORE* administering WinRho SDF™. ***Confirm Rh type, but no need to wait for screen result.***

- *28 weeks gestation:* give **300 µg.** If given before 28 weeks, a repeat injection is required 12 weeks later.
- *Postpartum:* obtain Kleihauer; give **120 µg** if infant is Rh(D) positive or Rh unknown. May withhold injection IF WinRho SDF™ has been given within the previous 3 weeks provided Kleihauer* is negative AND passive anti-D antibodies (due to Rho(D) Immune Globulin) are detected at delivery.
- *Spontaneous or induced abortion, ectopic pregnancy, partial molar pregnancy:* up to 12 weeks gestation, give **120 µg**; after 12 weeks gestation, give **300 µg**.
- *Antepartum bleeding (threatened abortion) :* up to 12 weeks gestation, give minimum of **120 µg**; after 12 weeks, give **300 µg**; repeat every 6 weeks if bleeding episodes continue; Kleihauer* test for bleeding episodes in second and third trimester.
- *Amniocentesis, cordocentesis, chorionic villus sampling (CVS):* give **300 µg**. Kleihauer after 19wks; Kleihauer + antibody screen if procedure is repeated within 6 weeks, and extra **300 µg** ***IF*** Kleihauer* is positive ***AND/OR*** passive anti-D antibodies (due to Rho(D) Immune Globulin) are not detected.
- *External versions, abdominal trauma, placental abruption, placenta previa with bleeding:* give minimum of **120 µg** in combination with Kleihauer* testing due to risk of fetomaternal hemorrhage.
- *Platelet transfusion:* **120 µg** covers up to 12 transfused platelet units (**300 µg** covers up to 30 platelet units), and protects up to 4 weeks. Increased dose is required if additional platelet units are transfused, and repeat if more than 4 weeks have passed. Rationale: Platelets may come from Rh(D) positive donors, and contain a small amount of red blood cells.
- *Transfusion of Rh(D) positive blood to Rh(D) negative recipient:* **20 µg** per mL red blood cells. Caution: see product insert for limitations, or consult Rh Program.

* *KLEIHAUER TEST POSITIVE for fetomaternal hemorrhage (FMH) of Rh(D) positive red blood cells:*
- **120 µg** protects for FMH of **0.0% to 0.2%**
- **300 µg** protects for FMH of **0.0% to 0.5%**

See product insert or consult with Rh Program if additional dosage is required.

NOTE:
1. **Administer within 72 hours of event to ensure effectiveness** (if omitted, give as soon as possible, up to 28 days later).
2. Administer by **INTRAVENOUS or DEEP INTRAMUSCULAR route**, to ensure adequate absorption. *Injections into the gluteal region often reach only subcutaneous tissues, hence decreasing absorption, and potentially the effectiveness of WinRho SDF™. If necessary, use alternate muscle or intravenous route.*
3. WinRho SDF™ is a *blood product.* Patients should be informed of the source and safety, and informed consent should be obtained. A consent form is also available from the Rh Program. Refer to Rh Program pamphlet *Pregnancy and the Rh Factor.*

Reference: Prevention of Rh Alloimmunization. SOGC Clinical Practice Guidelines No. 133, Sept 2003. JOGC Vol 25, No 9.

For further information contact the Rh Program of Nova Scotia, 5850/5980 University Avenue, PO Box 9700, Halifax, NS B3K 6R8
Telephone: (902) 470-6458 Facsimile: (902) 470-7468

Revised April 2004

Rh PROGRAM of NOVA SCOTIA
5850 / 5980 University Avenue, PO Box 9700
Halifax, Nova Scotia, Canada, B3K 6R8
Telephone (902) 470-6458 Facsimile (902) 470-7468

February 2006

Dear Physicians, Nurses, Midwives, and Laboratory Staff:

Re: New information regarding the administration of Rho(D) immune globulin (WinRho SDF™)

The Nova Scotia Provincial Blood Coordinating Program has released a *Nursing Policy and Procedure for Blood, Blood Component and Plasma Derivative Administration* as of September, 2005. Following discussions with the Blood Coordinating Program, the Rh Program has recommended a protocol for monitoring women receiving WinRho SDF™ for routine perinatal prophylaxis. This protocol is also contained in a draft Blood Administration Policy by the IWK Health Centre.

