

# **User Pre-Release Notes**

for RADNET rRIS  
Build 1.21

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## **1. Purpose**

This document describes some of the new features and changes implemented in rRIS as of the end of Sprint 21. This pre-release version of rRIS is referred to as Build 1.21.

Only features which can be visually demonstrated to the user will be outlined in this document.

## **2. Intended Audience**

This document is created by the rRIS Development team for the RadNet RIS management team.

## **3. Installing/Accessing the Application**

The installation instructions for the rRIS client have been posted to the RadNet Wiki page at <http://mdbal01rdtweb/Wiki/>

Under the RIS menu, click on the rRIS page. The credentials to access the page are:

Username: rRIS

Password: Summerside

*Please note that Build 1.21 is considered a new core release of the application and will require a reinstallation of rRIS. This is accomplished by navigating to the rRIS shared installation drive and running the CoreInstall.bat file (ex: I:\RISDeployment\CoreInstall.bat)*

If you experience difficulties accessing the application, please do not hesitate to contact Darcy Noye with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Apply Document Type after Scanning

Build 1.21 gives the user the ability to assign or change the document type after the document has been scanned. Additionally the user has the option to change the type of the document selected and also the documents that follow the currently selected document.



Figure 4.1 –Attached document selection type.

In the view attachment window, thumbnails are displayed on the left side. A right click on a thumbnail will open the list displayed in Figure 4.1. The first menu item “Classify Remaining as” expands the menu to show the available document types. The user can change the currently selected document as well as the all of the documents that follow the document in thumbnail view below it.

The document types available from this context menu are only those of the same document type of the scanned or imported image. For example, if the document scanned has a document type that is at the Patient Level, the context menu will only show active document types at Patient Level.

Changing the document type as shown in Figure 4.1 a new record is created and a new row will display in the Attachment Viewer. The original attachment “Insurance Card” has 8 pages. Three of those pages are changed to Type “script”, creating a new row for “script” document with 3 pages and “Insurance Card” has the remaining

The figure consists of two screenshots of the 'Attachement Viewer' window. The top screenshot shows a single row for an 'Insurance C...' document with 8 pages at the 'Exam\*' level. The bottom screenshot shows the same document split into two rows: one for 'Insurance C...' with 5 pages and one for 'Script' with 3 pages, both at the 'Exam\*' level.

Attached	Type	Pages	Level	Scheduled	Acc #	Procedures	Status	Attached By	Notes
09-07-2011	Insurance C...	8	Exam*	09-07-2011...	?	Current Exam	Adding	?	
09-07-2011	Insurance C...	5	Exam*	09-07-2011...	?	Current Exam	Adding	?	
09-07-2011	Script	3	Exam*	09-07-2011...	?	Current Exam	Adding	?	

**Figure 4.2 – Before and after changing document type for multiple documents**

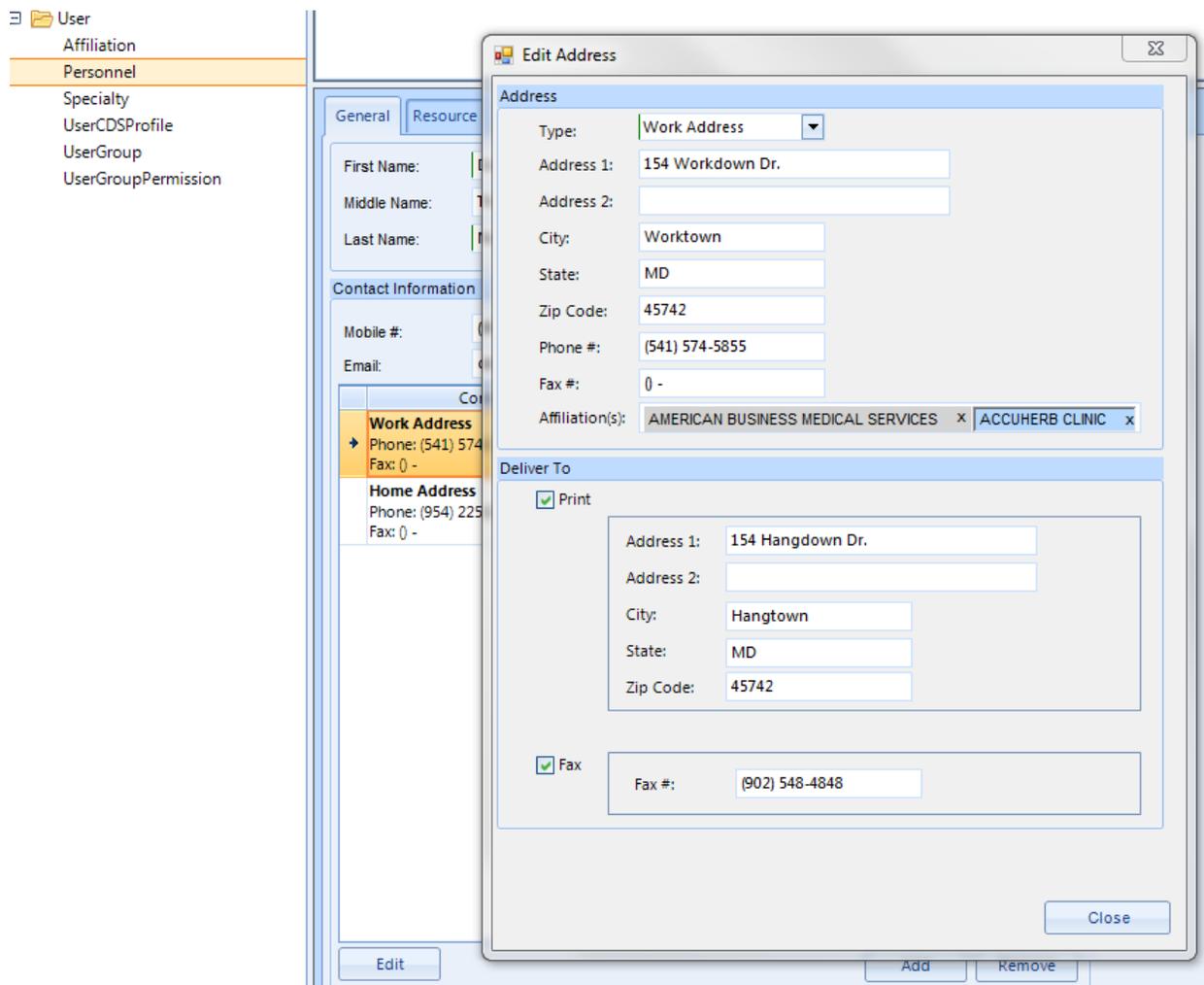
Also from Figure 4.1 you will notice that the document types may have shortcut keys assigned. To change the document type for a single document, you only need to select the shortcut key itself. For example, to change the document type to Unclassified, highlight the thumbnail and select **U** on the keyboard. To change the document type for the currently selected thumbnail and the documents below it, you must also select **<Ctrl>** in addition to the shortcut key.

