Identifying ‘Suspect Health Conditions’ in Medicare Risk Adjustment

Kwame Appiah-Yeboah, PhD
Brian R. Boyce, CPC, CPC-I
Presenters

Kwame Appiah-Yeboah, PhD
Senior Health Economics Analyst
kwame.appiah-yeboah@healthriskpartners.com

Brian R. Boyce, CPC, CPC-I
Vice President, Clinical Coding Services
AAPC Approved Instructor, PMCC
AHIMA Approved ICD-10 CM Instructor
Brian.Boyce@healthriskpartners.com
Agenda

- Risk Adjustment
- HRP Solution
- Suspect Identification
- Provider Selection
- Chart Review and Coding
- Questions
HCC Origins

- Pope, Ash, Ellis et al. of the Research Triangle Institute created the DCG/HCC model in 2000. At that time they identified 804 costly diagnosis groups, mapped to 189 HCC codes.
- Created a reporting model for reimbursement based on ICD-9 codes.
- There are 3,000+ ICD-9 codes mapped to 70 HCC codes.
- There are 3,000+ ICD-9 codes mapped to 84 RxHCC codes.
- ~1,500 ICD-9 Codes carry BOTH HCC and RxHCC value.
- HCC and RxHCC are ever-evolving and updated as needed.
- Look for changes and probable expansion with the new ICD-10 which is due in year 2013.
Health Risk Partners

Acquired in June 2011 to broaden Verisk Health’s service offering.

Pope, Ash and Ellis, developers of CMS DCG/HCC model were the founders of DxCG, now part of Verisk Health.

The people who made the wheel, are now making cars
## Provider Specialties

<table>
<thead>
<tr>
<th>CODE</th>
<th>SPECIALTY</th>
<th>CODE</th>
<th>SPECIALTY</th>
<th>CODE</th>
<th>SPECIALTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>General Practice</td>
<td>29</td>
<td>Pulmonary Disease</td>
<td>70</td>
<td>Multispecialty Clinic/Group Practice</td>
</tr>
<tr>
<td>02</td>
<td>General Surgery</td>
<td>33</td>
<td>Thoracic Surgery</td>
<td>72</td>
<td>Pain Management</td>
</tr>
<tr>
<td>03</td>
<td>Allergy/Immunology</td>
<td>34</td>
<td>Urology</td>
<td>76</td>
<td>Peripheral Vascular Disease</td>
</tr>
<tr>
<td>04</td>
<td>Otolaryngology</td>
<td>35</td>
<td>Chiropractic</td>
<td>77</td>
<td>Vascular Disease</td>
</tr>
<tr>
<td>05</td>
<td>Anesthesiology</td>
<td>36</td>
<td>Nuclear Medicine</td>
<td>78</td>
<td>Cardiac Surgery</td>
</tr>
<tr>
<td>06</td>
<td>Cardiology</td>
<td>37</td>
<td>Pediatric Medicine</td>
<td>79</td>
<td>Addiction Medicine</td>
</tr>
<tr>
<td>07</td>
<td>Dermatology</td>
<td>38</td>
<td>Geriatric Medicine</td>
<td>80</td>
<td>LCSW</td>
</tr>
<tr>
<td>08</td>
<td>Family Practice</td>
<td>39</td>
<td>Nephrology</td>
<td>81</td>
<td>Critical Care (Intensivists)</td>
</tr>
<tr>
<td>10</td>
<td>Gastroenterology</td>
<td>40</td>
<td>Hand Surgery</td>
<td>82</td>
<td>Hematology</td>
</tr>
<tr>
<td>11</td>
<td>Internal Medicine</td>
<td>41</td>
<td>Optometry (optometrists)</td>
<td>83</td>
<td>Hematology/Oncology</td>
</tr>
<tr>
<td>12</td>
<td>Osteopathic Manipulative Therapy</td>
<td>42</td>
<td>Certified Nurse Midwife</td>
<td>84</td>
<td>Preventative Medicine</td>
</tr>
<tr>
<td>13</td>
<td>Neurology</td>
<td>43</td>
<td>CRNA</td>
<td>85</td>
<td>Maxillofacial Surgery</td>
</tr>
<tr>
<td>14</td>
<td>Neurosurgery</td>
<td>44</td>
<td>Infectious Disease</td>
<td>86</td>
<td>Neuropsychiatry</td>
</tr>
<tr>
<td>16</td>
<td>Obstetrics/Gynecology</td>
<td>46</td>
<td>Endocrinology</td>
<td>89</td>
<td>Certified Clinical Nurse Specialist</td>
</tr>
<tr>
<td>18</td>
<td>Ophthalmology</td>
<td>48</td>
<td>Podiatry</td>
<td>90</td>
<td>Medical Oncology</td>
</tr>
<tr>
<td>19</td>
<td>Oral Surgery (Dentists only)</td>
<td>50</td>
<td>Nurse Practitioner</td>
<td>91</td>
<td>Surgical Oncology</td>
</tr>
<tr>
<td>20</td>
<td>Orthopedic Surgery</td>
<td>62</td>
<td>Psychologist</td>
<td>92</td>
<td>Radiation Oncology</td>
</tr>
<tr>
<td>22</td>
<td>Pathology</td>
<td>64</td>
<td>Audiologist</td>
<td>93</td>
<td>Emergency Medicine</td>
</tr>
<tr>
<td>24</td>
<td>Plastic &amp; Reconstructive Surgery</td>
<td>65</td>
<td>Physical Therapist</td>
<td>94</td>
<td>Interventional Radiology</td>
</tr>
<tr>
<td>25</td>
<td>Physical Medicine &amp; Rehabilitation</td>
<td>66</td>
<td>Rheumatology</td>
<td>97</td>
<td>Physician Assistant</td>
</tr>
<tr>
<td>26</td>
<td>Psychiatry</td>
<td>67</td>
<td>Occupational Therapist</td>
<td>98</td>
<td>Gynecologist/Oncologist</td>
</tr>
<tr>
<td>28</td>
<td>Colorectal Surgery</td>
<td>68</td>
<td>Clinical Psychologist</td>
<td>99</td>
<td>Unknown Physician Specialty</td>
</tr>
</tbody>
</table>
Where we find diagnoses

