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**FIVE VISTA UTILITIES**

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## THE MENU...

- ▶ CWAD (Postings) Auto-Demotion
- ▶ TIU Post-Signature Actions
- ▶ Progress Note Cloning
- ▶ Alerts to Pagers
- ▶ CPRS Pop-Up Messages

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## CWAD (POSTINGS) AUTO-DEMOTION

- ▶ Current Build May 28 2014, labeled as version 1.0
- ▶ Will be nationally released by CPRS team as TIU\*1\*291
  - ▶ Current Developer is Ty Phelps
  - ▶ M-side only patch as part of CPRS v32 project

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## CWAD (POSTINGS) AUTO-DEMOTION – USE CASE

- ▶ Facility decides that FALL RISK notes are important enough to be considered a Clinical Warning
- ▶ Clinical Warning (the 'W' in CWAD) is a document class that will list the notes in the Postings Box of CPRS
- ▶ Multiple Fall Risk notes clutter up the Postings Box; only the most recent one is relevant
- ▶ Program pairs a FALL RISK title (in the clinical warning document class) with a FALL RISK/PAST title (NOT in the clinical warning document class)

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## CWAD (POSTINGS) AUTO-DEMOTION – USE CASE

- ▶ When a new FALL RISK title is written, all previous FALL RISK notes are changed to FALL RISK/PAST
- ▶ Since the title is not in a Postings-Type document class, it appears to be “demoted” back to regular progress note status in the list of 100 [or whatever the parameters dictate] progress notes.
- ▶ Programming is performing a silent CHANGE TITLE action

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## CWAD (POSTINGS) AUTO-DEMOTION – USE CASE

- ▶ VA business rule #1
  - ▶ Health Information Management policy dictates that a RESCINDED ADVANCE DIRECTIVE is still a Postings-Type note
  - ▶ Class 1 programming (to be released) will not allow Advance Directives to be managed by this process
  - ▶ A new Kernel Parameter holds the list of TIU VHA ENTERPRISE STANDARD TITLES that may not be automatically demoted via this program

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## CWAD (POSTINGS) AUTO-DEMOTION – USE CASE

- ▶ VA business rule #2
  - ▶ In its original Class III version, I was unwilling to write code that overrides the field-level data dictionary protection on the POST-SIGNATURE CODE
  - ▶ Result: Only programmers with "@" privileges could actually use the Class III version
  - ▶ Class I Patch: By limiting the access to the Post-Signature Code field through the option, Clinical Application Coordinators (CACs) will now be able to establish their own Postings/Demotion progress note title pairs

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# SCREEN CAPTURES

1. Postings Box with Notes
2. Demoted Notes
3. Option and Resulting Post-Signature Action



[illegible]

All signed notes	
Jan 12,16	CLINICAL WARNING (FALL)
Jan 12,16	NURSING SHIFT NOTE, THE
Jan 12,16	SOCIAL WORK NOTE, THEP
Jan 12,16	PSYCHIATRIC CONSULT AT
Jan 12,16	PNUR PROGRESS NOTE, P
Jan 12,16	PSYCHIATRIC CONSULT AT
Jan 12,16	PAIN MANAGEMENT/REAS
Jan 12,16	NURSING SHIFT NOTE, THE
Jan 11,16	NURSING SHIFT NOTE, THE
Jan 11,16	CHAPLAIN'S NOTE, THEP
Jan 11,16	OCCUPATIONAL THERAPY
Jan 11,16	NURSING PRE DOCUMENT/
Jan 11,16	CLINICAL SWALLOW EVAL
Jan 11,16	PSYCHOLOGY CONSULT IN
Jan 11,16	PHYSICAL THERAPY INITIA
Jan 11,16	PNUR PROGRESS NOTE, P
Jan 11,16	PHYS THER/OPTHODICS
Jan 11,16	PSYCHIATRIC CONSULT AT
Jan 11,16	PSYCHIATRY CONSULT RE
Jan 11,16	SOCIAL WORK ASSESSMEN
Jan 11,16	NURSING SHIFT NOTE, THE
Jan 10,16	NURSING SHIFT NOTE, THE
Jan 10,16	CHAPLAIN'S NOTE, THEP
Jan 10,16	PNUR PROGRESS NOTE, P
Jan 10,16	PAIN MANAGEMENT/REAS
Jan 10,16	FALL RISK/PAST, 11ERM, Z
Jan 10,16	NURSING SHIFT NOTE, THE
Jan 10,16	NURSING SHIFT NOTE, THE
Jan 09,16	NURSING SHIFT NOTE, THE
Jan 09,16	NEW RESIDENT NOTE, THEP
Jan 09,16	RECREATION THERAPY AC
Jan 09,16	OCCUPATIONAL THERAPY
Jan 09,16	PAIN MANAGEMENT/REAS
Jan 09,16	FALL RISK/PAST, 11ERM, N
Jan 09,16	NURSING SHIFT NOTE, THE
Jan 09,16	PHYSICAL THERAPY NOTE
Jan 09,16	PNUR PROGRESS NOTE, P

