

PharmBiz

Software Vendors Forum

14th August 2014

Agenda

- Welcome/Introduction
- Review Action Items
- PBS Number
- Start Dates
- Medication Charts
- HSD Community Access
- PBS XML Schema 2.10
- PBS XML Schema 3.0
- AMT v3
- Brand Substitution
- Restrictions Review
- PBS XML Schema 3.0
- Other business
- Meeting close

Agenda

- ✦ Welcome/Introduction
- ✦ *Review Action Items*
- ✦ PBS Number
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- ✦ Medication Charts
- ✦ HSD Community Access
- ✦ PBS XML Schema 2.10
- ✦ PBS XML Schema 3.0
- ✦ AMT v3
- ✦ Brand Substitution
- ✦ Restrictions Review
- ✦ PBS XML Schema 3.0
- ✦ Other business
- ✦ Meeting close

Action Items

- ✦ Further discuss TPUU identification for all ready prepared items, especially for dangerous drugs
- ✦ AMT implementation in PBS XML: provide advice on progress
- ✦ Consider the timeliness of AMT releases and the inclusion of AMT information
- ✦ Provide feedback to software vendors regarding the alphabetic issue with drug AMT listing

Action Items

- ✦ Clarify business rules for start dates and publish on the PBS website
- ✦ Transition of start dates, provide list of the drugs and date change
- ✦ Improvement of the change explanations provided monthly for the PBS Schedule
- ✦ Develop formal process to deal with retrospective changes

Action Items

- Provide comments and concerns with current processes for PharmCIS
- Release PBS Software as Open Source by 2013-12-31

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PBS Number

- ✦ Discussed since 2006
- ✦ 4 digit PBS Item codes now exhausted
- ✦ 5 digit PBS Item codes first appeared in December 2013 schedule
- ✦ No limits on other codes
 - ✦ eg Restrictions, Notes, Cautions

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Start Dates

- ✦ Indicates when element content most recently changed
- ✦ PR start date semantics as per June 2013 meeting
- ✦ Implemented in PharmCIS
- ✦ Due for release November 2014 schedule
- ✦ Discontinue `sd-yyyy-mm-01.xml`

Start Dates

- pbs:prescribing-rule - most recent date of current contiguous product listings
- pbs:prices - most recent date product listing became effective
- rwt:restriction-reference - most recent date PR-restriction association became effective
- pbs:advance-notice - start date of product listing to be deleted

Start Dates

- ✦ Test data
 - ✦ Based on July 2014 Schedule
- ✦ Action item: analysis
 - ✦ All prescribing rule dates changed
 - ✦ Restriction reference dates: ~400 changed, 4776 unchanged

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Medication Charts

- ✦ Hospital medication charts
- ✦ Public & private hospitals
- ✦ Different to RACF
- ✦ Change PBS XML Schema: v2.10

Medication Charts

- ✦ `pbs:medication-chart` indicates PBS item is eligible
- ✦ Absence means PBS item must have prescription
- ✦ Add `pbs:type` element to `pbs:medication-chart`
- ✦ `pbs:medication-chart-racf`
- ✦ `pbs:medication-chart-hospital`

Medication Charts

```
<pbs:prescribing-rule ...>
```

```
...
```

```
  <pbs:medication-chart>
```

```
    <pbs:type>pbs:medication-chart-racf</pbs:type>
```

```
  </pbs:medication-chart>
```

```
  <pbs:medication-chart>
```

```
    <pbs:type>pbs:medication-chart-hospital</pbs:type>
```

```
  </pbs:medication-chart>
```

```
...
```

```
</pbs:prescribing-rule>
```


Medication Charts

- ✦ Categories of charts
- ✦ Chart validity
- ✦ pbs:medication-chart-definition

Medication Charts

```
<pbs:schedule>
```

```
  <pbs:copayments-list>
```

```
  ...
```

```
  <pbs:medication-chart-definition>
```

```
    <dbk:title>Hospital medication chart</dbk:title>
```

```
    <pbs:type>pbs:medication-chart-hospital</pbs:type>
```

```
    <pbs:duration>P1M</pbs:duration>
```

```
    <pbs:duration>P4M</pbs:duration>
```

```
    <pbs:duration>P1Y</pbs:duration>
```

```
  </pbs:medication-chart-definition>
```

```
  <pbs:medication-chart-definition>
```

```
    <dbk:title>Residential Aged Care Facility med chart</dbk:title>
```

```
    <pbs:type>pbs:medication-chart-racf</pbs:type>
```

```
    <pbs:duration>P4M</pbs:duration>
```

```
  </pbs:medication-chart-definition>
```

