

NCH - PEDMATCH

Integration Overview, v1.0-draft

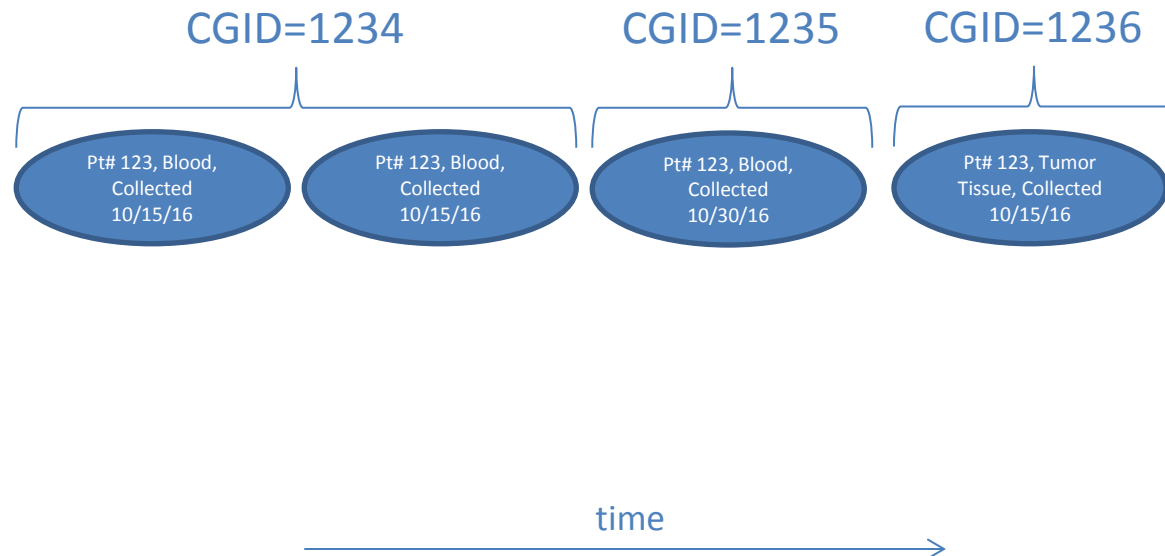
Last revised, 5/4/2016, ESK

Terminology

- Collection Grouping ID (“CGID”)
 - Shared by specimens of a given type taken from a patient in one encounter/surgery/draw/etc.
 - Same CGID means specimens are “equivalent” from a PED-MATCH standpoint
 - Specimen messages sent to MATCHBOX will include the CGID
 - CGIDs will be “inherited” by the various aliquots/derivatives from the original specimens
 - Specimens obtained through follow-up requests by BPC (e.g., inadequate/insufficient received) will keep the original CGID if specimens are known to come from the same original encounter/surgery/block/etc.