Scan type code	Display order	Description	Color flag	Duplex flag	Height	Width	Resolution	Document level	Auto deskew flag	Auto enhance flag	Keyboard shortcut
Script	1	Script	N	N	6	7.5	150	ExamLevel	Y	Y	s
Demo	1	New Type	N	N	11	8	150	ExamLevel	N	Y	n
InsuranceCard	1	Insurance Ca...	Y	N	11	8.5	150	ExamLevel	Y	N	i
Other	1	Other	N	N	11	8.5	150	ExamLevel	Y	Y	o
Referrer logo	1	Referrer logo	N	N	11	8.5	150	PersonLevel	Y	Y	
Unknown	1	Unknown	Y	Y	11	8.5	150	ExamLevel	Y	Y	u
Worksheet	1	Worksheet	N	N	11	8.5	150	ExamLevel	Y	Y	w

**Figure 4.3 – Lookup table ScanType. Keyboard shortcut column added**

### Assign Affiliation at Referring Address

Affiliation to a referring was already an option in rRIS. In this build it has been moved to be associated at the referrers address level. Users may be configured with multiple addresses. Each address may have different and multiple affiliations.



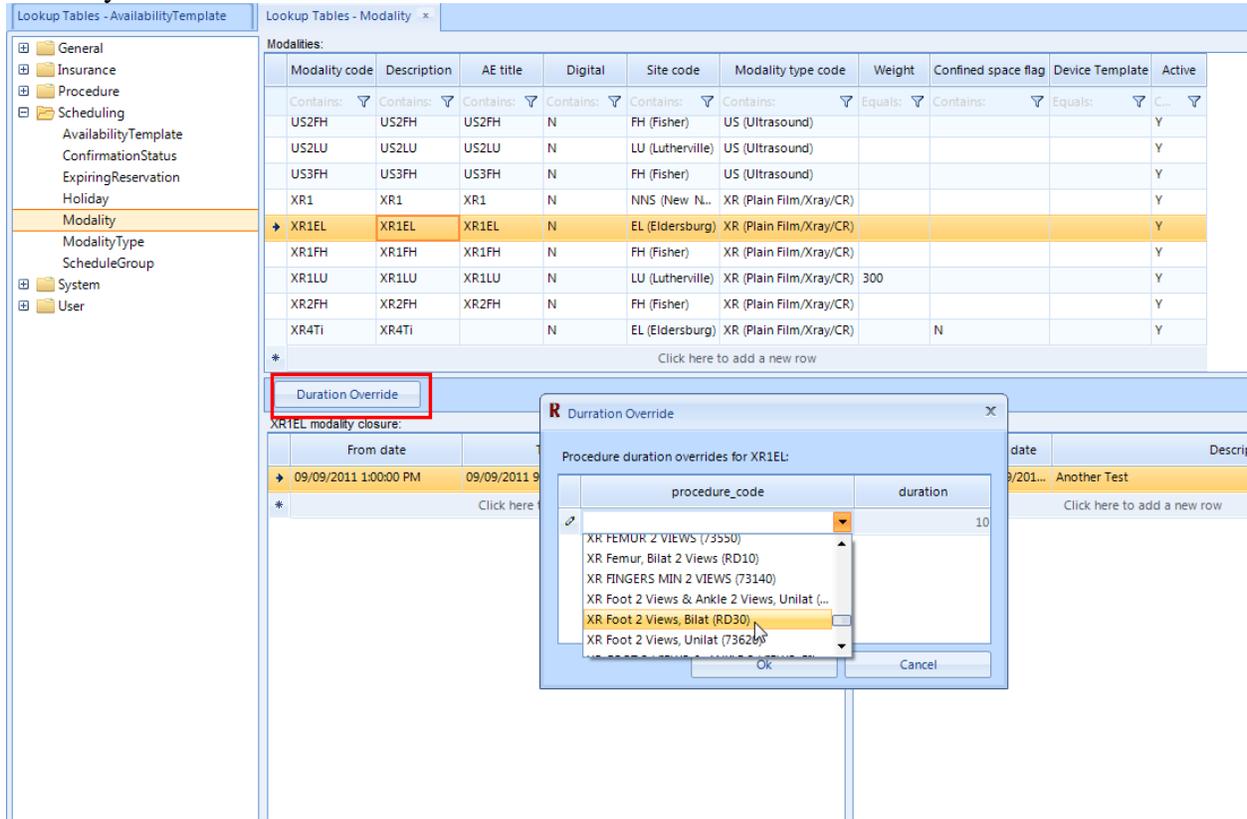
**Figure 4.4 – Affiliation moved to Address level**

## **Modality Procedure Duration Override**

In build 1.21 the ability to add study duration has been added to the modality level. In previous builds each procedure was assigned a default duration time. In addition to the procedure level, the duration could also be set for specific time blocks in the Availability Template.

The Duration Override is configured via the Modality lookup table. Choosing a modality code, then selecting this new button will spawn a new window. In this window the user may choose a

procedure and enter in the duration override to be used for this procedure in this specific modality.

