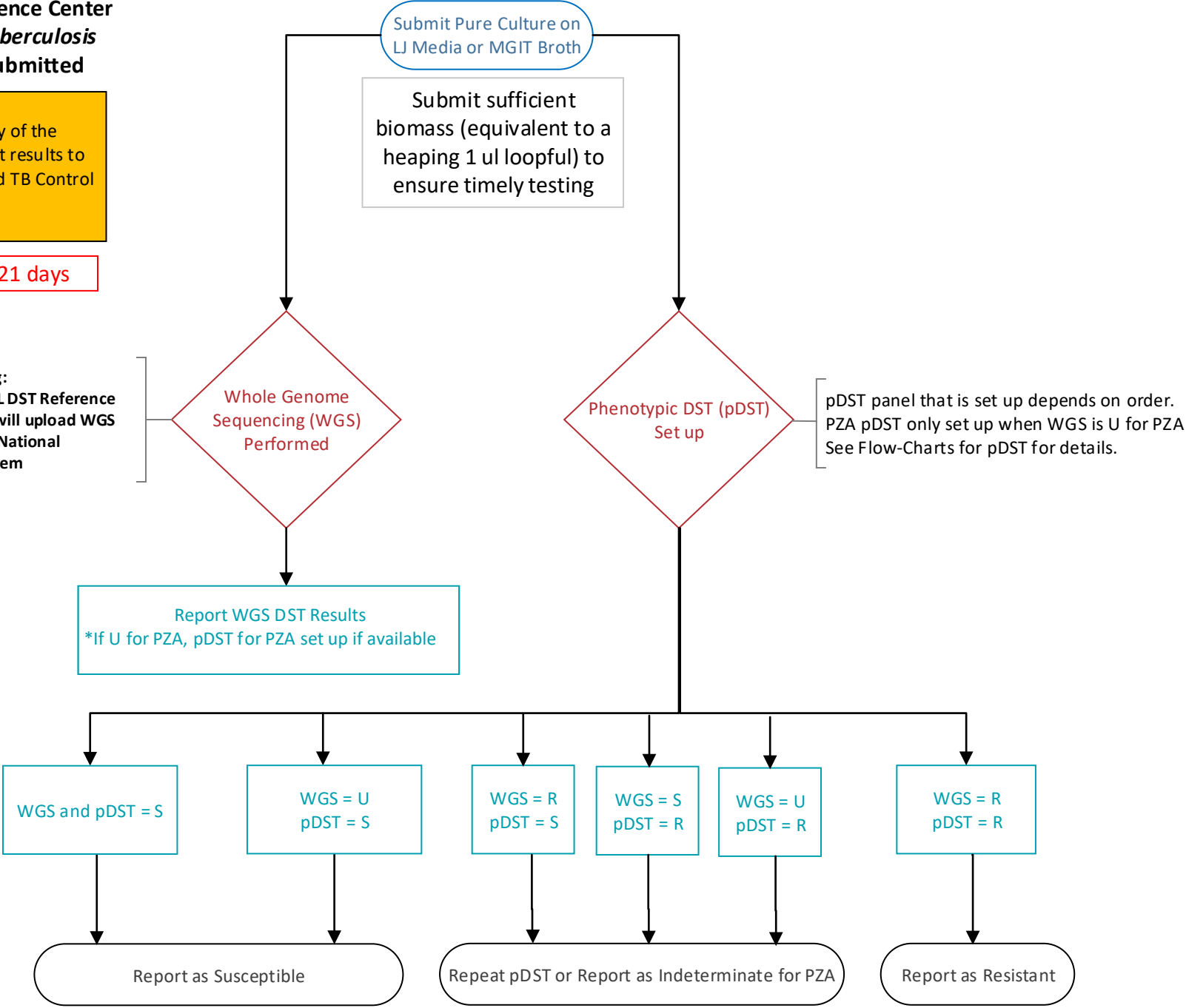


**Sequencing-Based DST at
National PHL DST Reference Center
for *Mycobacterium tuberculosis*
when pure culture submitted**

It is the responsibility of the
submitting PHL to report results to
the Ordering Clinician and TB Control
Program

WGS DST TAT: 10-21 days

WGS Genotyping:
The National PHL DST Reference
Center for MTB will upload WGS
data to the CDC National
Surveillance System