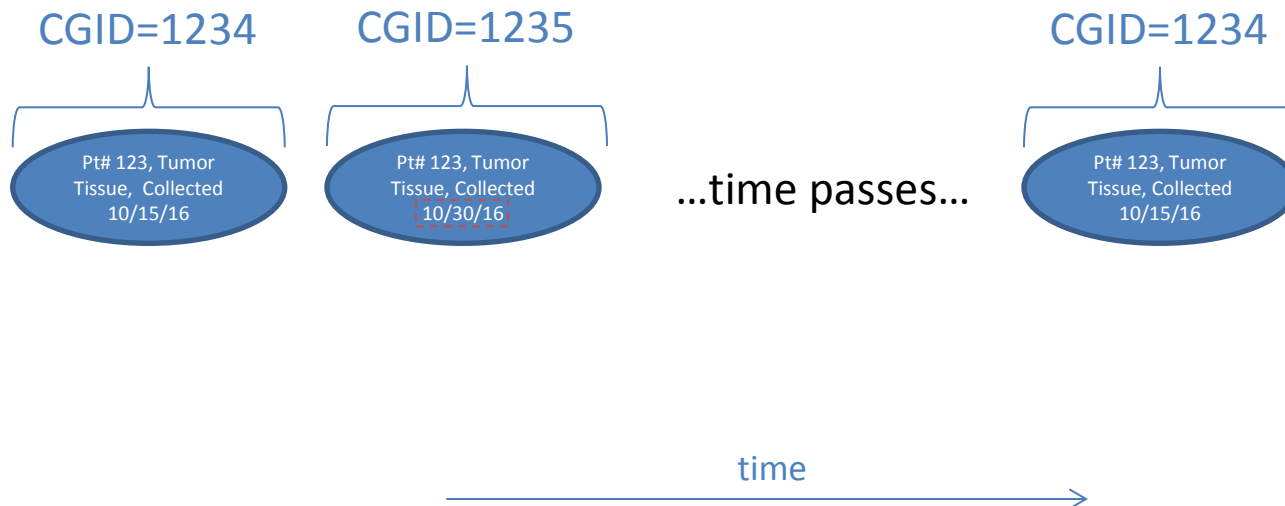
Collection Grouping Examples

- Scenario 1
 - First two specimens grouped together because attributes match (“equivalent” from PED-MATCH standpoint); New (shared) CGID
 - Third specimen was collected separately from first two; New CGID
 - Fourth specimen differs by type; New CGID



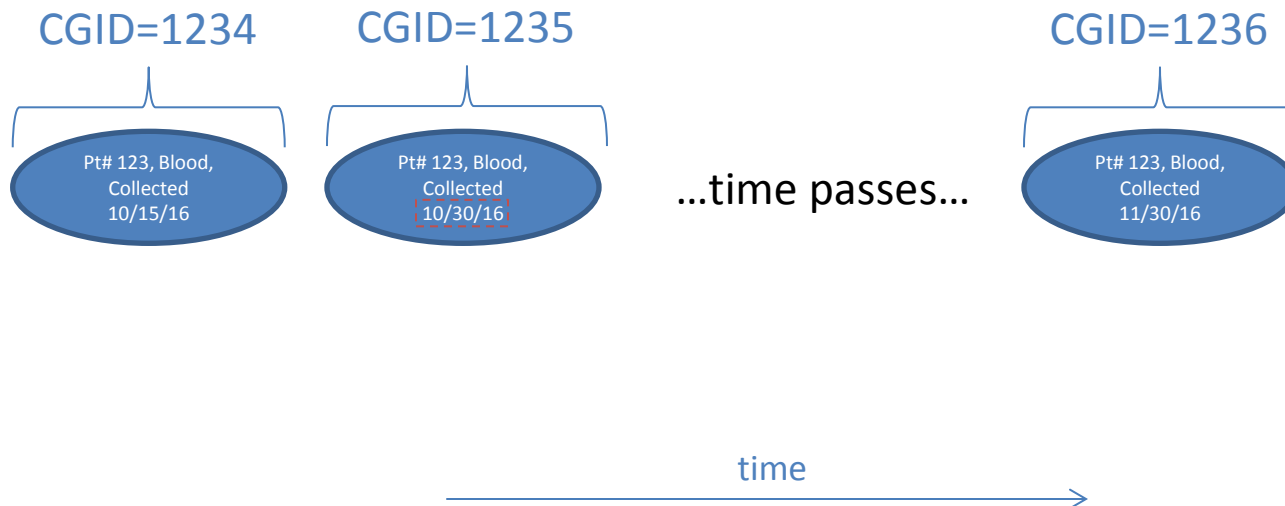
Collection Grouping Examples

- Scenario 2
 - First two specimens differ in collection date; Each receives a unique CGID
 - Third specimen—though arriving at the BPC days later—reuses the first specimen's CGID since they are “equivalent” from a PED-MATCH standpoint
 - Late-arriving specimens (e.g., delays in shipping/accessioning)
 - Cases where BPC requests additional portion of existing specimen (e.g., inadequacy) and site is able to indeed provide more from that original specimen