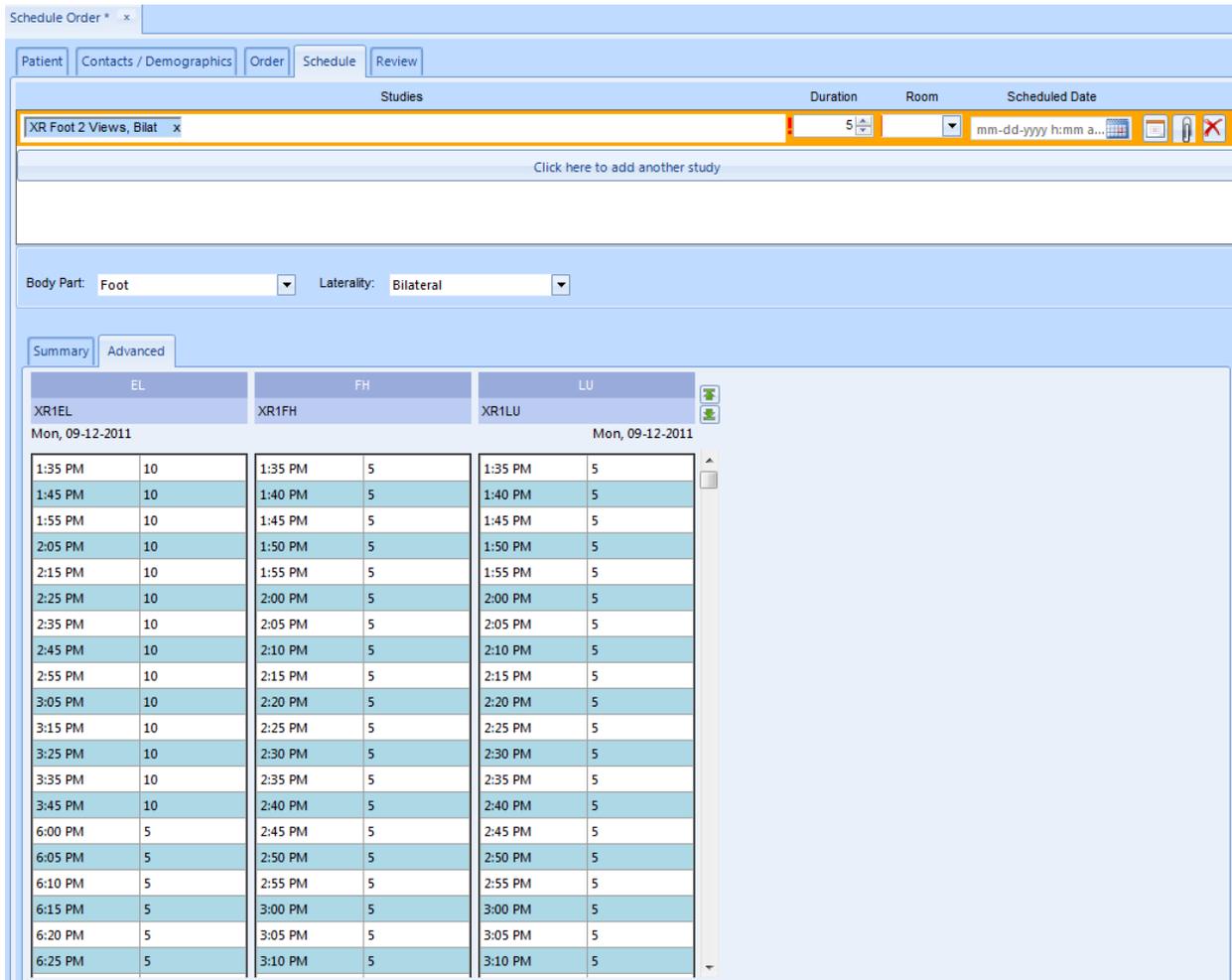


**Figure 4.5 – Duration Override at modality level**

With the duration override configured, procedure XR Foot 2 Views, BILAT (RD30) in modality XR1EL will be 10 minutes, overriding the procedures default duration of 5 minutes.

The order of process for procedure duration is as follows.

1. The procedure default duration is checked first
2. If a modality duration override is present it takes precedence over procedure level
3. The availability template may have a duration configured for a particular time block(s).  
The duration set here will take precedence over modality and procedure levels.

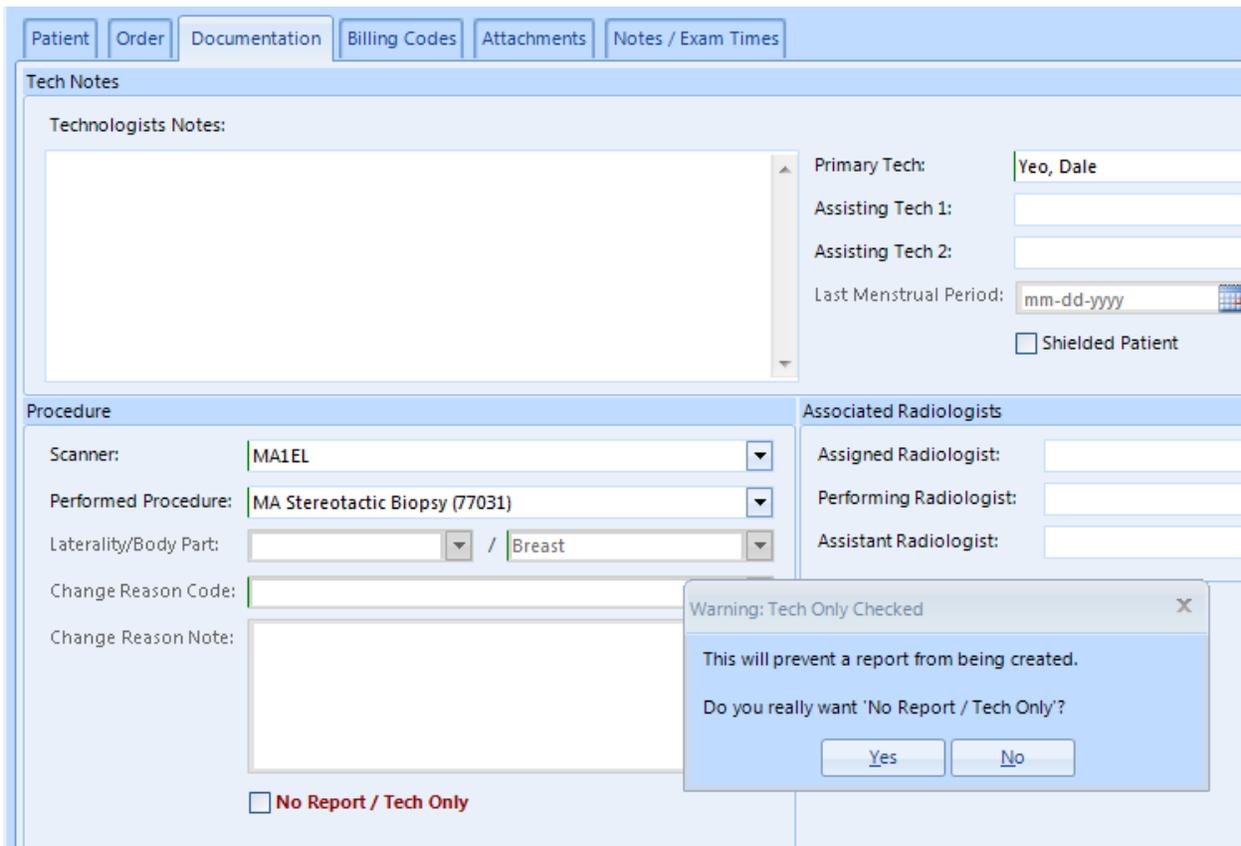


**Figure 4.6 – Scheduling window displaying duration override for XR1EL modality**

## Outside Reads (Tech Only and Professional Only)

Tech Only work flow. The tech will have the ability to mark a study as “No Report / Tech Only”. When a check is added the user will be prompted with confirmation message and the label “No Report / Tech Only” will be bolded red. Selecting “Yes” to confirm will add flag. Once the study is flagged and saved, it will move from the Technologist work list and flagged to skip professional services part of the workflow.

NOTE: currently this study will be sent to exam done work list and is not marked as a “no report” study. In next build the exam status will be informative (Ex: exam done / No Report)



**Figure 4.7 – Tech Only work flow**

Procedures may also be pre-configured as No report required flag from the Procedure Code lookup table.

	Procedure code	Description	bled flag	Prep instruction code	Coding scheme	Procedure group code	No report required flag	Requires contrast flag	Mammo type code	Ac
	Contains:	Contains:		Contains:	Contains:	Contains:	Contains:	Contains:	Contains:	Conta
	74400	XR IVP		General XR	RIS	XR (Plain Film/Xray/CR)	Y	N		Y
	77081	DX Appendicular Skeleton		General XR	RIS	XR (Plain Film/Xray/CR)	Y	N		Y
	0028T	DX Body Composition Study		General XR	RIS	XR (Plain Film/Xray/CR)	N	N		Y
	20605	FL Arthrocentesis Inject Intermediate Jt		General FL	RIS	FL (Fluoroscopy)	N	N		Y
	70030	XR ORBITS FOR FOREIGN BODY		General XR	RIS	XR (Plain Film/Xray/CR)	N	N		Y
	70100	XR Mandible 1-3 Views		General XR	RIS	XR (Plain Film/Xray/CR)	N	N		Y
	70110	XR MANDIBLE 4 VIEWS		General XR	RIS	XR (Plain Film/Xray/CR)	N	N		Y
	70120	XR Mastoid 1-2 View Ea Side		General XR	RIS	XR (Plain Film/Xray/CR)	N	N		Y

**Figure 4.8 – Procedure codes with No report required flag.**

Tech performing exam on a procedure that has the No report required flag pre-configured will automatically have the Check box for No Report / Tech Only pre-selected, and disabled so the user cannot remove flag as displayed in Figure 4.9.

The screenshot displays the 'Notes / Exam Times' tab of the rRIS interface. The 'Tech Notes' section is at the top, followed by the 'Procedure' section. In the 'Procedure' section, the 'Scanner' is 'DE1EL' and the 'Performed Procedure' is 'DX Appendicular Skeleton (77081)'. The 'No Report / Tech Only' checkbox is checked and disabled, highlighted with a red box. The 'Associated Radiologists' section is on the right.

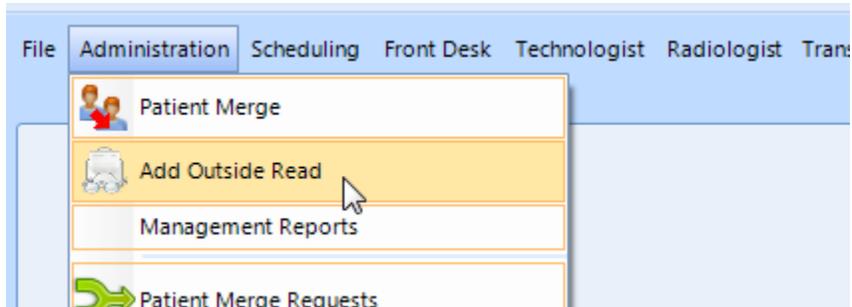
Tech Notes	
Technologists Notes:	
Primary Tech:	!
Assisting Tech 1:	
Assisting Tech 2:	
Last Menstrual Period:	mm
	<input type="checkbox"/> S

Procedure	
Scanner:	DE1EL
Performed Procedure:	DX Appendicular Skeleton (77081)
Laterality/Body Part:	/
Change Reason Code:	
Change Reason Note:	
<input checked="" type="checkbox"/> No Report / Tech Only	

Associated Radiologists	
Assigned Radiologist:	
Performing Radiologist:	
Assistant Radiologist:	

**Figure 4.9 – Procedure defaulted for no report**

Professional Only workflow outside reads – a new data window was added under the Administration menu.



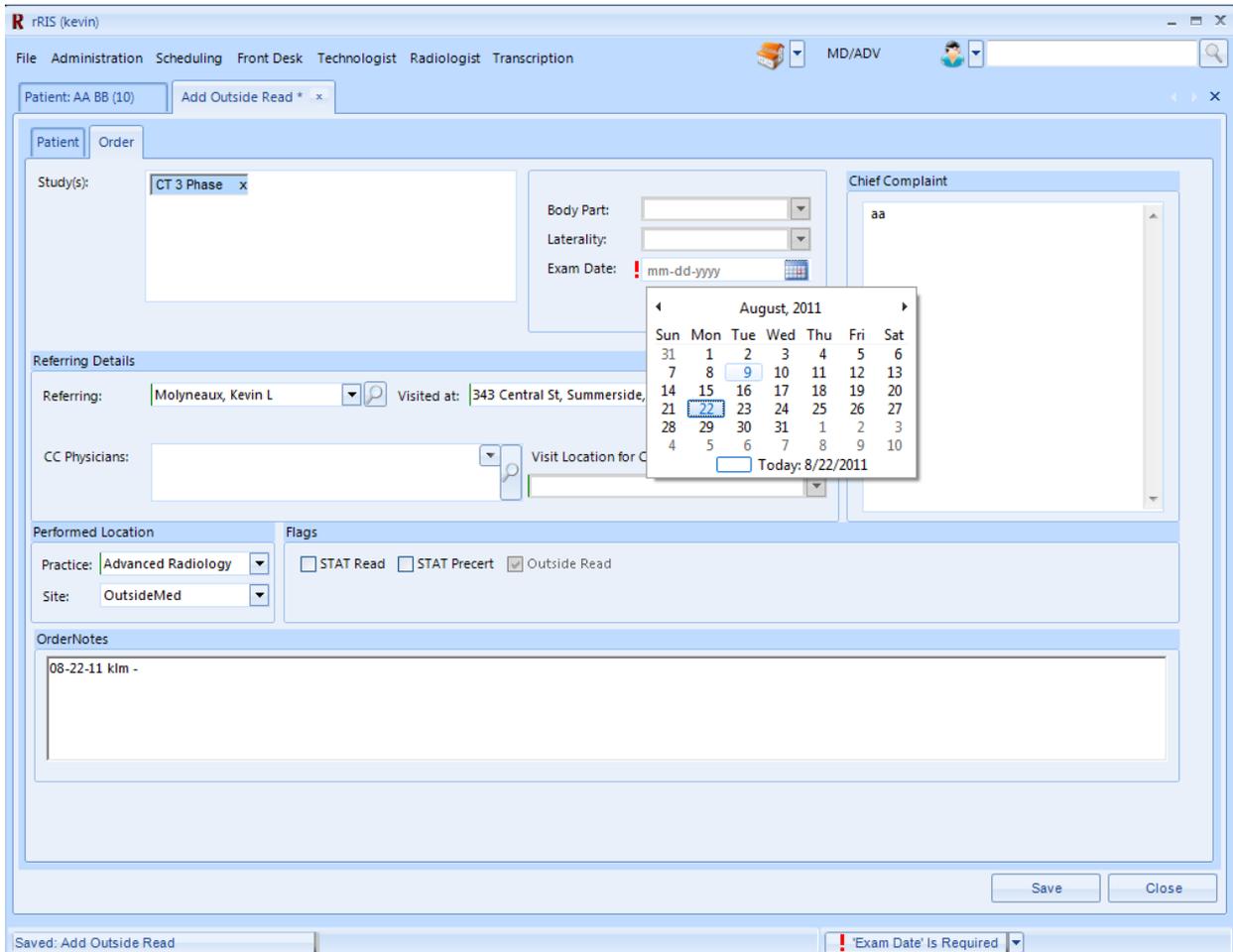
**Figure 4.10 – Add Outside Read**

“Add Outside Read” will open a new window that will allow the user to:

- Search or add a new patient.
- Data entry for exam date, order notes, stats, indications, referring, practice, etc.
- Entry for the exam location using the site field (required).
- Enter a list of studies for the order.
- Scan Documents for each study.

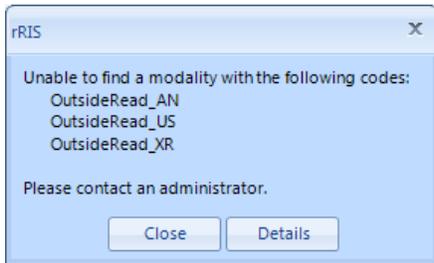
Once the information for the Outside Read has been added to the data window, the study will be moved directly to Exam Done status and are ready for dictation, transcription and signing.

