

# **User Pre-Release Notes**

## **for RADNET rRIS**

### **Build 1.15**

## **Table of Contents**

1. Purpose.....	3
2. Intended Audience .....	3
3. Installing/Accessing the Application .....	3
4. New Features and Enhancements .....	4
Enhancements to Audit Log.....	4
Insurance Verification at the Practice Level .....	5
Prep Notes Available on the Schedule Screen .....	6
Ability to Add/Edit Procedures from the Registration Screen.....	7
Appointment Details on Schedule Calendar .....	8
Enhancements to Label and Form Printing.....	9
“Checking-In” Status .....	11
Receipt Printing .....	12
Flags Framework .....	14
Storing Time Zone at the Practice Level .....	15
5. Known Limitations .....	17

## **1. Purpose**

This document describes some of the new features and changes implemented in rRIS as of the end of Sprint 15. This pre-release version of rRIS is referred to as Build 1.15.

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 1.15 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 Spencer MacDougall with the PEI RIS Development Team.

## 4. New Features and Enhancements

### Enhancements to Audit Log

The rRIS Audit History has been enhanced to show a before and after version of modified columns. In the example below, a correction was made to the name of a patient. The patient was listed in the system as Tommy Smith but his name is actually Timmy Smith. The Audit Trail now shows that first\_name was changed to “Timmy” from “Tommy” as well as the date and user that performed the modification.

Patient Search

Patient: Tommy Smith (1)

Audit ( Smith) x

Show entries for:

☐ Patient
☐ Order
☐ Study
☒ Everything for this patient

	description	notes	date	user id	retrieval	accession number	order number	status
	Contains: ▾	Contains: ▾	Equals: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾	Contains: ▾
	Order Updated	Visit updated	6/10/2011 9:31:28 AM	Spencer	N			
➔	Order Updated	Patient updated	6/10/2011 9:31:28 AM	Spencer	N			
	Order Retrieved		6/10/2011 9:31:22 AM	Spencer	Y		1009395	OrderSigned
	UI_OrderSubmitted	Order updated	6/10/2011 9:31:16 AM	Spencer	N		1009395	OrderSigned
	UI_OrderSubmitted	Visit updated	6/10/2011 9:31:16 AM	Spencer	N			
	Patient Retrieved		6/10/2011 9:30:45 AM	Spencer	Y			
	Patient Retrieved		6/10/2011 9:30:36 AM	Spencer	Y			
	UI_PatientCreated	Patient updated	6/10/2011 9:29:26 AM	Spencer	N			

Modified c\_patient entries (

first\_name:

BEFORE: Tommy AFTER: Timmy)

**Figure 4.1 – Audit History showing Before and After Changes**

## Insurance Verification at the Practice Level

Whether or not Insurance Verification is required is now determined by the combination of Modality Type and Practice. This had been set at the Insurance Carrier level but has been adjusted after feedback. The configuration screen below illustrates that both CT and US procedure types require insurance to be verified at the Advanced Radiology practice.

The screenshot shows the 'InsuranceVerificationRequired' configuration screen. The left sidebar contains a list of configuration categories, with 'InsuranceVerificationRequired' highlighted. The main content area displays a table with the following data:

Modality type code	Description	Display order	Practice code
CT	CT	1	ADV (Advanced Radiology)
US (Ultrasound)	US	2	ADV (Advanced Radiology)

**Figure 4.2 – Insurance Verification set at Practice and Modality Type**

## **Prep Notes Available on the Schedule Screen**

A “Review” tab has been added to the Schedule screen. This will display one or more prep instructions to the scheduler that can easily be communicated to the patient. In the example below, the patient is scheduled for both a CT and XR procedure. As a result, the Review tab displays both sets of prep instructions.

