Health Evidence Review Commission's

Value-based Benefits Subcommittee

June 14, 2012

Wilsonville Training Center
Clackamas Community College Room 211
29353 SW Town Center Loop E
Wilsonville, Oregon 97070

AGENDA
VALUE-BASED BENEFITS SUBCOMMITTEE
June 14, 2012
9:30am - 1:30pm
Wilsonville Training Center Room 211
Wilsonville, OR
A working lunch will be served at approximately 12:00 PM
All times are approximate

I. Call to Order, Roll Call, Approval of Minutes – Lisa Dodson 9:30 AM

II. Staff report –Cat Livingston, Darren Coffman 9:40 AM

III. ICD 10 – Cat Livingston 9:50AM

A. New Topics
   1. Pediatric Metabolic
   2. Genetics –markers in normal individuals

B. Follow up issues
   1. Ophthalmology
   2. Dermatology – severe psoriasis guideline

IV. New Discussion Items - Cat Livingston 11:00 AM

A. Percutaneous testing for drug allergies
B. Unspecified disorders of the nervous system
C. Amputation for burns resulting in deep tissue necrosis
D. Balloon dilation for transient cerebral ischemia
E. SBIRT
F. Urinary incontinence guideline
G. Spinal stenosis guideline GN 41
H. Genetic testing guideline
   1. Hereditary thrombophilia
   2. Cystic fibrosis gene testing
   3. Microarray testing
I. Rehabilitative Therapy Guideline

V. Straightforward - Cat Livingston 1:10 PM

A. Straightforward table—May, 2012
B. Straightforward table—June, 2012
C. Ancillary codes to place on Prioritized List

VI. Public Comment 1:25 PM

VII. Adjournment – Lisa Dodson 1:30 PM

Section 1

Minutes

Value-based Benefits Subcommittee Recommendations Summary

For Presentation to:

Health Evidence Review Commission on June 14, 2012

For specific coding recommendations and guideline wording, please see the text of the 5/10/12 VbBS minutes.

CODE MOVEMENT

ITEMS CONSIDERED BUT NO CHANGES MADE

- Coverage of neonatal congenital lacrimal duct obstruction was discussed and HERC staff will bring back to a future meeting
- Addition of additional diagnoses for lung transplantation were considered but not added to the lung transplantation line
- Addition of additional services for preventive foot care for high risk patients was discussed, but no decision made

GUIDELINE CHANGES

- A new guideline defining what is a significant injury to a ligament or tendon was accepted as shown in Appendix B to be effective October 1, 2012
- Modified guidelines for treatment of endometriosis and adnomyosis, menstrual bleeding disorders, pelvic pain syndrome, and dysmenorrhea and a modified guideline defining what constitutes a spinal condition with neurologic impairment were adopted as shown in Appendix B to be effective October 1, 2012

CHANGES FOR THE OCTOBER 1, 2014 (TENTATIVE) PRIORITIZED LIST AS PART OF THE ICD-10 CONVERSION PROCESS

- Specialty group recommendations reviewed: Infectious Disease, Cardiology, Ophthalmology, OB/Gyn, Endocriology, Lung Transplant, Internal Medicine, Pulmonary, Organ Transplant-Abdominal, Neurosurgery
- Multiple lines were renamed
- Multiple lines were deleted or merged
- Multiple new lines created
- Multiple lines rescored
- Valvuloplasty and valve replacement CPT codes and pacemaker ICD-10 and CPT codes were added to Line 122 CONGENITAL HEART BLOCK; OTHER OBSTRUCTIVE ANOMALIES OF HEART
- Procedure codes for vitrectomy, iridectomy, lensectomy were added to line 263 RETAINED INTRAOCULAR FOREIGN BODY, MAGNETIC AND NONMAGNETIC
- L90.0 (lichen sclerosus) was moved to line 460 ~~DYSTROPHY OF VULVA~~ PRECANCEROUS VULVAR CONDITIONS
- G96.0 (Cerebrospinal fluid leak) was moved to line 308 COMPLICATIONS OF A PROCEDURE ALWAYS REQUIRING TREATMENT
- Move K09.0 (Developmental odontogenic cysts) and K09.1 (Developmental (nonodontogenic) cysts of oral region) from an uncovered to an covered line
- New guidelines regarding hypotony and blepharoplasty added as shown in Appendix A to be effective with the ICD-10 biennial review Prioritized List
- The guideline regarding hospitalization for acute viral illness was modified as shown in Appendix A to be effective with the ICD-10 biennial review Prioritized List

- **MEETING MINUTES**

VALUE-BASED BENEFITS SUBCOMMITTEE
Meridian Park Health Education Center
May 10, 2012
9:00 AM – 1:00 PM

Members Present: Lisa Dodson, MD, Chair; Kevin Olson, MD, Vice-chair; Chris Kirk, MD; James Tyack, DMD; David Pollack MD; Mark Gibson; Irene Croswell RPh.

Members Absent: Laura Ocker, Lac.

Staff Present: Darren Coffman; Ariel Smits, MD, MPH; Cat Livingston, MD, MPH; Dave Lenar.

Also Attending: Denise Taray, DMAP; Ann Neilsen and Claire Merinar, Amgen; Jesse Little, Actuarial Services Unit of DMAP.

The meeting was called to order at 9:10 am and roll was called. Minutes from the April, 2012 VbBS meeting were reviewed and approved. ACTION: HERC staff will post the approved minutes on the website as soon as possible.

Smits gave the staff report. She will be out on leave for the summer, but other HERC staff will be available for questions and issues. She reviewed the progress on the ICD-10 conversion process: out of almost 50 expert groups convened to work on this project, only 5 groups remain to finish their work after today's meeting.

Coffman discussed the next steps in the ICD-10 review process. At the June meeting, the committee will be presented with a draft ICD-10 Biennial Review List with just structural changes (line order, new line titles, etc.) without all of the CPT and ICD-10 codes.

Note: All ICD-10 review changes take effect with the next Biennial Review Prioritized List (tentatively October 2014) unless otherwise noted.

Topic: ICD-10 Infectious Disease

Discussion: Smits introduced a summary document with suggested changes to the List from the Infectious Disease review group. There was discussion about the suggestion that acute polio be moved from a funded line to the non-funded line 683. The group felt sequelae (paralysis, need for leg brace, etc.) should be covered. Coffman reported post-polio syndrome and sequeale of polio are both on the dysfunction lines where services for such conditions would be covered. Specific sequelae (i.e. acquired deformity of leg, foot drop, etc.) would be covered on the dysfunction lines as well. Livingston was concerned about possible public health issues with contagious disease. The group felt if acute polio case(s) were identified, then public health authorities would mandate the type of treatment and isolation needed. Acute polio resulting in respiratory distress or other serious problems would be treated with a new guideline if the resulting conditions met criteria for hospital admission. The decision was to

move acute polio to the uncovered line for infectious disease conditions with no treatment available.

The other expert recommendations were accepted with minimal discussion.

Actions:

- Create new line Line XXX NON-PULMONARY TUBERCULOSIS
  Treatment: Medical therapy
  ICD-10: A17.83, A17.9, A18.01-A19.9
  CPT: 98966-98969,99051,99060,99070,99078,99201-99360,99366,99374,99375,99379-99444,99468-99480,99605-99607

Scoring

Category 6
HLY 6
Pain and suffering 2
Population effects 0
Vulnerable population 1
Tertiary prevention 3
Effectiveness 4
Need for treatment 1
Cost 2
Score: 1920
Approx line: 160

- Delete line 203 TETANUS NEONATORUM and move the only ICD-10 code on line 203 (A33 Tetanus neonatorum) to line 251 TETANUS
- Delete line 211 ERYSIPELAS. Move the only ICD-10 code on this line (A46 Erysipelas) to line 214 SUPERFICIAL ABSCESSES AND CELLULITIS
- Delete line 244 LEPTOSPIROSIS. Place all diagnoses on line 215 ZOONOTIC BACTERIAL DISEASES except A27.81 (Aseptic meningitis in leptospirosis) which should be placed on line 119 SUBACUTE MENINGITIS (EG. TUBERCULOSIS, CRYPTOCOCCOSIS).
- Delete line 387 LYME DISEASE AND OTHER ARTHROPOD BORNE DISEASES. Move all diagnoses to line 284 RICKETTSIAL AND OTHER ARTHROPOD-BORNE DISEASES except B64 (Unspecified protozoal disease) which should move to line 683 INFECTIOUS DISEASES WITH NO OR MINIMALLY EFFECTIVE TREATMENTS OR NO TREATMENT NECESSARY.
- Delete line 354 COCCIDIOIDOMYCOSIS, HISTOPLASMOSIS, BLASTOMYCOTIC INFECTION, OPPORTUNISTIC AND OTHER MYCOSES and move diagnoses into Line 246 UNSPECIFIED DISEASES DUE TO MYCOBACTERIA, ACTINOMYCOTIC INFECTIONS, AND TOXOPLASMOSIS. Change name of line 246 to ~~UNSPECIFIED DISEASES DUE TO MYCOBACTERIA, ACTINOMYCOTIC INFECTIONS, AND TOXOPLASMOSIS~~ MYCOBACTERIA, FUNGAL INFECTIONS, TOXOPLASMOSIS, AND OTHER OPPORTUNISTIC INFECTIONS
- Delete line 72 CANCRUM ORIS.
- Delete line 120 PNEUMOCYSTIS CARINII PNEUMONIA.

- Delete line 227 CANDIDIASIS OF LUNG, DISSEMINATED CANDIDIASIS, CANDIDAL ENDOCARDITIS AND MENINGITIS. Diagnoses all moved to more appropriate lines.
- Delete Line 289 ACUTE POLIOMYELITIS. Move all diagnoses to line 683 INFECTIOUS DISEASES WITH NO OR MINIMALLY EFFECTIVE TREATMENTS OR NO TREATMENT NECESSARY. .
- Delete Line 300 ARTHROPOD-BORNE VIRAL DISEASES. Put all diagnoses on line 683 INFECTIOUS DISEASES WITH NO OR MINIMALLY EFFECTIVE TREATMENTS OR NO TREATMENT NECESSARY.
- Rescore Line 73 Late syphilis. Rename Line 73: ~~DISSEMINATED INFECTIONS WITH LOCALIZED SITES~~ LATE SYPHILLIS

Scoring

Category 6
HLY 6
Pain and suffering 3
Population effects 0
Vulnerable population 1
Tertiary prevention 3
Effectiveness 1
Need for treatment 1
Cost 3
Score: 520
Approx line: 415

- Rescore Line 130: AMEBIASIS

Scoring

Category 6
HLY 5
Pain and suffering 1
Population effects 0
Vulnerable population 0
Tertiary prevention 3
Effectiveness 5
Need for treatment 1
Cost 3
Score:1800
Approx line: 185

- Change guideline note 61 as shown in Appendix A. Note: this guideline change is only to take effect with the new ICD-10 Biennial Review Prioritized List
- Rename Line 55: PULMONARY TUBERCULOSIS
- Rename Line 135 MALARIA ~~AND RELAPSING FEVER~~ CHAGAS' DISEASE AND TRYPANOSOMIASIS
- Rename line 396 ~~GIARDIASIS, INTESTINAL HELMINTHIASIS~~ INTESTINAL PARASITES

Topic: ICD-10 Review Cardiology

Discussion: Smits introduced a summary document with suggested changes to the List from the Cardiology review group. There was minimal discussion.

Action

- Delete Line 302 CHRONIC RHEUMATIC PERICARDITIS, RHEUMATIC MYOCARDITIS
- Delete Line 363 DISEASES OF ENDOCARDIUM
- Delete Line 367 IDIOPATHIC OR VIRAL MYOCARDITIS AND PERICARDITIS
- Rename Line 90 MYOCARDITIS ~~(NONVIRAL)~~, PERICARDITIS ~~(NONVIRAL)~~ AND ENDOCARDITIS
- Rename Line 109 CARDIOMYOPATHY~~, HYPERTROPHIC MUSCLE~~
- Rename Line 274 DISEASES OF MITRAL<u>,</u> ~~AND~~ TRICUSPID, <u>AND PULMONARY</u> VALVES
- Line 122 CONGENITAL HEART BLOCK; OTHER OBSTRUCTIVE ANOMALIES OF HEART
    - Add valvuloplasty and valve replacement CPT codes
        - 33420-33496, 33530, 92986-92993
    - Add all pacemaker ICD-10 and CPT codes
        - Z45.010-Z45.09
        - 33202-33249, 33262-33264, 93279-93296

Topic: ICD-10 review—Ophthalmology

Discussion: Smits introduced a summary document with suggested changes to the Ophthalmology lines base on the ICD-10 review. There was discussion about adding a coding specification to line 149 to allow vitrectomy for treamtent of glaucoma. Croswell raised the concern that vitrectomy can increase intraocular pressure, so this may not be appropriate. The decision was for HERC staff to ask for clarification of this suggestion with the experts and bring back to the June meeting.

There was discussion regarding the suggested new blepharoplasty guideline and addition of blepharoplasty to a covered line. Dodson raised concerns that this procedure might have abuse potential. Kirk replied that his health plan used visual field criteria, and the suggested guideline would be consistent with the current guidelines that his plan uses. The group decision was that this code movement and guidline were appropriate.

There was a short discussion regarding the suggestion to change several line names to include “laser surgery” in the treatment description. Croswell asked if laser surgery should be called out separately from “surgery.” Coffman pointed out there was precedence on the list to call this out as a separate treatment in the treatment description line. HERC staff will ask the experts and report back in June. The line renaming may be reconsidered based on that feedback when readdressed in June.

There was extensive discussion regarding whether neonatal lacrimal duct obstruction should be moved from an uncovered line to a covered line. The experts felt strongly this condition should be covered. Smits noted this has been a long term issue with many previous discussions at the HSC. Dodson asked for information on how many chidren with this condition do not have spontaneous

resolution; she felt that the vast majority would self-resolve and did not require treatment. Livingston pointed out kids can be treated prior to 6 months of age with restraints, but require general anesthesia for the treatment after 6 months. Pollak asked if there was some way to allow treatment for those children with complications. Smits suggested a possible guideline, to specify at what age and with what complications children should be treated. Dodson asked for evidence that this condition needs any treatment. Coffman pointed out allowing coverage for this condition would have a definite cost impact. The decision was to have HERC staff will work with experts to obtain more information on the natural history of this condition (how many children have spontaneous resolution), help with creation of a possible guideline on when this should be treated, or with what complications or predictors of poor outcome should allow treatment.

Actions:

- Create new line
  Condition: CHORIORETINAL INFLAMMATION
  Treatment: MEDICAL, SURGICAL, AND LASER TREATMENT
  ICD-10: H30.001-H30.93, H20.821-829 (Vogt Koyanagi syndrome), H44.111-H44.119 (Panuveitis), H44.131-9 (Sympathetic uveitis)
  CPT: all CPT codes currently on line 106

Scoring:

Category: 7
HLY: 5
Suffering: 3
Pop effects: 0
Vul pop: 0
Tertiary prvntn: 3
Effectiveness: 3
Need: 1
Net cost: 3
Total: 660
Approximate Line: 390

- Create new line
  Condition: STRABISMUS DUE TO NEUROLOGIC DISORDER
  Treatment: MEDICAL AND SURGICAL TREATMENT
  ICD-10 codes: H49.00-H49.13, H51.20-H51.23 (from 452 STRABISMUS; CONGENITAL ANOMALIES OF EYE)
  CPT codes: all CPT codes currently on line 452, except 66840-66984; Add 68810,68811,68815,68816,68840; Add ectopion repair codes: 67914-7. Add CPT codes currently on line 497 ACQUIRED PTOSIS AND OTHER EYELID DISORDERS WITH VISION IMPAIRMENT

Scoring

HLY: 5
Suffering: 2
Pop effects: 0
Vul pop: 0
Tertiary prvntn: 2
Effectiveness: 4
Need: 1

Net cost: 3
Score: 720
Approximate line: 380-385

- Rescore what remains on 452 STRABISMUS; CONGENITAL ANOMALIES OF EYE
  Scoring
  Category 7
  HLY: 3
  Suffering: 2
  Pop effects: 0
  Vul pop: 0
  Tertiary prvntn: 1
  Effectiveness: 4
  Need: 1
  Net cost: 3
  Score: 480
- Approximate line: 420
- Combine 537 DYSFUNCTION OF NASOLACRIMAL SYSTEM; LACRIMAL SYSTEM LACERATION and 654 STENOSIS OF NASOLACRIMAL DUCT (ACQUIRED); keep at line 537
- Combine Line 174 GONOCOCCAL AND CHLAMYDIAL INFECTIONS OF THE EYE with 482 NEONATAL CONJUNCTIVITIS, DACRYOCYSTITIS AND CANDIDA INFECTION; keep at line 174
- Change line 174 name to GONOCOCCAL AND CHLAMYDIAL INFECTIONS OF THE EYE, NEONATAL CONJUNCTIVITIS
- Rescore Line 374 ~~RETROLENTAL FIBROPLASIA~~ RETINOPATHY OF PREMATURITY
  Treatment: CRYOSURGERY
  ICD-10: all codes on current line 374
  CPT: Add all CPT codes on Line 106, plus cryosurgery (67227-67229)

Scoring
Category 7
HLY: 6
Suffering: 3
Pop effects: 0
Vul pop: 1
Tertiary prvntn: 5
Effectiveness: 4
Need: 1
Net cost: 4
Score: 1200
Approximate line: 300

- Rescore Line 452 STRABISMUS ~~WITHOUT AMBLYOPIA AND OTHER DISORDERS OF BINOCULAR EYE MOVEMENTS~~; CONGENITAL ANOMALIES OF EYE
  Treatment: MEDICAL AND SURGICAL TREATMENT
  ICD-10: all current

CPT: all current

Scoring

Category 7
HLY: 3
Suffering: 2
Pop effects: 0
Vul pop: 0
Tertiary prvntn: 1
Effectiveness: 4
Need: 1
Net cost: 3
Score: 480
Approximate line: 420

- HERC staff to discuss the coding spcifiation suggested to be added to line 149 regarding vitrectomy for treatment of glaucoma and bring to the June meeting.
- Add a new guideline to line 497 as shown in Appendix A to outline when blepharoplasty is covered. This guideline will not take effect until the new ICD-10 Biennial Review Prioritized List.
- The current coding specification on line 308 regarding hypotony was made into a new guideline and had changes made to make it consistent with ICD-10, as shown in Appendix A. This guideline will not take effect until the new ICD-10 Biennial Review Prioritized List.
- Guideline note 32 regarding cataracts was modified as shown in Appendix B. This guideline will become effective October 1, 2012.
- Rename Line 106 DIABETIC AND OTHER RETINOPATHY Treatment ~~LASER SURGERY~~ Medical, Surgical, and Laser Treatment
    - add 67028 to this line
- Rename Line 149 GLAUCOMA, OTHER THAN PRIMARY ANGLE-CLOSURE Treatment ~~MEDICAL AND SURGICAL TREATMENT~~ Medical, Surgical, and Laser Treatment
- Rename Line 258 PRIMARY ANGLE-CLOSURE GLAUCOMA Treatment ~~IRIDECTOMY, LASER SURGERY~~ Medical, Surgical, and Laser Treatment
- Rename Line 286 ~~SYMPATHETIC UVEITIS AND~~ ADVANCED DEGENERATIVE DISORDERS AND CONDITIONS OF GLOBE
    - Symphathetic uveitis moved to newly created line
- Rename Line 321 CATARACT, ~~EXCLUDING CONGENITAL~~
- Rename Line 429 APHAKIA AND OTHER DISORDERS OF LENS Treatment: ~~INTRAOCULAR LENS~~ MEDICAL AND SURGICAL THERAPY
- Rename Line 461 RECURRENT EROSION OF THE CORNEA Treatment: ~~CORNEAL TATTOO~~, ANTERIAL STROMAL PUNCTURE, REMOVAL OF CORNEAL EPITHELIUM; WITH OR WITHOUT CHEMOCAUTERIZATION
    - Add corneal scraping 65430, delete 65436
- Rename Line 465 VENOUS TRIBUTARY (BRANCH) OCCLUSION; CENTRAL RETINAL VEIN OCCLUSION Treatment: LASER SURGERY, MEDICAL THERAPY INCLUDING INJECTION
    - Add CPT for Injection (67028)

- Rename Line 473 DEGENERATION OF MACULA AND POSTERIOR POLE Treatment MEDICAL, SURGICAL AND LASER THERAPY ~~VITRECTOMY, LASER SURGERY~~
- Rename Line 485 CENTRAL PTERYGIUM AFFECTING VISION
- Rename Line 497 ~~PTOSIS (ACQUIRED) WITH VISION IMPAIRMENT~~ ACQUIRED PTOSIS AND OTHER EYELID DISORDERS WITH VISION IMPAIRMENT
- Rename Line 499 KERATOCONJUNCTIVITS, ~~CORNEAL ABSCESS AND NEOVASCULARIZATION~~
    - Removed corneal abscess diagnoses at June, 2011 HSC meeting; neovascular diagnoses moved to line 686
- Rename Line 524 ECTROPION, ~~TRICHIASIS OF EYELID,~~ AND BENIGN NEOPLASM OF EYE~~LID~~
- Add vitrectomy, iridectomy, lensectomy 66852, 67036, 66160, 66850, 66840, 66940 codes to line 263 RETAINED INTRAOCULAR FOREIGN BODY, MAGNETIC AND NONMAGNETIC
- HERC staff will consult with experts about neonatal lacrimal duct obstruction and bring this topic back to the June VBBS meeting.

Topic: ICD-10 review—OB/Gyn, with Hysterectomy Guidelines

Discussion: Smits introduced a summary document with suggested changes to the OB/Gyn lines base on the ICD-10 review. There was minimal discussion of the recommendations. The recommendations were accepted as presented.

The OB/Gyn guidelines were discussed in detail. A major question raised was whether the new progesterone-containing IUD guideline should be modified to allow use for the various diagnoses in the hysterectomy guidelines which this treatment was added to as a hormonal therapy option. The decision was no, as the managed care plans would be given the option of using IUDs instead of other hormonal treatments, but that coverage did not need to be mandated. The suggested changes to the hysterectomy guidelines were all accepted, except the requirement of 6 months of pelvic physical therapy for pelvic pain syndrome and dysmenorrhea. This requirement was thought to represent a hardship, as pelvic physical therapy is not a covered service for most women on OHP. The accepted guidelines are shown in Appendix B.

Actions:

- Combine Lines 43 ECTOPIC PREGNANCY, 59 HYDATIDIFORM MOLE, and 159 CHORIOCARCINOMA
    - All CPT and ICD-10 codes from all lines
    - Title new line: ECTOPIC PREGNANCY; HYDATIDIFORM MOLE; CHORIOCARCINOMA
    - Keep at line 43
- Combine Line 69 SPONTANEOUS ABORTION COMPLICATED BY INFECTION AND/OR HEMORRHAGE, MISSED ABORTION and Line 394 SPONTANEOUS ABORTION
    - All CPT and ICD-10 codes from both lines

    - Title new line: SPONTANEOUS ABORTION; MISSED ABORTION
    - Keep at line 69
- Combine Line 380 CONGENITAL ABSENCE OF VAGINA and Line 403 IMPERFORATE HYMEN; ABNORMALITIES OF VAGINAL SEPTUM
    - All CPT and ICD-10 codes from both lines
    - Keep at line 380
    - Line 380 renamed STRUCTURAL CAUSES OF AMENORRHEA ~~CONGENITAL ABSENCE OF VAGINA~~ Treatment: ~~ARTIFICIAL VAGINA~~ SURGICAL TREATMENT
- Delete Line 510 CERVICITIS, ENDOCERVICITIS, HEMATOMA OF VULVA, AND NONINFLAMMATORY DISORDERS OF THE VAGINA
- Delete Line 613 OLD LACERATION OF CERVIX AND VAGINA
- Delete Line 614 VULVAL VARICES. Only ICD-10 code on this line moved to 587 with CPT codes.
- Rescore Line 260 TORSION OF OVARY

Scoring

Category 6
HLY 7
Pain and suffering 5
Population effects 0
Vulnerable population 0
Tertiary prevention 1
Effectiveness 5
Need for treatment 1
Cost 4
Score:
Approx line: 70

- Rescore Line 84 DEEP ABSCESSES, INCLUDING APPENDICITIS AND PERIORBITAL ABSCESS

Scoring

Category 6
HLY 7
Pain and suffering 4
Population effects 0
Vulnerable population 0
Tertiary prevention 4
Effectiveness 5
Need for treatment 1
Cost 1
Score: 3000
Approx line: 45

- Rename Line 57 GONOCOCCAL INFECTIONS AND OTHER SEXUALLY TRANSMITTED DISEASES OF THE ORAL, ANAL AND GENITOURINARY TRACT
- Rename Line 311 CANCER OF VAGINA, VULVA AND OTHER FEMALE GENITAL ORGANS
- Rename Line 428 UTERINE LEIOMYOMA AND POLYPS
- Rename Line 451 VAGINITIS~~, TRICHOMONIASIS~~ AND CERVICITIS

- Rename Line 453 NONINFLAMMATORY DISORDERS AND BENIGN NEOPLASMS OF OVARY, FALLOPIAN TUBES AND UTERUS; OVARIAN CYSTS; ~~STREAK OVARIES~~ GONADAL DYSGENISIS
- Rename Line 492 UTERINE PROLAPSE; CYSTOCELE Treatment ~~SURGICAL REPAIR~~ MEDICAL AND SURGICAL TREATMENT
- Rename Line 495 ~~OVARIAN~~ GONADAL DYSFUNCTION, ~~GONADAL DYSGENISIS,~~ MENOPAUSAL MANAGEMENT
- Rename Line 587 BENIGN NEOPLASM AND CONDITIONS OF EXTERNAL FEMALE GENITAL ORGANS
- Rename Line 658 ~~NONINFLAMMATORY DISORDERS OF CERVIX; HYPERTROPHY OF LABIA~~ BENIGN CERVICAL CONDITIONS
- L90.0 (lichen sclerosus) was moved to line 460 ~~DYSTROPHY OF VULVA~~ PRECANCEROUS VULVAR CONDITIONS
- The guidelines for treatment of endometriosis and adnomyosis, menstrual bleeding disorders, pelvic pain syndrome, and dysmenorrhea were modified as shown in Appendix B. These changes are effective October 1, 2012.

Topic: ICD-10 review--Endocrinology

Discussion: Livingston introduced a summary document with suggested changes to the endocrinology lines on the Prioritized List based on ICD-10 review. There was minimal discussion with the exception of the hypoglycemia guideline. It was clarified that neonatal hypoglycemia is already located on the appropriate lines, and the generic code hypoglycemia does not need to be in the covered region of the List. All other recommendations were accepted.

Actions:

- Create new lines
  - Dyslipidemias – includes new ICD-10 codes E78.1-78.6, separates these codes out from Line 67 (inherited metabolic disorders
    - Ranking
      - Category =3
      - HLY=6
      - Pain and suffering = 0
      - Population effects =0
      - Vulnerable populations =1
      - Effectiveness of treatment = 4
      - Need for therapy = .70
      - Cost = 4, include diet and exercise counseling
      - Score = 1470
      - Line = 235
  - ACROMEGALY AND GIGANTISM – this is currently paired on line 371 with benign pituitary tumors and is separated out due to increased morbidity and role of preventive treatment. ICD 10 code: E22.0 Acromegaly and pituitary gigantism
    - Ranking
      Category = 6
      HLY=7
      Pain and suffering = 2 (for arthritis)
      Population effects = 0

Vulnerable populations = 0
Tertiary prevention = 3
Effectiveness of treatment = 4
Need for therapy = 1.0
Cost =1
Score = 1920
Line = 165

- Combine lines
  - Line 93: Condition: DISORDERS OF PANCREATIC ENDOCRINE SECRETION
  - Line 33 TYPE II DIABETES MELLITUS
- Merge line 93 into line 33 because once diabetes develops, the source is less relevant. Surgery codes will also be moved from 93 to 33 to include appropriate treatment for endocrine secreting tumors (e.g. somastatinomas).
- Delete lines
  - **Line 162 BENIGN NEOPLASM OF PITUITARY GLAND - codes were moved to line** 371 (~~ACROMEGALY AND GIGANTISM~~, OTHER AND UNSPECIFIED ANTERIOR PITUITARY HYPERFUNCTION, BENIGN NEOPLASM OF THYROID GLAND AND OTHER ENDOCRINE GLANDS) and 137 BENIGN NEOPLASM OF THE BRAIN

Topic: ICD-10 Review—Lung Transplant

Discussion: Smits introduced a summary document outlining the changes suggested during the expert review of the lung transplant lines as part of the ICD-10 conversion process. The major discussion centered around whether to add additional diagnoses to the lung transplant lines. Gibson felt that new diagnoses should only be added when there is evidence of effectiveness. He raised the concern that adding many of these diagnoses may allow treatment with lung transplant of that specific condition in an earlier form than perhaps should be done. Olson felt that the committee could perhaps rely on UNOS for making evidence based decisions on conditions that require lung transplant. Coffman pointed out that UNOS does not conduct evidence reviews. The decision was to not add any new diagnoses to the lung transplant lines without an evidence review. If a condition was identified as a candidate for these lines in the future, then HERC staff can work with experts to conduct such a review.

