# Use of Remote Issue

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# To cover

- What is Remote Issue (RI)
- Why use RI?
- Control of RI?
- How can RI be delivered?

# What is remote issue?

- The allocation and issue to patients of blood components or products that are stocked in a physically remote location from the main testing laboratory.

- Can include red cells, frozen plasma products, platelets or clotting factor concentrates

# Why use Remote issue

- ‘Hub and spoke’ arrangements becoming more common in Pathology.

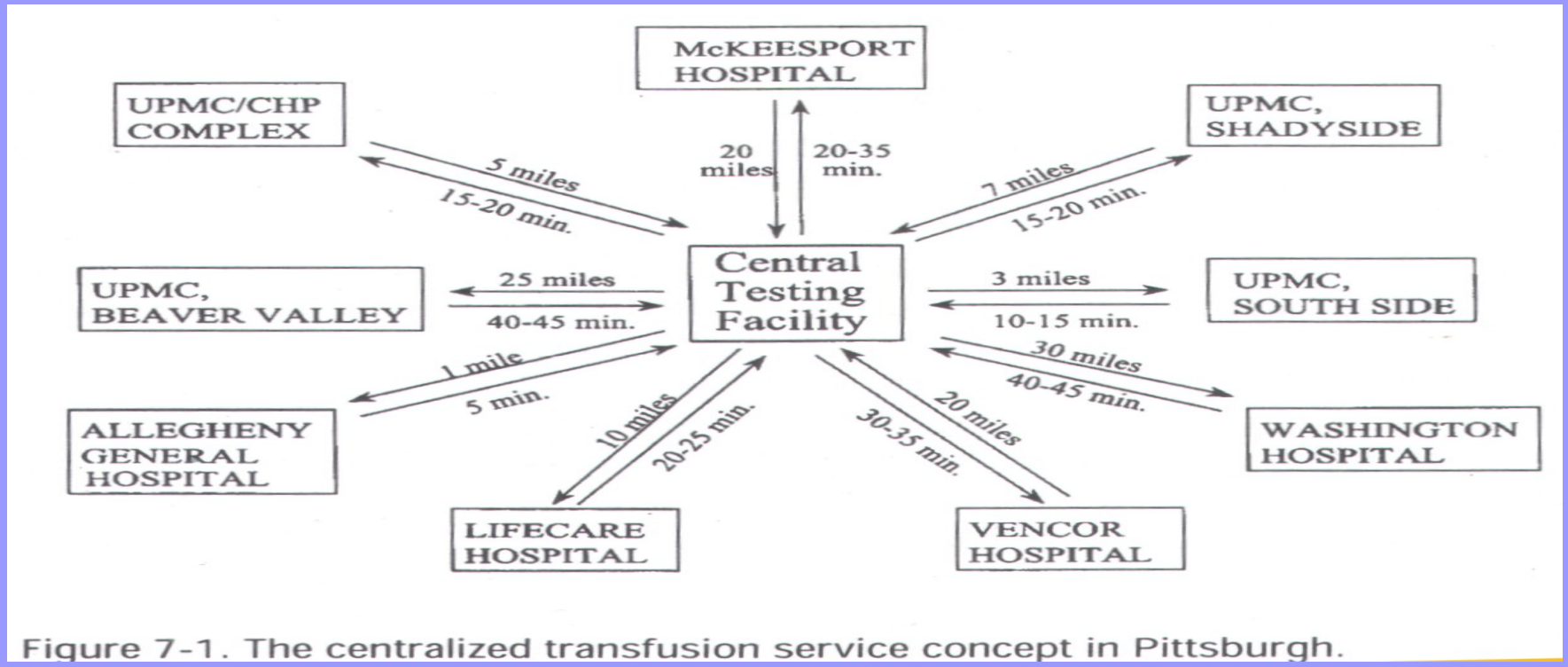



Figure 7-1. The centralized transfusion service concept in Pittsburgh.

