**North West Genomic Laboratory Hub (NW GLH) - Clinician Guidance**

**Ordering Whole Genome Sequencing (WGS) For Rare Disease**

**Questions?** E-mail the NW GLH on mft.genomics@nhs.net with WGS in the subject line

Also go to NW GLH website for information on WGS**:** https://mft.nhs.uk/nwglh/documents/wgs-forms/

**Sending forms and samples**:

Completed WGS request forms and copies of Record of Discussion (RoD) forms should be sent by e-mail to the NW GLH at: mft.nwglhdnalab@nhs.net

Samples for DNA extraction for WGS should be sent to the Manchester1 site laboratory accompanied by the NW GLH WGS Test Request Form available at: <https://mft.nhs.uk/nwglh/documents/test-request-forms/>

*1Samples can be accepted via the Liverpool site lab however this may lead to delay in sample processing*

Blood samples should be sent in EDTA. If DNA is already stored at the Manchester or Liverpool site laboratory for an individual, please indicate this and the location on the test request form. If DNA is stored at another GLH please request for an aliquot of DNA to be transferred. Please indicate that the DNA is required for WGS (a minimum 2ug of DNA is required for WGS).

**Guidance:**

Health Education England have produced guidance for ordering and consenting to WGS for Rare Disease at: <https://www.genomicseducation.hee.nhs.uk/supporting-the-nhs-genomic-medicine-service/>

This is accompanied by a summary factsheet which is available at: <https://www.genomicseducation.hee.nhs.uk/wp-content/uploads/2019/11/Guide-to-requesting-WGS-RD-Nov-20.pdf>

**Patient information leaflets:**

 A standard and an easy-read leaflet on WGS for patients are available from the NW GLH website at: <https://mft.nhs.uk/nwglh/documents/wgs-forms/>

**Clinical Indications for WGS:**

The list of clinical indications for which WGS can currently be ordered is on the

NW GLH WGS Rare Disease page at: <https://mft.nhs.uk/nwglh/test-information/rare-disease/requesting-rare-disease-tests/>

**Eligibility:**

Check the eligibility of your patient for WGS, and your eligibility to order the test.

This information can be found in the Rare and Inherited Disease eligibility criteria document on the National Genomic Test Directory webpage at https://www.england.nhs.uk/publication/national-genomic-test-directories/

**Patient Choice Consent**

Consent for WGS is taken through the Patient Choice Consent process. The Record of Discussion (RoD) form is available from the NWGLH website at: <https://mft.nhs.uk/nwglh/documents/wgs-forms/>

One record of discussion form should be completed for each family member

**Family members:**

The diagnostic yield of WGS is increased by the inclusion of parental samples to enable a trio analysis. Therefore, wherever possible a trio should be submitted for testing. In some circumstances parental samples may not be available for testing, therefore please submit duos or singletons. In some circumstances multiple family members can also be accepted.

**Completing the forms required to order a test**

One GMS WGS Test order form is required per family. The test order form can be downloaded from the NW GLH website at: <https://mft.nhs.uk/nwglh/documents/wgs-forms/>

One Record of Discussion form is required per family member

Send electronic versions of the completed forms to mft.nwglhdnalab@nhs.net

**Remote appointments:**

If the appointment is conducted remotely and/or if you have a separate conversation by phone with a family member, you can record the individual’s choices on the Record of Discussion form without the need for their signature. There is a Remote consent checkbox at the bottom of the Record of Discussion form to record that remote consent was taken without the patient present. The signature section should then be left blank.

**WGS Flow Chart**

**At the time of patient contact**

1. Provide information if not given beforehand and allow time to decide

2. Go through consent process

3. Complete 1x GMS WGS Test order form the family and 1x Record of Discussion (RoD) form for each family member

Send any new samples required for WGS to Manchester site lab using the NW GLH WGS Test Request Form

Send a copy of GMS WGS Test order form and RoD form to the NW GLH at mft.nwglhdnalab@nhs.net

Retain a copy of these forms in case notes

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