The second area of discussion was whether the two lung transplant lines should be combined, as they are only 2 lines apart on the List. The decision was that they should be combined, with the new line at 254 titled "Conditioned requiring heart-lung and lung transplantation." This line will contain all ICD-10 codes from lines 254 and 256 and all CPT codes from both lines.

Actions:

- Affirm the placement of alpha-1 antitrypsin deficiency (ICD-9 273.4/ICD-10 E88.0) on line 254.
- Combine lines 254 and 256
  - New line will be placed at 254
  - Line title "Conditioned requiring heart-lung and lung transplantation."

- This line will contain all ICD-10 codes from lines 254 and 256 and all CPT codes from lines 254 and 256.
- Add no new diagnoses to line 254 without evidence review

Topic: ICD-10 Review—Internal Medicine

Discussion: Livingston introduced a summary document outlining the changes suggested during the expert review of the internal medicine lines as part of the ICD-10 conversion process. There was discussion about the placement of the new Postthrombotic line and if it appropriately belonged with lymphedema or not. It was decided to remain separate from lymphedema. Other recommendations were aceepted with minimal discussion.

Actions:

- Create new lines
  - CONDITION: Postthrombotic syndrome
    TREATMENT: MEDICAL THERAPY
    Place those I87.0 codes currently on line 668 to new line.
    Ranking
    Category 7
    Pain and suffering 2
    Healthy life years 2
    Tertiary prevention 2
    Effectiveness 1 (prevention of DVT is best avoidance)
    Net cost 4
    Score 60
    New approximate Line 580
- Rescore lines
  - Hypertension currently Line 12 (handranked)
    - Reranking
    Change net cost to a 4 (inexpensive medication and monitoring)
    New score 2400
    Approximate new line placement 83
  - Line 234 ANAPHYLACTIC SHOCK; EDEMA OF LARYNX
    - Reranking
    Change suffering to a 5, change net cost to 3
    New score 2080
    Approximate new line placement 136

- Guideline note modification
  - Guideline Note 61, under Line 547 and 561, and obtundation, altered mental status, or dehydration
  - Rename lines
    - Line 426

  Condition: ANOGENITAL VIRAL WARTS
  Treatment: MEDICAL AND SURGICAL THERAPY
  - Coding specifications
    - Add K14.0 Glossitis to line 214 (in addition to 601).

Add coding specification: K14.0 is on Line 214 for abscess and cellulitis of tongue only

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Topic: ICD-10 Review—Pulmonary

Discussion: Livingston introduced a summary document outlining the changes suggested during the expert review of the pulmonary lines as part of the ICD-10 conversion process. The expert input had requiested covereage of a number of types of insomnia, as well as for sleepwalking and night terrors.

F51.3	Sleepwalking
G47.8	Other sleep disorders
G47.21	Circadian Rhythm sleep disorder-delayed sleep phase type
F51.4	Sleep Terrors
F51.01	Primary Insomnia
F51.09	Other insomnia
G47.52	REM Sleep Behavior Disorder
G47.24	Circadian Rhythm Disorder-free running type

There was a discussion desiring clarification of the effectiveness of treatment of these conditions. Conditions that are severe are not necessarily prioritized highly on the List, if there is no effective treatment. Members felt further information was necessary before making a decision on movement of some of these codes.

There was a discussion about mediastinitis, and it was decided it was reasonable to put in on line 278 whien it was associated with lung cancer diagnosis or treatment.

Actions:

- Make no change to the current Line assignments for the sleep disorder codes. Staff to work with experts and review evidence on these codes and return at a future emeeting
- Coding changes
- J98.5 Diseases of mediastinum, not elsewhere classified
    - Delete from Line 421
    - Keep on 689
    - Add to Line 278 CANCER OF LUNG, BRONCHUS, PLEURA, TRACHEA, MEDIASTINUM AND OTHER RESPIRATORY ORGANS

      Add coding specification to Line 278 *J98.5 is covered on line 278 for a lung cancer diagnosis or treatment ~~mediastinitis only~~. Other conditions associated with this code are located on Line 689.*

Topic: ICD-10 Review—Organ transplant-abdominal

Discussion: Livingston introduced a summary document outlining the changes suggested during the expert review of the organ transplant-abdominal lines as part of the ICD-10 conversion process. Experts had recommended adding ICD10 codes for Type 2 diabetes to the Line 92, DIABETES MELLITUS WITH

END STAGE RENAL DISEASE, with treatment: SIMULTANEOUS PANCREAS/KIDNEY (SPK) TRANSPLANT, PANCREAS AFTER KIDNEY (PAK) TRANSPLANT

UNOS allows for transplant into Type 2 diabetics and nationally about 10% occur in diabetes. There was a discussion about UNOS and whether an evidence-based process that was clearly delinated existed. It was felt that further information on the effectiveness and utility of pancreas and pancreas after kidney transplants was necessary in Type 2 diabetics to evaluate if these codes should be added to Line 92.

Actions:

- Staff to perform evidence review and work with specialists, and return with this topic at a future meeting

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Topic: ICD-10 Review—Neurosurgery

Discussion: Smits introduced a summary document outlining the changes suggested during the expert review of the neurosurgery lines as part of the ICD-10 conversion process. There was minimal discussion.

Actions:

- GUIDELINE NOTE 37, DISORDERS OF SPINE WITH NEUROLOGIC IMPAIRMENT was modified as shown in Appendix B, effective October 1, 2012
- Rename Line 137 BENIGN NEOPLASM OF THE BRAIN AND SPINAL CORD
- TREATMENT: ~~CRANIOTOMY/CRANIECTOMY, LINEAR ACCELERATOR, MEDICAL THERAPY, WHICH INCLUDES RADIATION THERAPY~~ MEDICAL, SURGICAL AND RADIATION TREATMENT
- Rename Line 91 DEEP OPEN WOUND OF NECK, INCLUDING LARYNX; FRACTURE OF LARYNX OR TRACHEA~~, OPEN~~
- Move G96.0 (Cerebrospinal fluid leak) to line 308 COMPLICATIONS OF A PROCEDURE ALWAYS REQUIRING TREATMENT and removed from other lines and diagnostic list

---

Topic: ICD-10 follow up, Oral Maxillofacial Surgery

Discussion: Smits introduced a summary document discussing follow up issues from the ICD-10 oral maxillofacial surgery review. There was minimal discussion

Actions:

- Move K09.0 (Developmental odontogenic cysts) and K09.1 (Developmental (nonodontogenic) cysts of oral region) from line 549 BENIGN NEOPLASM BONE AND ARTICULAR CARTILAGE INCLUDING OSTEOID OSTEOMAS; BENIGN NEOPLASM OF CONNECTIVE AND OTHER SOFT TISSUE to line 486 BRANCHIAL CLEFT CYST; THYROGLOSSAL DUCT CYST; CYST OF PHARYNX OR NASOPHARYNX

Plastic Surgery ICD 10 Recommendations

Topic: ICD-10 follow up, Sports Medicine

Discussion: Smits introduced a summary document discussing follow up issues from the ICD-10 sports medicine review. The subcommittee discussed whether the proposed new guideline which defined significant injuries to ligaments and tendons should be applied to the uncovered lower line for minor sprains and strains. It was decided that it should refer to this line, with a note that non-significant injuries are included on this lower line. Taray felt that such a clause would be helpful to DMAP to define when a particular ICD-9 or ICD-10 code is included on the covered line vs. the uncovered line. The clause allowing coverage for "weakness" was struck as this was felt to be too subjective. The group also added a clause requiring "clinically demonstrable" injuries to this guideline to remove any subjective interpretation.

The line name change proposal for lines 406 and 455 was modified to remove "potentially" from the title, as the group felt that the provider needs to produce evidence of actual significant injury or impairment before such an injury is covered. There was considerable debate about whether "Grades 2 and 3" should be struck from the line titles; however, it was felt that the new line titles with the new guideline were clearer and will be more helpful to providers.

Actions:

- Rename line 455 INTERNAL DERANGEMENT OF KNEE AND LIGAMENTOUS DISRUPTIONS OF THE KNEE, ~~GRADE II AND III~~ RESULTING IN SIGNIFICANT INJURY/IMPAIRMENT
- Rename line 406: DISRUPTIONS OF THE LIGAMENTS AND TENDONS OF THE ARMS AND LEGS, EXCLUDING THE KNEE, ~~GRADE II AND III~~ RESULTING IN SIGNIFICANT INJURY/IMPAIRMENT
- Add a new guideline to lines 455, 406 and 638 defining what is a significant injury/impairment
- The above changes are effective October 1, 2012

Topic: ICD-10 follow up, Plastic Surgery

Discussion: Livingston introduced a summary document discussing follow up issues from the ICD-10 plastic surgery review. There was no discussion. The suggested changes were accepted.

Actions:

- Create new line Line XXX
  - Condition: ACUTE PERIPHERAL MOTOR AND DIGITAL NERVE INJURY
  - Treatment: SURGICAL THERAPY
  - ICD10: S74.00xA-S74.11x
  - CPT codes: CPT codes from line 531
- Scoring
  - Category 7
  - Impact on Healthy Life Years 4
    - Rationale: If you don't repair a nerve, you will have a residual defect. If upper extremity is desensate, will significantly impact functionality

Impact on Pain and Suffering 1
Population effects 0
Vulnerable 0
Tertiary Prevention 1
Effectiveness 3
Need for service 0.90
Net cost 2
Score 324
Line 450

- Adopt new guideline note **GUIDELINE NOTE XXX ACUTE PERIPHERAL MOTOR AND DIGITAL NERVE INJURY**

  Line XXX

  Repair of acute (< 8 weeks) peripheral nerve injuries are included on line XXX. Non-surgical medical care of these injuries are included on line 535. Chronic nerve injuries are included on line 557.

Topic: ICD-10 follow up, Podiatry

Discussion: Smits introduced a summary document discussing follow up issues from the ICD-10 podiatry review. The evidence for coverage of some treatment for high risk patients for foot conditions was reviewed. Olson felt that the evidence supported some preventive foot care for patients with high risk conditions such as diabetes. Kirk was concerned that if certain diagnoses were added to the high risk foot care line, then high risk patients with normal foot would be referred to podiatry for foot exams, which would increase costs. Kirk felt that podiatry had little additional to offer over a primary care clinician exam unless an ulcer or other abnormality was present. Croswell felt that high risk patients should be allowed to see a podiatrist if there was docuementation that the PCP had examined the feet and had concerns. Taray felt that podiatry care may actually decrease long term costs through the prevention of ulcers and other conditions which are costly to treat. Kirk noted that some podiatry care, such as fitting of diabetic footwear, is already a covered condition. Smits reviewed the ICD-9 codes currently on the high risk foot care line, and found that the conditions that the group was concerned about (diabetes with neuropathy, neuropathic conditions, etc.) were already included on this line, making addition of such conditions unnecessary. Smits suggested adding limited procedures (podiatry consult, corn paring) to the line. Dodson agreed that prevention should be included in the covered area of the List when possible.

The decision was that HERC staff needs to continue to work with the podiatry experts to determine what preventive foot care services should be offered to high risk individuals.

Actions:

- HERC staff needs to continue to work with the podiatry experts to determine what preventive foot care services should be offered to high risk individuals.

Topic: ICD-10 follow up, Dermatology

Discussion: Livingston introduced a summary document discussing follow up issues from the ICD-10 dermatology review. There was a discussion about the new proposed

Severe Inflammatory Disease Line which members were support. However, there were some questions, including after public comment, about what exactly was first line and second line therapy for these conditions, and if these needed to be explicitly clarified in the guideline. Additionally, it was clarified that not every second line therapy would have to be tried before a biologic was considered, but further clarification was needed.

Actions:

- Create new line

SEVERE INFLAMMATORY SKIN DISEASE

ICD 10 codes to be placed on this line for the following conditions:

- Psoriasis
- Atopic dermatitis
- Lichen planus
- Darier disease (inherited epidermal disorder)
- Pityriasis rubra pilaris
- Discoid lupus

Ranking recommendations: (moderate severe psoriasis used to be 134 (was with pyoderma)
Category 7
Impact on Healthy Life Years 3
Impact on pain and suffering 3
Population effects 0
Vulnerable populations 0
Tertiary prevention 0
Effectiveness 3
Need for treatment 0.9
Net cost 2
Score 324 which is Line 450

- HERC Staff to confirm first and second line treatment including biologics and prepare a revised guideline
- **Create new line**
  - **ACNE CONGLOBATA (SEVERE CYSTIC ACNE)** (derived from line 545 Cystic Acne). ICD 10 codes: Includes acne conglobata only
  - **GUIDELINE NOTE XX** Acne conglobata is only included on line XX if it involves recurrent abscesses or communicating sinuses.

<u>Ranking</u>
Category 7.
Impact on Healthy Life Years 2
Impact on Pain and Suffering 3
Population effects 0
Vulnerable populations 0
Tertiary prevention 2 (high likelihood of decrease permanent disfigurement/scarring; possible decrease in suicide risk)
Effectiveness 4
Need for treatment 1

Net cost 3
SCORE 560, PUTS ON LINE 410

- Delete line - 134 PYODERMA; MODERATE/SEVERE PSORIASIS MEDICAL THERAPY
  Pyoderma codes move to cellulitis line 214. Psoriasis divided into mild and moderate/severe disease
- Rename line - 545 ~~CYSTIC ACNE~~ ACNE; ROSACEA
  - Moved rosacea codes from 530 to this line
  - Moved out hydradenitis suppurative to its own line
- Code movement and coding specifications
  - Adopt coding specification Move Q82.8 Other specified congenital malformations of skin to both higher severe line and 688.

New coding specification
Q82.8 is only included [on the higher line] for the diagnosis of Keratosis follicularis that meets the severity guideline criteria. Other diseases included within Q82.8 are not included on this line.

Topic: Percutaneous testing for drug allergies

Discussion: This topic was tabled until the June, 2012 VBBS meeting
Actions:
1) Will address at the June, 2012 VBBS meeting

Topic: Unspecified disorders of the nervous system

Discussion: This topic was tabled until the June, 2012 VBBS meeting
Actions:
1) Will address at the June, 2012 VBBS meeting

Topic: Amputation for burns resulting in deep tissue necrosis

Discussion: This topic was tabled until the June, 2012 VBBS meeting
Actions:
1) Will address at the June, 2012 VBBS meeting

Topic: Balloon dilation for transient cerebral ischemia

Discussion: This topic was tabled until the June, 2012 VBBS meeting
Actions:
1) Will address at the June, 2012 VBBS meeting

Topic: Straightforward items

Discussion: This topic was tabled until the June, 2012 VBBS meeting
Actions:
1) Will address at the June, 2012 VBBS meeting

Public Comment

Public testimony was heard from an Amgen representative regarding coverage of biologics for treatment of psoriasis. The risk profile of biologics agents are no greater than the risk profiles of other agents. Based on risk profile, there is no reason to limit use of biologics to second line treatment. No cost information was given. The representative could not give information on head-to-head comparison of effectiveness of biologics vs. other agents.

Issues for next meeting:

- Follow up issues for ICD-10 Ophthalmology review
- Follow up issues for ICD-10 Podiatry review
- Unspecified disorders of the nervous system
- Amputation for burns resulting in deep tissue necrosis
- Percutaneous testing for drug allergies
- Balloon dilation for transient cerebral ischemia
- May, 2013 straightforward items

Next meeting: June 14, 2012 at the Wilsonville Training Center in Wilsonville, OR.

Appendix A

Guideline Changes as Part of the ICD-10 and/or Biennial Review
Note: these take effect with the next Biennial Review List (tentatively October 1, 2014)

Modify Guidelines

GUIDELINE NOTE 61, HOSPITALIZATION FOR ACUTE VIRAL INFECTIONS

Lines 556,571,575,643, XXX, XXX OR 683 [new lines for acute polio and arthropod-borne viral disease lines]

Most acute viral infections are self-limited (e.g. colds, infectious mononucleosis, gastroenteritis). However, some viral infections such as viral pneumonia, aseptic meningitis, or severe gastroenteritis may require hospitalization to treat the complications of the primary disease.

Accepted coding practices insist that the underlying condition in these cases be the principle diagnosis. For example, complicated viral pneumonia requiring respiratory support with a ventilator would have a principle diagnosis of viral pneumonia and a secondary diagnosis of respiratory failure. Since the ICD-9-CM code for viral pneumonia has historically appeared only on a non-funded line, treatment has not been reimbursable regardless of the severity of the disease. In contrast, the code for viral gastroenteritis appears on Line 296 and any necessary outpatient or inpatient services would be covered.

Reimbursement for the treatment of certain conditions appearing low on the Prioritized List should be provided in severe cases of the diseases identified on the following four lines.

Line: 575
Condition: OTHER NONINFECTIOUS GASTROENTERITIS AND COLITIS
Treatment: MEDICAL THERAPY
Treatment of non-infectious gastroenteritis of significant severity that is associated with dehydration should be a covered service if the case fulfills the requirement of hospital admission guidelines using an index of severity of illness.

Line: 556
Condition: VIRAL, SELF-LIMITING ENCEPHALITIS, MYELITIS AND ENCEPHALOMYELITIS
Treatment: MEDICAL THERAPY
Treatment of viral encephalitis, myelitis and encephalomyelitis of significant severity that is associated with either obtundation/altered mental status or dehydration should be a covered service if the case fulfills the requirement of hospital admission guidelines using an index of severity of illness.

Line: 571
Condition: ASEPTIC MENINGITIS

Treatment: MEDICAL THERAPY
Treatment of aseptic meningitis of significant severity that is associated with either obtundation/altered mental status or dehydration should be a covered service if the case fulfills the requirement of hospital admission guidelines using an index of severity of illness.

Line: 643
Condition: ACUTE UPPER RESPIRATORY INFECTIONS AND COMMON COLD
Treatment: MEDICAL THERAPY
Treatment of viral pneumonia of significant severity that is associated with either respiratory failure or dehydration should be a covered service if the case fulfills the requirement of hospital admission guidelines using an index of severity of illness.

Line 683
Condition: INFECTIOUS DISEASES WITH NO OR MINIMALLY EFFECTIVE TREATMENTS OR NO TREATMENT NECESSARY
Treatment: MEDICAL THERAPY
Treatment of acute infectious disease that is associated with respiratory failure, obtundation/altered mental status, or dehydration should be a covered service if the case fulfills the requirement of hospital admission guidelines using an index of severity of illness.

NEW GUIDELINES

GUIDELINE XXX BLEPHAROPLASTY
Line 497
Blepharoplasty is covered when 1) visual fields demonstrate an absolute superior defect to within 15 degrees of fixation, 2) upper eyelid position contributes to difficulty tolerating a prosthesis in an anophthalmic socket, 3) essential blepharospasm or hemifacial spasm is present, OR 4) when there is significant ptosis in the downgaze reading position.

GUIDELINE NOTE XXX HYPOTONY
Line 308, 686
~~360.3 (hypotony)~~ H44.40 (unspeficied hypotony of the eye) and H44.411-H44.19 (Flat anterior chamber hypotony) are only included on this line when resulting from a complication of a procedure. Non-procedure related cases are included on Line 686.

GUIDELINE NOTE XX Acne conglobata is only included on line XX if it involves recurrent abscesses or communicating sinuses.

GUIDELINE NOTE XXX ACUTE PERIPHERAL MOTOR AND DIGITAL NERVE INJURY
Line XXX
Repair of acute (< 8 weeks) peripheral nerve injuries are included on line XXX. Non-surgical medical care of these injuries are included on line 535. Chronic nerve injuries are included on line 557.

Appendix B

Guideline Changes to be Implemented October 1, 2012

New Guidelines

GUIDELINE NOTE XXX SIGNIFICANT INJURIES TO LIGAMENTS AND TENDONS
Lines 406, 455, 638
Significant injuries to ligaments and/or tendons are those that result in clinically demonstrable joint instability or mechanical interference with motion. Significant injuries are covered on line 406 or 455; non-significant injuries are included on line 638.

Modified Guidelines

GUIDELINE NOTE 32, CATARACT
Line 320
Cataract extraction is covered for binocular visual acuity of 20/50 or worse OR monocular visual acuity of 20/50 or worse with the recent development of symptoms related to poor vision ~~(headache, etc.).~~ that affect activities of daily living (ADLs). Cataract removal must be likely to restore vision and allow the patient to resume activities of daily living. There are rare instances where cataract removal is medically necessary even if visual improvement is not the primary goal: 1) hypermature cataract causing inflammation and glaucoma, 2) to see the back of the eye to treat posterior segment conditions that could not be monitored due to the poor view and very dense lens opacity (i.e. diabetic retinopathy, glaucoma); 3) Significant anisometropia causing aniseikonia.

GUIDELINE NOTE 39, ENDOMETRIOSIS AND ADENOMYOSIS
Line 417

A) Hysterectomy, with or without adnexectomy, for endometriosis may be appropriate when all of the following are documented (1-4):
   1) Patient history of (a and b):
      a) Prior detailed operative description or histologic diagnosis of endometriosis
      b) Presence of pain for more than 6 months with negative effect on patient's quality of life
   2) Failure of a 3-month therapeutic trial with both of the following (a and b), unless there are contraindications to use:
      a) Hormonal therapy (i or ii):
         i) ~~Oral contraceptives~~ Oral contraceptive pills or patches, progesterone-containing IUDs, injectable hormone therapy, or similar
         ii) Agents for inducing amenorrhea (e.g., GnRH analogs or danazol)
      b) Nonsteroidal anti-inflammatory drugs
   3) Nonmalignant cervical cytology, if cervix is present
   4) Negative preoperative pregnancy test result unless patient is postmenopausal or has been previously sterilized
B) Hysterectomy, with or without adnexectomy, for adenomyosis may be appropriate when all of the following are documented (1-6):

1) Patient history of dysmenorrhea, pelvic pain or abnormal uterine bleeding for more than six months with a negative effect on her quality of life.
2) Failure of a six-month therapeutic trial with both of the following (a and b), unless there are contraindications to use:
    a) Hormonal therapy (i or ii):
        i) ~~Oral contraceptives~~ Oral contraceptive pills or patches, progesterone-containing IUDs, injectable hormone therapy, or similar
        ii) Agents for inducing amenorrhea (e.g., GnRH analogs or danazol)
    b) Nonsteroidal anti-inflammatory drugs
3) ~~Age > 30 years~~
4) One of the following (a or b):
    a) Endovaginal ultrasound suspicious for adenomyosis (presence of abnormal hypoechoic myometrial echogenicity or presence of small myometrial cysts)
    b) MRI showing thickening of the junctional zone > 12mm
5) Nonmalignant cervical cytology, if cervix is present
6) Negative preoperative pregnancy test unless patient is postmenopausal or has been previously sterilized

GUIDELINE NOTE 44, MENSTRUAL BLEEDING DISORDERS

Line 441

Endometrial ablation or hysterectomy for abnormal uterine bleeding in Premenopausal women may be indicated when all of the following are documented (A-C):

C) Patient history of (1, 2, 3, 4, and 5):
    1) Excessive uterine bleeding evidence by (a and b):
        a) Profuse bleeding lasting more than 7 days and/or repetitive periods at less than 21-day intervals
        b) Anemia due to acute or chronic blood loss (hemoglobin less than 10) prior to iron therapy
    2) Failure of hormonal treatment for a six-month trial period or contraindication to hormone use (oral contraceptive pills or patches, progesterone-containing IUDs, injectable hormone therapy, or similar)
    3) No current medication use that may cause bleeding, or contraindication to stopping those medications
    4) Endometrial sampling performed
    5) No evidence of ~~remedial pathology~~ treatable intrauterine conditions or lesions by (a, b or c):
        a) Sonohysterography
        b) Hysteroscopy
        c) Hysterosalpingography
D) Negative preoperative pregnancy test result unless patient ~~is postmenopausal or~~ has been previously sterilized
E) Nonmalignant cervical cytology, if cervix is present

GUIDELINE NOTE 55, PELVIC PAIN SYNDROME

Line 543

Diagnostic MRI may be indicated for evaluation of pelvic pain to assess for Adenomyosis and to assist in the management of these challenging patients when all of the following are documented:

1) Patient history of dysmenorrhea, pelvic pain or abnormal uterine bleeding for more than six months with a negative effect on her quality of life.
2) Failure of a six-month therapeutic trial with both of the following (a and b), unless there are contraindications to use:
    a) Hormonal therapy (i or ii):
        i) ~~Oral contraceptives of Depro-Provera~~ Oral contraceptive pills or patches, progesterone-containing IUDs, injectable hormone therapy, or similar
        ii) Agents for inducing amenorrhea (e.g., GnRH analogs or danazol)
    b) Nonsteroidal anti-inflammatory drugs
3) ~~Age > 30 years~~
4) An endovaginal ultrasound within the past 12 months that shows no other suspected gynecological pathology if diagnostic MRI shows > 12mm thickening of the junctional zone, the presumptive diagnosis of adenomyosis is fulfilled. See Guideline Note 39.

Hysterectomy for chronic pelvic pain in the absence of significant pathology may be Indicated when all of the followingaredocumented (1-7):

5) Patient history of:
    a) No ~~remedial pathology~~ treatable conditions or lesions found on laporoscopic examination
    b) Pain for more than 6 months with negative effect on patient's quality of life
6) Failure of a six-month therapeutic trial with both of the following (a and b), unless there are contraindications to use:
    a) Hormonal therapy (i or ii):
        i) ~~Oral contraceptives~~ Oral contraceptive pills or patches, progesterone-containing IUDs, injectable hormone therapy, or similar
        ii) Agents for inducing amenorrhea (e.g., GnRH analogs or danazol)
    b) Nonsteroidal anti-inflammatory drugs
7) Evaluation of the following systems as possible sources of pelvic pain:
    a) Urinary
    b) Gastrointestinal
    c) Musculoskeletal
8) Evaluation of the patient's psychologic and psychosexual status for nonsomatic cause of symptoms
9) Nonmalignant cervical cytology, if cervix is present
10) Assessment for absence of endometrial malignancy in the presence of abnormal bleeding
11) Negative preoperative pregnancy test unless patient is postmenopausal or as been previously sterilized

GUIDELINE NOTE 59, DYSMENORRHEA

Line 571

Hysterectomy for dysmenorrhea may be indicated when all of the following are documented (A-G):

F) Patient history of:
    1) No ~~remedial pathology~~ treatable conditions or lesions found on laporoscopic examination
    2) Pain for more than 6 months with negative effect on patient's quality of life

G) Failure of a six-month therapeutic trial with both of the following (1 and 2), unless there are contraindications to use:
   1) Hormonal therapy (a or b):
      a) ~~Oral contraceptives~~ Oral contraceptive pills or patches, progesterone-containing IUDs, injectable hormone therapy, or similar
      b) Agents for inducing amenorrhea (e.g., GnRH analogs or danazol)
   2) Nonsteroidal anti-inflammatory drugs
H) Evaluation of the following systems as possible sources of pelvic pain:
   1) Urinary
   2) Gastrointestinal
   3) Musculoskeletal
I) Evaluation of the patient's psychologic and psychosexual status for nonsomatic cause of symptoms
J) Nonmalignant cervical cytology, if cervix is present
K) Assessment for absence of endometrial malignancy in the presence of abnormal bleeding
L) Negative preoperative pregnancy test unless patient ~~is postmenopausal or~~ has been previously sterilized

GUIDELINE NOTE 37, DISORDERS OF SPINE WITH NEUROLOGIC IMPAIRMENT
Line: 397
Neurologic impairment is defined as objective evidence of one or more of the following:

A) ~~Reflex loss~~ Abnormal reflexes
B) ~~Dermatomal~~ Segmental muscle weakness
C) ~~Dermatomal~~ Segmental sensory loss
D) EMG or NCV evidence of nerve root impingement
E) Cauda equina syndrome~~,~~
F) Neurogenic bowel or bladder
G) Long tract abnormalities

Section 3

ICD-10-CM

Pediatric Metabolic ICD 10 Recommendations

Specialty consultants: David Koeller, Neil Buist

CREATE NEW LINES

None

DELETE LINES

None

RESCORE LINES

Line 264 GLYCOGENOSIS

txtDline	txtScore	cmbCategory	HLY	Suffering	PopEffects	VulnerablePop	TertiaryPrev	Effectiveness	NeedForServices	NetCost	Text65	txtFundingLvl	txtProposedFundingLevel
264	1360	6	10	4	0	0	3	2	1	2	268	511	516

If don't eat for 3 hours go into coma and die, at high risk for liver cancer. Need transplant.

