Registered Nurse Initiated Activities
Decision Support Tool No. 4:
Evaluation of Progress of Labour/Dystocia

Decision support tools are evidenced-based documents used to guide the assessment, diagnosis and treatment of client-specific clinical problems. When practice support tools are used to direct practice, they are used in conjunction with clinical judgment, available evidence, and following discussion with colleagues. Nurses also consider client needs and preferences when using decision support tools to make clinical decisions.

The Nurses (Registered) and Nurse Practitioners Regulation:	**Regulation: (6)(1)(h.1)** authorizes registered nurses to "manage labour in an institutional setting if the primary maternal care provider is absent."
Indications:	For the purpose of monitoring maternal-fetal responses to delayed progress of labour
Related Resources, Policies, and Standards:	CRNBC Scope of Practice for Registered Nurses (CRNBC, 2010) CRNBC Practice Standard: Documentation (CRNBC, 2008)
Definitions and Abbreviations:	**Delayed Progress of Labour/Dystocia** – Dilatation in 1st stage (active phase) of < 0.5 cm/hr for > 4 hr in labouring women or 1 hr with no descent during active pushing in 2nd stage. **Prodromal Labour** – Irregular uterine contractions that subside with rest and relaxation. No significant cervical dilatation in response to uterine contractions. **Latent Phase of First Stage of Labour** – First phase of labour in the presence of uterine activity resulting in progressive effacement and dilatation of the cervix preceding the active phase; from 0 – 3 cm dilatation (nullip), 0 – 4/5 cm (parous). Cervix length < 1 cm. Onset difficult to define. **Active First Stage of Labour** – Regular, frequent uterine contractions accompanied by cervical changes (dilatation and effacement) from 3 – 4 cm to full dilatation and effacement of the cervix **Second Stage of Labour** – Stage of labour from full dilatation and effacement of the cervix to birth of the neonate. Can be divided into passive 2nd stage (fully dilated without pushing) and active 2nd stage (fully dilated with active pushing) **Active Pushing** – May be directed or non-directed. Directed pushing is breath-holding bearing down effort against a closed glottis. Non directed pushing is *instinctive, spontaneous pushing in response to* involuntary bearing down with contractions while exhaling (open glottis pushing). **Station** – Determined during a vaginal examination and is the degree of fetal descent. The relationship of the lower most portion of the presenting fetal part to an imaginary line drawn between the ischial spines of the pelvis. An approximate measurement where station 0 is at the ischial spine and above the spines can be from -1 to -5 cm and below the spines can be from +1 cm to +5 cm. **Nulliparous** – A woman who has never given birth to a viable infant (500 grams birth weight or 20 weeks gestation) in a previous pregnancy. **Parous** – A woman who have carried a previous pregnancy to a point of viability (500 grams birth weight or 20 weeks gestation) regardless of outcome.

Assessment

Ongoing Labour Assessment

- Review initial assessment and overall clinical picture (see Assessment in normal labour and birth)
- Assess woman's knowledge and expectations of care
- Discuss with the woman her wishes, concerns and questions regarding her birth plans
- Ensure the woman is in active labour
- Use a partogram to assess cervical dilatation and fetal descent
- Assess possible causes of delayed progress of labour/dystocia
- Check woman's previous birth history

1. ***Powers*** – Contractions and expulsive efforts
   - Assess uterine activities – hypotonic, hypertonic, incoordinate and resting tone
   - Ongoing assessment of contraction pattern – frequency, duration, intensity and resting tone
   - Assess maternal expulsive efforts in 2nd stage
   - Check for vaginal discharge – bleeding, meconium, odour
2. ***Passenger*** – Fetus
   - Determine fetal lie, presentation, position, attitude
   - Perform ongoing assessment of fetal responses to labour –IA, EFM (see DST #2: Intrapartum Fetal Health Surveillance)
3. ***Passage*** – Pelvic structure, soft tissue factors (e.g. tumors, bladder/rectum, vaginal septum)
   - Perform vaginal exam (dilatation, effacement, station); assess rate of cervical change
   - Assess bladder and bowel function
   - Ensure the availability for freedom of movement
   - Encourage ambulation, frequent maternal position changes
   - Promote rest between contractions
4. ***Psyche*** – Maternal response to pain, stress and anxiety, available support
   - Assess for stress and tension
   - Provide continuous labour support and positive encouragement
   - Provide emotional support, teaching, comfort measures [include support person(s)]
   - Assess fears and discomfort
   - Implement non-pharmacological comfort measures (as required)
   - Implement pharmacological comfort measures (as required)

