Arkansas Payment Improvement Initiative

Discussion document
Ambulatory URIs

February 27th, 2012

PRELIMINARY WORKING DRAFT, SUBJECT TO CHANGE
Objectives for today and what’s coming up

Objectives for today

- Review and get your feedback on version 1.0 design elements specific to Ambulatory URI
- Review historical data for Ambulatory URI episodes based on version 1.0 design
- Briefly review episode design elements common across episodes

What’s coming up

- Third round of workgroups for each of the clinical areas underway through March 14
- Mid-March: in-depth discussion of design elements common across clinical areas (participants from all workgroups invited to attend)
- May/June: release and review of version 1.0 episode design refined based on stakeholder input
## July 1<sup>st</sup> launch: what to expect

<table>
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<tr>
<th>Key milestones</th>
<th>Description</th>
<th>Timing</th>
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<tr>
<td><strong>Description of design elements across episodes</strong></td>
<td>In-depth discussion of design elements common across clinical areas (participants from all workgroups invited to attend)</td>
<td>Mid-March</td>
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<tr>
<td><strong>Program announcement and education</strong></td>
<td>Payment design and documentation published</td>
<td>May/ June</td>
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<td></td>
<td>Educational workgroups and town halls to answer questions</td>
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<tr>
<td><strong>Program launch</strong></td>
<td>All analytic/ reporting engines up and running</td>
<td>July 1&lt;sup&gt;st&lt;/sup&gt;</td>
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<td><strong>Reporting period (3-6 months)</strong></td>
<td>Principal Accountable Providers (PAP) receive baseline historical performance reports</td>
<td>July 1&lt;sup&gt;st&lt;/sup&gt;</td>
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<tr>
<td></td>
<td>Analytic/ reporting engines track “virtual” performance for each PAP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Performance does not yet impact payment</td>
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<td><strong>Feedback period</strong></td>
<td>Workgroups provide feedback on version 1.0</td>
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<td>Payors may refine version 1.0 design</td>
<td></td>
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<tr>
<td><strong>Performance period begins</strong></td>
<td>New episodes begin to count towards a PAP’s share of risk or gain sharing</td>
<td>Q4 2012 or Q1 2013</td>
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</table>
Recap: goals of Payment Initiative compared with fee-for-service

- Reward high-quality care and outcomes
- Encourage clinical effectiveness
- Promote early intervention and coordination to reduce complications and associated costs
- Encourage referral to higher-value downstream providers
Recap: Episode-based care delivery will be paid for using an "episode performance payment" model¹

How episode performance payment will work:

- A cost threshold is determined for an episode
- One or more providers is designated the Principal Accountable Provider (PAP)
- Providers initially paid separately for the care they deliver, filing claims as they do today
- At the end of the episode, average costs and quality for the entire episode are aggregated and compared with the pre-determined threshold
- Savings or excess costs are divided between the PAP(s) and the payor or plan sponsor²
- While only PAPs directly receive a share of gain or risk from the payor, these providers may in turn choose to share incentives or risk with one or more other participating providers, subject of course to any legal limitations
- While the episode model inherently incents high quality care, PAPs will not be eligible for gain sharing unless certain quality thresholds are met

¹ We have previously described this as a “retrospective reconciliation” method of episode-based payment
² Upside and downside risk or gain sharing will be made at period intervals (i.e., at the end of a performance period)
Recap: Principal accountable providers – overview and criteria

Two types of providers for an episode of care:

- **Principal accountable provider (PAP):**
  - Provider with which payor directly shares upside/risk for cost relative to benchmark
  - Receives performance reports, organizes team to drive performance improvement
  - May be physician practice, hospital, or other provider

- **Other participating provider(s):**
  - Any provider that delivers services during an episode that is not a PAP
  - Payors do not directly share in upside/risk for cost relative to benchmark

Payors will identify one (or two if necessary) principal accountable provider(s) for each episode of care

- **Qualifications for a Principal Accountable Provider**
  - **Decision-making responsibility:** provider is principal (not exclusive) decision maker for most care during episode
    - Selects tests/ screenings
    - Determines treatment approach
    - Carries out procedures
  - **Influence over other providers:** provider is in best position to coordinate with, direct, or incent participating providers to improve performance
    - Makes referral decisions
    - Provides infrastructure
    - Organizes quality improvement efforts
  - **Economic relevance:** provider bears a material portion of the episode cost or a significant case volume