Category - Change to category 3 – chronic disease management

Healthy Life Years – change to 9, not universally fatal in childhood

Score 1950

New Line 158

Rescore line 329 DISORDERS OF AMINO-ACID TRANSPORT AND METABOLISM (NON PKU)
Current ranking

txtTreatment	txtDline	txtScore	cmbCategory	HLY	Suffering	PopEffects	VulnerablePop	TertiaryPrev	Effectiveness	NeedForServices	NetCost
MEDICAL THERAPY	329	1080	6	5	2	0	0	2	3	1	3

Chronic life-long conditions that are life-threatening

Change to category 3 – chronic disease management

Change healthy life years to 10

Change pain and suffering 2

Tertiary prevention is zeroed out due to chronic disease category

Effectiveness of treatment – change to 2, no treatment results in death. Treatment is effectective at reducing hospitalization but very few have normal neurologic status. Now doing liver transplant < age 1 with goal to prevent neurologic compromise.

Net cost 1

New score 2250

New line 110

GUIDELINES

None

RENAME LINES

Pediatric Metabolic ICD 10 Recommendations

370 ~~HEREDITARY FRUCTOSE INTOLERANCE~~, INTESTINAL DISACCHARIDASE AND OTHER DEFICIENCIES

329 DISORDERS OF AMINO-ACID TRANSPORT AND METABOLISM (NON PKU); HEREDITARY FRUCTOSE INTOLERANCE

Move the following codes to 329

- E74.12 Hereditary fructose intolerance
- E74.8 Other specified disorders of carbohydrate metabolism
- E74.19 Other disorder of fructose metabolism
- E74.4 Disorder of pyruvate

CODE PLACEMENT

Add genetic counseling codes

Code	CodeDesc	Current Placement	Recommended change
96040	Medical genetics and genetic counseling services, each 30 minutes face-to-face with patient/family	Updated description Codes,DMAP Diagnostic Procedure File	None
S0265	GENETIC COUNSELING, UNDER PHYSICIAN SUPERVISION, EACH 15 MINUTES	1104(A),1	Add to 13, 17, 47, 67, 264, 329, 370

to all Pediatric Metabolic Lines

txtDline	txtCondition
13	GALACTOSEMIA
17	PHENYLKETONURIA (PKU)
47	HYPOCALCEMIA, HYPOMAGNESEMIA AND OTHER ENDOCRINE AND METABOLIC DISTURBANCES SPECIFIC TO THE FETUS AND NEWBORN
67	METABOLIC DISORDERS INCLUDING HYPERLIPIDEMIA
264	GLYCOGENOSIS
329	DISORDERS OF AMINO-ACID TRANSPORT AND METABOLISM (NON PKU)
370	HEREDITARY FRUCTOSE INTOLERANCE, INTESTINAL DISACCHARIDASE AND OTHER DEFICIENCIES

Add to Line 264 GLYCOGENOSIS the medical nutrition codes

97802	Medical nutrition therapy; initial assessment and intervention, individual, face-to-face with the patient, each 15 minutes
97803	Medical nutrition therapy; re-assessment and intervention, individual, face-to-face with the patient, each 15 minutes
97804	Medical nutrition therapy; group (2 or more individual(s)), each 30 minutes

Genetic Chromosomal Abnormalities In Normal Individuals Issue Summary

Question: where should ICD-10 codes having to do with identified chromosomal abnormalities in normal individuals be placed?

Question Source: ICD – 10 pediatric metabolic consultants, Kerry Silvey (former GAC Chair)

Issue: These codes may be identified in pregnant women, or children or non-pregnant adults and have potential ramifications on inheritability and expected phenotypic outcomes. Therefore, it would be appropriate to have genetic counseling and possible additional lab testing.
From Kerry Silvey

Here are some examples.

1. During pregnancy
    1. If the fetus has an apparently balanced chromosome abnormality, it would be recommended to test the parents to see if the fetus inherited the balanced chromosome abnormality from one of the parents. If the fetus did inherit the balanced translocation from a parent and the parent is fine, it is less likely that the fetus would have problems. So the mother would be tested during pregnancy, and if she has the chromosome abnormality, genetic counseling would be appropriate for the mother during pregnancy.
    2. If an abnormal fetus has an unbalanced chromosome abnormality, it would be recommended to test the parents to see if the fetus' unbalanced translocation was derived from a balanced parental translocation from one of the parents. If the mother has a chromosome abnormality, it would be appropriate to offer her genetic counseling.
    3. If a pregnant woman has a previously detected balanced chromosome abnormality, it would be appropriate to offer her genetic counseling and prenatal diagnosis.
    4. If the father of the pregnancy has a previously detected balanced chromosome abnormality, it would be appropriate to offer the mother genetic counseling and prenatal diagnosis.
2. For an adult
    1. In the situations above where the father has a balanced chromosome abnormality, the situation would apply to an adult.
    2. If a baby or older child is found to have an unbalanced chromosome abnormality, it would be recommended to test the parents. If either parent has a balanced chromosome abnormality, genetic counseling would be appropriate.
3. For a child
    1. If a child of a parent with a balanced chromosome abnormality is found to have inherited that chromosome abnormality, then genetic counseling would be appropriate.

HERC Staff Recommendations

See Table below

Code	Description	Current Placement	Recommended placement
Q92.61	Marker chromosomes in normal individual	78 NEUROLOGICAL DYSFUNCTION IN BREATHING, EAT... 272 MULTIPLE ENDOCRINE NEOPLASIA 318 NEUROLOGICAL DYSFUNCTION IN POSTURE AND MO... 375 NEUROLOGICAL DYSFUNCTION IN COMMUNICATION ...	1 PREGNANCY 3 PREVENTIVE SERVICES, BIRTH TO 10 YEARS OF AGE 4 PREVENTIVE SERVICES, OVER AGE OF 10
Q95.0	Balanced translocation and insertion in normal individual	78 NEUROLOGICAL DYSFUNCTION IN BREATHING, EAT... 318 NEUROLOGICAL DYSFUNCTION IN POSTURE AND MO... 375 NEUROLOGICAL DYSFUNCTION IN COMMUNICATION ...	1,3,4
Q95.1	Chromosome inversion in normal individual	78 NEUROLOGICAL DYSFUNCTION IN BREATHING, EAT... 318 NEUROLOGICAL DYSFUNCTION IN POSTURE AND MO... 375 NEUROLOGICAL DYSFUNCTION IN COMMUNICATION ...	1,3,4

Follow Up of Recommendations for Converting Lines to ICD-10-CM

Ophthalmology

Specialty consultants: Charles Bock MD; Derek Louie, MD; Marc East, MD

The ophthalmology ICD-10 review was presented to the VbBS at their May, 2012 meeting. There were 3 outstanding follow up issues from the subcommittee's discussion. HERC staff have worked with the ophthalmology experts to address these issues.

Issue 1
Vitrectomy was proposed for addition to the non primary angle closure glaucoma line (line 149) with the coding specification "Vitrectomy (CPT 67036) is only covered for treatment of ICD-10 codes H40.831 to H40.839." The question was raised that vitrectomy can increase intraocular pressure, and so should this procedure be done for treatment of glaucoma. H40.8xx diagnoses are "aqueous misdirection."

Response from Dr. Louie:

> I spoke with a couple of specialists here. They say that vitrectomy is necessary if a tube gets blocked or in some certain valve implantation procedures if wanting a posterior placement. It's not a procedure that is likely to be used or abused as mostly the case would be fairly complex.

Issue 2
Should "laser treatment" be separated out in the treatment descriptions? The group was unsure how/if this differed from "surgical treatment." Basically, do we need to call out "laser treatment" if the treatment description is "surgical treatment" and why?

Response from Dr. Louie:

> My fear is that if laser treatment isn't specifically described, it may be easier to exclude the procedure, even if is the more indicated treatment. Does dermatology have specific laser treatment separated out from their other surgical procedures? Also, laser treatments are generally in office, out patient, quick and efficient with often only topical drops required pre and post procedure. Whereas a surgical treatment requires OR time and the rest of the associated planning/costs.

Issue 3
There was extensive discussion about moving nasolacrimal duct obstruction from the unfunded to the funded region of the Prioritized List.

a. The subcommittee wanted information on what percent of children do not have spontaneous resolution and would therefore need a procedure
b. Is there any way to differentiate children who will not have spontaneous resolution or who will have complications or otherwise will need the procedure? What is the age at which spontaneous resolution is unlikely? The subcommittee was interested in possibly drafting a guideline

allowing only higher risk kids or older kids or some other subset of children to have the procedure covered.

c. Is there good evidence that treatment makes a difference in long term outcomes?

Responses from Dr. Bock

1) Rate of spontaneous resolution: Dr. Bock provided an article which quoted spontaneous resolution rates of 70% by one year for children with symptoms at 6 months of age and 52% by one year for children with symptoms at 9 months of age. Dr. Bock thinks that about 25% of children with symptoms at any age prior to 1 year will not have spontaneous resolution by 1 year of age.
2) Is there any way to differentiate children at higher risk of not having spontaneous resolution or of having complications? "Spontaneous resolution becomes less likely with age, and increasingly less likely after 13 months of age. I am not aware of any characteristics that would place some children in a higher risk category than others for treatment vs. no treatment, except that children with more purulent infections at a younger age should be allowed early treatment if the committee opts for an age limit. Frankly, I'm really not sure this is the monetary straw that's going to break the back of OHP, though."
3) Is there evidence that treatment makes a difference in long term outcomes? "I can find no body in any literature search in any country that does not support the treatment of this disorder. I could no find no study (even natural history studies) that looked at not treating past the age of 12 to 18 months. I would consider this a pertinent negative." Dr. Bock also commented that the effectiveness of surgery appears to be stable until at least 36 months of age.

Dr. Bock provided an article on the cost-effectiveness of nasolacrimal duct probing vs. delayed probing (Frick 2011). This article seeks to determine how the rate of spontaneous resolution of congenital nasolacrimal duct obstruction affects the cost-effectiveness of deferred nasolacrimal duct probing in a surgical facility (DFPS) vs immediate office-based probing surgery (IOPS). The deferred option was a 6 month waiting period. Assuming a 75% spontaneous resolution rate, IOPS was more expensive ($771 vs $641) and slightly less effective (93.0% vs 97.5%) than DFPS.

Dr. Bock's comments on the Frick article: "The policy decision here, assuming NLDO treatment is included, is whether you want to restrict its use to children over a certain age for this fairly nominal savings, taking into account the variation in symptoms that some children have. The vast majority of pediatricians still refer these patients after 9 months of age, when they must have the OR procedure; they really only refer the ones with terrible symptoms early, and it seems unfair to these few to make them wait… Additionally, as I mentioned previously, I have been performing this procedure on OHP patients when possible (if they are young enough) at no charge for the past several years. Parents like having it over with and there is savings in not requiring antibiotics for months on end for the recurrent infections."

Follow Up of Recommendations for Converting Lines to ICD-10-CM

From Dr. East:
If the committee does decide to only allow limited coverage for treatment of congenital nasolacrimal duct obstruction, I would argue that the proposed guideline would the minimum acceptable for this condition. I would like to submit further evidence as to why this treatment is necessary to prevent possible complications, is extremely successful in cure, and may result in substantial savings if more costly surgeries can be avoided.

For your guideline, consider the following: Probing is indicated for congenital nasolacrimal duct obstruction (NLDO) that fails conservative management (such as *topical antibiotics, Crigler massage) and persists beyond 12 months of age or may be performed before 12 months of age if it has caused multiple episodes of purulent infections. Your initial phrase does not address patients who are older than 12 months *and* have had multiple episodes of purulent infections which is quite often the case. *topical antibiotics merely mask the symptoms of NLDO and in no way help fix the obstruction.

One of our classic articles Katowitz, et al (Katowitz, JA. Ophthalmology 94:698-705, 1987), showed that delaying initial probing beyond 13 months increases the risk of needing more complex and more costly procedures such as silicone intubation, dacrycystorhinostomy (DCR), and conjunctivorhinostomy (CJDCR). In addition, it is a rare occurrence but complications such as periorbital cellulitis as mentioned in Katowitz and also lacrimal sac abscess and fistula formation can also occur and often would mean hospital admission and extensive reconstruction as I witnessed in an OHP patient that was denied several times to have a simple probing performed and developed all three complications. In her particular case, it would have been much less expensive for the plan to have approved her probing and the patient would have had a better outcome. From this article, I believe it is clear that probing ideally would occur before 13 months of age. One concern that comes to mind is that this does not leave a big window of time between qualifying for probing at 12 months and increased risk of complications beyond 13 months.

Fortunately, probing has been shown to be extremely effective in curing the condition: 97% success rate when performed prior to 13 months of age. Even in older children with uncomplicated obstruction at the valve of Hasner (thin mucosal membrane at the lower end of the nasolacrimal duct where it empties into the nose) the success rate is excellent.

However, in this older group it is impossible to predict which children have a simple membrane and which will have more complicated obstructions and will likely need more extensive measures for cure. This is likely why Katowitz also showed that the success rate of probing decreases with increasing age. He found a success rate of 76% between 13 and 18 months and 33% after 24 months. Basically, if they are symptomatic at this point they still need the probing and the procedure itself becomes diagnostic if more unusual obstructions are encountered such as those described by Dr. Bock. The earlier

the probing, the higher the success rate. Now we have 2 reasons for treating before 13 months: less risk of complications, higher chance of success (cure).

Some would argue that probing in the office is a good alternative if performed relatively early (6-8 months of age) which would save the cost of going to the OR, remove the risk of general anesthesia if later probing is necessary, reduce the burden on health care for multiple office visits and anxiety that parents would have to endure with a chronically infected eye that they would need to massage several times a day and place topical antibiotics. Yes, some of these patients may have spontaneous resolution if surgery is delayed, but there are several positive reasons to consider early procedural cure.

Kassoff and Meyer (Arch Ophthalmol. 1995; 113:1103-4 and 1168-1171) argue that early in-office procedures may result in cost savings vs. hospital-based delayed surgery, but Kushner comments that decisions based on cost alone may miss several other critical factors.

Both articles point out that both early outpatient/office probings and relatively late in-hospital with general anesthesia probings are extremely and equally successful and both are excellent options. This was confirmed with the article that Dr. Bock submitted (Frick, K, et al. PEDIG Arch Ophthalmol. 2011;129(5):603-609), though the spontaneous resolution rate between 6 and 12 months has not definitively been determined and had a large impact on the cost differential between the two options. For the study's base case analysis, the resolution rate was assumed to be 75%.

Oftentimes, the choice of procedure depends on the wishes of the parents and what is feasible when considering the patient. If we decide to only allow surgery after 12 months of age, then this would remove office probing as an option (too big to restrain safely) and would necessitate general anesthesia in order to accomplish probing.

So in summary: treatment of nasolacrimal duct obstruction 1. Is extremely effective and almost always curative 2. Reduces risk of complications 3. Lowers risk of needing more costly and complicated surgery 4. Is equally effective with early probing in the office or delayed surgery under anesthesia.

As we look at the prioritization of this condition, clearly congenital NLDO is much different from the adult with acquired NLDO: its impact on healthy life years as we are speaking of our youngest of patients, the suffering of their caregivers as they deal with a chronically infected eye of their infant, the tertiary prevention of complications that would often require hospitalization and more costly surgery, the extremely high effectiveness of intervention and the net cost savings when you consider a lifetime of now being symptom-free.

I feel strongly that the treatment of congenital nasolacrimal duct obstruction should a covered benefit under the plan for the reasons above. I consider the guideline as stated above to be a compromise and the minimal acceptable.

Follow Up of Recommendations for Converting Lines to ICD-10-CM

Note: the ICD-9 codes for congenital nasolacrimal duct obstruction (743.65) is currently on lines 452 STRABISMUS WITHOUT AMBLYOPIA AND OTHER DISORDERS OF BINOCULAR EYE MOVEMENTS; CONGENITAL ANOMALIES OF EYE and 537 DYSFUNCTION OF NASOLACRIMAL SYSTEM; LACRIMAL SYSTEM LACERATION. The treatment codes are present on line 537.

Additional information: quoted rates of NLDO are 6/100 live births (6%). Given a 70% spontaneous resolution rate, the rate of continued symptomatic NLDO at 1 year would be 1.8/100 or 1.8% of children. The cost of the office procedure is $641; the cost of the OR procedure is $771.

Evidence

1) Evidence reviews
    - **a. NICE 2005**
        - i. Conventional treatment for NLDO is conventional treatment such as warm compresses, massage and probing of the nasolacrimal duct.
        - ii. Endoscopic dacryocystorhinostomy (DCR) is indicated for patients with lacrimal sac obstruction or nasolacrimal duct obstruction (NLDO) refractory to conventional treatment.
        - iii. "If NLDO is left untreated, the symptoms persist and may be distressing for the patient."

Articles submitted by experts

1) **Frick 2011**
    - **a.** Attempt to determine how the rate of spontaneous resolution of congenital nasolacrimal duct obstruction affects the cost-effectiveness of deferred nasolacrimal duct probing in a surgical facility (DFPS) vs immediate office-based probing surgery (IOPS).
    - **b.** The deferred option was a 6 month waiting period.
    - **c.** Assuming a 75% spontaneous resolution rate, IOPS was more expensive ($771 vs $641) and slightly less effective (93.0% vs 97.5%) than DFPS.
2) **Kassoff and Meyer 1995**
    - a. Decision analysis for office probing at 6 months vs delayed treatment to 12 months with OR procedure
    - b. 70% rate of spontaneous resolution of NLDO between 6 and 12 months assumed based on literature
    - c. Results: Both the early office probing strategy and the late hospital probing strategy yielded success rates greater than 99%. Based on prevailing fees, the late hospital strategy cost $2 310 000 more than the

early office strategy per 10 000 patients, even though fewer procedures were performed.

3) **Katowitz 1987**
   a. 427 patients with 572 eyes followed
   b. Conservative treatment with antibiotics and massage done; probing done at parental request
   c. Success rate 97% under 13 months of age; over 13 months 54.7%; 33.3% over 24 months of age
4) **Kushner 1998**
   a. 23 children with NLDO ofer than 18 months of age
   b. Excellent success found with probing for uncomplicated obstruction up to 4 yrs of age
5) **Kushner 1993, editorial**
   a. Argued that children whould be probed in the office between 6 and 8 months of age
   b. Avoids risks of anesthesia and increased hospital costs
6) **Kushner 1982**
   a. Massage is highly effective at resolving NLDO
   b. If massage is not effective, in office probing without anesthesia is highly effective
7) **Robb 1986**
   a. 107 patient case series
   b. Relief of symptoms in 90% of patient with first probing, and an additional 6% with second probing

Recommendations:

1) Approve recommendation for vitrectomy code addition to the glaucoma line
   1) Add vitrectomy code CPT 67036 to line 149
   2) Add coding specification to line 149
      A) "Vitrectomy (CPT 67036) is only covered for treatment of ICD-10 codes H40.831 to H40.839."
2) Approve line descriptions with "laser surgery"
3) Allow limited coverage of treatment of neonatal lacrimal duct obstruction
   a) Add neonatal lacrimal duct obstruction (ICD-10 H04.531-9) to line 452 STRABISMUS; CONGENITAL ANOMALIES OF EYE; keep on line 537 DYSFUNCTION OF NASOLACRIMAL SYSTEM; LACRIMAL SYSTEM LACERATION for adult patients
   b) Congenital lacrimal duct obstruction (ICD-9 743.65) is already present on line 452
   c) Change name of line 537 to DYSFUNCTION OF NASOLACRIMAL SYSTEM IN ADULTS; LACRIMAL SYSTEM LACERATION
   d) Add 68810-68840 (probing of nasolacrimal duct) to line 452 to pair with congenital lacrimal duct occlusion
   e) Add the guideline below to lines 452 and 537

i. Alternatively, do not add guideline per expert recommendation

GUIDELINE NOTE XXX NEONATAL NASOLACRIMAL DUCT OBSTRUCTION

Lines 452, 537

Probing of nasolacrimal duct (CPT 68810-68840) is included on line 452 only for children 12 months of age and older who have failed conservative management (e.g. topical antibiotics, Crigler massage) and for children younger than 12 months of age with multiple episodes of purulent infections.

Issue date: **February 2005**

NHS
National Institute for Clinical Excellence

Endoscopic dacryocystorhinostomy

1 Guidance

1.1 Current evidence on the safety and efficacy of endoscopic dacryocystorhinostomy appears adequate to support use of the procedure provided that the normal arrangements are in place for consent, audit and clinical governance.

1.2 Specific training is particularly important and the Royal College of Ophthalmologists and the British Association of Otorhinolaryngologists – Head & Neck Surgeons have agreed to produce joint standards for training.

2 The procedure

2.1 Indications

2.1.1 Endoscopic dacryocystorhinostomy (DCR) is indicated for patients with lacrimal sac obstruction or nasolacrimal duct obstruction (NLDO). NLDO is common, and presenting symptoms include watering of the eye and dacryocystitis (infection). Endoscopic DCR is usually considered for patients who have been refractory to conventional treatment such as warm compresses, massage and probing of the nasolacrimal duct. If NLDO is left untreated, the symptoms persist and may be distressing for the patient.

2.1.2 Endoscopic DCR is one of several techniques used to unblock the nasolacrimal duct. The standard approach for DCR is open surgery.

2.2 Outline of the procedure

2.2.1 Endoscopic DCR is a minimally invasive procedure used to bypass the nasolacrimal duct.

2.2.2 Under local anaesthesia, an endoscope is inserted into the nose. Surgical instruments or a laser are used to create an opening between the nose and the lacrimal sac through the mucosa and intervening bone. Silicone tubes can be inserted with the aim of improving long-term patency.

2.3 Efficacy

2.3.1 One randomised controlled trial reported success rates of 75% (24/32) for endoscopic DCR. After 12 months, 59% (19/32) of patients were asymptomatic. A large study that compared the use of lasers with electrocautery instruments for endoscopic DCR in 398 patients reported success rates of 92% (222/242) and 90% (28/31) using two different laser types, and 87% (39/45) for electrocautery instruments. At 1-year follow-up, 83% (65/78) of patients were symptom-free after a laser-assisted procedure in a case series of patients with dacryostenosis. For more details, refer to the Sources of evidence.

2.3.2 The Specialist Advisors stated that endoscopic DCR is now established practice, that failure rates are similar to conventional treatment, and that healing rates may be quicker.

Interventional Procedure Guidance 113

JOURNAL CLUB

Cost-effectiveness of 2 Approaches to Managing Nasolacrimal Duct Obstruction in Infants

The Importance of the Spontaneous Resolution Rate

Kevin D. Frick, PhD; Luxme Hariharan, MD, MPH; Michael X. Repka, MD, MBA; Danielle Chandler, MSPH; B. Michele Melia, ScM; Roy W. Beck, MD, PhD; for the Pediatric Eye Disease Investigator Group (PEDIG)

Objective: To assess the impact of the rate of spontaneous resolution of congenital nasolacrimal duct obstruction on the relative cost-effectiveness of deferred nasolacrimal duct probing in a surgical facility (DFPS) compared with an immediate office-based probing surgery (IOPS).

Methods: Data from the literature, Medicare 2009 fee schedule, and consensus assumptions were combined to populate a model of outcomes of 2 treatment strategies: immediate office-based probing (IOPS) and deferred facility-based probing (DFPS) (deferred for 6 months). Sensitivity analyses were conducted, varying the 6-month spontaneous resolution rate from 50% to 90%. Additional factors varied during analyses included surgical cost and each procedure's probability of success. Outcomes measured were overall cost of treatment, chance of cure, and months of symptoms avoided by 18 months of life.

Results: Under the base case, assuming a 75% spontaneous resolution rate during 6 months prior to deferred probing, IOPS is more expensive ($771 vs $641) and slightly less effective (93.0% vs 97.5%) than DFPS, although IOPS costs only $44 per month of symptoms avoided. At spontaneous resolution rates between 50% and 68%, IOPS costs less than DFPS (from $2 to $342 less), although it also is slightly less effective (from 2.0% to 3.8% less). At a 90% spontaneous resolution rate, IOPS costs $169 per month of symptoms avoided. As the rate of spontaneous resolution falls, the cost per additional success for DFPS increases to $16 709 at a 50% spontaneous resolution rate.

Conclusion: The relative cost-effectiveness of these strategies for treatment of nasolacrimal duct obstruction depends on the spontaneous resolution rate after diagnosis.

Arch Ophthalmol. 2011;129(5):603-609

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Group Information: A list of the members of the PEDIG was published in *Ophthalmology*. 2008;115(3):584, e2-e3; *J AAPOS*. 2009;13(3):306-307; and *Arch Ophthalmol*. 2009;127(5):636-637.

CONGENITAL NASOLACRIMAL duct obstruction (NLDO) is a common condition in the first year of life. Many cases resolve spontaneously or with massage by 12 months of age.[1-4] For children younger than 6 months, nonsurgical treatment is usually administered, including antibiotic eyedrops and massage of the lacrimal sac. For children older than 6 months, some surgeons offer probing of the nasolacrimal duct to clear the blockage in the office setting with topical anesthesia. Other surgeons continue medical management for varying lengths of time, with subsequent probing under general anesthesia in a hospital outpatient department (HOPD) or ambulatory surgical center (ASC) if spontaneous resolution has not occurred. The advantages of early probing in the office setting are avoidance of general anesthesia, immediate resolution of symptoms, fewer physician visits, fewer antibiotic prescriptions, and less costly procedures. The advantages of deferring the probing include more comfort with the procedure for the infant and avoidance of a surgical procedure and its associated costs if spontaneous resolution occurs.

Journal Club slides available at www.archophthalmol.com

Controversy remains among surgeons as to the preferred approach. Data that assist in the decision-making process include the rate of spontaneous resolution after the age at which an office procedure might be done and the success rates for probing procedures done early in the office and in a surgical facility after a period of observation. A wide range of spontaneous resolution rates has been documented[2,4,5] (from 32% to 95%), although the spontaneous resolution rate of symptoms present in infants at 6 months of age has been addressed in only 1 report,[6] a retrospective study that found the rate to be 70% by 12 months of age (26 of 37

Early Office-Based vs Late Hospital-Based Nasolacrimal Duct Probing

A Clinical Decision Analysis

Jordan Kassoff, MD, Dale R. Meyer, MD

Background: Controversy exists regarding the treatment of infants with symptomatic nasolacrimal duct obstruction. One philosophy advocates "early" nasolacrimal duct probing, generally in the office. An alternate strategy advocates medical management until the infant is approximately 12 months old to allow for spontaneous resolution, with those with persistent nasolacrimal duct obstruction usually treated by "late" probing in the hospital with the use of general anesthesia.

Methods: We used clinical decision analysis to compare these two opposing treatment strategies. A decision tree was constructed with the usual designations for probability nodes and decision points, comparing early probing at 6 months of age in the office and late probing at 12 months of age in the hospital. The initial decision point thus addressed treatment of children who still had symptomatic nasolacrimal duct obstruction at 6 months of age. One repeated probing under same-strategy conditions was performed for patients in whom initial office probing failed. Values for probability nodes were derived from the ophthalmic literature, including a 70% rate of spontaneous resolution of nasolacrimal duct obstruction between the ages of 6 and 12 months.

Results: Both the early office probing strategy and the late hospital probing strategy yielded success rates greater than 99%. Based on prevailing fees, the late hospital strategy cost $2 310 000 more than the early office strategy per 10 000 patients, even though fewer procedures were performed.

Conclusion: Early office probing and late hospital probing have similar high success rates, albeit at a higher cost for the late hospital probing strategy.

(Arch Ophthalmol. 1995;113:1168-1171)

WHEN AN infant presents with signs and symptoms of nasolacrimal duct obstruction (NLDO), the type and timing of treatment must be chosen. Within the first few months of life, usual management consists of massage of the lacrimal sac and use of topical antibiotics. The management of NLDO that persists more than several months is controversial. Early nasolacrimal duct probing, typically in an office setting, has been recommended.[1-4] Conversely, medical management up to 12 to 13 months of age also has been recommended, with those with persistent NLDO then being treated with probing, typically in a hospital setting with the patient under general anesthesia.[5-11]

Clinical decision analysis, a systematic approach to decision making under conditions of uncertainty,[12] can be used to evaluate these opposing treatment strategies. Clinical decision analysis formalizes and structures the problem, as well as provides a vocabulary and language (namely, probability and utility) in which to express it. Such analysis helps clarify and define the decision-making process. Clinical decision analysis has been used frequently in other disciplines (eg, internal medicine and cardiothoracic surgery). Many ophthalmologists, however, may be unfamiliar with this type of analysis.

