Interfacing - Focus on Efficiency

Interfacing is the most important link in exchanging data between systems. MIDAS+ offers a multitude of different interfaces that can save time and money by delivering exactly the data you need to do your job effectively. In this session, we will cover the interface implementation process from beginning to end as well as explore the different types of interfaces and how they can benefit your organization.

Presented by:

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Interfacing

Focus on Efficiency

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Clinical Data Integration
Turning Data into Actionable Information

Why interface?
- More efficient workflow
- Maximize resources
- Reduce costs
- Mandatory federal and state reporting requirements
- Improve patient outcomes
How Can MIDAS+ Help with Integration?

- Workflow Tools – improve quality and efficiency of daily work activities
- Information Tools – collect and store information

EMR or Paper Equivalent

Hospital Information System: Administrative Data including UB92 (UB04)

MIDAS+ Care Management
- Case Management
- Quality Management
- Risk Management
- Reporting/Performance Management

MIDAS+ DataVision:
- Retrospective comparative data and JCAHO/CMS Reporting

MIDAS+ Seeker: Credentialing and Provider Profiling
According to the US Department of Health & Human Services, National Institutes of Health…

One of the key benefits of an Electronic Health Record is its role in accurately identifying high-risk patients and enhancing disease management efforts.
Clinical Data Integration

First Steps of Interface Project

- PO/Contract sent to ACS MIDAS+?
- Other vendor ready to start?
- Who needs to be involved?
- What was the date of the last live-to-test copy?
- What type of interface feed? Batch? HL7?

Clinical Data Integration

Phases of Interface Project

- Develop requirements/specifications
- Develop code and load dictionaries
- Install code in the MIDAS+ test area
- Turn on interface
- Test test test!
- Check error log
- Report any issues to ACS MIDAS+
- Go live!
Clinical Data Integration

Laboratory Interface

Lab Focus Studies

Infection Control

Blood Bank

Things to think about…

• Can a live feed of ADT and lab results from LIS be connected to the MIDAS+ test area?
• When was the last live-to-test copy?
• When are you upgrading to version 8.0?
• Do you have resources from the appropriate areas available to do testing/validation?
• Pathology results and Radiology results will be ignored.
Assemble Your Team

Who Needs to be Involved?

- Infection Control Representative
- Blood Bank Representative
- Laboratory Information System Analyst
- IT Analyst/Engine Analyst
- MIDAS+ System Manager

Next Steps

What happens next?

- Budget
- Send purchase order to ACS MIDAS+
- Other vendor ready? IT/engine resource ready?
- Scheduler contacts MIDAS+ System Manager
- Project is scheduled and assigned
- Kick-off call
Laboratory Interface

The Project begins…

- Implement live feed of ADT and lab results from LIS or engine to MIDAS+ test area
- Transactions are logged
- ACS Clinical Integration Analyst performs the GAP analysis

Laboratory Interface

*Preparation Phase*

- What is the GAP analysis?
  - ACS Clinical Integration Analyst analyzes transactions for specific types of information and customizations
    - Isolates
    - Multiple organisms
    - Any other special processing
Laboratory Interface

*Preparation Phase*

*(continued)*

- ACS Clinical Integration Analyst develops specification from analysis
- ACS Interface Analyst/Technical Lead installs custom interface in the MIDAS+ test area

Lab Focus Studies

*Preparation Phase*

How do we get started on the Lab Focus Studies?

- Determine what results will be sent to the lab focus studies
- Set up separate security group
- Determine values for Focus Sub-criteria Dictionary (#144)
- Standard fields extracted
Lab Focus Studies

Preparation Phase

Determine what results will be sent

- Lab department associated with result (typically OBR-24)
- Ordered test code

Lab Focus Studies

Preparation Phase

Set up separate security group for Lab focus study and restrict user access as appropriate

- Remember data should only be updated via the incoming lab interface
- Accessed via inquiry mode only
Lab Focus Studies

*Preparation Phase*

Determine values for Focus Sub-criteria Dictionary (#144)

- Identify and enter all Abnormal Flag codes and descriptions.
  - Example - H for High, L for Low, etc.
- Identify and enter all Result Status codes and descriptions.
  - Example – F for Final, P for Preliminary, etc.

