



PBS Developers' Forum

17th September 2015

Agenda

- Welcome/Introduction
- Action Items
- PBS XML Schema 3.0
- AMT v3
- FHIR
- Post-Market Authority Review
- PBS XML Schema 2.11
- 6CPA Changes
- PBS XML Schema 2.12
- Other Business
- Meeting close

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- Welcome/Introduction
- **Action Items**
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Action Items

- ✦ Test data for CAR items
- ✦ Drug concepts: Separate AMT-mapped from non-AMT-mapped
 - ✦ Produce test data
- ✦ Include MPUU information for ready-prepared items
- ✦ Streamlined Authority Codes: format and length
- ✦ v3.0: temporal data

Action Items

- v3.0: use of changes-list; inline or out-of-band
- Restrictions on extemporaneous preparations

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- **PBS XML Schema 3.0**
- AMT v3
- FHIR
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PBS XML v3.0

- ✦ Schedule
- ✦ Release Plan
- ✦ Working Group
- ✦ Transition Plan
- ✦ Progress

PBS XML v3.0

- ✦ Schedule
- ✦ Targeting May 2016 Schedule
- ✦ Production release May 2016

PBS XML v3.0

- ✦ Release Plan
- ✦ Alpha stage
 - ✦ Schema design unstable; frequent releases
- ✦ Beta stage
 - ✦ Schema design stable, bug fixes; less frequent releases
- ✦ Pre-production
- ✦ Production

PBS XML v3.0

- ✦ Release Plan
- ✦ Alpha stage
- ✦ Gathering/finalising requirements
- ✦ First release April 2015 (alpha 3)
- ✦ Released Alpha 5-8

PBS XML v3.0

- ✦ Release Plan
- ✦ Beta stage
- ✦ Stable schema
- ✦ Not static
- ✦ Bug fixes, minor changes

PBS XML v3.0

- ✦ Release Plan
- ✦ Beta stage
- ✦ Develop schema package
 - ✦ Documentation
 - ✦ Sample document
- ✦ Beta 1: late September/early October

PBS XML v3.0

- ✦ Release Plan
- ✦ Pre-Production stage
- ✦ Finalise schema
- ✦ Complete package, test data available
- ✦ Pre-Production: December 2015/January 2016

PBS XML v3.0

- ✦ Release Plan
- ✦ Production stage
- ✦ March 2016
- ✦ for May 2016 Schedule

PBS XML v3.0

- ✦ Working Group
- ✦ Small group to develop v3.0
 - ✦ Design feedback
 - ✦ Testing
 - ✦ Feedback

PBS XML v3.0

- ✦ Working Group
- ✦ Meeting/workshop

PBS XML v3.0

- ✦ Transition Plan
- ✦ Support users to transition from v2 to v3
- ✦ Support users to adopt v3

PBS XML v3.0

- ✦ Transition Plan
- ✦ Schema release package
 - ✦ Relax-NG, XSD schemas
 - ✦ Revision history
 - ✦ Example instance document
 - ✦ Converted from production v2 PBS XML
 - ✦ plus extra examples

PBS XML v3.0

- ✦ Transition Plan
- ✦ Conversion
 - ✦ Upconvert: v2 to v3
 - ✦ Optionally add examples
 - ✦ Limited by v2 data model

PBS XML v3.0

- ✦ Transition Plan
- ✦ Conversion
 - ✦ Downconvert: v3 to v2
 - ✦ Reduce quality due to data model differences

PBS XML v3.0

- ✦ Transition Plan
- ✦ Conversion
- ✦ Currently alpha quality
- ✦ Aim for production quality

PBS XML v3.0

- ✦ Transition Plan
- ✦ Publication
- ✦ Aim for agreed timeframe to publish v3
- ✦ Parallel publication of v2 and v3
- ✦ Sunset for v2
 - ✦ 12 months

PBS XML v3.0

- ✦ Transition Plan
- ✦ Publication
- ✦ Text extracts generated from v2
- ✦ Health will not upgrade PBS Software to use v3

PBS XML v3.0

- ✦ Progress
 - ✦ Alpha 8
 - ✦ Outstanding:
 - ✦ Increases

PBS XML v3.0

- ✦ Internal layer
- ✦ Merged into public
- ✦ <pharmaceutical-item>

PBS XML v3.0

- Temporal data

Temporal Data

- ✦ Requirements
 - ✦ “Active” schedule data
 - ✦ Delta from previous month
 - ✦ Start dates

Temporal Data

- ✦ Non-Requirement
 - ✦ History over last twelve months
 - ✦ Dispensing view of Schedule
- ✦ Experimentation
 - ✦ Too difficult to incorporate

Temporal Data

- ✦ Hybrid design
- ✦ “Active” data
 - ✦ Effective
 - ✦ Supply-only
 - ✦ Non-effective, but still needed

Temporal Data

- ✦ Two categories of elements
 - ✦ Complex content
 - ✦ Simple content

Temporal Data

- ✦ Complex content
- ✦ Elements that contain other (child) elements
- ✦ Effectivity only of the element content
- ✦ Child elements have their own effectivity

Temporal Data

- ✦ Simple content
- ✦ Element contains atomic value
- ✦ Mixed content:
 - ✦ Must only contain non-PBS elements
 - ✦ Same as simple content
- ✦ Effectivity is previous value of the element

Temporal Data

- ✦ Inline vs out-of-band
- ✦ Hybrid model
- ✦ Effectivity (start dates) inline
- ✦ Previous values out-of-band

Temporal Data

- Every PBS element has effectivity
- All data values must be contained

v2.x: `<pbs:maximum-quantity>2</pbs:maximum-quantity>`

v3.0:

```
<maximum-prescribable>  
  <value>2</value>  
  <effective>  
    <start>1990-03-01</start>  
  </effective>  
</maximum-prescribable>
```

Temporal Data

- Every PBS element has effectivity
- New elements for month
 - Effective start date = schedule date

```
<product-listing>  
...  
<effective>  
  <start>2015-09-01</start>  
</effective>  
</product-listing>
```

```
<root>  
  <info>  
    <dct:valid>2015-09-01</dct:valid>  
  </info>  
  ...  
</root>
```

Temporal Data

- ✦ Delisted elements
- ✦ previous-list
- ✦ previous
- ✦ moved

```
<moved xlink:href="#a1234"/>
```

```
<root>  
  <info>  
    <dct:valid>2015-09-01</dct:valid>  
  </info>  
  <previous-list>  
    <previous xml:id="a1234">  
      <product-listing>  
        ...  
        <non-effective>  
          <date>2015-09-01</date>  
        </non-effective>  
        <effective>  
          <date>1999-12-01</date>  
        </effective>  
      </product-listing>  
    </previous>  
  </previous-list>  
</root>
```

Temporal Data

- ✦ Modified elements
- ✦ previous element
- ✦ previous attribute

```
<maximum-prescribable xml:id="a5678"  
  previous="#a9012">  
  <value>2</value>  
  <effective>  
    <date>2015-09-01</date>  
  </effective>  
</maximum-prescribable>
```

```
<root>  
  <info>  
    <dct:valid>2015-09-01</dct:valid>  
  </info>  
  <previous-list>  
    <previous xml:id="a9012"  
      xlink:href="#a5678">  
      <maximum-prescribable>  
        <value>3</value>  
        <non-effective>  
          <date>2015-09-01</date>  
        </non-effective>  
        <effective>  
          <date>2002-02-01</date>  
        </effective>  
      </maximum-prescribable>  
    </previous>  
  </previous-list>  
</root>
```

Temporal Data

- ✦ Advance notices
- ✦ Future change in status
- ✦ Effectivity contains future change

Temporal Data

- Advance notices

```
<product-listing>
```

```
...
```

```
<effective>
```

```
<date>2011-11-01</date>
```

```
<non-effective>
```

```
<date>2016-03-01</date>
```

```
</non-effective>
```

```
</effective>
```

```
</product-listing>
```

Temporal Data

- Advance notices

```
<product-listing>
```

```
...
```

```
<effective>
```

```
<date>2011-11-01</date>
```

```
<supply-only>
```

```
<date>2016-03-01</date>
```

```
<non-effective>
```

```
<date>2016-09-01</date>
```

```
</non-effective>
```

```
</supply-only>
```

```
</effective>
```