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RESULTS

With the completed decision tree, it was possible to calculate final success rate and cost for each strategy based on bayesian methods. The early office probing strategy yielded a success rate of 99.6% (0.95+0.05[0.92]). The late hospital

See Materials and Methods on next page

Timing of Initial Probing and Irrigation in Congenital Nasolacrimal Duct Obstruction

JAMES A. KATOWITZ, MD, MICHAEL G. WELSH, MD

Abstract: A series of 427 patients with congenital dacryostenosis involving 572 eyes was seen at the Children's Hospital of Philadelphia. All patients were treated conservatively with antibiotics and massage prior to decision by the parents to request probing. Congenital dacryostenosis, as well as resolution of symptoms, were confirmed by clinical examination and use of a modified dye disappearance test. In 572 eyes, the success rate of initial probing was found to be 97% under 13 months of age. Over 13 months, however, the mean success rate was found to be 54.7%. When broken down into smaller age categories, a stepwise progression was observed from 76.4% between 13 and 18 months to 33.3% for patients probed after 24 months. In addition, the number and complexity of subsequent procedures appeared to increase along with the age at which the initial probing was performed. These data suggest that initial probing should be done prior to 13 months of age depending on the severity of symptoms and parent compliance with medical management. [Key words: congenital dacryostenosis, epiphora, irrigation, nasolacrimal duct, nasolacrimal obstruction, probing, silastic intubation.] Ophthalmology 94:698–705, 1987

Dacryostenosis is a partial or complete block in the nasolacrimal duct. It is the most common cause of congenital epiphora occurring in up to 6% of newborns.[1] Although probing of congenitally obstructed nasolacrimal ducts is sometimes a required step for resolution of the problem, the proper timing for initial probing has still not been settled conclusively. A number of studies have supported the concept that conservative medical management, continued until 12 or 13 months of age, will result in satisfactory resolution without surgical intervention in almost all cases.[2–6] Others, however, are equally vocal in support of early surgical intervention even in the first few months of life.[7–11] Supporters of this position contend that delays in opening the obstructed system are not only annoying to the affected children and their families but, more importantly, seem to increase the risks of inflammation and secondary fibrosis with a resultant decrease in the success of simple probing procedures.

The following retrospective study was undertaken in an effort to evaluate the relationship of age at initial probing to the success rate of the initial probing procedure.

METHODS

We reviewed the records of all patients with nasolacrimal problems who were examined in the Division of Pediatric Ophthalmology at the Children's Hospital of Philadelphia from January 1983 to December 1985. During this period, 512 consecutive patients presented to the authors with a history of tearing and/or mucopurulent drainage. Eighty-five patients were eliminated from this study because of complicating factors such as craniofacial anomalies, canalicular problems, trauma, amniotocele, acute dacryocystitis, lid malpositions, or previous probing. A total of 427 patients were identified as having "uncomplicated" congenital dacryostenosis involving 572 eyes.

From the Oculoplastic and Orbital Service, Division of Ophthalmology, the Children's Hospital of Philadelphia, and the Scheie Eye Institute Department of Ophthalmology, University of Pennsylvania School of Medicine, Philadelphia.

Presented at the American Academy of Ophthalmology Annual Meeting, New Orleans, November 1986.

Reprint requests to James A. Katowitz, MD, 1624 Locust Street, Suite 400, Philadelphia, PA 19103.

The Management of Nasolacrimal Duct Obstruction in Children Between 18 Months and 4 Years Old

Burton J. Kushner, MD

Purpose: Success with nasolacrimal duct probing has been shown to be inversely correlated with age. Consequently, several authors have suggested that the older child with a previously untreated nasolacrimal duct obstruction should undergo silicone intubation or a balloon catheterization as the primary surgical procedure because older children are more likely to have complicated obstructions that will not respond to simple probing. The purpose of this study was to investigate the hypothesis that older children with uncomplicated nasolacrimal duct obstruction can be successfully managed with simple probing. ***Methods:*** A 14-year prospective study was conducted of consecutive patients older than age 18 months with nasolacrimal duct obstruction. All were treated (subject to certain exclusion criteria) with a simple nasolacrimal duct probing. Careful attention was paid to the type of obstruction encountered at surgery. Outcome evaluation included a standard ophthalmologic examination plus a dye disappearance test at 6 weeks after surgery. A follow-up examination or telephone interview was conducted 1 year after surgery. ***Results:*** Of 378 children undergoing nasolacrimal duct probing, 23 met the inclusion criteria of being older than age 18 months (18 to 48 months). Seventy percent of the 23 children had a good outcome from the probing procedure. When analyzed by the type of obstruction, 12 of the 12 children (100%) with a simple membrane at the valve of Hasner had a good outcome. This contrasted with a success rate of 4 of 11 children (36%) who had complicated obstructions ($p < 0.01$). Complicated nasolacrimal duct obstructions were more prevalent in older children. ***Conclusion:*** A simple probing of the nasolacrimal duct has an excellent success rate in children up to 4 years old if an uncomplicated obstruction is found at the valve of Hasner. (J AAPOS 1998;2:57-60)

Nasolacrimal duct probing is the standard treatment for nasolacrimal duct obstruction when medical management has failed; it carries a high success rate.[1-5] The most common type of congenital nasolacrimal duct obstruction is a simple membrane at the valve of Hasner.[5-7] Several authors have reported that the success with nasolacrimal duct probing relates to the type of obstruction.[5, 8, 9] I found that nasolacrimal duct probing had a 95% success rate in patients with a simple obstruction at the valve of Hasner versus only 58% in those patients with more complicated types of obstruction.

Katowitz and Welsh[10] reported a 97% success rate with nasolacrimal duct probing for children younger than 13 months old; however, a stepwise progressive drop to only a 33% success rate was found for children older than age 24 months. I am aware that many clinicians use the study of Katowitz and Welsh as a justification for performing silicone intubation as the initial surgical procedure for older children (typically older than age 18 months) with nasolacrimal duct obstruction. Recently, Becker et al.[11] cited the study of Katowitz and Welsh as justification for performing balloon catheterization of the nasolacrimal duct as the initial surgical procedure in children older than age 12 months with nasolacrimal duct obstruction.

Some investigators suggested that the poorer results with nasolacrimal probing in older children may be a result of chronic infection and fibrosis.[8, 12] Alternatively, Paul and Shepherd[13] considered that it might be due to a self-selection process. They suggested that possibly older children with nasolacrimal duct obstruction are more likely to represent the pool of children born with more complicated types of obstructions that did not resolve spontaneously in the first year of life. If they are correct, the older child with a simple obstruction at the valve of Hasner might be expected to have a successful outcome from a simple nasolacrimal duct probing procedure. In fact, Robb[9] reported an 85% success rate with simple probing of the nasolacrimal duct in 13 children older than age 2 years, with successful outcomes in children as old as 5.5 years of

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Early Office-Based vs Late Hospital-Based Nasolacrimal Duct Probing

BECAUSE THE PUBLIC bears such a large percentage of health care costs, physicians are coming under increasing pressure to provide care that is not only skilled and compassionate but also cost-effective. Outcome analysis and cost-benefit ratios are buzzwords of the 1990s. In this issue of the ARCHIVES, Kassoff and Meyer[1] have addressed the issue of cost-effectiveness in the management of congenital nasolacrimal duct obstruction using a technique called clinical decision analysis and have provided us with important and useful information. They have concluded that early office-based probing is substantially more cost-effective than a later, hospital-based procedure. Although cost is an important consideration for decision making by patients and physicians, other factors that I will discuss below need to be part of the equation. To paraphrase the noted physicist, Nehls Bohr, "The opposite of a false statement is a true statement, but the opposite of a true statement may be another true statement." Although it appears from the article by Kassoff and Meyer that early office-based probing is more cost-effective, the opposite may also be true if other factors are considered.

First, I would like to state my bias on the subject of timing and location for nasolacrimal duct probing. I believe that for many patients an office-based nasolacrimal duct probing may represent the optimum treatment choice. I frequently probe nasolacrimal ducts in children at 6 to 8 months of age in the office without general anesthesia. I also believe that in many situations an early office-based probing may not be desirable. How and why I make these decisions is based on factors unique to each individual child, as well as on the parent's preferences, as I will outline below.

The clinical decision analysis of Kassoff and Meyer is based on a number of assumptions, some of which may not true. Let me point out a few examples. The success rates used by the authors for probing were not estimated using age-specific data. If success rates are different for probings performed at 6 months of age and at 12 months of age, the authors' final cost estimate per patient would be invalid. The mortality rate associated with general anesthesia cited by Kassoff and Meyer was based on three studies that were over 15 years old and included patients who received general anesthesia as long as 20 years ago. The mortality rate based on current techniques is probably less. Also, those three studies reflected complications experienced by children undergoing anesthesia for many different types of surgical procedures and of various duration. Probably the complication rate for children undergoing a short procedure, such as a nasolacrimal duct probing, would be less. Kassoff and Meyer probably overestimated the risk of general anesthesia because of the data they cited.

See also page 1168

On the other hand, they underestimated the complication rate with office-based probing. They considered it to be zero, because published success rates are similar for office-based and hospital-based procedures. This ignores the fact that published series reflect the results of surgeons who may be the most experienced and (possibly) skillful. I am aware of serious complications from office-based probing when carried out by surgeons who only occasionally perform that procedure. These have included canalicular laceration, creation of a false passage with subsequent preseptal cellulitis, and aspiration pneumonia. This last complication occurred in a child who was restrained and struggled for one-half hour while the surgeon attempted, with great difficulty, to probe the nasolacrimal duct.

Although I tend to be enthusiastic about office-based probing at about 6 to 8 months of age, I advise my fellows that they probably should not use this approach until they have substantial experience with probing in the more controlled setting afforded by general anesthesia. I suggest they wait until they can successfully perform the procedure reliably in about 30 to 40 seconds. In addition, I occasionally will decline attempting an office-based probing on a 6-month-old child if his or her size, activity level, or anatomic orbital configuration suggest possible difficulties in carrying out the procedure. The clinical decision analysis under discussion does not take these variables into account. In my opinion, if all children with a persistent nasolacrimal duct obstruction at 6 months of age were probed in the office, the complication rate would be substantially greater than that assumed in the analysis by Kassoff and Meyer.

Finally, I would like to expand on a larger issue, which was touched on by Kassoff and Meyer. Put in the most reductionist terms, the authors have shown that patients (or third-party insurers) may save $231 if they are willing to undergo a surgical procedure that will be unnecessary 70% of the time. When stated this way, the decision to perform early probing seems illogical. Ultimately, patients should have the right to decide. If their bottom line is that they wish to avoid surgical intervention, deferring surgery at 6 months of age with plans to perform a hospital-based probing at a later age, if nec-

essary, is an appropriate option. If their bottom line is a desire to avoid general anesthesia, an office-based probing at a younger age may be preferred. It would seem unconscionable to me for a third-party insurer to mandate that probing be performed at an earlier age, in an office-based setting, for cost reasons alone.

Ever since Descartes split the mind from the body, science has been accused of focusing on the specific at the expense of the whole. Francis W. Peabody has been quoted as saying:

> The application of the principles of science to the diagnosis and treatment of disease is only one limited aspect of medical practice. The practice of medicine includes the whole relationship of the physician to the patient. It is an art based, to an increasing extent on the medical sciences, but comprising much that still remains outside the the realm of any science. The art and science of medicine are not antagonistic, but are supplementary to each other.[2]

What then is the use of the article by Kassoff and Meyer for the practicing physician? While it does provide useful information regarding one aspect of the decision-making process—relative cost efficiency—there are other important criteria on which decisions should be based. What, then, should be the role of the physician in the decision as to when and where a child with a nasolacrimal duct obstruction should be probed? I believe it should be to give the patient's parents the information necessary to make an informed choice.

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Congenital Nasolacrimal System Obstruction

Burton J. Kushner, MD

• **A series of 132 children with congenital nasolacrimal system obstruction was prospectively randomized into three groups to determine the effectiveness of different modes of nonsurgical treatment. Massaging the nasolacrimal sac in a manner that increased hydrostatic pressure and ruptured the membranous obstruction was more effective (with a high degree of statistical significance) than simple massage or no massage at all. Of those children requiring nasolacrimal probing, a high success rate was found with simple obstructions in the nasolacrimal duct. Failure of probing was more common in canalicular obstructions or generally narrow nasolacrimal ducts. Silicone intubation of the nasolacrimal system is an effective way of treating cases not cured by probing.**

(*Arch Ophthalmol* 1982;100:597-600)

Congenital obstruction of the nasolacrimal drainage system is a condition frequently encountered by the ophthalmologist. Estimates of the incidence of congenital nasolacrimal obstruction range between 1.75% and 6% in newborns.[1,2] Cassidy[3] found obstruction of the nasolacrimal system in 13 of 15 stillborn infants. He postulated that in most instances the nasolacrimal duct becomes patent during the first several weeks of life and before the onset of the formation of tears.

The clinical presentation of a child with congenital nasolacrimal system obstruction is that of the epiphora and mattering of the eye. The diagnosis can be confirmed by gently pressing over the nasolacrimal sac and observing purulent material reflux from the puncta.

Controversy has existed regarding the proper management of congenital nasolacrimal system obstruction. Peterson and Robb[4] studied the natural course of congenital nasolacrimal system obstruction in 50 infants and found that 44 of the infants had spontaneous resolution of their problem with conservative management. They recommended that conservative treatment be carried out for six to eight months in the absence of congenital mucocele of the nasolacrimal sac. Jones and Wobrig[5] and Ffooks[6] recommended early probing of the nasolacrimal system, after only one to two weeks of topical therapy with antibiotic drops. Ffooks cited lacrimal abscess formation as a possible complication of delaying surgical treatment.[7] This approach is in contrast to that of many pediatricians, as pointed out by Peterson and Robb,[4] who still advise waiting until it is evident that the problem will not spontaneously subside before recommending a nasolacrimal system probing.

There is also lack of agreement on the type of proper medical management of congenital nasolacrimal system obstruction before probing the nasolacrimal duct. In 1923, Crigler[8] described a technique of putting digital pressure over the nasolacrimal system to increase the hydrostatic pressure in the nasolacrimal sac and cause a rupture of the membranous obstruction at the bottom of the nasolacrimal duct. He reported 100% success with this technique during a seven-year period, but he did not indicate the size of his clinical series. Price[9] reported a cure rate of 94.6% in 203 cases of congenital nasolacrimal duct obstruction by 1 year of age using a similar technique of nasolacrimal system massage. Jones and Wobrig[5] only advocated gentle pressure over the nasolacrimal sac, a technique that would be expected to express pus from the puncta but would not be expected to contribute to opening the blocked nasolacrimal duct. Weil[10] specifically advised against nasolacrimal system massage because it may cause pericystitis. Other authors referred only to "massaging" or "decompressing" the nasolacrimal system and were not specific about technique.[4,11,12]

Guerry and Kendy[2] recommended always performing nasolacrimal duct probings in the operating room with the patient under general anesthesia, whereas Jones and Wobrig[5] and Koke[12] advised performing the procedure on an outpatient basis on children younger than 1 year.

The purpose of this study was to determine the value of different techniques of nasolacrimal system massage in the treatment of congenital nasolacrimal obstruction, to investigate the incidence of different types of nasolacrimal system obstruction, and to analyze the success rate of probing the nasolacrimal system in each type of obstruction.

SUBJECTS AND METHODS

Between January 1975 and January 1978, all children with congenital nasolacrimal system obstruction seen by me in one office were prospectively randomized into three groups. Parents of children in one group were instructed to massage the nasolacrimal system in a manner similar to that described by Crigler (hydrostatic massage group). The technique consists of placing the index finger over the common canaliculus to block the exit of material through the lacrimal punctum and of stroking downward firmly to increase hydrostatic pressure within the nasolacrimal sac (Fig 1). The parents were instructed to perform this maneuver for five to ten strokes four times a day. Ten percent sulfacetamide sodium drops were prescribed to be used up to four times a day if the eye was mattered. A second group of parents was instructed to exert gentle pressure over the nasolacrimal system to express pus from the puncta four times a day (simple massage group). Sulfacetamide was prescribed to be used as in the first group. A third group was not advised to massage the nasolacrimal system; however, they were instructed to use sulfacetamide drops in a similar manner as in the other two groups (control group).

In all cases, notation was made as to whether the symptoms included epiphora, mattering of the eye, or both.

All children were treated according to the previously described protocol for one month or until 6 months of age, whichever came later, at which time the nasolacrimal system was probed.

In some patients the nasolacrimal system probing was carried out with general anesthesia; however, in most it was performed on an outpatient basis without sedation. Technique of probing consisted in mummifying the child as described by Koke[12] (Fig 2). After instillation of 1 drop of 0.5% proparacine hydrochloride in the conjunctival sac, the inferior nasolacrimal punctum was dilated with a punctum dilator and probing was carried out with Bowman's probe with a diameter of 1.10 mm. Notation was made of the nature and location of the obstruction at the time of probing. No fluid was irrigated through the nasolacrimal system and no attempt was made to confirm the presence of the nasolacrimal probe in the nose by instrumentation introduced to the nares if the probing was carried out on an unsedated infant. After probing, the child was placed on a regimen of topical ophthalmic drops containing a combination neomycin sulfate and 0.1% dexamethasone sodium phosphate three times a day and 0.125% phenylephrine nasal drops three times a day for one week. If the probing was unsuccessful in eliminating symptoms, it was repeated three to four weeks later in a similar manner. If a second nasolacrimal system probing failed to provide a cure, silicone tubes, as advocated by Quickert and Dry-

Accepted for publication July 16, 1981.

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Probing and Irrigation for Congenital Nasolacrimal Duct Obstruction

Richard M. Robb, MD

• **I reviewed the results of probing for congenital nasolacrimal duct obstruction in a series of 107 patients, with special reference to age at the time of probing. Relief of tearing and discharge was achieved in 90% of patients with the first probing, and an additional 6% were cured after a second probing. Altered nasolacrimal duct anatomy seemed to account for probing failures rather than any delay in probing. Primary probing continued to be an effective treatment well after 2 years of age and was successful in two 5-year-old patients. Unsuccessful probings were usually apparent at the time of the initial probing and were characterized by difficulty passing the probe and subsequent inability to irrigate saline through the nasolacrimal system into the nose. Dacryocystorhinostomy was an effective secondary procedure in the few patients in whom probing was unsuccessful.**

(*Arch Ophthalmol* 1986;104:378-379)

Although congenital obstruction of the nasolacrimal duct frequently clears spontaneously during the first year of life,[1-3] 5% to 15% of obstructions persist and require surgical correction. Probing of the duct is usually the initial surgical procedure[4] and is performed using topical anesthesia[5] or brief general anesthesia.[6] Probing has been considered an effective procedure,[4-6] but there is little data in the literature to establish its effectiveness at various ages,[7] and there is the concern among some ophthalmologists that persistent infection in the nasolacrimal duct consequent to untreated obstruction may make late probing less successful.[5] I have therefore reviewed my personal experience with probing and irrigation for congenital nasolacrimal duct obstruction between 1972 and 1985, with special reference to the success of the procedure at various ages.

Accepted for publication Nov 28, 1985.

From the Department of Ophthalmology, The Children's Hospital and Harvard Medical School, Boston.

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Table 1.—Probings for Congenital Nasolacrimal Duct Obstruction

Age of Patient at Time of Probing, mo	No. of Patients	Result*
<6	3	All cured
6-12	39	All cured, 2 after second probing
12-18	44	42 cured, 3 after second probing; 2 unsuccessful probings followed by DCR
18-24	8	All cured, 1 after second probing
>24†	13	11 cured; 2 unsuccessful probings followed by DCR

*DCR indicates dacryocystorhinostomy.
†These patients are listed in Table 2.

Table 2.—Late Probing for Congenital Nasolacrimal Duct Obstruction in 13 Patients More Than 2 Years of Age

Patient No.	Age at Time of Probing, yr	Eye(s) Probed	Result
1	2 1/12	OD	Cure
2	2 2/12*	OU	Fail‡
3	2 3/12*	OS	Cure
4	2 3/12	OS	Cure
5	2 3/12*	OD	Cure
6	2 7/12	OU	Cure
7	2 8/12	OU	Cure
8	3 3/12	OD	Cure
9	3 7/12	OU	Cure
10	3 11/12	OS	Cure
11	5 3/12	OS	Cure
12	5 7/12	OS	Cure
13	9 4/12†	OD	Fail‡

*Patient had undergone a previous probing by another ophthalmologist.
†Probing procedure was repeated within three weeks by me.
‡Patient later underwent dacryocystorhinostomy.

PATIENTS AND METHODS

During the years 1972 to 1985, I performed probing procedures for congenital nasolacrimal duct obstruction in 126 patients. Seventeen of these patients were excluded from analysis because their parents failed to report their postoperative status and did not respond to a questionnaire sent at the time of the study. The parents of another 21 children whose postoperative status was uncertain did respond to the questionnaire and, without exception, confirmed that their child's tearing and discharge had cleared after the probing. The postoperative conditions of all other patients had been documented in their medical records either through postoperative visits or by telephone calls with their parents. Two patients were excluded from analysis because their duct obstruction was associated with congenital dacryocystocele, and the probings had been carried out within the first week of life using topical anesthesia. All other probings were done using general anesthesia in a hospital ambulatory surgery unit or, if done in combination with another surgical procedure, in the main hospital operating room. My technique of probing and irrigation has been described elsewhere.[6] Two personal preferences deserve comment. First, I believe that performing the procedure using general anesthesia allows one to concentrate on gentle passage of the probe along the canaliculus, sac, and duct. One can often feel a sudden advance of the probe when the membranous obstruction is penetrated at the lower end of the duct. Second, irrigation of the nasolacrimal system after the probing allows one to confirm patency of the system. Only a small

ICD 10 Dermatology Follow Up – Severe Psoriasis Guideline

Question: How should the guideline for severe psoriasis be modified?

Question source: ICD 10 Dermatology consultants, VbBS

Issue: At the May 2012 VBBS meeting the following new "severe inflammatory skin disease" line. However, there was a lack of clarity on the language regarding first and second line treatments for psoriasis. But consensus that biologics could be tried after failure of first line treatments, and a trial of a second line treatments. The guideline on psoriasis was also modified to only include severe psoriasis, and not moderate-severe psoriasis. However, other types of severe inflammatory skin disease were included on this line. It was decided in collaboration with expert input and evidence review that biologics should only be covered for a plaque psoriasis indication on the new severe inflammatory skin disease line.

NEW LINE: SEVERE INFLAMMATORY SKIN DISEASE

ICD 10 codes to be placed on this line for the following conditions:

a. Psoriasis
b. Atopic dermatitis
c. Lichen planus
d. Darier disease (inherited epidermal disorder)
e. Pityriasis rubra pilaris
f. Discoid lupus

GUIDELINE NOTE XX

Severe inflammatory skin disease is defined as having functional impairment (e.g. inability to use hands or feet for activities of daily living, or significant facial involvement preventing normal social interaction) AND one or more of the following:

1. At least 10% of body surface area involved; and/or
2. Hand, foot or mucous membrane involvement.

The current moderate/severe psoriasis guideline reads as follows:

First line agents include topical agents, oral retinoids, phototherapy and methotrexate. Use of other systemic agents should be limited to those who fail, have contraindications to, or do not have access to first line agents.

Current DMAP PA criteria is as follows:

Goal(s):

- Cover topical antipsoriatics only for covered OHP diagnoses. Moderate/Severe psoriasis treatments are covered on the OHP. Treatments for mild psoriasis (696.1-696.2, 696.8), seborrheic dermatitis (690.XX), keroderma (701.1-701.3) and other hypertrophic and atrophic conditions of skin (701.8, 701.9) are not covered.

Initiative:

- Initiative

Length of Authorization:
Up to 12 months
Requires PA:
- Non-preferred drugs
- TC = 92 and HIC = L1A, L5F, L9D, T0A

Covered Alternatives:
- Topical corticosteroids, methotrexate, cyclosporine
- Preferred alternatives listed at http://www.oregon.gov/DHS/healthplan/tools_prov/pdl.shtml

The recommended treatment guideline from our dermatology consultants was:

Proposed Treatment Guideline for Severe Psoriasis

First-line agents
Potent topical corticosteroids
Narrowband UVB
Methotrexate
+/- cyclosporine

Second-line agents
Other systemic immunosuppressives: cyclosporine, mycophenolate mofetil
Oral retinoids – acitretin or isotretinoin
Biologics – infliximab, adalimumab, etanercept, ustekinumab, alefacept

HERC Staff Recommendation:
Modify new Severe Inflammatory Skin Disease Guideline as follows:
Guideline Note XX

For severe psoriasis, first line agents include topical agents, phototherapy and methotrexate. Second line agents include other systemic agents and oral retinoids and should be limited to those who fail, or have contraindications to, or do not have access to first line agents.
Biologics are only covered on this line for the indication of severe plaque psoriasis; after documented failure of first line agents and failure of (or contraindications to) a second line agent.

Consensus Guidelines for the Management of Plaque Psoriasis

Sylvia Hsu, MD; Kim Alexander Papp, MD, PhD; Mark G. Lebwohl, MD; Jerry Bagel, MD; Andrew Blauvelt, MD; Kristina Callis Duffin, MD; Jeffrey Crowley, MD; Lawrence F. Eichenfield, MD; Steven R. Feldman, MD, PhD; David F. Fiorentino, MD, PhD; Joel M. Gelfand, MD, MSCE; Alice B. Gottlieb, MD, PhD; Carmen Jacobsen, RN, MPH; Robert E. Kalb, MD; Arthur Kavanaugh, MD; Neil J. Korman, MD, PhD; Gerald G. Krueger, MD; Melissa A. Michelon, MD; Warwick Morison, MD; Christopher T. Ritchlin, MD, MPH; Linda Stein Gold, MD; Stephen P. Stone, MD; Bruce E. Strober, MD, PhD; Abby S. Van Voorhees, MD; Stefan C. Weiss, MD; Karolyn Wanat, MD; Bruce F. Bebo Jr, PhD

The *Canadian Guidelines for the Management of Plaque Psoriasis* were reviewed by the entire National Psoriasis Foundation Medical Board and updated to include newly approved agents such as ustekinumab and to reflect practice patterns in the United States, where the excimer laser is approved for psoriasis treatment. Management of psoriasis in special populations is discussed. In the updated guidelines, we include sections on children, pregnant patients or pregnant partners of patients, nursing mothers, the elderly, patients with hepatitis B or C virus infections, human immunodeficiency virus–infected patients, and patients with malignant neoplasms, as well as sections on tumor necrosis factor blockers, elective surgery, and vaccinations.

Arch Dermatol. 2012;148(1):95-102

Psoriasis skin manifestations have a wide range of presentations. The manifestations can be severe and widespread with signs and symptoms that greatly affect the patients' quality of life. Psoriatic arthritis, which can be severe and debilitating, is also present in many patients. Finally, psoriasis is associated with an increased risk of serious comorbidities, such as cardiovascular disease and the metabolic syndrome, that complicate management and increase the risk of early death.[1]

Inflammation driven by T cells is responsible for keratinocyte growth and angiogenesis in the psoriatic plaque.[2] Many of the newly introduced therapies for psoriasis were therefore devised to target T cells or their inflammatory mediators.[3,4] Indeed, many of the classic topical and systemic therapies and phototherapies also act at least in large part by interfering with this same immune response.

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MANAGEMENT OF MODERATE TO SEVERE PLAQUE PSORIASIS

Definitions of moderate to severe psoriasis in the literature are varied and contradictory. Moderate psoriasis is commonly distinguished from milder forms of the disease on the basis of scores on 1 or more clinical metrics, such as the Psoriasis Area and Severity Index (PASI); the percentage of the body surface area affected; and the Dermatological Life Quality Index (eAppendix, chapter 3, Table 2; http://www.archdermatol.com). Although numerical cutoffs are necessary in clinical trial design, they have little value in daily prac-

Section 4

New Discussion Items

Percutaneous Allergy Testing for Drug Sensitivities

Question: Should percutaneous allergy testing (CPT 95004, 95015) be covered for evaluation of drug allergies?

Question source: DMAP

Issue: DMAP has received multiple requests for pairing of percutaneous allergy testing for evaluation of allergies to presumed medications. Currently, no allergy testing is on line 113 POISONING BY INGESTION, INJECTION, AND NON-MEDICINAL AGENTS, which contains medication allergy diagnoses. Specifically, DMAP has requested that 995.17 (Other drug allergy) and 995.29 (Unspecified adverse effect of other drug, medicinal and biological) be paired with 95004, 95024, and 95075. 95010 also appears to be possibly appropriate to pair.

Most drug allergies are straightforward to diagnose: a patient has a rash or other reaction after being administered a medication. However, in some cases, the cause of the reaction is unclear. A 2002 American Family Physician review on allergy testing listed "Previous suspected systemic reaction to drug, and clinical indication for suspected drug" as a major indication for allergy testing.

