College of Registered Nurses of Saskatchewan

Contraception: Adult & Pediatric

Reproductive Health

Clinical Decision Tools for RNs with Additional Authorized Practice [RN(AAP)s]

Effective Date: February 1, 2022

Background

Contraception is used for prevention of pregnancy. Care providers should discuss fertility awareness and contraception with clients (Di Meglio, Crowther, & Simms, 2018). Determining a timeline in which the client would like to become pregnant (e.g., within the next year) may help guide choices that fit with their reproductive goals (Bulfin, Thomas, & Porter, 2019). Adolescents should have opportunities to discuss sexual issues with care providers independent of a parent or guardian and in confidence to obtain a complete sexual history and eliciting questions they might not otherwise feel comfortable addressing (Di Meglio et al., 2018). Contraception consists of barrier, hormonal, intrauterine devices (IUD) and sterilization. RN(AAP)s need to refer to physicians/NPs for IUD insertion and sterilization, and when there are risks associated with hormonal therapies.

Immediate Consultation Requirements

The RN(AAP) should seek immediate consultation from a physician/NP when any of the following circumstances exist:

- a client whose medical condition has changed so that they might be using combined hormonal contraceptives or progesterone-only contraceptives in the presence of relative or absolute contraindications (refer to Appendix A and B),
- a client who is currently taking combined hormonal contraceptives and demonstrates any of the following: ACHES (abdominal pain, chest pain, headache, eye problems and severe leg pain), unexplained vaginal bleeding, jaundice, syncope, blood pressure >140/> 90, severe migraine headaches (with aura), severe depression, and/or severe allergic skin rash; or
- a client who is currently taking progesterone-only contraceptives and demonstrates any of the following: ACHES, jaundice, syncope, severe depression, unexplained vaginal bleeding, severe or worsening migraine headaches (with or without aura), or severe allergic reaction (Interprofessional Advisory Group [IPAG], personal communication, July 19, 2019; RxFiles Academic Detailing Program, 2021).

Contraception Types

Barrier
Condoms, diaphragm, cervical cap, cervical shield, spermicidal foam, sponges, and film. Relative contraindications to diaphragm use include recurrent cystitis and previous history of toxic shock syndrome. These are also considered backup methods of contraception.
Hormonal
Combined hormonal contraception (CHC) (estrogen/progesterone product) including oral contraceptive pill (OCP), vaginal ring, and transdermal patch. Before combined estrogen/progesterone product can be started, perform a detailed history to determine absolute contraindications, possible contraindications, and relative contraindications to use. Refer to Appendix A.
Progesterone-only hormonal contraception (POHC) including oral pill and depot medroxyPROGESTERone acetate (Depo-Provera) injection. Before a progesterone-only product can be started, perform a detailed history to determine absolute contraindications and possible contraindications to use. Refer to Appendix B.
Intrauterine Device (IUD) or Sterilization
Requires referral.

(Bulfin et al., 2019)

Predisposing and Risk Factors

Contraception request related to sexual intercourse.

Health History and Physical Exam

Subjective Findings

The RN(AAP) should:

- review past use of birth control including methods, effectiveness, problems, reason for discontinuation and specific contraindications. Enquire on past use of emergency contraception (e.g., Plan B) (Dehlendorf, 2019).
- identify any absolute and relative contraindications of CHC and/or POHC.

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Contraindications for use of Combined Contraceptive Product

