STEP 2: PRIORITIZE

Priority 1 (Highest Priority): ADT message delays.

- ADT messages have been delayed from the patient administration system to the interface engine for 45 minutes.
- ADT messages have been delayed from the dietary system to the interface engine for over 40 minutes.
- ADT messages have been delayed from the pharmacy system to the interface engine for over 40 minutes.
- ADT messages have been delayed from the surgical pathology system to the interface engine for over 40 minutes.
- ADT messages have been delayed from the laboratory system to the interface engine for over 40 minutes.
    - The ADT delay seems to be affecting all the systems – this might mean that the new patients are not getting their charts created in the systems or their orders entered and filled in the systems.
        - This is the highest priority.

Priority 2: The laboratory results have been delayed to the EHR system for 20 minutes. There is a queue (series) of 30 messages waiting to be processed.

- Lab results should always be flowing into the EHR and should never have a queue (series) of messages waiting to be processed.
    - A doctor needs lab results to make good clinical judgements, this needs to be fixed quickly.

Priority 3: No allergy messages have been received by the dietary system or pharmacy system for over an hour.

No orders have been received by the surgical pathology system for over 1 hour.

- At 3am, there may be no allergy information or surgical pathology orders entered in the system.
    - These could be normal operations.
        - They still should be checked.

STEP 3: NOTIFY

The users of all the pharmacy, surgical pathology, laboratory, EHR, and dietary systems need to know that ADT messages are delayed and that STAT (urgent) orders and results for new patients need to be shared with other departments using a different form of communication (for example: the phone). Users of surgical pathology, laboratory, and EHR systems need to know that the EHR system is currently not receiving lab results and that critical lab results must be shared using a different form of communication. E-mails, pages on pagers, faxes, and phone calls to other departments are all different forms of communication that can be used – using more than one form of communication is recommended. Make sure that users of all systems respond and state that they are aware of the problem. All systems must be informed when the problem is resolved. All the systems should receive updates often while the problem is still occurring.

STEP 4: RESTORE SERVICES

Look at the logs (records) and make sure the alerts represent a real problem that currently exists and search for any evidence that may explain the cause of the problem.

ADT issue:

- It seems like data is not flowing fast enough from the ADT system to all the other systems. It also seems like all the other systems have not received messages from the ADT system for a long time. When observing the logs (records) it might reveal that the ADT system isn't receiving any data. The logs (records) could also reveal that the ADT system is receiving data but there is a huge backlog (accumulation) of uncompleted work, or the ADT system may be running slow. Make sure there isn't a scheduled downtime occurring. Make sure there is no current problem with the ADT system. Then try to restart the ADT system interface. If this doesn't work contact the support person for the ADT system's interface and ask them to help you restore service. Keep sending updates to the users of the ADT system and all the users of the other systems to let them know if the service is restored. If you can't restore service quickly ask the service desk of ADT if they have experienced this issue before.

Surgical Pathology System and Lab System issues:

- Check the logs (records) to see if a real problem still exists. Try restarting both the surgical pathology system and lab system interfaces. If this doesn't work, see if the EHR system is experiencing any problems. If the EHR system is experiencing problems, contact the EHR system interface support person and work with them to restore the EHR system's service. Keep sending updates to the users of all systems to let them know if the service is restored. If service isn't restored quickly ask the service desk of EHR if they have experienced this issue before.

Dietary System and Pharmacy System issues:

- Check the logs (records) of the dietary system and pharmacy system to see if any problems currently exist. Check to make sure the EHR system hasn't sent any orders or allergy notes to the dietary and pharmacy systems. Check to make sure the dietary system and pharmacy system are working just fine. If no problem exists check to see if the dietary and pharmacy systems have been operating normally. If the systems haven't been operating normally then let the users of the EHR system know they have to send allergies and orders to the dietary and pharmacy systems using a different form of communication (for example: phone calls and e-mails).

STEP 5: PLAN

In the HIE (Health Information Exchange) environment the following would apply:

- ✓ Production support is important for an interoperability project because data needs to be constantly flowing.
- ✓ The goal of production support is to resolve incidents, not necessarily to fix problems, which are the root causes of incidents.
- ✓ Because of the healthcare work environment, the need for data flow, and the impact of production issues, support is key and requires teamwork and communication.

Due to the huge amount of connections and users involved in a HIE, the HIE environment is much more complicated. It would be difficult to decide which service users need to be notified of the problem and it would be difficult to decide who needs to be called to help restore the services.