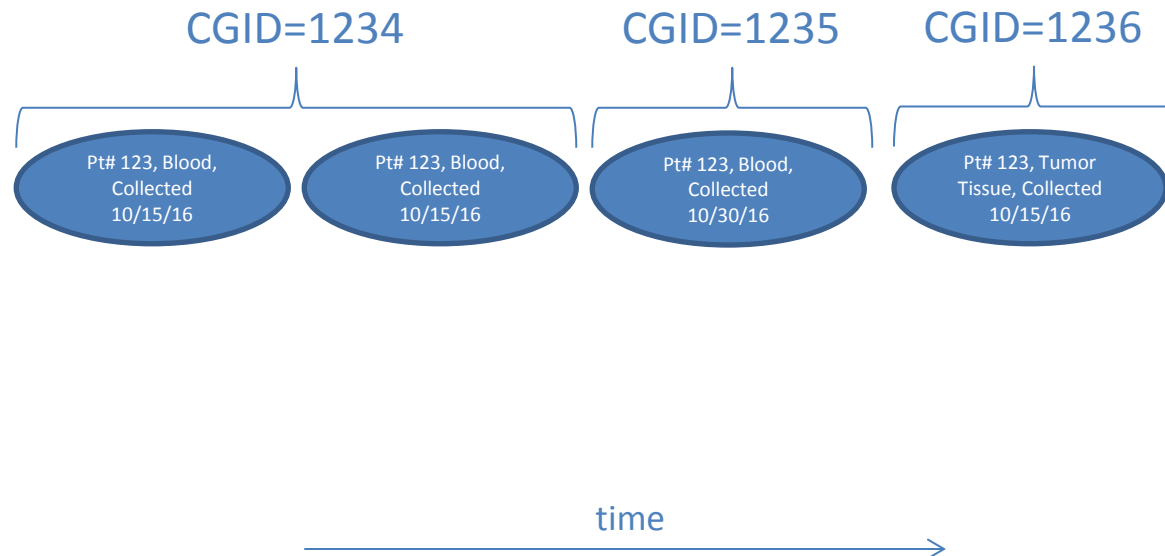# NCH - PEDMATCH

Integration Overview

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.
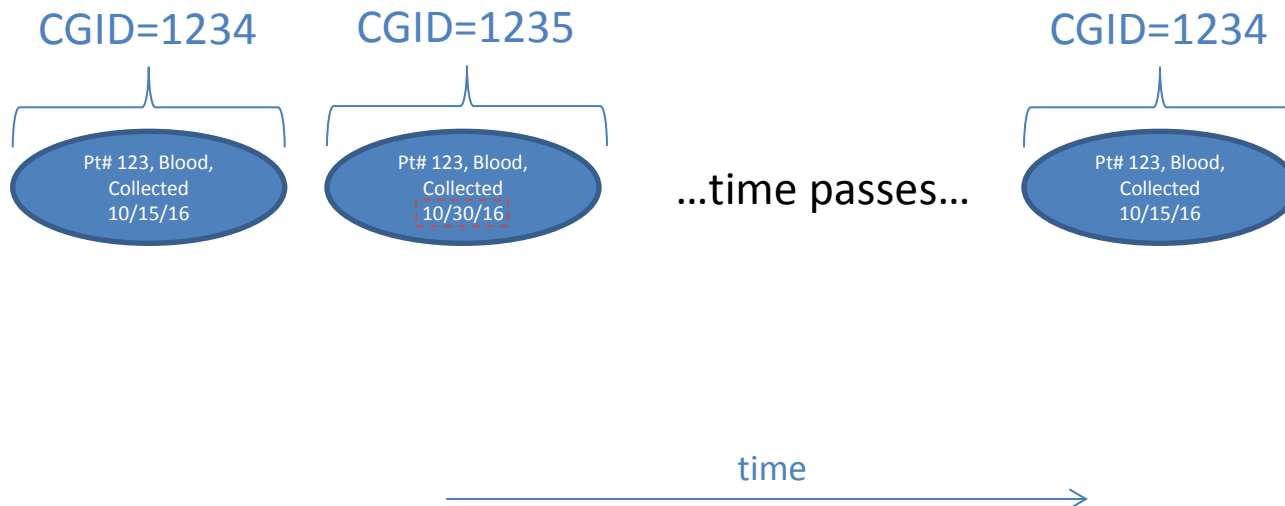
Collection Grouping Examples