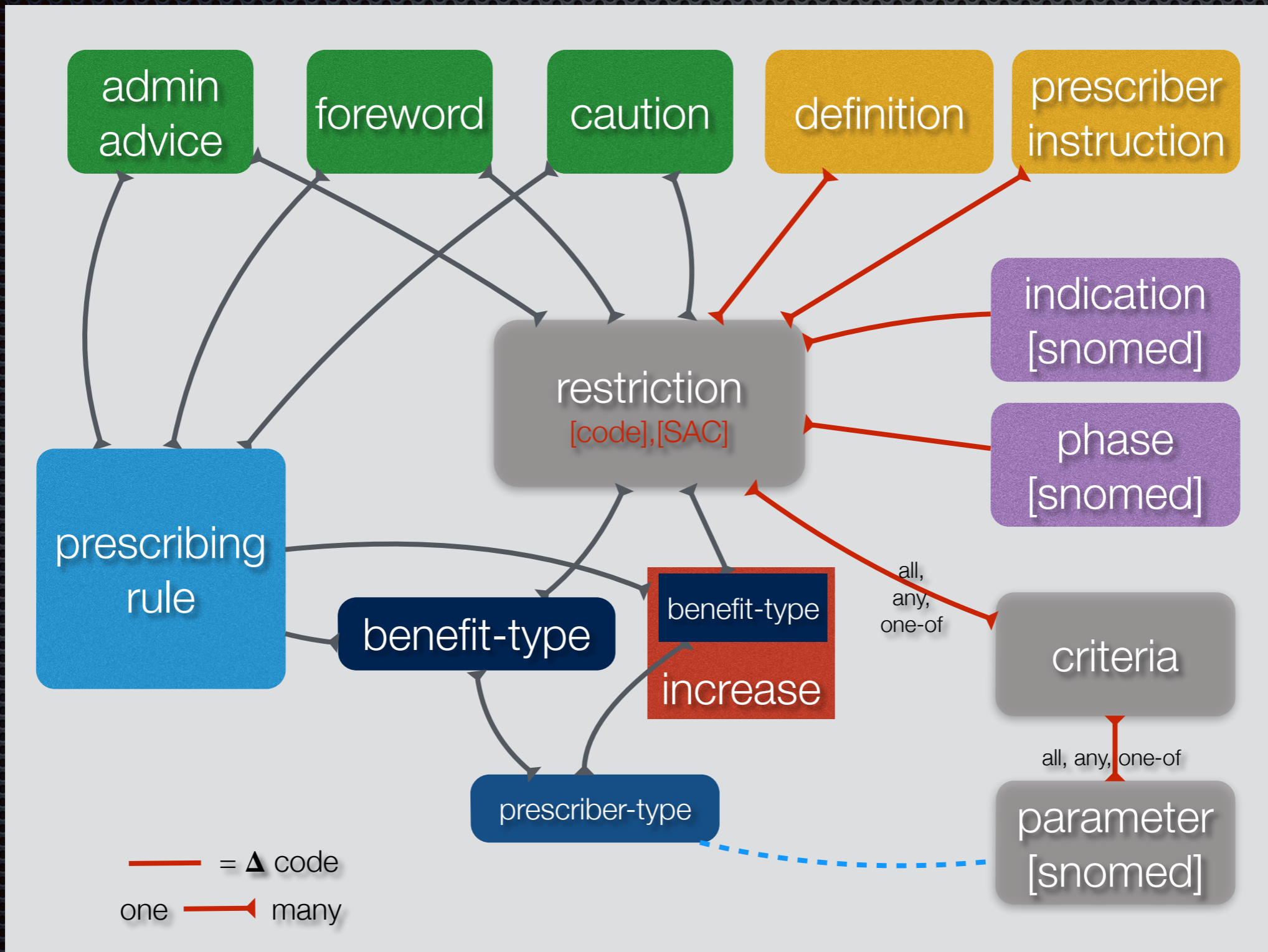
```
</product-listing>
```


Temporal Data

- ✦ Transitional listings
- ✦ supply-only
- ✦ May not be prescribed
- ✦ May be supplied/claimed

```
<product-listing>  
...  
<supply-only>  
  <date>2015-09-01</date>  
</supply-only>  
</product-listing>
```

Restrictions



Restrictions

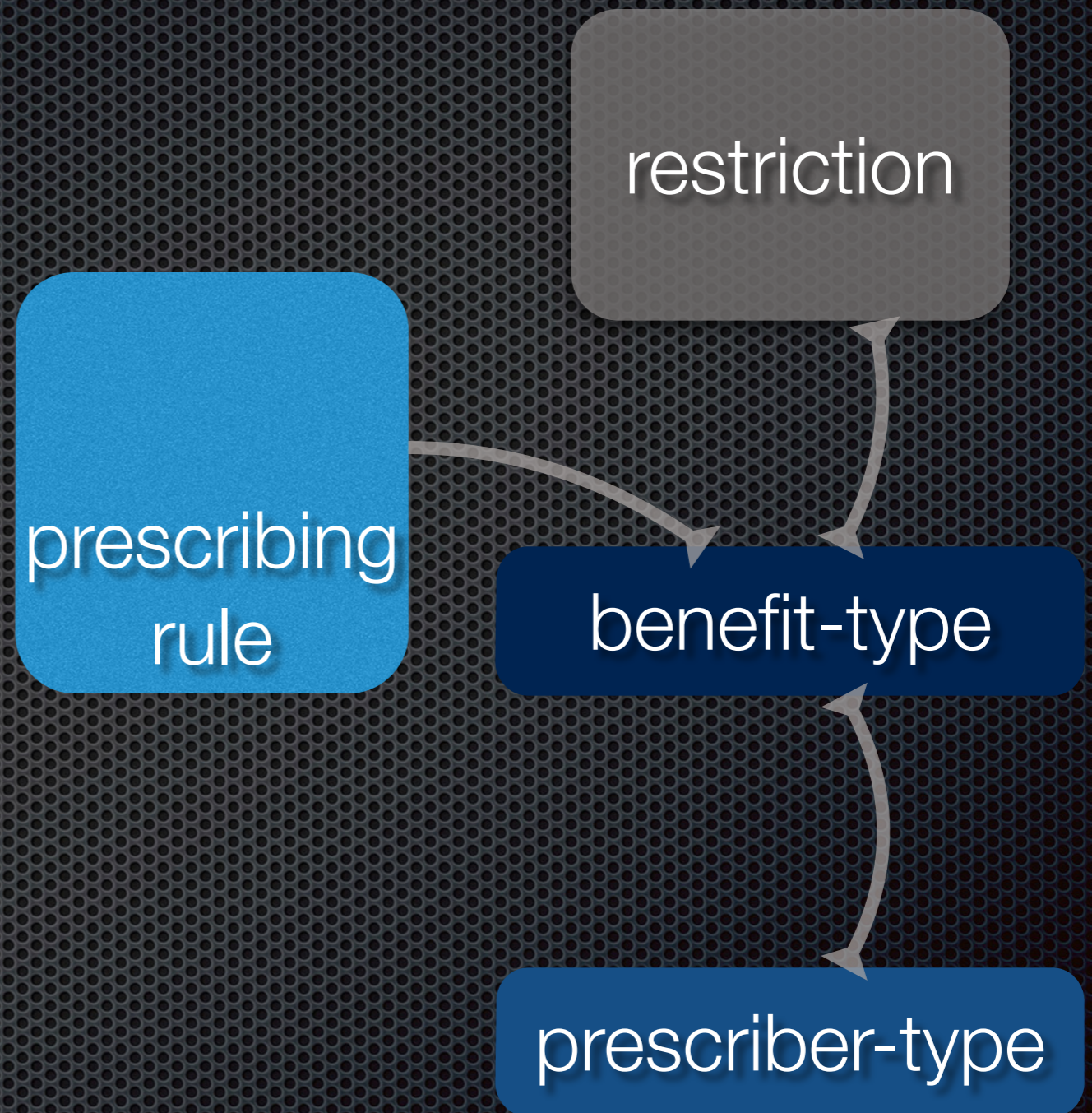
- ✦ Code management
- ✦ Separate restriction code from Streamlined Authority Code
 - ✦ Future: support different format for SAC

Restrictions

- ✦ Code management
- ✦ Legal vs informational
- ✦ Δ legal \Rightarrow new code
- ✦ Δ informational \Rightarrow same code

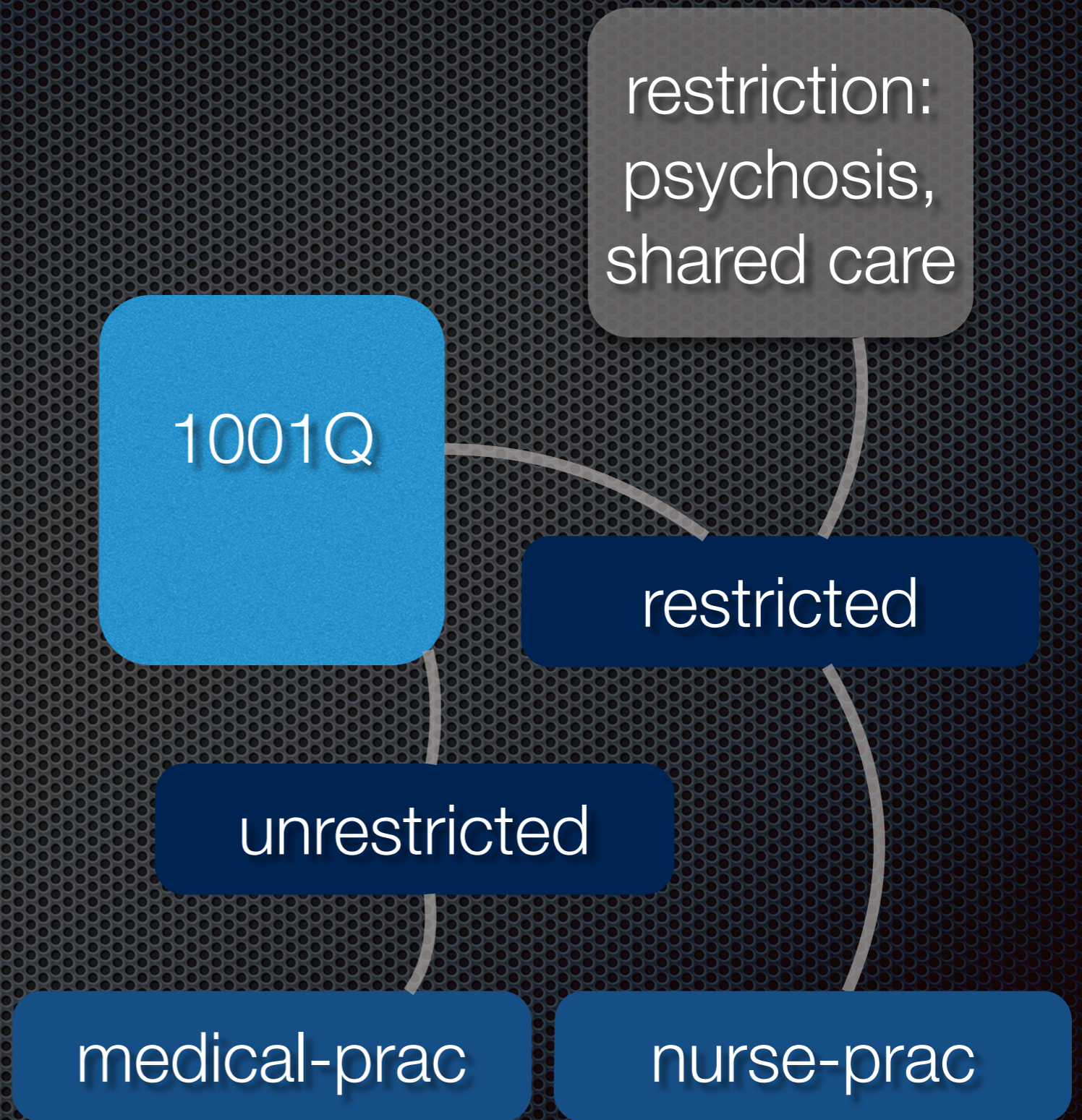
Restrictions

- Benefit type
- unrestricted, restricted, authority-required
- Different per prescriber type



