Proposed Solution

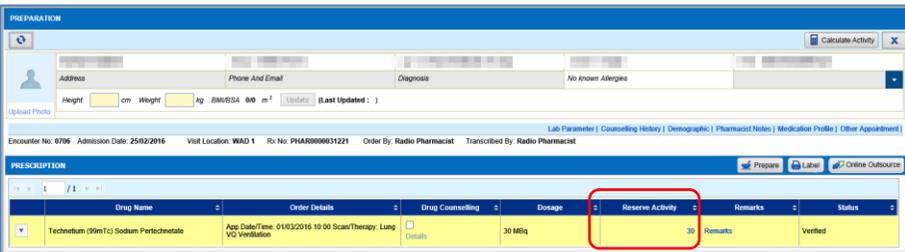| No.	Ticket #	Description	Requests	Proposed Solution
1.	I-PhIS012793815S	Listing screen: Default to current date in Pharmacy Transaction	To default appointment date as current date in Radiopharma Verification/Preparation/Dispensing.	• By default, Appointment Date is set to Current Date and listing displaying current date records only.
2.	I-PhIS012794315S	To have separate label for Iodine and Tc. Label iodine: default empty for Administered By Label Technetium: remove administered by, add Prepared By & Checked By	To have separate label for Iodine and Tc.	• Update batch allocation function. • Updated label layout to have only 1 label instead of 2 labels in one sheet and separate design of Iodine and Tc.
3.	I-PhIS012794515S	Batch Allocation: Allocation Qty, unable to allocate in decimal for volume	To update allocation function to allow user to allocate the volume in decimal.	• Add validation to compare variation between Order Activity and Reserve Activity.

Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1
1. Listing Default	• By default, displaying all records. 	• By default, Appointment Date is set to Current Date and listing displaying current date records only.

Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1
2. Batch Allocation	1. View record in Preparation screen: 2. Click on Reserve Activity hyperlink to view screen below: 3. Save the allocation: 	1. View record in Preparation screen: 2. Click on Reserve Activity hyperlink to view screen below: 3. Detailed functions for each field as below: <table><tr><th>No.</th><th>Field</th><th>Description</th></tr><tr><td>a.</td><td>Dispense UOM</td><td>• UOM displays based on Strength UOM and Qty UOM in Drug Master • Default to Dosage UOM based on order • Once user change the UOM, Available Activity will recalculate based on conversion 37 MBq = 1 mCi.</td></tr><tr><td>b.</td><td>Element and Half Life</td><td>• Based on the ordered drug, system displays element record which already linked with the drug in Radiopharma Element screen. • Half Life value is used to calculate Available Activity value.</td></tr><tr><td>c.</td><td>Allocation Date/Time</td><td>• By default, current date/time is displayed and user able to edit the value according to the actual allocation.</td></tr></table>
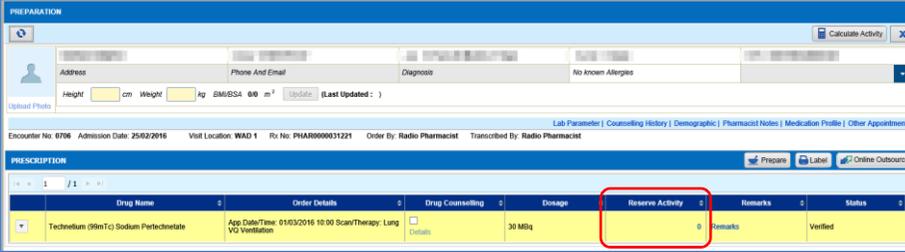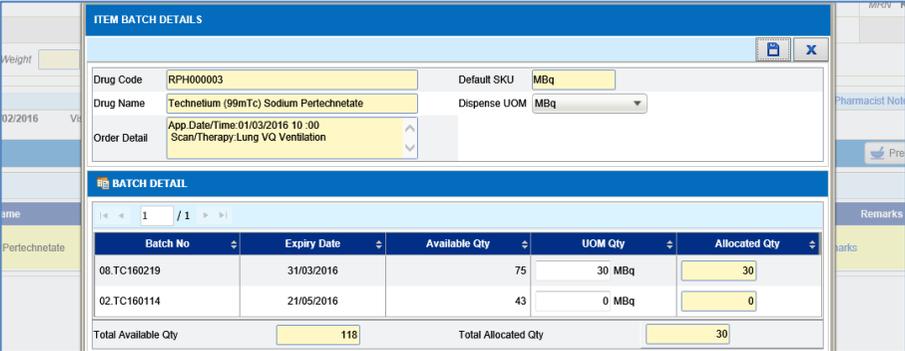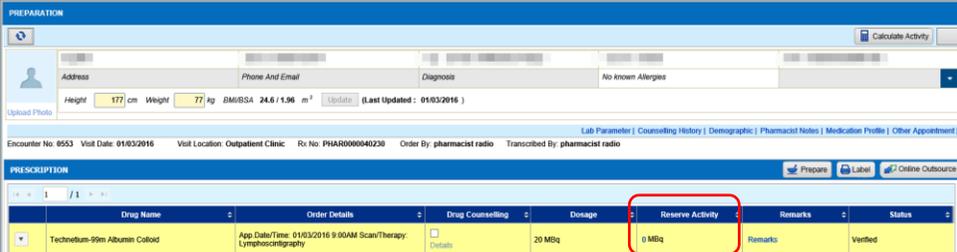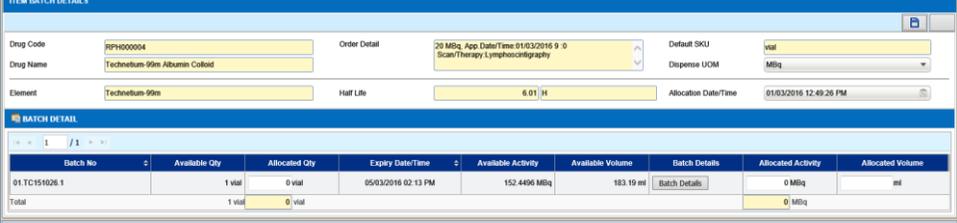
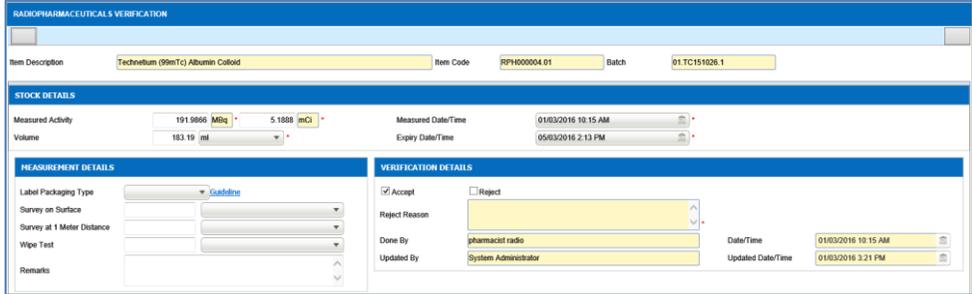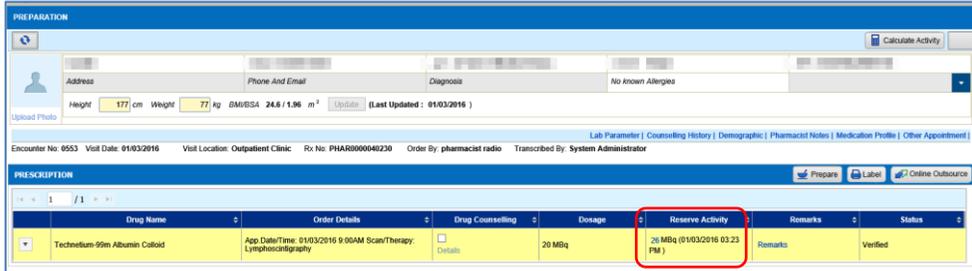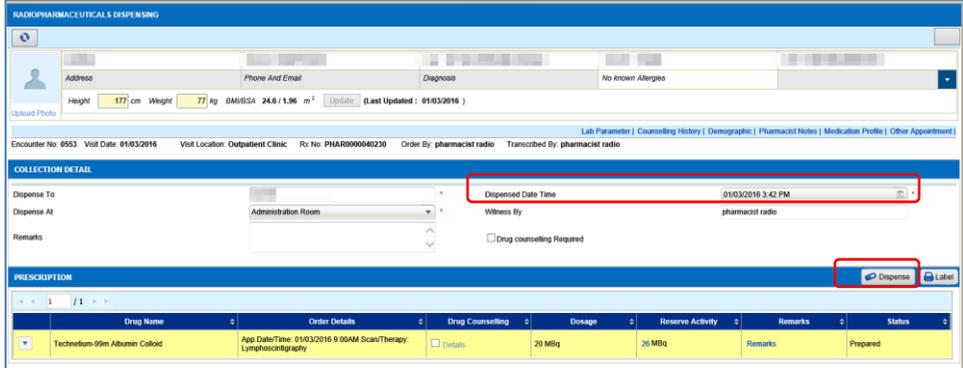| Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1		