Collection Grouping Examples

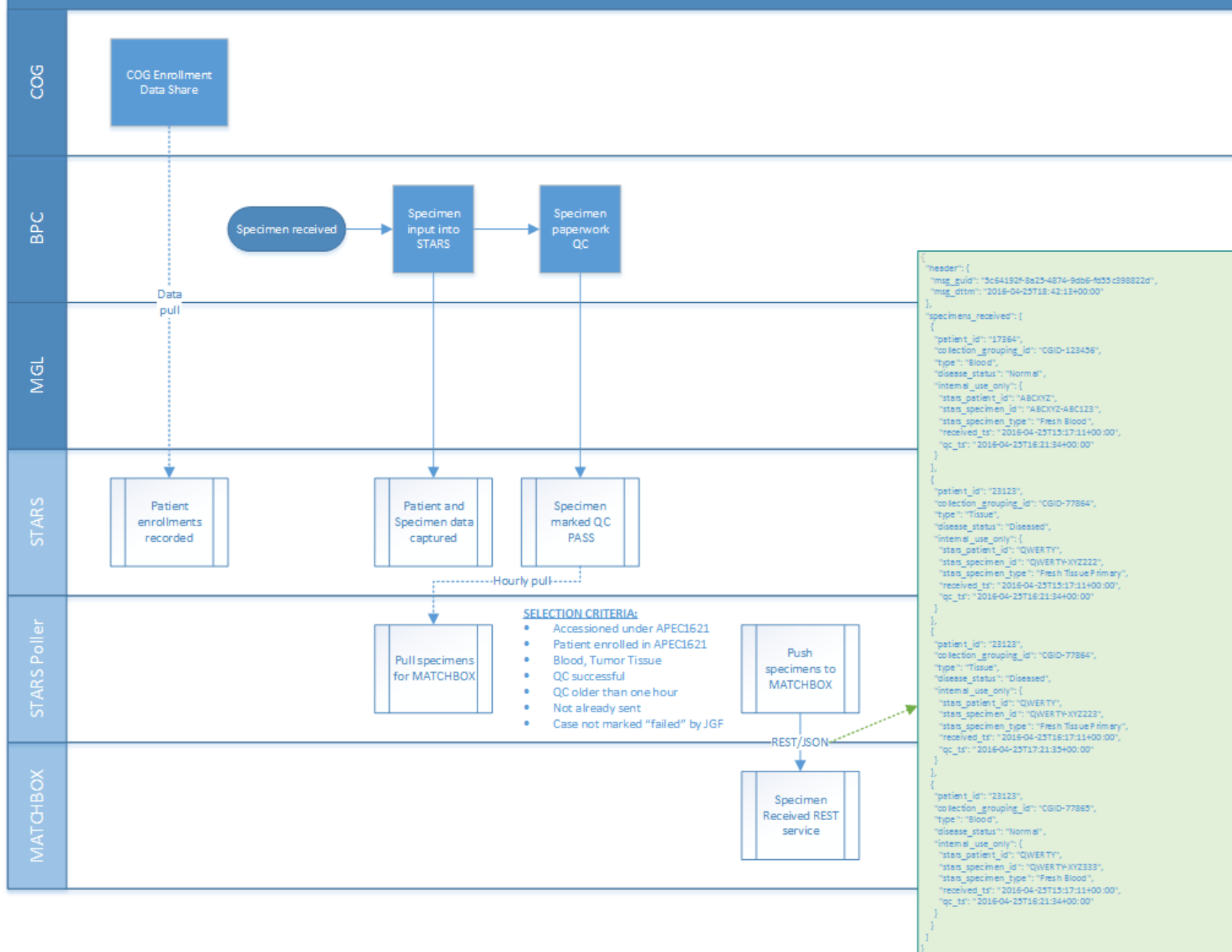
- Scenario 3
 - First two specimens differ in collection date; Each receives a unique CGID
 - Third specimen arrives at the BPC days later but does NOT reuse the first specimen's CGID since they are not from the same collection and thus not “equivalent” from a PED-MATCH standpoint
 - Cases where BPC requests additional portion of existing specimen (e.g., inadequacy) but site is unable to provide more of the original specimen, instead substituting from another specimen/draw/etc.