Additional steps

- Other user-defined fields needed? If so, contact the ACS Clinical Integration Analyst.
Lab Focus Studies

**Preparation Phase**

What standard fields are extracted?

<table>
<thead>
<tr>
<th>Midas+ Description</th>
<th>HL7 Description</th>
<th>HL7 Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facility</td>
<td>Sending Facility</td>
<td>MSH-4</td>
</tr>
<tr>
<td>Patient Account Number</td>
<td>Patient Account Number</td>
<td>PID-18.1</td>
</tr>
<tr>
<td>Accession Number</td>
<td>Filler Order Number</td>
<td>OBR-20</td>
</tr>
<tr>
<td>Order Code</td>
<td>Universal Service Identifier</td>
<td>OBR-4</td>
</tr>
<tr>
<td>Date of Focus</td>
<td>Specimen Received Date/Time</td>
<td>OBR-14</td>
</tr>
<tr>
<td>Requested Date/Time</td>
<td>Requested Date/Time</td>
<td>OBR-6</td>
</tr>
<tr>
<td>Test Name</td>
<td>Observation Identifier</td>
<td>OBX-3</td>
</tr>
<tr>
<td>Result</td>
<td>Observation Value</td>
<td>OBX-5</td>
</tr>
<tr>
<td>Units</td>
<td>Units</td>
<td>OBX-6</td>
</tr>
<tr>
<td>Reference Range</td>
<td>Reference Range</td>
<td>OBX-7</td>
</tr>
<tr>
<td>Abnormal Flags</td>
<td>Abnormal Flags</td>
<td>OBX-8</td>
</tr>
<tr>
<td>Observation Status</td>
<td>Observation Result Status</td>
<td>OBX-11</td>
</tr>
<tr>
<td>Date/Time of Observation</td>
<td>Date/Time of Observation</td>
<td>OBX-14</td>
</tr>
</tbody>
</table>

Next phase – Testing

- ACS Interface Analyst will map interface fields to Lab focus study in Test area.
- Direct ADT Interface and Lab Interface to MIDAS+ Test area/server.
- Examine records processed in test area against source system to ensure accuracy of interface output and mapping.
- Review the error queue for the interface and analyze any errors that are being posted.
Infection Control

Preparation Phase

How do we get started on Infection Control?

- Determine what results will be sent
- Obtain files from the LIS for the 4 Infection Control Dictionaries
- Define extended user fields
- Setup security group
- Standard fields extracted
Infection Control

*Preparation Phase*

Determine what results will be sent

- Lab department associated with result (typically OBR-24)
- Ordered test code

What Dictionaries are needed for IC?

- Obtain files from the LIS for the 4 Infection Control Dictionaries
- Files should contain all possible values MIDAS+ will receive from the LIS
- Files should have two columns: code and description
- Save file as a tab delimited text file
- Interface Analyst will FLOAD these files
Infection Control

*Preparation Phase*

- Infection Control Dictionaries
  - Culture Source – Inf Culture Source (# 25)
  - Organism – Inf Culture Organisms (# 26)
  - Resistant Drug – Inf Antibiotics (# 30)
  - Diagnostic – Inf Diagnostics (# 28)

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Define Extended User Fields

- Accession Number
- Isolate Lines
- Other commonly used fields such as body site of culture, ordering location, and specimen description
- Be sure to tell your ACS Interface Analyst what you have defined!
Infection Control

**Preparation Phase**

What standard fields are extracted?