Absolute Contraindications	Relative Contraindications	Possible Contraindications
• smoker > 35 years of age (≥ 15 cigarettes/day), • hypertension (systolic ≥ 160 mmHg or diastolic ≥ 100 mmHg), • current or past history of thromboembolism (VTE) and thromboembolic disorders, • coagulation factor deficiency, • cerebrovascular disorders, • ischemic heart disease, coronary artery disease, • known or suspected cancer of the breast, • known or suspected pregnancy, • < 6 weeks postpartum if breastfeeding, • liver tumour (adenoma or hepatoma), • undiagnosed abnormal genital bleeding, • migraine with aura or focal neurological symptoms, • diabetes with retinopathy/nephropathy/ neuropathy, • severe cirrhosis.	• post-thrombophlebitis; severe headaches, • adequately controlled hypertension, • hypertension (systolic 140-159 mmHg, diastolic 90-99 mmHg), • migraine headache > 35 years of age, • symptomatic gallbladder disease, • infectious mononucleosis, with hepatic involvement, • mild cirrhosis, • history of combined OCP-related cholestasis, • elective major surgery planned in the next 4 weeks or major surgery requiring immobilization, • long-leg cast or major injury to lower leg, • < 35 years of age and currently a heavy smoker (> 15 cigarettes/day), • with medications and/or herbal preparations that may interfere with metabolism of oral, • contraceptives, (antiepileptic, antipsychotic, anti-infectives, etc.), • with chronic health conditions and medications that increase serum potassium, • with drospirenone-containing oral CHCs as they can interact with other potassium-sparing drugs (e.g., ACE inhibitors, angiotensin-II antagonists, potassium-sparing diuretics, heparin, aldosterone antagonists and long term NSAID use). These clients should have their serum potassium checked about 14 days following initiation of a drospirenone-containing CHC,	• strong family history of diabetes mellitus, • previous cholestasis during pregnancy, • congenital hyperbilirubinemia (Gilbert's disease), • impaired liver function at the time of presentation or within the past year, • known unreliability and low likelihood of correct administration.

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	• strong family history consistent with inherited thrombophilia (e.g., unprovoked venous thromboembolism (VTE) in a first or second degree relative under the age of fifty).	

(Dehlendorf, 2019; Di Meglio et al., 2018; Rx Files Academic Detailing Program, 2021)

Contraindications for use of Progesterone-Only Contraceptive Product

Absolute Contraindications	Possible Contraindications
Oral	
• current breast cancer	• history of bariatric surgery with a malabsorptive procedure (e.g., gastric bypass), • ischemic heart disease or stroke (current or history of)—for continuing method, • systemic lupus erythematosus (SLE) (positive for antiphospholipid antibodies or status unknown), • migraine with aura—for continuing method (e.g., if migraines worsen in a client who is already using progestin-only pills), • breast cancer in the past; no evidence of disease for 5 years, • severe cirrhosis, • malignant liver tumour, • certain antiretroviral and anticonvulsant including RifAMPin or rifabutin therapy.
Injectable	
• current breast cancer	• multiple risk factors for arterial cardiovascular disease (e.g., older age, smoking, diabetes, and hypertension), • hypertension (systolic ≥ 160 mmHg or diastolic ≥ 100 mmHg), • vascular disease, • ischemic heart disease or stroke (current or history of) – for initiating or continuing method, • SLE (positive for antiphospholipid antibodies or status unknown; or if severe thrombocytopenia), • rheumatoid arthritis, • migraine with aura – for continuing method (e.g., if migraines worsen in a woman who is already using depot medroxyPROGESTERone acetate (Depo-Provera), • unexplained vaginal bleeding prior to evaluation, • breast cancer in the past; no evidence of disease for 5 years, • diabetes (only if nephropathy, retinopathy, neuropathy, or other vascular disease is present, or the duration of diabetes is > 20 years), • severe cirrhosis,

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	• malignant liver tumour, • certain antiretroviral and anticonvulsant medications.

(Dehlendorf, 2019; Di Meglio et al., 2018; RxFiles Academic Detailing Program, 2021)

Objective Findings

The following should be obtained for all clients:

- initial blood pressure measurement for initiation of all hormonal contraception (Bulfin et al., 2019);
- baseline body weight, as it may be beneficial in the event of future concerns regarding weight gain (Di Meglio et al., 2018).

Differential Diagnosis

Not applicable.

Making the Diagnosis

Contraceptive counselling including history, physical exam, results of diagnostic tests, and client preference will inform choice of contraception (Bulfin et al., 2019).

Investigations and Diagnostic Tests

Diagnostic tests may be considered based on sexual history and may include testing for sexually transmitted infections and/or pregnancy (through a urine test) (Bulfin et al., 2019). A pelvic exam and a Pap smear are not mandatory for provision of hormonal contraception and should not be a requirement to receive contraception (Bulfin et al., 2019).

