

Group & Cross Match (GXM) Collection by Registered Nurses in SGH

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Background

Group & Cross Match (GXM) is a 3 step blood test that involves the identification of patient's blood group type, screening red cell antibodies, and matching of patient's blood type to the most compatible donor blood units. GXM blood test is performed when a patient requires a blood transfusion.

In Singapore General Hospital (SGH), GXM blood collection can only be performed by a medical doctor and a Nurse as verifier. As doctors are often not stationed in the wards, GXM collections are often delayed and consequently resulting in delays in commencement of blood transfusion. If a patient requires GXM testing with other additional blood tests, the blood specimen collection are often delayed to save patient a second needle puncture so that all blood test specimens can be collected at the same time by the doctor.

Objective

To reduce delays in GXM collection by expanding registered nurses' scope of practice to enable them to perform GXM collection.

Method

GXM collection work flow to enable registered nurses to collect GXM blood specimens were discussed between SGH Nursing Division and the SGH Blood Transfusion Committee. Guidelines were created to provide clear instructions on this enhanced work process. Proposed practice change was presented and approved by the SGH Medical Board in end May 2018.

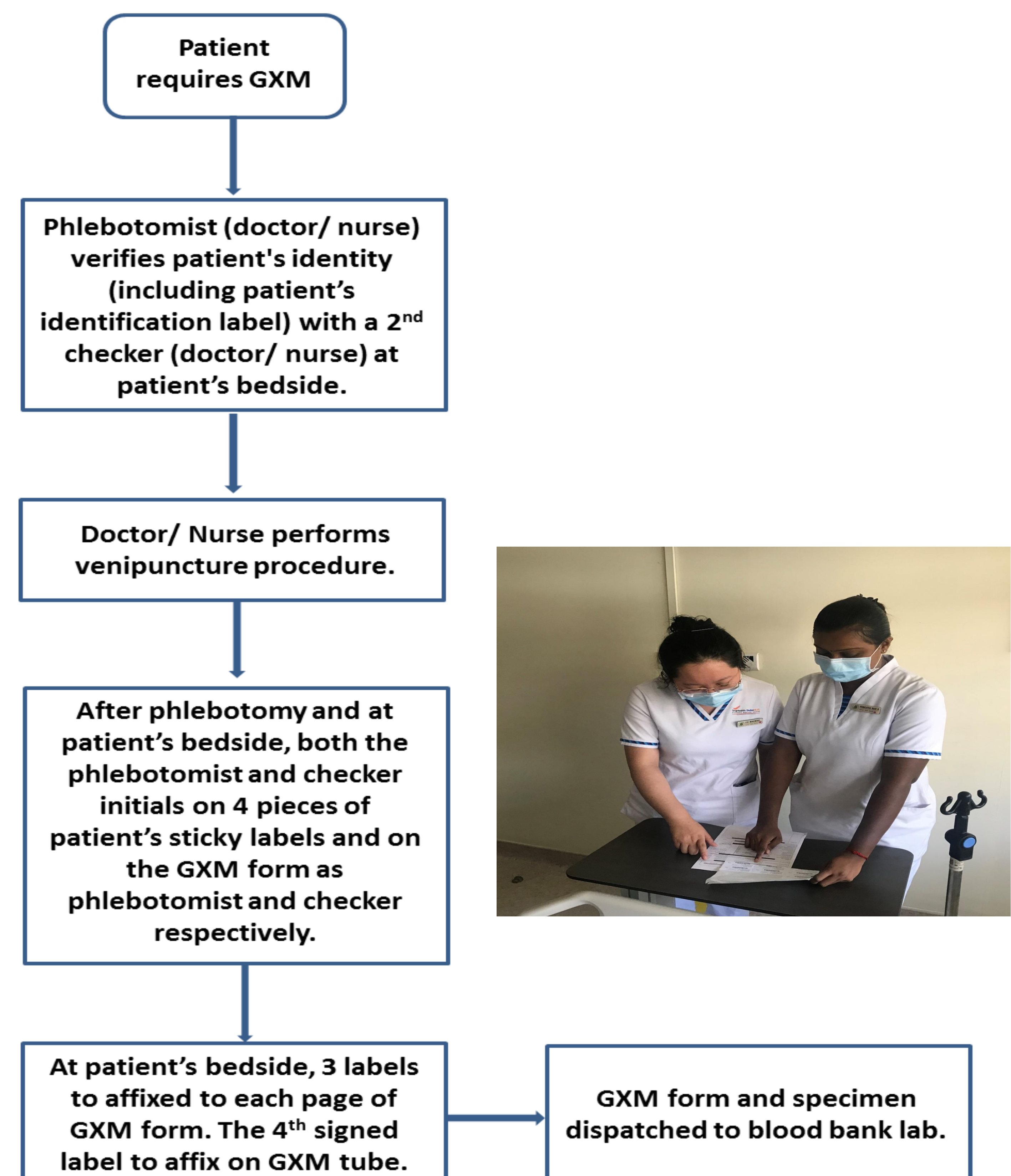
New work flow changes

- A Registered Nurse (RN) will be eligible to collect GXM based on the following criteria:
 - RN is not on probation
 - Has successfully passed the competency assessment related to the knowledge and process of GXM blood specimen collection.
- GXM is collected at patient's bedside (refer to Flowsheet 1) in the presence of a phlebotomist (Doctor or RN) and a second verifier (Enrolled Nurse level and above).
- GXM form was revised for so that both phlebotomist and the second verifier can sign on the form

Method (Continue)