Agenda

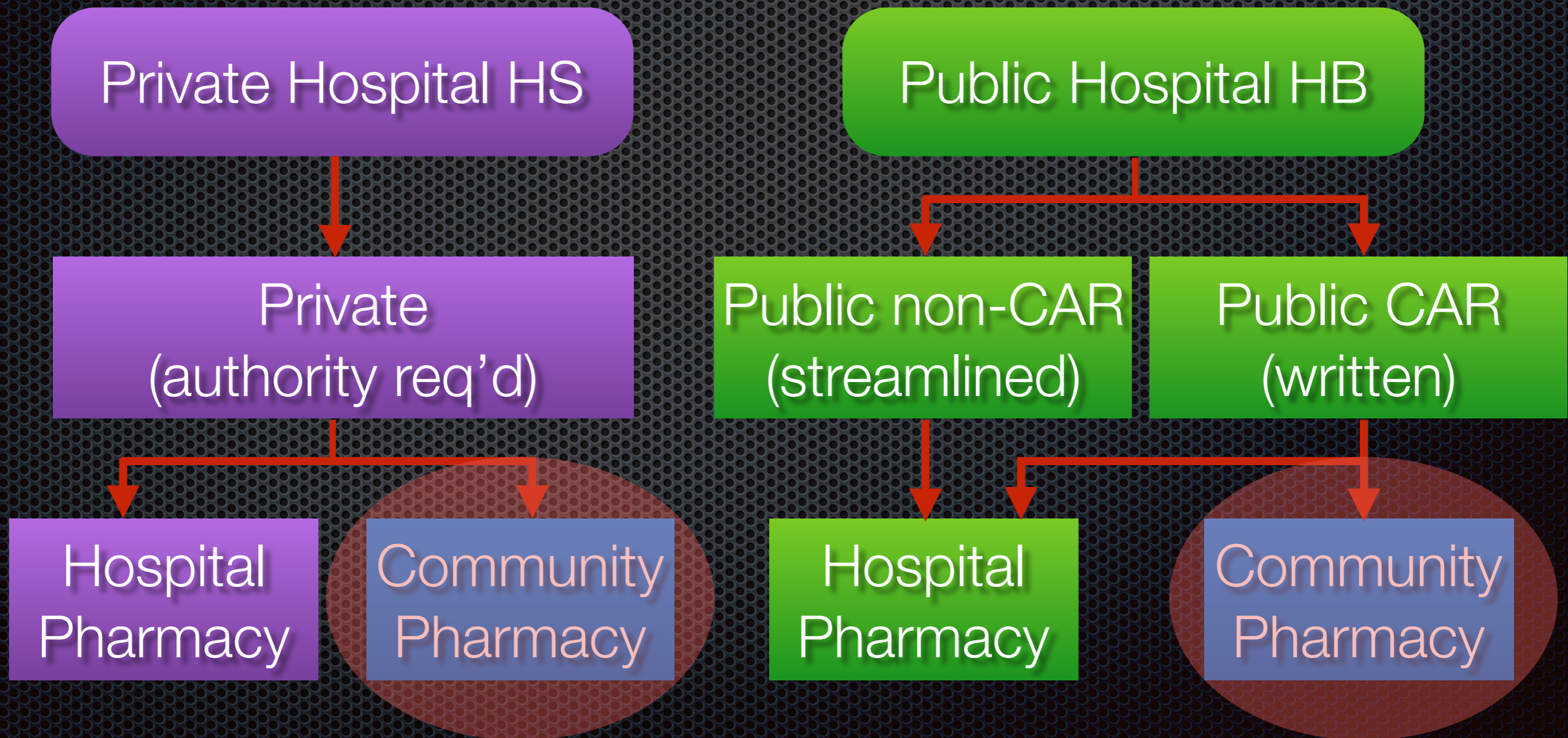
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Community Access

- ✦ Improve access to certain S100 medicines
 - ✦ Clozapine, HIV-ART
- ✦ Maintenance therapies, not initial
- ✦ Community pharmacies, public & private hospitals
- ✦ non-CAR HSD
- ✦ Streamlined authorities