NOTE: currently have outstanding issue of tech workflow fields required data at time of dictation.



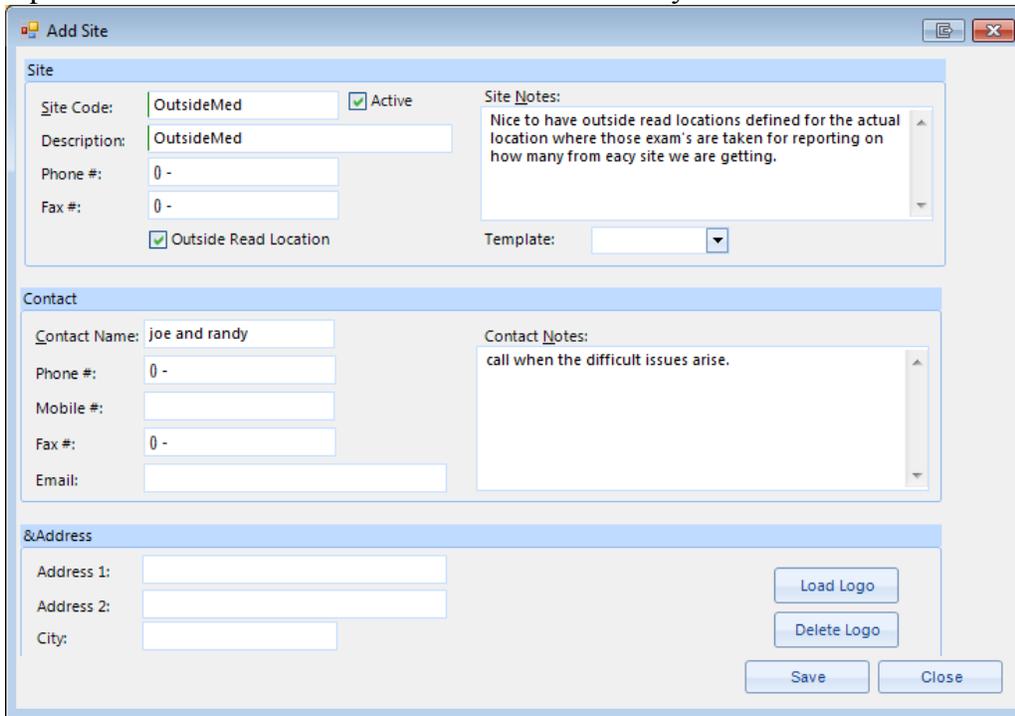
**Figure 4.11 – Outside read data window**

Administrators will need to create one modality for each modality type. These modalities created do not have to be assigned to scheduling groups (sites) also the Outside Read Modalities can be marked as inactive. If the modality does not exist a message will inform the user with a list of modalities the administrator will need to create.



**Figure 4.12 – Informative message instructing Modalities to be created**

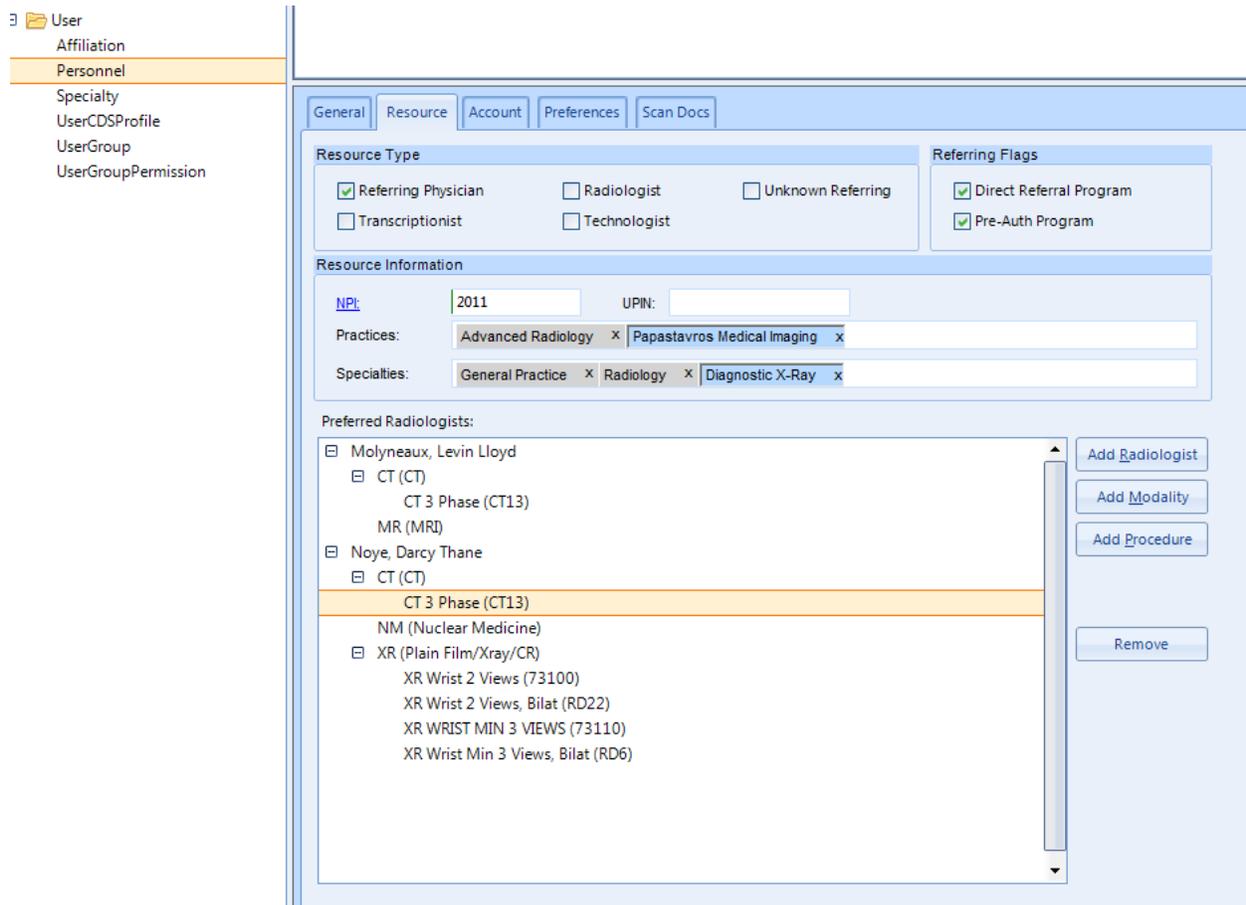
In the organization screen for site, the field “outside\_read\_location\_flag” has been added. When this flag is set those sites will not show up in the other Scheduling screen’s schedule/reschedule inputs for site. And on the “New Outside Read” only the sites for outside reads will be displayed



**Figure 4.13 – Add site Outside Read Location Flag**

## Preferred Reader

In build 1.21 a radiologist can be assigned as a preferred reader. Referring physicians may have one or more preferred radiologists to read a specific modality type or specific procedure.