CPT Code	Code Description	Current Lines	Recommendation
95004	Percutaneous tests (scratch, puncture, prick) with allergenic extracts, immediate type reaction, including test interpretation and report by a physician, specify number of tests	11,236,234,338,575,553,554,585,594	Do not add to line 113, not specific for medications/drugs
95010	Percutaneous tests (scratch, puncture, prick) sequential and incremental, with drugs, biologicals or venoms, immediate type reaction, including test interpretation and report by a physician, specify number of tests	11,236,234,338,575,553,554,585,594	Add to line 113
95015	Intracutaneous (intradermal) tests, sequential and incremental, with drugs, biologicals, or venoms, immediate type reaction, including test interpretation and report by a physician, specify number of tests	11,236,234,338,575,553,554,585,594	Add to line 113
95024	Intracutaneous (intradermal) tests with allergenic extracts, immediate type reaction, including test interpretation and report by a physician, specify number of tests	11,236,234,338,575,553,554,585,594	Do not add to line 113, not specific for medications/drugs
95075	Ingestion challenge test (sequential and incremental ingestion of test items, eg, food, drug or other substance such as metabisulfite)	11,236,234,338,575,553,554,585,594	Add to line 113

Recommendation:

1) Add 95010, 95015 and 95075 to line 113

Unspecified Disorders of Nervous System

Question: Should "Unspecified disorders of nervous system" (ICD-9 349.9) be a covered diagnosis?

Question source: Dr. John Sattenspiel, OHP Medical Director

Issue: Currently 249.9 (Unspecified disorders of the nervous system) is covered on the dysfunction lines (Lines 78, 318, 375, 407—our database also lists on Diagnostic List) where it pairs with a variety of treatments including OT and PT. There are no subdiagnoses for 349.9 listed in the ICD-9 coding texts.

From Dr. Sattenspiel:

> We are seeing an uptick of requests for OT based on 'sensory' issues such as sensory processing disorder, sensory integration disorder, etc. While the literature implies these symptoms are attributable to underlying autism, ASD, and ADHD many of the requests are coming in with the dx of 349.9, CNS Disorder Unspecified, found on covered lines 78, 318, 375, and 407 where it pairs with OT services. I do not believe this is an appropriate use of the diagnostic code and beyond that am concerned that there is no objective evidence that 'sensory diet' training or any other of the OT modalities for addressing the condition are effective. We are routinely denying these services due to the lack of evidence of efficacy but would appreciate some support and/or guidance from the HSC

Recommendation:

1) Remove 349.9 from lines 78, 318, 375, 407 (Dysfunction Lines)
2) Advise DMAP to remove 349.9 from the Diagnostic Work Up file and place 349.9 on the Excluded List

Amputation for Burns Resulting in Deep Necrosis

Question: Should amputation be a covered procedure for burns resulting in deep tissue necrosis?

Question source: DMAP, HERC staff

Issue: DMAP received a request for a finger amputation (CPT 26952) for treatment of deep necrosis of a finger resulting from a burn (ICD-9 944.41). Burns resulting in deep necrosis of tissue are found on line 64 BURN FULL THICKNESS GREATER THAN 10% OF BODY SURFACE. There are currently no amputation codes on this line, although all extremity burns resulting in deep tissue necrosis are on this line. HERC staff on reviewing this issue determined that many amputation codes should be considered for addition to this line.

Codes recommended for addition to line 64

CPT code	Code Description	Current Lines
25900	Amputation, forearm, through radius and ulna;	167,190,208,250,346,355
25905	Amputation, forearm, through radius and ulna; open, circular (guillotine)	167,190,208,250,346,355
25907	Amputation, forearm, through radius and ulna; secondary closure or scar revision	167,190,208,250,308,346
25909	Amputation, forearm, through radius and ulna; re-amputation	167,190,208,250,308,346
25915	Krukenberg procedure	208,250,308,346,355
25920	Disarticulation through wrist	190,208,250,308,346,355
25922	Disarticulation through wrist; secondary closure or scar revision	190,208,216,250,308,346
25924	Disarticulation through wrist; re-amputation	190,208,250,308,346
25927	Transmetacarpal amputation;	190,208,250,308,346,355
25929	Transmetacarpal amputation; secondary closure or scar revision	190,208,250,308,346
25931	Transmetacarpal amputation; re-amputation	190,208,250,308,346
26910	Amputation, metacarpal, with finger or thumb (ray amputation), single, with or without interosseous transfer	167,190,208,250,308,346,355
26951	Amputation, finger or thumb, primary or secondary, any joint or phalanx, single, including neurectomies; with direct closure	167,190,208,216,250,271,297,346,355,602
26952	Amputation, finger or thumb, primary or secondary, any joint or phalanx, single, including neurectomies; with local advancement flaps (V-Y, hood)	167,190,208,250,346,355
27888	Amputation, ankle, through malleoli of tibia and fibula (eg, Syme, Pirogoff type procedures), with plastic closure and resection of nerves	190,208,250,271,288,346,355,467
28800	Amputation, foot; midtarsal (eg, Chopart type procedure)	190,208,250,271,288,346,355
28805	Amputation, foot; transmetatarsal	190,208,250,271,288,346,355
28810	Amputation, metatarsal, with toe, single	190,208,216,250,271,288,346,355,410
28820	Amputation, toe; metatarsophalangeal joint	190,208,216,250,271,346,355,549
28825	Amputation, toe; interphalangeal joint	190,208,216,250,271,346,355,549

Recommendation:

1) Add above amputation codes for extremities to line 63

Balloon Dilation of Intracranial Vasospasm

Question: should balloon dilation of intracranial vasospasm be a covered procedure for treatment of transient cerebral ischemia?

Question source: DMAP

Issue: DMAP has received a request to pair balloon dilation of intracranial vasospasm with 435.9 Unspecified transient cerebral ischemia. 435.9 is currently on line 440 TRANSIENT CEREBRAL ISCHEMIA; OCCLUSION/STENOSIS OF PRECEREBRAL ARTERIES WITHOUT OCCLUSION. The balloon dilation CPT codes (61640-61642) are currently located on line 201 SUBARACHNOID AND INTRACEREBRAL HEMORRHAGE/HEMATOMA; CEREBRAL ANEURYSM; COMPRESSION OF BRAIN and on the DMAP Excluded List in the HERC database.

Current List information:
61640 Balloon dilatation of intracranial vasospasm, percutaneous; initial vessel
61641 Balloon dilatation of intracranial vasospasm, percutaneous; each additional vessel in same vascular family (List separately in addition to code for primary procedure)
61642 Balloon dilatation of intracranial vasospasm, percutaneous; each additional vessel in different vascular family (List separately in addition to code for primary procedure).

Evidence

1) Evidence reviews
    - **a. NICE 2007**
        - i. The evidence on the efficacy of endovascular stent insertion for intracranial atherosclerotic disease is currently inadequate and the procedure poses potentially serious safety concerns. Therefore, this procedure should only be used in the context of clinical research
        - ii. No mention of balloon dilation without stent insertion
    - **b. SIGN 2008**
        - i. Balloon dilation not mentioned as treatment modality
    - c. No Cochrane reviews are available
2) Other policies
    - **a. BCBS 2011**
        - i. Investigational in all cases
    - **b. Aetna 2011**
        - i. Aetna considers percutaneous transluminal angioplasty, with or without stenting, of the intra-cranial arteries experimental and investigational for the prophylaxis or treatment of either of the following conditions and all other indications because its effectiveness for these indications has not been established:
            1. Atherosclerotic stenosis of intra-cranial arteries; *or*
            2. Cerebral vasospasm after aneurysmal subarachnoid hemorrhage

Recommendation:

1) Do not add coverage for balloon dilation for transient cerebral ischemia
    - a. Do not add 61640-61642 to line 440
    - b. Procedure is experimental

Issue date: October 2007

NHS
National Institute for
Health and Clinical Excellence

Endovascular stent insertion for intracranial atherosclerotic disease

1 Guidance

1.1 The evidence on the efficacy of endovascular stent insertion for intracranial atherosclerotic disease is currently inadequate and the procedure poses potentially serious safety concerns. Therefore, this procedure should only be used in the context of clinical research including collecting data which should be submitted to a national register when available. Research should clearly define patient selection and be designed to provide outcome data based on follow-up of at least 2 years.

2 The procedure

2.1 Indications

2.1.1 Intracranial atherosclerotic disease (ICAD) is the narrowing or obstruction of arteries within the skull that supply the brain. It is caused by atheromatous plaques in the innermost layer of the arterial wall, called the endothelium. ICAD can lead to transient ischaemic attack (TIA), stroke or death, and is usually diagnosed in patients who have presented with a TIA or stroke.

2.1.2 In the first instance, ICAD is usually treated with antithrombotics, together with medication to control risk factors for atherosclerosis. Some patients may be suitable for treatment with extracranial to intracranial bypass surgery. Angioplasty without stent insertion may also be a treatment option.

2.2 Outline of the procedure

2.2.1 Under general or local anaesthetic, a catheter is introduced over a guidewire into the affected intracranial artery percutaneously. A balloon may be inflated within the narrowed portion of the artery to pre-dilate it before inserting a stent. It is possible to insert more than one stent or to treat more than one lesion in a treatment session.

2.3 Efficacy

2.3.1 The rate of successful stent deployment in the studies ranged from 90% to 100%.

2.3.2 In a case series of 104 patients treated with intracranial stenting, 72 (69%) had no recurrent ischaemic symptoms or TIA events during 6-month follow-up and 24 (23%) had no change in neurological symptoms.

2.3.3 In a case series of 45 patients, 4 of 43 patients were reported to have had strokes during 6-month follow-up (10%), 2 within 30 days of the procedure. TIA events were reported in 0% (0/40), 8% (2/26) and 10% (2/21) in three case series with a mean follow-up of 10 months, 2 months and 12 months, respectively.

2.3.4 In the case series of 104 patients, the degree of mean postprocedural stenosis was 18%, compared with 75% preprocedurally. In the remaining eight case series, mean postprocedural stenosis ranged from 3% to 32%, compared with 72% to 93% preprocedurally. In all patients in six of the nine case series, postprocedural stenosis was 30% or less (preprocedural stenosis not given).

Interventional procedure guidance 233

2.3.5 Restenosis was defined as ≥ 50% stenosis of the target vessel in two studies, and was not defined in the other three studies which reported on rates of restenosis. Reported restenosis rates ranged between 5% and 22% in six case-series studies involving between 7 and 58 patients, and with a follow-up of between 2 and 10 months. For more details, refer to the 'Sources of evidence' section.

2.3.6 The Specialist Advisers considered this procedure to be lacking long-term efficacy data in relation to restenosis rates. They considered there to be uncertainty about which stenoses should be treated and about the best type of stent to place.

2.4 Safety

2.4.1 Reported rates of procedure-related mortality ranged from 0% to 5% in nine case series involving between 21 and 104 patients.

2.4.2 The systematic review assessing 79 studies of 1999 patients treated with angioplasty with or without stenting for ICAD reported that the rate of death was 3.4% (95% confidence interval [CI] 2.0 to 4.8, range 0 to 33), the rate of perioperative stroke was 8.0% (95% CI 5.5 to 10.4, range 0 to 50), and the rate of other perioperative complications was 9.9% (95% CI 6.4 to 13.4, range 0 to 75). Furthermore, in those studies with follow-up of at least 1 year after the procedure, the risk of stroke or death was 5.6% (95% CI 3.7 to 7.6, range 0 to 50).

2.4.3 Overall procedure-related complication rates (including deaths) reported in eight studies involving between 21 and 104 patients ranged between 3% and 39%. For more details, refer to the 'Sources of evidence' section.

2.4.4 The Specialist Advisers considered this procedure to be of uncertain safety with potential adverse effects including death, stroke, arterial dissection, vessel occlusion, vessel rupture, haemorrhage, restenosis and stent thrombosis.

3 Further information

3.1 NICE has issued interventional procedures guidance on high-flow interposition extracranial to intracranial bypass (www.nice.org.uk/IPG073).

Andrew Dillon
Chief Executive
October 2007

Information for patients

NICE has produced information describing its guidance on this procedure for patients and their carers ('Understanding NICE guidance'). It explains the nature of the procedure and the decision made, and has been written with patient consent in mind. This information is available from www.nice.org.uk/IPG233publicinfo

Sources of evidence

The evidence considered by the Interventional Procedures Advisory Committee is described in the following document.

'Interventional procedure overview of endovascular stent insertion for intracranial atherosclerotic disease', March 2007.

Available from: www.nice.org.uk/ip386overview

Ordering information
Copies of this guidance can be obtained from the NHS Response Line by telephoning 0870 1555 455 and quoting reference number N1341. 'Understanding NICE guidance' can be obtained by quoting reference number N1342.

The distribution list for this guidance is available at www.nice.org.uk/IPG233distributionlist

National Institute for Health and Clinical Excellence
MidCity Place, 71 High Holborn, London WC1V 6NA; www.nice.org.uk

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Scottish Intercollegiate Guidelines Network

Management of patients with stroke or TIA: assessment, investigation, immediate management and secondary prevention

A national clinical guideline

December 2008

1 Introduction

1.1 THE NEED FOR A GUIDELINE

Stroke is the third biggest cause of mortality and the main cause of disability in Scotland. The Scottish Borders Stroke study measured the community based crude incidence of first-ever-in-a-lifetime stroke (FES) in Scotland at 2.8/1,000 of the population.[1] Around 8,500 FESs occur per annum in Scotland,[2] with around 130,000 in the UK.

Stroke is an age-dependent illness and approximately 80% of people with FES present at 65 years of age and over.[1,2] The predicted increase in this proportion of the Scottish population and the greater increase in the older old (over 80 years),[3] will be paralleled by a continuing increase in the number of strokes in Scotland.

1.2 REMIT OF THE GUIDELINE

1.2.1 OVERALL OBJECTIVES

This guideline replaces SIGN 13 Management of patients with stroke I: Assessment, investigation, immediate management and secondary prevention and SIGN 14 Management of patients with stroke II: Management of carotid stenosis and carotid endarterectomy, which were published in 1997.[4,5]

This guideline takes account of advances in both stroke treatment and imaging. The guideline uses an updated evidence base to support recommendations for all aspects of acute stroke care including the management of carotid stenosis.

The guideline complements SIGN 78 Management of patients with stroke: Identification and management of dysphagia and SIGN 64 Management of patients with stroke: Rehabilitation, prevention and management of complications, and discharge planning.[6,7] As stroke shares risk factors with cardiovascular disease, primary prevention of stroke has been covered in SIGN 97 Risk estimation and the prevention of cardiovascular disease[8] and is not discussed in this guideline.

The guideline follows the patient pathway from the onset of a suspected stroke and covers management of suspected stroke by non-stroke specialist practitioners, and clinical and radiological assessment. Treatment, monitoring and prevention of recurrent stroke in patients with ischaemic stroke, transient ischaemic attack (TIA), primary intracerebral haemorrhage (PICH) and asymptomatic carotid disease are also covered. There is also a section addressing the information and support needs of patients and carers. Management of patients with subarachnoid haemorrhage has not been addressed.

The guideline development group has based the recommendations in this guideline on answers to a series of key questions (*see Annex 1*).

1.2.2 TARGET USERS OF THE GUIDELINE

This guideline will be of particular interest to stroke physicians, stroke nurses, specialists in geriatric medicine and care of the elderly, neurologists, neuroradiologists, radiologists, vascular surgeons, cardiologists, general physicians, speech and language therapists, physiotherapists, occupational therapists, pharmacists, specialists in emergency medicine, specialists in intensive care, paramedics, specialists in public health, nurse practitioners and general practitioners.

Medical Policy

Subject: Carotid, Vertebral and Intracranial Artery Angioplasty with or without Stent Placement
Policy #: SURG.00001 **Current Effective Date:** 05/20/2011
Status: Revised (Coding updated 10/01/2011) **Last Review Date:** 05/19/2011

Description/Scope

Percutaneous extracranial carotid artery angioplasty with stenting (CAS) or without stenting has been investigated as a minimally invasive alternative to the current standard of care, that being carotid endarterectomy (CEA). CAS involves the passage of a balloon catheter into the lesion via a femoral or brachial artery, followed by dilatation of the blocked segment and stent placement. Similarly, angioplasty and stenting has been investigated as an alternative treatment for individuals with symptomatic intracranial artery and extracranial vertebrobasilar artery stenosis, since these conditions portend a poor prognosis even with medical therapy, and surgical intervention is associated with considerable morbidity. This document addresses percutaneous extracranial carotid, vertebral and intracranial artery angioplasty with or without stent placement.

Position Statement

Medically Necessary:

Extracranial Angioplasty with Stent Placement:

Percutaneous extracranial carotid artery angioplasty with stent placement (CAS) performed in conjunction with an FDA approved carotid stent system is considered **medically necessary** for individuals who meet **one or more** of the following criteria **AND** can be safely treated by this approach **AND** who have no angiographically visible intraluminal thrombus:

A. Symptomatic stenosis equal to or greater than 50%, **or** asymptomatic stenosis equal to or greater than 80%; **AND**
   One or more of the following conditions which put the individual at a high risk for surgery:
   a. Congestive heart failure (NYHA Class III/IV) or left ventricular ejection fraction less than 30%; or
   b. Open heart surgery needed within the next 6 weeks; or
   c. Recent myocardial infarction (greater than 24 hours and less than 4 weeks); or
   d. Severe chronic obstructive pulmonary disease; or
   e. Unstable angina (CCS class III/IV).
   OR
B. Symptomatic stenosis equal to or greater than 50%, **or** asymptomatic stenosis equal to or greater than 80%;
   AND
   One or more of the following conditions:

Clinical Policy Bulletin:
Angioplasty and Stenting of Extra-Cranial and Intra-Cranial Arteries
Number: 0276
Policy History
Last Review: 07/13/2011 Effective: 08/28/1998
Next Review: 03/24/2012
Review History
Definitions
Additional Information
Clinical Policy Bulletin Notes
Policy

1. Aetna considers percutaneous transluminal angioplasty of the extra-cranial carotid and vertebral arteries, with or without stent implantation and embolic protection, medically necessary in symptomatic individuals with at least 50 % stenosis of the carotid artery or the vertebral artery.
2. Aetna considers percutaneous transluminal angioplasty, with or without stenting, of the intra-cranial arteries experimental and investigational for the prophylaxis or treatment of either of the following conditions and all other indications because its effectiveness for these indications has not been established:
    1. Atherosclerotic stenosis of intra-cranial arteries; *or*
    2. Cerebral vasospasm after aneurysmal subarachnoid hemorrhage.

Background
Angioplasty and stenting of extra-cranial arteries:
Angioplasty and stenting of carotid and vertebral lesions represents a promising therapeutic option in patients at increased risk for surgical endarterectomy. Endarterectomy has several limitations. Among them, patients with severe coronary artery disease show a 3-fold increase in morbidity and mortality due to cardiac complications of the procedure. Similarly, the risk of endarterectomy is increased in patients with carotid lesions that, due to their anatomic location, are difficult to approach surgically. In addition, the risk of endarterectomy is increased in patients having previous cervical radiotherapy, previous endarterectomy, or lesions located or extending distally in the internal carotid artery.

There has been a high level of interest in treating extra-cranial carotid and vertebral stenoses with either angioplasty or stents. The relative technical ease of performing such procedures has attracted considerable attention in the clinical community. Such procedures are being performed in several academic medical centers. A prospective, randomized, controlled, multicenter clinical trial designed to compare these endovascular interventions with the "gold standard" of surgical carotid endarterectomy is currently being conducted.

Although a recent study found that among patients with severe carotid artery stenosis and co-existing conditions (symptomatic carotid-artery stenosis of at least 50% of the luminal diameter or an asymptomatic stenosis of at least 80 %), carotid stenting with the use of an emboli-protection device is not inferior to carotid endarterectomy (Yadav et al, 2004), the editorial accompanying this study stated that the small sample size and the study end points prevent

Question: How should SBIRT CPT and HPCPS codes be handled in respect to the Prioritized List?

Question source: DMAP and HERC staff

Issue: SBIRT stands for "screening, brief intervention, and referral to treatment." It is an evidence-based, effective method to intervene in alcohol and drug misuse used in primary care. Many primary care practices use a brief screening tool at one visit a year to assess for misuse.

Code	Code description	Current Placement
99408	Alcohol and/or substance (other than tobacco) abuse structured screening (eg, AUDIT, DAST), and brief intervention (SBI) services; 15 to 30 minutes	All medical lines on Prioritized List
99409	greater than 30 minutes	All medical lines on Prioritized List
99420	Administration and interpretation of heath risk assessment instrument	All medical lines on Prioritized List
G0396	Alcohol and/or substance abuse (other than tobacco) structured assessment (e.g. AUDIT, DAST) and brief intervention, 15 to 30 minutes	Lines 3 and 4 (Prevention Lines)
G0397	Greater than 30 minutes	Lines 3 and 4 (Prevention Lines)
H0049	Alcohol and/or drug screening	Ancillary List → Diagnostic List
H0050	Alcohol and/or drug service, brief intervention	Ancillary List → Diagnostic List

Currently, the CPT codes for SBIRT are on all medical lines on the Prioritized List. However, the HPCPS codes for this service have historically been on the DMAP "Ancillary List." Ancillary List items are covered if the diagnosis is covered, and are generally DME type items, such as wheelchairs. DMAP is moving these codes to the "Diagnostic List" where they can always be used, but they are only being opened for encounter purposes and only for behavioral health providers.

Several issues relating to SBIRT code placement have been identified. First, providers are now being trained to code only 99420 when a screening is done but no intervention is necessary. Therefore, CPT code 99408 or 99409 should only be used when an intervention is performed, with the code used depending on the length of time required. In these situations, 99420 is not billed because the screening is also captured in 99408 and 99409. Whereas H0049 and H0050 are only used for patients who are already enrolled in substance abuse programs, 99408 and 99409 may be appropriate to use when there is not a substance abuse/dependence problem, but the use of alcohol or drugs may be impacting other medical conditions they have (e.g., diabetes). Currently 99408 and 99409 appear on all medical therapy lines and it is recognized that reimbursement may be denied if an intervention is performed in conjunction with a non-funded

condition (e.g., common cold). In these situations the intervention would need to pair with an abuse/dependence diagnosis or a funded diagnosis to be reimbursed. It has also been discovered that two current HPCPS codes that can be used to report SBIRT and have the same exact definition as the intervention CPT codes are only on lines 3 and 4 (Prevention Lines).

Recommendations:

1) Place the screening only code, 99420, on the Diagnostic List and remove it from the Prioritized List medical therapy lines where it is currently located
2) Place G0396 and G0397 on the other medical therapy lines that the SBIRT intervention CPT codes appear on (beyond Lines 3 and 4 where they already appear)

Urinary Incontinence and Physical Therapy Requirement Issue Summary

Question: Should Guideline Note 47 be modified with regard to the alternative therapy requirement prior to surgical treatment for urinary incontinence?

Question Source: From Dr. Thieman, Associate Medical Director, CareOregon

Issue:
Dr. Thieman raised the concern that for chronic conditions physical therapy is only covered for the OHP Plus population up to twice per year, and for OHP Standard, there is no physical therapy coverage because of the legislative exclusion. However, the Guideline Note 47 as written, requires 3 months of alternative therapy, with two discrete options given: pessaries or physical therapy.

Current List status:

GUIDELINE NOTE 47, URINARY INCONTINENCE

Line 478

Surgery for genuine stress urinary incontinence may be indicated when all of the following are documented (A-G):

A) Patient history of (1, 2, and 3):
   1) Involuntary loss of urine with exertion
   2) Identification and treatment of transient causes of urinary incontinence, if present (e.g., delirium, infection, pharmaceutical causes, psychological causes, excessive urine production, restricted mobility, and stool impaction)
   3) Involuntary loss of urine on examination during stress (provocative test with direct visualization of urine loss) and low or absent post void residual
B) Patient's voiding habits
C) Physical or laboratory examination evidence of either (1 or 2):
   1) Urethral hypermobility
   2) Intrinsic sphincter deficiency
D) Diagnostic workup to rule out urgency incontinence
E) Negative preoperative pregnancy test result unless patient is postmenopausal or has been previously sterilized
F) Nonmalignant cervical cytology, if cervix is present
G) Patient required to have 3 months alternative therapy (e.g., pessaries or physical therapy, including bladder training, pelvic floor exercises, biofeedback, and/or electrical stimulation, as available)

Effective treatments for urinary incontinence include (from UpToDate):

1) Pharmacologic agents (e.g. antimuscarinics, duloxetine)
2) managing fluid intake, avoiding caffeinated beverages and alcohol, and treating constipation and cough
3) bladder training, pelvic muscle exercises, and biofeedback
4) electrical stimulation

HERC Staff Recommendations

1) Modify Guideline Note 47 as follows:

GUIDELINE NOTE 47, URINARY INCONTINENCE
Line 478
Surgery for genuine stress urinary incontinence may be indicated when all of the following are documented (A-G):
A) Patient history of (1, 2, and 3):
   1) Involuntary loss of urine with exertion
   2) Identification and treatment of transient causes of urinary incontinence, if present (e.g., delirium, infection, pharmaceutical causes, psychological causes, excessive urine production, restricted mobility, and stool impaction)
   3) Involuntary loss of urine on examination during stress (provocative test with direct visualization of urine loss) and low or absent post void residual

B) Patient's voiding habits
C) Physical or laboratory examination evidence of either (1 or 2):
    1) Urethral hypermobility
    2) Intrinsic sphincter deficiency

D) Diagnostic workup to rule out urgency incontinence
E) Negative preoperative pregnancy test result unless patient is postmenopausal or has been previously sterilized
F) Nonmalignant cervical cytology, if cervix is present
G) Patient required to have 3 months of alternative therapy (e.g., pessaries or physical therapy, including bladder training, pelvic floor exercises, biofeedback, and/or electrical stimulation, as available). If limited coverage of physical therapy is available, patients should be taught pelvic floor exercises by their treating provider, physical therapist or trained staff, and have documented consistent practice of these techniques over the 3 month period.

Central Versus Foraminal Spinal Stenosis Issue Summary

Question: Should guideline Note 41 be modified to clarify what type of spinal stenosis is included?

Question Source: Lyle Jackson, Medical Director, MRIPA

Issue: There is a lack of clarity as to whether central and/or foraminal stenosis are included in Guideline Note 41.

Current Prioritized List Status

GUIDELINE NOTE 37, DISORDERS OF SPINE WITH NEUROLOGIC IMPAIRMENT

Line 400

Neurologic impairment is defined as objective evidence of one or more of the following:
A) Reflex loss
B) Dermatomal muscle weakness
C) Dermatomal sensory loss
D) EMG or NCV evidence of nerve root impingement
E) Cauda equina syndrome,
F) Neurogenic bowel or bladder

GUIDELINE NOTE 41, SPINAL DEFORMITY, CLINICALLY SIGNIFICANT

Line 434

Clinically significant scoliosis is defined as curvature greater than or equal to 25 degrees or curvature with a documented rapid progression. Clinically significant spinal stenosis is defined as having MRI evidence of moderate to severe spinal stenosis in addition to a history of neurogenic claudication, or objective evidence of neurologic impairment consistent with MRI findings (see Guideline Note 37).

DIAGNOSTIC GUIDELINE D4, MRI OF THE SPINE

MRI of the spine is covered in the following situations:

1. Recent onset of major or progressive neurologic deficit (objective evidence of reflex loss, dermatomal muscle weakness, dermatomal sensory loss, EMG or NCV evidence of nerve root impingement), suspected cauda equine syndrome (loss of bowel or bladder control or saddle anesthesia), or neurogenic claudication in patients who are potential candidates for surgery;
2. Clinical or radiological suspicion of neoplasm; or,
3. Clinical or radiological suspicion of infection.

Background

Spinal stenosis is narrowing of the spinal column that causes pressure on the spinal cord, or narrowing of the openings (called neural foramina) where spinal nerves leave the spinal column. Spinal stenosis is more common with advancing age and is anticipated to increase in prevalence in the US as the population ages. The diagnosis of spinal stenosis typically requires both clinical symptoms as well as radiographic evidence since neither alone is adequately sensitive or specific. Although spinal stenosis could occur at any level, the cervical and lumbar regions are most frequently affected. The figure below illustrates that similar pathophysiology can lead to either or both central and foraminal stenosis (Katz, 2008).