- ## 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

CGID=1234   CGID=1235   CGID=1236

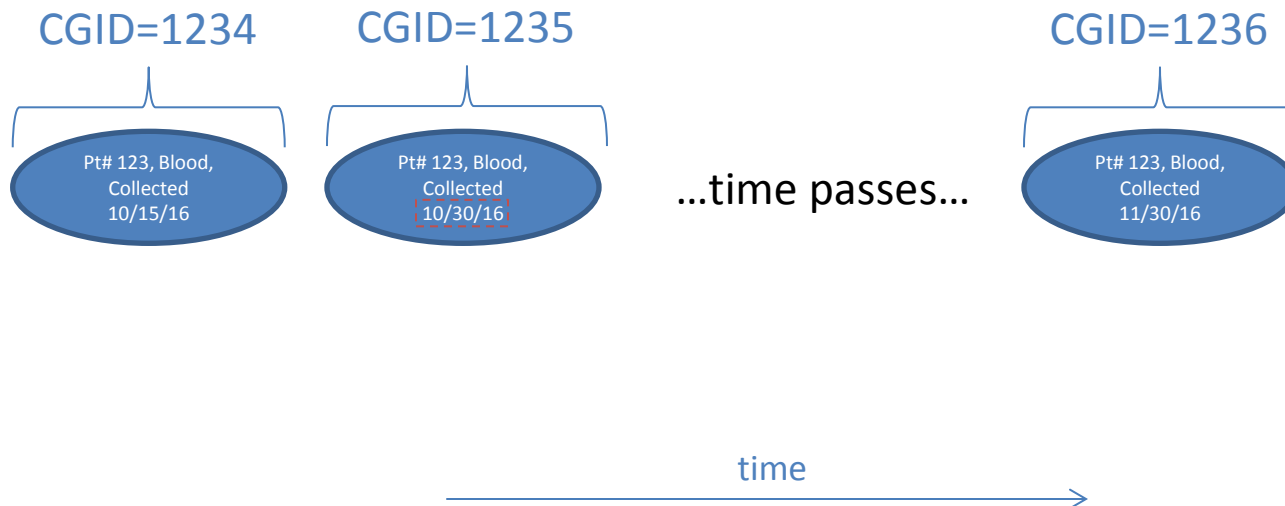| Pt# 123, Blood, Collected 10/15/16 | Pt# 123, Blood, Collected 10/15/16 | Pt# 123, Blood, Collected 10/30/16 | Pt# 123, Tumor Tissue, Collected 10/15/16 |

time →

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

CGID=1234   CGID=1235   CGID=1234

Pt# 123, Blood,   Pt# 123, Blood,   ...time passes...   Pt# 123, Blood,
Collected   Collected   Collected
10/15/16   10/30/16   10/15/16
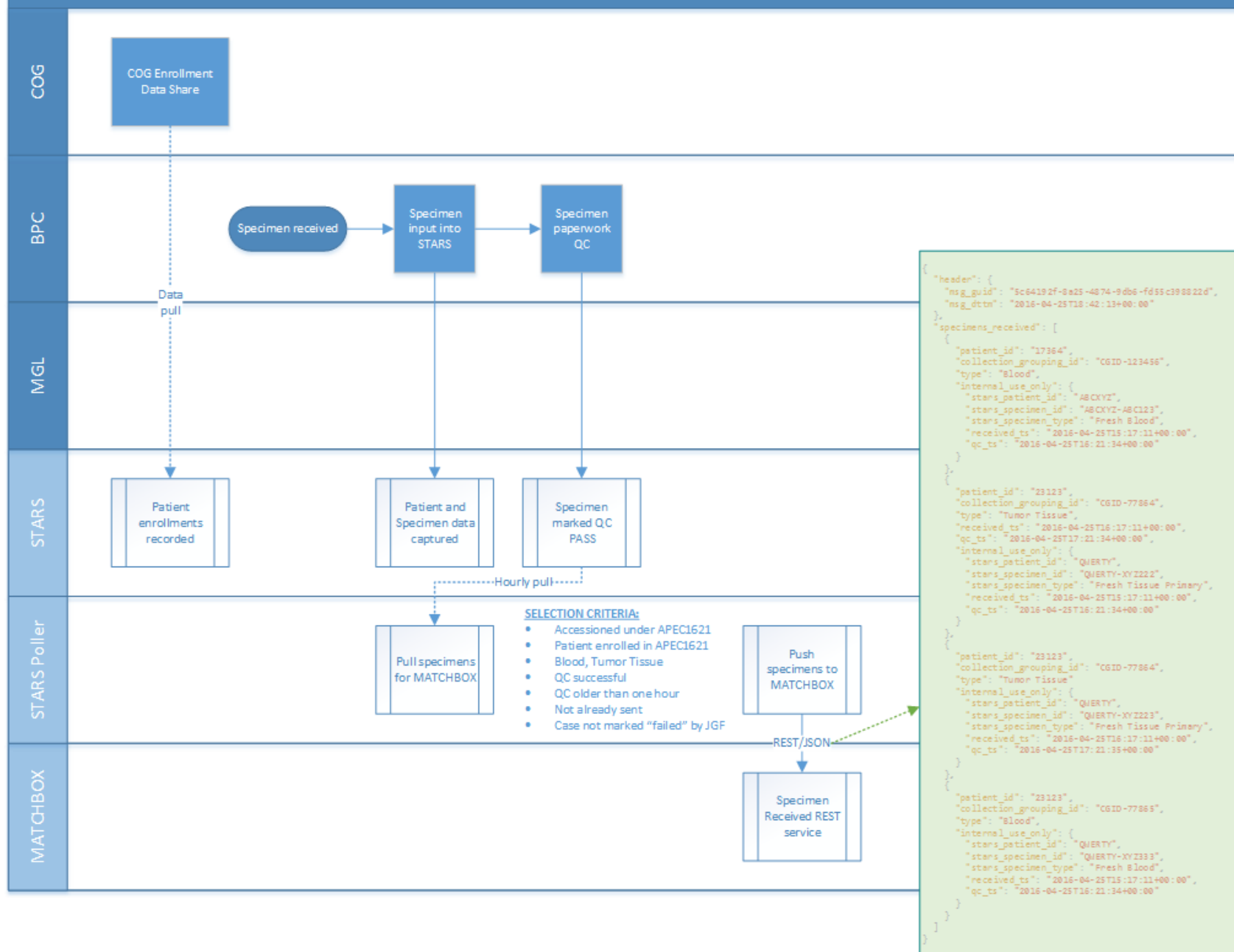
time