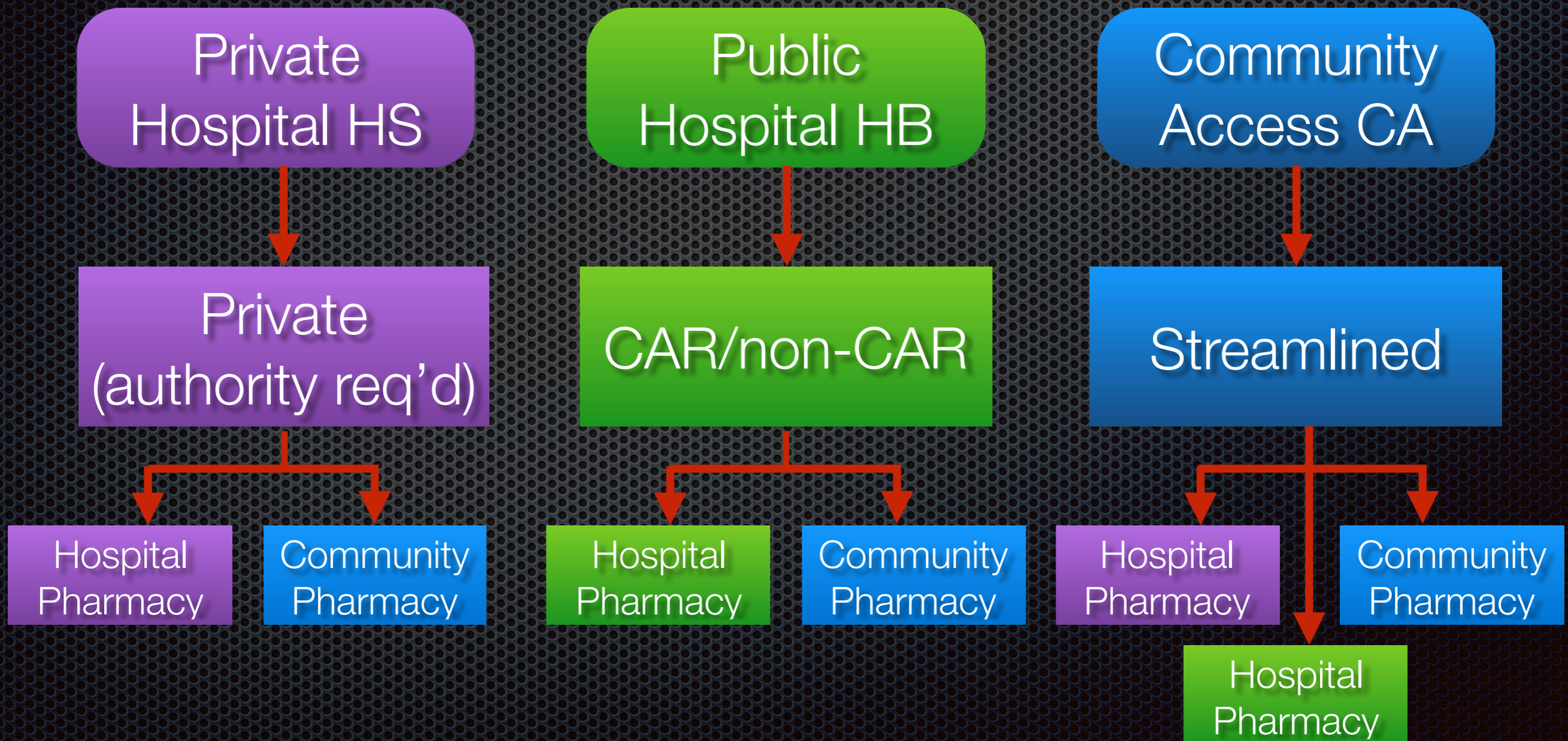
Community Access

- Current arrangements



Community Access

- New arrangements



Community Access

- ✦ Listing structure changes
 - ✦ New program: CA
 - ✦ 3 dispensing rules
 - ✦ Public hospital
 - ✦ Private hospital
 - ✦ Community Pharmacy

Community Access

- Listing structure changes
- Add Community Pharmacy dispensing rule to HB, HS programs

Community Access

- ✦ Complex Authority Required (CAR) items
- ✦ `rwt:complex-authority-required` element
- ✦ Child of `rwt:circumstance`
- ✦ `pbs:prescribing-rule/@type`
 - ✦ `complex-authority-required`

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PBS XML Schema 2.10

- ✦ Minor version of PBS XML Schema
- ✦ Version 2.10
- ✦ Types of medication charts
- ✦ Complex Authority Required items
- ✦ Controlled vocabulary specification
- ✦ Business rules for programs

PBS XML Schema 2.10

- ✦ Housekeeping
- ✦ Add restrictions to pbs:extemporaneous-preparation, pbs:standard-formula-preparation
- ✦ pbs:revision, pbs:build
- ✦ pbs:vial-content, pbs:pack-content
 - ✦ @amount optional

PBS XML Schema 2.10

- Draft schema package available
- Production March 2015

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PBS XML Schema 3.0

- ✦ Major release required
- ✦ Non-backward compatible changes
- ✦ Workshop requirements

PBS XML Schema 3.0

- ✦ Schema Change Policy:
 - ✦ not less than 12 months
- ✦ Draft/prototype: 3 months (November/December 2014)
- ✦ Test data: ?
- ✦ Production: ??

PBS XML Schema 3.0

- ✦ Transition
- ✦ No “big-bang” switchover
- ✦ PharmCIS dual-generation difficult
- ✦ v2.x \Rightarrow v3.0 upconverter
- ✦ v3.0 \Rightarrow v2.x downconverter
- ✦ Sunset for support: 12 months