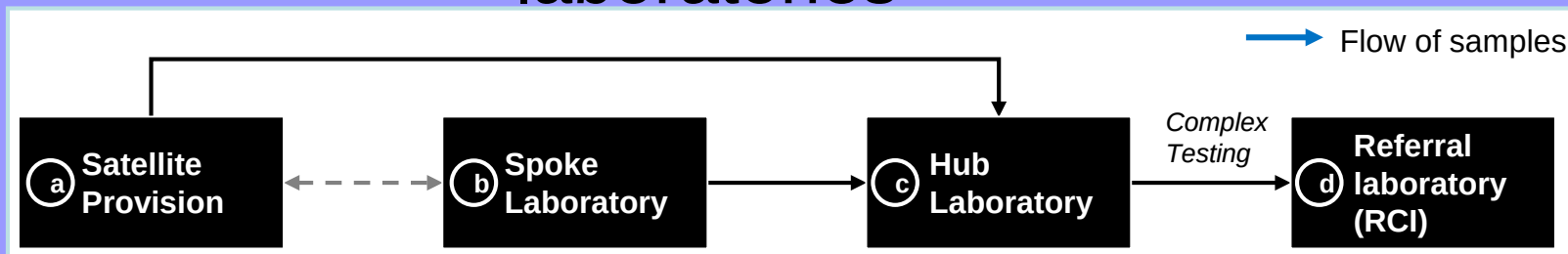
# NHS Improvement Summer 2017

**Pathology networks**

- We have identified 29 potential pathology networks, allowing for the transformation of pathology services into a series of networks across the country.
- https://improvement.nhs.uk/resources/pathology-networks/


Adobe Acrobat Document

# Reconfiguration of hospital transfusion laboratories




| | a Satellite Provision | b Spoke Laboratory | c Hub Laboratory | d Referral laboratory (RCI) |
|---|---|---|---|---|
| **Definition** | ▪ Remote fridge only | ▪ Laboratory present focused on urgent needs, may or may not have on site transfusion testing | ▪ Provides standard non urgent testing ('cold' work) for satellites and spokes at optimum cost<br>▪ Moderately complex testing | ▪ Provides the complex testing service and scientific advice and support |
| **Clinical criteria** | ▪ Non-urgent testing requirements related to its clinical activity e.g. elective | ▪ Low to Moderate demand for urgent testing<br>▪ Some specialist clinical services | ▪ Moderate to High demand for urgent testing<br>▪ Specialist clinical services | ▪ Provides the complex testing service and scientific advice and support |
| **Travel times and other requirements** | ▪ The hospital will be situated no further than 45 mins from a laboratory (spoke or hub) | ▪ For cold work, the hospital will be situated no further than 75 mins from a hub laboratory | ▪ No further than 75 mins from any spoke<br>▪ An infrastructure to support large laboratory | ▪ No absolute time constraint, but requirement to be reachable within each main region to serve hospitals (i.e. under 3 hours) |

# Centralisation of expertise with distribution of service to point of need

- Use technology to link expert to point of need
- Use technology to bring test results to expert for interpretation and authorisation
- Use technology to transmit decisions for component release to point of need.

IT IS ALL ABOUT CONTROL

# Control of Remote Issue

- BCSH Guidelines: The specification, implementation and management of information technology systems in hospital transfusion laboratories 2014
- BCSH Guidelines for pre-transfusion compatibility procedures in blood transfusion laboratories 2012
- MHRA regulatory expectations IT FAQ 2010
- MHRA guidance on electronic issue 2010 – includes section on remote issue

# BCSH and Remote Issue (1)

- Pre-transfusion guidelines for recommendations about electronic issue
- Components in remote issue must be managed by the transfusion laboratory and procedures in place to ensure that at all times only suitable components are available.
- The current location of all blood and components, including thawed FFP, should be available in the laboratory. Records must be kept of all movements of components.
- Remote issue of red cells must only be used for patients who have been determined as eligible for EI. Each organisation should define whether patients with special requirements (e.g. irradiated) will be handled through remote issue.