**Figure 4.14 – Preferred reader(s) added to referrers Personnel profile**

In the example above for this particular referrer, Molyneaux is the preferred reader for all MR (MRI) and CT 3 Phase (CT13). Noye is also a preferred reader CT 3 Phase (CT13), as well as all NM (Nuclear Medicine) and XR Wrist 2 views, XR Wrist 2 views, Bilat, XR Wrist min 3 views and XR Wrist Min 3 Views, Bilat.

When this referrer is selected for an order and the exam to be completed is of the Modality MR, Molyneaux will be defaulted as the Assigned Radiologist for the Technologist performing the exam.

The screenshot displays the rRIS interface with several tabs at the top: Patient, Order, Documentation, Billing Codes, Attachments, and Notes / Exam Times. The 'Tech Notes' section includes a large text area for 'Technologists Notes' and a 'Copy / Paste' button. To the right, there are dropdown menus for 'Primary Tech', 'Assisting Tech 1', and 'Assisting Tech 2'. Below these are fields for 'Last Menstrual Period' (with a date picker and radio buttons for 'Pregnant' and 'Not Pregnant') and a checkbox for 'Shielded Patient'. The 'Procedure' section contains dropdowns for 'Scanner' (MR1EL), 'Performed Procedure' (MR Abdomen Wo (74181)), 'Laterality/Body Part' (Abdomen), and 'Change Reason Code'. A 'Change Reason Note' text area is also present. The 'Associated Radiologists' section features a dropdown for 'Assigned Radiologist' (highlighted with a red box and containing 'Preferred: Molyneaux, Levin Lloyd'), and dropdowns for 'Performing Radiologist' and 'Assistant Radiologist'. A checkbox for 'No Report / Tech Only' is located at the bottom left of the procedure section.

**Figure 4.15 – Preform exam with preferred reader defaulted**

In a case where there is more than one preferred reader, the Assigned Radiologist field will not have a default value, but is marked with ! indicating that a preferred radiologist is configured and may be selected. The preferred radiologists will be prefixed with Preferred: as displayed in Figure 4.15

### **Scanned Documents at the Referring level**

Storing scan documents for a referring doctor at the Personnel level has been implemented in build 1.21. A new document type of person level was added to scan types and will be the only available option for attachments within the Personnel Editor.

	Scan type code	Display order	Description	Color flag	Duplex flag	Height	Width	Resolution	Document level	Auto deskew flag	Auto enhance flag
	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Equals: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼
	Demo	1	New Type	N	N	11	8	150	ExamLevel	N	Y
	InsuranceCard	1	Insurance Card	Y	N	11	8.5	150	ExamLevel	Y	N
	Other	1	Other	N	N	11	8.5	150	ExamLevel	Y	Y
	Referrer logo	1	Referrer logo	N	N	11	8.5	150	PersonLevel	Y	Y
	Script	1	Script	N	N	6	7.5	150	ExamLevel	Y	Y
	Unknown	1	Unknown	Y	Y	11	8.5	150	ExamLevel	Y	Y
	Worksheet	1	Worksheet	N	N	11	8.5	150	ExamLevel	Y	Y
* Click here to add a new row											

**Figure 4.16 – Scan type at PersonLevel.**

A new tab has been added to the personnel editor window conveniently labeled “Scan Docs”. Attachments are saved when you the person’s profile you are editing. The list of scanned attachments is downloaded to the person’s profile only when the scan docs tab is selected and the attachment itself is downloaded on a double click of the document row. Attachments can be scanned in or imported from file

The screenshot shows the Personnel Editor interface. On the left is a navigation tree with categories like General, Insurance, Procedure, Scheduling, System, and User. The 'Personnel' category is selected. The main window displays a table for user information with columns for Username, First Name, and Last Name. Below this is a tabbed interface with 'Scan Docs' selected. The 'Scan Docs' tab contains a table of attachments with columns for Attached, Type, Pages, Level, and Attached By. An 'Attach Document' dialog box is open in the foreground, showing a 'Document Type' dropdown menu with 'Referrer logo' selected and highlighted. The dialog also has 'Scan' and 'Cancel' buttons.

**Figure 4.17 – Scan Docs tab in Personnel Editor**

## Separate Permissions for Editing Users vs. Referrers

The ability for non admins to add / edit referring physicians has been added in build 1.21. The access string “Config.LookupEditor.PersonnelReferring” controls this ability. A look at the access string lookup table displays the new access string code Config.LookupEditor.PersonnelReferring with default access level to full as well as access to the Personnel Editor Config.LookupEditor.Personnel default access level to full. This currently gives all users access.

Access string code	Description	Display order	Default access level code
Contains: person	Contains:	Equals:	Contains:
Clinical.PersonSearch	Clinical.PersonSearch	1	Full
Config.LookupEditor.Personnel	Config.LookupEditor.Personnel	1	Full
Config.LookupEditor.PersonnelReferring	Config.LookupEditor.PersonnelReferring	1	Full
Config.LookupEditor.PersonResource	lookup table PersonResource	1	Full

**Figure 4.18 – Access String lookup table highlighting new access string code**

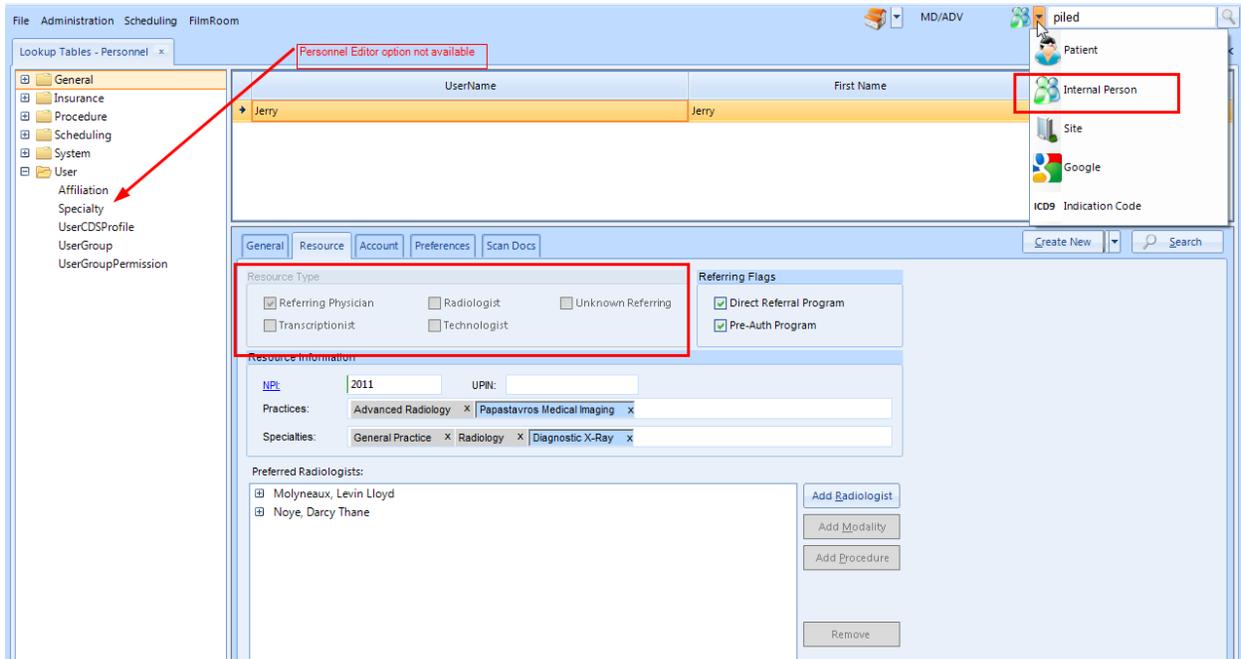
If we look at the lookup table for User Group Permission we see the User Group “Scheduling” is permitted access to edit Referrers, but will not be able to search for users that are not of the referring group.

