Quality Standards

Indicator Technical Specifications for the Quality Standard *Heavy Menstrual Bleeding: Care for Adults and Adolescents of Reproductive Age*

Technical Appendix

July 25, 2017

Health Quality Ontario

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Ontario
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Table of Contents

This technical appendix is intended to accompany Health Quality Ontario's Quality Standard *Heavy Menstrual Bleeding*. Early in development of each quality standard, a few health outcomes are chosen as the most important measures of success for the entire standard. The outcomes are mapped to indicators that reflect the goals of the standard. These outcomes and associated indicators guide development of the quality standard so that every statement within the standard aids in achieving the chosen outcomes. This appendix includes information on definitions and technical details of indicators listed below, including data sources for indicators that can be consistently measured across providers and at the provincial level. For information on the process and structural indicators developed to assist with implementation of the standard, please refer to the clinical guide.

OUTCOME INDICATORS FOR MEASURING SUCCESS

- Percentage of patients with heavy menstrual bleeding who reported that they are satisfied with symptom control (Table 1)
- Percentage of patients with heavy menstrual bleeding who reported that their health care provider always or often involves them in decisions about their care and treatment (Table 2)
- Percentage of patients with heavy menstrual bleeding who had unplanned visits to emergency department for heavy menstrual bleeding (Table 3)
- Rate of regional variation in hysterectomies among patients with heavy menstrual bleeding, by LHIN (Table 4)

Indicators are categorized as follows:

- Currently measured in Ontario or similar health systems (indicator is well defined and validated)
- Measurable with available provincial data (data are available to measure the indicator, but indicator requires definition and validation)
- Developmental (indicator is not well defined, and data sources do not currently exist to measure it consistently across providers and at the system level)

Outcome Indicators

Table 1: Percentage of patients with heavy menstrual bleeding who reported that they are satisfied with symptom control

<table>
<tr>
<td rowspan="3">GENERAL DESCRIPTION</td>
<td>Indicator description</td>
<td>Percentage of patients with HMB who reported that they are satisfied with symptom control of their condition

Directionality: A higher percentage is better</td>
</tr>
<tr>
<td>Indicator status</td>
<td>Developmental</td>
</tr>
<tr>
<td>Dimensions of quality</td>
<td>Effectiveness</td>
</tr>
<tr>
<td rowspan="1">DEFINTION AND SOURCE INFORMATION</td>
<td>Calculation</td>
<td>

Denominator
Option 1: **identifying HMB population using a survey question**
Number of survey respondents who stated that they have HMB

Option 2: **identifying HMB population using administrative or clinical database (with the intent of linking to survey data)**
Number of patients who had any services or visits for HMB in last 5 years*

Inclusions
Age ≥ 9 and ≤ 70 years
Diagnosis code in ICD-10-CA (any diagnosis type)
- N92.0 Excessive and frequent menstruation with regular cycle
- N92.1 Excessive and frequent menstruation with irregular cycle
- N92.2 Excessive menstruation at puberty
- N92.4 Excessive bleeding in premenopausal period
- N92.5 Other specified irregular menstruation
- N92.6 Irregular menstruation, unspecified; bleeding NOS, periods NOS
- N93.8 Other specified abnormal uterine and vaginal bleeding
- N93.9 Abnormal uterine and vaginal bleeding, unspecified
- N94.8 Other specified conditions associated with female genital organs and menstrual cycle
- N94.9 Unspecified condition associated with female genital organs and menstrual cycle

OHIP
Primary care diagnosis with IUD
- Disorder of menstruation
- Benign neoplasms -626
- Uterine fibroid, leiomyoma -218

Exclusions
- Women presenting with vaginal bleeding as a result of external cause (i.e., trauma)
- Women presenting with vaginal bleeding due to pregnancy or postpartum bleeding
- Women with lochia bleeding after pregnancy
- Women within 3 months of delivery
- Women presenting with irregular nonmenstrual bleeding: Intermenstrual bleeding (irregular episodes of bleeding, often light and short, occurring between otherwise fairly normal menstrual periods), post-coital bleeding, premenstrual and postmenstrual spotting (bleeding that occurs on a regular basis for 1 or more days before or after recognized menstrual period)