# BCSH and Remote Issue (2)

- Remote electronic issue must be rigorously controlled through use of standard operating procedures, trained and competent staff and validation of the system in use.
- The following controls must apply to all remote electronic issue systems:
  ● the user must be positively identified by the system and verified to ensure they are authorised for the procedure;
  ● procedures must be in place to ensure all stock is suitable for issue and appropriate stock rotation is in place to ensure units are removed prior to expiry;
  ● the identification of the patient and the request for components must follow the same rules as identified in section 2.3 and the Guidelines on Administration of Components (BCSH 2009)

# BCSH and Remote Issue (3)

The following controls must apply to all remote electronic issue systems:

- request information must be transferred to the LIMS either through electronic requesting or direct input to the remote issue system. The latter will require secure systems for entry preferably utilising barcoded information;
- the LIMS must verify the patient request and authorise the issue of group compatible components;
- the LIMS must take into account any special requirements that apply to the patient and ensure that these are met;
- selected units must be scanned into the remote issue system and a label produced;

# BCSH and Remote Issue (4)

The following controls must apply to all remote electronic issue systems:

- there must be a system for label verification to ensure that the label attached to the component matches exactly in terms of donation number;
- the system must generate local and remote alarms if a user scans the wrong unit, and give a prompt to return the unit and take out the correct one.
- There should be an alarmed electronic override feature as this is essential for use in emergencies i.e. release of emergency group O blood. All events should be logged and investigated retrospectively.

# BCSH and Remote Issue (5)

- All blood that has been recalled or removed from the remote issue system for longer than the specified time (depending on the storage conditions) must be quarantined so that it cannot be dispensed.
- Remote issue systems must not be used if the interface to the LIMS or any element of the remote issue system fails. Contingency plans must be in place.
- Records stored must include:
  - identity of individuals undertaking any step in the process;
  - identification of the patient;
  - donation numbers of the units placed into stock or issued;
  - component type(s);
  - date and time of placement and issue.

# MHRA and Remote Issue

- In all cases the LIMS at the testing and issuing locations must be connected.

- The generation of the labels must be via the LIMS or from an interface system which requires no manual transcription of data between the two systems

- There must be a secure process for the communication of patient's special requirements (e.g. irradiated components) to ensure the selection of suitable components, irrespective of the method of components issues (electronic or full crossmatch)

# Process change

- Map your existing process
- Map your proposed process
- Identify all Criticial Failure Points – risk assessment
- Mitigate all risks through new process development
- Develop your implementation plan
- Validate new system
- Documentation & training
- Communication
- Go live

# Staffing and Remote Issue

- Need to determine who can do what – risk assessment
- Need to use technology to deliver change
- Need to clarify duties
- Need to document procedures especially contingency plans
- Need to train all staff appropriately, including BMS, Support workers, collecting staff

# High tech Remote issue of red cells via specialist fridge

- Special blood issue fridge system can be adapted to release blood via electronic issue with label printed in situ
- Attachment of label can be done by non lab staff
- Emergency blood can be issued in a similar manner
- Serological crossmatched units would require samples of donor unit to be kept in testing laboratory – not usually done.

# Hemobank

- Requires Electronic Issue & LIMS interface
- Allows Remote issue
- Prints label and allows check
- Allows emergency release of selected units (O Neg)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# Low tech Remote issue of red cells (without specialist fridge)

- Requires electronic issue
- Requires full visibility of remote stock
- Requires allocation and issue from hub but printing and attachment of labels at spoke
- Requires check of label and donor unit post attachment
- Probably best managed by trained lab staff at spoke (not necessarily BMS) using an electronic blood tracking system

# Remote issue of other components and products

- BMS at hub allocate and issue to patient from stock at spoke
  Labels printed at spoke
  Units extracted from storage at spoke by support worker (thawed as necessary) and labelled
  Unit and label checked electronically to make sure correct attachment
- Support worker at spoke selects units from storage and allocates to patient (thawed as necessary)
  BMS at hub checks allocation and authorises issue
  Labels printed at spoke
  Unit and label checked electronically to make sure correct attachment

# Resilience

Things always go wrong at times but the need to supply at all times is mandatory

- IT failure
- Transport failure
- Staff failure

Tips

- Stock more than you strictly need
- Have a healthy pre-labelled O Neg flying squad
- Stock with A or (preferably) AB plasma only
- Have a means of communication that does not rely on hospital phone system

# Summary

- Need electronic issue
- Need validated LIMS, tracking and interfaces – for stock management and release
- Need trained staff
- Need good transport systems – for moving samples and restocking
- Need resilience

# The End

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