- **Focuses accountability**
- **Ensures sufficient upside/downside to motivate behavior change**
- **Simplifies administration**
Contents

Review version 1.0 episode design elements specific to Ambulatory URI

- Review historical data for the Ambulatory URI episode based on version 1.0 design

- Briefly review episode design elements common across episodes (for further discussion in mid March)
Patient focus: how episode-based care delivery will impact and benefit a patient with Ambulatory URI

- Patients will have one provider who is accountable for all of their care during the episode
- Patients will receive more appropriate levels of diagnostic testing and antibiotics
- Patients will attain better understanding of recommended care for their conditions
Preliminary proposal: Version 1.0 episode design elements specific to Ambulatory URI

1. **Episode definition/scope of services**
   - Episode start: patient’s first consultation with a clinical provider with a primary diagnosis of Acute Non-Specific URI, Acute Pharyngitis, or Acute Sinusitis. Episode lasts for 21 days (including the day of the initial visit)
   - The episode includes
     - All office visits (including in the Emergency Department) and outpatient costs with a primary diagnosis code of 460-465 and 034.0, excluding 464.4 (Croup)
     - Select antibiotics, antivirals and corticosteroids commonly used for URI, filled during the episode
   - The episode excludes
     - All inpatient spending
     - Surgical procedures and outpatient hospital monitoring
     - Symptom-related therapies

2. **Principal accountable provider(s)**
   - The provider who sees the patient for the first URI consultation, even if additional providers are seen during the episode

3. **Patient exclusions on a clinical basis**
   - Certain patients excluded from the v1.0 episode model
     - Patients with select comorbidities (e.g., Asthma, HIV, sickle cell)
     - Patients with inpatient stays during the episode
     - Children younger than 6 months

4. **Quality**
   - Episode design will be supplemented with additional quality metrics:
     - Frequency of antibiotic use for patients with acute pharyngitis who do not receive a strep test (directly related to payment)
     - Frequency of antibiotic usage (reporting only)
     - Frequency of follow up visits (reporting only)
     - Frequency of multiple courses of antibiotics during one episode (reporting only)
1 Episode definition/ scope of services: overview and criteria

- An episode begins with a patient’s first billable clinical consultation with a primary diagnosis of Acute Non-Specific URI, Acute Pharyngitis, or Acute Sinusitis
- The episode lasts for 21 days (including the day of the initial visit)

The episode includes the following services within 21 days of the initial “trigger” visit:

- Initial in-person URI consultation
- Follow-up in-person consultation(s)
- Imaging
- Diagnostic tests
- Medication

EXCLUSIONS

- All inpatient spending
- Surgical procedures and outpatient hospital monitoring
- Symptom-related therapies

1 Includes visits to the Emergency Department
2 Remote consultations are included as part of the episode, but will not be sufficient to trigger the start of an episode.

- All claims with a primary diagnosis code for an included URI (ICD-9 codes 460-465 and 034.0, excluding 464.4 for Croup)
- Select antibiotics, antivirals and corticosteroids commonly used for URI and filled within the duration of the episode
# 1 Episode definition/ scope of services: primary diagnoses codes that trigger an episode

<table>
<thead>
<tr>
<th>URI Type</th>
<th>ICD-9 codes</th>
<th>Percent of included URI episodes(^1)</th>
</tr>
</thead>
</table>
| Non-specific URI | - 460 – Acute nasopharyngitis  
- 464 – Acute laryngitis + tracheitis; excludes 464.4 (Croup)  
- 465 – Acute URI of multiple/ unspecified sites | 58% |
| Acute Pharyngitis and similar conditions | - 462 – Acute pharyngitis  
- 463 – Tonsillitis  
- 034.0 – Streptococcal sore throat | 26% |
| Acute Sinusitis | - 461 – Acute sinusitis | 16% |
| Chronic Conditions with significant inpatient costs | - 466 – Acute bronchitis, bronchiolitis | |
| Chronic | - 472 – Chronic pharyngitis, nasopharyngitis  
- 473 – Chronic sinusitis  
- 474 – Chronic disease of tonsils and adenoids  
- 475 – Chronic laryngitis and laryngotracheitis  
- 478 – Other diseases of upper respiratory tract | |
| Unknown | | |

\(^1\) Based on subset of cases among Medicaid patients in Arkansas with claims paid in SFY 2010. Includes ICD-9 code 460-465, excluding 464.4. Currently does not include 034.0, which will be included in the episode.
1 Episode definition/ scope of services: initial list of included prescriptions