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		• Women with bleeding outside reproductive age: post-menopausal bleeding (bleeding occurring more than 1 year after acknowledged menopause), precocious menstruation (bleeding occurring before age of 9 years) • Women diagnosed with endometriosis **Numerator** Number of patients with HMB who reported that they are satisfied with control of symptoms related to HMB **Method** Numerator ÷ Denominator × 100
	Data sources	Potential data sources are DAD, OHIP, and patient experience survey or audit
	Risk adjustment, age/sex standardization	NA
GEOGRAPHY AND TIMING	Timing and frequency of data release	NA
	Levels of comparability	Province, LHIN, provider or health care organization
ADDITIONAL INFORMATION	Limitations	None of the surveys specifically target the HMB population, nor do they ask about satisfaction with symptom control. Local surveys could be developed to identify the HMB population Our ability to identify the HMB population using administrative databases is limited. This condition is managed at the community level, and the main source for identifying the HMB population (cohort) is OHIP, which might not accurately reflect this population owing to limitations specific to this database (e.g., limited data on diagnosis)
	Comments	Indicator source is HMB guideline from NICE https://www.nice.org.uk/guidance/qs47/resources/heavy-menstrual-bleeding-2098671748549. NICE recommends an audit to measure this indicator
	Alignment	NA

Abbreviations: DAD, Discharge Abstract Database; HMB, heavy menstrual bleeding; ICD-10-CA, enhanced Canadian version of 10th revision of the *International Statistical Classification of Diseases and Related Health Problems*; IUD, intrauterine device; LHIN, local health integration network; NA, not applicable; NICE, National Institute for Health and Care Excellence; NOS, not otherwise specified; OHIP, Ontario Health Insurance Plan.
*Definition suggested by the expert panel.

Table 2: Percentage of patients with heavy menstrual bleeding who reported involvement in their care and treatment

<table>
<tr>
<td rowspan="3">GENERAL DESCRIPTION</td>
<td>Indicator description</td>
<td>Percentage of patients with HMB who reported that their health care provider always or often involves them in decisions about their care and treatment

Directionality: A higher percentage is better</td>
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<tr>
<td>Indicator status</td>
<td>Developmental</td>
</tr>
<tr>
<td>Dimensions of quality</td>
<td>Patient-centred</td>
</tr>
<tr>
<td rowspan="1">DEFINTION AND SOURCE INFORMATION</td>
<td>Calculation</td>
<td>

Denominator
Option 1: **identifying HMB population using a survey question**
Number of survey respondents who stated that they have HMB

Option 2: **identifying HMB population using administrative or clinical database (with the intent of linking to survey data)**
Number of patients who had any services or visits for HMB in last 5 years*

Inclusions
Age ≥ 9 and ≤ 70 years
Diagnosis code in ICD-10-CA (any diagnosis type):
- N92.0 Excessive and frequent menstruation with regular cycle
- N92.1 Excessive and frequent menstruation with irregular cycle
- N92.2 Excessive menstruation at puberty
- N92.4 Excessive bleeding in premenopausal period
- N92.5 Other specified irregular menstruation
- N92.6 Irregular menstruation, unspecified; bleeding NOS, periods NOS
- N93.8 Other specified abnormal uterine and vaginal bleeding
- N93.9 Abnormal uterine and vaginal bleeding, unspecified
- N94.8 Other specified conditions associated with female genital organs and menstrual cycle
- N94.9 Unspecified condition associated with female genital organs and menstrual cycle

OHIP
Primary care diagnosis with IUD
- Disorder of menstruation
- Benign neoplasms -626
- Uterine fibroid, leiomyoma -218