There are some points to consider when administering WinRho SDF™:

- Since WinRho SDF™ is a blood product, consent should be obtained. We suggest using the consent form specifically designed by the Rh Program, since it contains information that will be helpful in answering questions.
- The woman should be asked if she has had previous blood or blood products, and if she has had any adverse reactions.
- Since there is a possibility of a reaction to this product, women should be asked to remain for close observation for 15 to 30 minutes post administration.
- An antibody screen should be obtained at the first prenatal visit, and *withing two weeks* prior to any administration of WinRho SDF™.
- A repeat antibody screen should be obtained at 26-28 weeks gestation, prior to the routine 28 week injection of WinRho SDF™, since the absence of antibodies at the first prenatal visit *does not guarantee that antibodies will not be found at 26-28 weeks.* In a ten year period in Nova Scotia, 23 out of 67 newly sensitized women (34.3%) developed anti-D antibodies before 28 weeks gestation.[1]
- Any reactions to this blood product should be recorded on the blood transfusion report/tag and a copy should be returned to your Blood Transfusion Service department.

Thank you for considering these details in the administration of WinRho SDF™ for the prevention of Rho(D) alloimmunization in the perinatal period.

Sincerely,

M. C. Van den Hof, MD FRCS (C)
Director, Rh Program of Nova Scotia

1. Armson, B.A., Parsons, M.L., Baskett, T.F. The Rh Program of Nova Scotia, 1964-2000. J Soc Obstet Gynaecol Can 2000; 22(11):954-8

Endorsed by the Medical Society of Nova Scotia, supported by the Department of Health, Province of Nova Scotia, and Dalhousie University Departments of Obstetrics and Paediatrics

Appendix E SOGC HIV Screening Recommendations

SOGC CLINICAL PRACTICE GUIDELINE

No. 185, December 2006

HIV Screening in Pregnancy

This guideline has been reviewed by the Maternal Fetal Medicine Committee and approved by the Executive and Council of the Society of Obstetricians and Gynaecologists of Canada.

PRINCIPAL AUTHORS

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Thomas Wong, MD, MPH, FRCPC, Ottawa ON

Mark H. Yudin, MD, MSc, FRCSC, Toronto ON

Abstract

Objective: The purpose of this guideline is to provide recommendations to obstetric health care providers and to minimize practice variations for HIV screening, while taking provincial and territorial recommendations into account.

Outcomes: The risk of transmission of HIV from mother to fetus is significant if the mother is not treated. The primary outcome of screening for and treating HIV in pregnancy is a marked decrease in the rate of vertical transmission of HIV from mother to fetus. Secondary outcomes include confirmation of HIV infection in the woman, which allows optimization of her health and long-term management.

Evidence: The Cochrane Library and Medline were searched for English-language articles published related to HIV screening and pregnancy. Additional articles were identified through the references of these articles. All study types were reviewed.

Key Words: HIV, AIDS, pregnancy, perinatal, screening, counselling

Recommendations

1. All pregnant women should be offered HIV screening with appropriate counselling. This testing must be voluntary. Screening should be considered a standard of care, although women must be informed of the policy, its risks and benefits, and the right of refusal. Women must not be tested without their knowledge. (II-2 B)
2. Pre-test counselling and the patient's decision about testing should be documented in the patient's chart. (III-B)
3. Women who decline screening should still have concerns discussed and should continue to receive optimum antenatal care. (III-C)
4. Women should be offered HIV screening at their first prenatal visit. (I-A)
5. Women who test negative for HIV and continue to engage in high-risk behaviour should be retested in each trimester. (II-3 B)
6. Women with no prenatal care and unknown HIV status should be offered testing when admitted to hospital for labour and delivery. Women at high risk for HIV and with unknown status should be offered HIV prophylaxis in labour, and HIV prophylaxis should be given to the infant post partum. (III-B)
7. Women who test positive for HIV should be followed by practitioners who are knowledgeable in the care of HIV-positive women. (III-C)

J Obstet Gynaecol Can 2006;28(12):1103–1107

Appendix F SOGC GBS Recommendations

SOGC CLINICAL PRACTICE GUIDELINES

No. 149, September 2004

THE PREVENTION OF EARLY-ONSET NEONATAL GROUP B STREPTOCOCCAL DISEASE

PRINCIPAL AUTHORS
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Joanne Embree, MD, FRCPC (Chair), Winnipeg, MB

Abstract

Objective: To review the evidence in the literature and to provide recommendations on the management of pregnant women in labour for the prevention of early-onset neonatal group B streptococcal (GBS) disease.