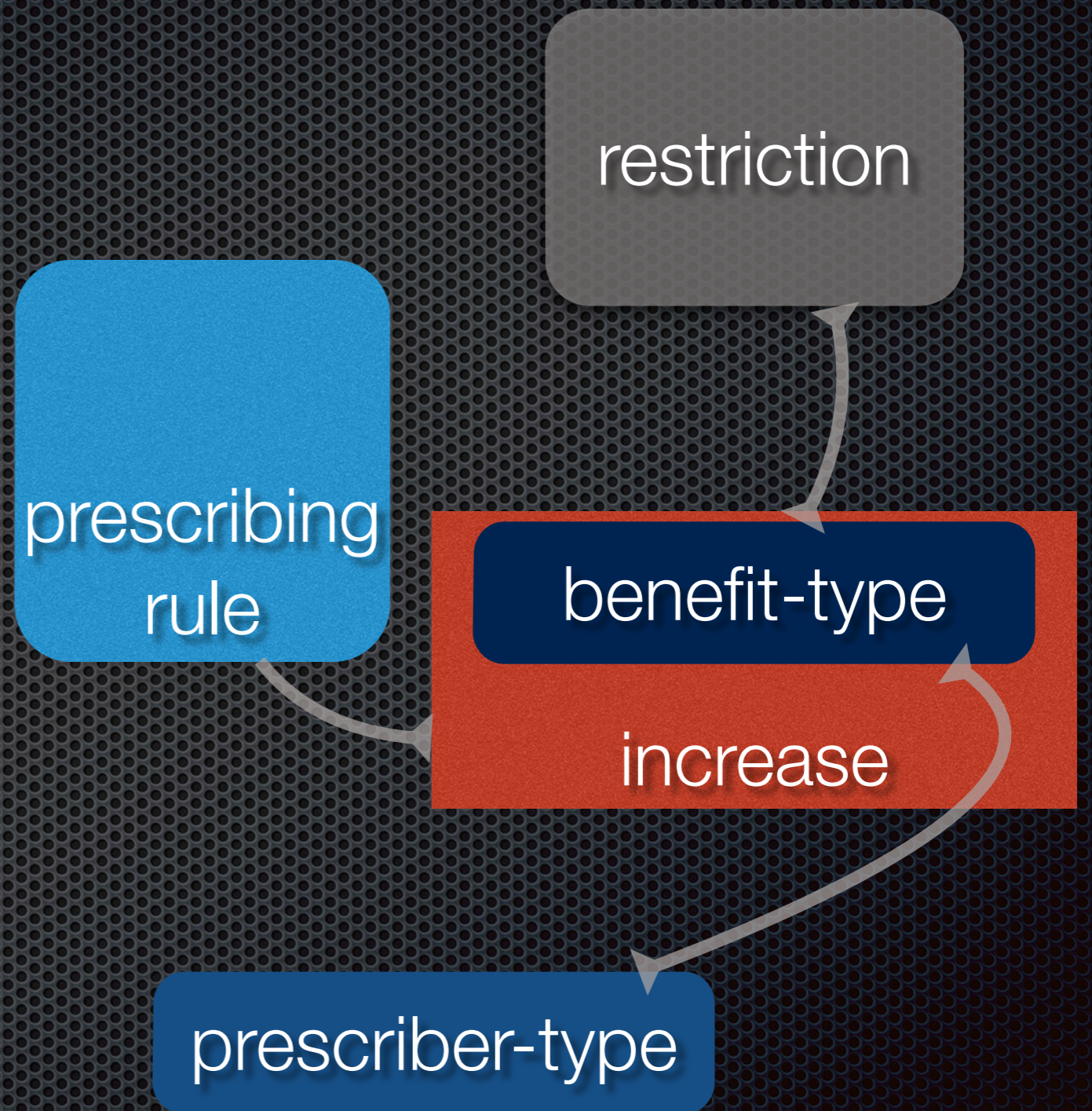
Restrictions

- ✦ Benefit type
- ✦ Example: 1001Q
- ✦ Shared Care Model
- ✦ MP: unrestricted
- ✦ NP: restricted



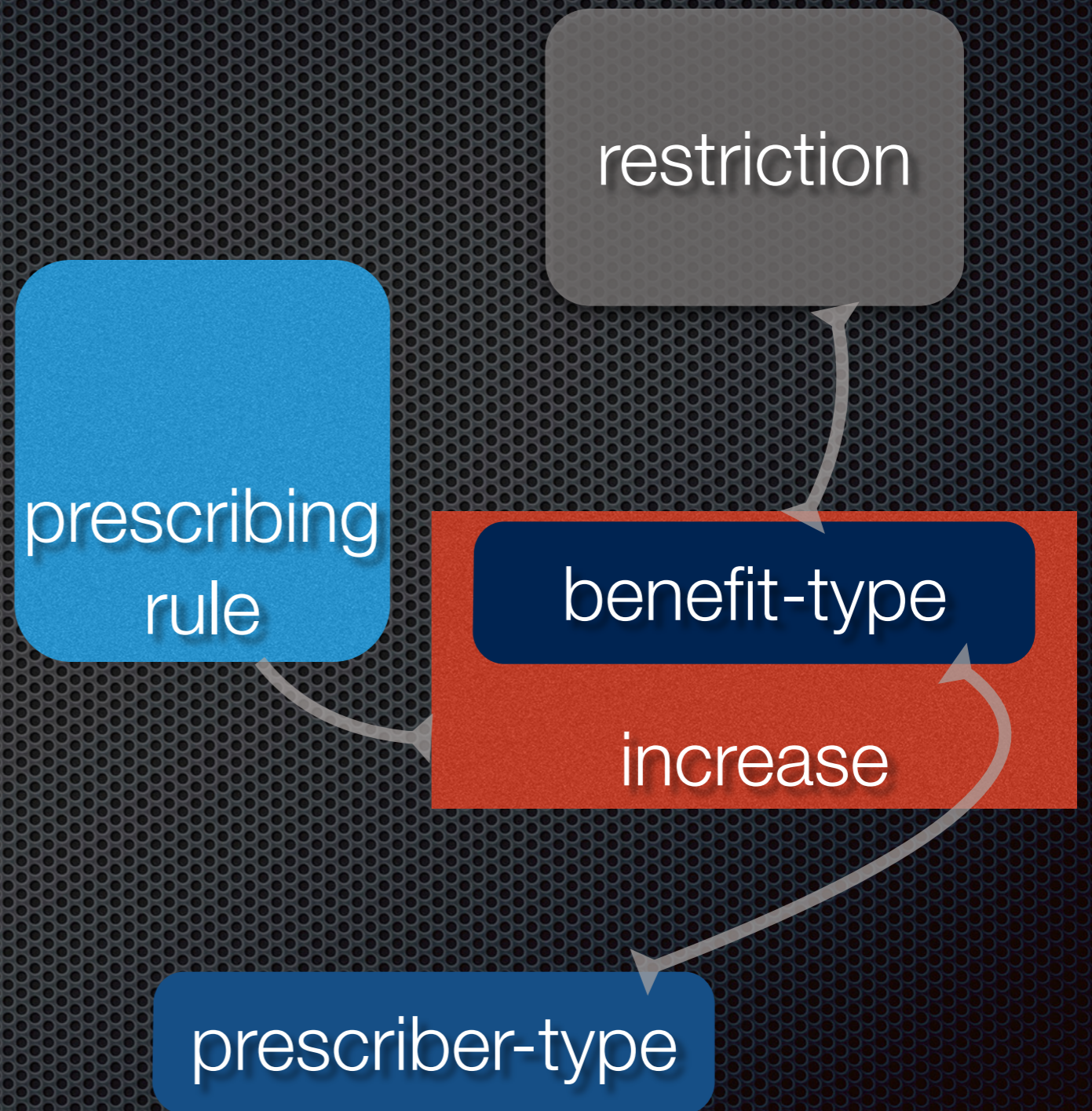
Increases

- ✦ Proposal
- ✦ Benefit type structure
- ✦ MQ, repeats value
- ✦ Different per prescriber type