“Specimen Received” Integration Message

- **DIRECTION**: Outbound from BPC to MATCHBOX
- **TIMING**: Sent when new specimens of interest are detected in STARS
 - Specimen is accessioned under APEC1621
 - Patient is enrolled in APEC1621
 - Specimen type of Blood or Tumor Tissue
 - Accessioning paperwork QC is successful
- **CONTENT**:
 - Technical Message Headers (*msg_guid, msg_dttm*)
 - List of specimens
 - PED-MATCH attributes (*patient_id, collection_grouping_id, type, disease_status*)
 - Additional (troubleshooting) attributes (*stars_patient_id, stars_specimen_id, stars_specimen_type, received_ts, qc_ts*)

BPC / PED-MATCH – Process and Integration Overview – Specimens Received (Success)



“Specimen Received” Integration Message

```
1 {
2   "header": {
3     "msg_guid": "5c64192f-8a25-4874-9db6-fd55c398822d",
4     "msg_dttm": "2016-04-25T18:42:13+00:00"
5   },
6   "specimens_received": [
7     {
8       "patient_id": "17364",
9       "collection_grouping_id": "CGID-123456",
10      "type": "Blood",
11      "disease_status": "Normal",
12      "internal_use_only": {
13        "stars_patient_id": "ABCDXYZ",
14        "stars_specimen_id": "ABCDXYZ-ABC123",
15        "stars_specimen_type": "Fresh Blood",
16        "received_ts": "2016-04-25T15:17:11+00:00",
17        "qc_ts": "2016-04-25T16:21:34+00:00"
18      }
19    },
20    {
21      "patient_id": "23123",
22      "collection_grouping_id": "CGID-77864",
23      "type": "Tissue",
24      "disease_status": "Diseased",
25      "internal_use_only": {
26        "stars_patient_id": "QWERTY",
27        "stars_specimen_id": "QWERTY-XYZ222",
28        "stars_specimen_type": "Fresh Tissue Primary",
29        "received_ts": "2016-04-25T15:17:11+00:00",
30        "qc_ts": "2016-04-25T16:21:34+00:00"
31      }
32    },
33    {
34      "patient_id": "23123",
35      "collection_grouping_id": "CGID-77864",
36      "type": "Tissue",
37      "disease_status": "Diseased",
38      "internal_use_only": {
39        "stars_patient_id": "QWERTY",
40        "stars_specimen_id": "QWERTY-XYZ223",
41        "stars_specimen_type": "Fresh Tissue Primary",
42        "received_ts": "2016-04-25T16:17:11+00:00",
43        "qc_ts": "2016-04-25T17:21:35+00:00"
44      }
45    },
46    {
47      "patient_id": "23123",
48      "collection_grouping_id": "CGID-77865",
49      "type": "Blood",
50      "disease_status": "Normal",
51      "internal_use_only": {
52        "stars_patient_id": "QWERTY",
53        "stars_specimen_id": "QWERTY-XYZ333",
54        "stars_specimen_type": "Fresh Blood",
55        "received_ts": "2016-04-25T15:17:11+00:00",
56        "qc_ts": "2016-04-25T16:21:34+00:00"
57      }
58    }
59  ]
60 }
```

```
object {2}
  header {2}
    msg_guid : 5c64192f-8a25-4874-9db6-fd55c398822d
    msg_dttm : 2016-04-25T18:42:13+00:00
  specimens_received [4]
    0 {5}
      patient_id : 17364
      collection_grouping_id : CGID-123456
      type : Blood
      disease_status : Normal
      internal_use_only {5}
        stars_patient_id : ABCDXYZ
        stars_specimen_id : ABCDXYZ-ABC123
        stars_specimen_type : Fresh Blood
        received_ts : 2016-04-25T15:17:11+00:00
        qc_ts : 2016-04-25T16:21:34+00:00
    1 {5}
      patient_id : 23123
      collection_grouping_id : CGID-77864
      type : Tissue
      disease_status : Diseased
      internal_use_only {5}
    2 {5}
      patient_id : 23123
      collection_grouping_id : CGID-77864
      type : Tissue
      disease_status : Diseased
      internal_use_only {5}
    3 {5}
      patient_id : 23123
      collection_grouping_id : CGID-77865
      type : Blood
      disease_status : Normal
      internal_use_only {5}
```


To be continued...

- Definition of specific attributes for grouping specimens for CGID derivation
- Semantics and messaging scenarios for “specimen failed” messaging