Group Name	Access string code
Contains: scheduling	Contains:
Scheduling	Config.LookupEditor.Personnel
SchedulingAdmin	Config.LookupEditor.Personnel
Scheduling	Config.LookupEditor.PersonnelReferring

**Figure 4.19 – User Group Permission for Scheduling only has access to edit Referrers in Personnel editor.**

Logged in as a user of the Scheduling user group, you can see from Figure 4.20 that they do not have access to the Personnel Editor, but they can perform an Internal Person search for referrers. The user will only have the ability to change data on the General, Resource (resource type will be un-editable) and Scan Docs tabs. Fields on the Account and Preferences tabs are disabled to this user. If they search for a user that is not flagged as a referrer Resource type, the results will

be returned to the Internal Person search window, but they will not be permitted to view this user in the Personnel Editor.

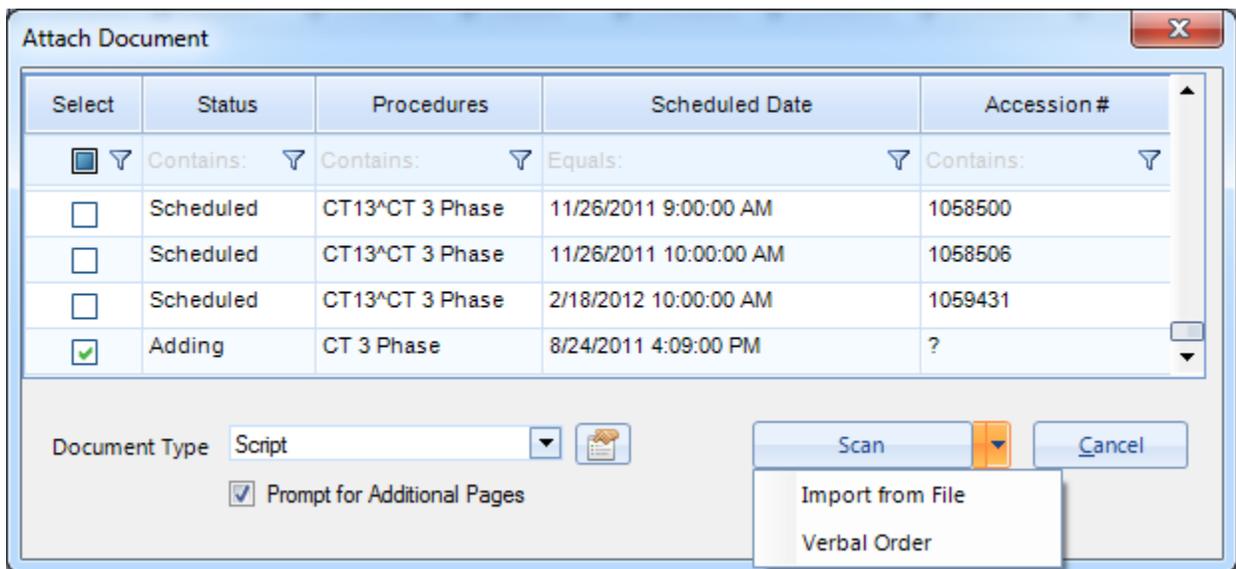


**Figure 4.20 – Locked down Personnel Editor for editing Referring Physician only**

## Verbal Order Work Flow

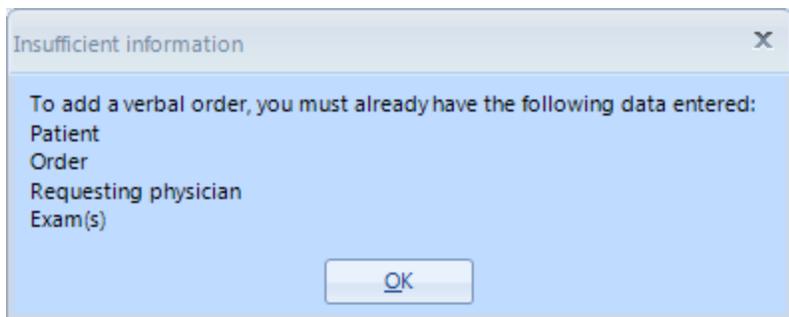
Patients may arrive at registration / walk-in without a written order from a referring physician, or perhaps the tech needs to change it. To add this work flow to rRIS, Verbal order work flow has been added to build 1.21. Since all downstream users may want or need to see the verbal order, it has been created as an attached document (scan doc).

A button called “Verbal Order” has been added to the Attach Document window as displayed in Figure 4.21. The button is accessed via the drop down button to the immediate right of the Scan button in the Attach Document window.