S = Subjective: Includes Chief Complaint, why are they here?
O = Objective: What do you see, Review of Systems
A = Assessment: What is wrong? What is the Diagnosis?
P = Plan: What is the treatment plan for the problem?

• **Problem List**: Dated index of patients diagnoses, from date first identified to resolution.
• Complete and Legible Notes are needed. No sticky notes.
• Use a **Standard Abbreviation List**. No “homegrown abbreviations” should be used.
• Each page in chart should have patient name or ID and Date of Birth and each visit dated accordingly.
• Each note must be signed and dated by the rendering provider.
<table>
<thead>
<tr>
<th>If this HCC is found...</th>
<th>(Disease Group Label)</th>
<th>Then Drop these HCC's:</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Opportunistic Infections</td>
<td>112</td>
</tr>
<tr>
<td>7</td>
<td>Metastatic Cancer and Acute Leukemia</td>
<td>8, 9, 10</td>
</tr>
<tr>
<td>8</td>
<td>Lung, Upper Digestive Tract, and Other Severe Cancers</td>
<td>9, 10</td>
</tr>
<tr>
<td>9</td>
<td>Lymphatic, Head and Neck, Brain and Other Major Cancers</td>
<td>10</td>
</tr>
<tr>
<td>15</td>
<td>Diabetes with Renal Manifestations or Peripheral Circulatory Manifestation</td>
<td>16, 17, 18, 19</td>
</tr>
<tr>
<td>16</td>
<td>Diabetes with Neurologic or Other Specified Manifestation</td>
<td>17, 18, 19</td>
</tr>
<tr>
<td>17</td>
<td>Diabetes with Acute Complication</td>
<td>18, 19</td>
</tr>
<tr>
<td>18</td>
<td>Diabetes with Ophthalmologic or Unspecified Manifestations</td>
<td>19</td>
</tr>
<tr>
<td>25</td>
<td>End Stage Liver Disease</td>
<td>26, 27</td>
</tr>
<tr>
<td>26</td>
<td>Cirrhosis of Liver</td>
<td>27</td>
</tr>
<tr>
<td>51</td>
<td>Drug/Alcohol Psychosis</td>
<td>52</td>
</tr>
<tr>
<td>54</td>
<td>Schizophrenia</td>
<td>55</td>
</tr>
<tr>
<td>67</td>
<td>Quadriplegia/Other Extensive Paralysis</td>
<td>68, 69, 100, 101, 157</td>
</tr>
<tr>
<td>68</td>
<td>Paraplegia</td>
<td>69, 100, 101, 157</td>
</tr>
</tbody>
</table>
Diabetes Example

