I. PURPOSE:

To define the standard of care for routine cervical cancer screening as required by Denver Health Medical Plan (DHMP) and Denver Health Medicaid Choice (DHMC).

DHMP/DHMC recognizes the importance of screening for cervical cancer. Screening allows cancer to be found and identified at an early stage, when successful treatment is most likely. Finding and treating cervical dysplasia early can help prevent most cervical cancers (American Cancer Society, 2014).

II. POPULATION:

Routine screening will be completed for members who are natal* women, with a cervix, regardless of sexual history, 21-65 years of age.

Members who have had a total hysterectomy, with removal of the cervix, are exempt from screening if they have had no history of high-grade cervical dysplasia.

These routine screening guidelines do not apply to the following high-risk populations of women:
- Have a history of high grade cervical dysplasia or cervical;
- In-utero exposure to diethylstilbestrol;
- Women who are immunocompromised (such as those who are human immunodeficiency virus (HIV) positive).

*natal woman: biological woman at birth

III. GUIDELINE:

A. Screening Tests and Interval:
   1. Cytology (Pap Smear): ages 21-65 every 3 years
      HEDIS specification reviews ages 24-64 years

   2. HPV combined with cytology (co-test): every 5 years in women ages 30-65
      HEDIS specification for co-test reviews ages 30-64 years

   3. Documentation of a total hysterectomy or absence of cervix, is necessary to be excluded from screening and HEDIS measure.

NOTE:
This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinician's judgment or to establish a protocol for all patients with a particular condition.
### POPULATION

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Screening Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Women 21-65 years of age</td>
<td>Screen with cytology (Pap smear) every 3 years</td>
</tr>
<tr>
<td>Women ages 30-65 years of age</td>
<td>Screen with cytology every 3 years or co-testing (cytology/HPV testing) every 5 years</td>
</tr>
<tr>
<td>Women less than 21 years of age</td>
<td>Do not screen</td>
</tr>
<tr>
<td>Women older than 65 years</td>
<td>Do not screen</td>
</tr>
<tr>
<td>-with negative and adequate prior screening</td>
<td>-Continued screening is recommended for high-risk women</td>
</tr>
<tr>
<td>and who are not high risk</td>
<td>-Continued screening for high risk women is at the discretion of the provider</td>
</tr>
<tr>
<td>Women with history of total hysterectomy</td>
<td>Do not screen</td>
</tr>
<tr>
<td>-with removal of the cervix and no history of high-grade cervical dysplasia or cervical cancer</td>
<td>-Continued screening for high risk women is at the discretion of the provider</td>
</tr>
<tr>
<td>Women less than 30 years</td>
<td>Do not screen with HPV testing (alone or with cytology)</td>
</tr>
</tbody>
</table>

Adapted from “Screening for Cervical Cancer Clinical Summary of U.S. Preventive Services Task Force Recommendation” AHRQ cervcancersum.pdf

### B. Timing of Screening:

1. Screening earlier than 21 years, regardless of sexual history, is not recommended.

2. Clinicians and patients should base the decision to end screening on whether the patient meets the criteria for adequate prior testing and appropriate follow-up.

### C. Risk Assessment:

1. Human Papillomavirus (HPV) infection is associated with nearly all cases of cervical cancer.

2. Other factors that put a woman at increased risk of cervical cancer include:
   - HIV infection
   - A compromised immune system

**NOTE:**

This guideline is designed to assist providers by providing an analytical framework for the evaluation and treatment of patients, and is not intended either to replace a clinicians judgment or to establish a protocol for all patients with a particular condition.
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- In utero exposure to diethylstilbestrol
- Previous treatment of a high-grade cervical dysplasia or cervical cancer

D. Grading of Cervical Dysplasia:

| CIN 1: Cervical Intraepithelial Neoplasia or LSIL: Low-grade squamous intraepithelial lesion | Mild | 1/3 of the cervical cells are abnormal | Usually does not require treatment |
| CIN 2 or HSIL: High-Grade Squamous intraepithelial lesions | Moderate | 2/3 of the cervical cells are abnormal | Higher-risk, may need additional screenings and/or treatment |
| CIN 3 or HSIL | Severe | Almost all cervical cells are abnormal or pre-cancerous, appearance of cells is grossly abnormal on inspection | Further treatment and/or close surveillance is recommended |

E. Further Care:

1. It is expected that patients with detected cervical dysplasia, cervical cancer, and other needs receive follow-up and are managed according to currently recommended standards of care.