The screenshot shows the RADNET rRIS interface. At the top, there are two tabs: "Orders To Schedule (353)" and "Schedule Order (Schweikert Marc) \* x". Below these is a navigation bar with five tabs: "Patient", "Order", "Insurance", "Schedule", and "Review". The "Review" tab is currently selected. The main content area displays the following text:

- General XR
- General CT
- 1 of 2 General XR All children must be accompanied by an adult other than the patient
- 2 of 2 General CT Weight limit 450 lbs at most sites. No solids 2 hrs prior
- Have you ever had an iodine injection before?
- If so have you had any problems with the injection?
- (if so consult technologist)
- Asthma?
- (if so, tell patient to bring their inhaler)?
- Ask if Diabetic? If so, what meds do they take?
- If pt takes oral meds for diabetes refer to memo date 7-10-08 and follow necessary instructions.
- For Oral Prep please see memo dated 10-14-2008 and follow protocol
- Ask pt about pregnancy?
- If patient is scheduling both a CT and MR WITH contrast and answers NO to all screening questions then the procedures may be scheduled on the same day. If the patient answers YES to any of the questions then the procedures MUST be scheduled on separate days and the MR must be scheduled first.
- All children must be accompanied by an adult other than the patient

**Figure 4.3 – Multiple Prep Instructions available on the Schedule Screen**

## Ability to Add/Edit Procedures from the Registration Screen

The front desk now has the ability to add or modify scheduled procedures without having to navigate to the Edit Schedule screen. This functionality has been added to the Registration screen. In the following example, the patient has arrived for a CT Chest but has an additional order request for an XR as well. The registration user can add the XR Chest to the same visit/encounter and select a scanner and timeslot.

The screenshot displays the 'Registration (Jermaine Prys)' window. At the top, there are tabs for 'Reception WL (1)', 'Registration (Jermaine Prys) \*', and 'Lookup Tables - Personnel'. Below these are tabs for 'Patient', 'Patient Contacts', 'Insurance', 'Exam', and 'Scan Document'. The 'Exam' tab is active, showing a table of scheduled studies.

Studies	Duration	Room	Scheduled Date
CT Chest W(Chest, ) x	30	CT1FH	06-16-2011 8:15 AM
XR Chest Min 4 Views(Chest, ) x	5	XR1FH	06-16-2011 9:00 AM

Below the table is a link: 'Click here to add another study'. Underneath that, there are dropdown menus for 'Body Part: Chest' and 'Laterality:'. To the right of the table is a 'Billable Item' section with a table:

Billable Item	Pre Cert #
MYOCARDIAL IMAGING, P...	
COMPUTED TOMOGRAPH...	
RADIOLOGIC EXAMINATI...	

Below the 'Billable Item' table is an 'Indication:' field. Further down is a 'Prep Instructions:' section with the following text:

General CT  
 Weight limit 450 lbs at most sites. No solids 2 hrs prior  
 Have you ever had an iodine injection before?  
 - If so have you had any problems with the injection?  
 --(if so consult technologist)  
 Asthma?  
 - (if so, tell patient to bring their inhaler?)  
 Ask if Diabetic? If so, what meds do they take?  
 If pt takes oral meds for diabetes refer to memo date 7-10-08 and follow notes  
 For Oral Prep please see memo dated 10-14-2008 and follow protocol  
 Ask pt about pregnancy?  
 If patient is scheduling both a CT and MR WITH contrast and answers NO to all screening questions then the procedures may be scheduled together  
 YES to any of the questions then the procedures MUST be scheduled on separate visits  
 All children must be accompanied by an adult other than the patient

**Figure 4.4 – Adding an additional scheduled procedure from the Registration Screen**

## Appointment Details on Schedule Calendar

When scheduling, the calendar view has been enhanced to show additional study information. By clicking on the “Show Details” checkbox the patient name, procedure code, study status, and scheduled time will appear in the study’s timeslot.