Exclusions
- Women presenting with vaginal bleeding as result of external cause (i.e., trauma)
- Women presenting with vaginal bleeding due to pregnancy or postpartum bleeding
- Women with lochia bleeding after pregnancy
- Women within 3 months of delivery
- Women presenting with irregular nonmenstrual bleeding: Intermenstrual bleeding (irregular episodes of bleeding, often light and short, occurring between otherwise fairly normal menstrual periods), post-coital bleeding, premenstrual and postmenstrual spotting (bleeding that occurs on a regular basis for 1 or more days before or after recognized menstrual period
- Women with bleeding outside reproductive age: post-menopausal bleeding (bleeding occurring more than 1 year after acknowledged menopause), precocious menstruation (bleeding occurring before age of 9 years)

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		• Women diagnosed with endometriosis **Numerator** Number of survey respondents who reported that their primary care provider always or often involves them as much as they want in decisions about their care and treatment **Method** Numerator ÷ Denominator × 100
	Data sources	Potential data sources are DAD, OHIP, HCES/CCHS
	Risk adjustment, age/sex standardization	NA
GEOGRAPHY AND TIMING	Timing and frequency of data release	Yearly
	Levels of comparability	Province, LHIN, patient characteristics (subject to sample size)
ADDITIONAL INFORMATION	Limitations	Surveys used as data sources (HCES and CCHS) are for general population and not specific to HMB population. We assume that by linking the denominator (HMB cohort) to survey data, results would show involvement in care and treatment of HMB Our ability to identify the HMB population using administrative databases is limited. This condition is managed at the community level, and the main source for identifying the HMB population (cohort) is OHIP, which might not accurately reflect this population owing to limitations specific to this database (e.g., limited data on diagnosis) In addition, there may be small number of people with HMB that completed the survey and the linkage may result in very small number of respondents Survey questions could be used to identify this population. The current CCHS survey, however, does not list HMB among chronic conditions. Local surveys could be developed to identify the HMB population
	Comments	This indicator can be measured at the local level by using EMRs to identify the population of interest and practice-level patient experience survey to get the numerator
	Alignment	NA

Abbreviations: CCHS, Canadian Community Health Survey; DAD, Discharge Abstract Database; EMR, electronic medical record; HCES, Health Care Experience Survey; HMB, heavy menstrual bleeding; ICD-10-CA, enhanced Canadian version of 10th revision of the *International Statistical Classification of Diseases and Related Health Problems*; IUD, intrauterine device; LHIN, local health integration network; NA, not applicable; NOS, not otherwise specified; OHIP, Ontario Health Insurance Plan.

*Definition suggested by the expert panel.

Table 3: Rate of unplanned visits to emergency department for heavy menstrual bleeding

<table>
<tr><td rowspan="3">GENERAL DESCRIPTION</td><td>Indicator description</td><td>Percentage of patients with HMB who had unplanned visits to emergency department for HMB</td></tr>
<tr><td>Indicator status</td><td>Measurable</td></tr>
<tr><td>Dimensions of quality</td><td>Effectiveness</td></tr>
<tr><td rowspan="2">DEFINTION AND SOURCE INFORMATION</td><td>Calculation</td><td>

Denominator
Number of patients who had any services or visits for HMB in last 5 years*

Inclusions
Age ≥ 9 and ≤ 70 years
Diagnosis code in ICD-10-CA (any diagnosis type)
- N92.0 Excessive and frequent menstruation with regular cycle
- N92.1 Excessive and frequent menstruation with irregular cycle
- N92.2 Excessive menstruation at puberty
- N92.4 Excessive bleeding in premenopausal period
- N92.5 Other specified irregular menstruation
- N92.6 Irregular menstruation, unspecified; bleeding NOS, periods NOS
- N93.8 Other specified abnormal uterine and vaginal bleeding
- N93.9 Abnormal uterine and vaginal bleeding, unspecified
- N94.8 Other specified conditions associated with female genital organs and menstrual cycle
- N94.9 Unspecified condition associated with female genital organs and menstrual cycle