- **Rx**: HCC 15 $$$$$
  Diabetes w Renal Manifest or Peripheral Circ d/o
  [250.40-250.43 & 250.70-250.73]

- **DME**: HCC 16 $$$$$
  Diabetes w Neuro Manifest or Other Specified
  [250.60-250.63 & 250.80-250.83]

- **CPT**: HCC 17 $$$
  Diabetes w coma or ketoacidosis
  [250.10-250.33]

- **Lab**: HCC 18 $$
  Diabetes w Opthal Manifest or Unspecified
  [250.50-250.53 & 250.90-250.93]
Risk / RAF

Risk is based on each individual patient.

• Each risk affects the RAF.

Example:

– Patients get a report from CMS showing their HCC codes:

  John Doe, age 65, male
  HCC 15 (0.6)
  HCC 7 (1.648)
  HCC 83 (0.23)
  Demographic score (0.330)
  Total individual score = 2.808

RAF is for the whole plan. This affects monthly payment. Based on projected cost to cover member’s Part A & Part B services.

• Goal of HCC use is to increase the RAF score.

• RAF Example:

  = $650 PMPM x RAF
  $650 x 0.5 RAF = $325
  $650 x 2.5 RAF = $1,625
## Real World Example

<table>
<thead>
<tr>
<th>No Conditions Coded</th>
<th>Some Coded - Not Specific</th>
<th>All Conditions Coded</th>
</tr>
</thead>
<tbody>
<tr>
<td>76 year old Female</td>
<td>76 year old Female</td>
<td>76 year old Female</td>
</tr>
<tr>
<td>Medicaid Eligible</td>
<td>Medicaid Eligible</td>
<td>Medicaid Eligible</td>
</tr>
<tr>
<td>DM not coded</td>
<td>DM w/o complication</td>
<td>DM w Vasc. Complication</td>
</tr>
<tr>
<td>Vasc Dz not coded</td>
<td>Vasc w/o complication</td>
<td>Vasc. w complication</td>
</tr>
<tr>
<td>CHF not coded</td>
<td>CHF not coded</td>
<td>CHF coded</td>
</tr>
<tr>
<td>No interaction</td>
<td>No interaction</td>
<td>Disease interaction (DM + CHF)</td>
</tr>
<tr>
<td>TOTAL RAF</td>
<td>TOTAL RAF</td>
<td>TOTAL RAF</td>
</tr>
<tr>
<td>PMPM Payment</td>
<td>PMPM Payment</td>
<td>PMPM Payment</td>
</tr>
<tr>
<td>Yearly Payment</td>
<td>Yearly Payment</td>
<td>Yearly Payment</td>
</tr>
</tbody>
</table>

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>.457</td>
<td>.457</td>
<td>.457</td>
</tr>
<tr>
<td>.179</td>
<td>.179</td>
<td>.179</td>
</tr>
<tr>
<td>.162</td>
<td></td>
<td>.508</td>
</tr>
<tr>
<td>.316</td>
<td></td>
<td>.61</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.41</td>
</tr>
<tr>
<td></td>
<td></td>
<td>.154</td>
</tr>
<tr>
<td>.636</td>
<td>1.114</td>
<td>2.318</td>
</tr>
<tr>
<td>$554</td>
<td>$969</td>
<td>$2,017</td>
</tr>
<tr>
<td>$6,644</td>
<td>$11,630</td>
<td>$24,199</td>
</tr>
</tbody>
</table>
Risk Adjustment & Coding