2. Close follow-up with colposcopy and cytology under certain circumstances is acceptable for women 21-24 years of age, to avoid invasive procedures for individuals with CIN II-III/HSIL.

3. Please refer to the DH Pap Algorithm for additional information.

IV. ATTACHMENTS:

A. U.S. Preventive Services Task Force: Screening For Cervical Cancer Clinical Summary of Recommendation
B. Pap Smear Algorithm v.1015a

V. REFERENCES:
SCREENING FOR CERVICAL CANCER
CLINICAL SUMMARY OF U.S. PREVENTIVE SERVICES TASK FORCE RECOMMENDATION

<table>
<thead>
<tr>
<th>Population</th>
<th>Women ages 21 to 65</th>
<th>Women ages 30 to 65</th>
<th>Women younger than age 21</th>
<th>Women older than age 65 who have had adequate prior screening and are not high risk</th>
<th>Women after hysterectomy with removal of the cervix and with no history of high-grade precancer or cervical cancer</th>
<th>Women younger than age 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recommendation</td>
<td>Screen with cytology (Pap smear) every 3 years. Grade: A</td>
<td>Screen with cytology every 3 years or co-testing (cytology/HPV testing) every 5 years Grade: A</td>
<td>Do not screen. Grade: D</td>
<td>Do not screen. Grade: D</td>
<td>Do not screen. Grade: D</td>
<td>Do not screen with HPV testing (alone or with cytology) Grade: D</td>
</tr>
</tbody>
</table>

Risk Assessment
Human papillomavirus (HPV) infection is associated with nearly all cases of cervical cancer. Other factors that put a woman at increased risk of cervical cancer include HIV infection, a compromised immune system, in utero exposure to diethylstilbestrol, and previous treatment of a high-grade precancerous lesion or cervical cancer.

Screening Tests and Interval
Screening women ages 21 to 65 years every 3 years with cytology provides a reasonable balance between benefits and harms. Screening with cytology more often than every 3 years confers little additional benefit, with large increases in harms. HPV testing combined with cytology (co-testing) every 5 years in women ages 30 to 65 years offers a comparable balance of benefits and harms, and is therefore a reasonable alternative for women in this age group who would prefer to extend the screening interval.

Timing of Screening
Screening earlier than age 21 years, regardless of sexual history, leads to more harms than benefits. Clinicians and patients should base the decision to end screening on whether the patient meets the criteria for adequate prior testing and appropriate follow-up, per established guidelines.

Interventions
Screening aims to identify high-grade precancerous cervical lesions to prevent development of cervical cancer and early-stage asymptomatic invasive cervical cancer. High-grade lesions may be treated with ablative and excisional therapies, including cryotherapy, laser ablation, loop excision, and cold knife conization. Early-stage cervical cancer may be treated with surgery (hysterectomy) or chemoradiation.

Balance of Benefits and Harms
The benefits of screening with cytology every 3 years substantially outweigh the harms. The benefits of screening with co-testing (cytology/HPV testing) every 5 years outweigh the harms. The harms of screening earlier than age 21 years outweigh the benefits. The benefits of screening after age 65 years do not outweigh the potential harms. The harms of screening after hysterectomy outweigh the benefits. The potential harms of screening with HPV testing (alone or with cytology) outweigh the potential benefits.

Other Relevant USPSTF Recommendations
The USPSTF has made recommendations on screening for breast cancer and ovarian cancer, as well as genetic risk assessment and BRCA mutation testing for breast and ovarian cancer susceptibility. These recommendations are available at [http://www.uspreventiveservicestaskforce.org/](http://www.uspreventiveservicestaskforce.org/).