<table>
<thead>
<tr>
<th>Antibiotics</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Amoxicillin</td>
<td>Amoxicillin-clavulanate (Augmentin)</td>
<td>Cephalexin</td>
<td>Minocycline</td>
</tr>
<tr>
<td>Ampicillin</td>
<td>Azithromycin</td>
<td>Clarithromycin</td>
<td>Moxifloxacin</td>
</tr>
<tr>
<td>Cefaclor</td>
<td>Clindamycin</td>
<td>Clindamycin</td>
<td>Penicillin</td>
</tr>
<tr>
<td>Cefadroxil</td>
<td>Dicloxacillin</td>
<td>Doxycycline</td>
<td>Sulfamethoxazole/TMP (Bactrim)</td>
</tr>
<tr>
<td>Cefdinir</td>
<td>Erythromycin</td>
<td>Erythromycin</td>
<td>Tetracycline</td>
</tr>
<tr>
<td>Cefpodoxime</td>
<td>Levofloxacin</td>
<td>Levofloxacin</td>
<td></td>
</tr>
<tr>
<td>Ceftriaxine</td>
<td>Metronidazole</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cefuroxime</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Anti-virals</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oseltamivir Phosphate (Tamiflu)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zanamivir (Relenza)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Corticosteroids</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prednisone</td>
<td>Dexamethasone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prednisolone</td>
<td>Methylprednisolone</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1 Only prescription antibiotics and antibiotics administered in-office included in data. All Rx will be included in episode design.
## Principal Accountable Providers: assessment of provider types

<table>
<thead>
<tr>
<th>Criteria for PAP selection$^1$</th>
<th>Decision-making</th>
<th>Influencing other providers</th>
<th>Economic relevance</th>
<th>Rationale</th>
</tr>
</thead>
</table>
| Clinician for in-person URI consultation(s)$^2$ | ![High] | ![High] | ![High] | - Orders all imaging and tests and prescribes antibiotics  
- Office visits account for majority of costs |
| Radiologist | ![Low] | ![Low] | ![Low] | - Imaging is ordered by other clinicians, but findings are relevant to clinical decisions  
- X-rays performed infrequently for acute URIs |
| Lab | ![Low] | ![Low] | ![Low] | - Imaging is ordered by other clinicians, but findings are relevant to clinical decisions  
- Tests are low-frequency and low-cost |
| Pharmacy | ![Low] | ![Low] | ![High] | - Does not make key clinical decisions for the episode  
- Antibiotics account for significant component of spending |

1 Based on objective assessment of PAP criteria; individual participating payors will need to make own assessment of which providers to designate as PAP  
2 Typically a primary care physician or emergency room doctor

SOURCE: Expert interviews, feedback from public stakeholder workgroups
Principal Accountable Providers: the provider who sees the patient for the first URI consultation is eligible to be the PAP\(^1\)

In all cases, the Principal Accountable Provider\(^1\) may be the provider who sees the patient for the first URI consultation in any setting of care, even if additional providers are seen during the episode.

Setting of care for initial consultation
\%
\begin{tabular}{l|c|c}
Setting & Office & ED & Clinic\(^3\) \\
83 & 10 & 7 \\
\end{tabular}

1 Based on objective assessment of PAP criteria; individual participating payors will need to make own assessment of which providers to designate as PAP
2 Follow-up visit counted as any visit with a URI primary diagnosis code (460-465, excluding 464.4). 034.0 not currently in analysis but will be included in the episode
3 E.g. – Rural health clinics, outpatient clinics

SOURCE: Medicaid claims data for claims paid in SFY 2010
### Patient exclusions: initial summary of patients excluded from the v1.0 episode model

<table>
<thead>
<tr>
<th>Description</th>
<th>Specific conditions/ criteria for exclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patients with a competing diagnosis for chronic URI either prior to or during episode</td>
<td>Chronic pharyngitis, nasopharyngitis; chronic sinusitis; chronic disease of tonsils and adenoids; chronic laryngitis and laryngotracheitis; other diseases of upper respiratory tract</td>
</tr>
<tr>
<td>Patients with certain respiratory conditions</td>
<td>Asthma</td>
</tr>
<tr>
<td>Patients who are immunocompromised</td>
<td>COPD; tracheostomy</td>
</tr>
<tr>
<td>Patients with rare diseases/genetic disorders</td>
<td>HIV, Cancer, transplant patients, other immune disorders</td>
</tr>
<tr>
<td>Patients with other comorbidities</td>
<td>Cystic Fibrosis, Sickle Cell (others to be defined)</td>
</tr>
<tr>
<td>Patients with inpatient stays</td>
<td>Anemia; End State Renal Disease</td>
</tr>
<tr>
<td>Very young children</td>
<td>Inpatient stay during the episode</td>
</tr>
<tr>
<td>Children less than 6 months old</td>
<td></td>
</tr>
</tbody>
</table>