Agenda

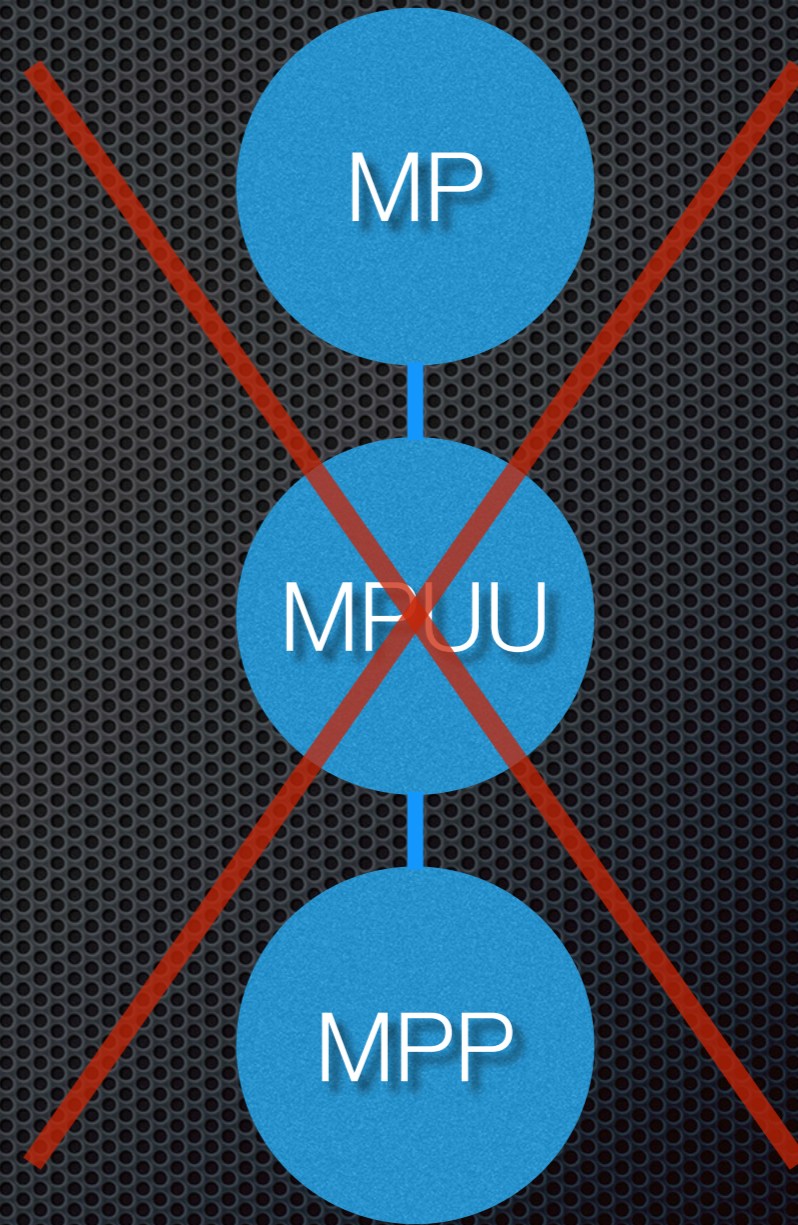
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AMT Version 3

- ✦ Nehta have released AMT version 3
- ✦ Many changes to MP, MPUU, TP, TPUU
- ✦ RF2 format, ref-sets
- ✦ Few changes to MPP, TPP
- ✦ PharmCIS will transition

AMT Version 3

- ✦ AMT v3 removes:
 - ✦ Multi-component MPs
 - ✦ MP-MPP relationship
- ✦ Avoid 'Coveram' problem
- ✦ No single hierarchy
- ✦ Graph



AMT v3

- PharmCIS transition in 3 phases

AMT v3

- ✦ Phase 0
- ✦ AMT 2.56
- ✦ No new releases until phase 1
- ✦ All new concepts will be non-AMT
- ✦ May reconcile some non-AMT concepts

AMT v3

- ✦ Phase 1
- ✦ Preserve status-quo
- ✦ Load AMT v3 releases
- ✦ All concepts to be loaded

AMT v3

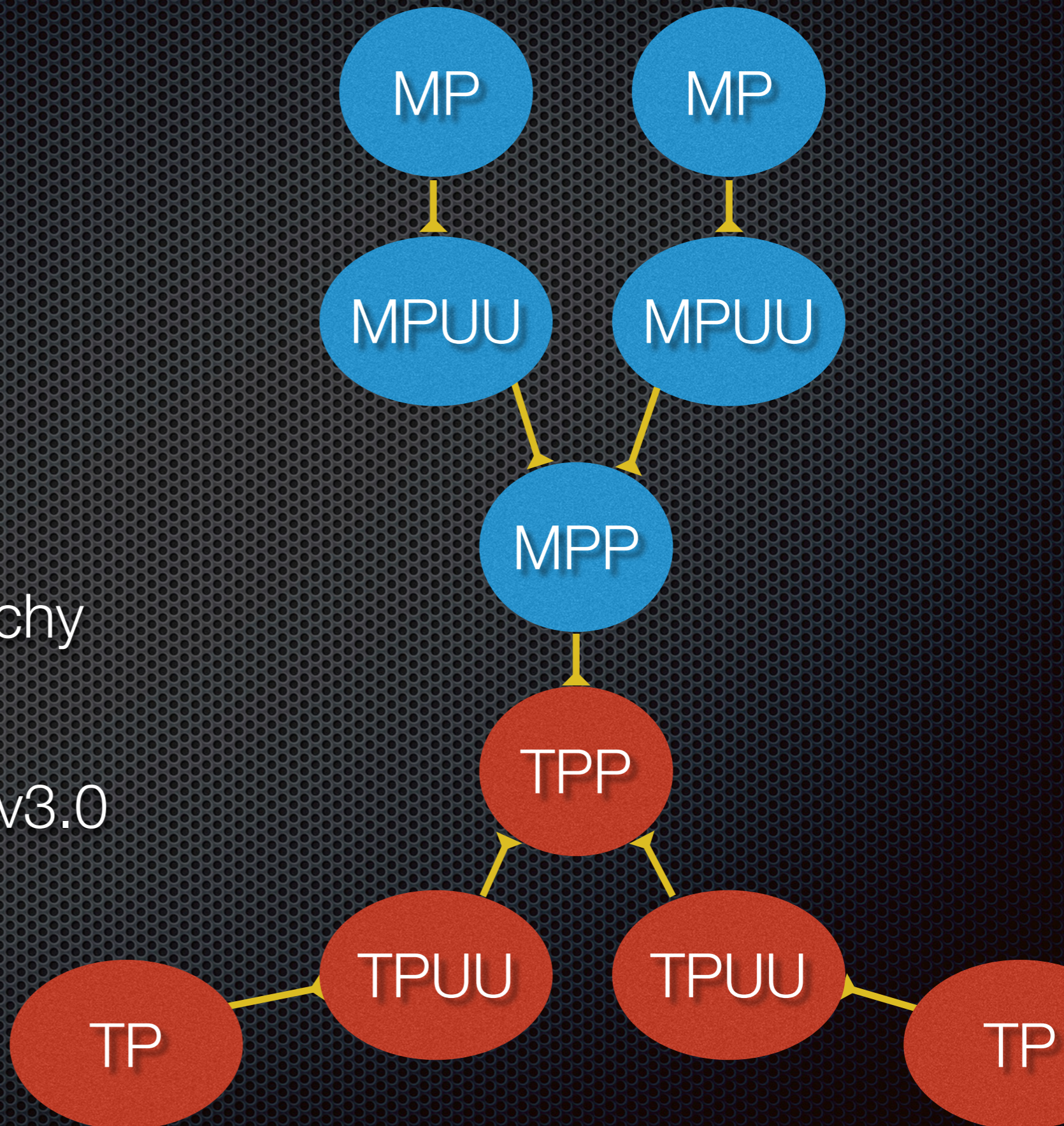
- ✦ Phase 1
- ✦ 'Unreconcile' multi-component concepts to non-AMT
- ✦ Support AMT concepts with non-AMT parent
- ✦ May reconcile existing non-AMT concepts