For a summary of the evidence systematically reviewed in making this recommendation, the full recommendation statement, and supporting documents, please go to [http://www.uspreventiveservicestaskforce.org/](http://www.uspreventiveservicestaskforce.org/).
Pap Smear Algorithm
v.1015a

SPECIMEN ADEQUACY

Satisfactory

Next Pap per Adult Preventative Care
– Cervical Cancer Screening, Policy
Stat ID: 1784122

Unsatisfactory

Repeat Pap 2-4 months

If two (2) unsatisfactory Paps

Gyn Specialty
[WCC, WSWC, ESWC]
Pap & HPV DNA testing
In patients ≥ 30 years old
("Adult Preventative Care – Cervical Cancer Screening, Policy Stat ID: 1784122"

- Pap abnormal
  - Pap Algorithm
    - Pap negative, HPV Positive
      - Repeat cotesting at 12 months

- Pap normal
  - HPV Positive
    - Colposcopy

- Both tests negative, repeat cotesting in 5 years
  - Routine Pap Screening
    ("Adult Preventative Care – Cervical Cancer Screening, Policy Stat ID: 1784122"

- Pap abnormal
  - Pap Algorithm

- Pap and HPV negative
  - Repeat cotesting at 3 years

- Pap negative, HPV Positive
  - Repeat cotesting at 5 years

- Negative for Intraepithelial Lesion or malignancy
  - AGC/AIS

- Epithelial Cell Abnormality (see pages 3-9)

- Other
  - Endometrial cells (all postmenopausal women and ≥ 40 years old with abnormal uterine bleeding)
    - Endometrial biopsy

** If any part of cotesting is abnormal, colposcopy is needed; otherwise routine screening**

† Cotesting refers to both pap and HPV DNA testing.
EPITHELIAL CELL ABNORMALITY
Squamous Cell

ASC-US

LSIL

ASC - H

HSIL

Squamous Cell CA

Age 21-24: See page 6
Pregnancy: See page 7
HIV +: See page 8

ASC-US

See page 4

LSIL

See page 5

ASC - H

Gyn Specialty [WCC, WSWC, ESWC]
(all patients ,regardless of HPV status)

HSIL

Gyn Specialty [WCC, WSWC, ESWC]
(all patients ,regardless of HPV status)

Squamous Cell CA

Gyn Specialty [WCC]
(all patients, regardless of HPV status)

*For all women ages 21-24 please refer to Page 6
*For pregnant women please refer to Page 7
*For all HIV + women please refer to Page 8
HPV DNA Testing (reflex)

HPV Positive

Colposcopy*

HPV Negative‡

Cotesting at 3 years †

no CIN
CIN1/LSIL
CIN2/LSIL

Cotesting at 12 months

Gyn specialty [WCC, WSWC, ESWC]

≥ ASC or HPV Positive

Pap and HPV Negative

Colposcopy

Cotesting at 3 years

** If any part of cotesting is abnormal, colposcopy is needed; otherwise routine screening**

† Cotesting refers to both pap and HPV DNA testing.
‡ Age 25 and older
* If pregnant, defer colposcopy to 6 weeks postpartum.
**If any part of cotesting is abnormal, colposcopy is needed; otherwise routine screening**

† Cotesting refers to both pap and HPV DNA testing.

‡ Age 25 and older

* If pregnant, defer colposcopy to 6 weeks postpartum
Women Ages 21-24

ASC-US HPV positive
LSIL (regardless of HPV status)

Repeat pap at 12 months

Negative pap
ASC-US (regardless of HPV)
LSIL

Repeat pap at 12 months

Negative
≥ ASC

Pap in 3 years
Colposcopy#

ASC-US HPV negative

Pap in 3 years

ASC-H
HSIL
AIS/AGC

GYN Specialty
[WCC, WSWC, ESWC]

ASC-H
HSIL
AIS/AGC

GYN Specialty
[WCC, WSWC, ESWC]

# Defer colposcopy to 6 weeks postpartum in pregnant patients with ASCUS and LSIL paps
EPITHELIAL CELL ABNORMALITY

PREGNANCY‡

ASC-US

Age 21-24
See page 6

Age 25 and older
See page 4

LSIL

Age 21-24
See page 6

Age 25 and older
See page 5

HSIL
ASC-H
AIS
AGC

Immediate referral to Gyn Specialty
[WCC, WSWC, ESWC]
(any adult, regardless of HPV status)

Colposcopy at any gestational age
HIV POSITIVE WOMEN

ASCUS (regardless of HPV) LSIL

Colposcopy

NO CIN
CIN 1 / LSIL
CIN 2 / LSIL

Pap 6 & 12 months

HSIL, ASC-H, AGC, AIS, SCC

Gyn Specialty [WCC, WSWC or ESWC]

CIN 2 / HSIL
CIN 3 / HSIL

Gyn Specialty [WCC, WSWC or ESWC]

*HPV typing should not be used in screening or management of abnormal cytology/histology in HIV positive women