**NOTE:** These comorbidities likely to be excluded from episode; not currently excluded in data presented in this document
4 Approach to quality: overview of approach

- By design, the episode model incents high quality care
- In addition, we will incorporate two types of quality metrics into the episode model

<table>
<thead>
<tr>
<th>Types of quality metrics</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quality metrics linked to payment (5 or fewer per episode)</td>
<td>Initially will be limited to claims-based metrics</td>
</tr>
<tr>
<td>Reporting only quality metrics (5 or fewer per episode)</td>
<td>Each metric will have a quality threshold that providers must exceed</td>
</tr>
<tr>
<td></td>
<td>May be mix of claims-based and provider-reported metrics</td>
</tr>
<tr>
<td></td>
<td>- If non-claims based: reported through a new, user-friendly, internet-based provider portal</td>
</tr>
</tbody>
</table>

*Providers will regularly receive reports on their performance across both types of quality metrics*

**Upside gain-sharing will be limited to providers that:**
- Meet quality threshold on all performance metrics AND
- Fully report all required data for metrics that require reporting
## Approach to quality: proposed metrics for URI

### URI quality metrics

<table>
<thead>
<tr>
<th>Quality metrics related to payment</th>
<th>Reporting only quality metrics</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Percent of Pharyngitis patients who receive antibiotics that receive Strep test(^1)</td>
<td>- Frequency of antibiotic usage</td>
</tr>
<tr>
<td></td>
<td>- Frequency of follow-up visits</td>
</tr>
<tr>
<td></td>
<td>- Frequency of multiple courses of antibiotics during one episode</td>
</tr>
</tbody>
</table>

\(^1\) Either rapid or traditional
Contents

- Review version 1.0 episode design elements specific to Ambulatory URI

Review historical data for the Ambulatory URI episode based on version 1.0 design

- Briefly review episode design elements common across episodes (for further discussion in mid March)
Preliminary note about data presented in the following pages

- For simplicity, data presented in this document is based on Arkansas Medicaid claims paid in State Fiscal Year 2010¹ (data for other participating payors to follow)

- Episodes are defined as described earlier in this document

- Data presented in this document are not shown with any patient or provider exclusions or cost adjustments, unless specifically indicated

- Provider data is based on Billing ID; therefore it presents all providers in one group as a single provider

- All data presented are preliminary and intended to facilitate today’s discussion
Understanding the basic cost structure of an average acute ambulatory URI episode (Medicaid example)

Acute Non-Specific URI shown here

Average cost of a single episode ($)

N= 123,339

<table>
<thead>
<tr>
<th></th>
<th>% total cost</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>53</td>
<td>69</td>
</tr>
<tr>
<td>Office visits</td>
<td>20</td>
<td>37</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>9</td>
<td>13.5</td>
</tr>
<tr>
<td>ED visits</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Clinic visits</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Labs</td>
<td>4</td>
<td>2.5</td>
</tr>
<tr>
<td>Strep test²</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Imaging</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Other³</td>
<td>3</td>
<td>2</td>
</tr>
</tbody>
</table>

1 Observations in hospital excluded
2 Strep tests include rapid strep test and cultures
3 E.g., vaccines, preventative health

SOURCE: Medicaid claims paid, SFY 2010
Distribution of episode cost per patient (Medicaid example)

Acute Non-Specific URI shown here

Percent of total episodes for Arkansas Medicaid, SFY10
(Non-Specific URI, all ages)

N = 123,339 episodes

Average cost per individual episode ($)

Median = $54
Average cost = $69

SOURCE: Medicaid claims paid, SFY10
Distribution of average episode cost per Principal Accountable Provider (Medicaid example)

Acute Non-Specific URI shown here

Percent of total Principal Accountable Providers\(^1\) for Arkansas Medicaid, SFY10
(Non-Specific URI, all ages)

\[\text{N} = 844\]
providers

Average cost per episode, per Principal Accountable Provider ($)

\[\text{Median} = $67\]
\[\text{Weighted average cost} = $69\]