- Each patient-based reimbursement is linked to how sick the member is and adjusts his or her “risk” based on specific documented diagnoses.
- Only certain Diagnoses ensure proper level of coverage for each patient.
  - Diagnoses must be made during face-to-face visits by any acceptable provider specialty
  - Any diagnosis related to the visit’s Medical Decision Making
  - Chronic conditions (paraplegia, old MI, loss of limb, etc.) that never resolve and are re-documented yearly
  - Updated diagnoses made from face-to-face visits after rule out diagnoses are confirmed by lab or radiology.
  - Suspect or rule-out conditions or old conditions that were previously treated and no longer exist cannot be used. Conditions listed only as “PMH” (past medical history), without evidence of current treatment are not accepted.
Documenting “History of…”

“History of” Diagnoses

- May only be accepted by Medicare if there is evidence of Treatment, Assessment, Monitoring/Medication, Plan, Evaluation or Referral (TAMPER):
  - Medication (refill, new RX, evaluation, etc)
  - Diet modifications by the medical provider related to the condition
  - Referral for the condition
  - Lab or other Diagnostic testing for the condition

- If a problem is current, do not list it as “history of”, instead include it in the assessment or plan and show what you did to address that diagnosis on that visit in your documentation.
Missing Pieces

• Many previously documented chronic conditions persist for patients which are not regularly documented through claims systems and can only be abstracted via chart review
  – Old MI, Amputations, Ostomy status, etc. are all examples

• Familial history is often taken in provider offices and hospitals, yet rarely coded using “Family history of” diagnosis codes, thereby cloaking potentially valuable information for predictive modeling

• Because most providers are not formally trained in medical coding, shortcuts are often taken in utilizing diagnosis codes which do not tell the full story
  – Diabetes 250.00 is often generally used when many of these patients have manifestations

• With the implementation of ICD-10 CM, providers will have many more specific diagnosis codes to choose from which may help predictive modeling

• ICD-10 CM will also impact pay for performance measures and HEDIS quality of care type reviews
  – Through both identification of patients with new progressive illness as well as documentation of improved care utilizing different diagnosis codes
**HRP Solution**

Health Plan Data
- Membership
- Claims
- PDE
- RAPS
- MOR
- Diagnosis
- Lab
- Rx
- DME
- Surveys
- Care Management

**HRP “Member Centric” Data Mart**

Additional Health Data
- Pharmacy
- HEDIS

**Reports and Extracts**

**HRP ReconEdge™**

**Suspect Models**
- Clinical Algorithms
- Computer models
- Member Demographics

Proprietary and confidential information. Do not copy or distribute without the permission of HRP.
SUSPECT IDENTIFICATION

Suspect = ∑ Demographic HCC Factors + ∑ Clinical Algorithms + ∑ Computer Models
SUSPECT IDENTIFICATION

Demographic Information

- HRP utilizes member demographics to aid suspect identification
  
  • Age
  • Gender
  • Disability
  • Special Status (Medicaid, ESRD, Hospice, etc)
  • Interaction among above factors

Proprietary and confidential information. Do not copy or distribute without the permission of HRP.
SUSPECT IDENTIFICATION

Clinical Algorithms

- HRP utilizes over 700 clinical algorithms in identifying Suspect HCC
- Medical conditions (known current and past drop off)
- Pharmacy data and PDE mapping
- Laboratory results or outcomes
- Co-morbidities
- Prior Authorizations
- DME
- Other CPT and HCPS codes used
- Interactions of all the above
SUSPECT IDENTIFICATION

Combo of HCC 19 & 130 or 131 (CKD) kidney function lab results or use of Rx of combos, or use of DME