AMT v3

- ✦ Phase 1
- ✦ PBS XML Schema unchanged
- ✦ 1st Schedule release likely to have large set of changes
 - ✦ MP concepts being 'unreconciled'
 - ✦ AMT v3 concept codes
- ✦ Implementation underway

AMT v3

- Phase 2
- Support AMT v3 structure
- Expand drug hierarchy to graph
- PBS XML Schema v3.0



AMT v3

- ✦ Phase 3
- ✦ Legislative change to align NHA with AMT
- ✦ Internal changes
- ✦ Possible listing changes
- ✦ PBS XML Schema unchanged

AMT v3

- ✦ Identification
- ✦ @scheme
 - ✦ <http://snomed.info/sct/900062011000036108>
 - ✦ <http://snomed.info/sct/911000144106>
- ✦ Include version?
 - ✦ <http://snomed.info/sct/900062011000036108/20140630>

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Brand Substitution

- ✦ Brand substitution groups
- ✦ Cross-item substitution
- ✦ Must also consider listing conditions

Brand Substitution

- ✦ Difficult to resolve
- ✦ Simplify
- ✦ Declarative
- ✦ Denormalise to product listing
 - ✦ See PBS XML Schema 3.0

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Restrictions Review

- ✦ Post-market review of Authority Required PBS Listings
 - ✦ Public consultation - www.pbs.gov.au
- ✦ RWT improvements
- ✦ CAR support
 - ✦ See also PBS XML Schema 2.10, 3.0