# TIU CWAD AUTO-DEMOTION CWAD/Postings Auto-Demotion Setup

Select a CWAD/Postings TITLE for auto-demotion: FALL

- 1 FALL CLINICAL WARNING (FALL RISK) (BP) TITLE
- 2 FALL CLINICAL WARNING (FALL RISK) TITLE
- 3 FALL CLINICAL WARNING (FALL RISK) (GUI) TITLE

Std Title: FALL RISK ASSESSMENT NOTE

CHOOSE 1-3: 3 CLINICAL WARNING (FALL RISK) (GUI) TITLE

Std Title: FALL RISK ASSESSMENT NOTE

The selected CWAD/Postings title already has a TIU POST-SIGNATURE ACTION, possibly by inheritance.

It is --> D SILENT^AJEY0270(2924,3036) ;D LOCATE^AJEY0270

Do you wish to CONTINUE (and thus OVERWRITE) the Post-Signature Action?  
You can also choose to exit, which will make no changes.

Continue/overwrite? (Y/N): YES

Select a NON-Posting TITLE as the demotion target: FALL

- 1 FALL RISK/PAST TITLE
- 2 FALL PATIENT FALL TITLE

Std Title: ADVERSE EVENT NOTE

CHOOSE 1-2: 1 FALL RISK/PAST TITLE

Done. Post-Signature code has been set (or reset) as follows...

TITLE: CLINICAL WARNING (FALL RISK) (GUI)

POST-SIGNATURE ACTION: D SILENT^TIUCWD(2924,3036)

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## TIU POST-SIGNATURE ACTIONS

- ▶ Current build is version 1.4, dated Sept 12 2014
  - ▶ A version 1.5 is under consideration as more VA sites pick up the Class III program
  - ▶ v1.5 would incorporate features for the Mental Health Treatment Coordinator (MHTC) - see the upcoming use case description
- ▶ Software under review by VistA Intake Program for likely Class I VA release
  - ▶ Analyst/developer is Steve Winterton

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# TIU POST-SIGNATURE ACTIONS USE CASE

- ▶ How can we notify a patient's primary care provider (PCP) that their patient was seen in the Emergency Room?
  - ▶ Assuming there is a progress note title that is always used in ER/Urgent Care visits, notifying the PCP when that title is used is a valid surrogate marker
  - ▶ Alert recipients receive a notification based on the TIU Addendum programming
    - ▶ It is an ACTION alert in the sense that it will take you into the patient's chart
    - ▶ It is an INFORMATIONAL alert in the sense that no response is required by the notification recipient

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## TIU POST-SIGNATURE ACTIONS – ADDITIONAL DETAILS

- ▶ Similar to the Postings Auto-Demotion, Class III versions of this program require a user with “@” privileges to place code in the TIU Post-Signature Code field
  - ▶ A Class I release will not be subject to the same limitation
- ▶ Standard recipients include: Individual User, Mail Group, OE/RR Team List, PCP [calculated], Printer Device
  - ▶ The infrastructure allows other calculated user recipients if a site wants to add additional local programming
  - ▶ This is where the MHTC might be added as a part of the standard release in Class III version 1.5 or in the VistA Intake Program version

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# SCREEN CAPTURES

1. Post-Signature Code
2. Sample Alert



AJEY TIU FLAGGED PN SET      Set a Flagged Progress Note Alert

This option will assist in the generation of FLAGGED PROGRESS NOTE ALERTS  
Please select the recipients, optional IRM special coding, and an optional  
DEVICE to receive the alerted notes upon signature.