Nursing Diagnosis

Delayed progress of labour/dystocia in first stage labour

The diagnosis needs to take into consideration all aspects of progress in labour including:

- Nulliparous women: cervical dilatation of less than 2 cm in 4 hours (< 0.5 cm/hr assessed over 4 hours) (SOGC, 1995)
- Parous women: cervical dilatation of less than 2 cm in 4 hours (< 0.5 cm/hr assessed over 4 hours) or a slowing in the progress of labour (NICE, 2007)
- Descent and rotation of the fetal head
- Changes in contraction duration, frequency, intensity and resting tone

Delayed progress of labour/dystocia in second stage labour

- Lack of descent after 1 hour of active pushing in 2nd stage

Special Considerations and Precautions

- The diagnosis of dystocia should not be made prior to the active phase of labour until the cervix in a nulliparous woman is at least 3 cm dilated, 80–90% effaced; 3–4 cm dilated and 70–80% effaced in parous woman (SOGC, 1995).
- Optimal support of normal labour processes and the appropriate management of dystocia, if it occurs, could potentially lead to a significant reduction in the caesarean section rate (SOGC, ALARM 2010)

Interventions

First Stage of Labour

Interventions

- Engage woman in informed decision making
- Present care options when possible
- Provide ongoing feedback and support to the woman and her support person(s)
- Reassure and value the woman and her support person(s)
- Use a variety of interventions and comfort measures to promote progress in labour (See DST # 5 Discomfort and Pain in Labour) including:
  - One-to-one supportive care in active labour
  - Freedom of movement
  - Upright positioning and position changes
  - Ambulation
- Offer oral intake during established labour unless the woman has received opioids or developed risk factors
- Identify and alleviate factors that may interfere with the progress of labour:
  - Safety and environment
  - Anxiety and fear
  - Hyperventilation
  - Supine position, flat on back
  - Fatigue
  - Dehydration
- Where delay in the established first stage is suspected, consider the following:
  - Parity
  - Cervical dilatation and rate of change
  - Quality of uterine contractions
  - Station and position of presenting part
  - The woman's emotional state, available support and appropriate comfort measures
  - Hydration status: oral intake, urine output, condition of skin and mucous membranes, NPO status

Notify PCP

ALERT

- Abnormal IA or atypical or abnormal FHR tracing
- Inability to obtain or assess FHR
- Abnormal maternal vital signs (see below)
- Abnormal uterine contraction pattern
- Vaginal bleeding
- Meconium

Maternal

- Cervical dilatation of less than 2 cm in 4 hours (< 0.5 cm/hr)
- Uterus
  - Abnormal uterine contraction pattern: tachysystole, defined as > 5 contractions in 10 minutes, averaged over a 30-minute window
  - Doubling or tripling of contractions
  - A contraction duration of greater than 90 seconds
  - Contractions of normal duration with less than 30 seconds soft resting tone or the uterus does not relax (hypertonus) between contractions
  - Uterine tenderness or pain
- Vaginal Discharge
  - Meconium
  - Blood (other than "show")
  - Odour
- Pain requiring pharmacologic comfort measures
- Dehydration – fatigue, dry skin or mucous membranes, nothing by mouth or negative balance of intake and output, urine output less than 30 mL/hr
- Psychosocial factors such as fear, anxiety and lack of support
- Other pathological factors
  - Temperature ≥ 38.0ºC over 2 hours (with hydration)
  - A diastolic BP of > 90 mmHg, based on the average of at least two measurements, taken using the same arm
  - Severe hypertension as systolic BP of ≥ 160 mmHg or diastolic BP of ≥ 110 mmHg
  - Proteinuria ≥ 2+ on dipstick