Management and Intervention

Goals of Treatment

The primary goals of treatment are to prevent pregnancy, reduce the risk of acquiring a sexually transmitted infection (barrier contraception only), and identify and manage side effects of the medications (e.g., breakthrough bleeding) (Bulfin et al., 2019).

Non-Pharmacological Interventions

The RN(AAP) should recommend the use of condoms, dams and other barrier devices in addition to any other method of contraception to prevent sexually transmitted infections.

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Pharmacological Interventions

The pharmacological interventions recommended for contraception are in accordance with the *RxFiles Drug Comparison Charts* (RxFiles Academic Detailing Program, 2021), *Contraceptive Counseling and Selection for Women* (Dehlendorf, 2019), and *Contraceptive Care for Canadian Youth* (Di Meglio et al., 2018).

Combined Hormonal Contraceptives (CHCs)

Combined hormonal contraceptives are prescribed based on review of absolute and relative contraindications, and client preference. The following are general considerations related to CHCs:

- All oral, transdermal and vaginally administered CHCs with < 50 mcg of ethinyl estradiol (EE) can be used for continuous or extended use.
- Extended or continuous use increases contraceptive efficacy. Client takes consecutive packages of pills for 63-84-91 days followed by four to seven day hormone free interval for menstruation.
- The rate of side effects and adverse events with continuous use regimes is similar to conventional CHC use.
- The length of the continuous use or extended use of combined hormonal contraceptive CHC regimens should be administered according to the preference of the client.
- Combined hormonal contraception contains EE and progestin in various doses and combinations. The amount of EE in CHCs ranges from 15 mcg-50 mcg. The amount and type of progestin vary and differ in potency and metabolic effect. A low-dose CHC preparation is preferred to provide effective contraception, acceptable cycle control and the least number of side effects for that individual. All CHCs providing a daily dose of less than 50 mcg EE are considered low-dose.

CHCs

Initiation and ongoinguse	Backup contraception	Additional information
Oral		
Most effective if started on Day 1 of menstrual period but can be started any day of the cycle.	Recommended for first 7-10 days during initiation of therapy, especially if started after Day 5.	Refer to the *RxFiles Drug Comparison Charts* (2021) for prescribing information on the various formulations which include: • Monophasic: each tablet contains a fixed amount of estrogen and progestin, e.g., Alesse and MIN Ovral (Portia). • Biphasic: each tablet contains a fixed amount of estrogen; the amount of progestin increases in the second half of the cycle, e.g., Synphasic.
To avoid weekend period, start on the first Sunday after period begins. Advise the client to take daily at the same time each day.		

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		• Triphasic: the amount of estrogen can be fixed or variable; the amount of progestin increases in three equal phases, e.g., tri-cyclen (Triphasic). There are a range of different sequence formulations of oral CHCs available, for example 21-7, 24-4 or extended use packaging. Product selection should be based on signs and symptoms of estrogen deficiency, progestin deficiency, estrogen excess and/or progestin deficiency, excess estrogen, excess progestin, excess androgen, and/or the presence of acne. Pills containing 30 mcg to 35 mcg of EE are preferred in adolescents.
Ring		
Insert on or before Day 5 of cycle (even if period not finished). Insert a vaginal ring every 3 weeks and remove for 1 week prior to inserting new ring.	Recommended until after the first 7 days during the first cycle.	Clients who have significant pelvic relaxation, vaginal stenosis or utero-vaginal prolapse, who are unable to touch their genitalia, or who have vaginal obstruction are not good candidates for the intravaginal ring. The ring may not be suitable for clients who have conditions that make the vagina more susceptible to irritation or ulceration. Clients who have genital outbreaks of herpes simplex virus are able to use the intravaginal contraceptive ring. The intravaginal ring should not be used in conjunction with the diaphragm as it could dislodge this barrier. The intravaginal contraceptive ring is a cold chain medication. Once the cold chain has been broken, it is stable at room temperature for up to 4 months.