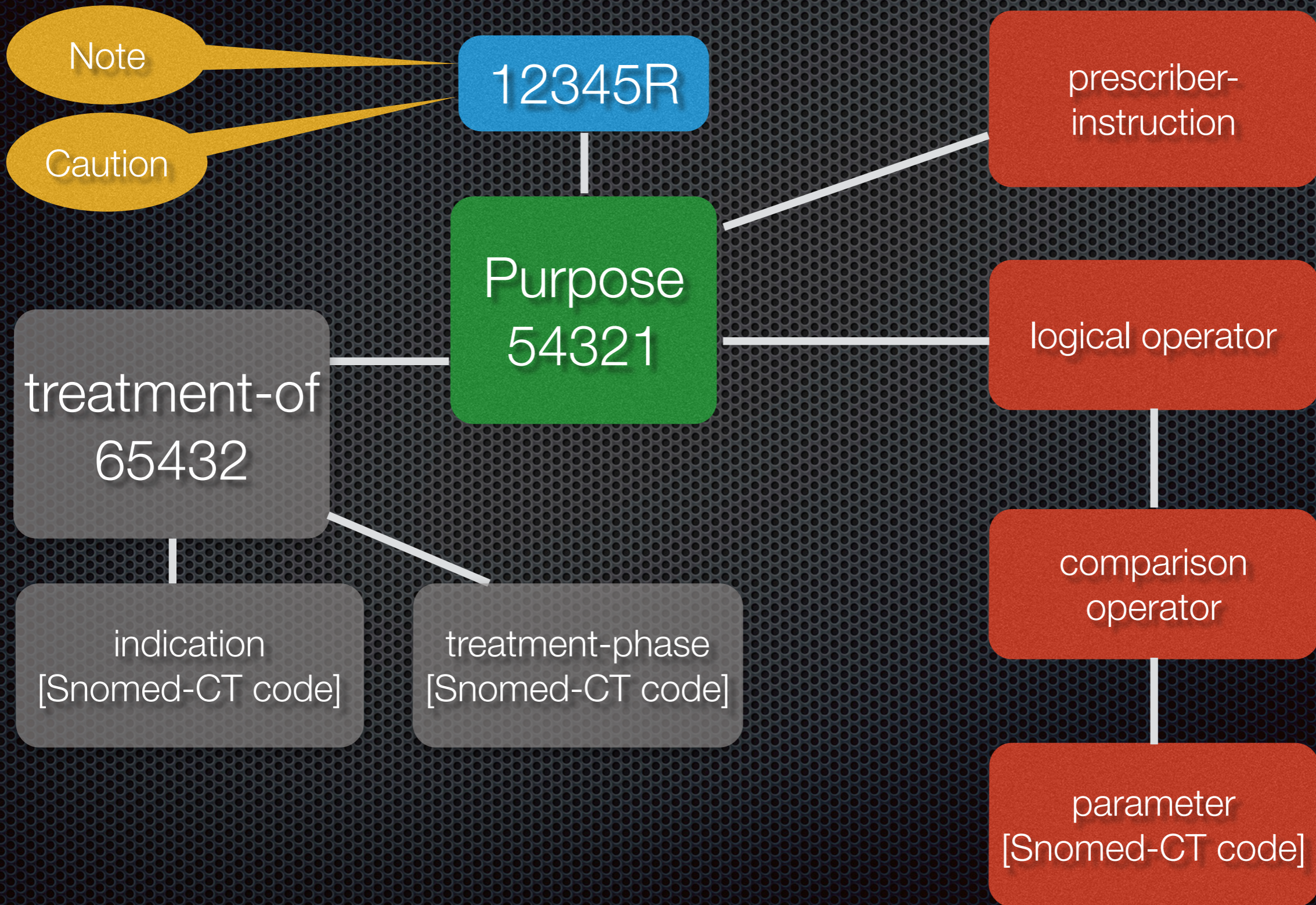
Restrictions Review

- ✦ Restriction codes (SAC) are unstable
- ✦ Duplicate restriction codes
- ✦ Too complex
 - ✦ Increases

Restrictions Review

- ✦ Proposal (data):
 - ✦ Separate legal from informational
 - ✦ Separate indication from authority requirements

Restrictions Review



Restrictions Review

- ✦ Authorities
 - ✦ Electronic
- ✦ Increases

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PBS XML Schema 3.0

- ✦ Major version change
- ✦ Non-backward compatible
- ✦ Version 2 started development 2007
- ✦ In production late 2011
- ✦ Overlapped with PharmCIS development

PBS XML Schema 3.0

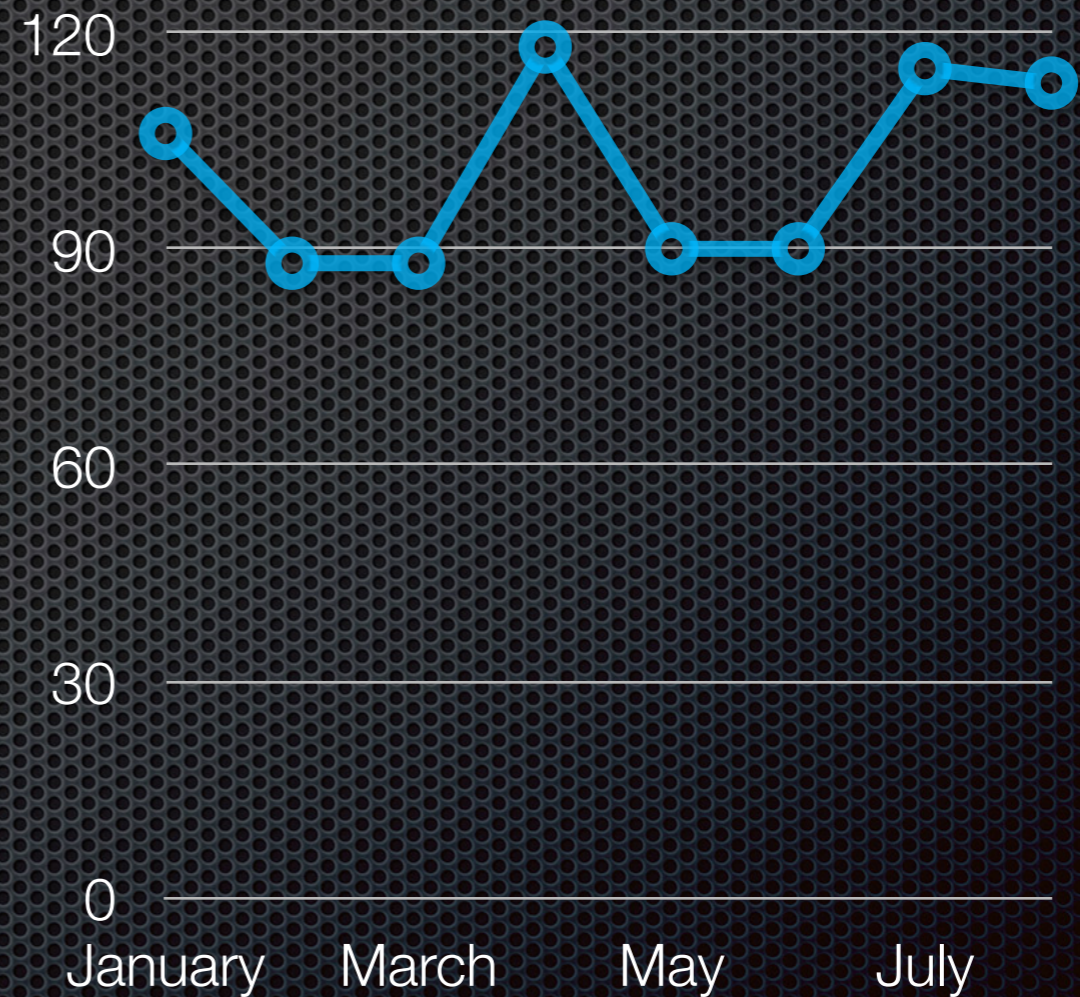
- ✦ Proposals for change
- ✦ Subject to review and approval