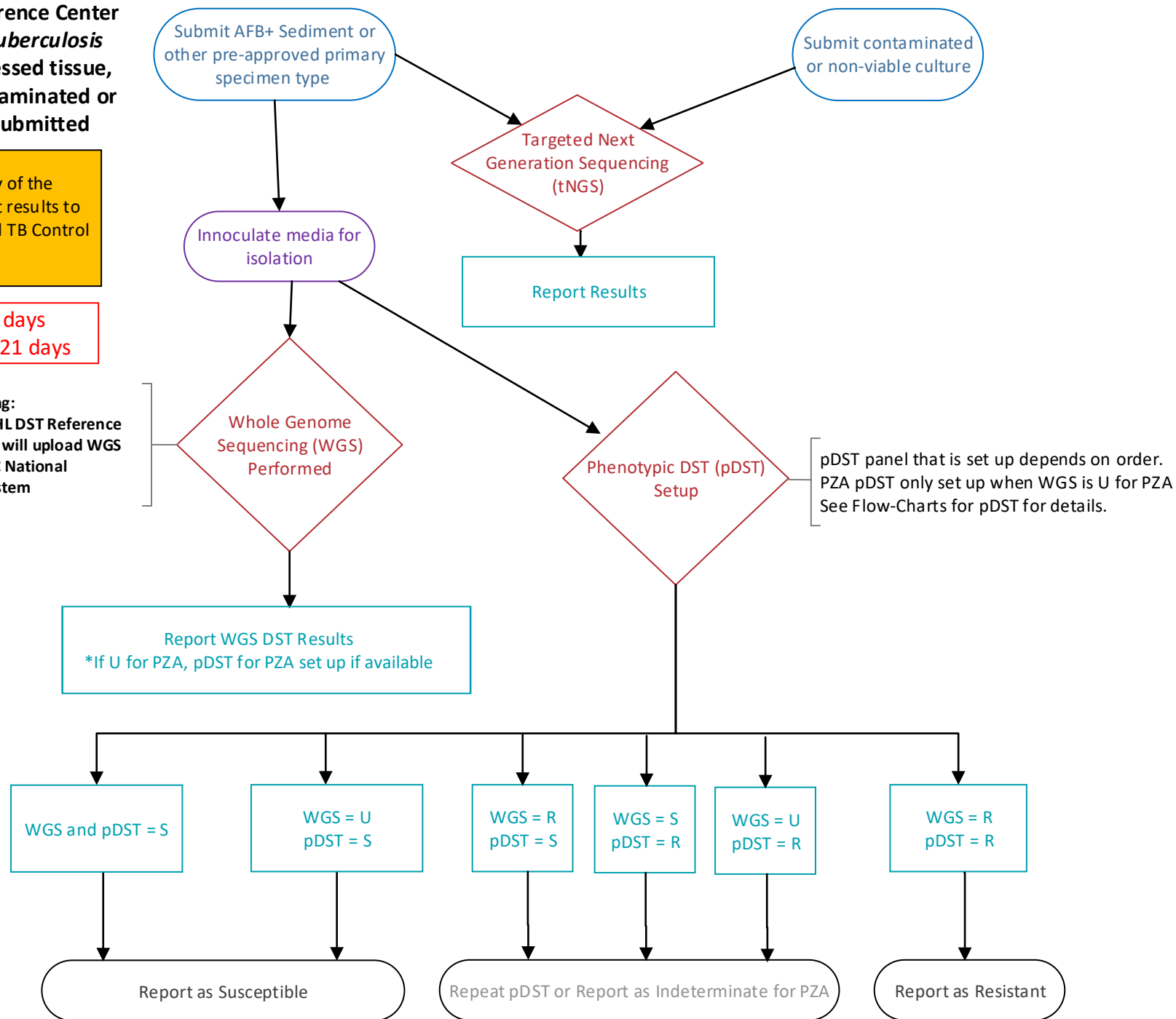
**Sequencing-Based DST at
National PHL DST Reference Center
for *Mycobacterium tuberculosis*
when sediment, processed tissue,
sterile body fluid, contaminated or
non-viable culture submitted**

See Submission and Shipping Instructions on aphl.org/tbdst

It is the responsibility of the
submitting PHL to report results to
the Ordering Clinician and TB Control
Program

tNGS TAT: 7-10 days
WGS DST TAT: 10-21 days

WGS Genotyping:
The National PHL DST Reference
Center for MTB will upload WGS
data to the CDC National
Surveillance System



First-Line DST (FL-DST) at National PHL DST Reference Center for *Mycobacterium Tuberculosis*

Submit pure culture on LJ Media or MGIT Broth
-OR-
Specimen Reflexed from tNGS

Submitting PHL should keep 1 mL aliquot and submit remainder to MDL Isolates on Solid Media Acceptable

It is the responsibility of the submitting PHL to report results to the Ordering Clinician and TB Control Program

First Line Panel*
Rifampin (RIF), 1 µg/mL
Isoniazid (INH), 0.1 µg/mL^
Ethambutol (EMB), 5 µg/mL
Purity plate also setup to check for contamination or NTM
*pDST for PZA is performed only if "Uncertain" WGS results are obtained.
^INH tested at 0.4 µg/mL when INH resistance detected by any method

WGS-DST Performed and Results Reported (If not already)

Assessed for Concordance as Shown pg 1 and Below

First-Line DST Performed when ordered

No Resistance Detected (including genotypic data)

Resistance Detected to at least one first-line drug

If RIF-R is detected, the sample will be referred to CDC for MDDR
PZA mono-resistance reflexed to SL-DST by request only