1 Does not apply any restrictions (e.g., minimum case volume) in attributing a PAP

NOTE: Providers based on billing ID; therefore, physicians in the same practice are counted as one PAP for this analysis

SOURCE: Medicaid claims paid, SFY10
# Antibiotic prescription rates by sub-episode (Medicaid example)

## Antibiotic prescription rate

<table>
<thead>
<tr>
<th></th>
<th>All patients</th>
<th>Adults (&gt;18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute non-specific</td>
<td>42</td>
<td>49</td>
</tr>
<tr>
<td>Pharyngitis¹</td>
<td>64</td>
<td>63</td>
</tr>
<tr>
<td>Sinusitis</td>
<td>78</td>
<td>58</td>
</tr>
</tbody>
</table>

### Example national guidelines for antibiotics use in URIs (adults)²

- “Antibiotics should not be used to treat **nonspecific upper respiratory tract infections** in adults, since antibiotics do not improve illness resolution.”

- “For **acute pharyngitis**, antibiotic use should be limited to patients who are most likely to have group a β-hemolytic streptococcus”

- “For **acute sinusitis**, narrow-spectrum antibiotics should be given only to patients with persistent purulent nasal discharge and facial pain or tenderness who have not improved after 7 days or those with severe symptoms.”

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¹ ICD-9 034.0 not included in analysis. All patients with tonsil-related procedures and outpatient observations in hospitals were excluded from the episode

² From CDC, summarized in Gill et. al., “Use of Antibiotics for Adult Upper Respiratory Infections in Outpatient Settings: A National Ambulatory Network Study” (2006) (internal citations removed)

SOURCE: Medicaid claims SFY2010; CDC
Contents

- Review version 1.0 episode design elements specific to Ambulatory URI
- Review historical data for the Ambulatory URI episode based on version 1.0 design

**Briefly review episode design elements common across episodes** (for further discussion in mid March)
In addition, version 1.0 episode design will incorporate several design elements common across clinical areas

<table>
<thead>
<tr>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Payment mechanics</strong></td>
</tr>
<tr>
<td>▪ Structure of risk and gain sharing arrangements</td>
</tr>
<tr>
<td>▪ Transition vs. end-state model</td>
</tr>
<tr>
<td><strong>Other patient-level adjustments</strong></td>
</tr>
<tr>
<td>▪ Patient risk/severity adjustments</td>
</tr>
<tr>
<td>▪ Outlier exclusions on a cost basis</td>
</tr>
<tr>
<td><strong>Provider-level adjustments</strong></td>
</tr>
<tr>
<td>▪ Stop-loss provisions</td>
</tr>
<tr>
<td>▪ Adjustments for providers in areas with poor physician access</td>
</tr>
<tr>
<td>▪ Adjustments for critical access hospitals</td>
</tr>
<tr>
<td>▪ Adjustments for differences in regional pricing</td>
</tr>
<tr>
<td>▪ Adjustments or exclusions for providers with low case-volume</td>
</tr>
</tbody>
</table>

More in-depth discussion of these dimensions scheduled for mid March (participants from all clinical workgroups invited to attend)
Gain and risk sharing: a Principal Accountable Provider will fall into one of four categories, depending on the provider’s average cost per episode.

- **A: Sub-par performance**
  - Providers under-performing the acceptable threshold subject to downside risk share of costs in excess of this level – shown by the red arrow.

- **B: Acceptable performance**
  - The provider **neither gains nor loses** because costs are neither above the acceptable threshold nor below the commendable threshold.

- **C: Commendable performance**
  - **Savings** below the commendable threshold – shown by the green arrow – **are shared** between provider and payor, until the upper limit is reached.

- **D: Beyond commendable performance**
  - Once the upper limit for savings is reached, the provider receives **savings up to the upper limit, but not beyond**.

Note: in the coming months, each participating payor will determine the level of upside and downside sharing for each episode.
Gain and risk sharing: a transition period will allow for a more relaxed “acceptable” threshold (fewer providers will be exposed to downside risk)

Transition period (first one to three years)

Average cost per episode, for each Principal Accountable Provider

- Higher acceptable threshold (fewer providers exposed to downside risk)

End state

Average cost per episode, for each Principal Accountable Provider

- Acceptable threshold will be brought closer to the commendable threshold

Guiding principle: give providers the time and resources to change practice patterns and improve performance before full risk and gain sharing is in effect