PBS XML Schema 3.0

- ✦ v2.x Feedback
 - ✦ Document size
 - ✦ Complexity
 - ✦ Hyperlinks
 - ✦ Brand substitution

PBS XML Schema 3.0

- ✦ Document size
- ✦ Restrictions alone are > 25MB



PBS XML Schema 3.0

- ✦ Current schema designed for bulk data transfer
- ✦ Web Service style documents
- ✦ 1 document per “object”
 - ✦ Prescribing rules: 3600+ (18KB-222KB)
 - ✦ TPP: 5400+
- ✦ Resolve hyperlinks

PBS XML Schema 3.0

- [show example]

PBS XML Schema 3.0

- ✦ Complexity
- ✦ Refactor schema
- ✦ Simplify markup conventions
- ✦ Simplify data structures
- ✦ Provide more declarative data
 - ✦ Minimise interpretation, scraping

PBS XML Schema 3.0

- ✦ Simplify markup conventions
- ✦ XML Namespaces
- ✦ Controlled vocabularies
- ✦ Boolean elements

PBS XML Schema 3.0

- ✦ XML Namespaces
- ✦ Merge redundant definitions
 - ✦ g2g, rwt
- ✦ Remove extraneous definitions
 - ✦ contrib, admin, dr, container, sn, etc

PBS XML Schema 3.0

- ✦ Controlled vocabularies
- ✦ Hyperlinks
- ✦ Boolean elements
- ✦ Default values
- ✦ Extend group mechanism

PBS XML Schema 3.0

- ✦ Groups have three components
 - ✦ Group type
 - ✦ Group type instances
 - ✦ Group members

PBS XML Schema 3.0

- ✦ Group type definition
- ✦ Description, default value
- ✦ Other values, e.g. fees

```
<pbs:group-type  
  <pbs:name>pack-breakability</pbs:name>  
  <pbs:info>  
    <db:title>Pack not to be broken</db:title>  
    <pbs:default>pack-breakable</pbs:default>  
    <pbs:member-type>pbs:ready-prepared</pbs:member-type>  
  </pbs:info>  
  ...  
</pbs:group-type>
```

PBS XML Schema 3.0

- ✦ Group instance
- ✦ Groups are named

```
<pbs:group-type
  <pbs:name>pack-breakability</pbs:name>
  <pbs:group
    <pbs:name>pack-not-breakable</pbs:name>
    <pbs:note><db:para>The CTPP must not be broken</db:para></pbs:note>
  </pbs:group>
  <pbs:group
    <pbs:name>pack-breakable</pbs:name>
    <pbs:note><db:para>The CTPP may be broken</db:para></pbs:note>
  </pbs:group>
  ...
</pbs:group-type>
```

PBS XML Schema 3.0

- ✦ Group membership refers to name
- ✦ Well known group types need not be resolved
- ✦ Missing membership uses default

```
<pbs:prescribing-rule>  
  <pbs:ready-prepared>  
    <pbs:member-of-list>  
      <pbs:member-of>  
        <pbs:type>pack-breakability</pbs:type>  
        <pbs:name>pack-not-breakable</pbs:name>  
      </pbs:member-of>  
    </pbs:member-of-list>  
    ...  
  </pbs:prescribing-rule>
```

PBS XML Schema 3.0

- Non-semantic named groups

```
<pbs:product-listing>  
  <pbs:member-of-list>  
    <pbs:member-of>  
      <pbs:type>brand-substitution</pbs:type>  
      <pbs:name>5602378</pbs:name>  
    </pbs:member-of>  
  </pbs:member-of-list>  
  ...  
</pbs:product-listing>
```

PBS XML Schema 3.0

- ✦ Simplify data structures
- ✦ Product listing
- ✦ Rationalise pricing data

PBS XML Schema 3.0

- ✦ v2 pricing
 - ✦ Ready prepared
 - ✦ normalised for prescribing rule
 - ✦ pbs:reimbursement, pbs:lowest
- ✦ Product listing(s)
 - ✦ pbs:prices

PBS XML Schema 3.0

- ✦ v2 pricing
 - ✦ Ready prepared
 - ✦ Exceptions for variant models
 - ✦ no-premium
 - ✦ no-premium-no-charge

PBS XML Schema 3.0

- ✦ v2 pricing
 - ✦ Infusible
 - ✦ Designed for cost-efficient algorithm
 - ✦ pbs:prices, pbs:tpp-list

PBS XML Schema 3.0

- ✦ v3 pricing
- ✦ Make product listings explicit
- ✦ De-normalise
- ✦ Works for both ready-prepared and infusible