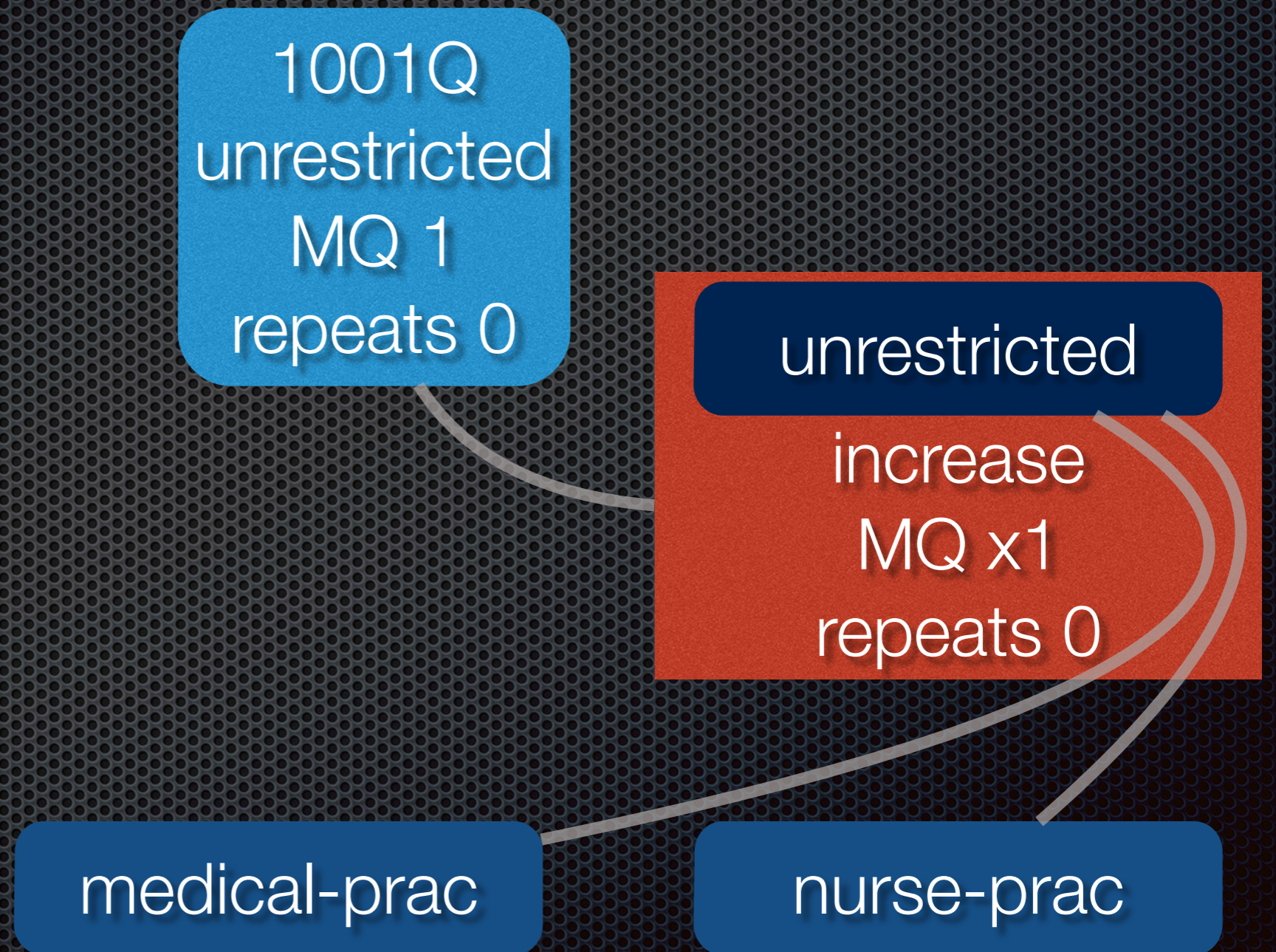
Increases

- ✦ Different benefit type
- ✦ Current: simple assessment
- ✦ Future: streamlined, complex