OHIP
Primary care diagnosis with IUD
- Disorder of menstruation
- Benign neoplasms -626
- Uterine fibroid, leiomyoma -218

Exclusions
- Women presenting with vaginal bleeding as result of external cause (i.e., trauma)
- Women presenting with vaginal bleeding due to pregnancy or postpartum bleeding
- Women with lochia bleeding after pregnancy
- Women within 3 months of delivery
- Women presenting with irregular nonmenstrual bleeding: intermenstrual bleeding (irregular episodes of bleeding, often light and short, occurring between otherwise fairly normal menstrual periods), post-coital bleeding, premenstrual and postmenstrual spotting (bleeding that occurs on a regular basis for 1 or more days before or after recognized menstrual period
- Women with bleeding outside reproductive age: post-menopausal bleeding (bleeding occurring more than 1 year after acknowledged menopause), precocious menstruation (bleeding occurring before age of 9 years)
- Women diagnosed with endometriosis

Numerator
Number of patients in denominator who had unplanned visit to emergency department for HMB in past 12 months

Inclusions
- Unscheduled/unplanned visits to emergency department are identified by NACRS variables VISITTYPE = [1,2,4] OR SCHEDEDVISIT = N

</td></tr>
</table>

		• Unplanned visits with any of ICD-10-CA diagnosis codes above **Method** Numerator ÷ Denominator × 100
	Data sources	NACRS, OHIP, DAD
	Risk adjustment, age/sex standardization	NA
GEOGRAPHY AND TIMING	Timing and frequency of data release	Yearly
	Levels of comparability	Province, LHIN, patient characteristics (subject to sample size)
ADDITIONAL INFORMATION	Limitations	Our ability to identify the HMB population using administrative databases is limited. This condition is managed at the community level, and the main source for identifying HMB population (cohort) is OHIP, which might not accurately reflect this population owing to limitations specific to this database (e.g., limited data on diagnosis). Diagnosis codes in NACRS might not accurately reflect reasons for visit At the local level, survey questions or EMRs could be used to identify the HMB population; however, information on unplanned visits to emergency department might not be available to providers at the local level
	Comments	This indicator can be measured at the local level by using EMRs to identify the population of interest and information from emergency departments to capture any unplanned visits to emergency department
	Alignment	NA

Abbreviations: DAD, Discharge Abstract Database; HMB, heavy menstrual bleeding; ICD-10-CA, enhanced Canadian version of 10th revision of the *International Statistical Classification of Diseases and Related Health Problems*; IUD, intrauterine device; LHIN, local health integration network; NA, not applicable; NACRS, National Ambulatory Care Services; NOS, not otherwise specified; OHIP, Ontario Health Insurance Plan.

*Definition suggested by the expert panel.

Table 4: Rate of regional variation in hysterectomies among patients with heavy menstrual bleeding

GENERAL DESCRIPTION	Indicator description	Rate of regional variation in hysterectomies among patients with HMB
	Indicator status	**Measurable**
	Dimensions of quality	Effectiveness
DEFINTION AND SOURCE INFORMATION	Calculation	**Denominator** Number of patients who had any services or visits for HMB in last 5 years* *Inclusions* Age ≥ 9 and ≤ 70 years Diagnosis code in ICD-10-CA (any diagnosis type) • N92.0 Excessive and frequent menstruation with regular cycle • N92.1 Excessive and frequent menstruation with irregular cycle • N92.2 Excessive menstruation at puberty • N92.4 Excessive bleeding in premenopausal period • N92.5 Other specified irregular menstruation • N92.6 Irregular menstruation, unspecified; bleeding NOS, periods NOS • N93.8 Other specified abnormal uterine and vaginal bleeding • N93.9 Abnormal uterine and vaginal bleeding, unspecified • N94.8 Other specified conditions associated with female genital organs and menstrual cycle • N94.9 Unspecified condition associated with female genital organs and menstrual cycle OHIP Primary care diagnosis with IUD • Disorder of menstruation • Benign neoplasms -626 • Uterine fibroid, leiomyoma -218 *Exclusions* • Women presenting with vaginal bleeding as result of external cause (i.e., trauma) • Women presenting with vaginal bleeding due to pregnancy or postpartum bleeding • Women with lochia bleeding after pregnancy • Women within 3 months of delivery • Women presenting with irregular nonmenstrual bleeding: intermenstrual bleeding (irregular episodes of bleeding, often light and short, occurring between otherwise fairly normal menstrual periods), post-coital bleeding, premenstrual and postmenstrual spotting (bleeding that occurs on regular basis for 1 or more days before or after recognized menstrual period • Women with bleeding outside reproductive age: post-menopausal bleeding (bleeding occurring more than 1 year after acknowledged menopause), precocious menstruation (bleeding occurring before age of 9 years) • Women diagnosed with endometriosis **Numerator** Number of patients in denominator who had hysterectomy in time frame stated for denominator *Exclusion*