MDL Reports Results to Submitter

Smear or purity plate checked to rule out contamination

No Contamination Detected
Phenotypic and Genotypic Results Concordant

No Contamination Detected
Phenotypic and Genotypic Results Discrepant -
OR- No genotypic data available

Contamination Detected

Simultaneously

MDL Reports Preliminary Results to Submitter

SL-DST Performed

MDL Reports Results to Submitter

MDL Reports Preliminary Results to Submitter, See pg 1 for Details

Repeat FL-DST

tNGS For Confirmation

MDL Reports Results to Submitter
*tNGS reported only if it confirms MGIT DST Result

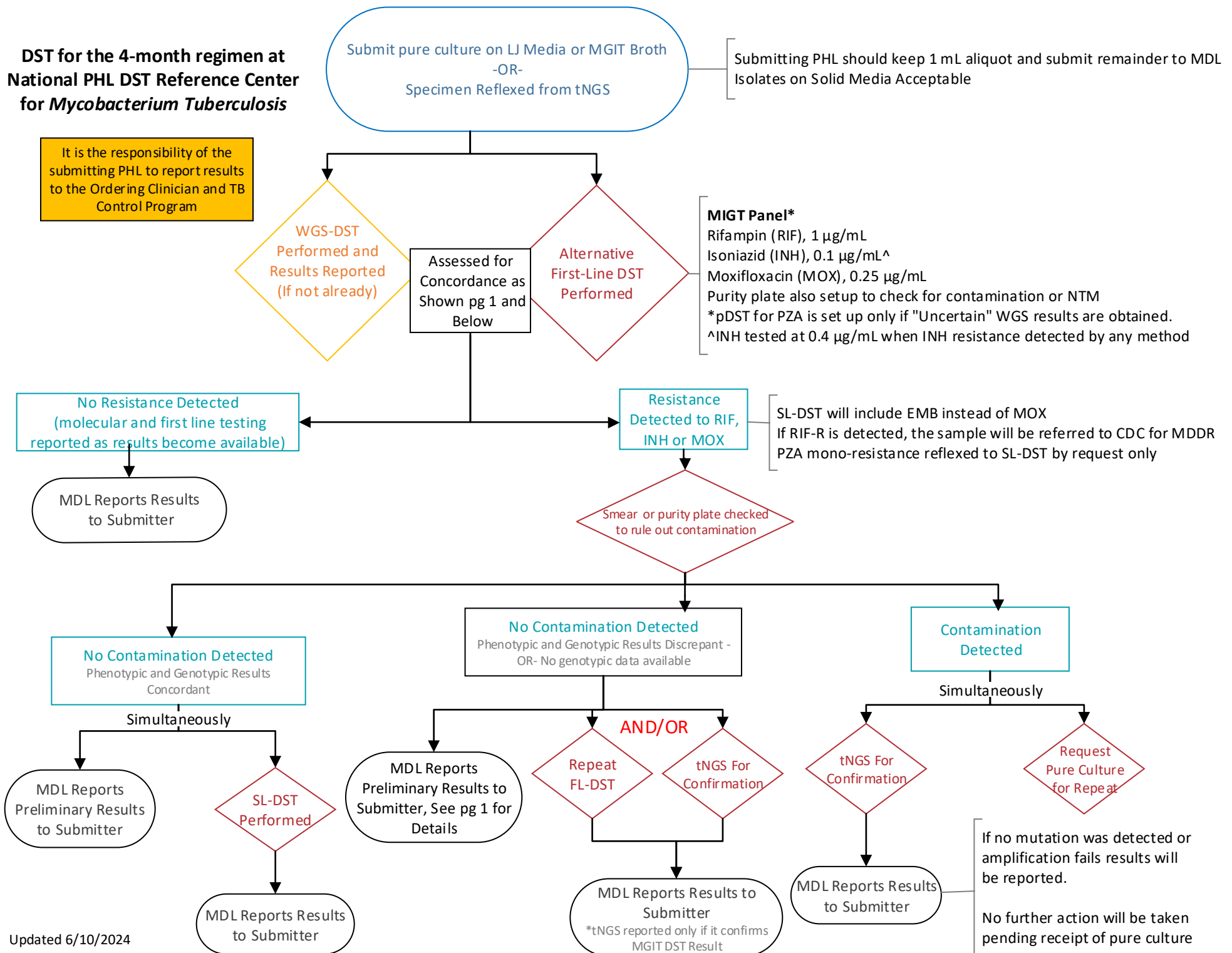
tNGS For Confirmation

MDL Reports Results to Submitter

Request Pure Culture for Repeat

If no mutation was detected or amplification fails results will be reported.
No further action will be taken pending receipt of pure culture

**DST for the 4-month regimen at
National PHL DST Reference Center
for *Mycobacterium Tuberculosis***



**Second-Line DST (SL-DST) at
National PHL DST Reference Center
for *Mycobacterium Tuberculosis***

It is the responsibility of the
submitting PHL to report results to the
Ordering Clinician and TB Control
Program