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</tr>
<tr>
<td>Specimen Source</td>
<td>Specimen Source</td>
<td>OBR-15</td>
</tr>
<tr>
<td>Specimen Received Date/Time</td>
<td>Specimen Received Date/Time</td>
<td>OBR-14</td>
</tr>
<tr>
<td>Order Code</td>
<td>Universal Service Identifier</td>
<td>OBR-14</td>
</tr>
<tr>
<td>Ordering Physician</td>
<td>Ordering Provider</td>
<td>OBR-16</td>
</tr>
<tr>
<td>Organism</td>
<td>Observation Value</td>
<td>OBX-5</td>
</tr>
<tr>
<td>Antibiotics</td>
<td>Observation Identifier</td>
<td>OBX-3</td>
</tr>
<tr>
<td>Resistances</td>
<td>Abnormal Flags</td>
<td>OBX-8</td>
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Infection Control

**Testing Phase**

Next phase – Testing

- ACS Interface Analyst will map interface fields to Infection Control fields in Test area.
- Direct Lab Interface to MIDAS+ Test area/server.
- Examine records processed in test area against source system to ensure accuracy.
- Review the error queue for the interface and analyze any errors that are being posted.
Infection Control Inquiry

**General Tab**

- Enter Date:
- Infection:

**Organism/Antibiotics Tab**

- Organism:
- Antibiotics:
- Isolation:
- Isolation Type:

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Infection Control Inquiry

*Prior Conditions/Tests Tab*

![Screen shot of the Prior Conditions/Tests Tab](image)

Infection Control Inquiry

*Extended Screen*

![Screen shot of the Extended Screen](image)
Infection Control

Linking Surgery Data

Blood Bank

Preparation Phase

How do we get started on Blood Bank?

- Determine what results will be sent
- Obtain files from the LIS for the 2 Blood Bank Dictionaries
- Standard fields extracted
Blood Bank

Preparation Phase

Determine what results will be sent

- Lab department associated with blood bank result (typically OBR-24)
- Ordered test code

What Dictionaries are needed for BB?

- Obtain files from the LIS for the 2 BB Dictionaries
- Files should contain all possible values MIDAS+ will receive from the LIS
- Files should have two columns: code and description
- Save file as a tab delimited text file
- Interface Analyst will FLOAD these files
Blood Bank

Preparation Phase

• Blood Bank Dictionaries
  • Blood Components (#32)
  • Blood Order Type (#537)

What standard fields are extracted?

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<td>Universal Service Identifier</td>
<td>OBR-4</td>
</tr>
<tr>
<td>Component</td>
<td>Observation Value</td>
<td>OBX-5.1</td>
</tr>
<tr>
<td>Unit Number</td>
<td>Observation Value</td>
<td>OBX-5</td>
</tr>
<tr>
<td>Units Transfused</td>
<td>Observation Value</td>
<td>OBX-5</td>
</tr>
<tr>
<td>Ordering Provider</td>
<td>Ordering Provider</td>
<td>OBR-16</td>
</tr>
<tr>
<td>Date/Time of Transfusion</td>
<td>Date/Time of Observation</td>
<td>OBX-14</td>
</tr>
</tbody>
</table>

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Blood Bank

Testing Phase

Next phase – Testing

- ACS Interface Analyst will map interface fields to the Blood Bank fields in Test area.
- Examine records processed in test area against source system to ensure accuracy of interface output and mapping.
- Review the error queue for the interface and analyze any errors that are being posted.

Blood Bank

Example
Laboratory Interface

Live Phase

• The big day…Go live
  • Load dictionaries in live
  • Create focus in live
  • Create extended user fields in live
  • ACS Interface Analyst/Technical Lead moves interface programs to live
  • Create live feed to live area
  • Validate data in MIDAS+
  • Start building SmarTrack Indicators and Worklist Rules
Pharmacy to Drug Therapy

What standard fields are extracted?

• Start & End Dates
• Route
• Frequency
• Duration
• Ordering Physician
• Indication
• Use

Drug Therapy

Example Record
Drug Therapy
Example EUFs for IV order

Inbound Orders
Discharge Planning and Support Services
Other New Interfaces/Services

- BedReady
- SmartConnect (module to Care Management)

Remember the 5 W’s of Clinical Data Integration

- Why
- Where
- When
- What
- Who
Need more info?

Contact your ACS Service Manager
What information do you need to provide to ACS MIDAS+?
  • Type of interface needed
    • Vendor and product name
    • Contact name for vendor (if applicable)
    • Will multiple facilities be sending data through this interface?
    • Engine?
    • Explain workflow and business requirements

Contact

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Questions?