	4. Prepare the order and proceed to Dispensing screen: Click on Dispense to Dispense the order.	d.	Batch No	• Batch no based on the stock for the user's unit. • Only Batch no with Available Qty more than 0 is displayed and in Stock Verification record, status is Accepted.
		e.	Available Qty	• Stock Available Qty based on user's unit stock minus the Reserve Qty (if any).
		f.	Allocated Qty	• By default, value is 0. User to enter value if required to minus the physical stock. • Allowed to proceed with allocation when value is 0 due to one stock can be used for multiple patients. • Integer value.
		g.	Expiry Date/Time	• Based on Expiry Date/Time as specified in Stock Verification screen.
		h.	Available Activity	• Auto calculated based on the radioactive decay formula : $$A = A_0\, e^{-\lambda t}$$ Where: A = Current amount of radioactivity A_0 = Original amount of radioactivity e = base natural log (approximately 2.718) λ = the decay constant = $0.693/t_{1/2}$ (where $t_{1/2}$ = half-life) t = the amount of time elapsed from A_0 to A • With parameters below: - Half Life - Measured Activity (in Stock Verification) - Measured Date/Time (in Stock Verification) - Allocation Date/Time (in Stock Verification) • UOM display based on selected Disp UOM.
		i.	Available Volume	• Volume value as in Stock Verification screen minus the Allocated Volume (if already allocated in other order transaction, but not yet dispensed).

Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1
		(see detailed content below)

j.	Allocated Activity	• User to enter value to allocate. • Will auto-calculate if Allocated Volume is entered, based on calculation: Allocated Volume * ('Available Activity' / 'Available Volume') • Value is mandatory, allow decimal value.
k.	Allocated Volume	• User to enter value to allocate. • Will auto-calculate if Allocated Activity is entered, based on calculation: Allocated Activity / ('Available Activity' / 'Available Volume') • Value is mandatory, allow decimal value.

4. Click on Batch Details to display screen as below:

No.	Field	Description
a.	Calibration Activity and Date/Time	As per in Stock Verification (if any).
b.	Dispensed Activity	Total Activity Dispensed for the batch.
c.	Measured Activity and Date/Time	Latest record as per in Stock Verification screen.
d.	Dispensed Volume	Total Volume Dispensed for the batch.
e.	Volume	Latest record as per in Stock Verification screen.
f.	Allocated Volume	Total Allocated Volume if already allocated in other order transaction, but not yet dispensed.

Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1
		5. On Batch Details screen, click on Edit Details button and screen Stock Verification for the batch is displayed: • User able to edit the value in Stock Verification screen if necessary. Any updates will auto-update on Preparation: Batch Allocation screen. 6. Save the Batch Allocation record: Reserve Activity display updated value with the Allocation Date/Time.

Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1
		7. Prepare the order and proceed to Dispensing screen: Click on Dispense button and screen below will display to summarize the value before user Dispense the order:
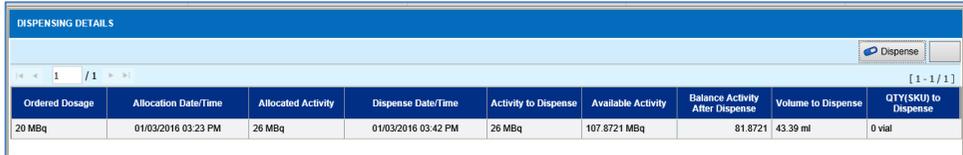
No.	Field	Description
a.	Ordered Dosage	Based on order.
b.	Allocation Date/Time	Based on Allocation.
c.	Allocated Activity	Based on Allocation.
d.	Dispense Date/Time	Based on date/time selected on Dispensing screen.
e.	Activity to Dispense	System calculated value based on decay calculation with parameters, - Allocation Date/Time - Allocated Activity - Dispense Date/Time

Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1		
		f.	Available Activity	System calculated value based on decay calculation with parameters, - Measured Date/Time (Stock Verification) - Measured Activity (Stock Verification) - Dispense Date/Time
		g.	Balance Activity after Dispense	Minus Available Activity with Activity to Dispense value.
		h.	Volume to Dispense	Based on Allocation.
		i.	Qty (SKU) to Dispense	Based on Allocation (if any).