Fetal

- Malpresentation, malposition and abnormal attitude
- Failure to descend into the pelvis
- Abnormal IA or atypical or abnormal FHR tracing
- Inability to obtain or assess FHR

Second Stage of Labour

Interventions

- Support the woman in choosing a comfortable position for pushing
- Promote and encourage spontaneous, non directed pushing in upright positions
- Use of a variety of positions of comfort to encourage progress, avoid supine positions
- May require directed pushing if there is no progress with non directed, spontaneous pushing efforts
- General principles for pushing for both primaparous and multiparous women
  - Fetal and maternal well-being is established prior to any delay in pushing
  - Hourly vaginal assessment (by consistent examiner) in the second stage of labour to assess fetal station, position and descent
  - Regular bladder assessment
- Both nulliparous and parous women with epidural anaesthesia benefit from a policy of delayed pushing

Notify PCP

- At the time of full cervical dilatation
- When there is absent fetal descent in any one hour period during active pushing in 2nd stage

Recommended Practices in Second Stage
(after full cervical dilatation)
By Parity and Use of Epidural Analgesia

	Nulliparous		Parous	
	No Epidural	**Epidural**	**No Epidural**	**Epidural**
Total Duration *	3 hours	4 hours	2 hours	3 hours
Waiting Period ‡	May wait up to 2 hours before pushing, provided continued passive descent	May wait up to 2 hours before pushing, provided continued passive descent	May wait up to 1 hour	May wait up to 2 hours before pushing, provided continued passive descent
Commence Pushing	When urge to push present ***AND*** Station +2 ***AND*** Position OA §		When urge to push present	
Pushing By	Pushing by 2 completed hours after full dilatation			
Assessment	Hourly for descent and position			
Notification of PCP	If no descent after any 1 hour of active pushing			

* Continuing beyond the following time limits may not be appropriate if there is slow or no progress despite oxytocin augmentation; extending these time limits may be appropriate if progress is evident and birth is imminent. Consult PCP.

‡ Waiting for up to the time period indicated prior to the onset of pushing is appropriate in the presence of continued passive descent of the head and normal FHR assessment.

§ Nulliparous women with fetal head above +2 and malposition should be encouraged to allow passive descent.

Intended Clinical Outcomes

- Accurate diagnosis of active stage of labour
- Prompt diagnosis of delay in first stage or second stage labour
- Variances in maternal/fetal well being during labour are recognized, and appropriate interventions are carried out
- Timely and effective communication to PCP of variances/complications during any phase of labour
- Continuous labour support to the labouring woman and family

Education

- Inform woman of progress and explain possible reasons for delayed progress of labour/dystocia and present care options