1. The new workflow was piloted in Haematology Centre, Haematology wards, and the Advanced Practice Nurse and Resident Nurse groups from September to end October 2018.
2. Based on the feedbacks and review of the process, the workflow was revised.
3. Training and competency assessment were extended to all the Registered Nurses working in the inpatient wards from 1st April 2019.

Flowsheet 1: GXM collection workflow.



Singapore General Hospital SingHealth		REQUEST FOR BLOOD AND BLOOD PRODUCTS		XM 0000001		NRC NAME ACCOUNT NO.		Patient's Particulars Alias Label Here											
CLASS		DEPT		WARD		BED													
Clinical Information (Specimen REJECTED if information incomplete)																			
Clinical / Diagnosis:		Blood Group (if available)		Most Recent Results (Date)		Previous Transfusion		YES/NO											
Relevant History / Indication for Transfusion		Date		Hb		Transfusion Reactions		YES/NO											
Name & MCR No. of Requesting Doctor		Signature of Requesting Doctor		Mobile No.		Name of Consultant UC		YES/NO											
Please tick appropriate box (es) and indicate required quantity below																			
<input type="checkbox"/> Red Blood Cells RBC <input type="checkbox"/> Leucocytes Filter Set (RBC) RBSO <input type="checkbox"/> Autologous Blood ABS <input type="checkbox"/> Frozen Plasma FFP <input type="checkbox"/> SGH Apheresis Granulocytes Irrad PMPSG <input type="checkbox"/> Platelets PLT <input type="checkbox"/> Platelets Products PLT P <input type="checkbox"/> Pooled Platelets PPLT <input type="checkbox"/> Pooled Platelets - Irrad PPLT <input type="checkbox"/> Cell Separator Platelets CSP <input type="checkbox"/> Cell Separator Platelets - Irrad CSP <input type="checkbox"/> Cryoprecipitate CRP <input type="checkbox"/> Cryoprecipitate CRP <input type="checkbox"/> Factor VIII F8 <input type="checkbox"/> Recombinant Factor VIII F8 <input type="checkbox"/> Factor IX F9 <input type="checkbox"/> Recombinant Factor IX F9 <input type="checkbox"/> Factor X F10 <input type="checkbox"/> Recombinant Factor X F10 <input type="checkbox"/> Activated Prothrombin Complex FEBA <input 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