HCC 19

Known or Rx evident

Combo of HCC 19 & 71 or use of Rx of combos, or use of DME

HCC 16

Unable to predict diabetic coma or ketoacidosis

HCC 18

Combo of HCC 19 HCPCS / CPT eye exam codes, ICD related eye dz

HCC 119

HCC 15

HCC 130 & 131 or 104

HCC 70 & 71

HCC 17

+$$

+$$

+$$

+$$

+$$

Proprietary and confidential information. Do not copy or distribute without the permission of HRP.
Suspect Health Conditions

Computer Models

• HRP utilizes proprietary computer algorithms to identify suspect conditions

• HRP uses statistical modeling to assign suspects conditions into buckets

• Uses algorithms to aid provider and chart selection process
SUSPECT IDENTIFICATION

Proprietary and confidential information. Do not copy or distribute without the permission of HRP.

HCC 1: 25%
HCC 45: 0.73%
HCC 105: 3.7%
Suspects identified through Demographic, Clinical Algorithms and Computer Models are filtered to remove already documented conditions.
SUSPECT IDENTIFICATION

HRP uses statistical modeling to rank identified suspect conditions

- Suspect Health Condition (SHC) = F(∑DF, ∑CA, ∑CM)
- \[ SHC = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \beta_8 X_8 + \beta_9 X_9 + \beta_{10} X_{10} + \ldots + e_i \]

- Where
  - \( \beta \) are coefficients
  - \( X \) are the individual and interaction variables
  - \( e \) is the error term
  - DF Demographic Factors
  - CA Clinical Algorithms
  - CM Computer Models
SUSPECT IDENTIFICATION

\[ HCC_1 = \beta_0 + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \]

\[ \beta_5 + \beta_6 + \beta_7 + \beta_8 + \beta_9 \]
SUSPECT IDENTIFICATION

STEVE I.S. YOUNG

IRENE B. COOL
SUSPECT IDENTIFICATION

STEVE
Male
82
Medicaid

• Rx: Sustiva (efavirenz)
• Rx: Epivir (lamivudine)
• Kaposi's sarcoma or lymphoma
• Cryptococcal meningitis
• Computer Model 78%
• Probability of HCC 1 = 0.35

IRENE
Female
82
Medicaid

• Rx: Valtrex (valacyclovir)
• Computer Model 18%
• Probability of HCC 1 = 0.013
PROVIDER SELECTION

An algorithm that maps disease conditions to provider / specialties and providers / specialties likely to yield chart

- Suspect HCC 15:
  - 1st likely provider: Nephrology
  - 2nd likely provider: Endocrinology
  - 3rd likely provider: Internal Medicine
PROVIDER SELECTION

Example: Which Specialty and provider is our best chance for charts on HCC 15

Provider A
- ER Physician
- Saw member once in ER
- Prescribed Claritin

Provider B
- Endocrinologist
- Saw member 8 times in YOS
- Prescribed Humalin, Actos
- Ordered Hemoglobin A1C
- Noted on peritoneal dialysis
Certified Coders Role

- Only the provider who saw the patient or a nationally certified coder should translate diagnosis (ICD-9 CM or ICD-10 CM), CPT, or HCPCS codes
- Find legible face-to-face encounters with chronic conditions documented and signed by an acceptable provider
- Include all Chronic Conditions that are part of the Medical Decision Making Process. This includes any chronic condition that is under current treatment whether it is the main reason for the visit or not. Past Medical History, Review Of Systems, Exam, Assessment & Plan are all portions of the record that may have valuable conditions documented
- Any DOS (date of service) within the calendar year gives credit for that diagnosis for each month of that year
HRP SOLUTION

Assist Medicare and Medicaid Health Plans in Compliance, Payment Integrity and Revenue Optimization
Health Risk Partners

A Health Care IT Company Where Health Care Expertise and Information Technology Excellence Meet

For more information please contact:

Health Risk Partners,
A Division of Verisk Health

6802 Paragon Place, Suite 500
Richmond, VA 23230
www.healthriskpartners.com
(804) 381-4166
Questions