Documentation

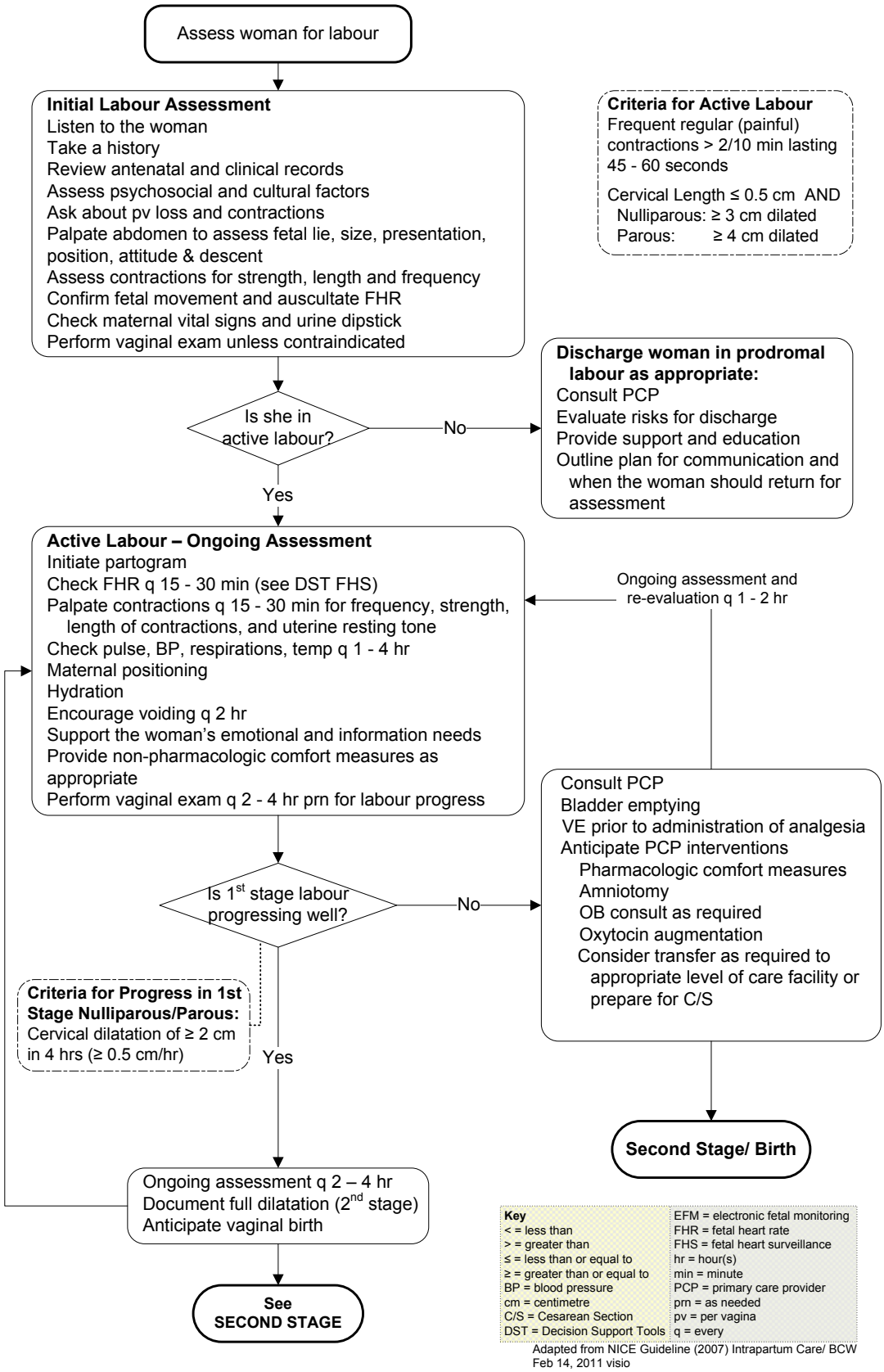
Document on the PSBC Forms – Perinatal Triage and Assessment Record (PSBC 1590), BC Labour Partogram (PSBC 1583), Labour and Birth Summary Record (PSBC 1588), Interprofessional Notes and/or institutional records.

Include the following:

- Maternal status
  - Contraction pattern
  - Vaginal discharge – bleeding, meconium, odour
  - Vaginal exams (dilatation, cervical length and fetal station)
  - Hydration
  - Vital signs
  - Discomfort – comfort measures, analgesia
  - Emotional status
  - Responses to care
- Fetal status
  - Type of fetal health surveillance (IA, EFM)
  - Fetal heart rate pattern and responses to labour
  - Fetal position, presentation, status of presenting part
  - Fetal descent-station
- Communication to PCP when there are variances in maternal and fetal responses to labour
  - Time of call to PCP
  - Time of orders/response from PCP
  - Orders/response received
- Arrival time of PCP

Decision Support Tool:

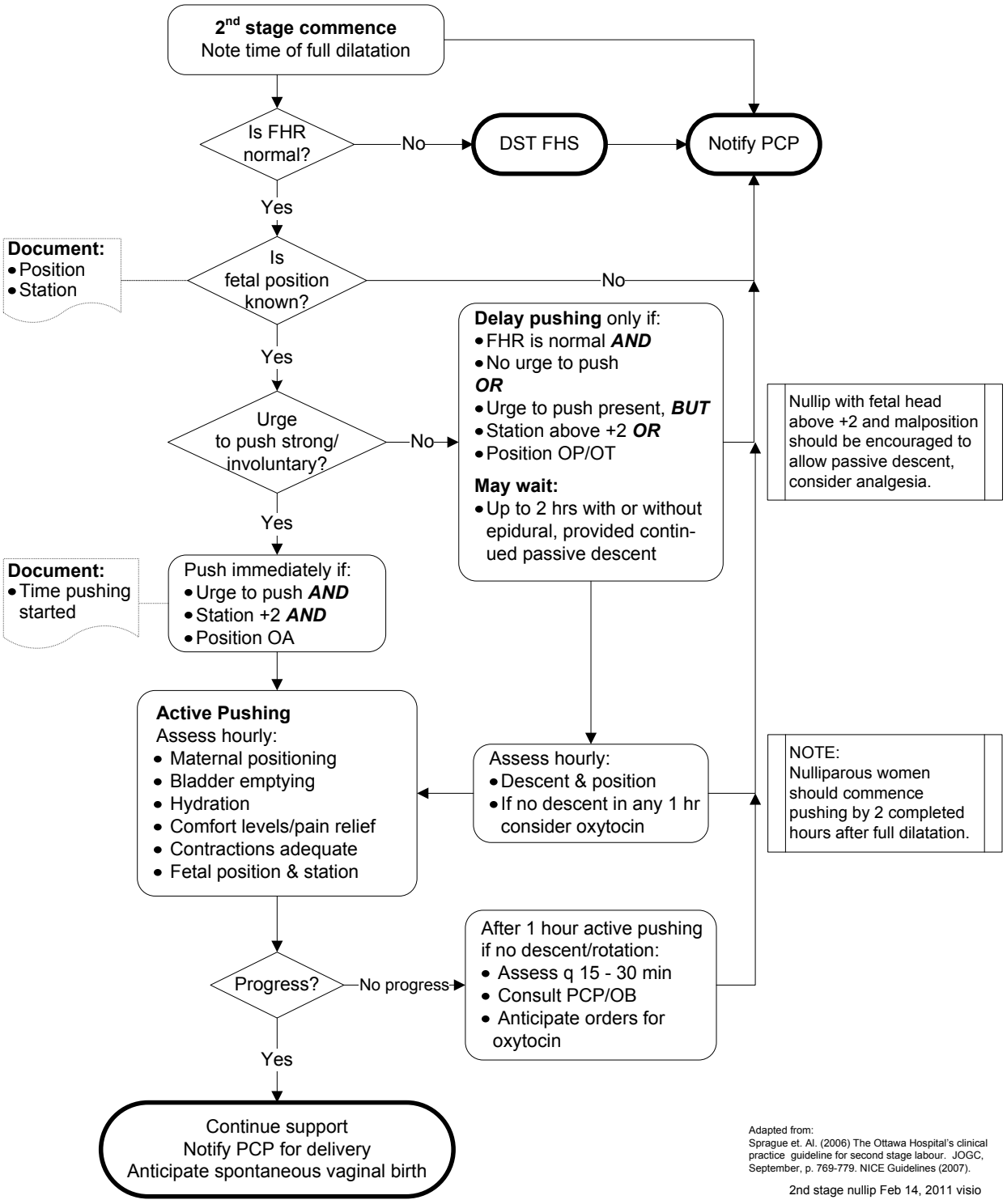
Evaluating Progress of Labour – First Stage



Adapted from NICE Guideline (2007) Intrapartum Care

Decision Support Tool:

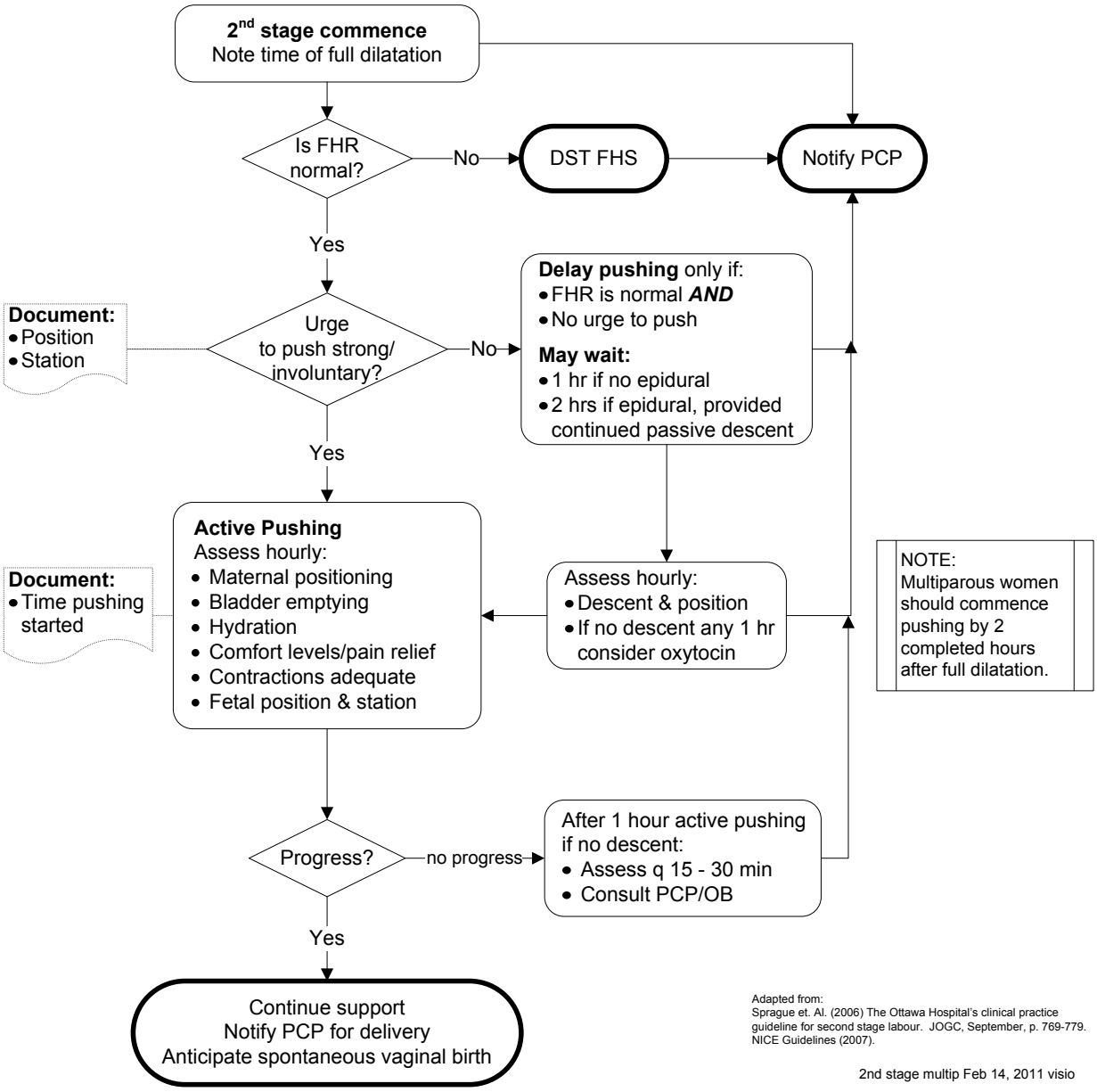
Evaluating Progress of Second Stage of Labour for NULLIPAROUS Woman with or without Epidural Analgesia



Adapted from: Sprague et al. (2006) The Ottawa Hospital's clinical practice guideline for second stage labour. JOGC, September, pp. 769-779.