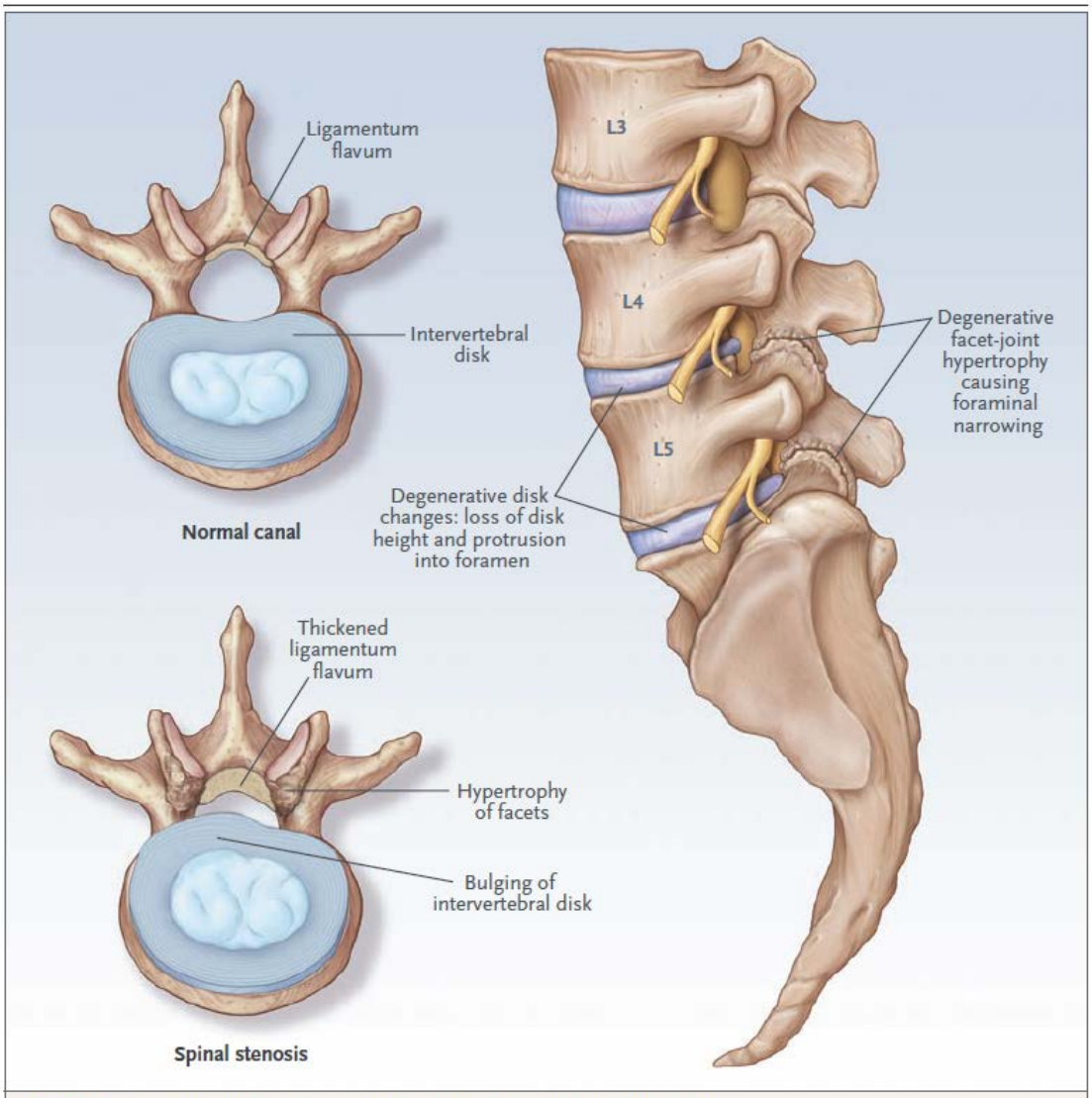

Figure 1. Pathoanatomical Features of Degenerative Lumbar Spinal Stenosis.

The axial view in the upper left shows a cross-section of a normal lower lumbar spine. The axial view in the lower left shows a cross-section of the lumbar spine with features that are consistent with lumbar spinal stenosis, including bulging of the intervertebral disk, thickening of the ligamentum flavum, and hypertrophy of the facet joints. The sagittal view on the right shows loss of disk height, disk protrusion, and facet-joint osteoarthritis, all leading to foraminal stenosis.

In general there is a dearth of evidence regarding the natural history, diagnostic criteria, and therapeutic efficacy of different treatments for spinal stenosis. Clinical guidelines and evidence-based reviews do not distinguish between central stenosis versus foraminal stenosis (also known as lateral space stenosis).

Evidence-based Reviews

None current

Past Evidence-based Reviews

AHRQ 2001

Evidence Report/Technology Assessment: Number 32 (Now available only as archive)

1) Purpose: To assess, in an evidence-based fashion, the efficacy of methods for the diagnosis and treatment of degenerative lumbar spinal stenosis
2) Outcome: Findings relevant to MRI study for diagnosis include
    i. Very little evidence exists correlating degree of narrowing of the lumbar spine with the presence or severity of the signs, symptoms, or conditions associated with stenosis. Difficulties associated with finding such correlations include the presence of large numbers of patients with spinal narrowing and no symptoms, variations in canal size throughout the population, and lack of an accepted system for quantifying the degree of narrowing.
    ii. Only two studies provide numerical evidence of a lack of association between severity of stenosis or spondylolisthesis and severity of back pain. There is some evidence of a relationship between degree of spinal instability and back pain. Among patients with symptomatic stenosis, those with more severe stenosis tend to have more disability.
    iii. Clinical signs and symptoms do not appear to predict whether the results of imaging tests will show severe stenosis.
3) No distinction between central and foraminal stenosis was reported.

National Guidelines

None

Professional Society Clinical Guidelines

North American Spine Society, 2011

Imaging Recommendations

MRI is the most appropriate first imaging test in a patient with history and physical examination findings consistent with degenerative lumbar spinal stenosis to identify central canal narrowing or nerve root impingement(Grade B)[4]. No distinction made between central and foraminal stenosis.

Summary

Guideline Note 41 should apply to both central versus foraminal spinal stenosis since contemporary diagnostic criteria and therapeutic options are similar. Clinical findings associated with foraminal compression (pain, weakness, or numbness in the nerve root distribution) are accounted for in Guideline Note 37.

HERC Staff Recommendation:

Modify Guideline Note 41 as follows:

> Clinically significant scoliosis is defined as curvature greater than or equal to 25 degrees or curvature with a documented rapid progression. Clinically significant spinal stenosis is defined as having MRI evidence of moderate to severe central or foraminal spinal

stenosis in addition to a history of neurogenic claudication, or objective evidence of neurological impairment consistent with MRI findings (see Guideline Note 37).

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CLINICAL PRACTICE

Lumbar Spinal Stenosis

Jeffrey N. Katz, M.D., M.Sc., and Mitchel B. Harris, M.D.

This Journal *feature begins with a case vignette highlighting a common clinical problem. Evidence supporting various strategies is then presented, followed by a review of formal guidelines, when they exist. The article ends with the authors' clinical recommendations.*

A 72-year-old woman with hypertension presents with a 4-month history of lower back discomfort that radiates to both buttocks and lateral thighs. Previously, she had walked 2 miles (3.2 km) a day; now she has difficulty walking 2 blocks and standing up for more than 15 minutes at a time. Her physical examination is notable only for a slightly stooped posture and a reduction of vibratory sensibility in both great toes. How should she be evaluated and treated?

THE CLINICAL PROBLEM

From the Department of Orthopedic Surgery (J.N.K., M.B.H.) and the Division of Rheumatology, Immunology, and Allergy, Department of Medicine, Brigham and Women's Hospital (J.N.K.); Harvard Medical School (J.N.K., M.B.H.); and Harvard School of Public Health (J.N.K.) — all in Boston. Address reprint requests to Dr. Katz at the Center for Orthopedic and Arthritis Outcomes Research, Brigham and Women's Hospital, 75 Francis St., B3, Boston, MA 02115, or at jnkatz@partners.org.

N Engl J Med 2008;358:818-25.

The clinical syndrome of neurogenic claudication due to lumbar spinal stenosis is a frequent source of pain in the lower back and extremities, impaired walking, and other forms of disability in the elderly. Although the incidence and prevalence of symptomatic lumbar spinal stenosis have not been established, this condition is the most frequent indication for spinal surgery in patients older than 65 years of age.[1]

The radiographic and anatomical finding of lumbar spinal stenosis is characterized by narrowing of the spinal canal. Narrowing may occur in the central spinal canal, in the area under the facet joints (subarticular stenosis), or more laterally, in the neural foramina (Fig. 1). Compression of nerve roots causes symptomatic lumbar spinal stenosis, which can be categorized into several distinct entities defined by the underlying reasons for the spinal nerve-root compression. One commonly used classification system is shown in Table 1, with minor modification.[2]

Congenital stenosis is characterized by a narrow canal resulting from congenitally short pedicles. Patients with this condition tend to become symptomatic in the third, fourth, or fifth decade of life, when mild degenerative changes that would otherwise be tolerated result in narrowing sufficient to cause symptoms.

Acquired degenerative stenosis is the most frequently observed type of spinal stenosis. It arises in conjunction with age-associated degeneration of the lumbar disks and facet joints. The degenerative process leads to a loss of disk height with associated bulging of the disk and infolding of the ligamentum flavum. Facet osteoarthritis and hypertrophy (from the increased stresses associated with disk degeneration) often lead to osteophyte formation and thickening of the joint capsule (Fig. 1). With advanced osteoarthritis of the facet joints, cysts originating from these joints can protrude into the spinal canal, further compromising the space available for the neural elements.

Stenosis may also arise in the setting of degenerative spondylolisthesis or spondylolisthesis arising from a prior spondylolysis (disruption in pars interarticularis). In such cases, back pain typically predominates, with neurogenic claudication as a secondary symptom. Stenosis can also occur at the level adjacent to a prior spinal fusion. Other recognized causes of spinal stenosis include an excess of corticosteroids, either endogenous (e.g., Cushing's syndrome) or iatrogenic, as well as Paget's disease, acromegaly, and several other conditions (Table 1).

Surgery for degenerative lumbar spondylosis (Review)

Gibson JNA, Waddell G

This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in *The Cochrane Library* 2008, Issue 4

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[Intervention Review]

Surgery for degenerative lumbar spondylosis

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ABSTRACT

Background

Surgical investigations and interventions account for large health care utilisation and costs, but the scientific evidence for most procedures is still limited.

Objectives

Degenerative conditions affecting the lumbar spine are variously described as lumbar spondylosis or degenerative disc disease (which we regarded as one entity) and may be associated with back pain and associated leg symptoms, instability, spinal stenosis and/or degenerative spondylolisthesis. The objective of this review was to assess current scientific evidence on the effectiveness of surgical interventions for degenerative lumbar spondylosis.

Search methods

We searched CENTRAL, MEDLINE, PubMed, Spine and ISSLS abstracts, with citation tracking from the retrieved articles. We also corresponded with experts. All data found up to 31 March 2005 are included.

Selection criteria

Randomised (RCTs) or quasi-randomised trials of surgical treatment of lumbar spondylosis.

Data collection and analysis

Two authors assessed trial quality and extracted data from published papers. Additional information was sought from the authors if necessary.

Main results

Thirty-one published RCTs of all forms of surgical treatment for degenerative lumbar spondylosis were identified. The trials varied in quality: only the more recent trials used appropriate methods of randomization, blinding and independent assessment of outcome. Most of the earlier published results were of technical surgical outcomes with some crude ratings of clinical outcome. More of the recent trials also reported patient-centered outcomes of pain or disability, but there is still very little information on occupational outcomes. There was a particular lack of long term outcomes beyond two to three years. Seven heterogeneous trials on spondylolisthesis, spinal stenosis and nerve compression permitted limited conclusions. Two new trials on the effectiveness of fusion showed conflicting results. One showed that fusion gave better clinical outcomes than conventional physiotherapy, while the other showed that fusion was no

Treatment of Degenerative Lumbar Spinal Stenosis Summary

Evidence Report/Technology Assessment: Number 32

Under its Evidence-based Practice Program, the Agency for Healthcare Research and Quality (AHRQ) is developing scientific information for other agencies and organizations on which to base clinical guidelines, performance measures, and other quality improvement tools. Contractor institutions review all relevant scientific literature on assigned clinical care topics and produce evidence reports and technology assessments, conduct research on methodologies and the effectiveness of their implementation, and participate in technical assistance activities.

Overview

The purpose of this report is to assess, in an evidence-based fashion, the efficacy of methods for the diagnosis and treatment of degenerative lumbar spinal stenosis. Degenerative lumbar spinal stenosis is defined as a focal narrowing of the spinal canal, although there is some variation among investigators about the precise amount of narrowing that must occur before the canal is considered stenotic.

The general term "spinal stenosis" can be applied to three root compression mechanisms alone or in combination:

Evidence-Based Clinical Guidelines for Multidisciplinary Spine Care

Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis

NASS Evidence-Based Clinical Guidelines Committee

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William O. Shaffer, MD
Committee Co-Chair, Natural History Co-Chair

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Medical/Interventional Treatment Chair

John Toton, MD
Surgical Treatment Chair

Steven Hwang, MD
Richard Mendel, MD
Charles Reitman, MD

I. Introduction

Objective

The objective of the North American Spine Society (NASS) Clinical Guideline for the Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis is to provide evidence-based recommendations to address key clinical questions surrounding the diagnosis and treatment of degenerative lumbar spinal stenosis. The guideline is intended to reflect contemporary treatment concepts for symptomatic degenerative lumbar spinal stenosis as reflected in the highest quality clinical literature available on this subject as of July 2010. The goals of the guideline recommendations are to assist in delivering optimum, efficacious treatment and functional recovery from this spinal disorder.

Scope, Purpose and Intended User

This document was developed by the North American Spine Society Evidence-based Guideline Development Committee as an educational tool to assist practitioners who treat patients with degenerative lumbar spinal stenosis. The goal is to provide a tool that assists practitioners in improving the quality and efficiency of care delivered to patients with degenerative lumbar spinal stenosis. The NASS Clinical Guideline for the Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis provides a definition and explanation of the natural history of degenerative lumbar spinal stenosis, outlines a reasonable evaluation of patients suspected to have degenerative lumbar spinal stenosis and outlines treatment options for adult patients with a diagnosis of degenerative lumbar spinal stenosis.

THIS GUIDELINE DOES NOT REPRESENT A "STANDARD OF CARE," nor is it intended as a fixed treatment protocol. It is anticipated that there will be patients who will require less or more treatment than the average. It is also acknowledged that in atypical cases, treatment falling outside this guideline will sometimes be necessary. This guideline should not be seen as prescribing the type, frequency or duration of intervention. Treatment should be based on the individual patient's need and doctor's professional judgment and experience. This document is designed to function as a guideline and should not be used as the sole reason for denial of treatment and services. This guideline is not intended to expand or restrict a health care provider's scope of practice or to supersede applicable ethical standards or provisions of law.

Patient Population

The patient population for this guideline encompasses adults (18 years or older) with a chief complaint of neurogenic claudication without associated spondylolisthesis. Furthermore, the nature of the pain and associated patient characteristics (eg, age) should be more typical of a diagnosis of spinal stenosis than herniated disc.

North American Spine Society

Evidence-Based Clinical Guidelines
for Multidisciplinary Spine Care

Diagnosis and Treatment of Cervical Radiculopathy from Degenerative Disorders

NASS Evidence-Based Guideline Development Committee

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John Toton, MD

I. Introduction

Objective

The objective of the North American Spine Society (NASS) Clinical Guideline for the *Diagnosis and Treatment of Cervical Radiculopathy from Degenerative Disorders* is to provide evidence-based recommendations to address key clinical questions surrounding the diagnosis and treatment of cervical radiculopathy from degenerative disorders. The guideline is intended to reflect contemporary treatment concepts for cervical radiculopathy from degenerative disorders as reflected in the highest quality clinical literature available on this subject as of May 2009. The goals of the guideline recommendations are to assist in delivering optimum, efficacious treatment and functional recovery from this spinal disorder.

Scope, Purpose and Intended User

This document was developed by the North American Spine Society Evidence-Based Guideline Development Committee as an educational tool to assist practitioners who treat patients with cervical radiculopathy from degenerative disorders. The goal is to provide a tool that assists practitioners in improving the quality and efficiency of care delivered to patients with cervical radiculopathy from degenerative disorders. The NASS *Clinical Guideline for the Diagnosis and Treatment of Cervical Radiculopathy from Degenerative Disorders* provides a definition and explanation of the natural history of cervical radiculopathy from degenerative disorders, outlines a reasonable evaluation of patients suspected to have cervical radiculopathy from degenerative disorders and outlines treatment options for adult patients with a diagnosis of cervical radiculopathy from degenerative disorders.

THIS GUIDELINE DOES NOT REPRESENT A "STANDARD OF CARE," nor is it intended as a fixed treatment protocol. It is anticipated that there will be patients who will require less or more treatment than the average. It is also acknowledged that in atypical cases, treatment falling outside this guideline will sometimes be necessary. This guideline should not be seen as prescribing the type, frequency or duration of intervention. Treatment should be based on the individual patient's need and physician's professional judgment. This document is designed to function as a guideline and should not be used as the sole reason for denial of treatment and services. This guideline is not intended to expand or restrict a health care provider's scope of practice or to supersede applicable ethical standards or provisions of law.

Patient Population

The patient population for this guideline encompasses adults (18 years or older) with a chief complaint of pain in a radicular pattern in one or both upper extremities related to compression and/or irritation of one or more cervical nerve roots.

DIAGNOSTIC GUIDELINE D1, NON-PRENATAL GENETIC TESTING GUIDELINE

Coverage of genetic testing in a non-prenatal setting shall be determined the algorithm shown in Figure C.1 unless otherwise specified below.

A) Related to genetic testing for patients with breast/ovarian and colon/endometrial cancer suspected to be hereditary, or patients at increased risk to due to family history.
   1) Services are provided according to the Comprehensive Cancer Network Guidelines.
      a) Lynch syndrome (hereditary colorectal and endometrial cancer) services (CPT 81292-81300, 81317-81319) should be provided as defined by the NCCN Clinical Practice Guidelines in Oncology. Colorectal Cancer Screening. V.2.2011 (10/22/10). ***www.nccn.org***
      b) BRCA1/BRCA2 testing services (CPT 81211-81217) for women without a personal history of breast and/or ovarian cancer should be provided to high risk women as defined in Guideline Note 3 or as otherwise defined by the US Preventive Services Task Force.
      c) BRCA1/BRCA2 testing services (CPT 81211-81217) for women with a personal history of breast and/or ovarian cancer and for men with breast cancer should be provided according to the NCCN Clinical Practice Guidelines in Oncology. Genetic/Familial High-Risk Assessment: Breast and Ovarian. V.1.2011 (4/7/11). ***www.nccn.org***
   2) Genetic counseling should precede genetic testing for hereditary cancer. Very rarely, it may be appropriate for a genetic test to be performed prior to genetic counseling for a patient with cancer. If this is done, genetic counseling should be provided as soon as practical.
      a) Pre and post-test genetic counseling by the following providers should be covered.
         i) Medical Geneticist (M.D.) - Board Certified or Active Candidate Status from the American Board of Medical Genetics
         ii) Clinical Geneticist (Ph.D.) - Board Certified or Active Candidate Status from the American Board of Medical Genetics.
         iii) Genetic Counselor - Board Certified or Active Candidate Status from the American Board of Genetic Counseling, or Board Certified by the American Board of Medical Genetics.
         iv) Advance Practice Nurse in Genetics - Credential from the Genetic Nursing Credentialing Commission.
   3) If the mutation in the family is known, only the test for that mutation is covered. For example, if a mutation for BRCA 1 has been identified in a family, a single site mutation analysis for that mutation is covered (CPT 81215), while a full sequence BRCA 1 and 2 (CPT 81211) analyses is not. There is one exception, for individuals of Ashkenazi Jewish ancestry with a known mutation in the family, the panel for Ashkenazi Jewish BRCA mutations is covered (CPT 81212).
   4) Costs for rush genetic testing for hereditary breast/ovarian and colon/endometrial cancer is not covered.

B) Related to diagnostic evaluation of individuals with intellectual disability (defined as a full scale or verbal IQ < 70 in an individual > age 5), developmental delay (defined as a cognitive index <70 on a standardized test appropriate for children < 5 years of age), Autism Spectrum Disorder, or multiple congenital anomalies:
   1) CPT 81228, Cytogenomic constitutional (genome-wide) microarray analysis; interrogation of genomic regions for copy number variants (eg, Bacterial Artificial Chromosome [BAC] or oligo-based comparative genomic hybridization [CGH] microarray analysis): Cover for diagnostic evaluation of individuals with intellectual disability/developmental delay; multiple congenital anomalies; or, Autism Spectrum

Disorder accompanied by at least one of the following: dysmorphic features including macro or microcephaly, congenital anomalies, or intellectual disability/developmental delay in addition to those required to diagnose Autism Spectrum Disorder.

2) CPT 81229, Cytogenomic constitutional (genome-wide) microarray analysis; interrogation of genomic regions for copy number and single nucleotide polymorphism (SNP) variants for chromosomal abnormalities: Cover for diagnostic evaluation of individuals with intellectual disability/developmental delay; multiple congenital anomalies; or, Autism Spectrum Disorder accompanied by at least one of the following: dysmorphic features including macro or microcephaly, congenital anomalies, or intellectual disability/developmental delay in addition to those required to diagnose Autism Spectrum Disorder; ONLY IF consanguinity AND recessive disease is suspected, OR UPD (uniparental disomy) is suspected, OR other suspected mechanism that is not detected by the oligo microarrays (CPT 81228).
3) Array-based evaluation of multiple molecular probes (CPT 88384-88386) will be covered for diagnostic evaluation of individuals with intellectual disability/developmental delay; multiple congenital anomalies; or, Autism Spectrum Disorder for 2012.
4) CPT 81243, 81244, Fragile X genetic testing is covered for individuals with intellectual disability/developmental delay. Although the yield of Fragile X is 3.5-10%, this is included because of additional reproductive implications.
5) A visit with the appropriate specialist (often genetics, developmental pediatrics, or child neurology), including physical exam, medical history, and family history is covered. Physical exam, medical history, and family history by the appropriate specialist, prior to any genetic testing is often the most cost-effective strategy and is encouraged.

C) Related to other tests with specific CPT codes:
1) The following tests are not covered:
   a) CPT 81225, CYP2C9 (cytochrome P450, family 2, subfamily C, polypeptide 9) (eg, drug metabolism), gene analysis, common variants (eg, *2, *3, *5, *6)
   b) CPT 81226, CYP2D6 (cytochrome P450, family 2, subfamily D, polypeptide 6) (eg, drug metabolism), gene analysis, common variants (eg, *2, *3, *4, *5, *6, *9, *10, *17, *19, *29, *35, *41, *1XN, *2XN, *4XN).
   c) CPT 81227, CYP2C9 (cytochrome P450, family 2, subfamily C, polypeptide 9) (eg, drug metabolism), gene analysis, common variants (eg, *2, *3, *5, *6)
   d) CPT 81291, MTHFR (5,10-methylenetetrahydrofolate reductase) (eg, hereditary hypercoagulability) gene analysis, common variants (eg, 677T, 1298C)
   e) CPT 81330, SMPD1(sphingomyelin phosphodiesterase 1, acid lysosomal) (eg, Niemann-Pick disease, Type A) gene analysis, common variants (eg, R496L, L302P, fsP330)
   f) CPT 81350, UGT1A1 (UDP glucuronosyltransferase 1 family, polypeptide A1) (eg, irinotecan metabolism), gene analysis, common variants (eg, *28, *36, *37)
   g) CPT 81355, VKORC1 (vitamin K epoxide reductase complex, subunit 1) (eg, warfarin metabolism), gene analysis, common variants (eg, -1639/3673)
2) The following tests are covered only if they meet the criteria for the Non-Prenatal Genetic Testing Algorithm AND the specified situations:
   a) CPT 81205, BCKDHB (branched-chain keto acid dehydrogenase E1, beta polypeptide) (eg, Maple syrup urine disease) gene analysis, common variants (eg, R183P, G278S, E422X): Cover only when the newborn screening test is abnormal and serum amino acids are normal
   b) CPT 81223, CFTR (cystic fibrosis transmembrane conductance regulator) (eg, cystic fibrosis) gene analysis; full gene sequence: covered for patients who are

symptomatic or who have positive newborn screening for CF AND genetic testing for common mutations is negative AND if the patients ethnicity has <90% coverage by common mutation panels.

c) CPT 81224, CFTR (cystic fibrosis transmembrane conductance regulator) (eg, cystic fibrosis) gene analysis; intron 8 poly-T analysis (eg, male infertility): Covered only after genetic counseling.

d) CPT 81240, F2 (prothrombin, coagulation factor II) (eg, hereditary hypercoagulability) gene analysis, 20210G>A variant: Not covered for routine testing in the following circumstances: (1) adults with idiopathic venous thromboembolism. (2) Asymptomatic adult family members of patients with idiopathic venous thromboembolism and F5 mutation, for the purpose of considering primary prophylactic anticoagulation. Test may have clinical utility in other circumstances, e.g. family history of coagulopathy, deciding short range anticoagulation therapy, problems with anticoagulation therapy management, muliptle pregnancy losses.

e) CPT 81241, F5 (coagulation Factor V) (eg, hereditary hypercoagulability) gene analysis, Leiden variant: Not covered for routine testing in the following circumstances: (1) adults with idiopathic venous thromboembolism. (2) Asymptomatic adult family members of patients with idiopathic venous thromboembolism and F5 mutation, for the purpose of considering primary prophylactic anticoagulation. Test may have clinical utility in other circumstances, e.g. family history of coagulopathy, deciding short range anticoagulation therapy, problems with anticoagulation therapy management, muliptle pregnancy losses.

f) CPT 81256, HFE (hemochromatosis) (eg, hereditary hemochromatosis) gene analysis, common variants (eg, C282Y, H63D): Covered for diagnostic testing of patients with elevated transferrin saturation or ferritin levels. Covered for predictive testing ONLY when a first degree family member has treatable iron overload from HFE.

g) CPT 81332 SERPINA1 (serpin peptidase inhibitor, clade A, alpha-1 antiproteinase, antitrypsin, member 1) (eg, alpha-1-antitrypsin deficiency), gene analysis, common variants (eg, *S and *Z): The alpha-1-antitrypsin protein level should be the first line test ofr a suspected diagnosis of AAT deficiency in symptomatic individuals with unexplained liver disease or obstructive lung disease that is not asthma or in a middle age individual with unexplained dyspnea. Generic testing or the anpha-1 phenotype test is appropriate is the protein test is abnormal or borderline. The genetic test is appropriate for siblings of people with AAT deficiency regardless of the AAT protein test results.

3) Do not cover a more expensive genetic test (generally one with a wider scope or more detailed testing) if a cheaper (smaller scope) test is available and has, in this clinical context, a substantially similar sensitivity. For example, do not cover CFTR gene sequencing as the first test in a person of Northern European Caucasian ancestry because the gene panels are less expensive and provide substantially similar sensitivity in that context.

Hereditary thrombophilia genetic testing draft guideline

Question: Should the non-prenatal genetic testing guideline be modified regarding hereditary thrombophilia?

Question Source: Kerry Silvey

Issue: Thrombophilia testing is commonly done, however, there is not a clear clinical benefit in certain populations.

Current guideline excerpt

a) CPT 81240, F2 (prothrombin, coagulation factor II) (eg, hereditary hypercoagulability) gene analysis, 20210G>A variant: Not covered for routine testing in the following circumstances: (1) adults with idiopathic venous thromboembolism. (2) Asymptomatic adult family members of patients with idiopathic venous thromboembolism and F5 mutation, for the purpose of considering primary prophylactic anticoagulation. Test may have clinical utility in other circumstances, e.g. family history of coagulopathy, deciding short range anticoagulation therapy, problems with anticoagulation therapy management, multiple pregnancy losses.
b) CPT 81241, F5 (coagulation Factor V) (eg, hereditary hypercoagulability) gene analysis, Leiden variant: Not covered for routine testing in the following circumstances: (1) adults with idiopathic venous thromboembolism. (2) Asymptomatic adult family members of patients with idiopathic venous thromboembolism and F5 mutation, for the purpose of considering primary prophylactic anticoagulation. Test may have clinical utility in other circumstances, e.g. family history of coagulopathy, deciding short range anticoagulation therapy, problems with anticoagulation therapy management, muliptle pregnancy losses.

Recommendations with rationale from Kerry Silvey (in contact with former Genetics Advisory Committee to the Health Services Commission).

> *CPT 81240. F2 (prothrombin, coagulation factor II) (eg, hereditary hypercoagulability) gene analysis, 20210G>A variant: Factor 2 20210G>A testing should not be covered for adults with idiopathic venous thromoboembolism because recent studies show that a Factor 2 20210G>A mutation is not a risk factor for recurrence of venous thromboembolism; for asymptomatic family members of patients with venous thromboembolism and a Factor V Leiden or Prothrombin 20210G>A mutation because potential benefits of primary anticoagulant therapy are unlikely to exceed potential harms; or for determining the etiology of recurrent fetal loss or placental abruption because it is unclear whether anticoagulation reduces recurrence.*
>
> *CPT 81241. F5 (coagulation Factor V) (eg, hereditary hypercoagulability) gene analysis, Leiden variant: Factor V Leiden testing should not be covered for: adults with idiopathic venous thromoboembolism because recent studies show that a Factor V Leiden*

mutation is only a weak risk factor for recurrence of venous thromboembolism; for asymptomatic family members of patients with venous thromboembolism and a Factor V Leiden or Prothrombin 20210G>A mutation because potential benefits of primary anticoagulant therapy are unlikely to exceed potential harms; or for determining the etiology of recurrent fetal loss or placental abruption because it is unclear whether anticoagulation reduces recurrence.