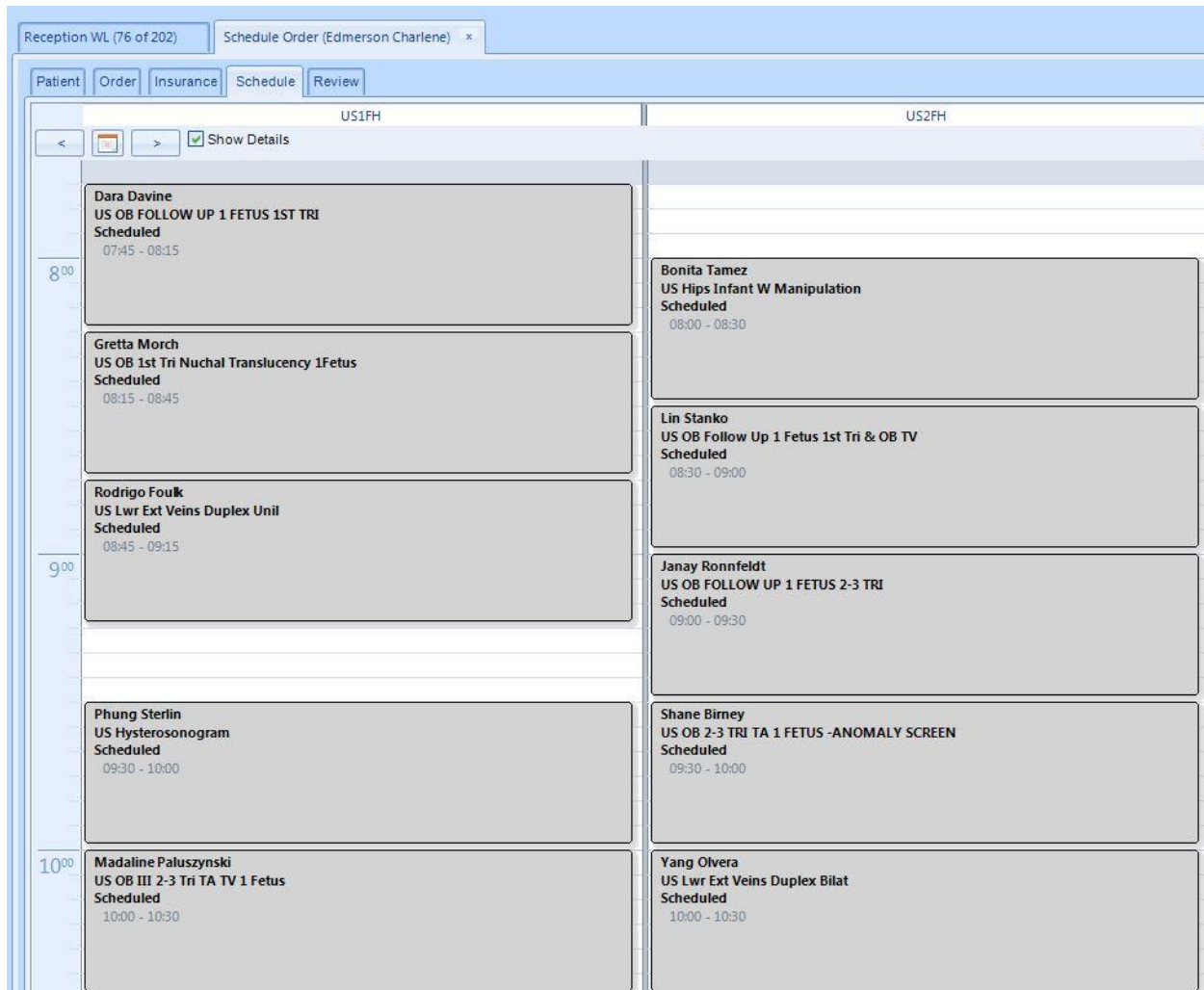


Figure 4.5 – Calendar View showing Appointment Details



## Enhancements to Label and Form Printing

The application has been modified to allow front desk users to print all associated forms simultaneously instead of one at a time. In the example below, the user is arriving (changing to arrived status) a patient for an US Thyroid procedure. The system is configured to generate an exam form, history sheet, and worksheet on patient arrival. Therefore once the patient is marked as arrived, the user is prompted to print or preview one or more of the mapped forms.