Decision Support Tool:

Evaluating Progress of Second Stage of Labour for PAROUS Woman
with or without Epidural Analgesia



Adapted from: Sprague et al. (2006) The Ottawa Hospital's clinical practice guideline for second stage labour. JOGC, September, pp. 769-779.

References

Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). (2000). Evidenced-Based Clinical Practice Guideline. *Nursing Management of the Second Stage of Labour.* AWHONN.

British Columbia Perinatal Health Program. (BCPHP). (2006). Guideline 11. *Hypertension In Pregnancy*. BCPHP.

BCW (2008). Guidelines for Management of Dystocia- 1st and 2nd Stage. *Fetal Maternal Newborn and Family Health Policy & Procedure Manual.* BCW.

Fraser, W.D., Marcourx S., Krauss, I., Douglas, L., Goulet, C. and Boulvain, M. (2000).Multicenter, Randomized, Controlled Trial Of Delayed Pushing For Nulliparous Women In The Second Stage Of Labour With Continuous Epidural Analgesia. *AJOG*, 182: 1165-72.

Gilbert, S. (2007). *High Risk Pregnancy & Delivery (4th ed.)* St. Louis, MO: Mosby.

Hansen, S.L., Clark, S.L., Foster, J.C. (2002). Active pushing versus passive fetal descent in the second stage of labor: A randomized trial. *Obstet Gyncol. 99*(2):29-34.

Institute for Clinical Systems Improvement (ICSI). (2007). *Management of Labor Health Care Guideline.* (2nd ed). Bloomington, MN. http://www.icsi.org/labor/labor__management_of__full_version__2.html

Lowdermilk, D.L., Perry, S.E., Cashion, K., & Alden, K.R. (2012). *Maternity & women's health care.* (10th ed.). St. Louis, MO: Mosby Elsevier.

Magee, L., Helewa, M., Moutquin, J. (2008). SOGC Clinical Practice Guideline: Diagnosis, evaluation and management of the hypertensive disorders of pregnancy. *JOGC 30*(3):Suppl 1–48.

Mayberry, L.J., Wood, S.H., Strange, L.B., Lee, L., Heisler, D.R. and Nielsen-Smith, K (2000). Second Stage Labor Management: Promotion Of Evidence-Based Practice And A Collaborative Approach To Patient Care. Washington, DC: AWHONN.

Menticoglou, S. M. (1992). How long should the second stage of labour be allowed to last? *J Soc Obstet Gynaecol Can, 14*(7), 77-79.

Myles, T.D., Santolaya, J. (2003). Maternal and neonatal outcomes in patients with a prolonged second stage. *Obstet Gynaecol, 102*(1):52-8.

National Collaborating Centre for Women's and Children's Health. (NICE)(2007). *Intrapartum Care: Care Of Healthy Women And Their Babies During Childbirth.* Royal College Of Obstetricians And Gynaecologists (RCOG) Press. London. England http://www.nice.org.uk/nicemedia/pdf/IntrapartumCareSeptember2007mainguideline.pdf

Romano, A.; Lothian. J. (2008) Promoting, Protecting and Supporting Normal Birth. *Journal of Obstetrics, Genecology and Neonatal Nurses (JOGNN), 37*, 94-105.

SOGC. Dystocia. Clinical Practice Guideline: No. 40. Ottawa, Ontario.

SOGC. (2010). Advances in Labour and Risk Management (ALARM) Course Syllabus. Management of Labour. *SOGC*. Ottawa, Ontario.

SOGC. (2010). MORE^{OB}. Management of Labour. Salus Global Corporation. http://www.moreob.com/

Sprague, A.E., Oppenheimer, L., McCabe, L. Brownlee, J. Grahma, I.D. and Davies, B. (2006).

The Ottawa Hospital's Clinical Practice Guideline For The Second Stage Of Labour. *JOGC* Sept. 769-779.

World Health Organization (1999). Care in Normal Birth: A Practical Guide, Report of a Technical Working Group, Department of Reproductive Health and Research.