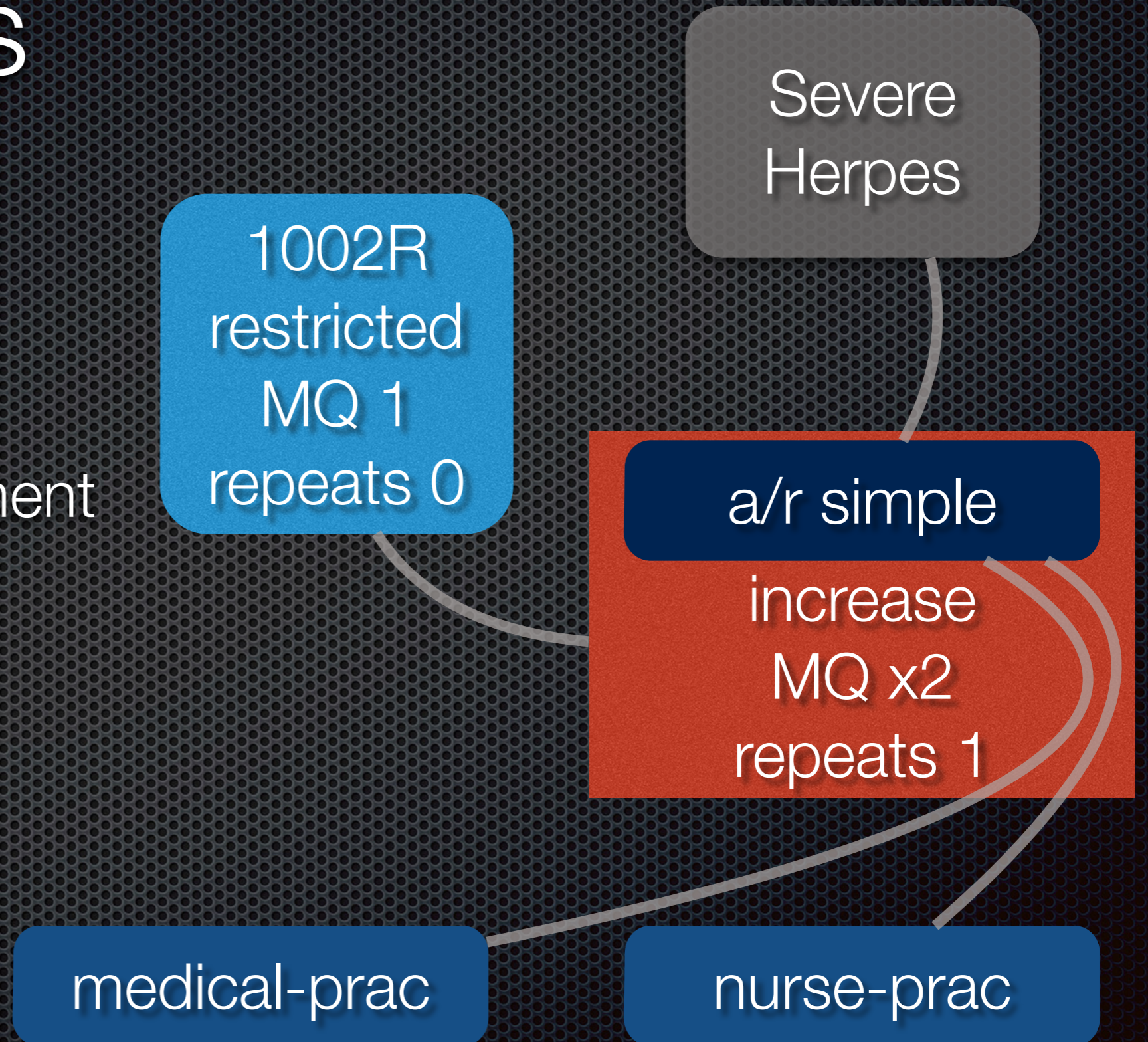
Increases

- ✦ Example
- ✦ Current
- ✦ no increase



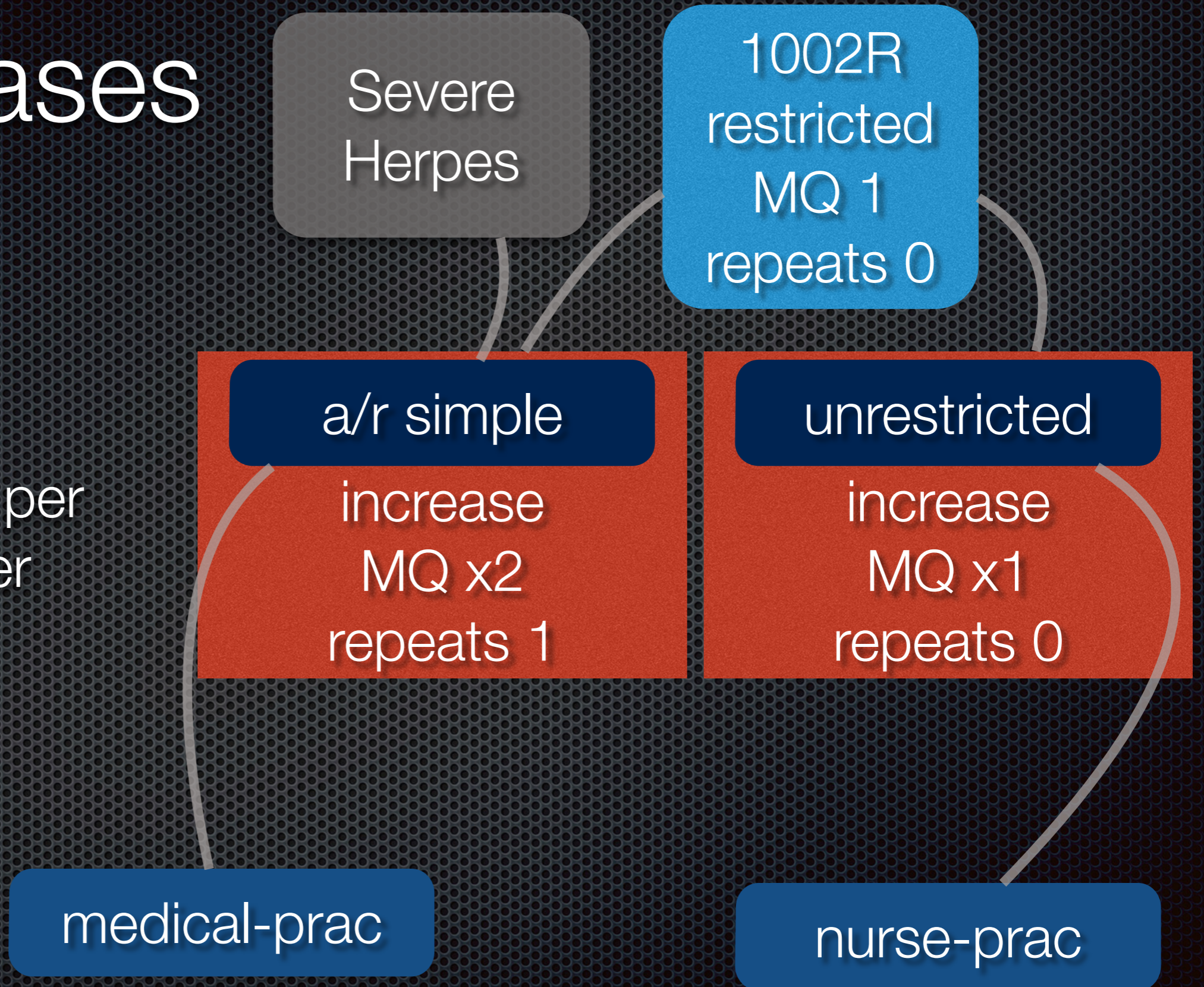
Increases

- Example
- Current
- Simple assessment

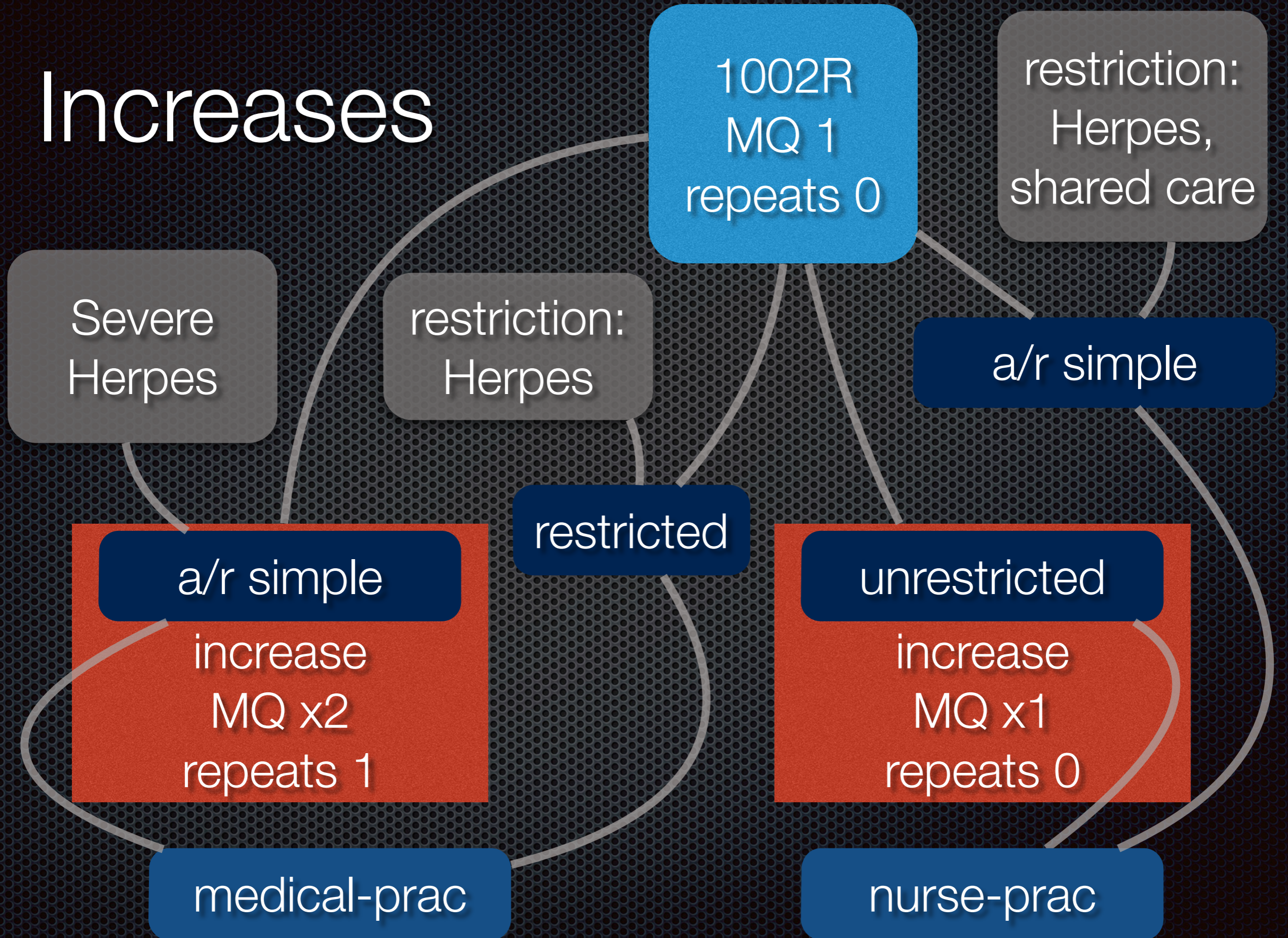


Increases

- ✦ Example
- ✦ Future
- ✦ Different per prescriber

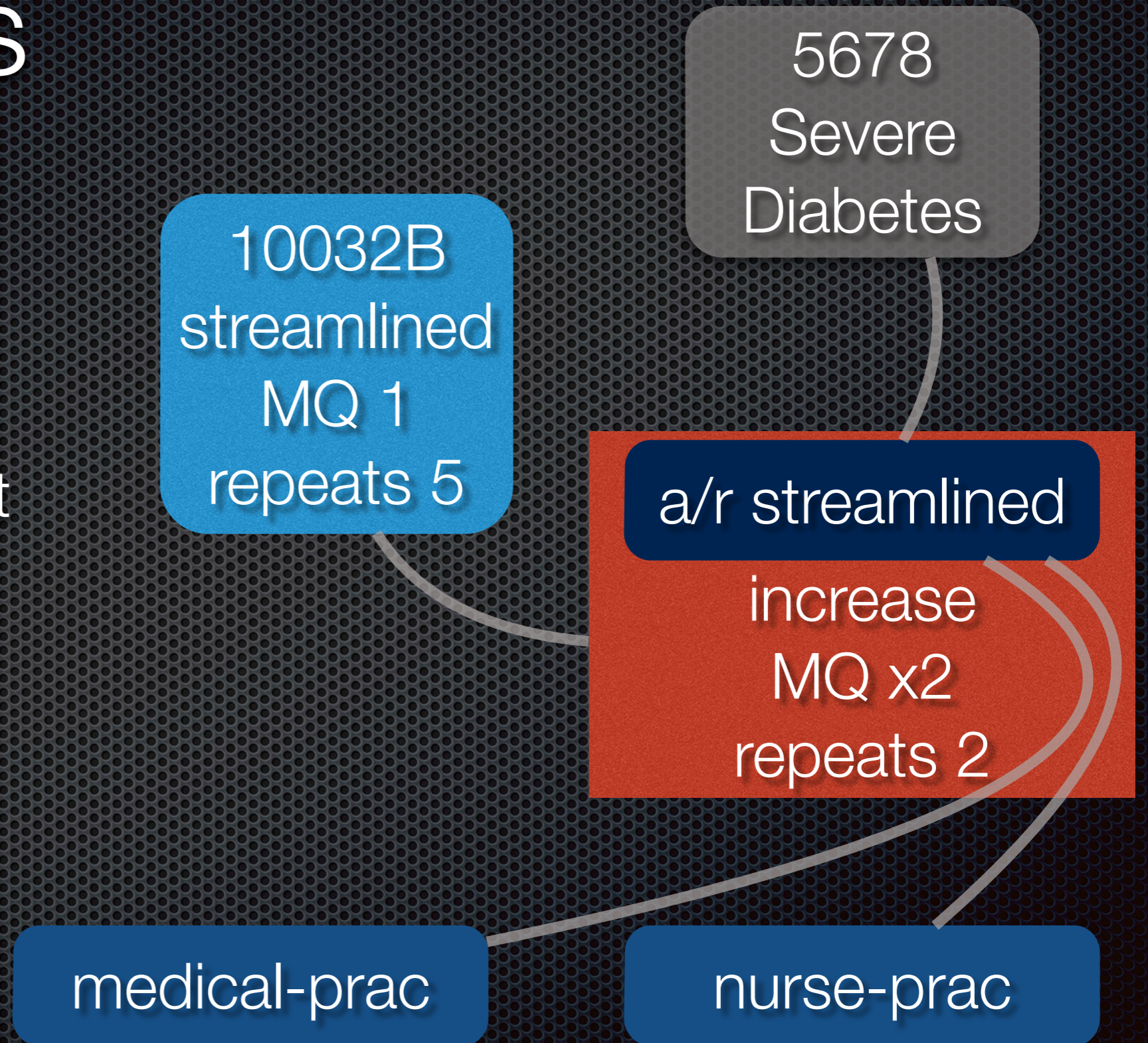


Increases



Increases

- Example
- Future
- Self assessment



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AMT v3

- ✦ PharmCIS implementation underway
- ✦ Phase 1
- ✦ Planned for December
 - ✦ February 2016 Schedule