		Women with hysterectomy before start of the reporting period, defined by presence of following OHIP or intervention codes
		- E862A Hysterectomy performed laparoscopically, or with laparoscopic assistance - S757A Hysterectomy—with or without adnexa (unless otherwise specified)—abdominal—total or subtotal - S758A Hysterectomy—with or without adnexa (unless otherwise specified)—with anterior and posterior vaginal repair and including enterocele and/or vault prolapse repair when rendered - S759A Hysterectomy— with or without adnexa (unless otherwise specified)—with anterior or posterior vaginal repair and including enterocele and/or vault prolapse repair when rendered - S762A Hysterectomy—with or without adnexa (unless otherwise specified)—radical trachelectomy—excluding node dissection - S763A Hysterectomy—with or without adnexa (unless otherwise specified)—radical (Wertheim or Schauta)—includes node dissection - S765A Amputation of cervix - S766A Cervix uteri—excluding cervical stump—abdominal - S767A Cervix uteri—excluding cervical stump—vaginal - S816A Hysterectomy—with or without adnexa (unless otherwise specified) —vaginal - S810 Laparoscopic vaginal hysterectomy ***Intervention codes*** - Hysterectomy using laparoscopic approach or vaginal approach 1RM89DA; 1RM89AA; 1RM89CA; 1RM91CA; 1.RM.87.BA-GX; 1.RM.87. CA-GX; 1.RM.87.DA-GX; - Hysterectomy using open approach 1RM89LA; 1RM91LA; 1.RM.87.LA-GX **Method** Numerator ÷ Denominator × 100
	Data sources	DAD, OHIP
	Risk adjustment, age/sex standardization	NA
GEOGRAPHY AND TIMING	Timing and frequency of data release	NA
	Levels of comparability	Province, LHIN, patient characteristics (subject to sample size)
ADDITIONAL INFORMATION	Limitations	Potential to measure this indicator at system level by identifying denominator and numerator populations from administrative databases Our ability to identify the HMB population using administrative databases is limited. This condition is managed at the community level, and the main source for identifying the HMB population (cohort) is OHIP, which might not accurately reflect this population owing to limitations specific to this database (e.g., limited data on diagnosis). Diagnosis codes in NACRS might not accurately reflect reasons for visit At the local level, survey questions or EMRs could be used to identify the HMB population; however, information on performed hysterectomies might not be available to them

	Comments	This indicator will help to review and understand regional variation of this treatment. It can be measured at the local level by using EMRs to identify the population of interest and information from hospitals to capture hysterectomies
	Alignment	NA

Abbreviations: DAD, Discharge Abstract Database; EMR, electronic medical record; HMB, heavy menstrual bleeding; ICD-10-CA, enhanced Canadian version of 10th revision of the *International Statistical Classification of Diseases and Related Health Problems*; IUD, intrauterine device; LHIN, local health integration network; NA, not applicable; NACRS, National Ambulatory Care Services; NOS, not otherwise specified; OHIP, Ontario Health Insurance Plan.

*Definition suggested by the expert panel.