HERC Staff Recommendation

1) Modify non-prenatal genetic testing guideline

    a. CPT 81240. F2 (prothrombin, coagulation factor II) (eg, hereditary hypercoagulability) gene analysis, 20210G>A variant: Factor 2 20210G>A testing should not be covered for adults with idiopathic venous thromoboembolism; for asymptomatic family members of patients with venous thromboembolism and a Factor V Leiden or Prothrombin 20210G>A mutation; or for determining the etiology of recurrent fetal loss or placental abruption.
    b. CPT 81241. F5 (coagulation Factor V) (eg, hereditary hypercoagulability) gene analysis, Leiden variant: Factor V Leiden testing should not be covered for: adults with idiopathic venous thromoboembolism; for asymptomatic family members of patients with venous thromboembolism and a Factor V Leiden or Prothrombin 20210G>A mutation; or for determining the etiology of recurrent fetal loss or placental abruption.

2) Decided if rationale should be included in the guideline itself (the above italicized version would be used instead)

Cystic Fibrosis Genetic Testing Guideline Issue Summary

Question: Should cystic fibrosis coverage of genetic testing be modified, given that there is a new drug available for a specific gene mutation?

Current language of cystic fibrosis guideline

a) CPT 81223, CFTR (cystic fibrosis transmembrane conductance regulator) (eg, cystic fibrosis) gene analysis; full gene sequence: covered for patients who are symptomatic or who have positive newborn screening for CF AND genetic testing for common mutations is negative AND if the patients ethnicity has <90% coverage by common mutation panels.
b) CPT 81224, CFTR (cystic fibrosis transmembrane conductance regulator) (eg, cystic fibrosis) gene analysis; intron 8 poly-T analysis (eg, male infertility): Covered only after genetic counseling.

From Kerry Silvey (in contact with former Genetics Advisory Committee)

1. Diagnostic testing for cystic fibrosis (CF)
    a. Alternative 1
        i. CFTR, cystic fibrosis transmembrane conductance regulator tests. CPT 81220, 81223, 81222: For infants with a positive newborn screen for cystic fibrosis or who are symptomatic for cystic fibrosis, CFTR gene analysis of a panel containing at least the mutations recommended by the American College of Medical Genetics* (CPT 81220) is covered. If two mutations are not identified, CFTR full gene sequencing (CPT 81223) is covered. If two mutations are still not identified, duplication/deletion testing (CPT 81222) is covered. These tests may be ordered as reflex testing on the same specimen.
        ii. Reasoning:
            1. Choosing this alternative would document that covering genetic testing for infants with a positive newborn screen for cystic fibrosis or who are symptomatic for cystic fibrosis fits the genetic testing algorithm. Genetic testing for this population fits the algorithm because there is over a 10% chance that the results will affect prognosis. The director of the Oregon cystic fibrosis clinic reports that the current wording of the guidelines is difficult to interpret and follow, and that some Medicaid Managed Care Plans are denying payment for these tests.
            2. If this alternative is chosen, genetic testing would not be covered for most older children and adults who have a clinical diagnosis of CF since the severity of their CF is already known and the chance the test would find a mutation eligible for treatment with ivacaftor (Kalydeco) is less than 10%.
    b. Alternative 2

i. CFTR, cystic fibrosis transmembrane conductance regulator tests. CPT 81220, 81223, 81222: For infants with a positive newborn screen for cystic fibrosis or who are symptomatic for cystic fibrosis, or for clients that have previously been diagnosed with cystic fibrosis but have not had genetic testing, CFTR gene analysis of a panel containing at least the mutations recommended by the American College of Medical Genetics* (CPT 81220) is covered. If two mutations are not identified, CFTR full gene sequencing (CPT 81223) is covered. If two mutations are still not identified, duplication/deletion testing (CPT 81222) is covered. These tests may be ordered as reflex testing on the same specimen.

ii. Reasoning
    1. This alternative adds an additional population; clients that have been previously diagnosed with cystic fibrosis but have not had genetic testing, to those covered by alternative 1.
    2. A treatment for cystic fibrosis for individuals six years of age or older with a G551D mutation, ivacaftor (Kalydeco), was approved by the FDA earlier this year. Genetic testing to identify those with a G551D mutation is required to identify those who will benefit from this treatment. Because the G551D mutation occurs in approximately 4% of those diagnosed with CF, and generally, the severity of their CF has already been determined in older children and adults, genetic testing of older children and adults already diagnosed with CF usually would not fit the OHP genetic testing algorithm. The Oregon cystic fibrosis clinic director estimates that there are approximately 40 children and adults on OHP that have not yet been genotyped. He recommends that all patients diagnosed with CF who have not yet had mutation testing be tested.
    3. It has not yet been decided whether ivacaftor (Kalydeco) will be covered by the Oregon Health Plan. This topic is on the agenda for the June 28th meeting of the Pharmacy and Therapeutics committee. I don't know whether a coverage decision will be made at that meeting. At the HERC meeting in January, some commission members and staff questioned whether the Oregon Health Plan should pay for testing to determine eligibility for receiving ivacaftor unless the OHP covers the drug. It was suggested that a decision on covering the testing for older children and adults be deferred until a decision about OHP coverage of ivacaftor is made. An additional consideration is that if a patient is identified as a candidate for ivacaftor, it is possible that they may be eligible for the drug through a free pharmaceutical program.

Estimated costs for genotyping untested Oregon Medicaid clients diagnosed with cystic fibrosis.

Estimated Numbers of OHP Clients and Estimated Costs			
OHP cost for common mutation panel	$554		

Number of untested clients	40		
Population cost for common mutation panel		$22,160	
Number of clients to go on to gene sequencing (20%)	8		
OHP cost for gene sequencing	$1,505		
Population cost for gene sequencing		$12,040	
Number to go on to duplication/deletion testing	1		
OHP cost of duplication/deletion testing	$536		
Population cost for duplication/deletion testing		$536	
Total Cost			**$24,201**

2. Carrier testing for cystic fibrosis
    a. CFTR gene analysis of a panel containing at least the mutations recommended by the American College of Medical Genetics* (CPT 81220) is covered.

    * As of 2008
    http://www.acmg.net/AM/Template.cfm?Section=Laboratory_Standards_and_Guidelines&Template=/CM/ContentDisplay.cfm&ContentID=6328.

HERC Staff Recommendations

1. Discuss
2. Choose alternative 1 or 2

K Silvey, 5/14/12

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A CFTR Potentiator in Patients with Cystic Fibrosis and the *G551D* Mutation

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ABSTRACT

BACKGROUND

Increasing the activity of defective cystic fibrosis transmembrane conductance regulator (CFTR) protein is a potential treatment for cystic fibrosis.

METHODS

We conducted a randomized, double-blind, placebo-controlled trial to evaluate ivacaftor (VX-770), a CFTR potentiator, in subjects 12 years of age or older with cystic fibrosis and at least one *G551D-CFTR* mutation. Subjects were randomly assigned to receive 150 mg of ivacaftor every 12 hours (84 subjects, of whom 83 received at least one dose) or placebo (83, of whom 78 received at least one dose) for 48 weeks. The primary end point was the estimated mean change from baseline through week 24 in the percent of predicted forced expiratory volume in 1 second (FEV_1).

RESULTS

The change from baseline through week 24 in the percent of predicted FEV_1 was greater by 10.6 percentage points in the ivacaftor group than in the placebo group (P<0.001). Effects on pulmonary function were noted by 2 weeks, and a significant treatment effect was maintained through week 48. Subjects receiving ivacaftor were 55% less likely to have a pulmonary exacerbation than were patients receiving placebo, through week 48 (P<0.001). In addition, through week 48, subjects in the ivacaftor group scored 8.6 points higher than did subjects in the placebo group on the respiratory-symptoms domain of the Cystic Fibrosis Questionnaire–revised instrument (a 100-point scale, with higher numbers indicating a lower effect of symptoms on the patient's quality of life) (P<0.001). By 48 weeks, patients treated with ivacaftor had gained, on average, 2.7 kg more weight than had patients receiving placebo (P<0.001). The change from baseline through week 48 in the concentration of sweat chloride, a measure of CFTR activity, with ivacaftor as compared with placebo was −48.1 mmol per liter (P<0.001). The incidence of adverse events was similar with ivacaftor and placebo, with a lower proportion of serious adverse events with ivacaftor than with placebo (24% vs. 42%).

CONCLUSIONS

Ivacaftor was associated with improvements in lung function at 2 weeks that were sustained through 48 weeks. Substantial improvements were also observed in the risk of pulmonary exacerbations, patient-reported respiratory symptoms, weight, and concentration of sweat chloride. (Funded by Vertex Pharmaceuticals and others; VX08-770-102 ClinicalTrials.gov number, NCT00909532.)

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*The members of the VX08-770-102 Study Group are listed in the Supplementary Appendix, available at NEJM.org.

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Effect of VX-770 in Persons with Cystic Fibrosis and the G551D-*CFTR* Mutation

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ABSTRACT

BACKGROUND

A new approach in the treatment of cystic fibrosis involves improving the function of mutant cystic fibrosis transmembrane conductance regulator (CFTR). VX-770, a CFTR potentiator, has been shown to increase the activity of wild-type and defective cell-surface CFTR in vitro.

METHODS

We randomly assigned 39 adults with cystic fibrosis and at least one G551D-*CFTR* allele to receive oral VX-770 every 12 hours at a dose of 25, 75, or 150 mg or placebo for 14 days (in part 1 of the study) or VX-770 every 12 hours at a dose of 150 or 250 mg or placebo for 28 days (in part 2 of the study).

RESULTS

At day 28, in the group of subjects who received 150 mg of VX-770, the median change in the nasal potential difference (in response to the administration of a chloride-free isoproterenol solution) from baseline was −3.5 mV (range, −8.3 to 0.5; P=0.02 for the within-subject comparison, P=0.13 vs. placebo), and the median change in the level of sweat chloride was −59.5 mmol per liter (range, −66.0 to −19.0; P=0.008 within-subject, P=0.02 vs. placebo). The median change from baseline in the percent of predicted forced expiratory volume in 1 second was 8.7% (range, 2.3 to 31.3; P=0.008 for the within-subject comparison, P=0.56 vs. placebo). None of the subjects withdrew from the study. Six severe adverse events occurred in two subjects (diffuse macular rash in one subject and five incidents of elevated blood and urine glucose levels in one subject with diabetes). All severe adverse events resolved without the discontinuation of VX-770.

CONCLUSIONS

This study to evaluate the safety and adverse-event profile of VX-770 showed that VX-770 was associated with within-subject improvements in CFTR and lung function. These findings provide support for further studies of pharmacologic potentiation of CFTR as a means to treat cystic fibrosis. (Funded by Vertex Pharmaceuticals and others; ClinicalTrials.gov number, NCT00457821.)

From the University of Colorado Denver and Children's Hospital, Aurora (F.J.A., S.D.S.); University of Alabama at Birmingham, Birmingham (S.M.R., J.P.C.); Johns Hopkins Medical Institutions, Baltimore (M.P.B.); University of Minnesota, Minneapolis (J.M.D.); Hospital for Sick Children and the University of Toronto — both in Toronto (P.R.D.); University of Iowa Carver College of Medicine, Iowa City (D.B.H.); Rainbow Babies and Children's Hospital and Case Western Reserve University School of Medicine — both in Cleveland (M.W.K.); University of North Carolina at Chapel Hill, Chapel Hill (S.H.D.); Stanford University School of Medicine, Palo Alto, CA (R.B.M.); University of Pittsburgh, Pittsburgh (J.M.P.); Children's Hospital of Philadelphia and University of Pennsylvania School of Medicine — both in Philadelphia (R.C.R.); Children's Hospital Boston (A.Z.U.) and Beth Israel Deaconess Medical Center (S.D.F.) — both in Boston; University of Washington (M.L.A., L.M.R., N.M.-H.) and Seattle Children's Hospital (L.M.R., N.M.-H., B.W.R.) — both in Seattle; Vertex Pharmaceuticals, Cambridge, MA (Q.D., J.Z., A.J.S., E.R.O., C.L.O.); and Cystic Fibrosis Foundation Therapeutics, Bethesda, MD (P.W.C., M.A.A.). Address reprint requests to Dr. Accurso at the University of Colorado Denver, 13123 E. 16th Ave., B395, Aurora, CO 80045, or at accurso.frank@tchden.org.

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Microarray genetic testing guideline

Question: should the microarray genetic testing guideline be modified to clarify what exactly microarray testing involves?in

Question Source: Medical Directors

Issue: there is confusion about what codes are included with the new microarray testing in the revised non-prenatal genetic testing guideline.

Kerry Silvey ran the questions by the former Genetics Advisory Committee to the HSC, and came up with the following recommendations:

5/25/12 draft of revised microarray genetic testing for DD/ID, MCA, & ASD

B) Related to diagnostic evaluation of individuals with intellectual disability (defined as a full scale or verbal IQ < 70 in an individual > age 5), developmental delay (defined as a cognitive index <70 on a standardized test appropriate for children < 5 years of age), Autism Spectrum Disorder, or multiple congenital anomalies:

1) CPT 81228, Cytogenomic constitutional microarray analysis ~~interrogation of genomic regions for copy number variants (eg, Bacterial Artificial Chromosome [BAC] or oligo-based comparative genomic hybridization [CGH] microarray analysis):~~ for copy number variants for chromosomal abnormalities: Cover for diagnostic evaluation of individuals with intellectual disability/developmental delay; multiple congenital anomalies; or, Autism Spectrum Disorder accompanied by at least one of the following: dysmorphic features including macro or microcephaly, congenital anomalies, or intellectual disability/developmental delay in addition to those required to diagnose Autism Spectrum Disorder. In 2012, this test may also be billed using one of CPT 88384-88386, or stacking CPTs 83890-83915.

2) CPT 81229, Cytogenomic constitutional ~~(genome-wide) microarray analysis; interrogation of genomic regions for copy number and single nucleotide polymorphism (SNP) variants for chromosomal abnormalities::~~ microarray analysis for copy number variants for chromosomal abnormalities; plus cytogenetic constitutional microarray analysis for single nucleotide polymorphism (SNP) variants for chromosomal abnormalities: Cover for diagnostic evaluation of individuals with intellectual disability/developmental delay; multiple congenital anomalies; or, Autism Spectrum Disorder accompanied by at least one of the following: dysmorphic features including macro or microcephaly, congenital anomalies, or intellectual disability/developmental delay in addition to those required to diagnose Autism Spectrum Disorder; only if (a) consanguinity and recessive disease is suspected, or (b) uniparental disomy is suspected, or (c) another mechanism is suspected that is not detected by the copy number variant test alone. In 2012, this test may also be billed using one of CPT 88384-88386, or stacking CPTs 83890-83915. ~~Array-based evaluation of multiple molecular probes (CPT 88384-88386) will be covered for diagnostic evaluation of individuals with intellectual disability/developmental delay; multiple congenital anomalies; or, Autism Spectrum Disorder for 2012~~

3) CPT 81243, 81244, Fragile X genetic testing is covered for individuals with intellectual disability/developmental delay. Although the yield of Fragile X is 3.5-10%, this is included because of additional reproductive implications.

4) A visit with the appropriate specialist (often genetics, developmental pediatrics, or child neurology), including physical exam, medical history, and family history is covered. Physical exam, medical history, and family history by the appropriate specialist, prior to any genetic testing is often the most cost-effective strategy and is encouraged.

Section 5

Straightforward Items

Straightforward Issues—May, 2012

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
44186	Laparoscopy, surgical; jejunostomy (eg, for decompression or feeding)	**339** CANCER OF ESOPHAGUS	DMAP is requesting that 44186 be added to line 339 to pair with 150.8 (Malignant neoplasm of esophagus; Other specified part). 44186 is currently on lines 48,78,111.	Add 44186 to line 339
92083	Visual field examination, unilateral or bilateral, with interpretation and report; extended examination	**162** BENIGN NEOPLASM OF PITUITARY GLAND **407** DYSFUNCTION RESULTING IN LOSS OF ABILITY TO MAXIMIZE LEVEL OF INDEPENDENCE IN SELF- DIRECTED CARE CAUSED BY CHRONIC CONDITIONS THAT CAUSE NEUROLOGICAL DYSFUNCTION	DMAP is requesting that 92083 be added to line 407 to pair with 369.20 (Blindness and low vision; Moderate or severe impairment, both eyes; Impairment level not further specified) and to line 162 to pair with 227.3 (Benign neoplasm of pituitary gland and craniopharyngeal duct (pouch)). 92083 is currently on more than 50 lines.	Add 92083 to lines 162 and 407
31615	Tracheobronchoscopy through established tracheostomy incision	**78** NEUROLOGICAL DYSFUNCTION IN BREATHING, EATING, SWALLOWING, BOWEL, OR BLADDER CONTROL CAUSED BY CHRONIC CONDITIONS	DMAP is requesting that 31615 be taken off line 78 and added to the Diagnostic Procedures List, as this is a diagnostic test.	Remove 31615 from line 78 Advise DMAP to add 31615 to the Diagnostic Procedures List.
92134	Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral; retina	**413** CENTRAL SEROUS RETINOPATHY	DMAP is requesting that 92134 be added to line 413 to pair with 362.41 (Central serous retinopathy). 92134 is on approximately 40 lines on the List.	Add 92134 to line 413
77301	Intensity modulated radiotherapy	**218** CANCER OF UTERUS	DMAP is requesting that 77301	Add 77301 to lines 218

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
	plan, including dose-volume histograms for target and critical structure partial tolerance specifications	**229** CANCER OF STOMACH	be added to line 218 to pair with 182.8 (Malignant neoplasm of other specified sites of body of uterus) and line 229 to pair with 151.8 (Malignant neoplasm of other specified sites of stomach). 77301 is on multiple cancer lines on the List.	and 229
54440	Plastic operation of penis for injury	**142** CRUSH INJURIES OTHER THAN DIGITS; COMPARTMENT SYNDROME **458** HYPOSPADIAS AND EPISPADIAS	DMAP is requesting that 54440 be added to line 339 to pair with 959.13 (Fractures of corpus cavernosum penis). 54440 is currently on line 458. Per Medscape, "Penile fracture is the traumatic rupture of the corpus cavernosum. Traumatic rupture of the penis is relatively uncommon and is considered a urologic emergency." 959.13 is in the crush injury area of ICD-9 codes; however, its treatment is different. Treatments are similar to treatments on line 458.	Add 959.13 to line 458 Remove 959.13 from line 142
27301	Incision and drainage, deep abscess, bursa, or hematoma, thigh or knee region	**448** COMPLICATIONS OF A PROCEDURE USUALLY REQUIRING TREATMENT	DMAP is requesting that 27301 be added to line 448 to pair with 998.12 (Hematoma complicating a procedure). 28301 is currently on lines 84,214,250,308.	Add 27301 to line 448
58150-58200	Total abdominal hysterectomy	**56** ACUTE PELVIC INFLAMMATORY DISEASE	DMAP is requesting that 58541 be added to line 56 to pair with 614.9 (Unspecified	Add 58150-58200, 58260-58294, 58541-58544, 58550-58554,

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
58260-58294 58541-58544 58550-58554 58570-58573	Vaginal hysterectomy Laparoscopy, surgical, supracervical hysterectomy Laparoscopy, with vaginal hysterectomy Laparoscopy, surgical, with total hysterectomy		inflammatory disease of female pelvic organs and tissues). On review, multiple abscess codes are located on line 56 (tubo-ovarian abscess, etc.) which may require surgical treatment. No hysterectomy codes are currently located on line 56.	58570-58573 to line 56
35820	Exploration for postoperative hemorrhage, thrombosis or infection; chest	**90** MYOCARDITIS (NONVIRAL), PERICARDITIS (NONVIRAL) AND ENDOCARDITIS **448** COMPLICATIONS OF A PROCEDURE USUALLY REQUIRING TREATMENT	DMAP is requesting that 35820 be added to line 90 to pair with 423.0 (Hemopericardium) and to line 448 to pair with 998.12 (Hematoma complicating a procedure). 35820 is currently on lines 303, 307, 308, 349, 350, and 472. HERC staff suggests pairing only with 423.0 on line 90 as 998.12 is too non-specific a code (more specific codes exist that would pair on other lines).	Add 35820 to line 90
12020	Treatment of superficial wound dehiscence; simple closure	**308** COMPLICATIONS OF A PROCEDURE ALWAYS REQUIRING TREATMENT	DMAP is requesting that 12020 be added to line 308 to pair with 998.33 (Disruption of traumatic injury wound repair). 12020 is currently on lines 143, 216, 243, 292, and 650. Similar code 12021 is already on line 308.	Add 12020 to line 308

Straightforward Issues—May, 2012

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
46917	Destruction of lesion(s), anus (eg, condyloma, papilloma, molluscum contagiosum, herpetic vesicle), simple; laser surgery	**165** CANCER OF COLON, RECTUM, SMALL INTESTINE AND ANUS **278** CANCER OF LUNG, BRONCHUS, PLEURA, TRACHEA, MEDIASTINUM AND OTHER RESPIRATORY ORGANS	HERC staff found on review that 46917 was inappropriately placed on two lines. It is appropriately placed on line 426 ANOGENITAL VIRAL WARTS.	Remove 46917 from lines 165 and 278
46610-46612, 46615	Anoscopy, with removal of single or multiple tumors(s), polyp(s) or other lesion(s)	**173** ANAL, RECTAL AND COLONIC POLYPS	HERC staff found on review that anoscopy codes with polyp removal were not located on line 173, which has the treatment description of "Excision of polyp."	Add 46610-46612, 46615 to line 173
44625 44626	Closure of enterostomy, large or small intestine; with resection and anastomosis other than colorectal Closure of enterostomy, large or small intestine; with resection and colorectal anastomosis (eg, closure of Hartmann type procedure)	**48** INTUSSCEPTION, VOLVULUS, INTESTINAL OBSTRUCTION, AND FOREIGN BODY IN STOMACH, INTESTINES, COLON, AND RECTUM **323** FISTULA INVOLVING FEMALE GENITAL TRACT **353** VESICULAR FISTULA	DMAP is requesting that 44625 be added to line 48 to pair with 560.81 (Intestinal or peritoneal adhesions with obstruction (postoperative) (postinfection)), line 323 to pair with 619.1 (Digestive-genital tract fistula, female) and to line 353 to pair with 596.1 (Intestinovesical fistula). 44625 is currently on lines 35, 62, 84, 88, 97, 111, 165, 173, 191, 448. 44626 is also on the above lines and missing from lines 48, 323 and 353.	Add 44625 and 44626 to lines 48, 323, and 353
77470	Special treatment procedure (eg, total body irradiation, hemibody radiation, per oral or endocavitary irradiation.	**166** HODGKIN'S DISEASE **229** CANCER OF STOMACH	DMAP is requesting that 77470 be added to line 229 to pair with 151.8 (Malignant neoplasm of other specified sites of stomach) and to line 166 to pair with	Add 77470 to lines 166 and 229

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
			201.92 (Hodgkin's disease, unspecified type, or intrathoracic lymph nodes). 77470 is on multiple lines.	
52354 52355	Cystourethroscopy, with ureteroscopy and/or pyeloscopy; with biopsy and/or fulguration of ureteral or renal pelvic lesion. Cystourethroscopy, with ureteroscopy and/or pyeloscopy; with resection of ureteral or renal pelvic tumor	**228** CANCER OF KIDNEY AND OTHER URINARY ORGANS **287** CANCER OF BLADDER AND URETER	DMAP is requesting that 52354 be added to line 87 to pair with 189.2 (Malignant neoplasm of Ureter). 52354 is currently on lines 54, 186, 228. 52355 is currently on line 287; however, on review, 52355 is missing from line 228.	Add 52354 to line 287 Add 52355 to line 228
61600	Resection or excision of neoplastic, vascular or infectious lesion of base of anterior cranial fossa; extradural.	**84** DEEP ABSCESSES, INCLUDING APPENDICITIS AND PERIORBITAL ABSCESS; INTESTINAL PERFORATION	DMAP is requesting that 61600 be added to line 84 to pair with 324.0 (Intracranial abscess). 61600 is currently on lines 137,201,320.	Add 61600 to line 84
31290 31291	Nasal/sinus endoscopy, surgical, with repair of cerebrospinal fluid leak; ethmoid region Nasal/sinus endoscopy, surgical, with repair of cerebrospinal fluid leak; sphenoid region	**201** SUBARACHNOID AND INTRACEREBRAL HEMORRHAGE/HEMATOMA; CEREBRAL ANEURYSM; COMPRESSION OF BRAIN	DMAP is requesting that 31290 be added to line 84 to pair with 349.81 (Cerebrospinal fluid rhinorrhea). 31290 and 31291 are on lines 498,532	Add 31290 and 31291 to line 201

Straightforward Issues—June, 2012

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
92134	Scanning computerized ophthalmic diagnostic imaging, posterior segment, with interpretation and report, unilateral or bilateral; retina	**413** CENTRAL SEROUS RETINOPATHY	DMAP is requesting that 92134 be added to line 413 to pair with 362.63 (Peripheral retinal degenerations; Lattice degeneration). 92134 is currently on more than 40 lines.	Add 92134 to line 413
33417	Aortoplasty (gusset) for supravalvular stenosis	**237** DISEASES AND DISORDERS OF AORTIC VALVE	DMAP is requesting that 33417 be added to line 237 to pair with 424.1 (Aortic valve disorders). 33417 is currently on lines 76,116,192,195,308,354.	Add 33417 to line 237
27179	Open treatment of slipped femoral epiphysis; osteoplasty of femoral neck (Heyman type procedure)	**382** CLOSED FRACTURE OF EXTREMITIES (EXCEPT TOES)	DMAP is requesting that 27179 be added to line 382 to pair with 732.2 (Non-traumatic slipped upper femoral epiphysis). 27179 is currently on lines 297, 336, 531. Similar codes 27178 and 27181 are on line 382.	Add 27179 to line 382
13160	Secondary closure of surgical wound or dehiscence, extensive or complicated	**448** COMPLICATIONS OF A PROCEDURE USUALLY REQUIRING TREATMENT	DMAP is requesting that 13160 be added to line 448 to pair with 998.83 (Non-healing surgical wound). 13160 is currently on lines 216, 243, 257, 292, 308, 652.	Add 13160 to line 448
31615	Tracheobronchoscopy through established tracheostomy incision	**78** NEUROLOGICAL DYSFUNCTION IN BREATHING, EATING, SWALLOWING, BOWEL, OR BLADDER CONTROL CAUSED BY CHRONIC CONDITIONS	DMAP is requesting that 31615 be added to the Diagnostic List and removed from line 77. Alternatively, this procedure could be placed on all lines with tracheostomy diagnoses.	Remove 31615 from line 78 Advise DMAP to add 31615 to the Diagnostic List.