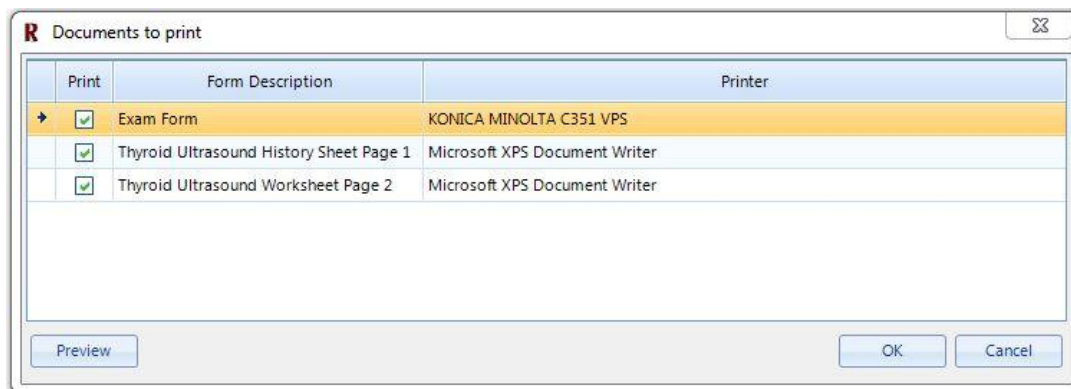


Figure 4.6 – Popup with Mapped Forms to be Printed

1 of 1 100% Find | Next

**ADVANCED RADIOLOGY** **THYROID ULTRASOUND Worksheet page 2**

First Name: MALCOM  
Last Name: DAOUD  
Date of Birth: 3/4/1971  
MRN #: 9568  
Accession #: 1009055

Tech: \_\_\_\_\_ Date of Exam: 6/10/2011  
Extension: \_\_\_\_\_ This is a preliminary worksheet, and should not be used in place of the final report.

	Length (cm)	Width (cm)	AP (cm)	Vol (cc)	Enlarged	Echotexture
RT	_____	_____	_____	_____	_____	Homog MidHet
LT	_____	_____	_____	_____	_____	ModHet ExHet
ISTHMUS	_____	_____	_____	_____	_____	Homog MildHet
	_____	_____	_____	_____	_____	ModHet ExHet

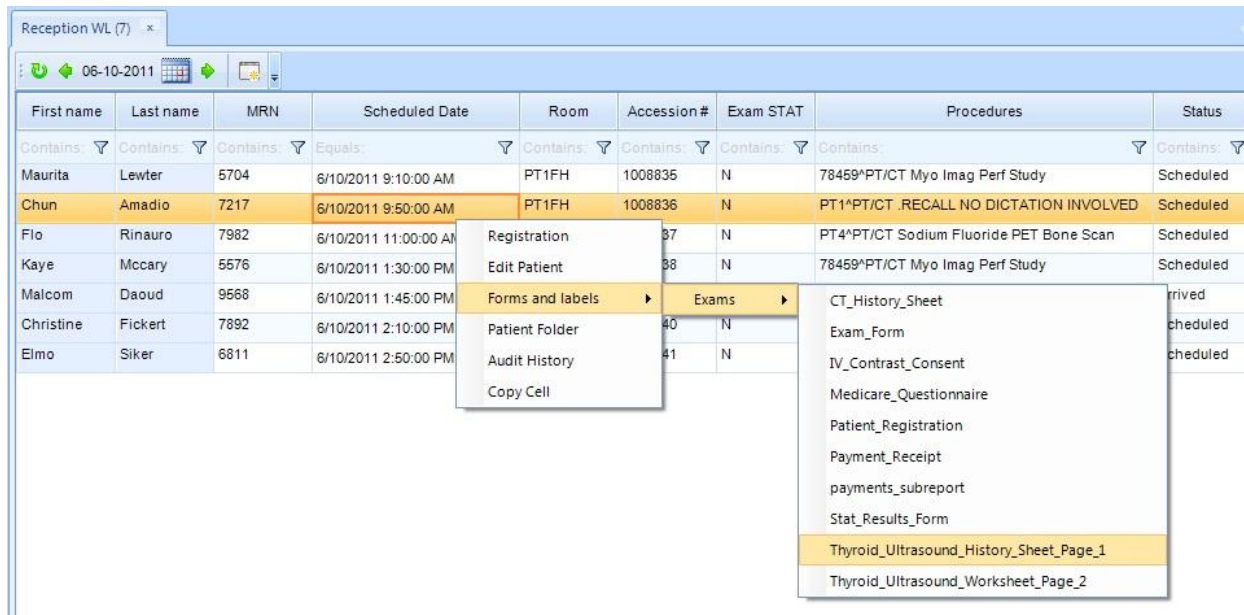
Enlarged if lobe vol > 10cc, lobe AP > 2cm, isthmus AP > 0.4cm

