SCRIPT
SHOT UK Collaborative Reviewing and reforming IT Processes in Transfusion

SHOT Serious Hazards of Transfusion

Information technology downtime: Aide Memoire

What is this document about?

This aide memoire provides suggestions to support development of effective contingency plans for planned and unplanned IT downtimes. The transfusion service is dependent on many IT systems, including laboratory information management systems (LIMS), electronic patient record systems (EPR), electronic blood management systems (EBMS), electronic temperature monitoring systems (ETM), procurement systems, blood component ordering systems, staff rostering systems and those that support the quality management system. General principles of contingency planning apply to all electronic systems used in transfusion, but this document focuses on those systems that are critical for safe transfusion practice; LIMS, EPR, EBMS and ETM.

Please note: The suggestions contained are not exhaustive and are provided as a guide only, please rectify any further gaps identified in local documentation

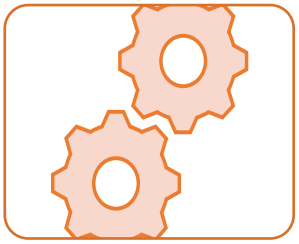
General principles

Documentation which may contain information about IT downtime

- Business continuity plan (BCP) – high level to give assurance to executive management that plans in place
- Risk assessment– potential errors leading to patient harm
- Contracts, SLAs with suppliers – level of cover, responsibilities for investigation and disaster recovery
- Policies, procedures and processes – detailed descriptions of actions for staff (laboratory, clinical, IT) easily available

Potential content to be included

- Length of downtime – consideration of impact and service dependent on length (hours, days, weeks)
- Communication channels – suppliers, users, staff, management
- System recovery – validation of functionality, data input
- Ensure no single point of failure within contingency plans



Further actions to support BCP

- Regular testing – walk through, table top, simulation, planned downtime, learning captured and improvement actions
- Staff training and competency assessment
- Investigation – root causes, corrective and preventive actions, learning incorporated
- Appropriate priority level for organisational IT support
- Incident de-brief following IT downtime to recognise achievements and areas for improvement

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Transfusion IT Systems: Review BCP for each system and consider if suggestions are incorporated, local action may be required to ensure plans are satisfactory

LABORATORY INFORMATION MANAGEMENT SYSTEMS

Consideration for continuity plan	Incorporated (Y/N)
Length of downtime – consideration of impact and service in various scenarios	
Stop routine work and provide manual emergency only	
Refer samples to another site	
Additional staff needed for manual work	
Second checking process in place for manual testing, label verification, specific requirements met	
Access to patient records (downtime report/snapshot system, printed records)	
Retrospective data input – implications for expired samples and /or components	
Criteria for transfusion of ABO-specific components agreed and stated in SOPs	
Traceability follow up for components and products	

ELECTRONIC PATIENT RECORDS SYSTEMS

Consideration for continuity plan	Incorporated (Y/N)
Access to patient records (downtime report/snapshot system)	
Access to other systems e.g., EBMS	
Traceability – record to return to laboratory	
Retrospective input of information – scanning paper charts, data input (date/time stamp)	
Reconciliation of temporary medical record number (MRN) for patients with no known MRN, if required when system back up.	

ELECTRONIC BLOOD MANAGEMENT SYSTEMS

Consideration for continuity plan	Incorporated (Y/N)
Access to emergency group O red cells in remote fridges	
Control of cold chain	
Control of component expiry dates	

TEMPERATURE MONITORING SYSTEMS

Consideration for continuity plan	Incorporated (Y/N)
Back-up – paper charts, EBMS, manual records of regular temperature checks, evidence of calibration or equivalent assurance of accuracy	
Move components to central blood fridge in laboratory	
Fridge failure packs at each blood fridge	

BCP box

Consider including the following items:

In the blood transfusion laboratory

- ✓ Compatibility labels
- ✓ Paper forms for recording test results
- ✓ Paper forms for component and product release/fridge sign out
- ✓ Paper forms available for test, component, and product ordering
- ✓ Prescription forms – prompts for appropriate transfusion, TACO, consent, specific requirements
- ✓ Paper forms for patient observations, reactions, monitoring, fluid balance
- ✓ Action cards
- ✓ Signs for blood fridges – instructions for clinical teams
- ✓ Emergency access keys (local emergency group O red cells)
- ✓ Collection documentation (local emergency group O red cells)
- ✓ Paper records for regular check of storage device temperature

In the clinical area

- ✓ Paper forms for test ordering (request forms)
- ✓ Paper forms for component/product collection (pick-up slips) – including recording arrival, handovers
- ✓ Emergency access keys and instructions (remote sites)
- ✓ Collection documentation (remote sites)
- ✓ Action cards

Sign when reviewed	Date

Further information

More information can be found within BSH Guidelines for the specification, implementation and management of IT systems in hospital transfusion laboratories or contact shot@nhsbt.nhs.uk https://onlinelibrary.wiley.com/doi/epdf/10.1111/tme.13027 .