Straightforward Issues—June, 2012

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
67917	Repair of ectropion; extensive (eg, tarsal strip operations)	**497** PTOSIS (ACQUIRED) WITH VISION IMPAIRMENT **515** BELL'S PALSY, EXPOSURE KERATOCONJUNCTIVITIS	DMAP is requesting that 67917 be added to line 497 to pair with 374.20 (Lagophthalmos, unspecified) and to line 515 to pair with 370.34 (Exposure keratoconjunctivitis). Currently, 67917 is on line 524 ECTROPION, TRICHIASIS OF EYELID, BENIGN NEOPLASM OF EYELID. Per ophthalmology experts, these should pair.	Add 67917 to lines 497 and 515
37204	Transcatheter occlusion or embolization (eg, for tumor destruction, to achieve hemostasis, to occlude a vascular malformation), percutaneous, any method, non-central nervous system, non-head or neck	**50** COARCTATION OF THE AORTA **77** CONGENITAL PULMONARY VALVE STENOSIS **98** TRANSPOSITION OF GREAT VESSELS **141** TOTAL ANOMALOUS PULMONARY VENOUS CONNECTION **247** HYPOPLASTIC LEFT HEART SYNDROME	DMAP is requesting that 37204 be added to line 497 to pair with 745.10 (Complete transposition of great vessels) and 745.11 (Double outlet right ventricle), to line 77 to pair with 746.02 (Anomalies of pulmonary valve; Stenosis, congenital), to line 247 to pair with 746.7 (Hypoplastic left heart syndrome), to line 50 to pair with 747.10 (Coarctation of aorta (preductal)(postductal) and to line 141to pair with 747.41 (Total anomalous pulmonary venous). 37204 is currently on lines 85, 270, 340.	Add 37204 to lines 50, 77, 98, 141 and 247
19020	Mastotomy with exploration or drainage of abscess, deep	**84** DEEP ABSCESSES, INCLUDING APPENDICITIS AND PERIORBITAL ABSCESS; INTESTINAL PERFORATION	DMAP is requesting that 19020 be added to line 1 to pair with 675.13 (Abscess of breast, antepartum). 19020 is currently on line 84.	Add 675.13 to line 84

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
27138	Revision of total hip arthroplasty; femoral component only, with or without allograft	**297** DEFORMITY/CLOSED DISLOCATION OF JOINT	DMAP is requesting that 27138 be added to line 297 to pair with 718.25 (Pathological dislocation of pelvic region and thigh joint). 27138 is currently on lines 308 and 448.	Add 27138 to line 297
92002 92004 92012 92014	Ophthalmological services: medical examination and evaluation with initiation of diagnostic and treatment program; intermediate, new patient Ophthalmological services: medical examination and evaluation with initiation of diagnostic and treatment program; comprehensive, new patient, 1 or more visits Ophthalmological services: medical examination and evaluation, with initiation or continuation of diagnostic and treatment program; intermediate, established patient Ophthalmological services: medical examination and evaluation, with initiation or continuation of diagnostic and treatment program; comprehensive, established patient, 1 or more visits.	**84** DEEP ABSCESSES, INCLUDING APPENDICITIS AND PERIORBITAL ABSCESS; INTESTINAL PERFORATION **162** BENIGN NEOPLASM OF PITUITARY GLAND **242** FRACTURE OF FACE BONES; INJURY TO OPTIC AND OTHER CRANIAL NERVES **407** DYSFUNCTION RESULTING IN LOSS OF ABILITY TO MAXIMIZE LEVEL OF INDEPENDENCE IN SELF- DIRECTED CARE CAUSED BY CHRONIC CONDITIONS THAT CAUSE NEUROLOGICAL DYSFUNCTION	DMAP is requesting that 92014 be added to line 407 to pair with various 369 diagnoses (Blindness and low vision), to line 84 to pair with 376.00 (Acute inflammation of orbit, unspecified), to line 242 to pair with 802.7 (Fracture of face bones; Orbital floor (blow-out), open) and to line 162 to pair with 227.3 (Benign neoplasm of pituitary gland and craniopharyngeal duct (pouch)). 92014 is currently on over 40 lines on the List. HERC staff identified more codes which should be added if one ophthalmology code is added. Note from DMAP: It was felt that vision exams would be part of the routine assessment/ evaluation of a client with this diagnosis due to the vision deficits/changes that often occur	Add 92002-92014 to lines 84, 162, 242 and 407

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
27882	Amputation, leg, through tibia and fibula; open, circular (guillotine).	**378** ATHEROSCLEROSIS, PERIPHERAL	DMAP is requesting that 27882 be added to line 378 to pair with 444.22 (Arterial embolism and thrombosis of arteries of the lower extremity). 27882 is currently on lines 146, 190, 208, 250, 271, 346, 355, 467. HERC staff identified other leg amputation codes which should pair if one is added to this line (27880-27886).	Add 27880-27886 to line 378
23462	Capsulorrhaphy, anterior, any type; with coracoid process transfer	**297** DEFORMITY/CLOSED DISLOCATION OF JOINT	DMAP is requesting that 23462 be added to line 297 to pair with 718.31 (Recurrent dislocation of shoulder joint). 23462 is currently on line 443 DISORDERS OF SHOULDER,POTENTIALLY RESULTING IN SIGNIFICANT INJURY/IMPAIRMENT. Line 443 has multiple appropriate treatment codes for this condition. Similar code 718.21 (Pathological dislocation of shoulder joint) is on line 443 alone.	Add 718.31 to line 443 Remove 718.31 from line 297

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
11740	Evacuation of subungual hematoma	**142** CRUSH INJURIES OTHER THAN DIGITS; COMPARTMENT SYNDROME **143** OPEN FRACTURE/DISLOCATION OF EXTREMITIES **315** CRUSH INJURIES OF DIGITS	DMAP is requesting that 11740 be added to line 315 to pair with 927.3 (Crushing injury of finger(s)), to line 143 to pair with 816.12 (Open fracture of distal phalanx or phalanges of hand), and to line 142 to pair with 928.20 (Crushing injury of foot). 11740 is currently on line 214,536,615,663. Note from DMAP: This recommendation is based on the ICD-9-CM coding guideline indicating this diagnosis is primary and the associated injuries are coded as 2ndary diagnoses	Add 11740 to lines 142, 143, and 315
46608	Anoscopy; with removal of foreign body	**48** INTUSSCEPTION, VOLVULUS, INTESTINAL OBSTRUCTION, AND FOREIGN BODY IN STOMACH, INTESTINES, COLON, AND RECTUM **111** CONGENITAL ANOMALIES OF DIGESTIVE SYSTEM AND ABDOMINAL WALL EXCLUDING NECROSIS; CHRONIC INTESTINAL PSEUDO-OBSTRUCTION **501** THROMBOSED AND COMPLICATED HEMORRHOIDS	DMAP is requesting that 46608 be added to line 126 to pair with 937 Foreign body in anus and rectum). 46608 is currently on lines 111 and 501.	Add 46608 to line 48 Remove 46608 from lines 111 and 501

Straightforward Issues—June, 2012

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
41805	Removal of embedded foreign body from dentoalveolar structures; soft tissues	**126** FOREIGN BODY IN PHARYNX, LARYNX, TRACHEA, BRONCHUS AND ESOPHAGUS	DMAP is requesting that 41805 be added to line 126 to pair with 935.0 (Foreign body in mouth). 41805 is currently on line 464 RESIDUAL FOREIGN BODY IN SOFT TISSUE.	Add 41805 to line 126
32480-32488	Removal of lung, other than pneumonectomy	**84** DEEP ABSCESSES, INCLUDING APPENDICITIS AND PERIORBITAL ABSCESS; INTESTINAL PERFORATION **306** CHRONIC OBSTRUCTIVE PULMONARY DISEASE; CHRONIC RESPIRATORY FAILURE	DMAP is requesting that 32480 be added to line 126 to pair with 492.0 (Emphysematous bleb) and to line 84 to pair with 513.0 (Abscess of lung). 32480 is currently on lines 65, 204, 278, 385, 402. Similar code 32491 was added to line 306 in December, 2011. If 32480 (single lobe) is added to these lines, then the series 32480-8 should be added for consistency.	Add 32480-32488 to lines 84 and 306
69110	Excision external ear; partial, simple repair	**292** CANCER OF SKIN, EXCLUDING MALIGNANT MELANOMA	DMAP is requesting that 69110 be added to line 292 to pair with 238.2 (Neoplams of uncertain behavior of skin). 69110 is currently on lines 257, 312, 355, 632.	Add 69110 to line 292
92002-92014	Ophthalmological services: medical examination and evaluation	**93** DISORDERS OF PANCREATIC ENDOCRINE SECRETION	DMAP is requesting that 92014 be added to line 93 to pair with the 249.00 code series (Secondary diabetes mellitus). These CPT codes are currently on both the type 1 and type 2 diabetes lines.	Add 92002-92014 to line 93

Straightforward Issues—June, 2012

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
92002-92014	Ophthalmological services: medical examination and evaluation	**64** BURN FULL THICKNESS GREATER THAN 10% OF BODY SURFACE **147** OPPORTUNISTIC INFECTIONS IN IMMUNOCOMPROMISED HOSTS; CANDIDIASIS OF STOMA; PERSONS RECEIVING CONTINUOUS ANTIBIOTIC THERAPY **214** SUPERFICIAL ABSCESSES AND CELLULITIS **407** DYSFUNCTION RESULTING IN LOSS OF ABILITY TO MAXIMIZE LEVEL OF INDEPENDENCE IN SELF- DIRECTED CARE CAUSED BY CHRONIC CONDITIONS THAT CAUSE NEUROLOGICAL DYSFUNCTION	DMAP is requesting that 92014 be added to line 93 to pair with 940.0 (Other burn of cornea and conjunctival sac), to line 147 to pair with 078.5 (Cytomegaloviral disease), line 407 to pair with 369.3 (Unqualified visual loss, both eyes), line 214 to pair with 373.13 (Abscess of eyelid). 92014 is currently on multiple lines. The ophthalmologic service codes are a series from 92002 to 92014.	Add 92002-92014 to lines 64, 147, 214, and 407.
26540	Repair of collateral ligament, metacarpophalangeal or interphalangeal joint.	**216** DEEP OPEN WOUND, WITH OR WITHOUT TENDON OR NERVE INVOLVEMENT **406** DISRUPTIONS OF THE LIGAMENTS AND TENDONS OF THE ARMS AND LEGS, EXCLUDING THE KNEE, GRADE II AND III	DMAP is requesting that 26540 be added to line 93 to pair with 882.2 (Open wound of hand except finger(s) alone; with tendon involvement) and to line 406 to pair with 842.12 (Sprains and strains of hand; Metacarpophalangeal (joint). 26540 is currently on lines 297, 308, 531, 550.	Add 26540 to lines 216 and 406

Straightforward Issues—June, 2012

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
41822	Excision of Gum Lesion	**676** DENTAL CONDITIONS WHERE TREATMENT RESULTS IN MARGINAL IMPROVEMENT.	DMAP is requesting that 41822 be added to line 676, as this CPT code crosswalks to the dental code D7972 (Surgical Reduction of Fibrous Tuberosity) which is found on line 676. Currently, 41822 is on the Ancillary List.	Add 41822 to line 676 Advise DMAP to move 41822 from the Ancillary List.
10060	Incision and drainage of abscess (eg, carbuncle, suppurative hidradenitis, cutaneous or subcutaneous abscess, cyst, furuncle, or paronychia); simple or single	**308** COMPLICATIONS OF A PROCEDURE ALWAYS REQUIRING TREATMENT	DMAP is requesting that 10060 be added to line 308 to pair with 998.51 (Infected postoperative seroma). 10060 is currently on lines 84, 214, 250, 410, 427, 511, 545, 651.	Add 10060 to line 308
33310 33315	Cardiotomy, exploratory (includes removal of foreign body, atrial or ventricular thrombus); without bypass With bypass	**76** ACUTE AND SUBACUTE ISCHEMIC HEART DISEASE, MYOCARDIAL INFARCTION **363** DISEASES OF ENDOCARDIUM	DMAP is requesting that 33315 be added to line 76 to pair with 410.91 (Acute myocardial infarction, unspecified site) and to line 363 to pair with 424.90 (Endocarditis, valve unspecified, unspecified cause). 33315 is currently on line 88 INJURY TO INTERNAL ORGANS.	Add 33310-33315 to lines 76 and 363
33967	Insertion of intra-aortic balloon assist device, percutaneous	**304** LIFE-THREATENING CARDIAC ARRHYTHMIAS	DMAP is requesting that 33967 be added to line 304 to pair with 427.5 (Cardiac arrest) and 427.41 (Ventricular fibrillation). 33967 is currently on lines 76, 108, 195. HERC staff has consulted with Dr. Howard Song (Cardiology, OHSU) who agrees with this pairing.	Add 33967 to line 304

Code	Code Description	Line(s) Involved	Issue	Recommendation(s)
57295 57296	Revision (including removal) of prosthetic vaginal graft; vaginal approach Abdominal approach	**448** COMPLICATIONS OF A PROCEDURE USUALLY REQUIRING TREATMENT	From Dr. Michelle Berlin at OHSU: "can someone address 629.32? The surgical removal of exposed vaginal mesh does not ever pair with the diagnosis of exposure/erosion of vaginal mesh....it is approved always on appeal, but it would be nice if that were not something that required paperwork every time...." 629.32 (Exposure of implanted vaginal mesh and other prosthetic materials into vagina) is on line 448. 57295 is on line 380 CONGENITAL ABSENCE OF VAGINA and 57296 is on line 308 COMPLICATIONS OF A PROCEDURE ALWAYS REQUIRING TREATMENT.	Add 57295 and 57296 to line 448
97802 97803 97804	Medical nutrition therapy; initial assessment and intervention, individual, face-to-face with the patient, each 15 minutes Medical nutrition therapy; re-assessment and intervention, individual, face-to-face with the patient, each 15 minutes Medical nutrition therapy; group (2 or more individual(s)), each 30 minutes	**264** GLYCOGENOSIS	From Kerry Silvey, "These codes are already included in the other inborn errors of metabolism lines," and medical nutrition therapy is essential.	Add 97802 – 97804 to line 264

Ancillary Codes to Place on Prioritized List

Question: Should certain procedure codes be left on the Ancillary List or placed on a line or lines on the Prioritized List?

Question source: DMAP

Issue: DMAP has been reviewing the Ancillary List and found several procedure CPT codes which are candidates for line(s) on the List. The Ancillary List is generally reserved for procedures which could be paired with many, many diagnoses, such as wheelchair fitting, bandage changes, IV starts, etc. HERC staff has reviewed these codes; placement suggestions are in the table below.

Recommendation:

1) Changes as outlined in table below

CPT code	Code description	Related diagnosis code(s)	Suggested Line(s)/List(s)
23931	Incision and drainage, upper arm or elbow area; bursa	726.33 Olecranon bursitis 726.31 Medial epicondylitis	**531** PERIPHERAL ENTHESOPATHIES Treatment: SURGICAL TREATMENT
24149	Radical resection of capsule, soft tissue, and heterotopic bone, elbow, with contracture release	718.42 Contracture of joint, upper arm 728.10 Calcification and ossification, unspecified	**318** NEUROLOGICAL DYSFUNCTION IN POSTURE AND MOVEMENT CAUSED BY CHRONIC CONDITIONS
24344	Reconstruction lateral collateral ligament, elbow, with tendon graft	841.1 Ulnar collateral ligament sprain	**406** DISRUPTIONS OF THE LIGAMENTS AND TENDONS OF THE ARMS AND LEGS, EXCLUDING THE KNEE, GRADE II AND III
27035	Denervation, hip joint, intrapelvic or extrapelvic intra-articular branches of sciatic, femoral, or obturator nerves	724.5 Sciatica 724.6 Disorders of sacrum (SI joint pain)	**562** ACUTE AND CHRONIC DISORDERS OF SPINE WITHOUT NEUROLOGIC IMPAIRMENT
29900	Arthroscopy, metacarpophalangeal joint, diagnostic, includes synovial biopsy		**Diagnostic List**
29901	Arthroscopy, metacarpophalangeal joint, surgical; with debridement	842.12 Sprain of metacarpophalangeal (joint) of hand	**406** DISRUPTIONS OF THE LIGAMENTS AND TENDONS OF THE ARMS AND LEGS, EXCLUDING THE KNEE, GRADE II AND III
29902	Arthroscopy, metacarpophalangeal joint, surgical; with reduction of displaced ulnar collateral ligament (eg, Stenar lesion)	841.1 Ulnar collateral ligament sprain 842.12 Sprain of metacarpophalangeal (joint) of hand	**406** DISRUPTIONS OF THE LIGAMENTS AND TENDONS OF THE ARMS AND LEGS, EXCLUDING THE KNEE, GRADE II AND III

Scoring Criteria

Scoring Criteria for the HERC Individual and Population Health Impact Measures

Impact of Condition on Health without Treatment

0 – No impact on health (beyond the short term)
1 – Nonfatal condition with a marginal impact on health and/or functional status
2 – Nonfatal condition with a modest impact on health and/or functional status
3 – Nonfatal condition with a low probability of a significant residual effect or a high probability of a residual effect with a moderate impact on health and/or functional status
4 – Nonfatal condition with a low probability (<20%) of significant disability
5 – Nonfatal condition with at least a moderate probability (≥20%) of significant disability or has a low fatality rate (<10%) and condition is not likely to shorten lifespan by more than 10 years
6 – Moderately fatal condition (10-30%) and condition is not likely to shorten lifespan by more than 10 years, or has a low fatality rate and lifespan likely reduced by 10 to 35 years
7 – Highly fatal condition (>30%) and condition is not likely to shorten lifespan by more than 10 years; moderately fatal with lifespan likely reduced by 10 to 35 years; or has a low fatality with lifespan likely reduced by 35 to 60 years
8 – Highly fatal condition with lifespan likely reduced by 10 to 35 years; moderately fatal with lifespan likely reduced by 35 to 60 years; or has a low fatality rate and lifespan likely to be shortened by 60 years or more
9 – Highly fatal condition with lifespan likely reduced by 35 to 60 years or moderately fatal and lifespan likely to be shortened by 60 years or more
10 – Highly fatal condition and lifespan likely to be shortened by 60 years or more

Impact on Pain and Suffering

0 – No impact on pain or suffering
1 – Intermittent pain of moderate level or frequent pain of low level and/or low level of suffering of the individual, immediate family or caregiver
2 – Frequent pain of moderate level or constant pain of low level and/or modest level of suffering of the individual, immediate family or caregiver
3 – Intermittent pain of high level or constant pain of moderate level and/or moderate level of suffering of the individual, immediate family or caregiver
4 – Frequent pain of high level and/or high level of suffering of the individual, immediate family or caregiver
5 – Constant pain of high level and/or extreme suffering of the individual, immediate family or caregiver

Population Effects

0 – No impact on population health
1 – Nontreatment would result in limited spread of a significant nonfatal disease or have a low impact on population safety (e.g. due to the nontreatment of a mental health condition)
2 – Nontreatment would result in a moderate spread of a significant nonfatal disease or have a modest impact on population safety
3 – Nontreatment would result in a limited spread of a potentially fatal disease or a wide spread of a significant nonfatal disease or have a moderate impact on population safety

4 – Nontreatment would result in a moderate spread of a potentially fatal disease or have a high impact on population safety
5 – Nontreatment would result in a wide spread of a potentially fatal disease or have a very high impact on population safety

Impact on Vulnerable Populations

0 – No impact on vulnerable populations
1 – Somewhat disproportionate impact of a condition with a moderate impact on health on one or more vulnerable populations (does not include men, women, children or pregnant women considered as separate populations or low-income individuals, since methodology is only being applied to Medicaid population at this point)
2 – Moderately disproportionate impact of a condition with a moderate impact on health on one or more vulnerable populations
3– Somewhat disproportionate impact of a condition with a significant impact on health on one or more vulnerable populations
4 – Moderately disproportionate impact of a condition with a significant impact on health on one or more vulnerable populations
5 – Highly disproportionate impact of a condition with a significant impact on health on one or more vulnerable populations

Tertiary Prevention

0 – No tertiary prevention provided by treatment and early treatment does not prevent progression of the disease
1 – Treatment will prevent of moderate complication and/or early treatment may prevent progression of the disease resulting in a moderate impact on health
2 – Low to modest likelihood that treatment will prevent a significant complication or prevent progression of the disease resulting in significant impact on health
3 –Moderate to high likelihood that treatment will prevent a significant complication or prevent progression of the disease resulting in significant impact on health
4 – Low to modest likelihood that treatment will prevent severely debilitating complication and/or early treatment with prevent progression of disease leading to severe disability or death
5 – Moderately to high likelihood that treatment will prevent severely debilitating complication and/or early treatment with prevent progression of disease leading to severe disability or death

Effectiveness

0 – No demonstrated effectiveness (<5%) or causes harm
1 - Achieves desired result in 5-25% of cases
2 - Achieves desired result in 25-50% of cases
3 – Achieves desired result in 50-75% of cases
4 – Achieves desired result in 75-95% of cases
5 – Achieves desired result in 95+% of cases

Net Cost

0 – Very high cost (>$100,000)
1 – High cost ($20,000-$100,000)
2 – Moderate cost ($5,000-$20,000) or higher cost somewhat offset by cost of treatment alternative

3 – Modest cost ($1,000-$5,000) or higher cost significantly offset by cost of treatment alternative
4 – Low cost (<$1,000) or higher cost nearly offset by cost of treatment alternative
5 – Cost savings

Rank Order of Health Care Categories

1) Maternity & Newborn Care (100) - Obstetrical care for pregnancy. Prenatal care; delivery services; postpartum care; newborn care for conditions intrinsic to the pregnancy.

2) Primary Prevention and Secondary Prevention (95) - Effective preventive services used prior to the presence of disease and screenings for the detection of diseases at an early stage. Immunizations; fluoride treatment in children; mammograms; pap smears; blood pressure screening; well child visits; routine dental exams.

3) Chronic Disease Management (75) - Predominant role of treatment in the presence of an established disease is to prevent an exacerbation or a secondary illness. Medical therapy for diabetes mellitus, asthma, and hypertension. Medical/psychotherapy for schizophrenia.

4) Reproductive Services (70) - Excludes maternity and infertility services. Contraceptive management; vasectomy; tubal occlusion; tubal ligation.

5) Comfort Care (65) - Palliative therapy for conditions in which death is imminent. Hospice care; pain management.

6) Fatal Conditions, Where Treatment is Aimed at Disease Modification or Cure (40) - Appendectomy for appendicitis; medical & surgical treatment for treatable cancers; dialysis for end-stage renal disease; medical therapy for stroke; medical/psychotherapy for single episode major depression.

7) Nonfatal Conditions, Where Treatment is Aimed at Disease Modification or Cure (20) - Treatment of closed fractures; medical/psychotherapy for obsessive-compulsive disorders; medical therapy for chronic sinusitis.

8) Self-limiting conditions (5) - Treatment expedites recovery for conditions that will resolve on their own whether treated or not. Medical therapy for diaper rash, acute conjunctivitis and acute pharyngitis.

9) Inconsequential care (1) - Services that have little or no impact on health status due to the nature of the condition or the ineffectiveness of the treatment. Repair fingertip avulsion that does not include fingernail; medical therapy for gallstones without cholecystitis, medical therapy for viral warts.

Impact Healthy Life Years
+ Impact on Suffering
+ Population Effects X Effectiveness X Need for Service
+ Vulnerable of Population Affected
+ Tertiary Prevention (categories 6 & 7 only)

Population and Individual Impact Measures

Impact on Health Life Years - to what degree will the condition impact the health of the individual if left untreated, considering the median age of onset (i.e., does the condition affect mainly children, where the impacts could potentially be experienced over a person's entire lifespan)? Range of 0 (no impact) to 10 (high impact).

Impact on Suffering - to what degree does the condition result in pain and suffering? Effect on family members (e.g. dealing with a loved one with Alzheimer's disease or needing to care for a person with a life-long disability) should also be factored in here. Range of 0 (no impact) to 5 (high impact).

Population Effects - the degree to which individuals other than the person with the illness will be affected. Examples include public health concerns due the spread of untreated tuberculosis or public safety concerns resulting from untreated severe mental illness. Range of 0 (no effects) to 5 (widespread effects).

Vulnerability of Population Affected - to what degree does the condition affect vulnerable populations such as those of certain racial/ethnic decent or those afflicted by certain debilitating illnesses such as HIV disease or alcohol & drug dependence? Range of 0 (no vulnerability) to 5 (high vulnerability).

Tertiary Prevention - in considering the ranking of services within new categories 6 and 7, to what degree does early treatment prevent complications of the disease (not including death)? Range of 0 (doesn't prevent complications) to 5 (prevents severe complications).

Effectiveness - to what degree does the treatment achieve its intended purpose? Range of 0 (no effectiveness) to 5 (high effectiveness).

Need for Medical Services - the percentage of time in which medical services would be required after the diagnosis has been established. Percentage from 0 (services never required) to 1 (services always required).

Net Cost - the cost of treatment for the typical case (including lifetime costs associated with chronic diseases) minus the expected costs if treatment is not provided -- including costs incurred through safety net providers (e.g., emergency departments) for urgent or emergent care related to the injury/illness or resulting complications. Range of 0 (high net cost) to 5 (cost saving).

Population and Individual Impact Measures

Impact on Health Life Years - to what degree will the condition impact the health of the individual if left untreated, considering the median age of onset (i.e., does the condition affect mainly children, where the impacts could potentially be experienced over a person's entire lifespan)? Range of 0 (no impact) to 10 (high impact).

Impact on Suffering - to what degree does the condition result in pain and suffering? Effect on family members (e.g. dealing with a loved one with Alzheimer's disease or needing to care for a person with a life-long disability) should also be factored in here. Range of 0 (no impact) to 5 (high impact).

Population Effects - the degree to which individuals other than the person with the illness will be affected. Examples include public health concerns due the spread of untreated tuberculosis or public safety concerns resulting from untreated severe mental illness. Range of 0 (no effects) to 5 (widespread effects).

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Tertiary Prevention - in considering the ranking of services within new categories 6 and 7, to what degree does early treatment prevent complications of the disease (not including death)? Range of 0 (doesn't prevent complications) to 5 (prevents severe complications).

Effectiveness - to what degree does the treatment achieve its intended purpose? Range of 0 (no effectiveness) to 5 (high effectiveness).

Healthy Life Years Score Examples					
0	**1**	**2**	**3**	**4**	**5**
Sexual Dysfunction	Anogenital Viral Warts	Tourette's Disorder And Tic Disorders	Termination Of Pregnancy	Pituitary Dwarfism	Chronic Organic Mental Disorders Including Dementias
Disorders Of Sleep Without Sleep Apnea	Anti-Social Personality Disorder	Dental Conditions (Eg. Periodontal Disease)	Incontinence Of Feces	Schizotypal Personality Disorders	Autism Spectrum Disorders
6	**7**	**8**	**9**	**10**	
Abuse Or Dependence Of Psychoactive Substance	Drug Withdrawal Syndrome In Newborn	HIV Disease And Related Opportunistic Infections	Cystic Fibrosis	Very Low Birth Weight (Under 1500 Grams)	
Tobacco Dependence	Tuberculosis	Life-Threatening Cardiac Arrhythmias	Acute And Subacute Necrosis Of Liver; Specified Inborn Errors Of Metabolism (Eg. Maple Syrup Urine Disease, Tyrosinemia)	Short Bowel Syndrome - Age 5 Or Under	

Pain And Suffering Score Examples					
0	**1**	**2**	**3**	**4**	**5**
Anogenital Viral Warts	Anti-Social Personality Disorder	Sexual Dysfunction	Tourette's Disorder And Tic Disorders	Autism Spectrum Disorders	Chronic Organic Mental Disorders Including Dementias
Acute Viral Conjunctivitis	Pituitary Dwarfism	Disorders Of Sleep Without Sleep Apnea	Abuse Or Dependence Of Psychoactive Substance	Cystic Fibrosis	Very Low Birth Weight (Under 1500 Grams)
Chronic Bronchitis	Schizotypal Personality Disorders	Termination Of Pregnancy		Short Bowel Syndrome - Age 5 Or Under	

Population Effects Score Examples					
0	**1**	**2**	**3**	**4**	**5**
Sexual Dysfunction	Life-Threatening Cardiac Arrhythmias	Anogenital Viral Warts	HIV Disease And Related Opportunistic Infections	Anti-Social Personality Disorder	Chronic Hepatitis; Viral Hepatitis
Disorders Of Sleep Without Sleep Apnea	Autism Spectrum Disorders	Tobacco Dependence	Termination Of Pregnancy	Tuberculosis	Abuse Or Dependence Of Psychoactive Substance

Vulnerability Of Population Score Examples					
0	**1**	**2**	**3**	**4**	**5**
Pituitary Dwarfism	Very Low Birth Weight (Under 1500 Grams)	Tourette's Disorder And Tic Disorders	Drug Withdrawal Syndrome In Newborn	Chronic Hepatitis; Viral Hepatitis	HIV Disease And Related Opportunistic Infections
Cystic Fibrosis	Tobacco Dependence	Anogenital Viral Warts	Incontinence Of Feces	Tuberculosis	

Effectiveness Of Treatment Score Examples					
0	**1**	**2**	**3**	**4**	**5**
Acute Viral Conjunctivitis	Schizotypal Personality Disorders	Tobacco Dependence	Life-Threatening Cardiac Arrhythmias	Cystic Fibrosis	Pituitary Dwarfism
Chronic Bronchitis	Anti-Social Personality Disorder	Tourette's Disorder And Tic Disorders	Sexual Dysfunction	HIV Disease And Related Opportunistic Infections	Termination Of Pregnancy

Tertiary Prevention Score Examples					
0	**1**	**2**	**3**	**4**	**5**
Cancer Of Pancreas	Stroke	Urinary Incontinence	Iron Deficiency Anemia And Other Nutritional Deficiencies	Diabetes Mellitus With End Stage Renal Disease	Acute And Subacute Ischemic Heart Disease, Myocardial Infarction
Ruptured Spleen	Sexual Dysfunction	Cleft Palate And/Or Cleft Lip	Chronic Hepatitis; Viral Hepatitis	Injury To Internal Organs	Acute Stress Disorder
Minor Burns	Acute Bronchitis And Bronchiolitis	Depression And Other Mood Disorders, Mild Or Moderate	Superficial Injuries With Infection	Ulcers, Gastritis, Duodenitis, And Gi Hemorrhage	Hearing Loss - Age 5 Or Under