AMT v3

- ✦ Reconcile non-AMT concepts
- ✦ Post-May-2014
- ✦ Pre-May-2014

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FHIR

- Nehta presentation

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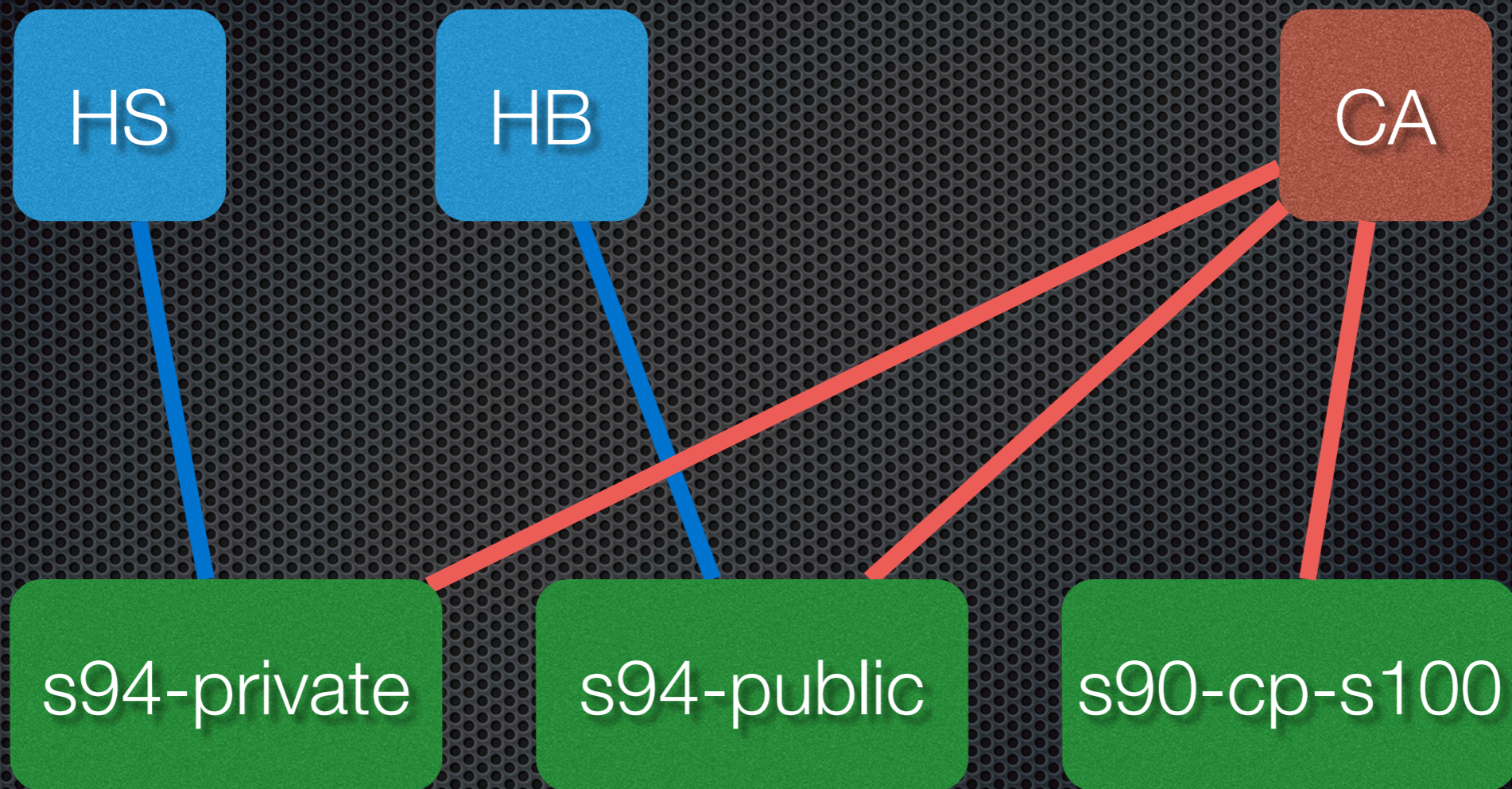
Initial/Continuing Authorities

- ✦ PBAC Recommendation
- ✦ Normal process to obtain authority for initial treatment
 - ✦ Telephone/electronic or in writing
- ✦ No need to contact DHS for authority for continuing treatment
 - ✦ Streamlined Authority

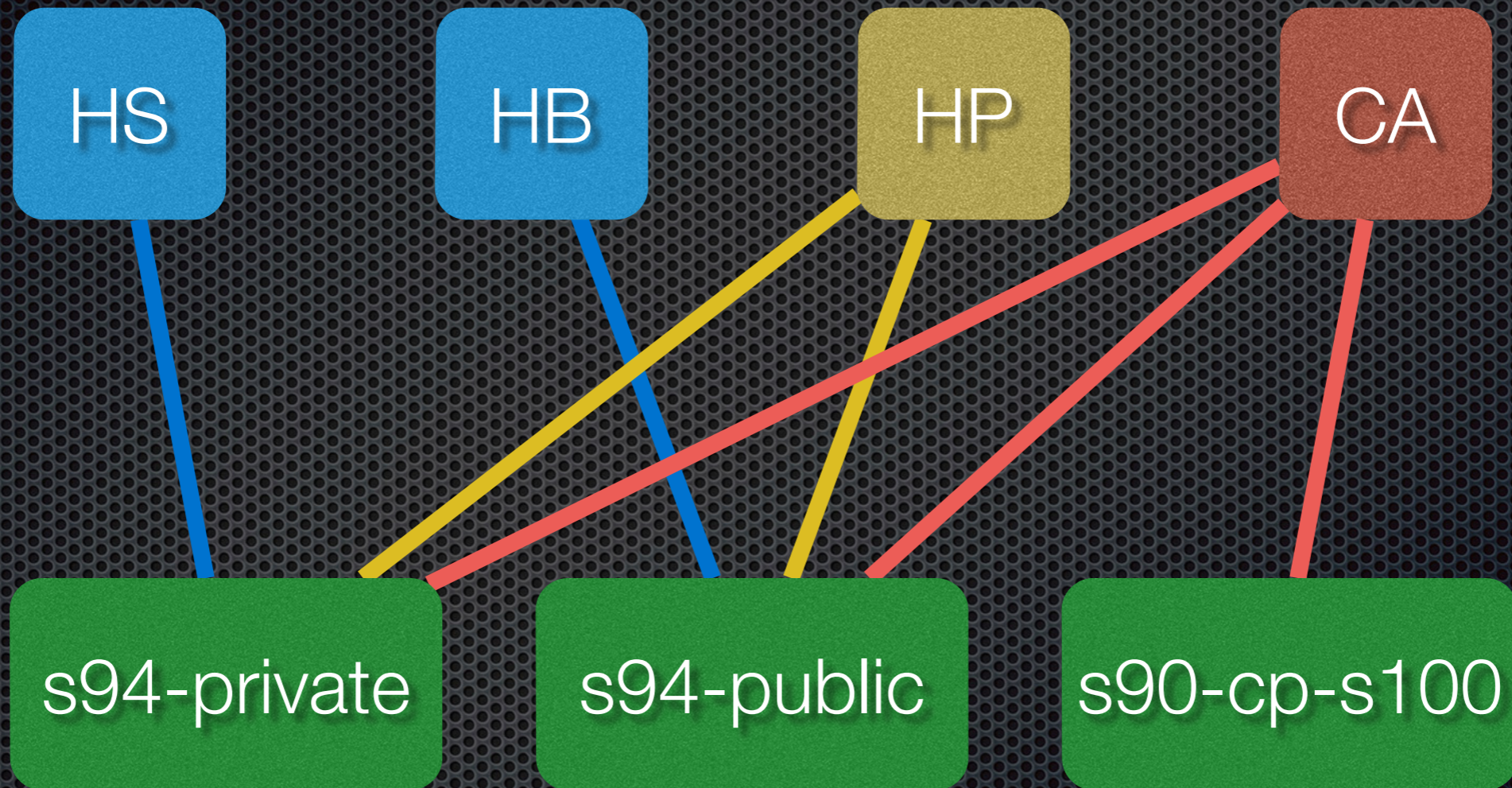
Hospital Access

- ✦ PBAC Recommendation
- ✦ Option 1
 - ✦ Create 'HP' program
 - ✦ Deprecate 'HB', 'HS' programs