Outcomes: Maternal outcomes evaluated included exposure to antibiotics in pregnancy and labour and complications related to antibiotic use. Neonatal outcomes of rates of early-onset group B streptococcal infections are evaluated.

Evidence: A review of the literature through MEDLINE from January 1980 to December 2003, relating to neonatal group B streptococcal infection and a review of the Centers for Disease Control and Prevention recommendations.

Values: The evidence obtained was reviewed and evaluated by the Infectious Diseases Committee of the Society of Obstetricians and Gynaecologists of Canada (SOGC) under the leadership of the principal authors, and recommendations were made according to guidelines developed by the Canadian Task Force on the Periodic Health Exam.

Recommendations:

1. Offer all women screening for group B streptococcal disease at 35 to 37 weeks' gestation with culture done from one swab first to the vagina then to the rectal area. (II-1)
2. Treat the following women intrapartum at time of labour or rupture of membranes with IV antibiotics:
   - all women positive by GBS culture screening done at 35 to 37 weeks (II-2)
   - any women with an infant previously infected with GBS (II-3)
   - any women with documented GBS bacteriuria (regardless of level of colony-forming units per mL) in this pregnancy (II-2)
3. Treat women at less than 37 weeks' gestation with IV antibiotics unless there has been a negative GBS vaginal/rectal swab culture within 5 weeks. (II-3)
4. Treat women with intrapartum fever with IV antibiotics (i.e., chorioamnionitis must be treated, but broader spectrum antibiotics would be advised). (II-2)
5. If a woman is GBS-positive by culture screening or by history of bacteriuria, with prelabour rupture of membranes at term, treat with GBS antibiotic prophylaxis and initiate induction of labour with IV oxytocin (II-1)
6. If GBS culture result is unknown and the woman has ruptured membranes at term for greater than 18 hours, treat with GBS antibiotic prophylaxis. (II-2)

Validation: These guidelines have been reviewed and approved by the Infectious Diseases Committee of the SOGC, and approved by the Council of the SOGC.

Sponsor: The Society of Obstetricians and Gynaecologists of Canada. This document replaces document number 61, June 1997.

Key Words
Group B streptococcus, antibiotic therapy, infection, prevention

J Obstet Gynaecol Can 2004;26(9):826–32.

Reprinted with permission from the Society of Obstetricians and Gynecologists of Canada (2004). *The prevention of early onset neonatal group B streptococcus disease*. Retrieved June 12, 2007 from http://sogc.medical.org/guidelines/public/149E-CPG-September2004.pdf

Appendix G Alternate BMI Chart from the Perinatal Centre at the IWK Health Centre

BMI (kg/m^2)	19	20	21	22	23	24	25	26	27	28	29	30	35	40
Height (in.)	Weight (lb.)													
4' 10"	91	96	100	105	110	115	119	124	129	134	138	143	167	191
4' 11"	94	99	104	109	114	119	124	128	133	138	143	148	173	198
5'	97	102	107	112	118	123	128	133	138	143	148	153	179	204
5' 1"	100	106	111	116	122	127	132	137	143	148	153	158	185	211
5' 2"	104	109	115	120	126	131	136	142	147	153	158	164	191	218
5' 3"	107	113	118	124	130	135	141	146	152	158	163	169	197	225
5' 4"	110	116	122	128	164	140	145	151	157	163	169	174	204	232
5' 5"	114	120	126	132	138	144	150	156	162	168	174	180	210	240
5' 6"	118	124	130	136	142	148	155	161	167	173	179	186	216	247
5' 7"	121	127	134	140	146	153	159	166	172	178	185	191	223	255
5 '8"	125	131	138	144	151	158	164	171	177	184	190	197	230	262
5' 9"	128	135	142	149	155	162	169	176	182	189	196	203	236	270
5' 10"	132	139	146	153	160	167	174	181	188	195	202	207	243	278
5' 11"	136	143	150	157	165	172	179	186	193	200	208	215	250	286
6'	140	147	154	162	169	177	184	191	199	206	213	221	258	294
6' 1"	144	151	159	166	174	182	189	197	204	212	219	227	265	302
6' 2"	148	155	163	171	179	186	194	202	210	218	225	233	272	311
6' 3"	152	160	168	176	184	192	200	208	216	224	232	240	279	319
6' 4"	156	164	172	180	189	197	205	213	221	230	238	246	287	328

Body weight in pounds according to height and body mass index
This table uses the kg/m^2 formula to calculate BMI. It has been converted to pounds and inches for your convienence.