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		The "insert by" expiry date should be indicated on the package as soon as cold-chain storage is broken.
Transdermal Patch		
Apply on Day 1 of menstrual period, or to avoid weekend period apply on first Sunday after period begins. Advise client to change the patch on the same day every week for 3 weeks and off for one week. Can be used continuously for 9-12 weeks followed by hormone free interval of 1 week.	Recommended for first 7 days during the first cycle.	The effectiveness of the patch might be somewhat decreased among clients weighing > 90 kg or who are obese (BMI > 30). Clients with conditions that affect the skin (e.g., eczema, psoriasis, cuts, rash or sunburn) should not apply the patch to these areas.

Progesterone-only Hormonal Contraceptives (POHCs)

Progesterone only hormonal contraceptives are prescribed based on review of absolute and relative contraindications, and client preference. The following are general considerations related to POHCs:

POHCs

Initiation and ongoing use	Backup contraception	Additional information
Oral		
The client is to start on Day 1 of menstrual period and daily thereafter.	The client is to use a backup method for the first 7 days.	
The client is to take the pill (e.g., Micronor) at the same time every day without a hormone free period.		

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Injection		
Inject depot medroxyPROGESTERone acetate (Depo-Provera) 150 mg/mL IM using a 1 to 1.5 inch 21-23 gauge needle during the first 5 days of menses or anytime if pregnancy is ruled out, and repeat every 12 weeks.	The client is to use a backup method for 7 days following the first injection. No backup method is needed for subsequent injections as long as they are given every 12 weeks	Mix the suspension well by shaking the vial before drawing up the medication. To rule out a rare but possible severe allergic reaction to depot medroxyPROGESTERone acetate (Depo-Provera) injection, clinicians should recommend that clients wait 15-20 minutes following injection. Clients should be informed about the potential effects of depot medroxyPROGESTERone acetate (Depo-Provera) injection on bone mineral density and counselled about bone health, including calcium and vitamin D supplements, smoking cessation, weight-bearing exercise, and decreased alcohol and caffeine consumption. Depot medroxyPROGESTERone acetate (Depo-Provera) injection might have a slower return to fertility than other hormonal contraceptives. The average return to fertility is 10 months from the last depot medroxyPROGESTERone acetate (Depo-Provera) injection. Weight gain is possible with depot medroxyPROGESTERone acetate (Depo-Provera) use. Overweight adolescents are at higher risk for weight gain than non-overweight peers. Early weight gain is predictive of continued weight gain. Client on medroxyPROGESTERone acetate (Depo-Provera) may stop having menses or have irregular menses

The RN(AAP) can consider using the following 'Quickstart' method for CHCs, POHCs, or Depo-Provera:

- Screen for pregnancy if presenting following day seven of the menstrual period, or if last menstrual period was abnormal or reports unprotected intercourse since last menstrual period.
- If the pregnancy test is negative – start COC, POP, or Depo-Provera that day.

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- Recommend repeat pregnancy test 21 days later.
- Recommend use of backup contraception for a minimum of seven days (Di Meglio et al., 2018).

Client and Caregiver Education

The RN(AAP) provides client and caregiver education as follows:

- Encourage use of condoms in addition to chosen method of contraception to prevent sexually transmitted infections.
- Demonstrate use of chosen method of barrier contraception.
- Counsel about the appropriate use of medications (dose, frequency, compliance, etc.).
- Advise that side effects typically disappear after two to three cycles of use.
- Advise that malabsorption related to chronic gastrointestinal inflammation and active diarrhea might cause ineffectiveness of oral medications.
- Advise that repeated vomiting and/or severe, persistent diarrhea can decrease the absorption of oral medications and may decrease its effectiveness.
- Advise that irregular menses is common within the first several months of POHC use. After 6-12 months, amenorrhea is more likely.
- Educate about what to do if pills are missed, the ring is expelled, or the patch comes off as follows:

Instructions for Missed Days when using CHC

Oral
Missed pills If at any time during the cycle, the client delays taking a pill < 24 hours, they are to take the pill ASAP, no backup contraception required. *In Week 1 of cycle:* • If 1 or more pills are missed, the client is to take 1 pill ASAP and daily until the end of the pack. The client should use a backup method of contraception for 7 days and consider emergency contraception if intercourse within the last 5 days. *In Week 2 or 3 of cycle:* • If 1 or more pills are missed, the client is to take 1 pill ASAP and daily until the end of the pack. The client is to discard any placebo pills and start new cycle without a hormone free interval. The client is to use a backup method of contraception for 7 days. The client should consider emergency contraception if more than 3 pills are missed.