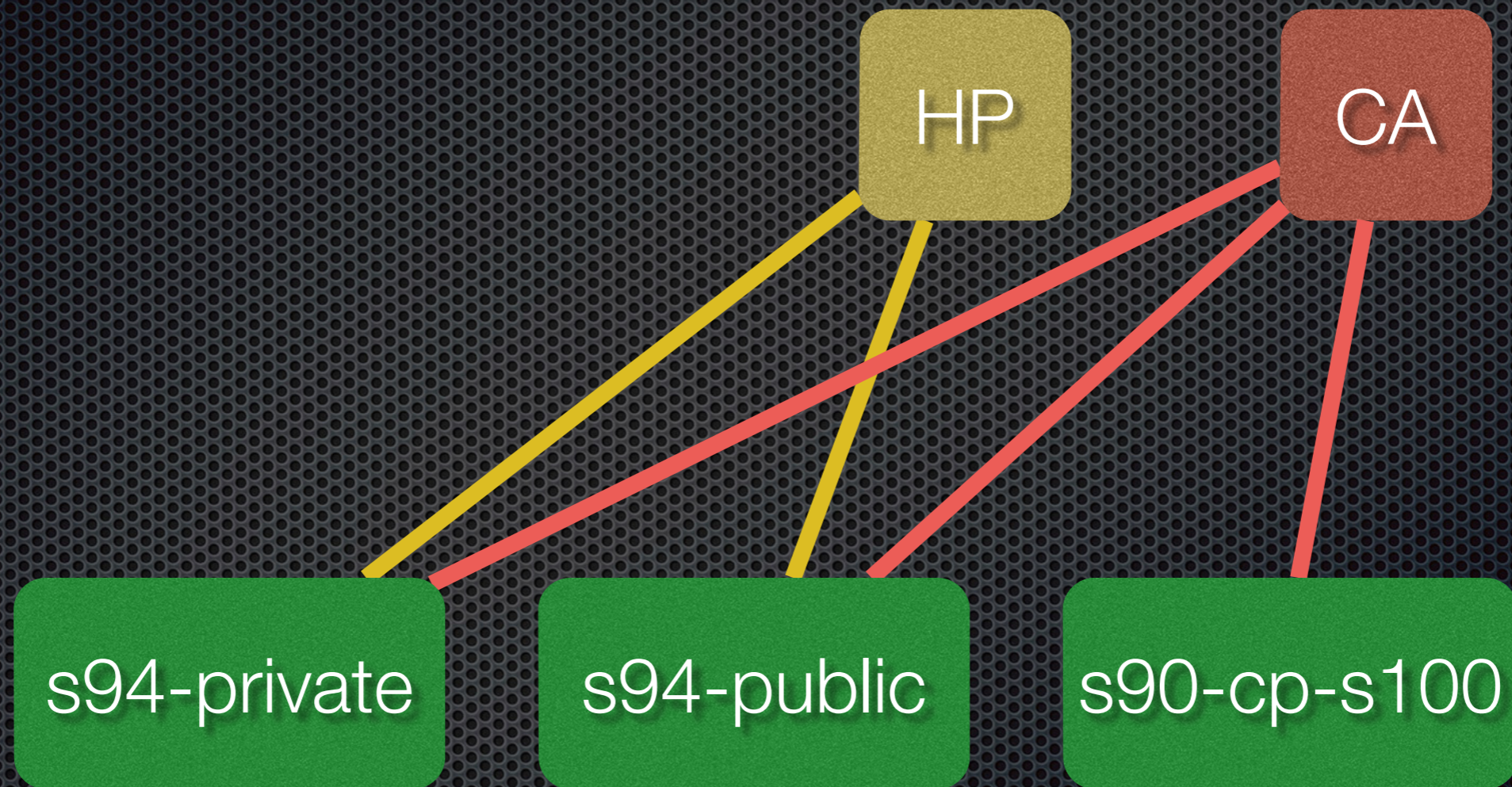
Hospital Access



Hospital Access



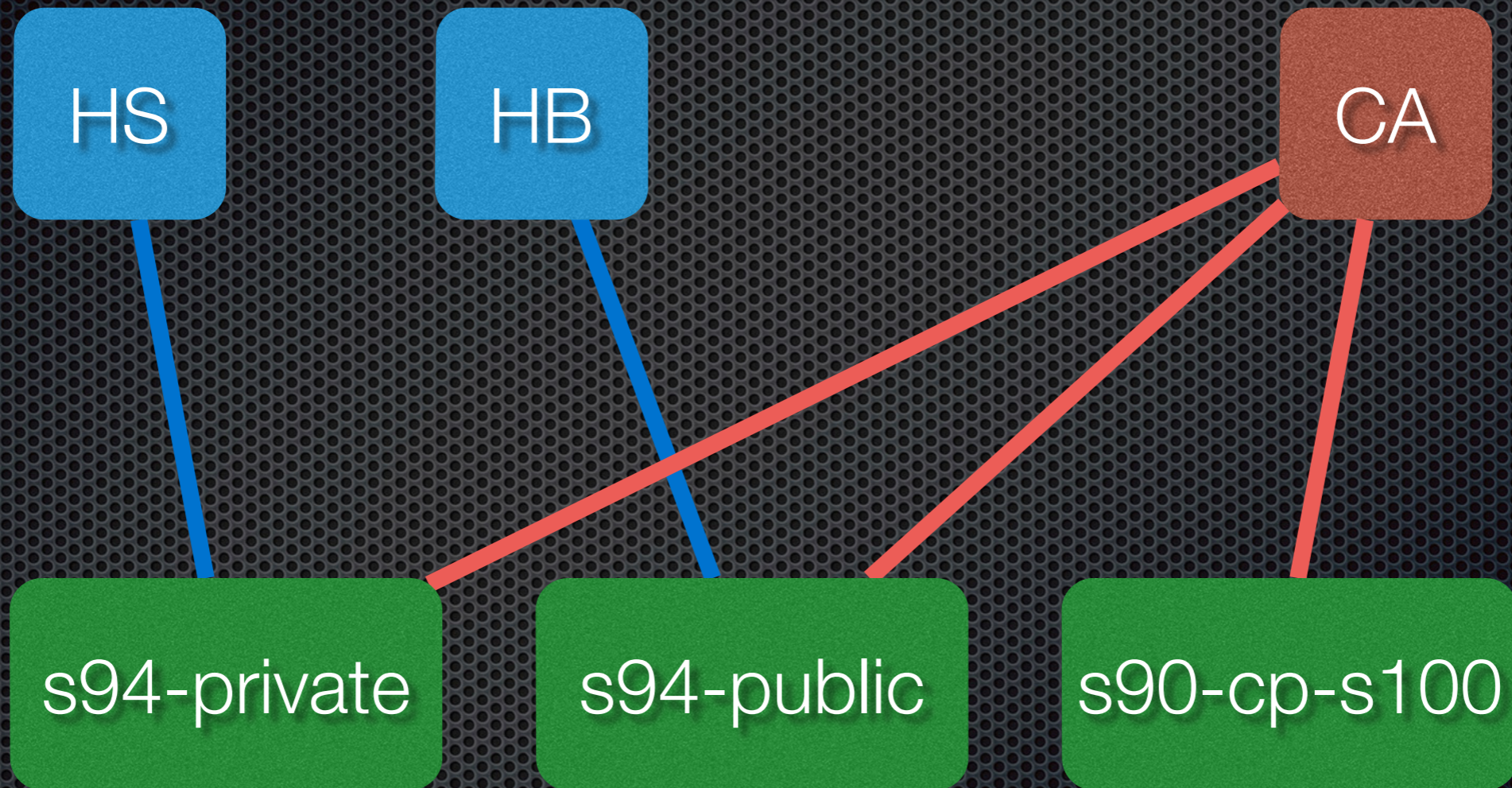
Hospital Access



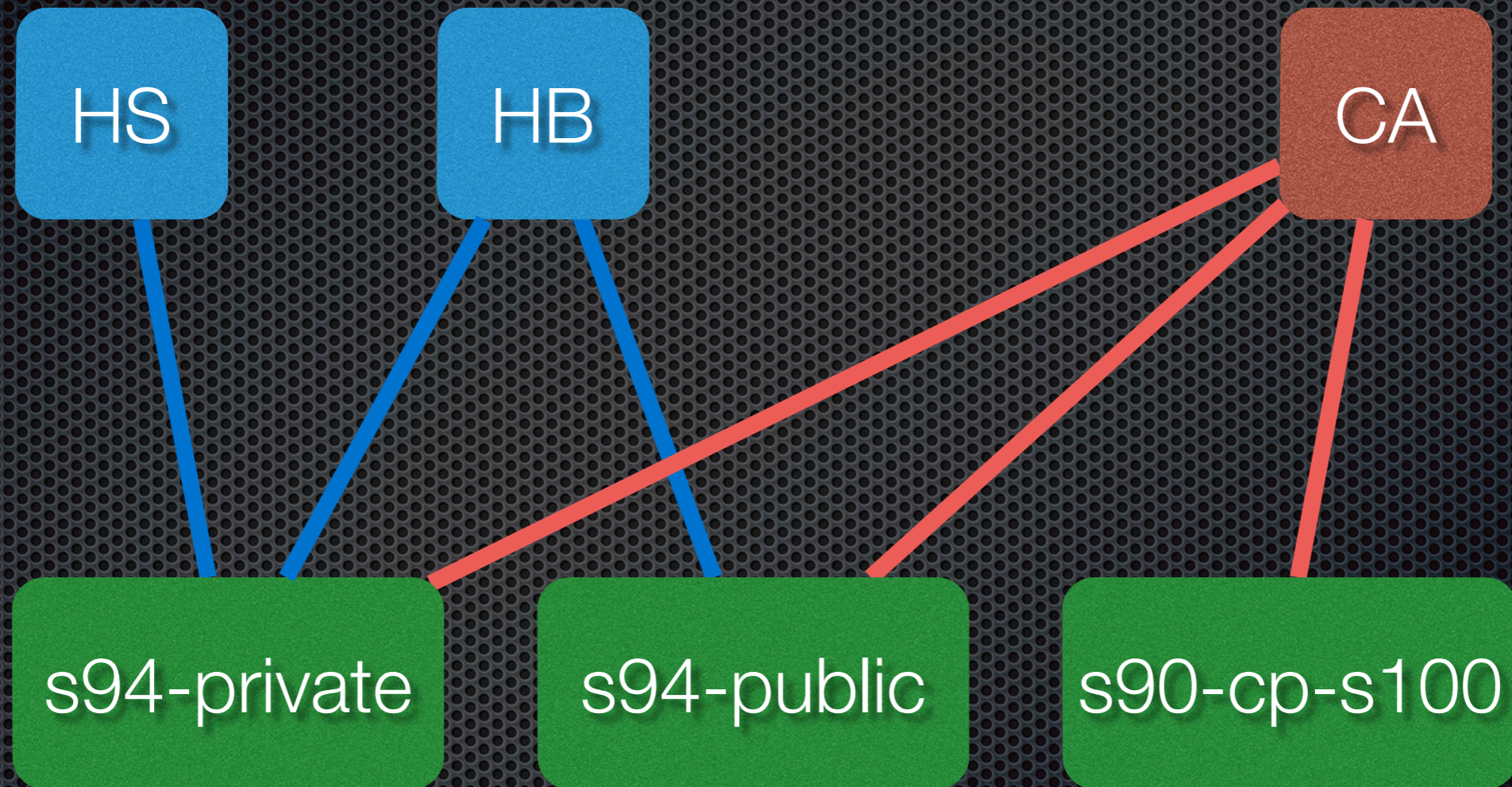
Hospital Access

- ✦ PBAC Recommendation
- ✦ Option 2
 - ✦ Add private hospital dispensing rule to 'HB' program
 - ✦ Delist 'HS' program