Side	1			2			3			4			5		
	RT	LT	Isthmus	RT	LT	Isthmus	RT	LT	Isthmus	RT	LT	Isthmus	RT	LT	Isthmus
Location	UP	MP	LP	UP	MP	LP	UP	MP	LP	UP	MP	LP	UP	MP	LP
	Extrathyroidal			Extrathyroidal			Extrathyroidal			Extrathyroidal			Extrathyroidal		
Length (cm)															
Width (cm)															
AP (cm)															
Volume (cc)															
Size Change > 20%	Stable	Smaller		Stable	Smaller		Stable	Smaller		Stable	Smaller		Stable	Smaller	
	*LARGER	##NEW		*LARGER	##NEW		*LARGER	##NEW		*LARGER	##NEW		*LARGER	##NEW	
Composition	SOLID PRED. SOLID Mixed Mixed Spongiform Pred. Cystic Cystic *CYSTIC W/MURAL Too Small to Characterize			SOLID PRED. SOLID Mixed Mixed Spongiform Pred. Cystic Cystic *CYSTIC W/MURAL Too Small to Characterize			SOLID PRED. SOLID Mixed Mixed Spongiform Pred. Cystic Cystic *CYSTIC W/MURAL Too Small to Characterize			SOLID PRED. SOLID Mixed Mixed Spongiform Pred. Cystic Cystic *CYSTIC W/MURAL Too Small to Characterize			SOLID PRED. SOLID Mixed Mixed Spongiform Pred. Cystic Cystic *CYSTIC W/MURAL Too Small to Characterize		

If Vol > 0.1cc (avg diam >= 0.6cm) and non-cystic/spongiform, fill out below

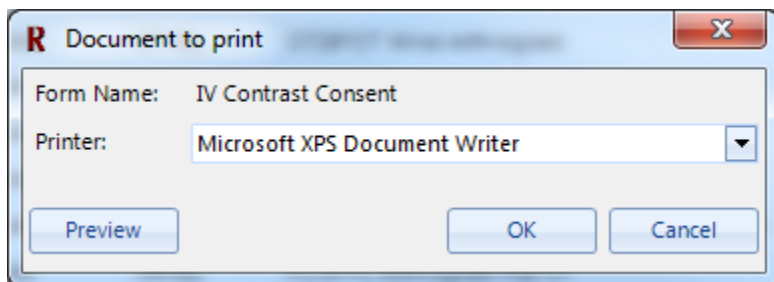
Figure 4.7 – Example of a Thyroid Worksheet

The printer can be different for each form listed in the grid. The application will default to the default printer for the workstation, and if the user chooses a different printer for a particular form, rRIS will persist that preference to the workstation's disk cache and use that as the default printer for that form in the future.



**Figure 4.8 – Print Forms directly from the Worklist**

If the user chooses to print a form directly from the worklist, they will be presented with a similar dialog box.



**Figure 4.9 – Popup to specify Form Printer**

## “Checking-In” Status

An additional status is required between Scheduled and Arrived. Checking-In was added to allow the registration user to mark a patient as checking-in while he or she is filling in the required paperwork. Once all documentation has been completed, the registration user can mark the patient as arrived so the technologist will know to come and receive the patient. The Checking-In status will also be used for Management Reporting to determine wait room turnover.