8. Once order is **Dispensed**:

- Minus Stock Allocated Qty – Based on 'Qty (SKU) to Dispense'.
- Minus Stock Available Qty – Based on 'Qty (SKU) to Dispense'.
- Stock Movement (Item Movement report) record created – Based on 'Qty (SKU) to Dispense'.
- Update Measured Date/Time in Stock Verification screen based on 'Dispense Date/Time'.
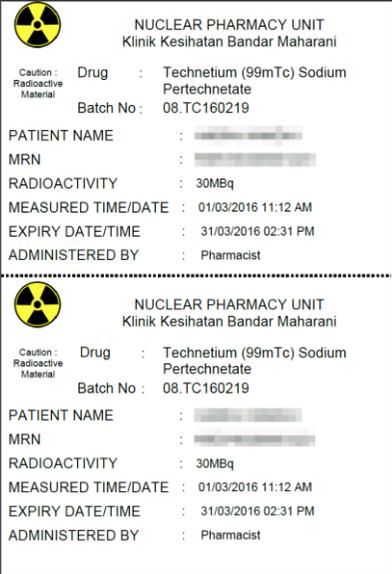- Update Measured Activity in Stock Verification screen based on 'Balance Activity after Dispense'.
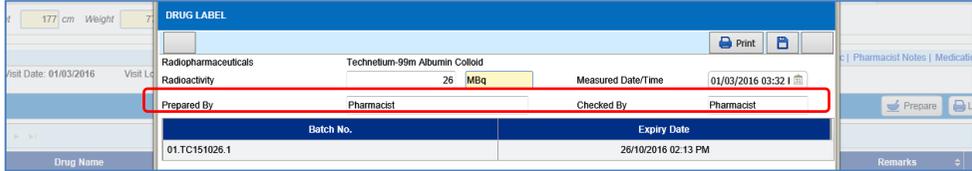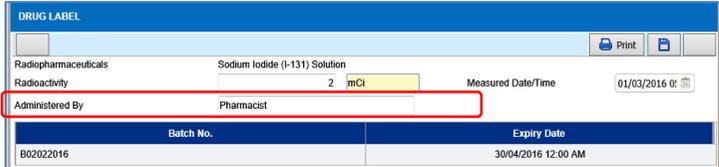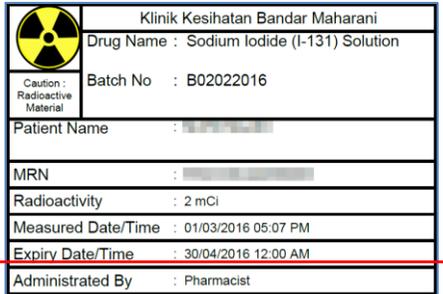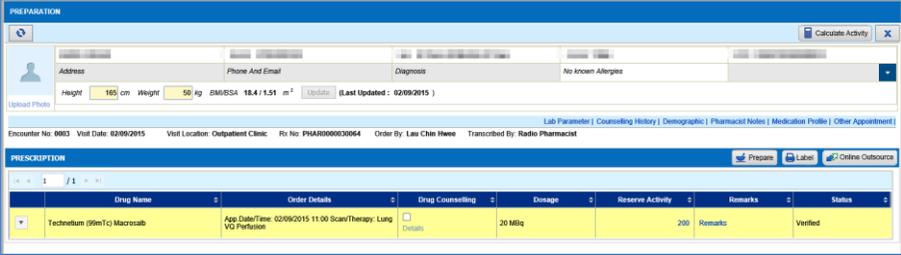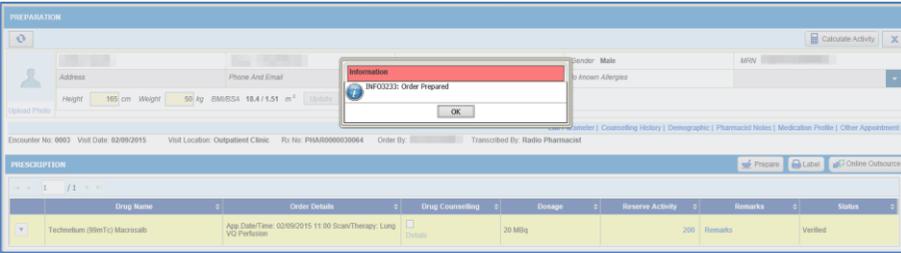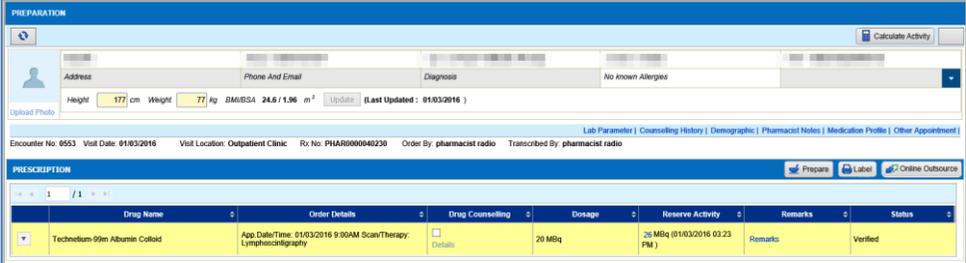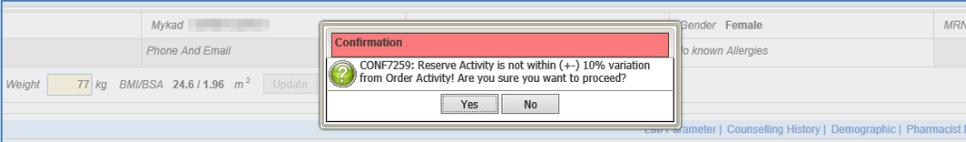
Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1
3. Label	1. Allocate Reserve Qty: 2. Click on Label button to view screen below: Click on Print button to view label in PDF. 	1. Updated label layout to have only 1 label instead of 2 labels in one sheet. 2. Two types of labels based on criteria below: • Radiopharma drug with Compounded Item selected in Drug Master - Prepared By - Checked By • Radiopharma drug with Compounded Item <u>not</u> selected in Drug Master - Administered By
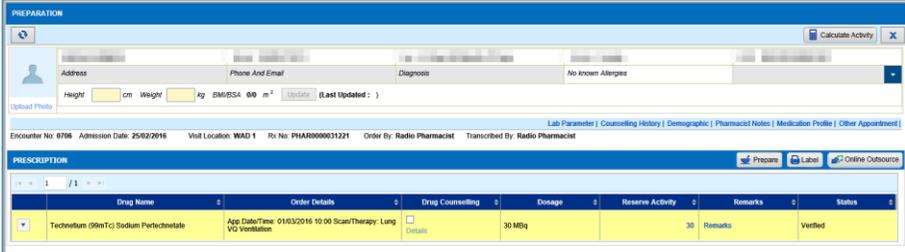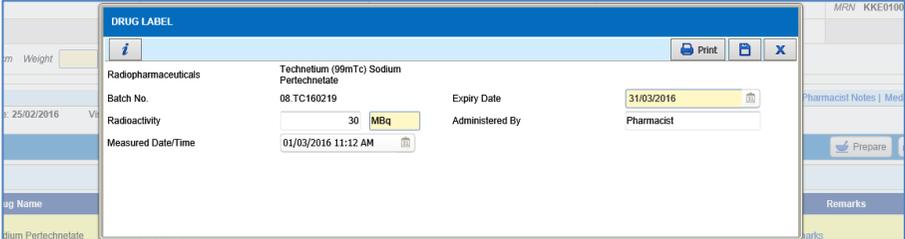
Function Flow	Radiopharma Verification/Preparation/Dispensing in current Version 1.3.8	Radiopharma Verification/Preparation/Dispensing in new Version 1.4.1
4. Activity Variation validation	1. Save allocation: Ordered Dosage = 20 MBq Reserve Activity = 200 MBq 2. Click on Prepare button, successfully prepared the order, no validation for Activity Variation. 	1. Save allocation: Ordered Dosage = 20 MBq Reserve Activity = 26 MBq 2. Click on Prepare button: • Upon click on the Prepare button system compare and calculate the variation % between Order Activity and Reserve Activity should be within (+-) 10%. • Once the variation exceeds +- 10%, alert message as above is displayed. • User has options to proceed or not. If user click 'Yes', system will proceed with Preparation, else when user click 'No', system will remain in current screen and will not proceed to Preparation.