

The Virtual Crossmatch (VXM) Working Group is pleased to advise the next phase of the transition to VXM will commence on 1 February 2022.

What you need to know:

- ▶ In Phase 2b from 1 February 2022 non-sensitised kidney and kidney/pancreas recipients will cease having a CDC crossmatch and will have a VXM assessment only.
- ▶ All other organ and sensitised patients will continue to have CDC and VXM assessments conducted.
- ▶ Serum from all recipients will need to be collected on the day of transplant. This serum will be used to enable retrospective flow crossmatches if needed as well as quality control for the VXM processes.
- ▶ Thoracic transplant waitlist patients will require listing of antigens for exclusion so that VXM can occur.

Why are we transitioning to Virtual Crossmatch?

The level of detail for donor HLA typing and recipient HLA antibody screening has increased substantially over time, which means that the chance of 'missing' a significant antibody is now extremely low. As a result, unexpected positive CDC crossmatch results are very rare (and usually a false positive). Internationally there has been a shift to virtual crossmatches which can provide a more rapid assessment of compatibility without compromising transplant outcomes for low risk recipients. Further information on the transition to VXM project can be found [here](#).

Non-sensitised Kidney and Kidney/Pancreas patients

In the next phase of the transition to VXM, CDC crossmatches will cease for non-sensitised kidney and kidney/pancreas transplant waitlist patients. This group will have a VXM assessment (including a DSA assessment) to assess donor – recipient compatibility.

All other transplant waitlist patients

All other transplant waitlist patients will continue to have a VXM assessment as well as a prospective CDC crossmatch for compatibility assessments during this phase. This will provide transplant units additional time to familiarise with VXM interpretation and compatibility outcomes. In Phase 3 from July 2022 CDC crossmatching is expected to cease for all transplant waitlist patients.

When will the transition to VXM occur?

The transition to VXM will occur in three phases.

Phase 1

Complete

More information about Phase 1 can be found [here](#).

Phase 2

- Phase 2a – October 2021**
- ▶ An early Organ Offer List (OOL) w/o CDC results is generated using DSA assessment.
 - ▶ When CDC results are available the OOL is re-issued. This has provided a faster turnaround of suitability results that previously experienced.

- Phase 2b – February 2022**
- ▶ For kidney and kidney/pancreas patients – CDC crossmatching will be limited to sensitised recipients only.
 - ▶ All heart and lung transplant recipients will continue to have a CDC.
 - ▶ Retrospective flow crossmatches (FXM) can be performed if required.

Phase 3

- From July 2022**
- ▶ VXM processes will be introduced for all transplant recipients.
 - ▶ A small number of prospective FXM may be performed in identified sensitised recipients.
 - ▶ Retrospective FXM will be performed if the recipient is sensitised.

Regular post-implementation review will occur to ensure the effectiveness and safety of the National Histocompatibility Guidelines.

Day of transplant serum collection.

We are implementing a national process to collect serum from all recipients on day of transplant. This serum will be used as a reference serum and stored for any further testing if needed.