The screenshot displays the 'Registration (Flo Rinauro)' window with the 'Insurance' tab selected. The 'Insurance Policies' table contains one entry: a policy with carrier code 111130, carrier name FUTURECARE OLD COURT, policy number 532056, group name Test Data, group number 957578, phone 4109223200, and priority Primary. Below this table are buttons for 'Manage Policies', 'Not required', 'Insurance verified' (unchecked), and 'Amount to collect:'. The 'Payments' section has a table with columns 'Posted By', 'Amount', 'Payment Method', and 'Date', and an 'Add Payment' button. The 'Injuries' section has a table with columns 'claim #' and 'date of injury', containing one entry with claim # 626362 and date 04-07-2011, and a 'View Injury Details' button. At the bottom, there are buttons for 'Checking In', 'Arrive', 'Save', and 'Close'. A 'Total: \$0.00' label is also present.

Note	Carrier code	Carrier name	Policy number	Group name	Group number	Phone	Priority
→	111130	FUTURECARE OLD COURT	532056	Test Data	957578	4109223200	Primary

Manage Policies      Not required      ☐ Insurance verified      Amount to collect:

Posted By	Amount	Payment Method	Date
-----------	--------	----------------	------

Add Payment

claim #	date of injury
→ 626362	04-07-2011

Edit Payment      View Injury Details

Total: \$0.00

Checking In      Arrive      Save      Close

**Figure 4.10 – Registration Screen with Checking In Button**

## Receipt Printing

Build 1.15 allows registration users to print receipts and void payments. The system will detect if a payment has been made and prompt the user to print or preview the receipt.

Insurance Policies

Note	Carrier code	Carrier name	Policy number	Group name	Group number	Phone	Priority
▶	111130	FUTURECARE OLD COURT	532056	Test Data	957578	4109223200	Primary

Manage Policies      Not required      ☐ Insurance verified      Amount to collect: \$100.00

Payments

Posted By	Amount	Payment Method	Date
▶ Spencer	\$100.00	Cash	06-10-2011
Spencer	\$50.00	CreditCard	06-10-2011
Spencer	(\$50.00)	Void	06-10-2011

Add Payment      Edit Payment      View Injury Details

Injuries

claim #	date of injury
▶ 626362	04-07-2011

Total: \$100.00

**Figure 4.11 – Registration Screen with Multiple Payment Entries**

In the example above, the patient has paid a \$100 co-pay amount. Two payments have been recorded, but the \$50 credit card payment has been voided. Once the form is saved and the patient is arrived, the user is prompted to print the receipt.

**R** Document to print

Form Name: Payment Receipt

Printer: KONICA MINOLTA C351 VPS

Preview      OK      Cancel

**Figure 4.12 – Popup Prompting User to Print Receipt**





Fisher		Rinauro, Flo Sim	
Receipt # FH24206-61			
<i>Payment_Receipt</i>			
Patient Name: Rinauro, Flo Sim			
Medical Record: 7982			
DOB: 8/13/1944			
6/10/2011	Cash Payment Test	Cash	\$100.00
6/10/2011	Credit Card Test	CreditCard 1245	\$50.00
6/10/2011		Void	(\$50.00)
<b>Total Payments</b>			<b>\$100.00</b>
Billing Inquiries: (443) 436-1300			
Please write this number on your check: 21085			
Make checks payable to: Advanced Radiology			
<b>We thank you for your patronage.</b>			
Payment_Receipt		Printed: 6/10/2011 3:09:16 PM	

**Figure 4.13 – Example of a Receipt Preview**
















## Flags Framework

A Flags column has been added to the worklist framework for Build 1.15. Flags are a quick visual indication of relevant data. Four flags have been added to the system:

1. IVT Required 
2. Stat Exam 
3. Stat Read 
4. Special Accommodations 

So basically if an order is marked as Stat, the row in the worklist will show the Stat Exam flag. Since flags are sortable and filterable, the user could easily sort his or her worklist so that all Stat cases are at the top. The user could also create a filtered worklist based on a flag. If the user's function was to verify insurance, he or she could filter the worklist to only show studies where the IVT Required flag is enabled.