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.

CGID=1234   CGID=1235   CGID=1236

Pt# 123, Blood, Collected 10/15/16   Pt# 123, Blood, Collected 10/30/16   …time passes…   Pt# 123, Blood, Collected 11/30/16

time

"Specimen Received" Integration Message

- **<u>DIRECTION</u>**: Outbound from BPC to MATCHBOX
- **<u>TIMING</u>**: 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
- **<u>CONTENT</u>**:
  - Technical Message Headers (*msg_guid*, *msg_dttm*)
  - List of specimens
    - PED-MATCH attributes (*patient_id*, *collection_grouping_id*, *type*)
    - Additional (troubleshooting) attributes (*stars_patient_id*, *stars_specimen_id*, *stars_specimen_type*, *received_ts*, *qc_ts*)

BPC Specimen Accessioning – Process and Integration Overview

COG

COG Enrollment Data Share

BPC

Specimen received → Specimen input into STARS → Specimen paperwork QC

MGL

Data pull

STARS

Patient enrollments recorded

Patient and Specimen data captured

Specimen marked QC PASS

Hourly pull

STARS Poller

Pull specimens for MATCHBOX

SELECTION CRITERIA:
- Accessioned under APEC1621
- Patient enrolled in APEC1621
- Blood, Tumor Tissue
- QC successful
- QC older than one hour
- Not already sent
- Case not marked "failed" by JGF

Push specimens to MATCHBOX

REST/JSON

MATCHBOX

Specimen Received REST service

```
{
  "header": {
    "msg_guid": "5c64192f-8a25-4874-9db6-fd55c398822d",
    "msg_dttm": "2016-04-25T18:42:13+00:00"
  },
  "specimens_received": [
    {
      "patient_id": "17364",
      "collection_grouping_id": "CGID-123456",
      "type": "Blood",
      "internal_use_only": {
        "stars_patient_id": "ABCXYZ",
        "stars_specimen_id": "ABCXYZ-ABC123",
        "stars_specimen_type": "Fresh Blood",
        "received_ts": "2016-04-25T15:17:11+00:00",
        "qc_ts": "2016-04-25T16:21:34+00:00"
      }
    },
    {
      "patient_id": "23123",
      "collection_grouping_id": "CGID-77864",
      "type": "Tumor Tissue",
      "received_ts": "2016-04-25T16:17:11+00:00",
      "qc_ts": "2016-04-25T17:21:34+00:00",
      "internal_use_only": {
        "stars_patient_id": "QWERTY",
        "stars_specimen_id": "QWERTY-XYZ222",
        "stars_specimen_type": "Fresh Tissue Primary",
        "received_ts": "2016-04-25T15:17:11+00:00",
        "qc_ts": "2016-04-25T16:21:34+00:00"
      }
    },
    {
      "patient_id": "23123",
      "collection_grouping_id": "CGID-77864",
      "type": "Tumor Tissue",
      "internal_use_only": {
        "stars_patient_id": "QWERTY",
        "stars_specimen_id": "QWERTY-XYZ223",
        "stars_specimen_type": "Fresh Tissue Primary",
        "received_ts": "2016-04-25T16:17:11+00:00",
        "qc_ts": "2016-04-25T17:21:35+00:00"
      }
    },
    {
      "patient_id": "23123",
      "collection_grouping_id": "CGID-77865",
      "type": "Blood",
      "internal_use_only": {
        "stars_patient_id": "QWERTY",
        "stars_specimen_id": "QWERTY-XYZ333",
        "stars_specimen_type": "Fresh Blood",
        "received_ts": "2016-04-25T15:17:11+00:00",
        "qc_ts": "2016-04-25T16:21:34+00:00"
      }
    }
  ]
}
```

"Specimen Received" Integration Message