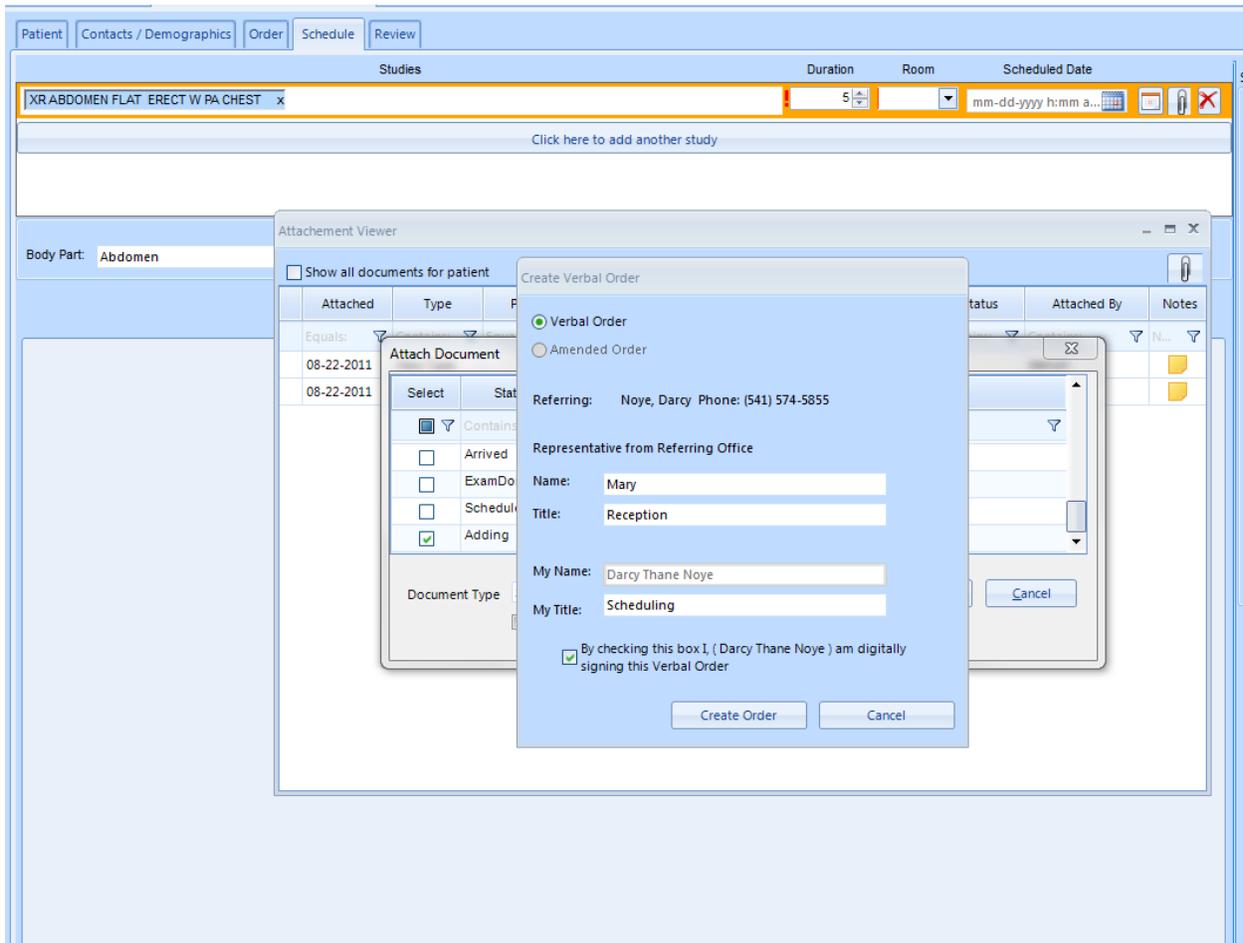
**Figure 4.21 – Verbal order.**

Selecting the Verbal Order button will open the Verbal Order window. Before the Verbal Order window opens, it checks for the patients data. If there is insufficient information a pop up window informs the user of the missing information.



**Figure 4.22 – Verbal Order missing data**

Once sufficient information has been entered the user is prompted to complete information in the Verbal Order data window. The create order button is enabled when all of the fields have data and the check box is selected.



**Figure 4.23 – Creating Verbal order**

Selecting the Create Order button will render the data and saves it as a scanned document. The document is attached to the current order with a scan type of script. The regular attachment viewer will allow the order to be viewed

Acorn, Adele : Attached Documents

Script

### Verbal Order Form

Created on 9/13/2011 11:57:21 AM

---

Patient Name	Adele Acorn	Phone Number
--------------	-------------	--------------

---

Date of Birth	20/07/2000
---------------	------------

---

Ordering Physician	Darcy Noye	Physician Phone #	(541) 574-5855
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---

Representative from Referring Physician Office:

Name	Mary	Title	Reception
------	------	-------	-----------

---

Exams Ordered

XR ABDOMEN FLAT & ERECT W PA CHEST

---

Reasons for Exam (Signs and Symptoms)

---

Team Member taking Verbal Order

Name	Darcy Thane Noye	Title	Scheduling
------	------------------	-------	------------

OK

**Figure 4.24 – Verbal Order Form complete.**

## 5. Known Limitations

Bugs, Suggested Features, and Support Issues are now tracked in a web based system called Redmine. The following is a snapshot of the issues found in Build 1.21.

#	Status	Subject	Category	Target version	% Done	Resolved Version
514	Resolved	Refresh issue on save personnel	Admin Tools	1.21	100	1.22
523	New	Apply Document type after scanning only showing patient level document types	Thick Client GUI	1.21	0	
524	Resolved	Scan docs - Classify Remaining - Scan notes on incorrect document	Thick Client GUI	1.21	100	1.22
526	New	Exception on diagnose / dictate	Thick Client GUI	1.21	0	
528	New	Create new report distribution job from Distribution History throws error	Thick Client GUI	1.21	0	
529	New	Reschedule study search returning incorrect times	Thick Client GUI	1.21	0	
531	Resolved	Availability template - adding time ranges start date not formatted	Admin Tools	1.21	100	1.22
532	Resolved	Time slot not released on reschedule	Thick Client GUI	1.21	100	1.22
534	New	Creating verbal order needs a user friendly message when missing DOB	Thick Client GUI	1.21	0	
535	New	Installer errors	Admin Tools	1.21	0	
536	New	Exception thrown for new user created	Thick Client GUI	1.21	0	
537	New	Preferred reader - cannot multi select when removing	Admin Tools	1.21	0	
538	New	Cannot edit modality code in modality lookup table	Admin Tools	1.21	0	
539	Resolved	Patient information - phone fields extension not retained	Thick Client GUI	1.21	100	1.22
540	New	Outside Read - Exception thrown on save	Thick Client GUI	1.21	0	
541	New	Error on perform exam when referrer has preferred reader assigned.	Thick Client GUI	1.21	0	
542	Resolved	Creating an Outside Read returns error	Thick Client GUI	1.21	100	1.22
543	New	Distribute report - can save distribute report	Thick Client GUI	1.21	0	
544	New	User with read only rights to Personnel cannot view their own account	Admin Tools	1.21	0	
545	New	User who has appropriate permissions cannot create unknown referring physician	Admin Tools	1.21	0	
546	New	Exception throw submitting appended dictation	Thick Client GUI	1.21	0	
547	Resolved	Diagnose window hides pop ups behind application	Thick Client GUI	1.21	100	

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548	New	Error logging in with some of our test users	Thick Client GUI	1.21	0	
549	Resolved	Duration Override - procedures added are not displayed and other suggestions	Admin Tools	1.21	100	1.22
550	Resolved	Issues when viewing available times when duration override applied	Thick Client GUI	1.21	100	1.22
551	Resolved	Removing a procedure from procedure picker that has a modality duration override will throw exception	Thick Client GUI	1.21	100	1.22
552	New	Issues will editing time ranges on AvailabilityTemplate lookup.	Admin Tools	1.21	0	
553	Resolved	Diagnose window opening with incorrect patient information.	Thick Client GUI	1.21	100	
554	Resolved	Procedure plan min/max values ignored when duration override applied.	Thick Client GUI	1.21	100	1.22
555	Resolved	Procedure plan throwing an error on schedule	Thick Client GUI	1.21	100	1.22
556	New	Add Outside Read missing required fields from tech workflow	Thick Client GUI	1.21	0	
557	New	Preferred Reader - user is able to assign non radiologists as preferred reader.	Admin Tools	1.21	0	
558	New	Verbal Order form - patient phone number	Thick Client GUI	1.21	0	
559	New	Personnel - Add / Edit address - Scrolling needed	Thick Client GUI	1.21	0	
560	New	Column filter range of same day - no results returned	Thick Client GUI	1.21	0	
561	New	Exporting audit history throws exception	Thick Client GUI	1.21	0	