Select one of the following:

I	ONE PERSON
G	MAILGROUP
T	TEAM LIST IN OE/RR

To whom will the alert go?: I ONE PERSON

Select NEW PERSON NAME: SILVERMAN,ROBERT      RMS      11INF      PHARMACIST

Enter the (optional) name of a routine for special situations: PCP

Optional DEVICE NAME:

Post-Signature Action being set as:

D EN^AJEYTIUP(26904,"PCP","")

Now select the TIU documents to which this applies ...

Select TIU DOCUMENT DEFINITION NAME: GU OSTEOPOROSIS REFERRAL CONSULT REPLY  
TITLE

Std Title: UROLOGY CONSULT

This document already has a post-signature action, possibly by inheritance.  
It is --> D POST^TIUCNSLT(DA,"COMPLETED")  
You will have to set the code manually through FileMan.



NAME: GU OSTEOPOROSIS REFERRAL CONSULT REPLY

PRINT NAME: GU OSTEOPOROSIS REFERRAL CONSULT REPLY

TYPE: TITLE

CLASS OWNER: CLINICAL COORDINATOR

STATUS: ACTIVE

POST-SIGNATURE CODE:

D POST^TIUCNSLT(DA,"COMPLETED"),EN^AJEYTIUP(26904,"PCP","")

VHA ENTERPRISE STANDARD TITLE: UROLOGY CONSULT

MAP ATTEMPTED: DEC 29, 2006@10:37:12 MAP ATTEMPTED BY: SILVERMAN,ROBERT

TIMESTAMP: 59557,30646

MESSAGE TEXT: GXXIPDY (G9448) [8FL] (9/28/15): ADMISSION ASSESSMENT  
(NURSING) signed.

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## PROGRESS NOTE CLONING

- ▶ New PackMan created January 7th 2016
- ▶ No current plans or project for national release

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## PROGRESS NOTE CLONING – USE CASE #1

- ▶ Facility includes a fall risk assessment as part of a larger templated progress note, such as a Nursing Admission Assessment
- ▶ Policy requires the FALL RISK to be a standalone note of its own for multiple reasons, including to have a copy easily accessible as a POSTING (Clinical Warning-CWAD) note
- ▶ Progress Note Cloning allows the relevant content of the first note to automatically generate a second TIU document without additional user effort

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## PROGRESS NOTE CLONING – USE CASE #1 TECHNICAL DETAILS

- ▶ The section of the note to be cloned is 'tagged' with markers to identify the beginning and end of the content to be cloned
  - ▶ A sample beginning tag would be [FALL]
  - ▶ The ending tag is always [END\*]
  - ▶ The tags appear in column 1 of the resulting note
    - ▶ Caution: use of the INDENT feature in reminder dialog templates can disrupt this programming

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## PROGRESS NOTE CLONING – USE CASE #1 TECHNICAL DETAILS, CONTINUED

- ▶ A Post-Signature Code is added to the title(s) where the content to be cloned might exist
- ▶ The programming identifies the IEN of the destination title, the identity of the tag to be used to locate the content, and a flag of whether the resulting note should be left unsigned, or completed using the “Administrative Closure” process from VistA Imaging
- ▶ Result - user writes one note and the system creates a second TIU document with content meeting policy requirements

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## PROGRESS NOTE CLONING – USE CASE #2

- ▶ A case manager wants to create a single note containing the assessments of several specialists and other providers
- ▶ Group notes or standard TIU documents are not an option because all participants have to write the notes together in order to provide a single signature at the end
- ▶ Multiple notes can be collated into an “Interdisciplinary Note” but the final printed version has a lot of header text

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## PROGRESS NOTE CLONING – USE CASE #2, CONTINUED

- ▶ Enter Progress Note Cloning
- ▶ All of the contributing authors write their own progress notes, using a template that contains a tagged summary section which will eventually become part of the Case Manager's note
- ▶ When all of the contributing notes are written, the Case Manager writes their own note, using a template that contains OBJECTS to locate and clone in the tagged summary section of the team members' notes

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## PROGRESS NOTE CLONING – USE CASE #2, TECHNICAL DETAILS

- ▶ The programming is a Patient Data Object that knows the tag/label for the section to bring into the case management note
- ▶ TIU 'components' are used as a cross-reference (index) to help the system locate the progress note title where the summary content is to be found
- ▶ Multiple objects can be set up to represent each member of a multidisciplinary team



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# SCREEN CAPTURES

1. Note with each style in the template
2. Post-Signature Example
3. Object Example

**Reminder Dialog Template: GU--POSTOP NOTE <GU--OP NOTE>**

Was a new implantable medical device/item placed during this procedure?