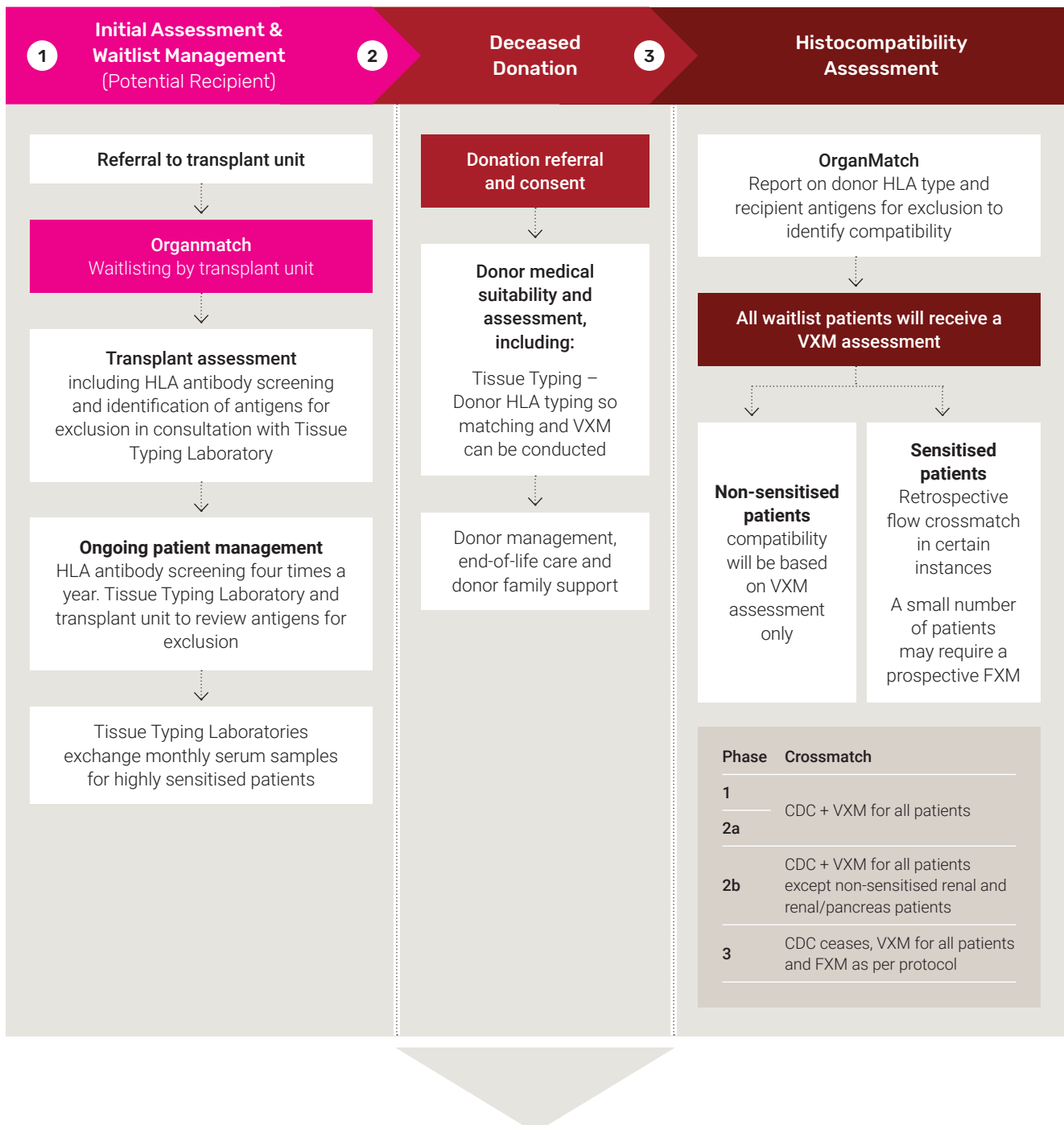
What if a physical crossmatch is required?

A retrospective FXM can be conducted for sensitised patients if required.