PBS XML Schema 3.0

```
<pbs:prescribing-rule>
  <pbs:ready-prepared>
    <pbs:product-listing>
      <pbs:tpp-reference xlink:href="..." />
      <pbs:code>BQ</pbs:code>
      <pbs:reimbursement>
        <pbs:ex-manufacturer>...</pbs:ex-manufacturer>
        ...
        <pbs:dpmq>...</pbs:dpmq>
      </pbs:reimbursement>
      <pbs:lowest>
        <pbs:ex-manufacturer>...</pbs:ex-manufacturer>
        ...
        <pbs:dpmq>...</pbs:dpmq>
      </pbs:lowest>
      <pbs:manufacturer>
        <pbs:ex-manufacturer>...</pbs:ex-manufacturer>
        ...
        <pbs:dpmq>...</pbs:dpmq>
      </pbs:manufacturer>
    </pbs:product-listing>
  </pbs:ready-prepared>
</pbs:prescribing-rule>
```

...

PBS XML Schema 3.0

```
...
  <pbs:maximum-safety-net-value>
    ...
  <pbs:maximum-safety-net-value>
  <pbs:maximum-patient-charge>
    ...
  </pbs:maximum-patient-charge>

  <pbs:member-of>
    <pbs:type>brand-substitution</pbs:type>
    <pbs:name>a93721362</pbs:name>
  </pbs:member-of>
</pbs:product-listing>
</pbs:ready-prepared>
</pbs:prescribing-rule>
```

PBS XML Schema 3.0

```
<pbs:prescribing-rule>  
  <pbs:infusible>  
    <pbs:product-listing>  
      <pbs:tpuu-reference xlink:href="..." />  
      <pbs:tpuu>  
        <pbs:content unit="mg">10</pbs:content>  
      </pbs:tpuu>  
      <pbs:code>BQ</pbs:code>  
      <pbs:reimbursement>...</pbs:reimbursement>  
      <pbs:manufacturer>...</pbs:manufacturer>  
    ...  
  </pbs:product-listing>  
</pbs:infusible>  
</pbs:prescribing-rule>
```

PBS XML Schema 3.0

- ✦ Attach other data to product listing
- ✦ Brand substitution
- ✦ Group membership

PBS XML Schema 3.0

- ✦ Drug concepts
- ✦ AMT v3
- ✦ Graph
 - ✦ Not hierarchy

PBS XML Schema 3.0

Current

```
<pbs:mp xml:id="a136560176">
  <dbk:title>arsenic</dbk:title>
  <pbs:code scheme="urn:snomed-org/sct">79088011000036104</pbs:code>
  <pbs:mpp xml:id="a136569781">
    <pbs:code scheme="urn:snomed-org/sct">79239011000036107</pbs:code>
    <dbk:title>arsenic trioxide 10 mg/10 mL injection, 10 x 10 mL vials</dbk:title>
    <pbs:mpuu xml:id="a136589857">
      <pbs:code scheme="urn:snomed-org/sct">79114011000036104</pbs:code>
      <dbk:title>arsenic trioxide 10 mg/10 mL injection, vial</dbk:title>
    <pbs:tpp xml:id="a136638592">
      <pbs:code scheme="urn:snomed-org/sct">78863011000036105</pbs:code>
      <dbk:title>Phenasen 10 mg/10 mL injection: concentrated, 10 x 10 mL vials</dbk:title>
      <dbk:subtitle>Phenasen</dbk:subtitle>
      <pbs:organisation-reference xlink:href="#a137945399" xml:id="d1e144">
        <pbs:tpuu xml:id="a136660981">
          <pbs:code scheme="urn:snomed-org/sct">78669011000036101</pbs:code>
          <dbk:title>Phenasen (arsenic trioxide 10 mg/10 mL) injection: vial</dbk:title>
```


PBS XML Schema 3.0

Proposed

```
<pbs:mp xml:id="a987654321">
  <pbs:code scheme="http://snomed.info/sct/900062011000036108">1234...</pbs:code>
  <pbs:preferred-term>Arsenic</pbs:preferred-term>
  <pbs:mpuu-reference xlink:href="#a997654321"/>
</pbs:mp>
<pbs:mpuu xml:id="a997654321">
  <pbs:code scheme="http://snomed.info/sct/900062011000036108">1235...</pbs:code>
  <pbs:preferred-term>Arsenic 10mg</pbs:preferred-term>
  <pbs:mp-reference xlink:href="#a987654321"/>
  <pbs:mpp-reference xlink:href="#a999654321"/>
</pbs:mpuu>
<pbs:mpp xml:id="a999654321">
  <pbs:code scheme="http://snomed.info/sct/900062011000036108">1236...</pbs:code>
  <pbs:preferred-term>Arsenic 10mg, 20</pbs:preferred-term>
  <pbs:mpuu-reference xlink:href="#a997654321"/>
  <pbs:tpp-reference xlink:href="#a999954321"/>
</pbs:mpp>
```

PBS XML Schema 3.0

- ✦ +
 - ✦ Consistent with cross-linking mechanism
 - ✦ Similar to Snomed-CT RF2
 - ✦ Can use AMT codes
- ✦ -
 - ✦ More hyperlinks

PBS XML Schema 3.0

- ✦ Restrictions
- ✦ Dependent on review

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Meeting Close

- Next meeting