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Ring

Ring expulsion of > 3 hours is of concern.

- If this occurs during *Week 1 of cycle*, replace with new ring and use a backup method of contraception for 7 days.
- If this occurs during *Week 2 or 3 of cycle*, apply a new patch, and skip hormone free interval. The client is to use a backup method of contraception for 7 days and consider emergency contraception.

Transdermal Patch

Detachment of patch for less than 24 hours:

- Re-apply same patch.
- keep the same 'patch change day'.
- Delayed application or detachment of patch for more than 24 hours during week 1 of cycle:
- apply a new patch,
- restart a 3-patch cycle,
- use a backup method of contraception for 7 days,
- consider using emergency contraception.

Delayed application or detachment of patch for less than 24 hours during week 2 or 3 of cycle:

- re-apply same patch,
- keep the same 'patch change day' and avoid a hormone free period for this cycle.

Delayed application or detachment of patch for more than 24 hours during week 2 or 3 of cycle:

- apply a new patch,
- keep the same 'patch change day' and avoid a hormone free period for this cycle,
- use a backup method of contraception for 7 days,
- consider using emergency contraception.

(BC Contraceptive Management Community of Practice, 2014; Centers for DiseaseControl and Prevention, 2013; Rx Files Academic Detailing Program, 2021)

Instructions for Missed Days when using POHC

Oral

A missed oral POHC pill by > 3 hours from the regular time requires use of backup contraception for 48 hours.

Clients might consider the use of emergency contraception if unprotected intercourse occurred within the past 5-7 days.

Vomiting within 3 hours of pill ingestion might require repeated doses.

Injection

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If it has been 14 weeks or more since the last depot medroxyPROGESTERone acetate (Depo-Provera) injection, a urine pregnancy test should be performed.

Use of emergency contraception may be considered if intercourse has occurred within the last 5-7 days. A backup method should be recommended for the next 7 days.

Depending on the client's risk of pregnancy, a repeat urine pregnancy test may be indicated at 2 weeks or prior to the next injection.

(BC Contraceptive Management Community of Practice, 2014; Centers for Disease Control and Prevention, 2013; RxFiles Academic Detailing Program, 2021)

Monitoring and Follow-Up

The RN(AAP) should:

- ensure blood pressure measurements are evaluated at initiation of a POHC and then at least annually thereafter (Bulfin et al., 2019).
- provide year-long prescriptions (or longer-term prescriptions) for youth. This decreases the number of pregnancy tests taken, decreases number of unintended pregnancies and abortions, and increases continuation of contraception (Di Meglio et al., 2019).
- advise that different CHCs may need to be trialed depending on adverse effects including breakthrough bleeding (RxFiles Academic Detailing Program, 2021).

Complications

The following complications may occur:

- ACHES:
  - Abdominal pain,
  - Chest pain,
  - Headaches,
  - Eye problems,
  - Severe leg pain,
- severe depression,
- jaundice,
- unexplained vaginal bleeding,
- syncope,
- blood pressure > 140/> 90,
- severe or worsening migraine headaches with or without aura, and
- severe allergic reaction (RxFiles Academic Detailing Program, 2021).

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Referral

Refer to a physician/NP if client presentation is consistent with those identified in the *Immediate Consultation Requirements* and the Complications sections, if the client wants to use combined hormonal contraceptives, or progesterone-only hormonal contraceptives in the presence of absolute contraindications (refer to Appendix A and B), or the client is requesting a diaphragm, IUD or sterilization (IPAG, personal communication, July 19, 2019).

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