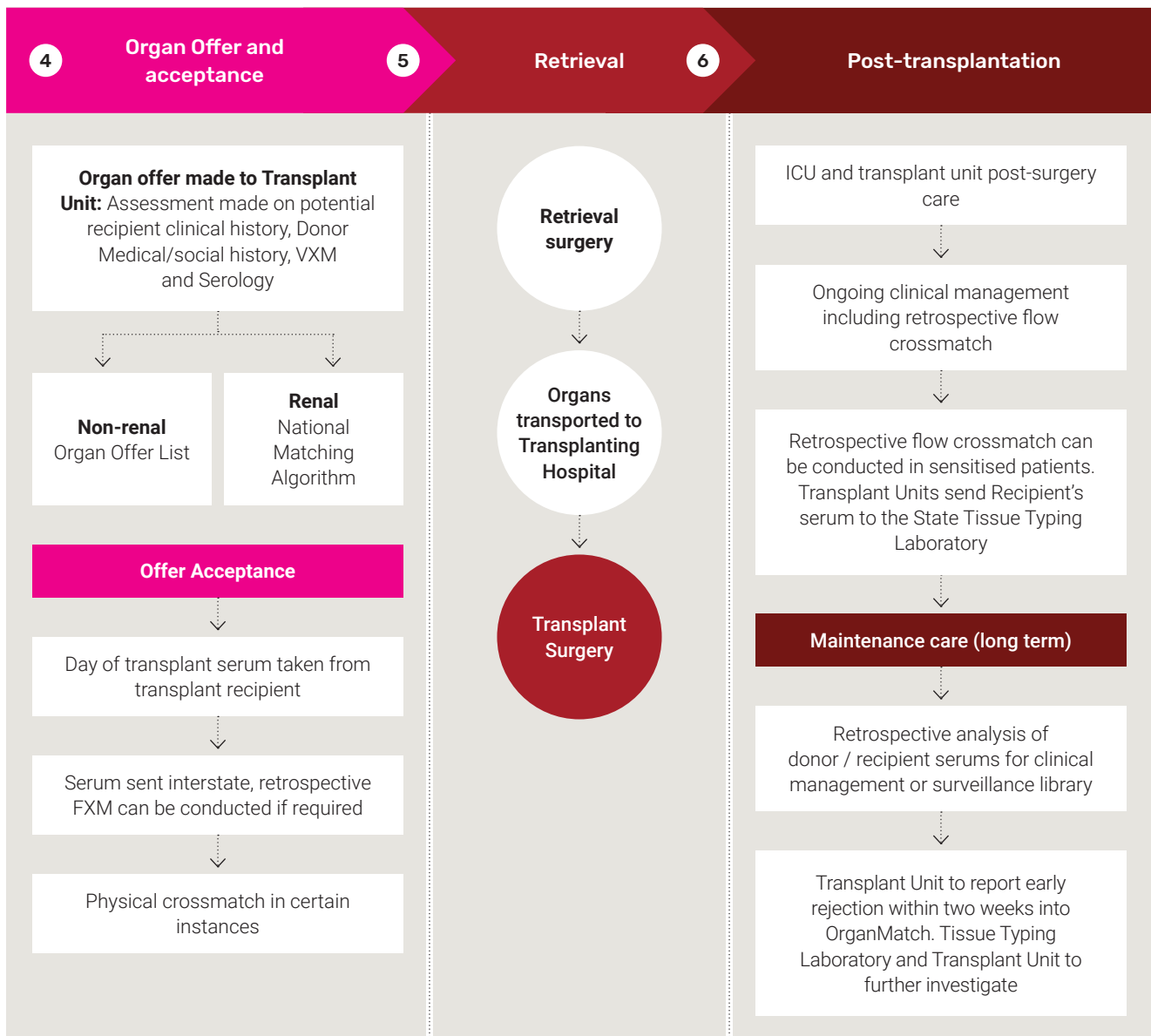
In a small number of instances, a prospective crossmatch may be conducted. Consultation with tissue typing laboratories will need to be made prior to any organ offer. Monthly patient serum is required in order to form the national trays that will be shared with the Tissue Typing Labs nationally.

The following diagram demonstrates how VXM will be implemented in the various stages of donation through to transplantation.

Virtual Crossmatch in Donation and Transplantation



Virtual Crossmatch in Donation and Transplantation (continued)



Further information

A training opportunity will be held for Clinicians and Transplant Coordinators on the 19th January 2022. Enrolment details will be sent out through the OrganMatch portal. The training will be recorded and posted on the OrganMatch website for those that cannot attend. Further resources on the transition to VXM project are:

- ▶ Previous VXM project [newsletters](#)
- ▶ VXM glossary of terms
- ▶ VXM Frequently Asked Questions
- ▶ Virtual crossmatching elearning through the Lifeblood transfusion online learning [site](#).

Further information or questions please contact projects@tsanz.com.au.

Next Steps

From July 2022 the transition will move to the final phase of implementation. In this phase CDC crossmatching will be phased out and all patients will receive a VXM assessment with the addition of a flow crossmatch if required. Transplant units will be notified well in advance of this phase to allow time for transition.