☐ No

☒ Yes

===== [IMPL]

CURRENT IMPLANTABLE DEVICE/ITEM(S)	DATE RECORDED
IMPLANTABLE MEDICAL DEVICES - GENERAL	
DENTAL IMPLANT	06/03/2010
IMPLANTABLE MEDICAL DEVICES - ORTHOPEDIC	
KNEE	06/03/2010
HIP	06/03/2010
OTHER DEVICES/ITEMS	
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	11/19/2014
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	12/05/2013
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	10/12/2012
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	10/19/2011
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	09/19/2011

A new implantable medical device/item was placed/identified during this procedure/encounter.

☐ <-- Click here to document a CARDIAC implantable device

☐ <-- Click here to document a GENERAL implantable device

☐ <-- Click here to document a NEURO implantable device

☐ <-- Click here to document an ORTHOPEDIC implantable device

☐ <-- Click here to document a VASCULAR implantable device

☐ <-- Click here to document SHRAPNEL/EMBEDDED FRAGMENT/BULLET

[END\*]

Visit Info Finish Cancel



Visit Info		Finish	Cancel
[IMPL]			
CURRENT IMPLANTABLE DEVICE/ITEM(S)	DATE RECORDED		
IMPLANTABLE MEDICAL DEVICES - GENERAL			
DENTAL IMPLANT	06/03/2010		
IMPLANTABLE MEDICAL DEVICES - ORTHOPEDIC			
KNEE	06/03/2010		
HIP	06/03/2010		
OTHER DEVICES/ITEMS			
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	11/19/2014		
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	12/05/2013		
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	10/12/2012		
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	10/19/2011		
NO NEW IMPLANTABLE MEDICAL DEVICES/ITEMS	09/19/2011		
A new implantable medical device/item was placed/identified during this procedure/encounter.			
[END*]			
<No encounter information entered>			
* Indicates a Required Field			

NAME: GU--POSTOP NOTE <GU--OP NOTE>      PRINT NAME: GU--POSTOP NOTE  
TYPE: TITLE      CLASS OWNER: CLINICAL COORDINATOR  
STATUS: ACTIVE  
POST-SIGNATURE CODE: D CLONE^AJEYCLO2(DA,DFN,"IMPL",3528)  
VHA ENTERPRISE STANDARD TITLE: UROLOGY POST OPERATIVE E & M NOTE  
MAP ATTEMPTED: DEC 29, 2006@10:58:39      MAP ATTEMPTED BY: SILVERMAN,ROBERT  
TIMESTAMP: 59092,45390

Select TIU DOCUMENT DEFINITION NAME: `3528      IMPLANTABLE DEVICE(S)      TITLE  
Std Title: CLINICAL WARNING

**Title: TBI/POLYTRAUMA REHAB/ REINTEGRATION (SW/ CASE MANAGER)**

PATIENT AND FAMILY GOALS:  
 [TSW1]  
 \*  
 [END\*]

SUMMARY OF INTERDISCIPLINARY TREATMENT (IDT) EVALUATIONS:  
 [TSW2]  
 \*  
 [END\*]

INTERDISCIPLINARY TREATMENT GOALS:  
 [TSW3]  
 \*  
 [END\*]

REHABILITATION AND REINTEGRATION PLAN:

\* Indicates a Required Field      Preview      OK      Cancel

NAME: TBI SW 1

TYPE: OBJECT

STATUS: ACTIVE

OBJECT METHOD: S X=\$\$CLONEOBJ^AJEYCLO1 (DFN, "^TMP (\$J, " "AJEY" " ) ", "TSW1" )

TIMESTAMP: 61984,29422

PRINT NAME: TBI SW 1

CLASS OWNER: CLINICAL COORDINATOR

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## ALERTS TO PAGERS

- ▶ Most recent RobWare build is December 12 2013
  - ▶ requires one modification to ^ORB3
- ▶ Region 1 has a modified version written by Kevin DeZorzi that uses a tasked job running every 5 minutes to overcome the need for modifications to Class I code
  - ▶ R1 approach will eventually become the only supported version of this program

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## ALERTS TO PAGERS – USE CASE

- ▶ The program was originally written to notify a provider, such as a respiratory therapist, of the New Consult alert
- ▶ Idea is to prevent the RT from being on the 10th floor of the hospital building, going back to the basement office, only to learn of another patient to be seen on the 11th floor
- ▶ Alerts to Pagers is a misnomer; the program is really "SMS-to-email using VistA MailMan to deliver notification of a new orderable item filed into a patient's record"