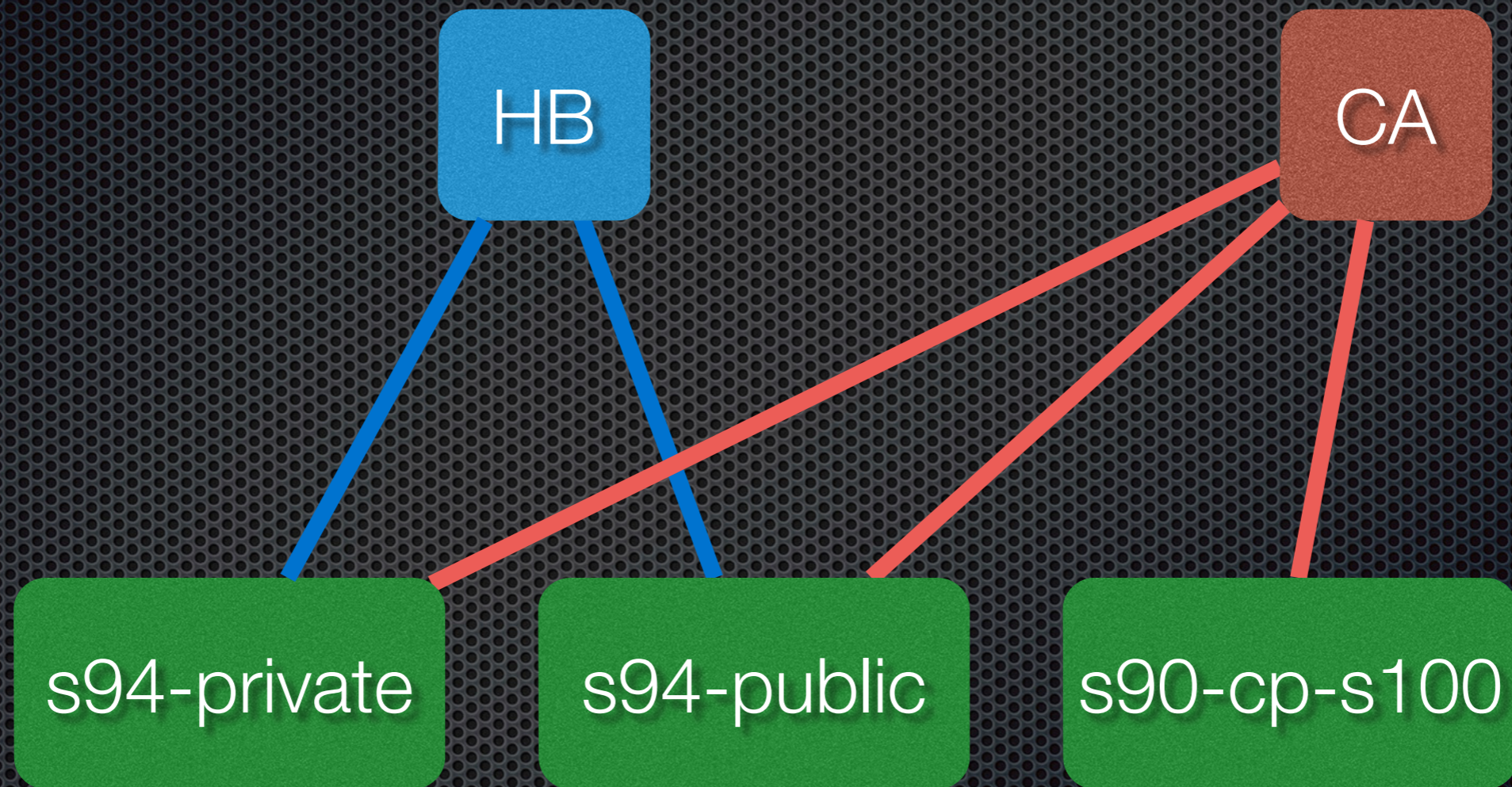
Hospital Access



Hospital Access



Hospital Access



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PBS XML Schema 2.1.1

- ✦ Support AHI
- ✦ Add new markup band type
- ✦ Combine fixed and percentage with offset
- ✦ Introduced in September 2015 Schedule

PBS XML Schema 2.1.1

- ✦ ext:markup-type
- ✦ ext:markup-fixed
- ✦ ext:markup-offset

```
<pbs:markup-band xml:id="a215328918">  
  <pbs:code>C</pbs:code>  
  <pbs:limit>180.00</pbs:limit>  
  <pbs:type>markup:percent</pbs:type>  
  <pbs:amount>3.50</pbs:amount>  
  <ext:markup-type>markup:combined</ext:markup-type>  
  <ext:markup-offset>-180.00</ext:markup-offset>  
  <ext:markup-fixed>3.49</ext:markup-fixed>  
</pbs:markup-band>
```

PBS XML Schema 2.1.1

- 3.0 markup
- Merge all markup band types
- Components may be zero

```
<markup-band xml:id="GE-d4e62"> <!-- Tier 2 -->
  <code
    rdf:resource="http://pbs.gov.au/markup/band/community-pharmacy">C</code>
  <limit xml:id="d3e11142">180.00</limit>
  <offset>-180.00</offset>
  <fixed>3.49</fixed>
  <variable>3.5</variable>
</markup-band>
```


PBS XML Schema 2.1.1

- 3.0 markup
- Merge all markup band types
- Components may be zero

```
<markup-band xml:id="GE-d4e53"> <!-- Tier 1 -->  
  <code rdf:resource="http://pbs.gov.au/markup/band/community-pharmacy">C</code>  
  <limit xml:id="d3e37564">0.01</limit>  
  <offset>0.00</offset>  
  <fixed>3.49</fixed>  
  <variable>0</variable>  
  <effective>  
    <date>2015-07-01</date>  
  </effective>  
</markup-band>
```

PBS XML Schema 2.1.1

- ✦ Default dispensing rule
- ✦ Use Case:
 - ✦ Single price for an item
- ✦ Introduced in September 2015 Schedule

PBS XML Schema 2.1.1

- ✦ ext:default
- ✦ Child of pbs:dispensing-rule

```
<pbs:dispensing-rules-list>  
  <pbs:dispensing-rule about="dr:RP/s90-cp">  
    <dbk:title>Community Pharmacy</dbk:title>  
    <ext:default/>  
    <pbs:fees-list>  
    ...
```

PBS XML Schema 2.1.1

- ✦ 3.0 markup
- ✦ Group

```
<dispensing-rule xml:id="d3e11057"  
  rdf:resource="http://pbs.gov.au/dispensing-rule/rp-s90-cp">  
  <member-of-list>  
    <member-of rdf:resource="http://pbs.gov.au/dispensing-rule/default">yes</member-of>  
  </member-of-list>  
  <fee-definitions-list>  
  ...
```

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6CPA Changes

- ✦ PFDI
- ✦ Additional rule:
 - ✦ Brand must be substitutable with another brand that has a premium
- ✦ Change to data population
- ✦ No change to schema

6CPA Changes

- PFDI
- Introduced July 2015 Schedule

6CPA Changes

- Compounding fee
- PBS XML: change to preparation fee

6CPA Changes

- ✦ Life Saving Drugs programme
- ✦ New programme
- ✦ Similar to IVF/GIFT
- ✦ Commences: ?

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PBS XML Schema 2.12

- ✦ Copayment discount
- ✦ Pharmacy may discount patient copayment
- ✦ Optional
- ✦ Variable
 - ✦ From zero to full discount

PBS XML Schema 2.12

- ✦ Copayment discount
- ✦ Different discounts may be permitted
 - ✦ General: \$1.00
 - ✦ Hospital: up to entire copayment
 - ✦ Friendly Society: ?

PBS XML Schema 2.12

- ✦ Copayment discount
- ✦ ext:discounts-list, ext:discount
- ✦ Child of pbs:copayment

```
<pbs:copayment xml:id="a215327865">  
  <pbs:type>copay:general</pbs:type>  
  <pbs:amount>37.70</pbs:amount>  
  <ext:discounts-list>  
    <ext:discount>...</ext:discount>  
  </ext:discounts-list>  
</pbs:copayment>
```

PBS XML Schema 2.12

- Discount type

```
<ext:discount>  
  <ext:type>pbs:discount-general</ext:type>  
  <pbs:amount>1.00</pbs:amount>  
</ext:discount>  
<ext:discount>  
  <ext:type>pbs:discount-hospital</ext:type>  
  <pbs:amount>37.70</pbs:amount>  
</ext:discount>
```

PBS XML Schema 2.12

• 3.0 markup

```
<copayment xml:id="a215327865"  
  rdf:resource="http://pbs.gov.au/copayment/general">  
  <amount>37.70</amount>  
  <discounts-list>  
    <discount rdf:resource="http://pbs.gov.au/discount/general">  
      <amount>1.00</amount>  
      <effective>...</effective>  
    </discount>  
  </discounts-list>  
</copayment>
```

PBS XML Schema 2.12

- ✦ Originator brand
- ✦ Identifies first brand that was marketed
- ✦ Required for Price Disclosure
 - ✦ Legal Instrument

PBS XML Schema 2.12

- ✦ Originator brand
- ✦ Data item for TPP

```
<pbs:tpp xml:id="a215426640">  
  <pbs:code scheme="urn:snomed-org/sct">69781000144104</pbs:code>  
  <dbk:title>Mylanta P Oral suspension 200 mg-200 mg per 5 mL, 500 mL, 1</dbk:title>  
  <dbk:subtitle>Mylanta P</dbk:subtitle>  
  <ext:originator/>  
  <pbs:organisation-reference xlink:href="#a217053314"/>  
  <pbs:pack-size>1</pbs:pack-size>  
  <pbs:effectivity>  
    <pbs:start>2015-09-01</pbs:start>  
  </pbs:effectivity>  
  <pbs:ex-manufacturer>4.56</pbs:ex-manufacturer>  
</pbs:tpp>
```

PBS XML Schema 2.12

- 3.0 markup
- Group

```
<tpp xml:id="a183093930">  
  <code rdf:resource="http://snomed.info/sct/911000144106">69781000144104</code>  
  <member-of-list>  
    <member-of ref:resource="http://pbs.gov.au/brand/originator"/>  
  </member-of-list>  
  <preferred-term>Mylanta P Oral suspension 200 mg per 5 mL, 500 mL, 1</preferred-term>  
  <pack-size>1</pack-size>  
  <ex-manufacturer>4.56</ex-manufacturer>  
  ...  
</tpp>
```

PBS XML Schema 2.12

- ✦ Schema-validation
- ✦ Forward compatibility
- ✦ If only understanding 2.10+
 - ✦ Use rng/pbs.rng
 - ✦ Ignores extension elements

PBS XML Schema 2.12

- ✦ Schema-validation
- ✦ Forward compatibility
- ✦ Improvements to extension validation

PBS XML Schema 2.12

- ✦ Schema-validation
- ✦ Forward compatibility
- ✦ If must understand 2.12 (and only 2.12)
 - ✦ Use rng/extension.rng
 - ✦ Validates 2.11, 2.12 extension elements
 - ✦ Not 2.13, 2.14, etc

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Meeting

- Next meeting February/March 2016