Orders To Schedule (352) Reception WL (14)									
Flags	First name	Last name	MRN	Scheduled Date	Room	Accession #	Exam STAT	Procedures	Status
Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Equals: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼	Contains: ▼
	Venetta	Ramone	4520	6/8/2011 7:45:00 AM	PT1FH	1004327	N	PT4*PT/CT Sodium Fluoride PET Bone Scan	Scheduled
	Claribel	Beifuss	9697	6/8/2011 7:45:00 AM	NM2FH	1008874	Y	93017*NM EKG Tracing	Scheduled
	Jeff	Carter	9905	6/8/2011 7:45:00 AM	CT1EL	1009046	N	71260*CT Chest W	CheckingIn
	John	Test15	9883	6/8/2011 7:45:00 AM	CT1FH	1009049	N	71260*CT Chest W	Scheduled
	Jenise	Gawrych	9617	6/8/2011 8:00:00 AM	NM1FH	1008850	Y	78464*NM Myocard Imag W Spec Sngl	Scheduled
	Jeff	Carter	9905	6/8/2011 8:15:00 AM	CT1EL	1009047	N	CT13*CT 3 Phase	CheckingIn
	John	Test15	9883	6/8/2011 8:15:00 AM	CT1FH	1009048	N	CT13*CT 3 Phase	Scheduled
	Maynard	Coxey	4683	6/8/2011 8:30:00 AM	PT1FH	1004316	N	78459*PT/CT Myo Imag Perf Study	Arrived
	Gertrude	Rodenizer	9659	6/8/2011 9:30:00 AM	NM2FH	1008902	N	78464*NM Myocard Imag W Spec Sngl	CheckingIn
	Dung	Mand	4922	6/8/2011 10:00:00 AM	PT1FH	1004343	N	78459*PT/CT Myo Imag Perf Study	Arrived
	Blossom	Breneman	5029	6/8/2011 11:00:00 AM	PT1FH	1004351	N	78459*PT/CT Myo Imag Perf Study	CheckingIn
	Kymerly	Valliere	5064	6/8/2011 1:30:00 PM	PT1FH	1004369	N	78492*PT/CT Myocardial Multi Study	Scheduled
	Chrissy	Egel	4671	6/8/2011 2:30:00 PM	PT1FH	1004397	N	78492*PT/CT Myocardial Multi Study	Scheduled
	John	Test15	9883	6/8/2011 3:31:00 PM	CT1FH	1009050	N	CT13*CT 3 Phase	Scheduled

**Figure 4.14 – Reception Worklist with Flags**

Orders To Schedule (352)									
Reception WL (6 of 14)									
Flags	First name	Last name	MRN	Scheduled Date	Room	Accession #	Exam STAT	Procedures	Status
Contains: v	Contains: v	Contains: v	Contains: v	Equals: v	Contains: v	Contains: v	Contains: v	Contains: v	Contains: v
	Venetia	Ramone	4520	6/8/2011 7:45:00 AM	PT1FH	1004327	N	PT4*PT/CT Sodium Fluoride PET Bone Scan	Scheduled
	Claribel	Beifuss	9697	6/8/2011 7:45:00 AM	NM2FH	1008874	Y	93017*NM EKG Tracing	Scheduled
	Jenise	Gawrych	9617	6/8/2011 8:00:00 AM	NM1FH	1008850	Y	78464*NM Myocard Imag W Spec Sngl	Scheduled
	Maynard	Coxey	4683	6/8/2011 8:30:00 AM	PT1FH	1004316	N	78459*PT/CT Myo Imag Perf Study	Arrived
	Gertrude	Rodenizer	9659	6/8/2011 9:30:00 AM	NM2FH	1008902	N	78464*NM Myocard Imag W Spec Sngl	CheckingIn
	Dung	Mand	4922	6/8/2011 10:00:00 AM	PT1FH	1004343	N	78459*PT/CT Myo Imag Perf Study	Arrived

**Figure 4.14 – Reception Worklist Filtered to only show IVT Required Flag**

## Storing Time Zone at the Practice Level

One instance of rRIS is required to span across more than one time zone. Because of this, many dates like order date and schedule date are stored in the database in UTC (Coordinated Universal Time) format with an offset in hours. This can allow a group of schedulers or transcriptionists to work in the system from another time zone without having to adjust their local computer's time zone to match the server's.

When setting up Practices in rRIS, the user is now able to specify what time zone the practice exists in. This is how the offset to UTC is determined.

Lookup Tables - Organization

AbortedStudyReason

AccessString

AddressDescription

Affiliation

AvailabilityTemplate

BillingCode

Birad

BodyPart

Carrier

CarrierType

CreditCardType

EducationLevel

StudyType

Region: Maryland

Edit

Add

Remove

Practices

	Practice	Practice Notes	Address	Contact	Contact Notes
	<div>Advanced Radiology(ADV)</div> <div>Phone: (443) 436-1100</div> <div>Fax: (443) 436-4568</div> <div>Time Zone: (UTC-04:00) Atlantic Time (Canada)</div>		7253 Ambassador Road Baltimore, MD 21244	Jim Smith Phone: (443) 436-1100 jim@mail.com	

**Figure 4.15 – Organization Editor showing Time Zone of Practice**

The screenshot shows a software window titled "Edit Practice". It contains three main sections: "Practice", "Contact", and "Address".

**Practice Section:**

- Practice Code:  ☒ Active
- Description:
- Phone #:
- Fax #:
- Time Zone:  (This dropdown is highlighted with a red rectangular box)
- Practice Notes:

**Contact Section:**

- Contact Name:
- Phone #:
- Mobile #:
- Fax #:
- Email:
- Contact Notes:

**Address Section:**

- Address 1:
- Address 2:
- City:
- State:
- Zip Code:

At the bottom right of the window are two buttons: "Save" and "Close".

**Figure 4.16 – Specifying Time Zone at the Practice Level**



## 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 1.15.

#	Status	Subject	Category	Found	%Done	Resolved
416	New	Flags - exception loading flags	Thick Client GUI	1.15	0	
415	Resolved	Edit Schedule - Remove study row exception	Thick Client GUI	1.15	100	1.16
414	New	Scheduling - Exception when removing and adding study row	Thick Client GUI	1.15	0	
413	New	Review Tab - Shouldn't show if it is null	Thick Client GUI	1.15	0	
412	New	Labels and Forms - Performance issues sending directly to printer	Thick Client GUI	1.15	0	
411	Resolved	Appointment Book - A few differences between calendar view and appointment book	Thick Client GUI	1.15	100	1.16
410	Resolved	Scheduling - Issue with changing procedure code	Thick Client GUI	1.15	100	1.16
409	New	IVT Worklist - status column is order status	Thick Client GUI	1.15	0	
408	New	Checking In - Missing time stamp in database	Thick Client GUI	1.15	0	
406	New	New Appointment - Unhandled WCF exception	Web Services/DB	1.15	0	
405	New	Registration - Issue removing policy from study	Thick Client GUI	1.15	0	
404	New	Insurance Verification Required - Exception with lookup table	Admin Tools	1.15	0	
403	Resolved	Locking - Cancelling a lock causes exception	Thick Client GUI	1.15	100	1.16
402	New	Registration Workflow - Locking Issues	Thick Client GUI	1.15	0	
401	New	Reception WL - No ability to change status	Thick Client GUI	1.15	0	
400	New	Checking In - Not consistent with Perform Exam screen	Thick Client GUI	1.15	0	
399	New	Audit History - Issue with tab name when opened from Patient History	Thick Client GUI	1.15	0	
398	New	Audit Log - rRIServices entries	Thick Client GUI	1.15	0	
397	New	Forms and Labels - Lookup missing splitter	Admin Tools	1.15	0	
396	New	Audit Log - System related updates should be excluded	Thick Client GUI	1.15	0	
395	Resolved	Registration - Exception adding blank study row	Thick Client GUI	1.15	100	1.16
394	Resolved	Login - Issue with Version name	Thick Client GUI	1.15	100	1.16
393	New	Login - System will not detect disconnected state	Thick Client GUI	1.15	0	
392	Resolved	Dropdowns - Still showing as required when completed	Thick Client GUI	1.15	100	1.16
391	New	Forms - Reverse Tab Order	Thick Client GUI	1.15	0	
390	Resolved	Lookup - InsuranceVerificationRequired does not check for duplicate entries	Admin Tools	1.15	100	1.16