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## ALERTS TO PAGERS – USE CASE, CONTINUED

- ▶ Region 1 modified the program as noted before when implementing alerts for new antibiotic orders in the treatment of sepsis
- ▶ The goal here is to reduce the order-to-dispensing time and to provide an assist for orders that are genuinely "STAT"



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# ALERTS TO PAGERS – TECHNICAL DETAILS

- ▶ A VistA file holds ORDERABLE ITEMS at the top level
  - ▶ Next level holds email addresses for the mobile devices, such as [AAAPPPNNNN@mobilecarrier.ext](mailto:AAAPPPNNNN@mobilecarrier.ext)
  - ▶ Different recipients can be defined at the location level
  - ▶ A default recipient can be defined
  - ▶ The default can be identified as a supervisor, to determine whether or not to also sent to that recipient when a location-specific recipient is or isn't known
- ▶ In order to follow HIPAA privacy rules, the actual information sent is minimal, typically the orderable item, location, and in lieu of PHI patient identifiers, a DFN is used to identify the patient. This number can then be used in `DFN format to select the patient in a VistA terminal session.



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# SCREEN CAPTURE

## ▶ Mockup of received email

FROM: POSTMASTER@VISTA.HINES.MED.VA.GOV  
SUBJECT: New Consult Alert

Consult ordered for patient: `16347  
Type: PT REFERRAL  
Location: 11 WEST

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## CPRS POP-UP MESSAGES

- ▶ Original version written at Hines VA Hospital
- ▶ Region 1 enhanced the program (see technical details) and now has a Class II version
- ▶ The Class II version is the recommended (supported?) version due to the improved extensibility of the R1 approach

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## CPRS POP-UP MESSAGES – USE CASES

- ▶ Program started as the equivalent of a sticky note (think a piece of 3M yellow note paper) on the outside of an inpatient's hard chart
  - ▶ A short one-line message could be associated with a given chart, using a simple file based on associating patients and text messages
- ▶ The program grew to support many versions of messages

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## CPRS POP-UP MESSAGES – USE CASES

- ▶ The most popular pop-up message types include:
  - ▶ Observation Clock: remind providers of the 48-hour rules on an observation patient
  - ▶ Vesting status: remind providers when a patient requires a vesting visit
  - ▶ MRSA: collaboration with Durham VAMC to identify patients with positive MRSA results for isolation tracking

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## CPRS POP-UP MESSAGES – USE CASES

- ▶ Other useful, but less common examples:
  - ▶ Transgender patient: Address as Female
    - ▶ The Category I Patient Record Flag for this purpose is limited by design to a single, specific Veteran
  - ▶ Broadcast announcements:
    - ▶ Hines Hospital doesn't have an overhead paging system; this allows announcements to all users similar to how Linux/VMS administrators can announce a pending shutdown to terminal sessions

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## CPRS POP-UP MESSAGES – TECHNICAL DETAILS

- ▶ Routine and RPC LEGACY^ORWPT knows to look for additional 'Patient Lookup Messages' in the A7R\* namespace from when VistA systems were being integrated in the late 90's and early 2000's
- ▶ Routine A7RDPAGU has been given a nationally released modification to also look in routine AJEY7GUI
- ▶ Routine AJEY7GUI collects pop-up message content (recommended limit 5-6 lines, 60 characters wide) to add to the return array of the RPC

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## CPRS POP-UP MESSAGES – TECHNICAL DETAILS

- ▶ Region 1's enhancement creates a file of possible pop-up message flags
- ▶ The flags can execute screen-type code to determine if a patient should or shouldn't have the flag message displayed (also defined in a file)
- ▶ Facilities can create new pop-up modules via additions to the file without further modifications to the MUMPS routines

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# SCREEN CAPTURES

1. Menu from laptop account
2. Observation clock



PAT	EDIT PATIENT FLAG
ADD	EDIT TEMPORARY ADDRESS
FLAG	EDIT FLAG
CODE	CPRS Pop-up Text Edit
LOC	EDIT LOCAL NOTICE
PRT	PRINT CPT AND PROVIDER TYPE CODES FOR VESTING
VEST	EDIT CPRS POPUP VESTING

<CPM> Select POPUP FLAG MAIN MENU <TEST ACCOUNT> Option:

