DFengage 2.6 Training

ePRO with DFdiscover

Last updated: 22Oct2026

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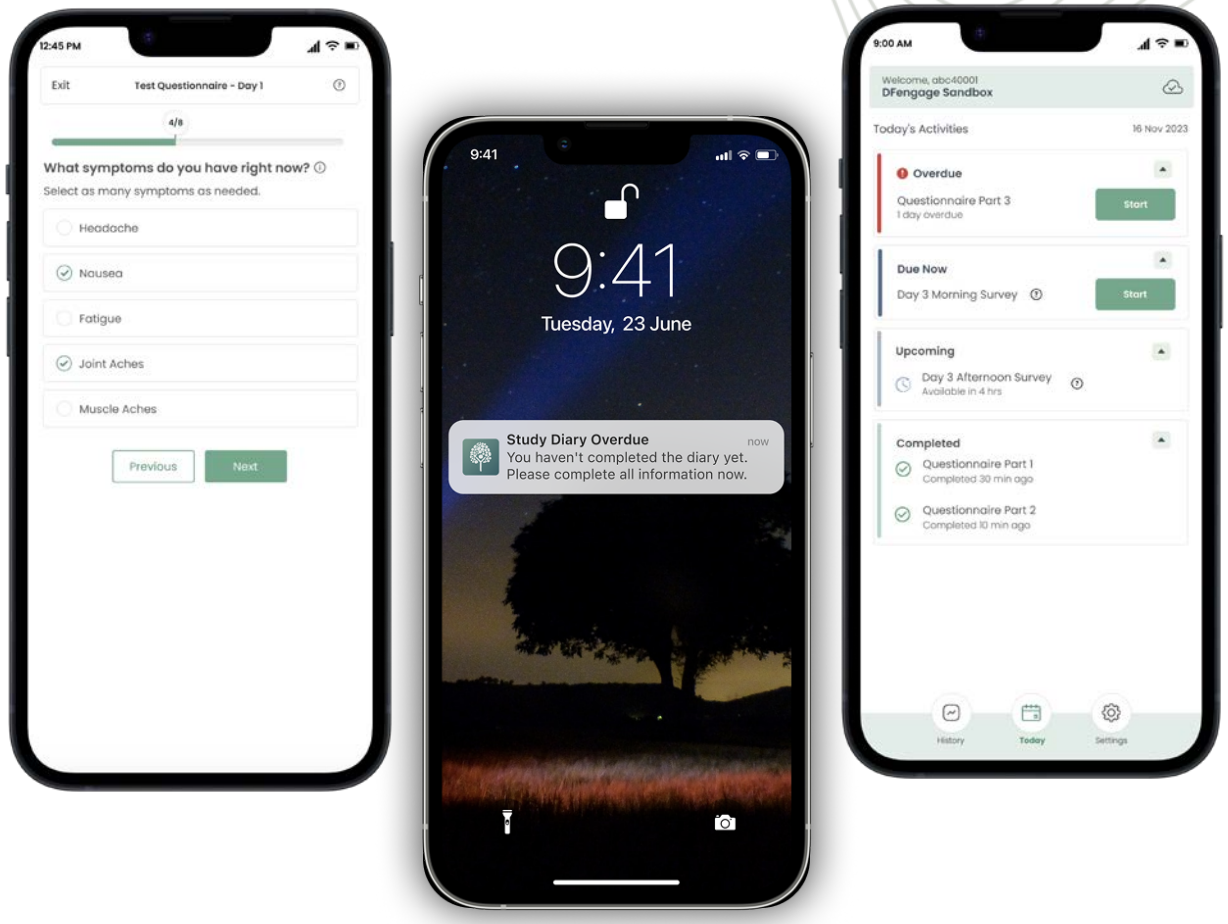
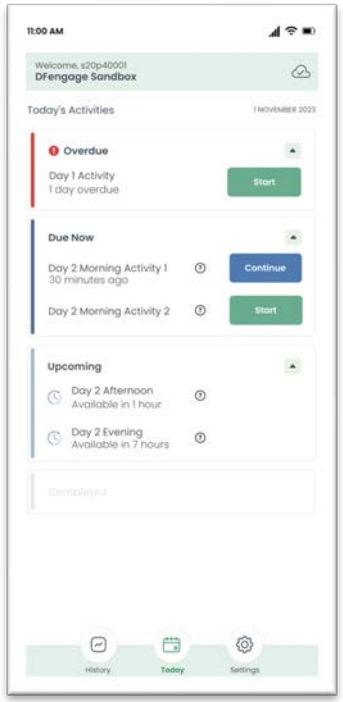
Introduction to DFengage

Enhance Participant Engagement with **DFengage ePRO**

- Easy-to-use app for research participants
- Collect symptoms, daily outcomes, questionnaires, study diaries, surveys
- Participants enter data from any device
  - In their chosen language
  - From anywhere – online or offline
- Real-time study team access to completed data
- Reduce in-person and phone visits
- Available on the web & as a mobile app on Android and iOS
- Fully integrated with DFdiscover system



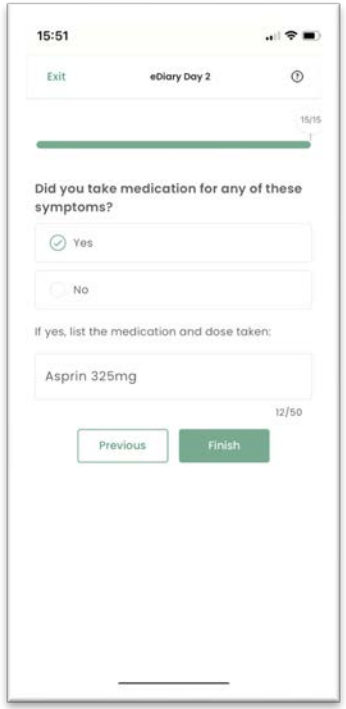
Capture ePRO data with **DFengage**

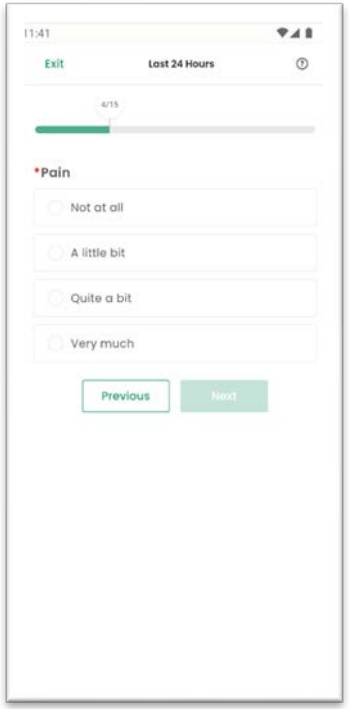


Study activities defined per protocol

Notification sent for new and overdue activities



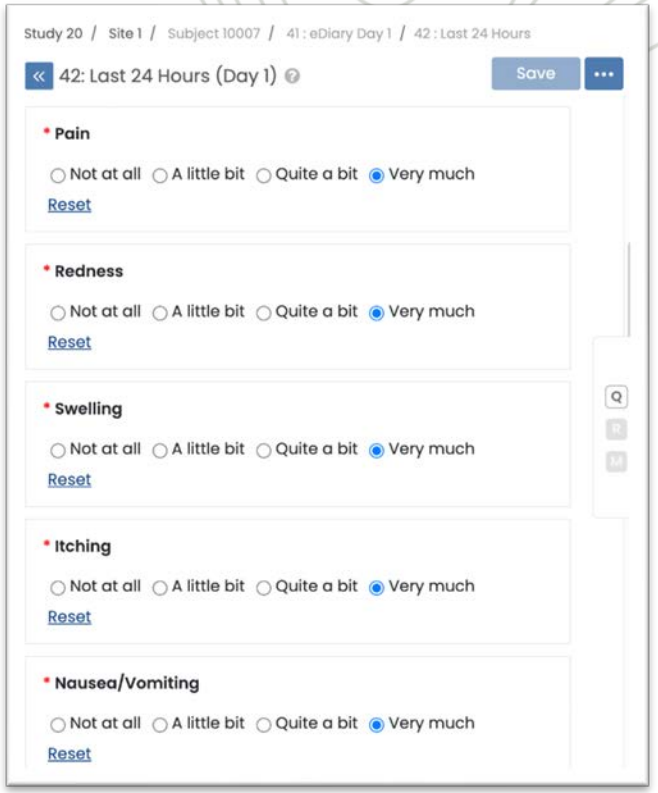




One question per screen for ease of completion.

All data types supported. Help information may be defined.

Activities can be completed online or offline.



Data available in DFexplore / DFweb / DFcollect after syncing

DFengage: ePRO with DFdiscover

- **ePRO app** fully integrated with **DFdiscover** system and **EDC** apps
- Available as a **mobile app** (iOS/Android) and **on the web**
- Study participants complete activities defined by the research team
- **Instant access** to synced ePRO data in DFexplore, DFweb, DFcollect
- **Email and push notifications** for new and overdue activities
- **Offline support** for notifications and activities (mobile app only)
- Multi-language support
- One study database definition in DFdiscover
- Mid-study changes are synced when opening DFengage online

MOBILE

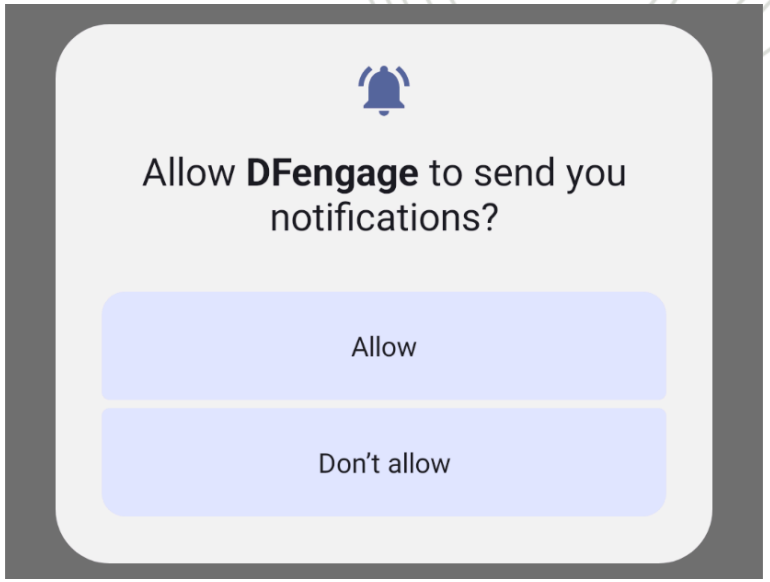
DFengage: Works Online and Offline

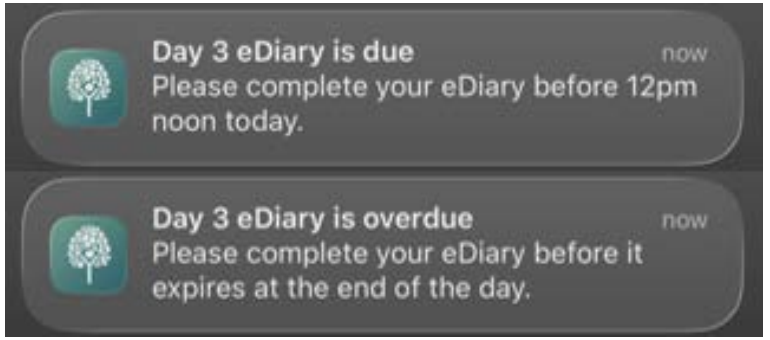
- Online
  - When online, once user clicks “Finish”, data for that activity is sent to DFdiscover via API and removed from the app
  - Any scheduling updates or mid-study changes are synced with DFengage
- Offline
  - Setup and visit schedule information is stored in the app on device so that activities can be completed while offline
  - Notifications are sent while offline according to schedule from last sync
  - Once back online with app open and active, the data is synced with DFdiscover and removed from device

MOBILE

DFengage Mobile: Timing and Notifications

- Activities available based on participant visit schedule
  - Flexible notification timing options
  - Supports multiple notifications per visit
  - Generic or custom notification content
- By default, activities are available at 8:00am device time on their due date, but can be customized per visit
  - Custom visit timing supports multiple activities per day
- Timing is based on user's device time
- In case of time zone changes:
  - Notifications are sent according to the device's time zone when DFengage was last open
  - Will revert to new time zone moving forward once DFengage is open

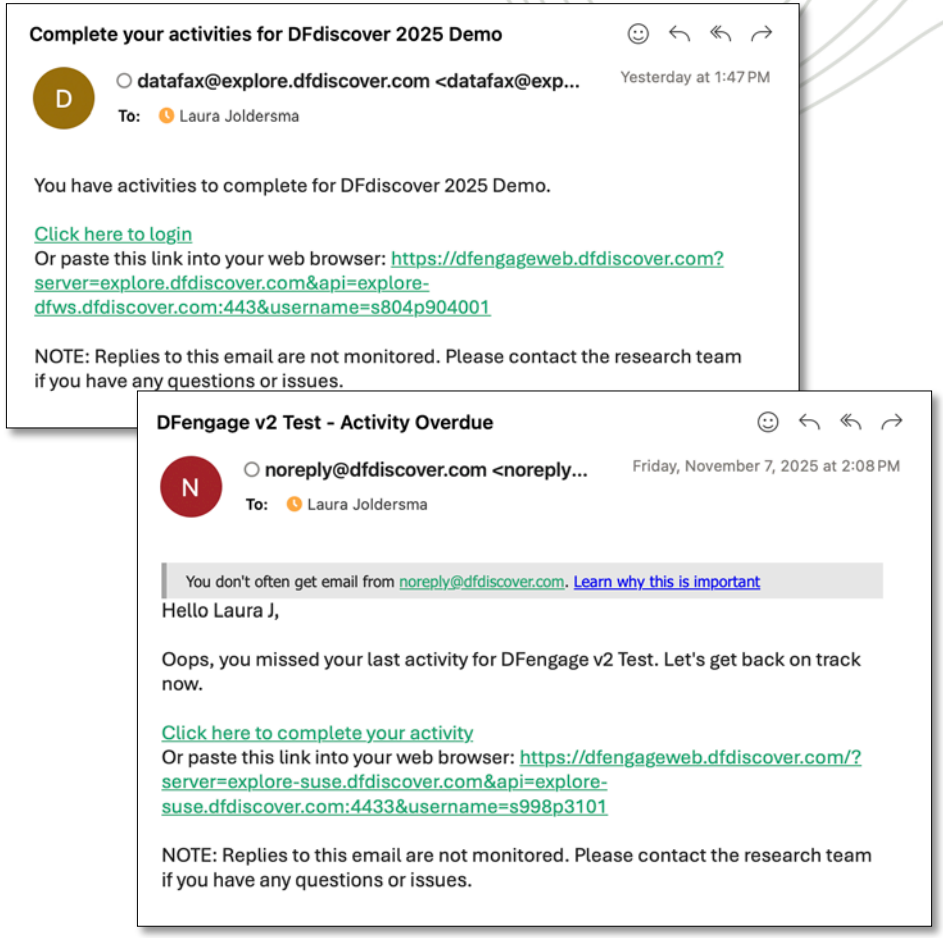




WEB

DFengage Web: Timing and Notifications

- Activities available based on participant visit schedule
  - Same as mobile app
- **Activity notifications sent via email**
  - Reminders sent based on server time (not user's device time) and participant schedule
  - Subject must be registered with email address on DFweb ePRO management page
  - Reminder email text can be customized
  - No push notifications available in the web app
  - Web reminder emails can be sent by site on demand



DFengage: Security & Personal Data

Security

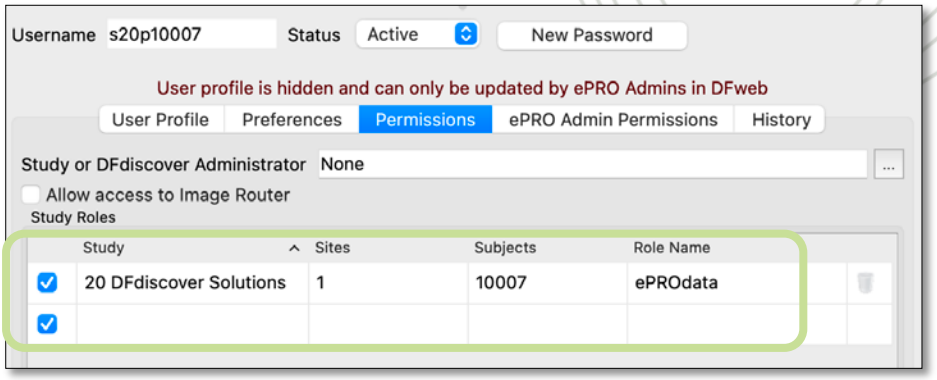
- Unique user account with username and password required for each participant
- No geolocation data stored in DFengage
- Only study responses are collected from participant
- Data encrypted locally on the device and in transit
- Data not retained on the device/browser
  - Mobile: No study data remains on the device after syncing
  - Web: No study data remains on the device after logging out

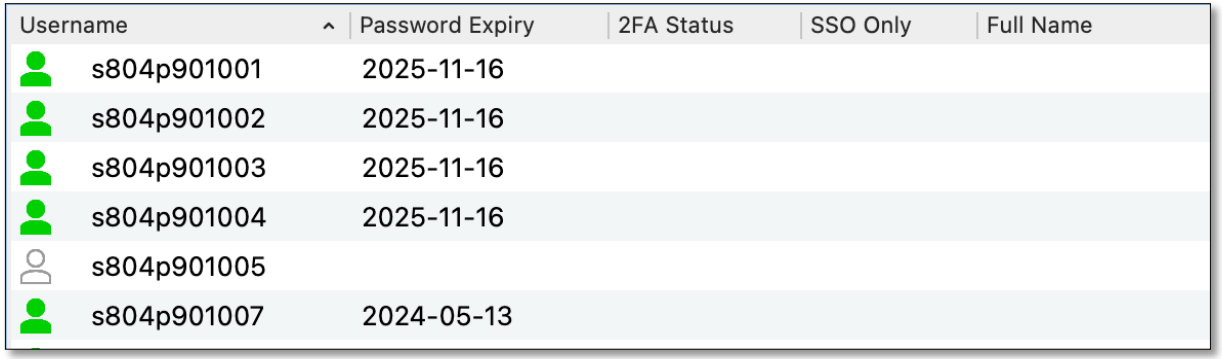
Personally Identifiable Information (PII)

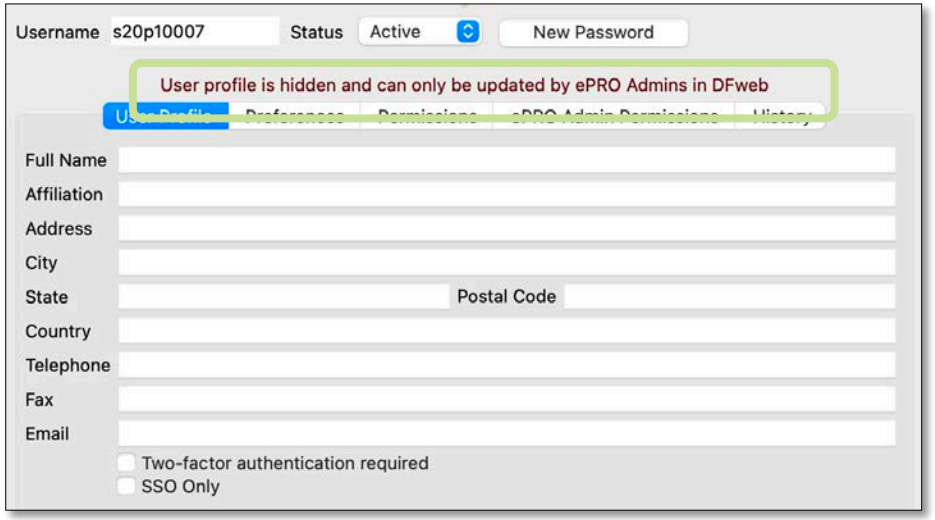
- Database records identified by subject ID
- Audit trail tracked by username
- PII used to support account setup, forgot password, two-factor authentication, and email reminders
- PII stored securely in DFdiscover and only accessible to authorized personnel
  - User-based access to participant PII
  - User profile inaccessible to system and study admins
  - User profile data encrypted in transit and at rest

DFengage: ePRO User Accounts

- Unique username and password for each participant with generic usernames
- One-to-one correspondence between DFadmin user and study participant
- Study administrator creates unique ePRO user accounts in DFadmin
- Staff working directly with participants use **ePRO Management** tool in DFweb for registration





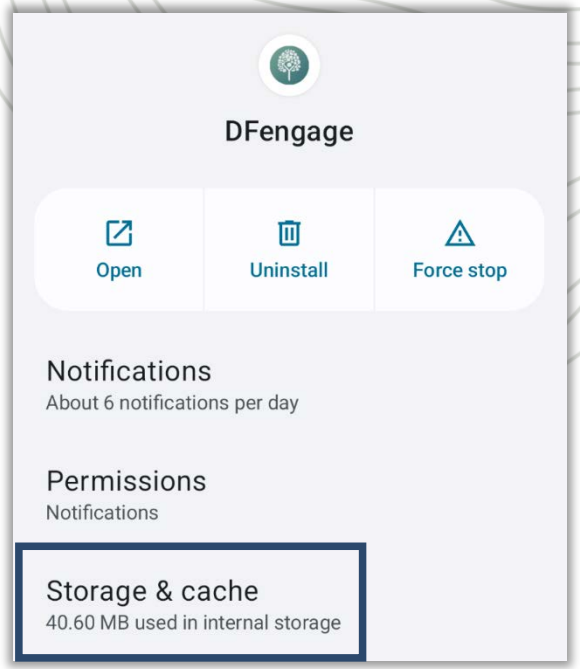


MOBILE

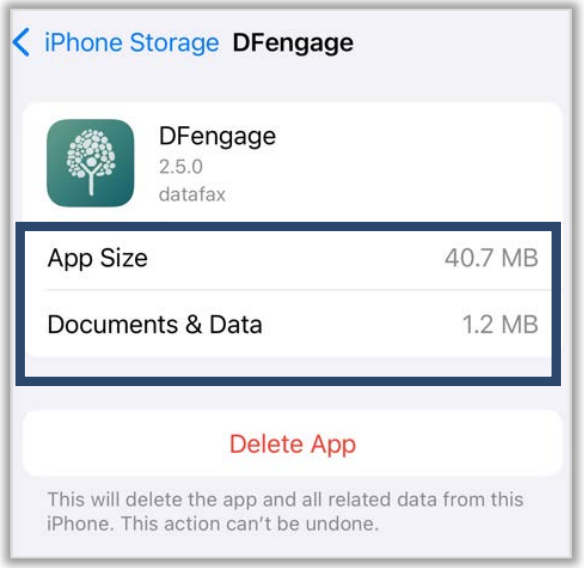
DFengage: Data Usage and Storage

- App does not consume data while swiped away or closed
- Data is consumed while participant is completing activities and when data is synced
- DFengage uses less storage space than commonly used apps
  - Social media, photos, and music take most space on phone or tablet
  - Larger studies will take up more storage

Android (Pixel 4): 41 MB



iPhone: 45 MB



DFengage 2.6

What’s New

NEW IN 2.6

What’s new in DFengage 2.6

- **Study Logo**

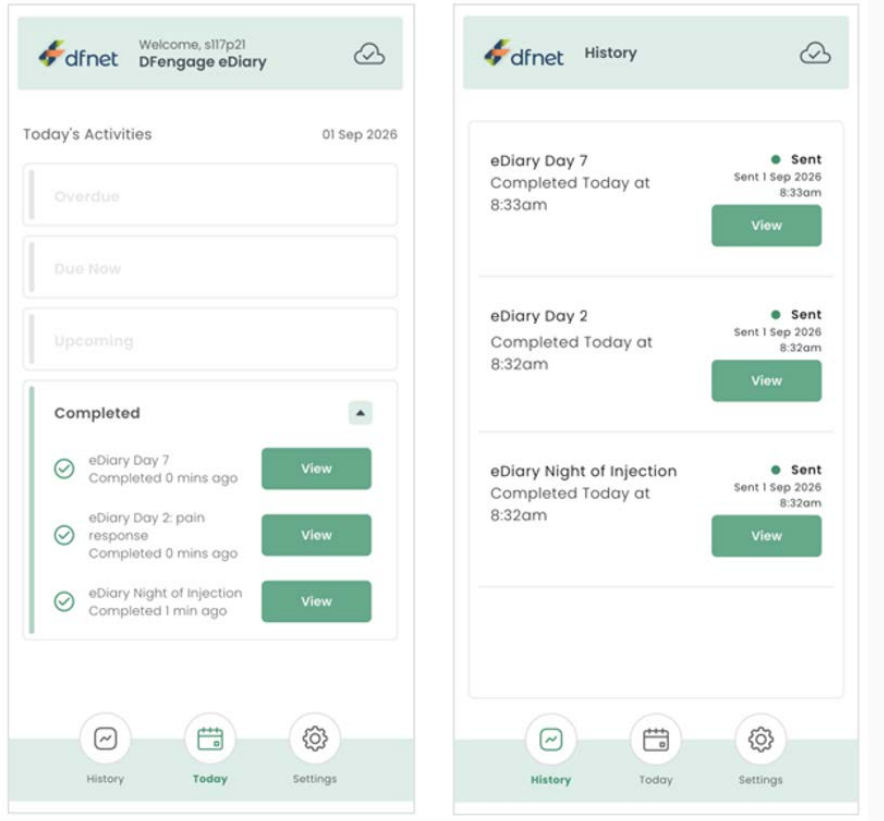
  Create a more recognizable participant experience by displaying your study or organization logo directly in the DFengage header

- **Auto-Navigate Activities**

  Participants navigate directly to their activities automatically, bypassing the Today page, when enabled for a study, to reduce clicks and guide participants through their activities

- **Change Study Language from Settings**

  Participants can now change their study language directly from the Settings page without logging out and starting again



See **Release Notes** for complete details

NEW IN 2.6

Additional DFengage 2.6 Updates

- DFengage web now asks for a 2FA code on each new browser from which users sign in, when 2FA is enabled for that user
  - After upgrading, users may be asked to re-enter their security code once
  - Browsers already verified won’t ask for a security code again until verification expires
- Improvements to invite and login access links with DFengage mobile
- Usability and reliability updates around number response entry, time picker behavior, Enter and Done key behavior, activity pages on Android devices with 3-button navigation, and more

Upgrade Process for DFengage

DFengage mobile app

- On release, update becomes available in the app stores for Android and iOS
- Once available in the app stores, existing users will receive the update according to their device settings
  - Auto-update enabled: Update received automatically from app store
  - Auto-update disabled: Manually update from app store

DFengage web app

- DFnet instance will update to the newest version after the release
- Organizations with their own DFengage web instance will upgrade on their own schedule
- No action required by end users – existing links will continue working as usual

Additional Resources

DFengage 2.6 Release Notes

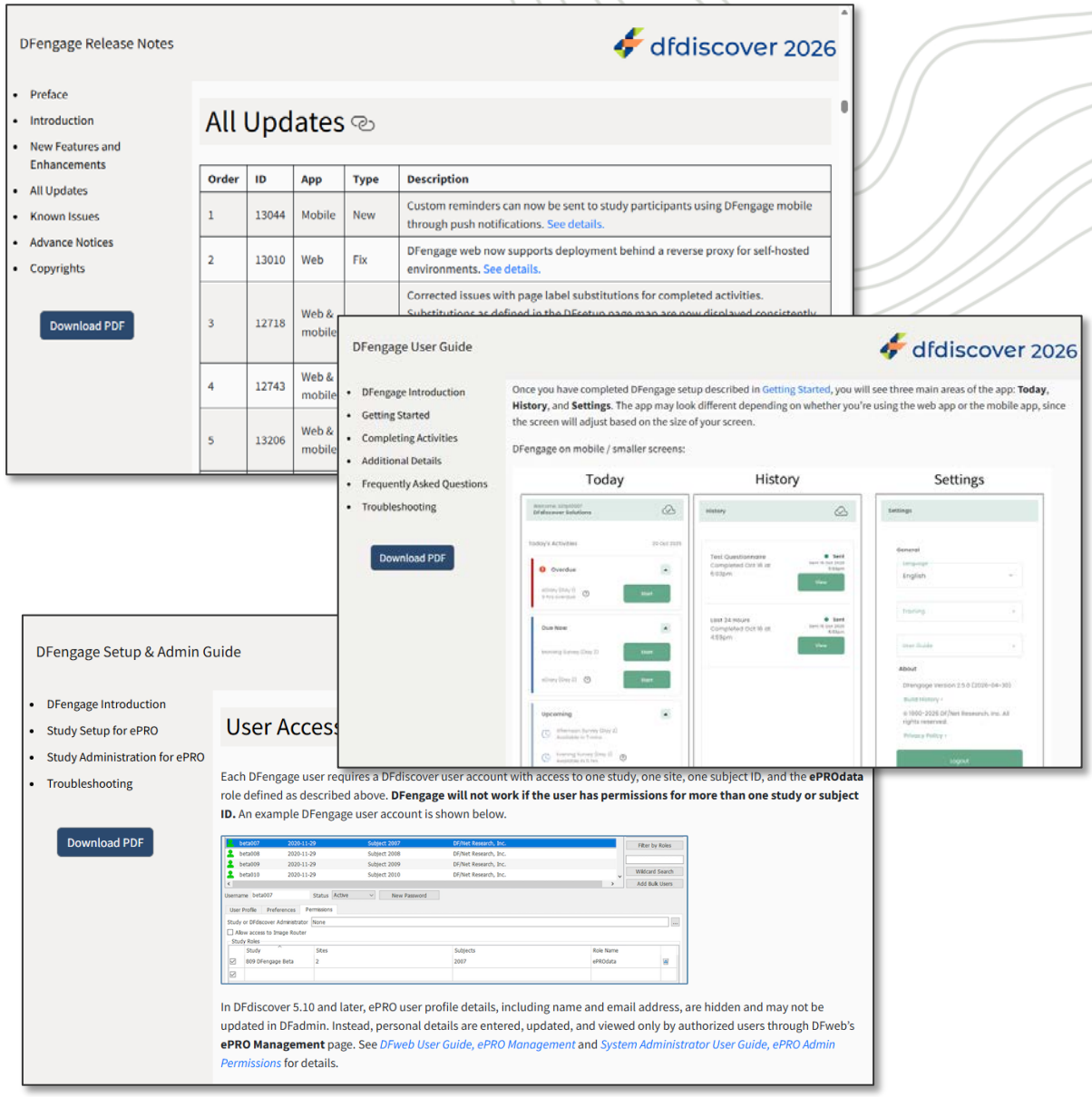
- Details of changes since DFengage 2.5

DFengage User Guide

- Details for end users of DFengage

DFengage Setup & Admin Guide

- Details for study teams implementing DFengage in their studies



A note about these materials

- These slides cover how to use DFengage when using the mobile app (installed on a tablet or smartphone) or web app (accessed through a browser)
- Some instructions are the same on mobile and web; some are different
- Information specific to mobile or web are noted using the cards below:

  MOBILE

  WEB

- If you are using mobile or web only in your study, adapt these slides as needed by removing instructions for the modality you are not using

Getting Started with DFengage

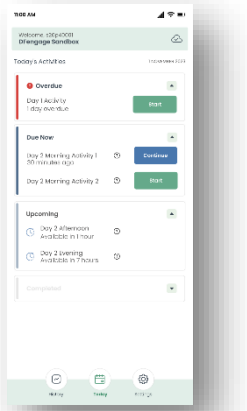
For Study Teams & Site Staff

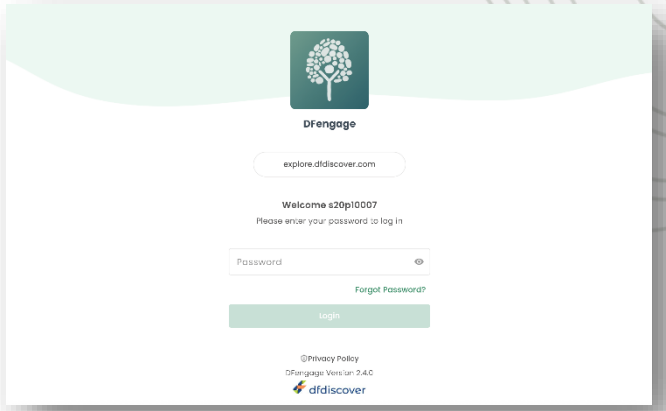
DFengage Mobile vs. Web

Key functionality is the same between web and mobile, with a few differences:

Feature	DFengage mobile	DFengage web
Complete scheduled activities online	✓	✓
Complete scheduled activities offline	✓	✗ internet connection required
Set PIN for easy login	✓	✗ password required for each login
Streamlined invitation workflow	✓	✓
Forgot password & two-factor authentication	✓	✓
Offline notifications	✓	✗ notifications sent via email
Push notifications	✓ no email required	✗ notifications sent via email
Custom push notifications	✓ ePRO notifications in DFsetup	✗
Notifications in participant's local time	✓ sent using device time zone	✗ sent using server time zone
View history of completed activities	✓	✓
Unique ePRO accounts	✓	✓
Accessible via web browser	✗ requires app installation	✓
Requires installation on a phone/tablet	✓	✗ no installation required

Considerations for Mobile vs. Web





Mobile best when:

- Activities are frequent (e.g., daily surveys)
- Internet connection not always available
- Simpler access with PIN (vs. password)
- Push notifications help increase patient engagement

Web best when:

- Activities are infrequent (e.g., once; every few months)
- No internet connectivity limits
- Preference not to install an app
- Email-based reminders sufficient for patient engagement

Streamlined Login

ePRO Onboarding Flow for In-Person Participants

1. Site registers participant with email address and shares invite link/QR code



2. Participant opens link or scans QR code to open DFengage on their device



Non-expiring, non-secure link

3. Participant confirms email address



4. Participant receives new password email and clicks link



Secure, expiring link

5. Participant sets new password and logs in to DFengage



Streamlined Login

ePRO Onboarding Flow for Remote Participants

1. Site registers participant with email address and sends invitation email



2. Participant receives email and clicks invitation link



Non-expiring, non-secure link

3. Participant confirms email address



4. Participant receives new password email and clicks link



Secure, expiring link

5. Participant sets new password and logs in to DFengage

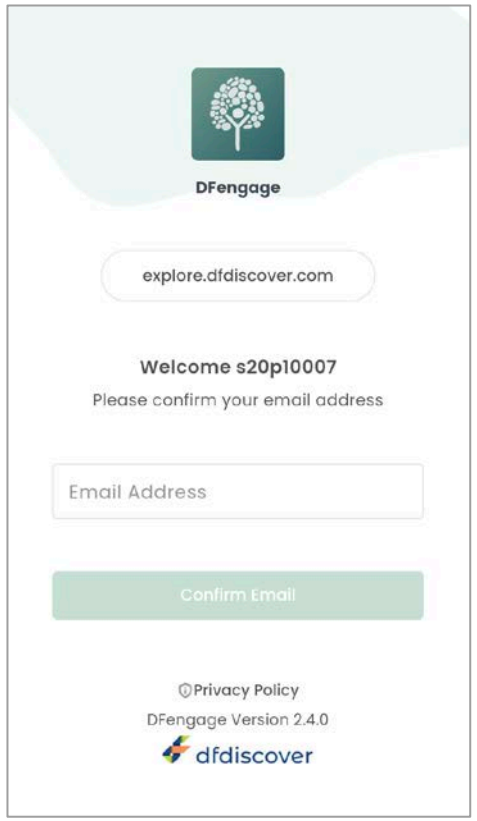


Streamlined Login

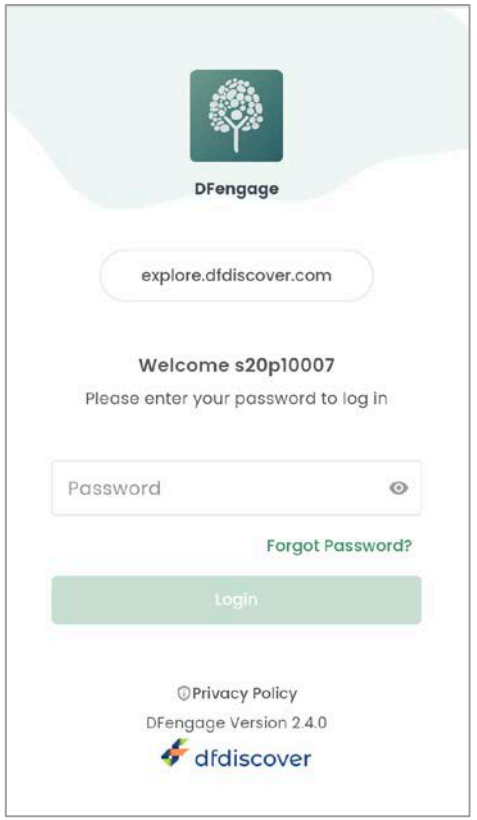
Access Links for DFengage Web & Mobile

Simplifying DFengage login

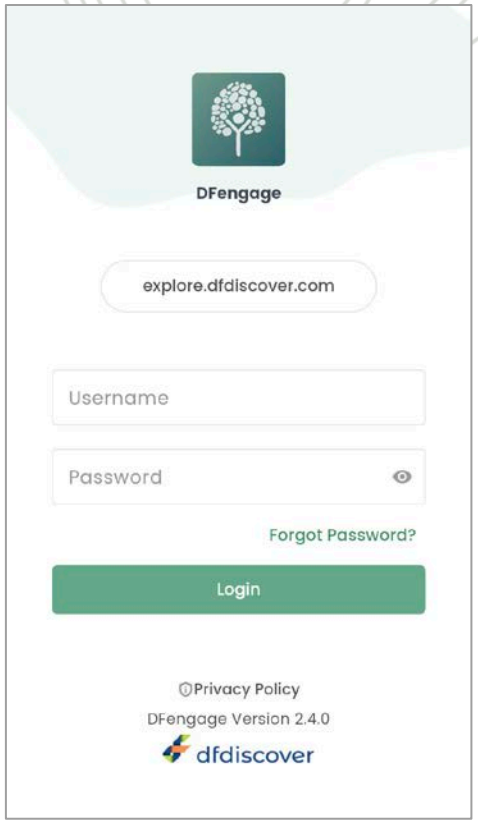
- Subject-specific **invite** and **login** links
- Server-specific link requires both username and password
- Non-expiring
- Password always required for login



*From **subject-specific invite** link*



*From **subject-specific login** link*



*From **server-specific** link*

Access Links Details

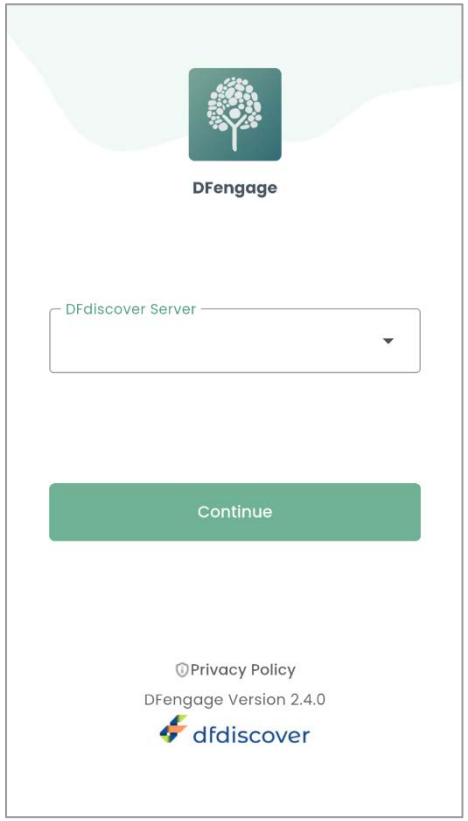
- When to use which link:
  - **Invite** = participant has not yet confirmed their email address or set a password
  - **Login** = participant knows their password but needs the link to access their activities on the web, or needs to set up DFengage mobile on a new device
  - **Server-specific** = generic link for any participant, requires username to be entered
  - These are non-expiring links (not secure, no expiry)
- Default links using **dfengage.dfdiscover.com** provide flexibility for web & mobile:
  - Directs to mobile app on a supported phone or tablet
  - Otherwise, directs to DFengage web
- Learn more about access links in the DFengage Setup & Admin Guide

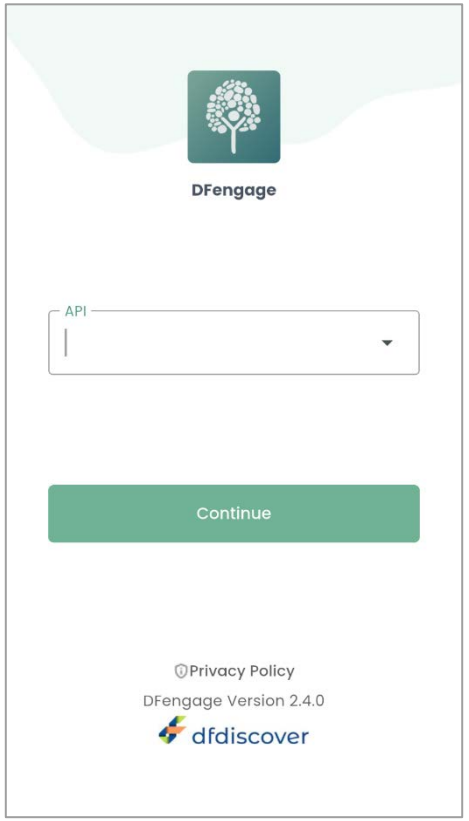
Login without Access Links

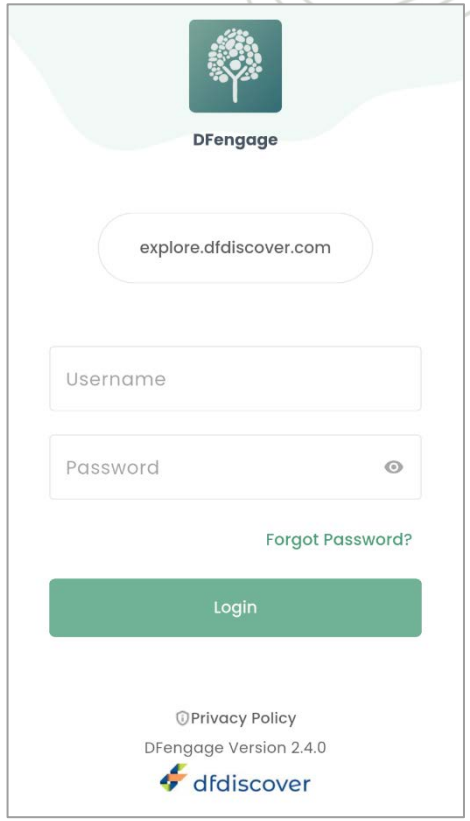
*1. Enter **server*** → *2. Enter **API** (may be skipped)* → *3. Enter **username** and **password***

Without an access link, server & API are not known to DFengage

- Server is required
- API may be skipped if provided by the DFdiscover server
- Both username & password required to login







Getting Started with DFengage

For Study Participants

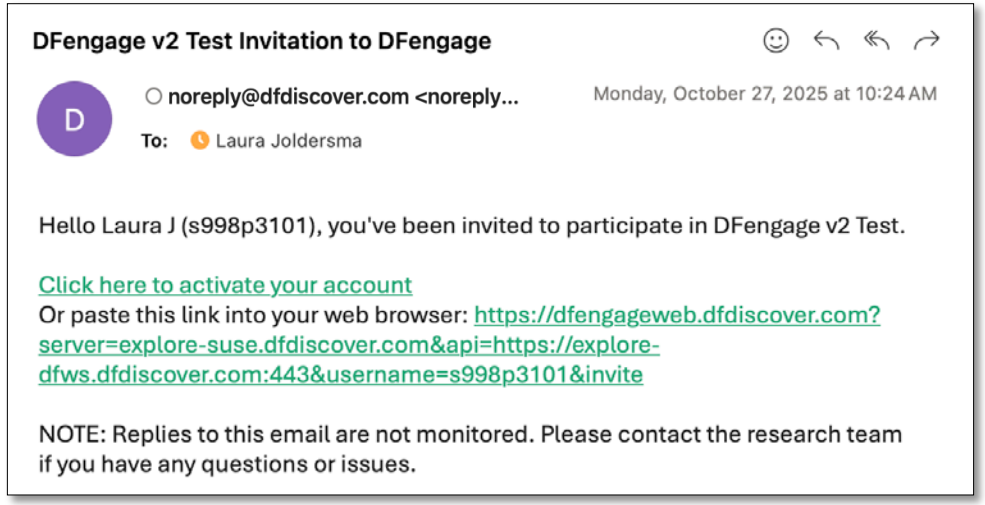
Follow instructions provided by research team

The research team will provide you with information needed to access DFengage

- An invitation email with a link to open DFengage mobile or DFengage web
- A link or QR code to access DFengage on the web
- A link or QR code to set up DFengage on your mobile device



Example invite link & QR code



Example invitation email

dfnet

Getting Started with DFengage Mobile

MOBILE

Step 1: Install DFengage

iPhone/iPad

Available from Apple App Store

iOS/iPadOS 15.0 or newer required

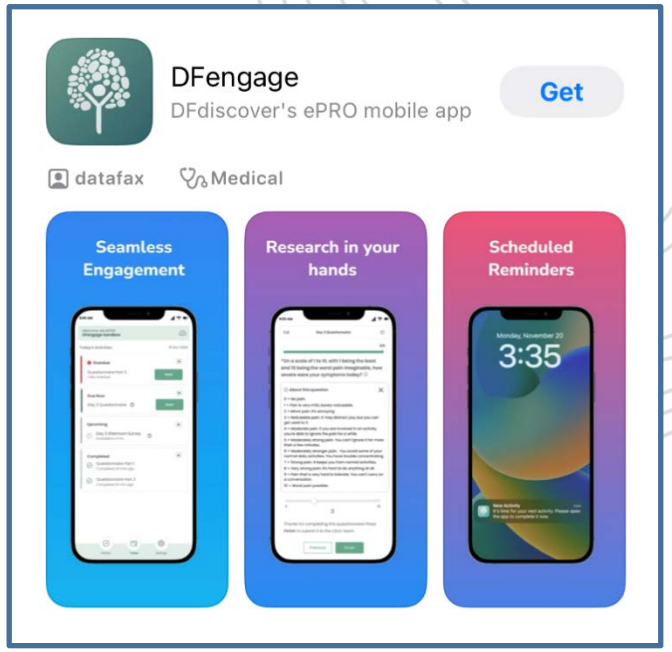
Download on the App Store

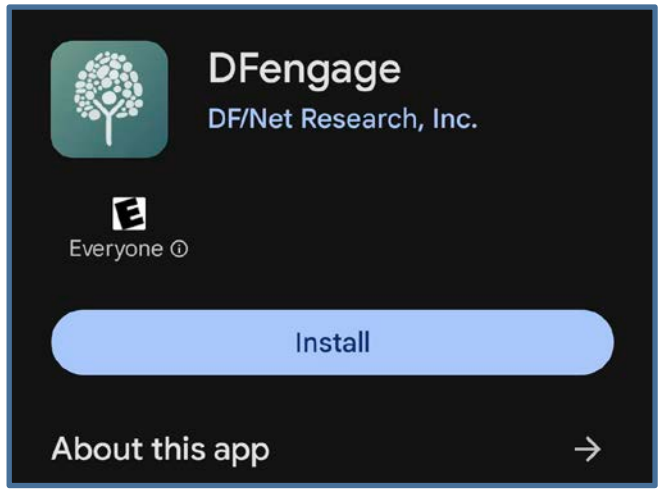
Android

Available from Google Play Store

Android 8.0 or newer required

GET IT ON Google Play





The research team may also give you a special QR code or link to use

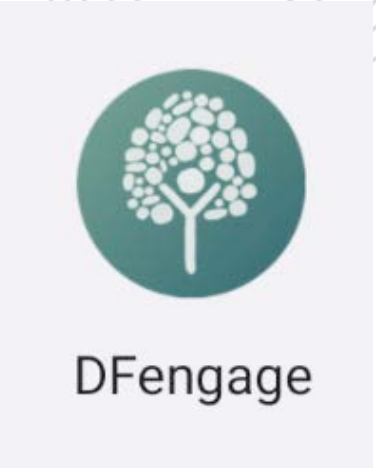
MOBILE

Step 2: Open DFengage

- Once installed, open DFengage:
  - Tapping “Open” from the app store
  - Find and tap the DFengage icon on your phone screen or in your apps list
  - Click the special link provided by the research team
- Default interface language is **English** but DFengage will switch to **French** or **Spanish** based on your device language setting



iPhone



Android

MOBILE

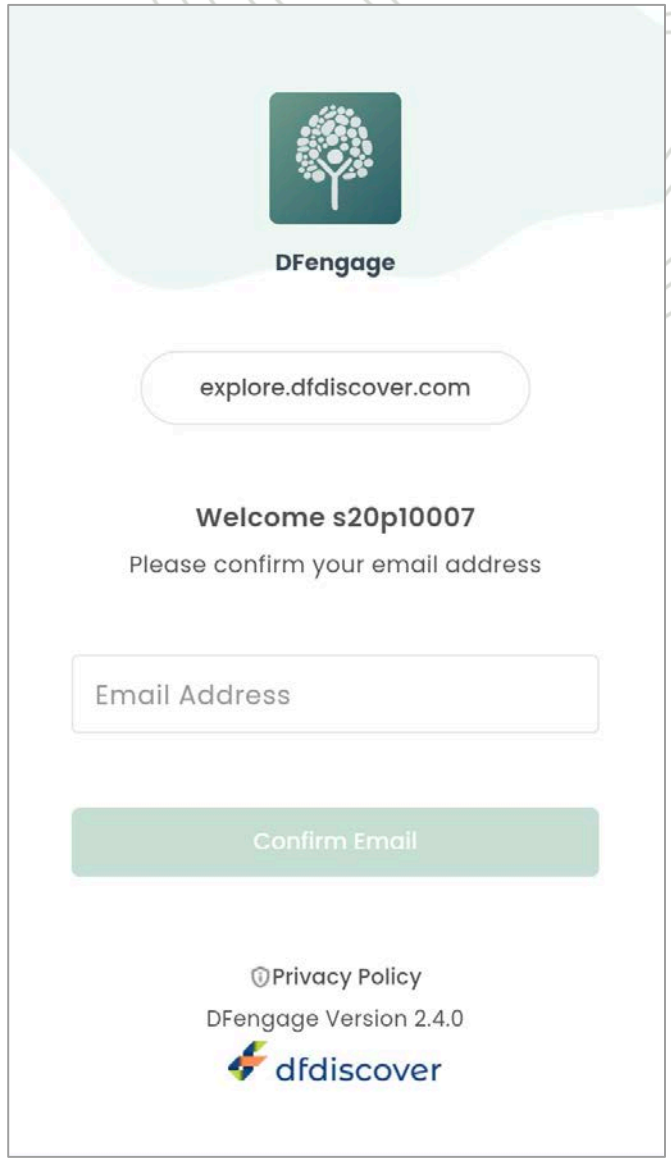
Step 2: Open DFengage

- Introduction screen gives app overview over 4 pages
- Screen scrolls automatically through 4 pages, or swipe to scroll manually
- Tap **Get Started** to continue to login page
- The introduction screen will not show again after tapping Get Started



Step 3: Confirm your email address

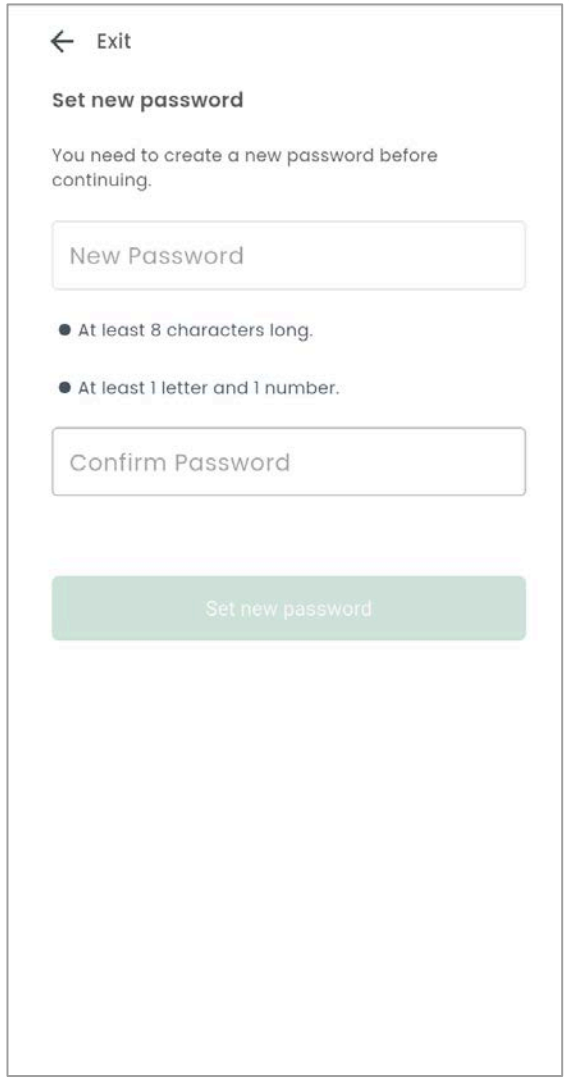
- This step confirms your registration
- Enter your email address provided to the research team
- Click **Confirm Email**
- This will verify your account and send you a link to set your password
- Find the email with subject line **DFdiscover password reset** and click the link in it

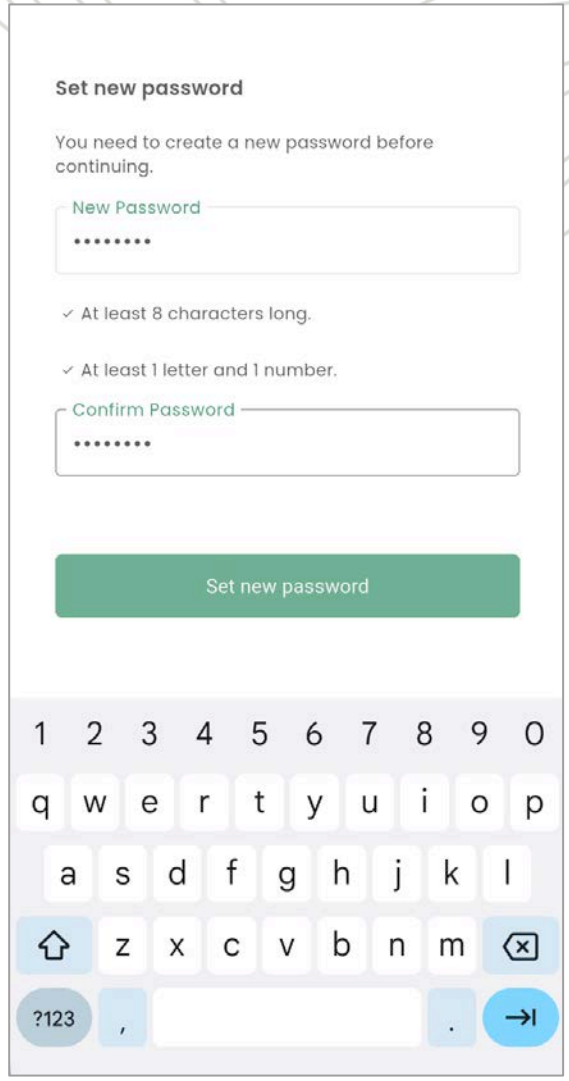


Step 4: Set new password

- Create a new password that only you know
- Follow any instructions shown for password length and complexity
- Enter the password a second time to confirm it
- Remember your password for future logins
- Press **Set New Password**
- You will be logged into DFengage with your new password

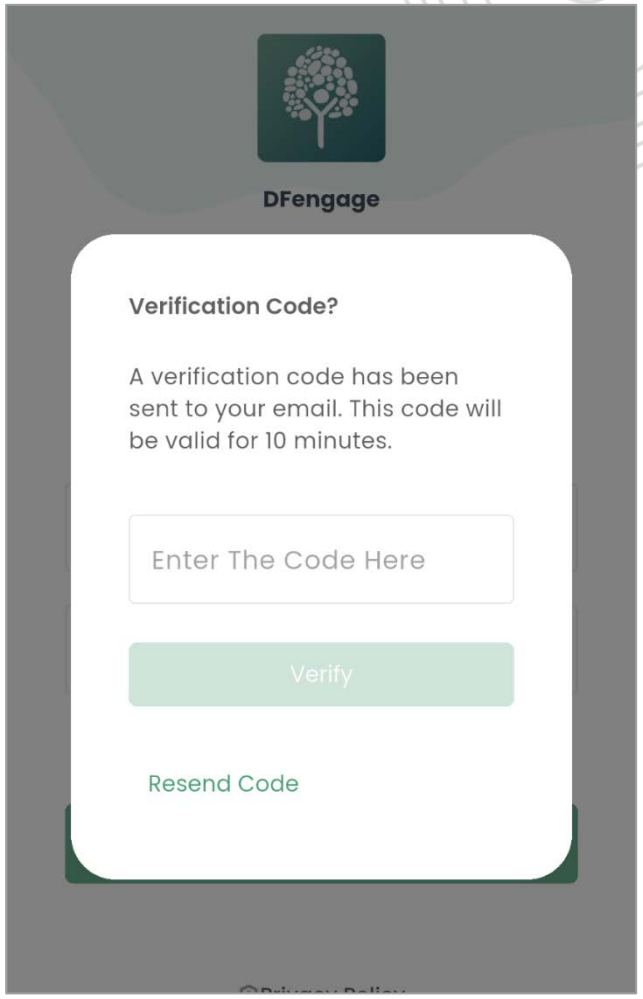
Note: This step will repeat later if your password expires during the study or if you request a password reset





Step 5: Two-factor authentication *(optional)*

- You may be prompted to provide a verification code after logging in with your password
- Find the email with subject line **Security Code for explore.dfdiscover.com**
  - NOTE: The subject line may have a different server name in place of “explore.dfdiscover.com”
- Return to DFengage and enter the code provided, then click **Verify**
- If the code expires, click **Resend Code** to get a new one

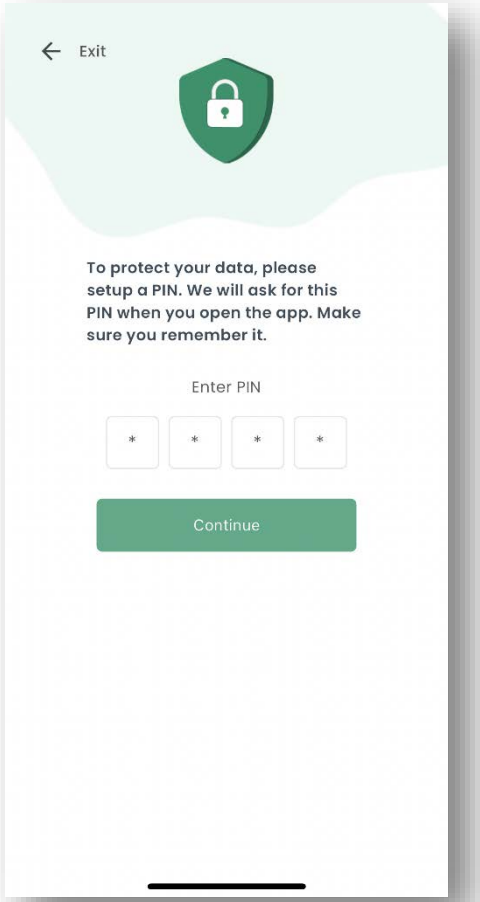


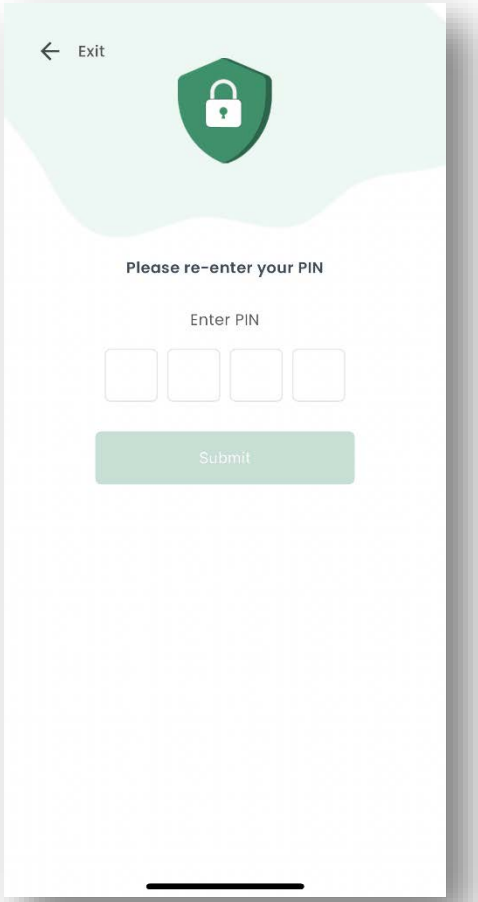
MOBILE

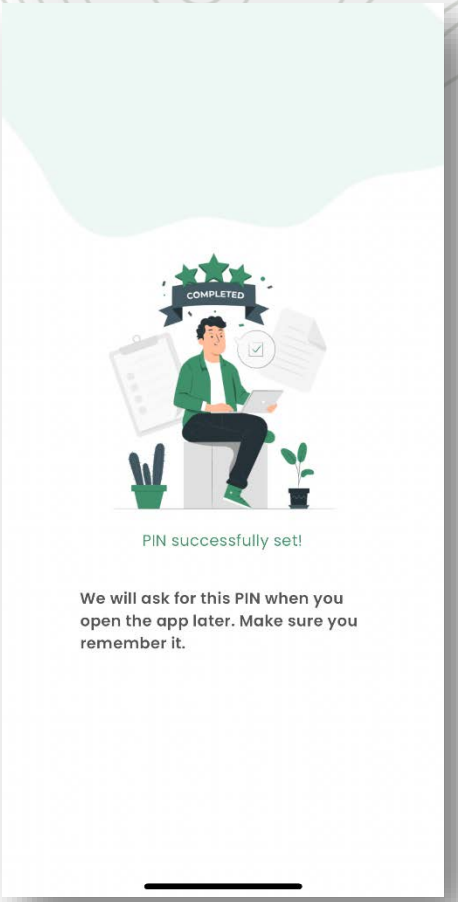
Step 6: Set PIN

A PIN is required to protect your data. You will enter your PIN each time you open the app

- Choose a four-digit PIN
- Re-enter PIN to confirm



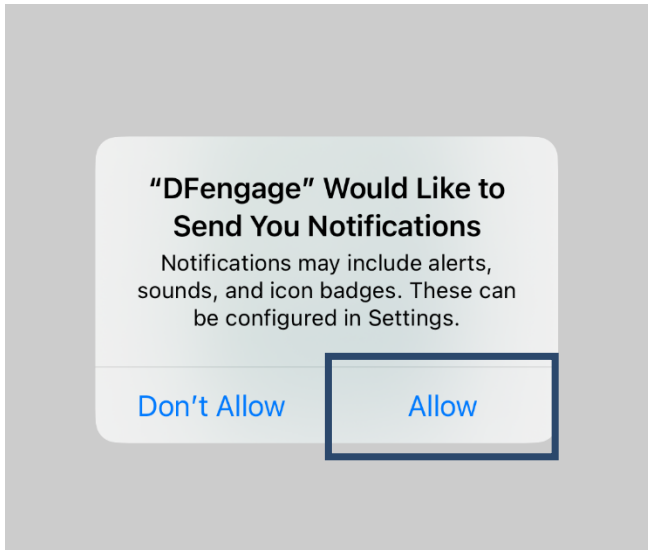




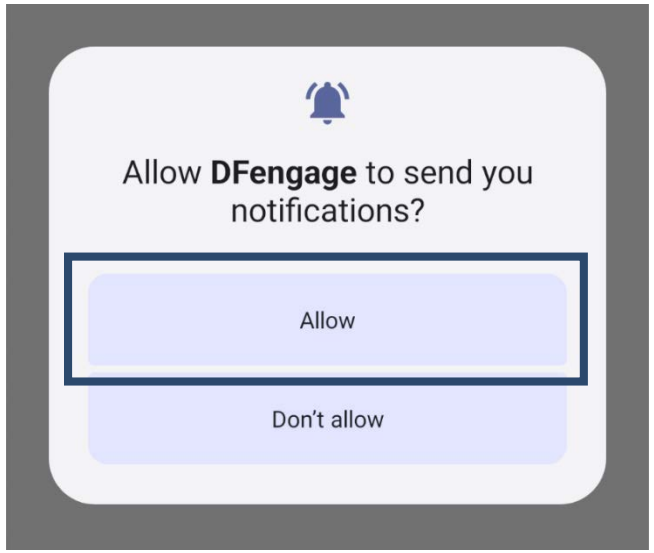
MOBILE

Step 7: Allow notifications

- Allow DFengage to send you notifications about new activities



iPhone

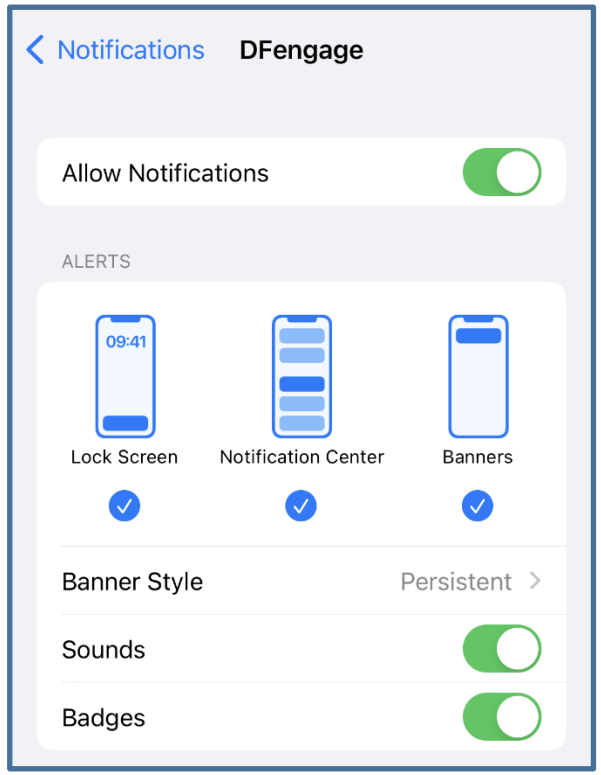


Android

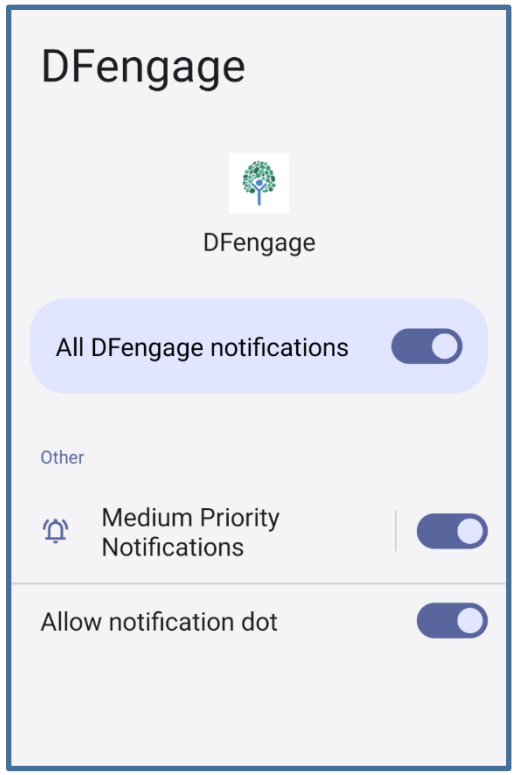
MOBILE

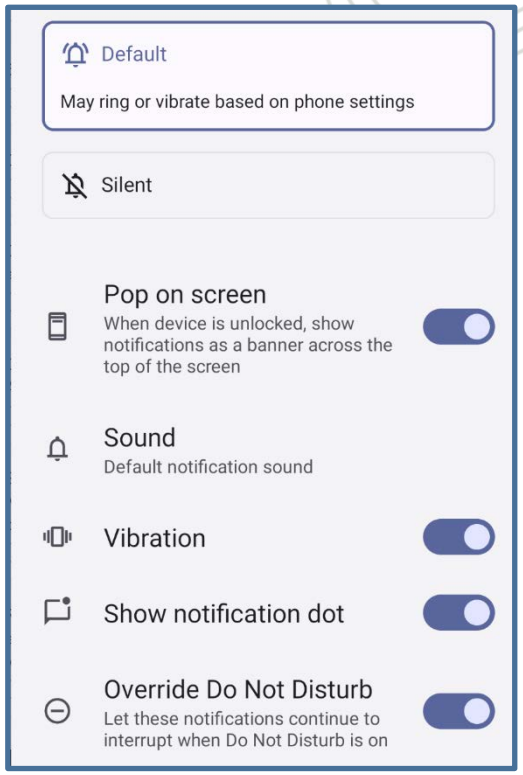
Step 7: Enable all notification options

Enable all notification options in Settings so no reminders are missed



iPhone



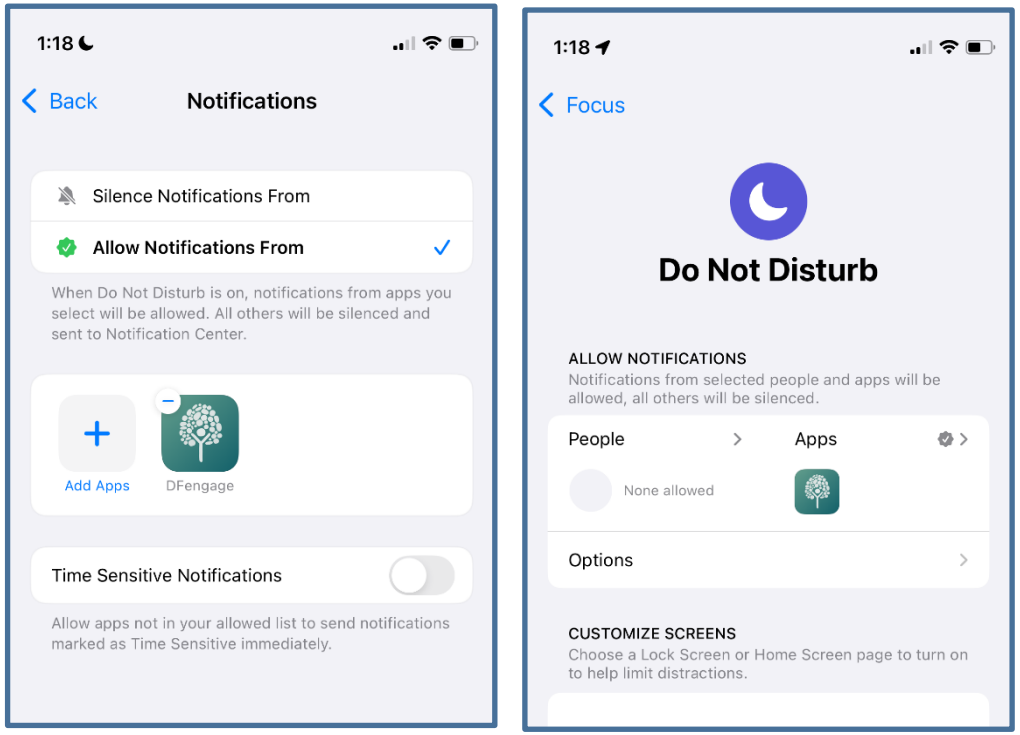


Android (may differ across devices)

MOBILE

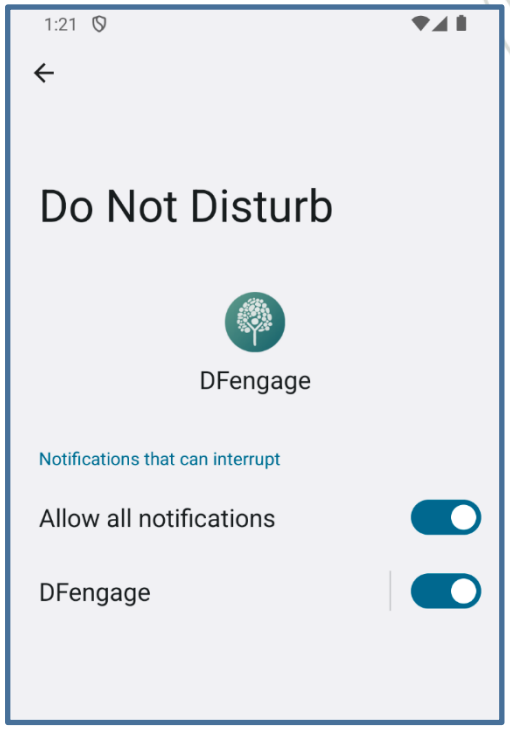
Step 7: Allow notifications in focus modes

Add DFengage as an allowed app in focus modes to avoid missing notifications



iPhone

Settings > *Focus* > *Select mode* > *Apps*



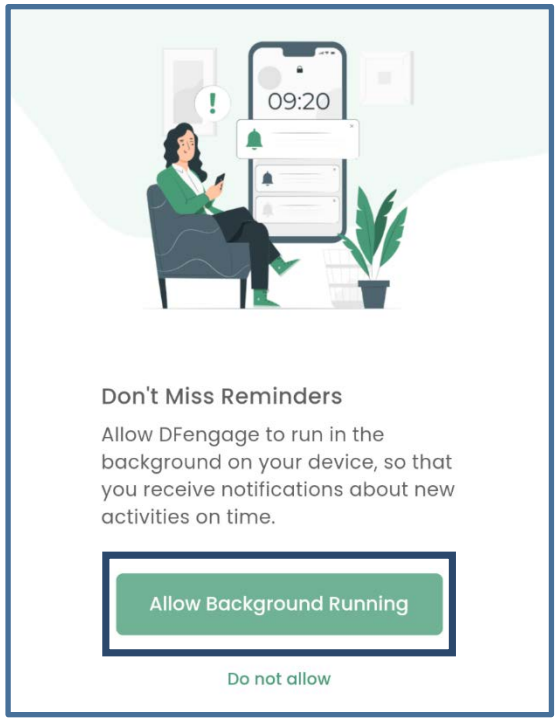
Android

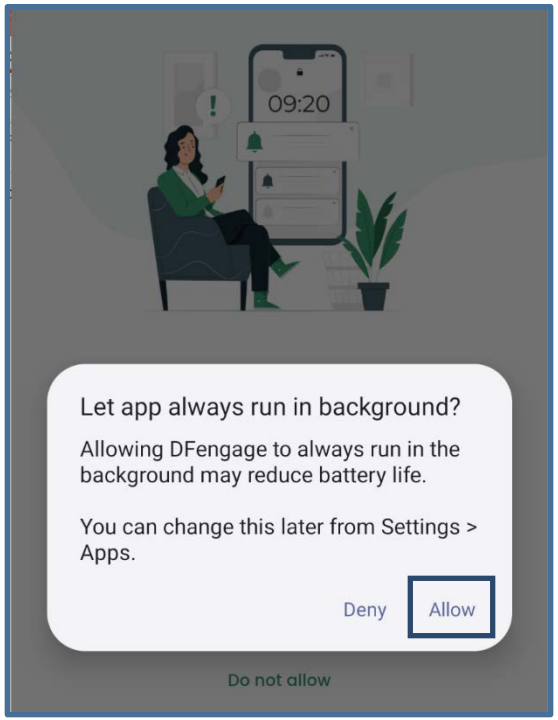
Settings > *Notifications* > *Do Not Disturb* > *Apps*

MOBILE

Step 8: Allow background running *(Android only)*

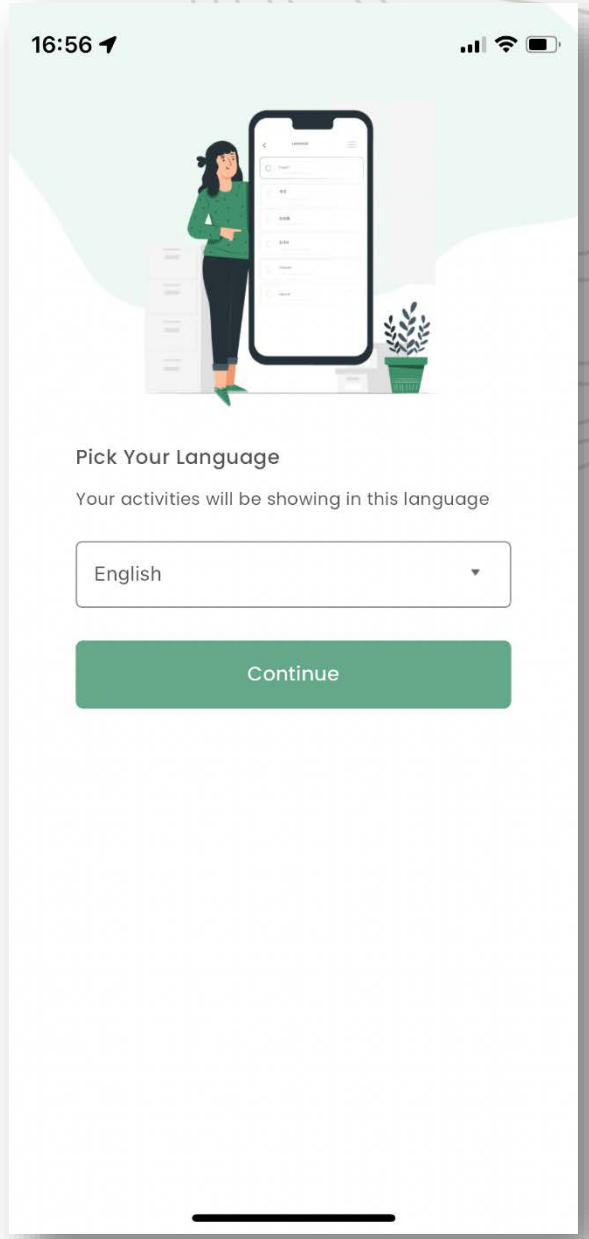
- Allow background running to ensure notifications are received on time
- Not applicable when using iPhone



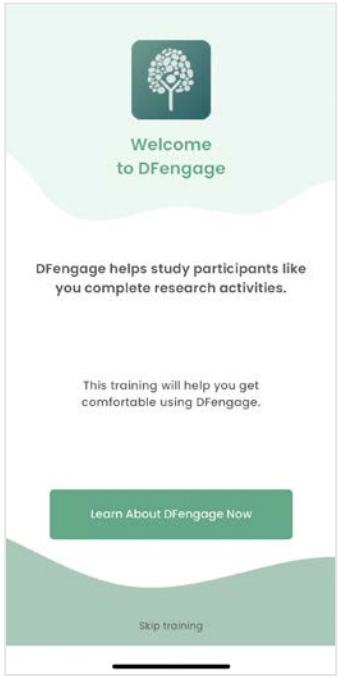


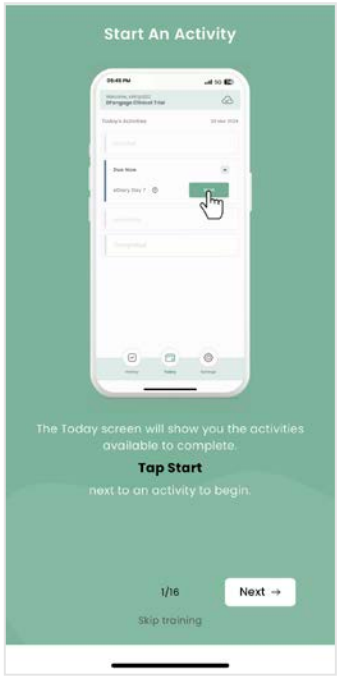
Step 9: Select language *(optional)*

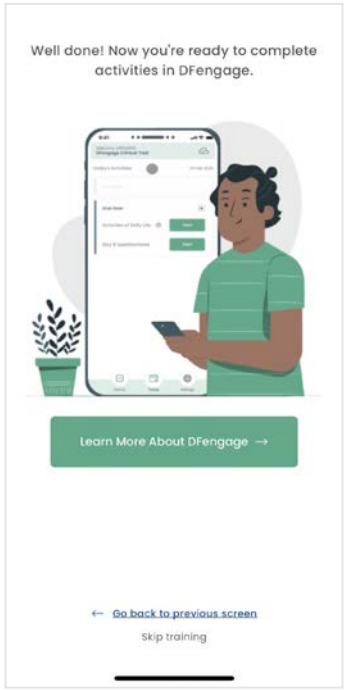
- This step may be skipped for your study or auto-detected from your device language
- If you want to change your study language later, go to the **Settings** tab and select the language from the dropdown menu.
- Languages available here are specific to your study and may be different from the app interface languages available
  - DFengage interface is available in English, French, and Spanish, displayed according to your device language setting



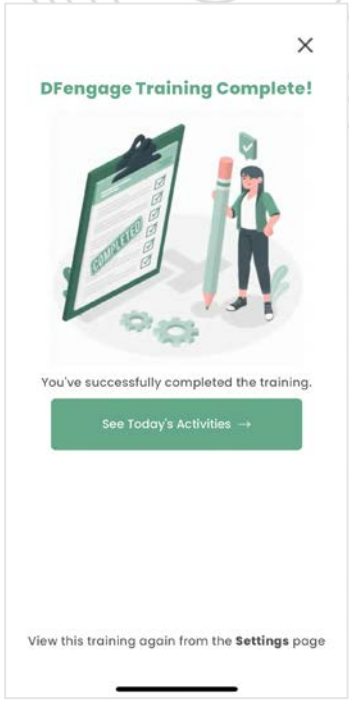
Step 10: Complete training











The training module teaches you how to use DFengage

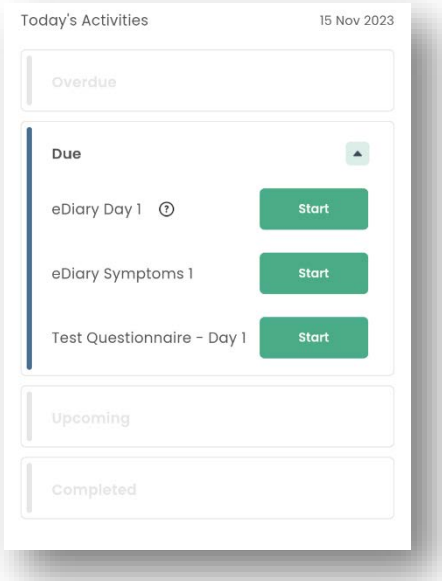
Tap through each screen to learn how to complete activities and use the app's other features

Later, you can access this training anytime from Settings page

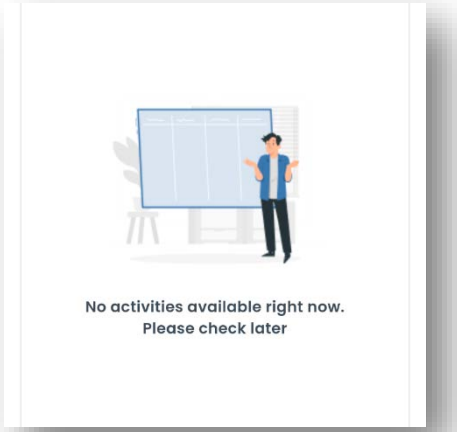
MOBILE

Setup complete!

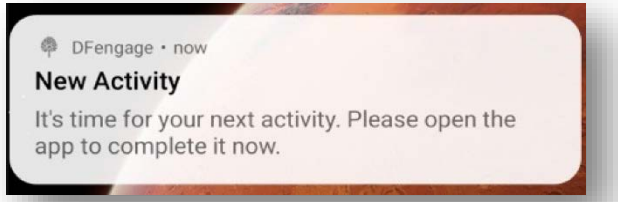
If you have activities ready to complete now, you'll see a screen like this:



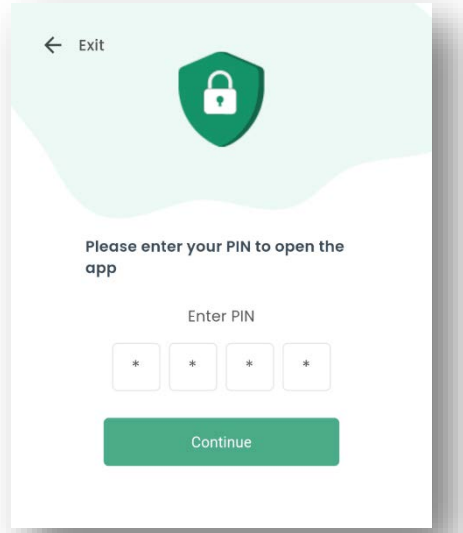
If you don't have any activities for today, you'll see a screen like this:



You'll receive a notification on your device when a new activity is ready



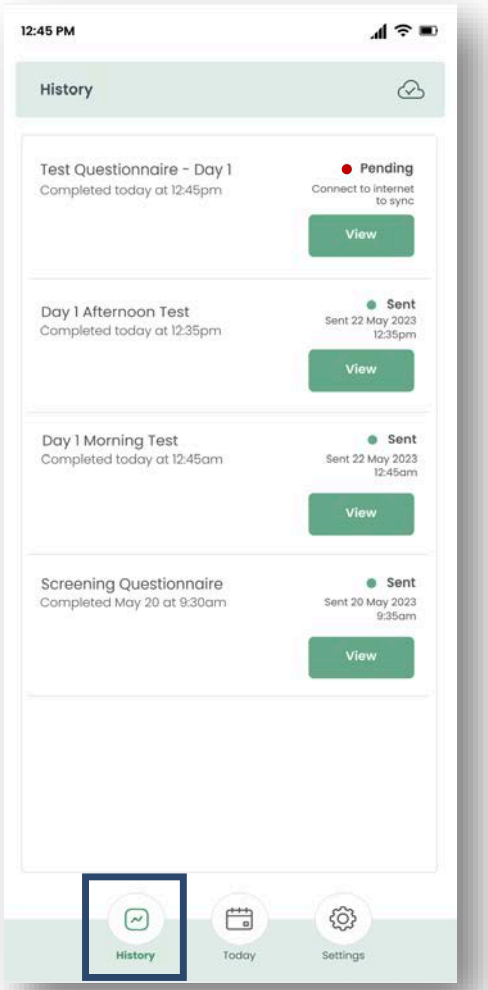
You'll need to enter your PIN to complete new activities



Note: If auto-navigation is enabled, you'll be taken directly to your first activity

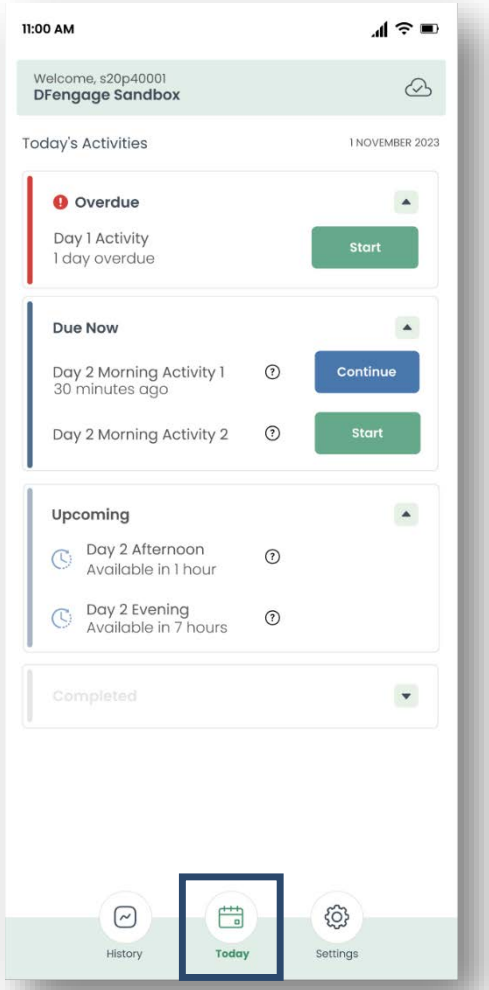
History

View all completed activities and their sync status



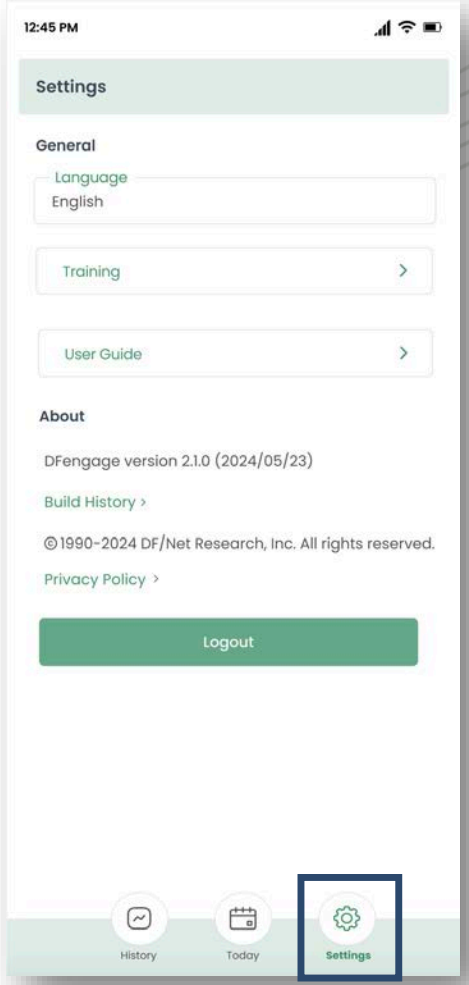
Today

This is your home page, where you will find all of today's activities



Settings

Switch study language, access training & online user guide, find app info, and logout



dfnet

Getting Started with DFengage Web

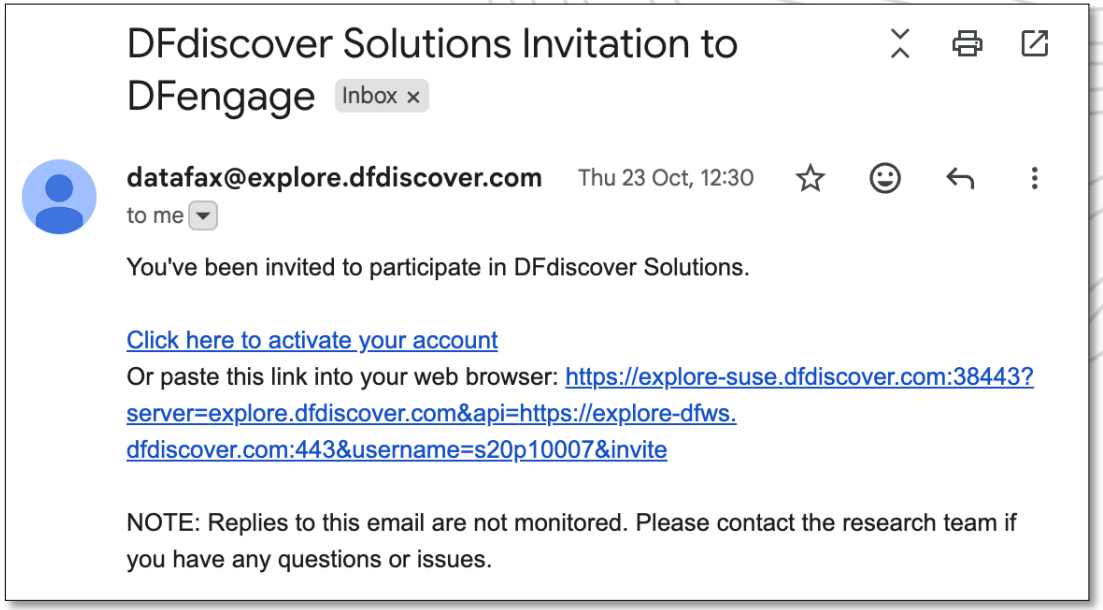
WEB

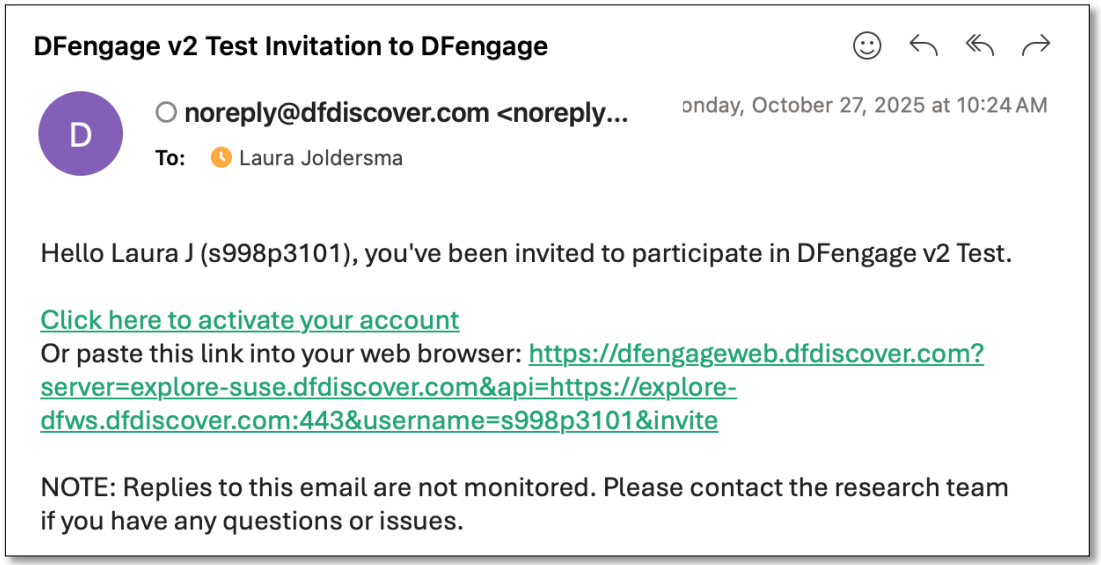
Step 1: Open DFengage

Using the invitation email, link, or QR code provided by the research team, open DFengage on the web



Example invite link & QR code

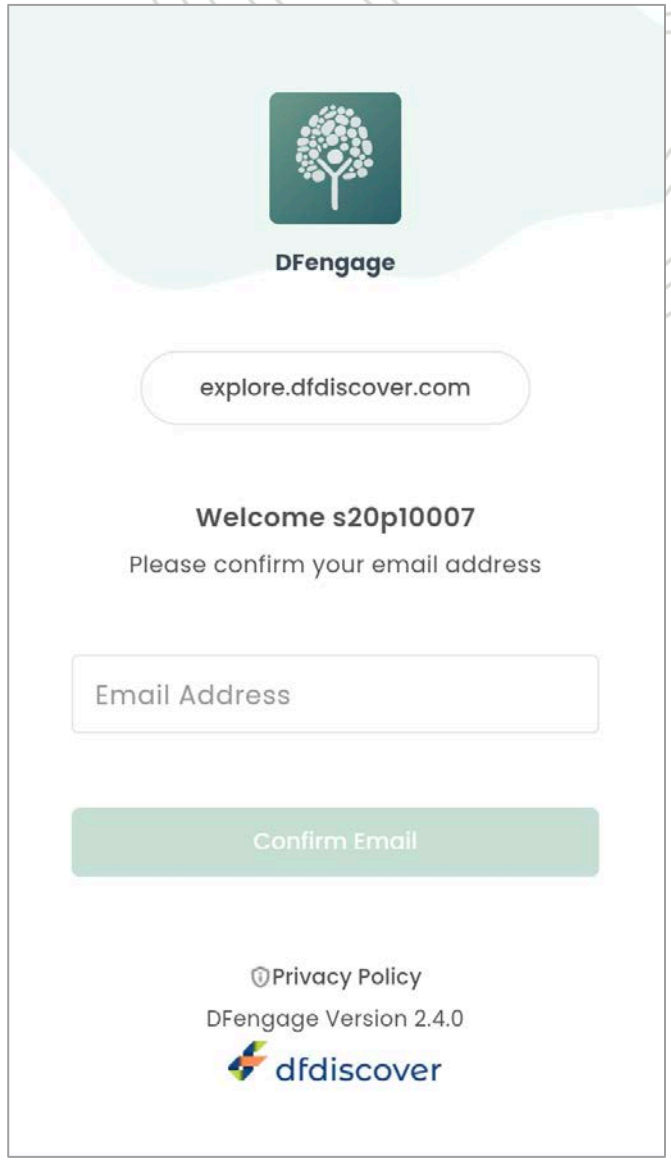




Example invitation emails

Step 2: Confirm your email address

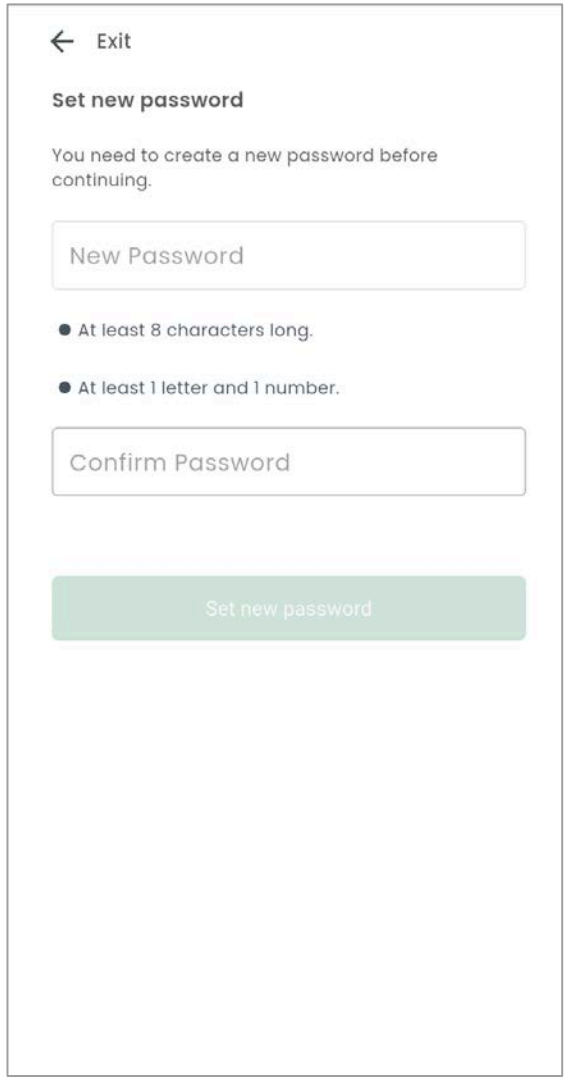
- Enter your email address provided to the research team to confirm your registration
- Click **Confirm Email**
- This will verify your account and send you a link to set your password
- Find the email with subject line **DFdiscover password reset** and click the link in it
  - The link is secure and private to you and must be used within 30 minutes
  - Use the same browser & device as the one used to confirm your email

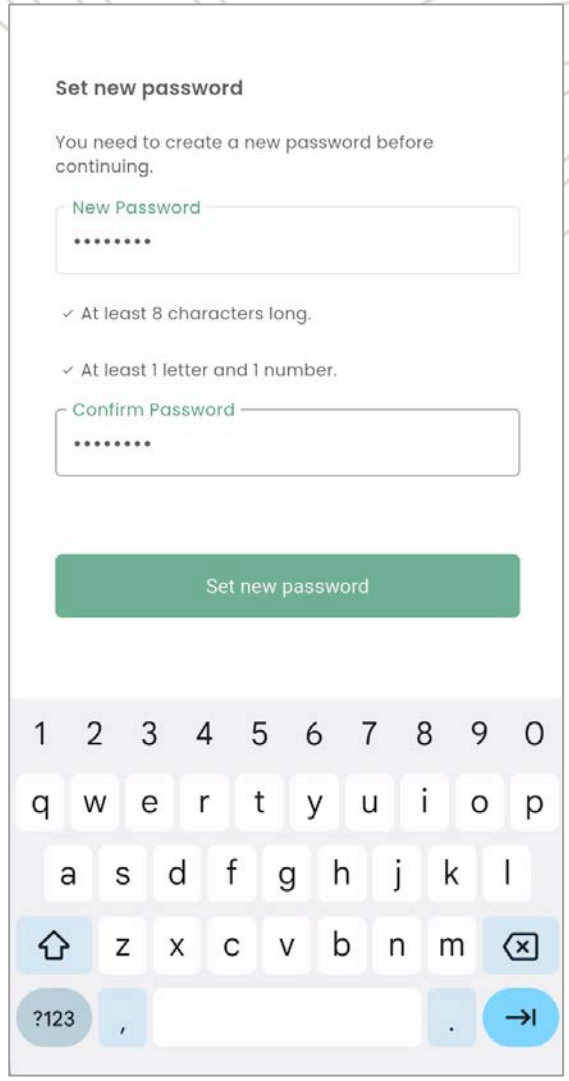


Step 3: Set new password

- Create a new password that only you know
- Follow any instructions shown for password length and complexity
- Enter the password a second time to confirm it
- Remember your password for future logins
- Press **Set New Password**
- You will be logged into DFengage with your new password

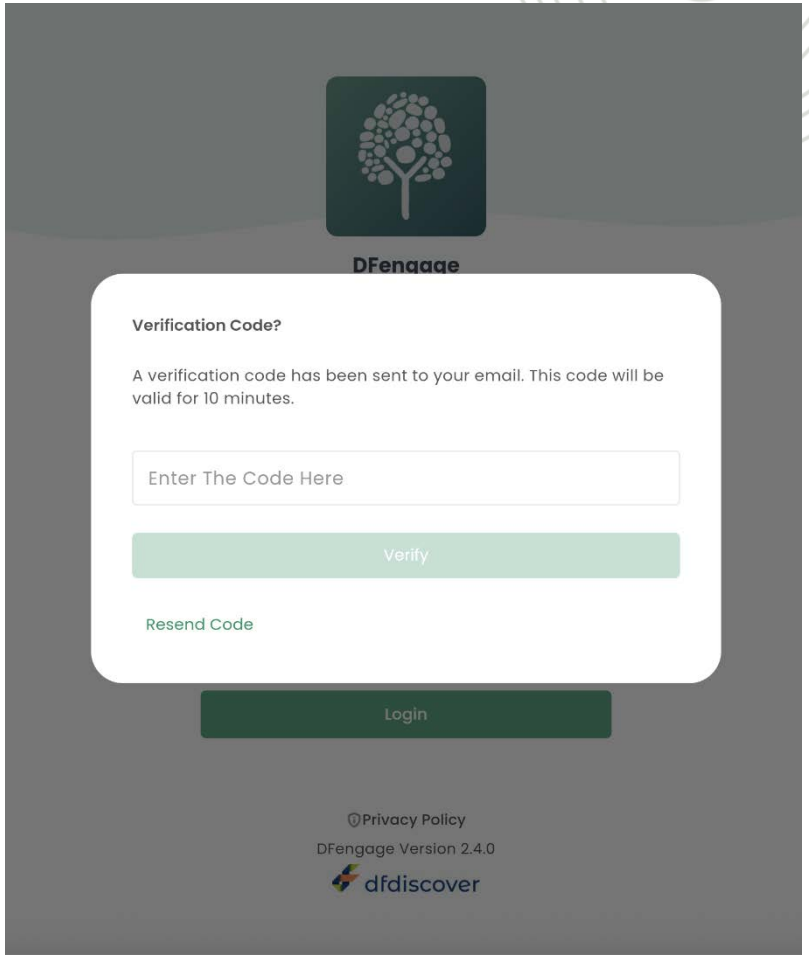
Note: This step will repeat later if your password expires during the study or if you request a password reset





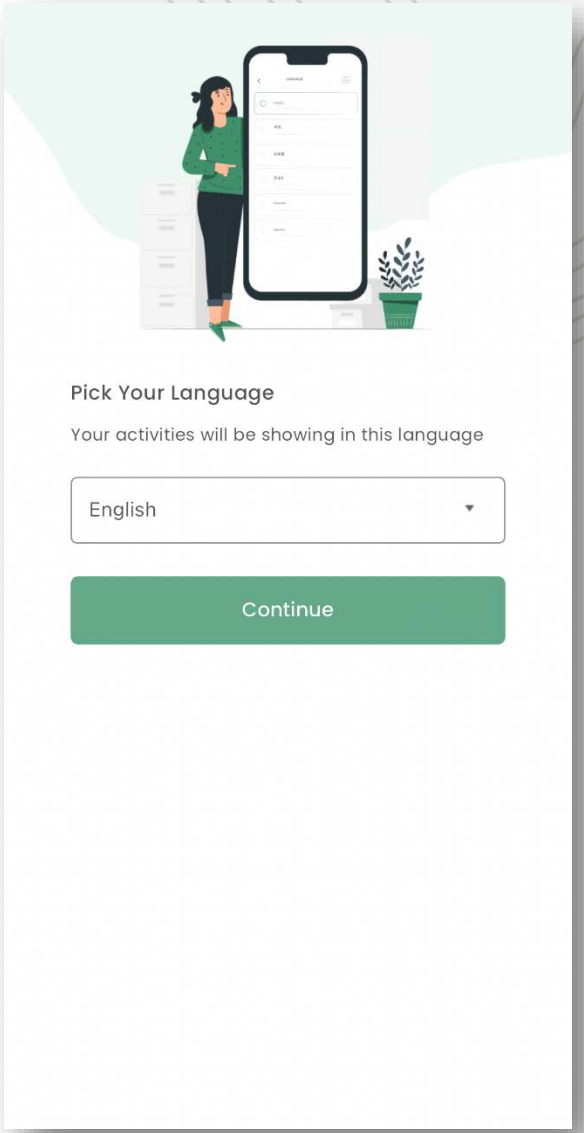
Step 4: Two-factor authentication *(optional)*

- You may be prompted to provide a verification code after logging in with your password
- Find the email with subject line **Security Code for explore.dfdiscover.com**
  - NOTE: The subject line may have a different server name in place of “explore.dfdiscover.com”
- Return to DFengage and enter the code provided, then click **Verify**
- If the code expires, click **Resend Code** to get a new one

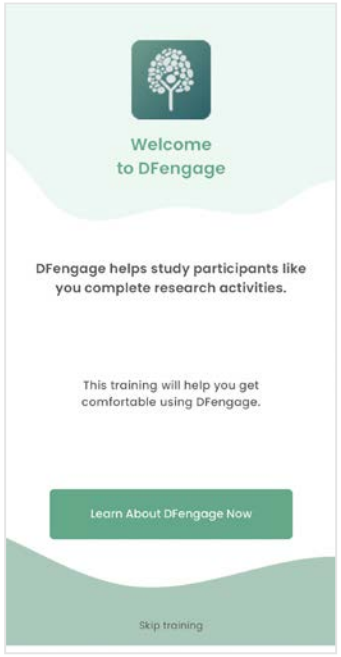


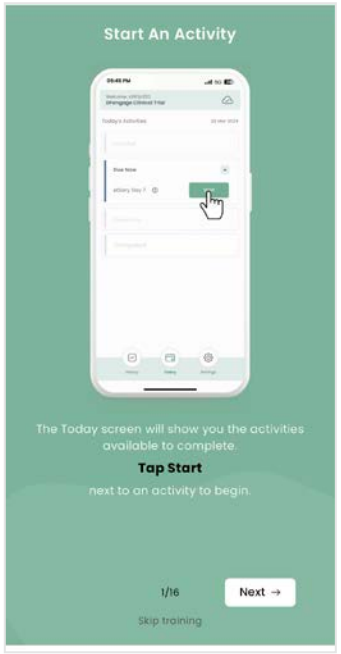
Step 5: Select language *(optional)*

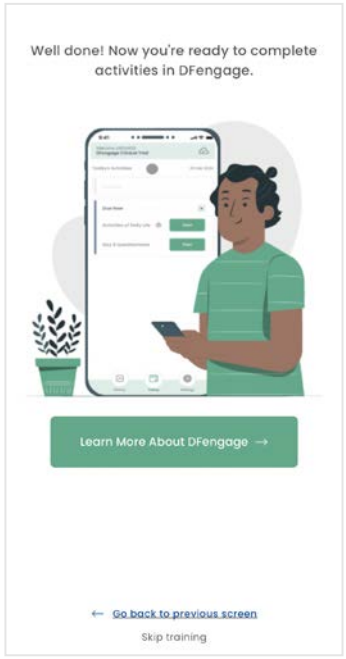
- This step may be skipped for your study or auto-detected from your device language
- If you want to change your study language later, go to the **Settings** tab and select the language from the dropdown menu
- Languages available here are specific to your study and may be different from the app interface languages available
  - DFengage interface is available in English, French, and Spanish, displayed according to your device language setting



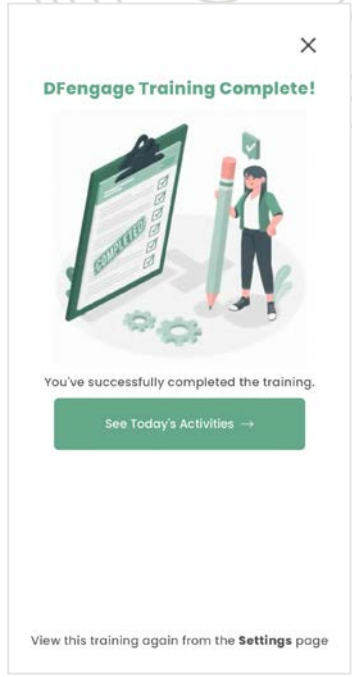
Step 6: Complete training











The training module teaches you how to use DFengage

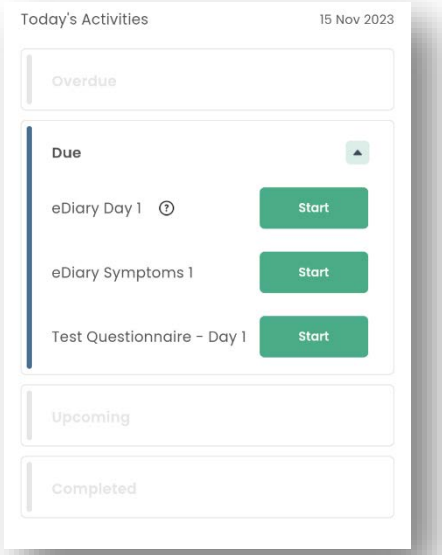
Tap through each screen to learn how to complete activities and use the app's other features

Later, you can access this training again anytime from Settings page

WEB

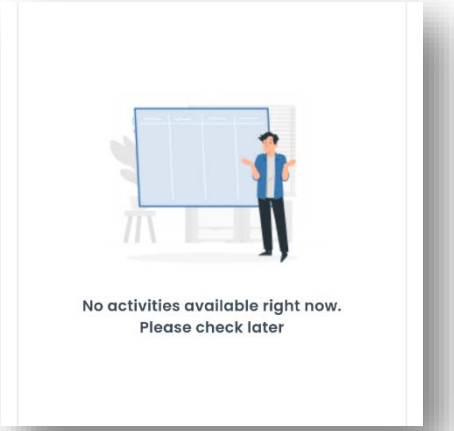
Setup complete!

If you have activities ready to complete now, you'll see a screen like this:

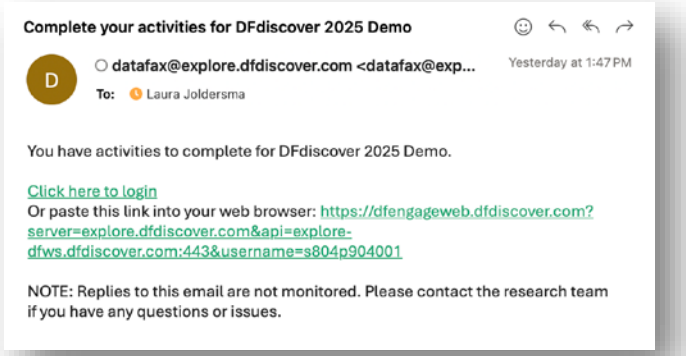


Note: If auto-navigation is enabled, you'll be taken directly to your first activity

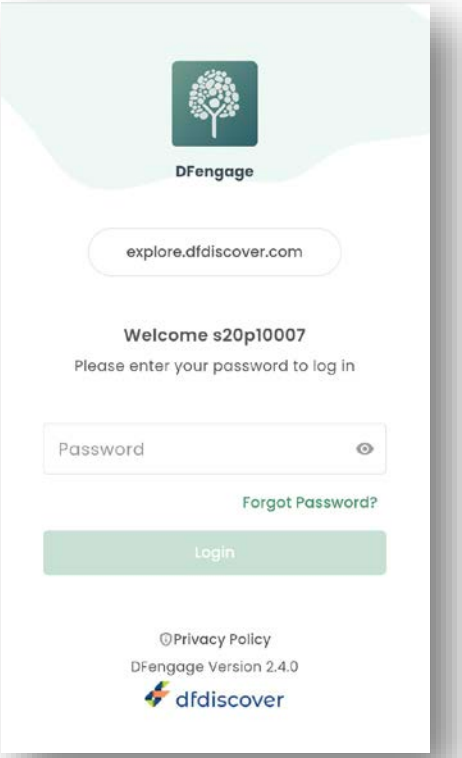
If you don't have any activities for today, you'll see a screen like this:



You'll receive an email when a new activity is ready



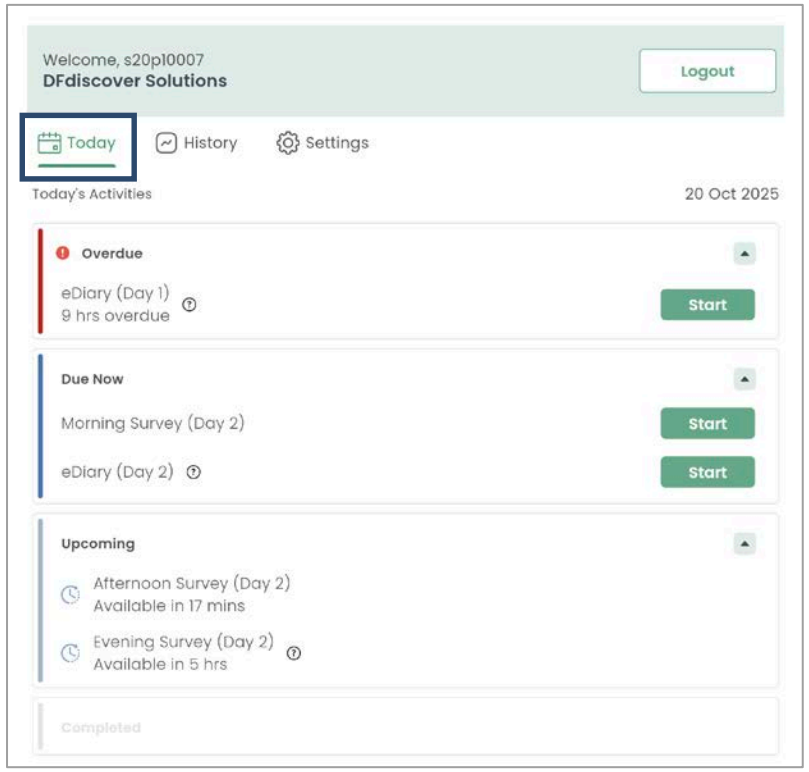
You'll need to login with your password to complete new activities



WEB

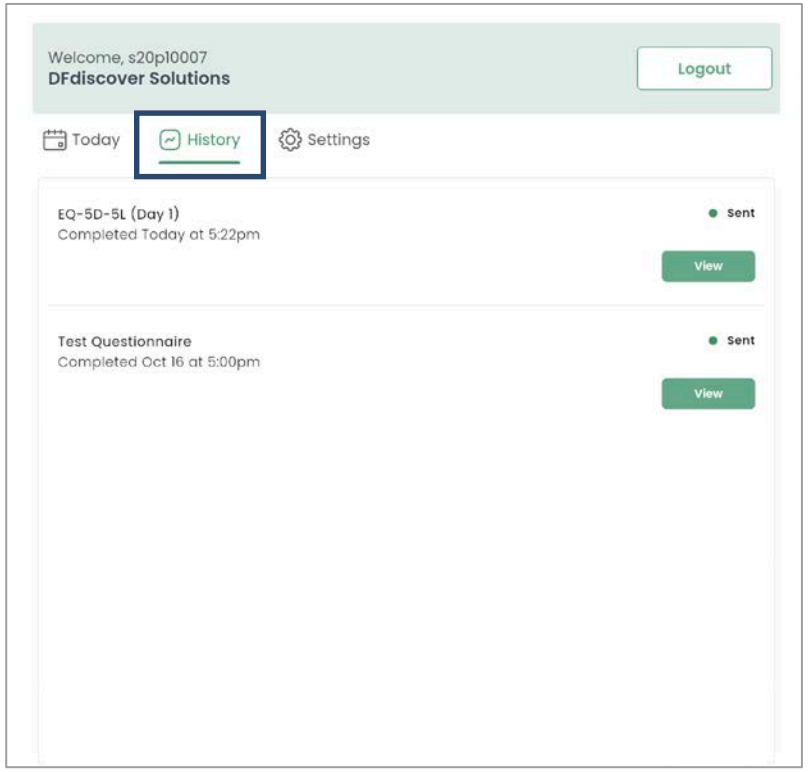
Today

This is your home page, where you will find all of today's activities



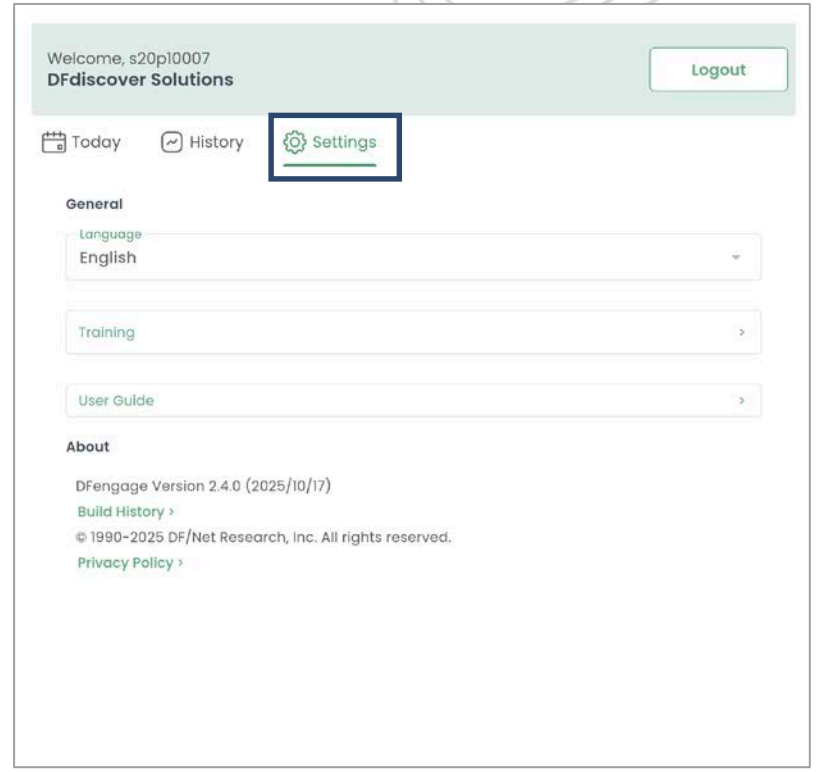
History

View all completed activities and their sync status



Settings

Switch study language, access training & online user guide, and find app info



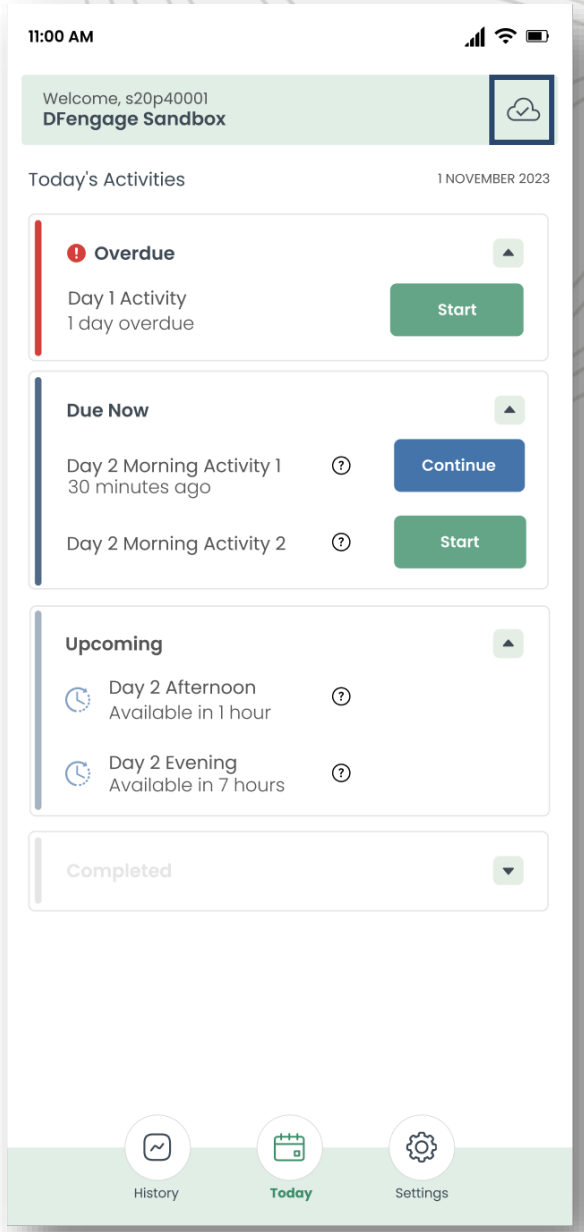
Completing activities in DFengage

For Study Participants

MOBILE

Today’s Activities

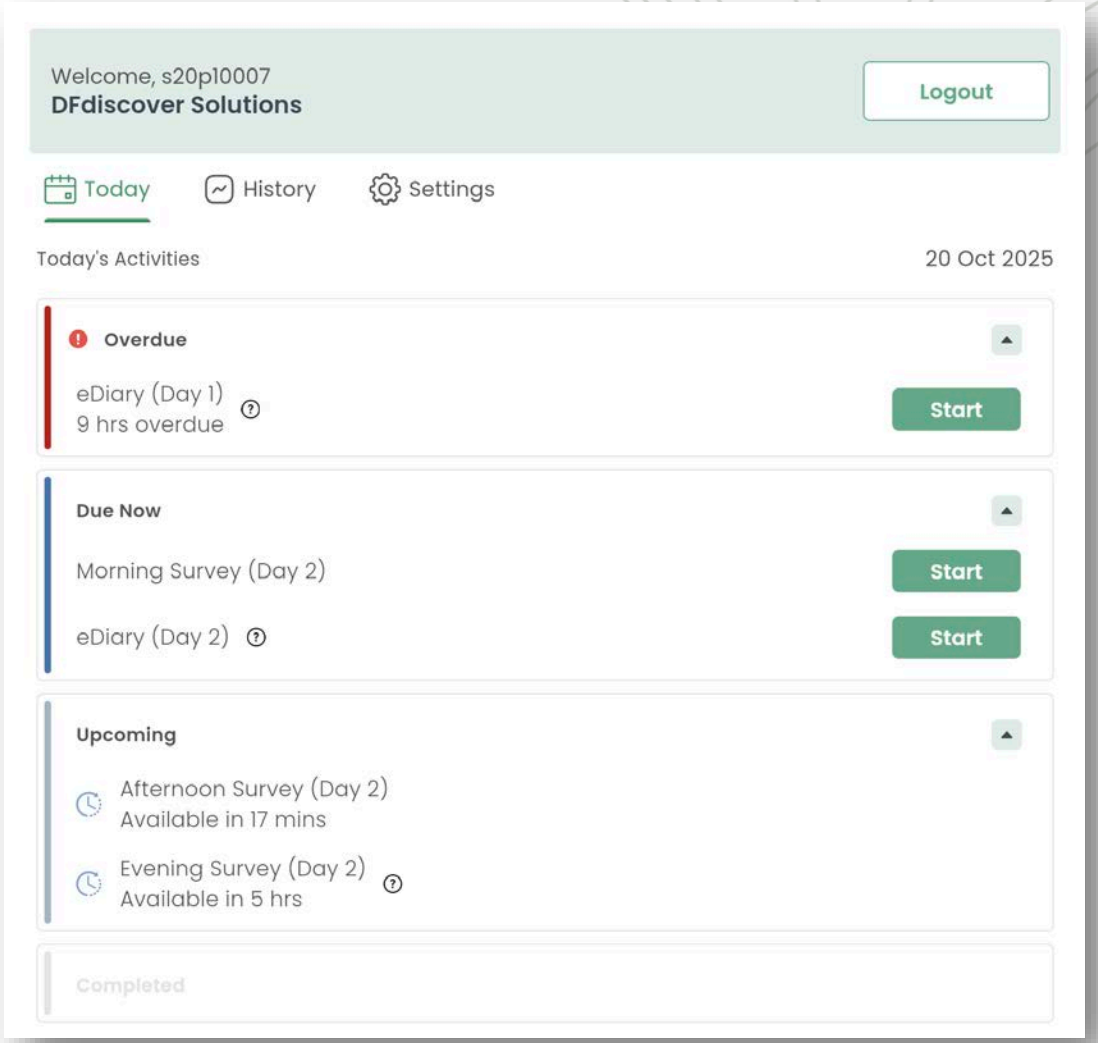
- Your username and study name are shown in header
- Cloud icon indicates connection and sync status:
  - Online, successful sync with the server
  - Online, syncing in progress
  - Offline, no connection with the server
- Activities are listed according to their status: Overdue, Due Now, Upcoming, Completed



WEB

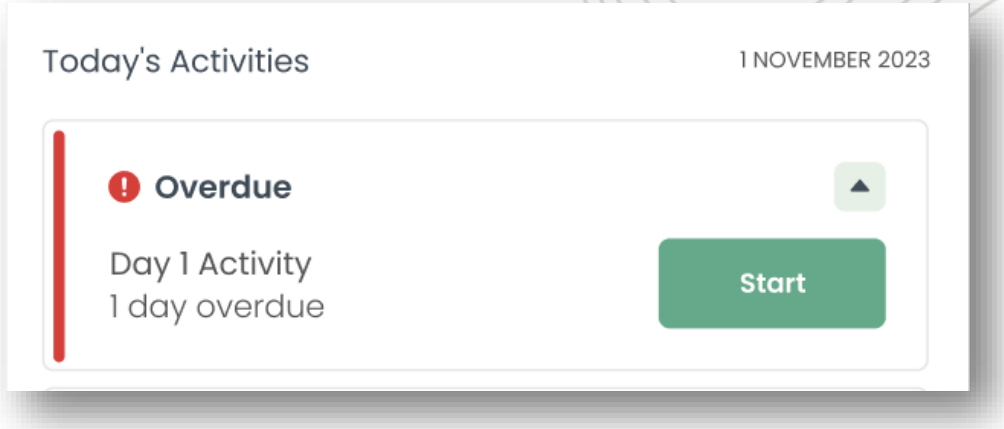
Today’s Activities

- Your username and study name are shown in header
- Activities are listed according to their status: Overdue, Due Now, Upcoming, Completed
- Logout button for when you have completed all your activities
  - Logging out is important to keep your data safe and secure



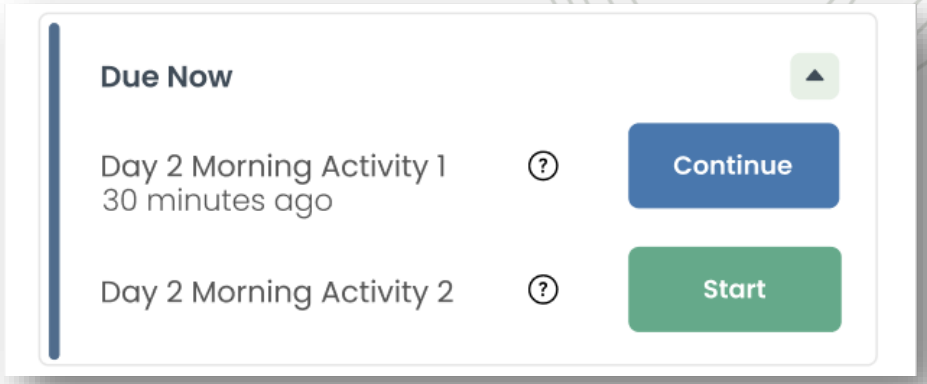
Overdue activities

- If you do not complete your activities on time, they may become overdue
- You will receive notifications for overdue activities as well as new activities
- Please complete these activities as soon as possible!
- This section is greyed out if you have no overdue activities



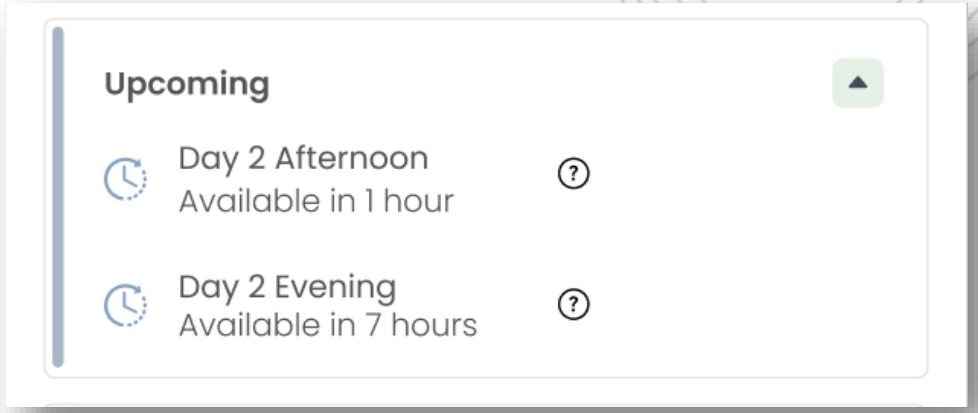
Due Now activities

- Activities that are ready to complete now are shown in **Due Now** section
- Click “?” icon to see more information about this activity from the research team
- Complete these activities before they become overdue!
- This section is greyed out if you have no activities due now



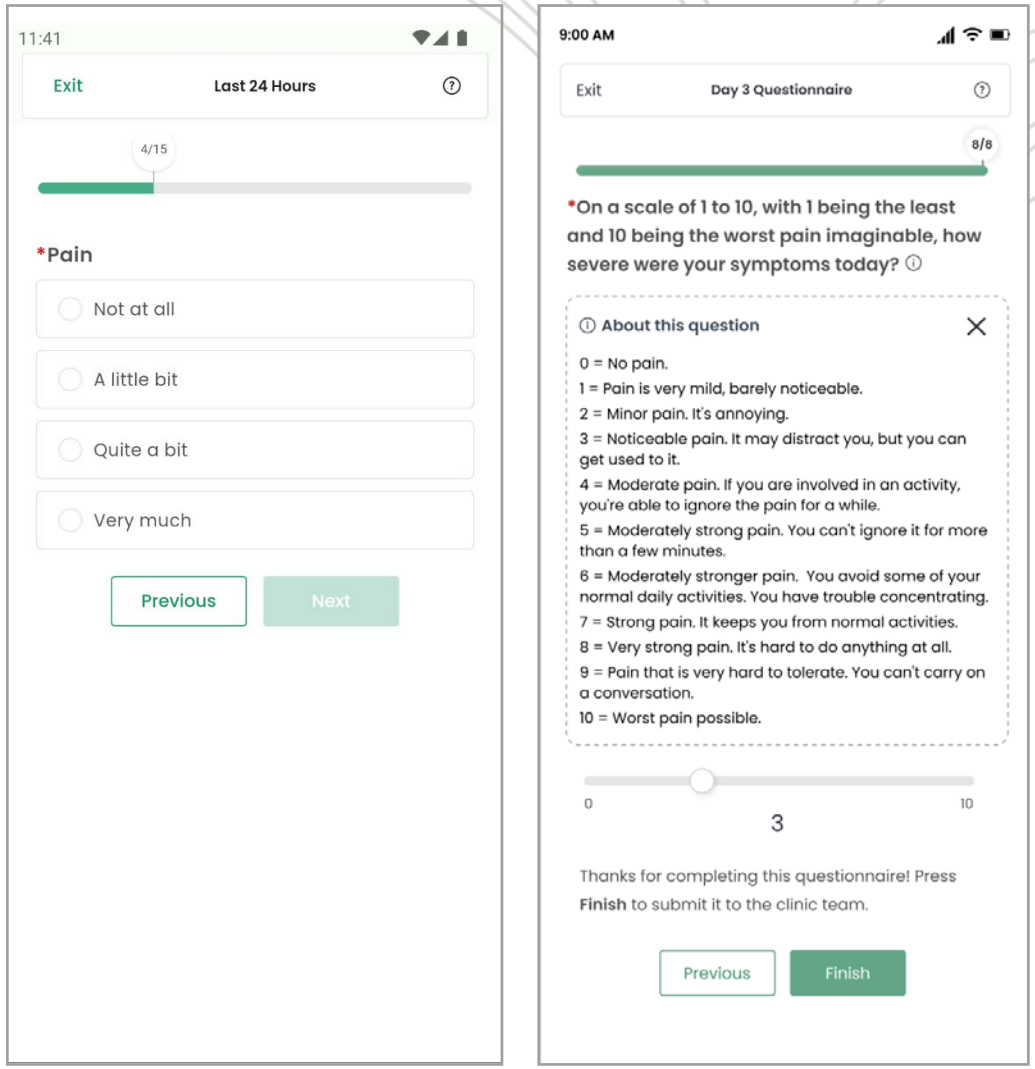
Upcoming activities

- You may have activities to complete later in the day that aren’t yet available
- No **Start** button until the activity is available
- You will receive a notification when an upcoming activity is ready
- This section is greyed out if you have no upcoming activities



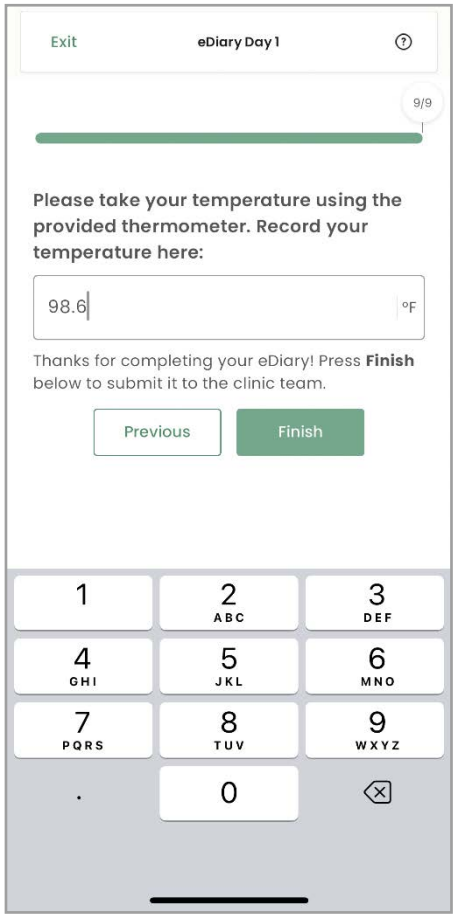
Starting an activity

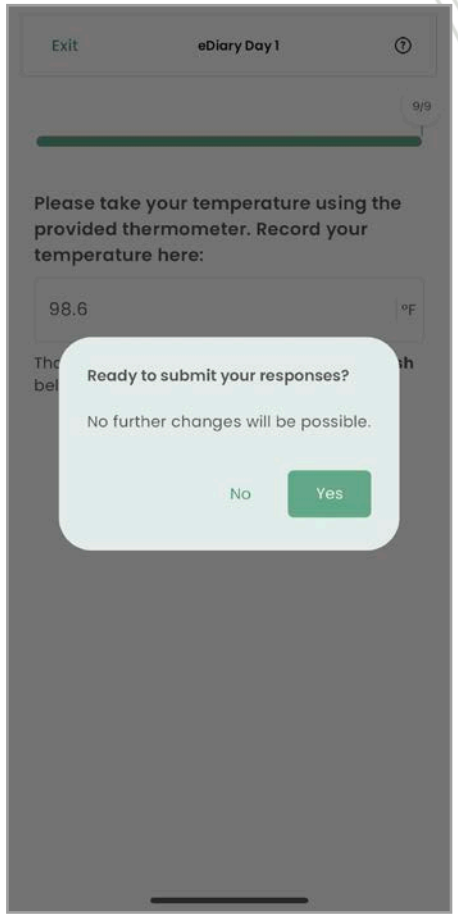
- If auto-navigation is enabled, your first activity will open right away, bypassing the Today's Activities page
- If auto-navigation is not enabled, tap **Start** next to an activity to begin providing responses, or **Continue** for an activity started earlier
- After providing a response, tap **Next** to go to the next question
- Tap **i** next to the question for more information about it (if provided by the research team)

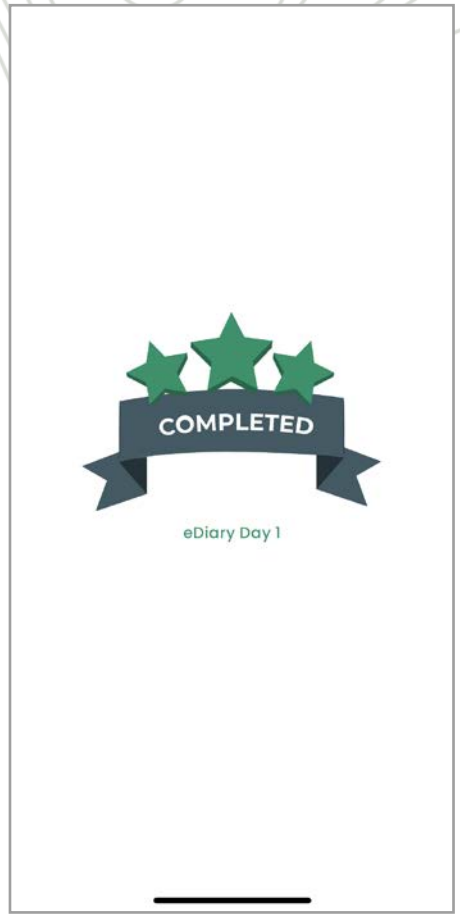


Finishing an activity

- On the last question of the activity, tap **Finish** to submit your responses
- You'll be asked to confirm you are ready to submit. Tap **Yes** to confirm or **No** to return to the activity
- After you tap **Yes**, the activity is completed
- If auto-navigation is enabled and more activities are available, you'll continue directly to the next activity
- Otherwise, you'll return to the Today page

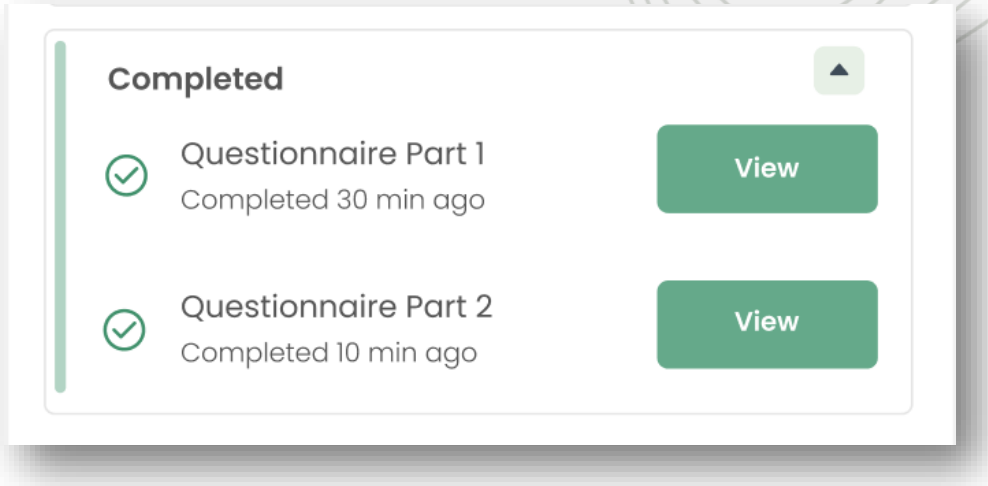






Completed activities

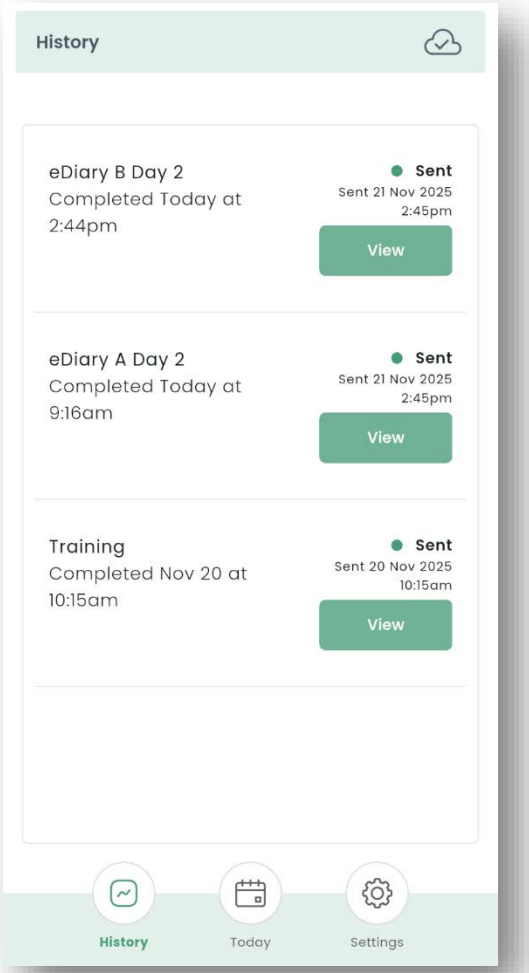
- Once you complete an activity, you'll see it in the **Completed** section for that day only
- All completed activities are listed on the History page
- Tap **View** to see your responses (online only, no changes allowed)
- This section is greyed out if you have no completed activities today



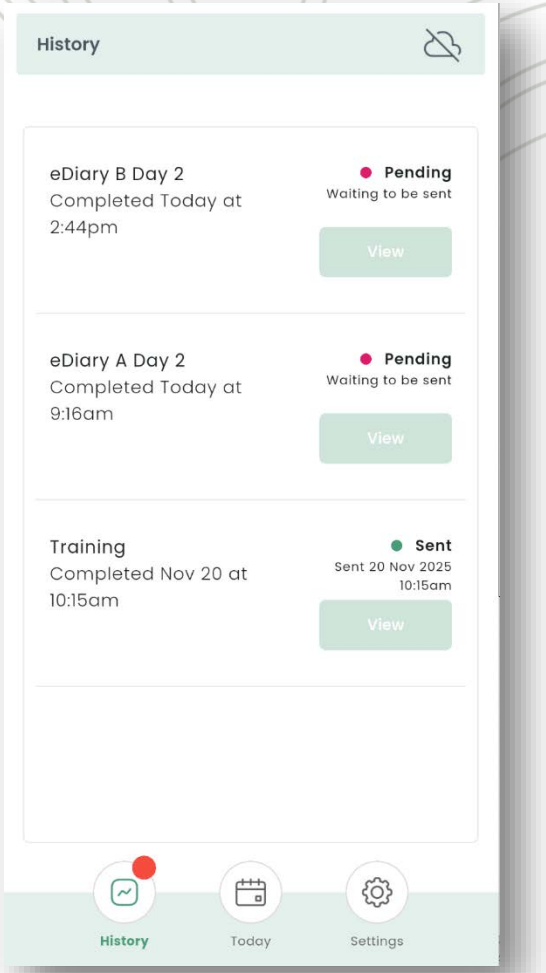
MOBILE

History & Pending activities

- History lists all your completed activities and their current sync status
- Tap **View** to see your responses (online only, no changes allowed)
- If activity is synced with server, it is **Sent**
- If activity is not yet synced with server (not available to the research team), it is **Pending**
  - DFengage will attempt to resend when the app is open and connected to the internet
  - When online, tap cloud icon to sync manually
  - Red dot reminder on History button
- History is reset if you log out of DFengage



Online, 3 activities sent

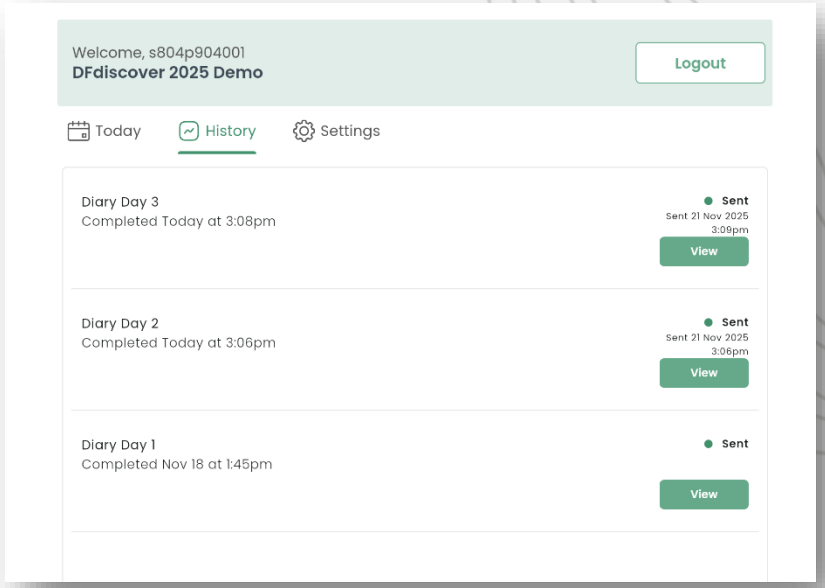


Offline, 2 activities pending

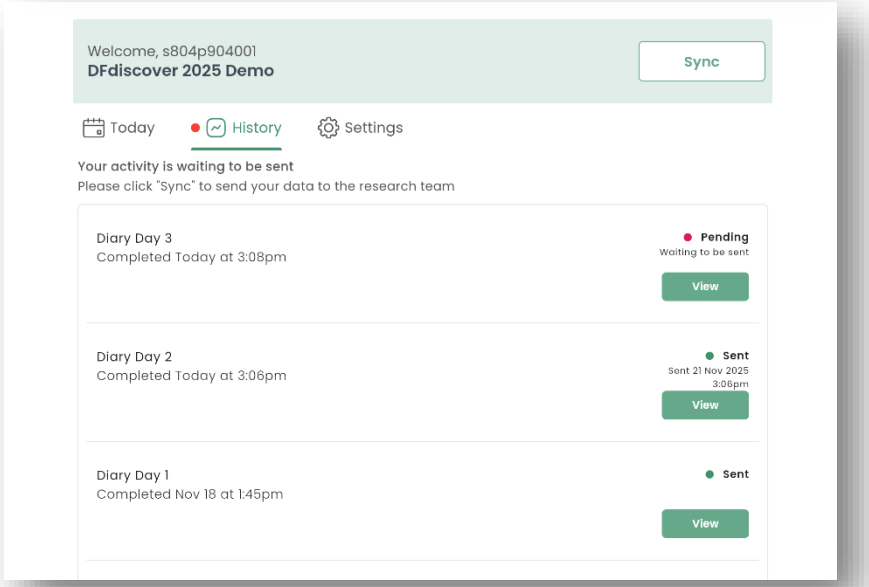
WEB

History & Pending activities

- History lists all your completed activities and their current sync status
- Tap **View** to see your completed responses (no changes allowed)
- If activity is synced with server, it is **Sent**
- If activity is not yet synced with server (not available to the research team), it is **Pending**
  - This may happen if data is in use by research team
  - Red dot reminder on History button & message: “Your activity is waiting to be sent”
  - Click **Sync** button to resend manually
  - Do not leave the page or logout without syncing



3 activities sent

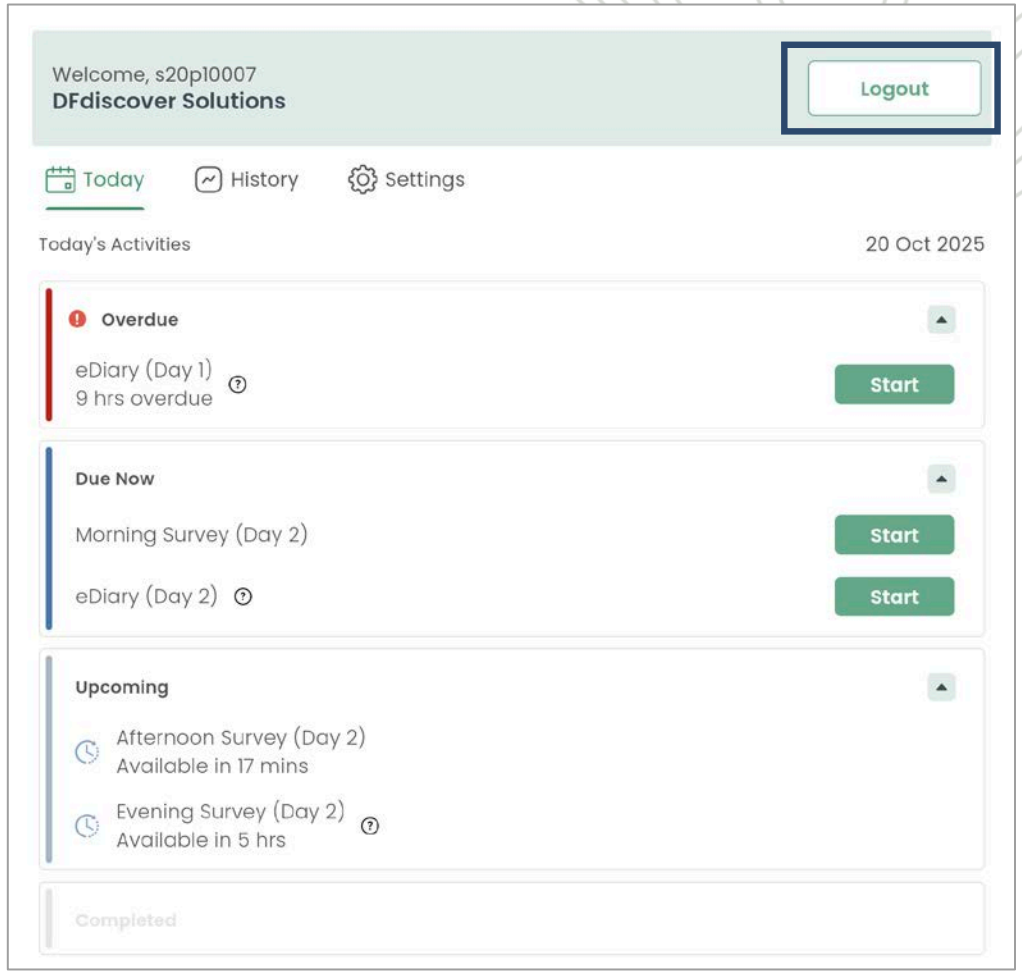


1 pending activity, 2 activities sent

WEB

Logout

- When you are finished working in DFengage web, log out to close your session
- Click **Logout** in top right corner
- On smaller screens, go to the Settings page to log out
- If you are inactive for 20 minutes, you will be automatically logged out
- Logging out helps keep your data secure

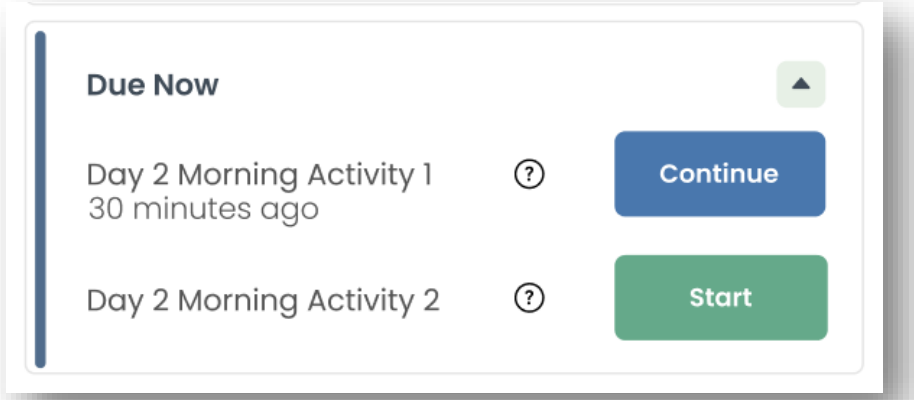


Questions & Issues

For study participants

Can I stop halfway through an activity? *Yes*

- Complete activities in one sitting (unless otherwise instructed)
- However, responses are saved if you stop or exit mid-activity
  - On mobile, DFengage saves your progress to your device
  - On web, DFengage saves your progress until the end of your session (logout or close page)
- Click “Continue” on the Today page to return to the question where you exited
- If you logout of the app, you will lose any activities not yet finished and synced with the server

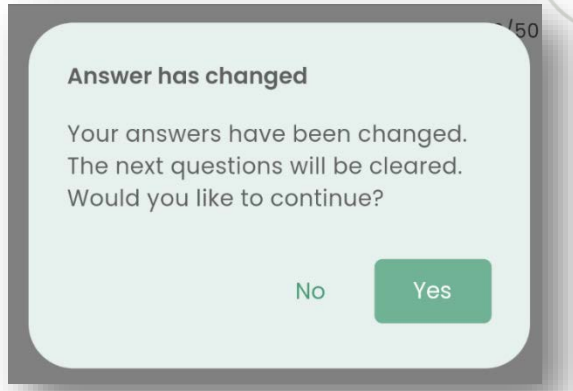


Can I change my responses? *Yes*

- Tap “Previous” to review responses:



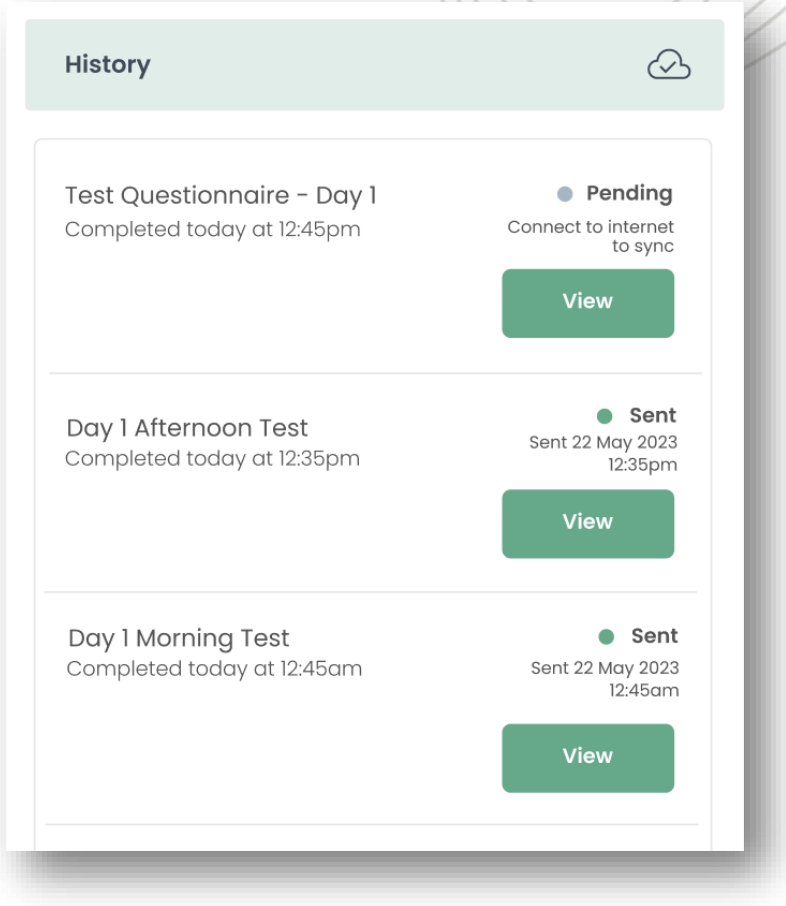
- If you change a previous response:



- Once completed (“Finish”, then “Yes”), your responses cannot be changed in DFengage
- Contact the research team to change your responses after completion

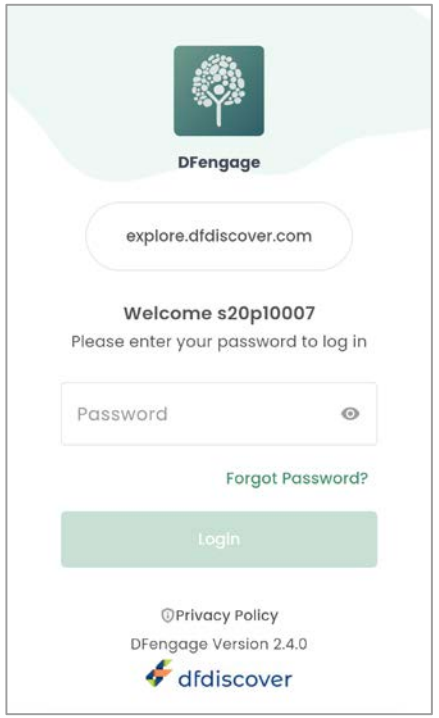
Can I see my responses to completed activities? *Yes*

- After tapping **Finish** and then **Yes** to submit the activity to the research team, the activity is complete
- Tap **View** on Today or History page to see your submitted responses, when online only
- If any changes were made after you submitted your responses, you will see those changes in DFengage
- Contact the research team with any questions or concerns

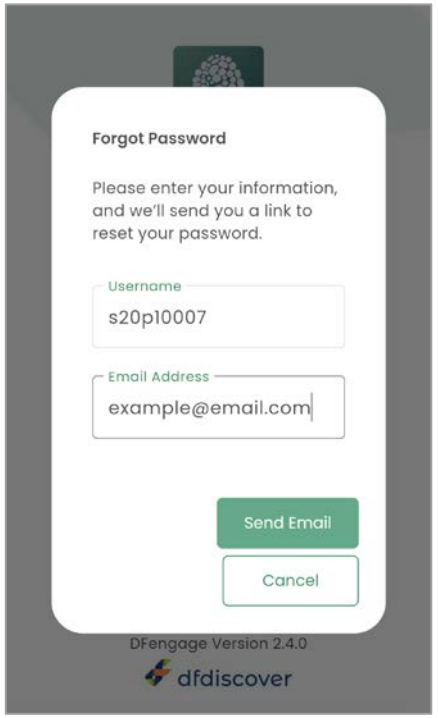


What if I forget my password?

1. Click **Forgot Password** below the password field



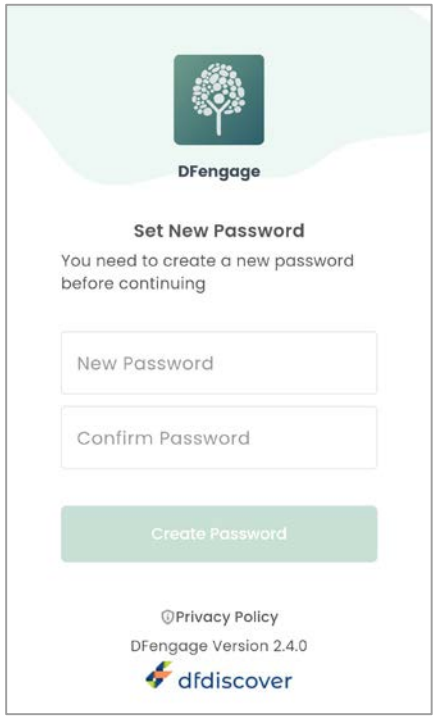
2. Enter your username and email address, then click **Send Email**



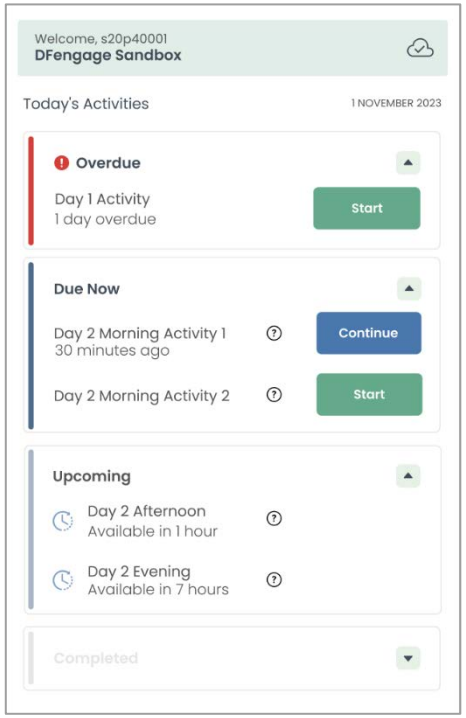
3. Find the email message **DFdiscover password reset** and click the link

- *Link expires after 30 minutes*
- *Requires the same browser & device as step 1-2*

4. Follow the instructions for setting a new password



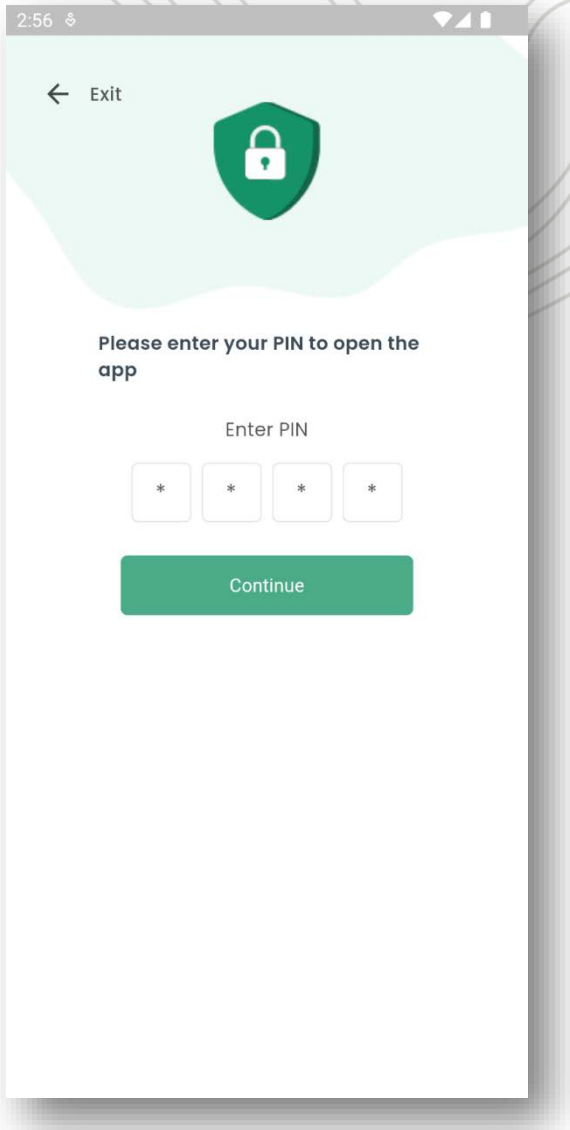
5. Now you're logged in to DFengage



MOBILE

When do I need to use my PIN?

- Your PIN keeps the app secure on your device
- PIN is **required** when reopening the app after:
  - App is inactive for 20 minutes or longer
  - App is closed
- PIN is **not required** when reopening the app after:
  - App is inactive for less than 20 minutes
  - Device goes to sleep for less than 20 minutes
- If you exit this screen or log out:
  - Pending activities and activity history are deleted
  - You will need to login with your username and password and set a new PIN to continue using the app

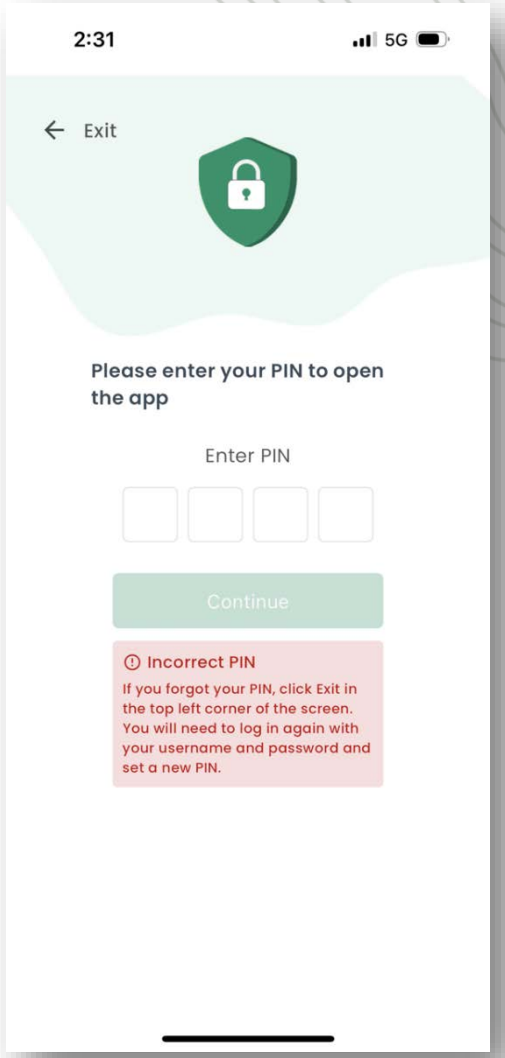


MOBILE

What if I forget my PIN?

If you forgot your PIN and want to set a new one:

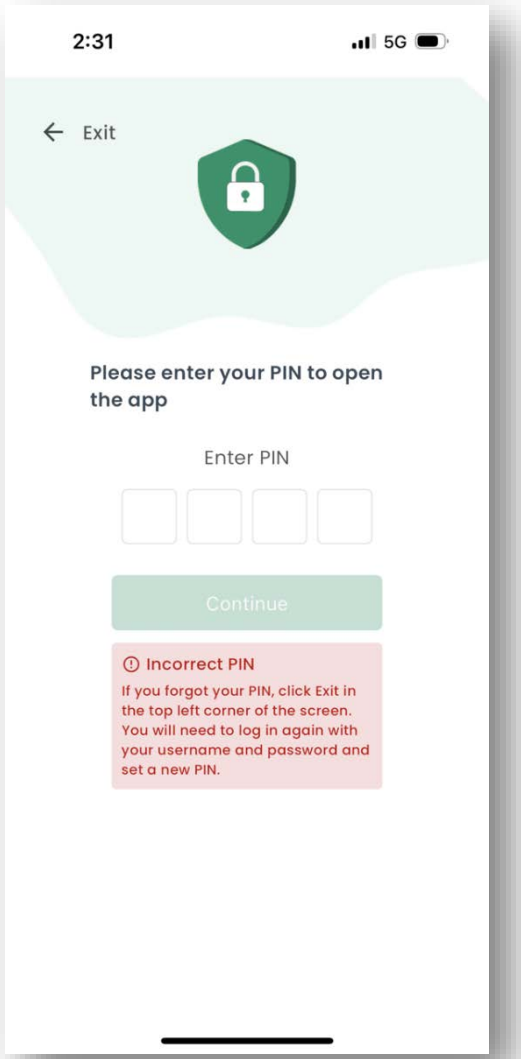
- First, make sure you don’t have any unsynced data
- Click “Exit” to log out: All unsynced data (pending activities) and history will be deleted from your device
- You will need to login with your username and password and set a new PIN

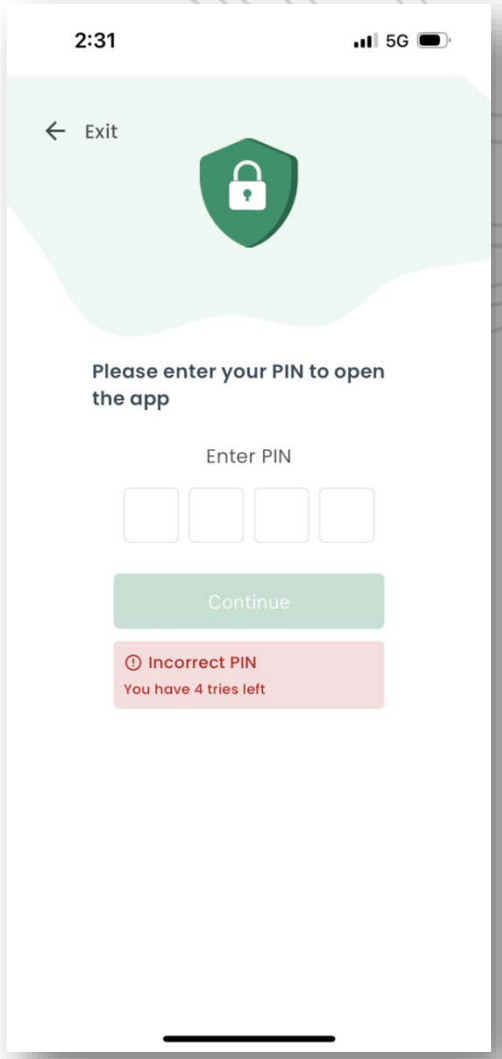


MOBILE

Incorrect PIN
1st and 2nd attempts

- You have a total of six attempts to enter the correct PIN
- First wrong attempt: Warning
- Second wrong attempt: Reminder about remaining attempts

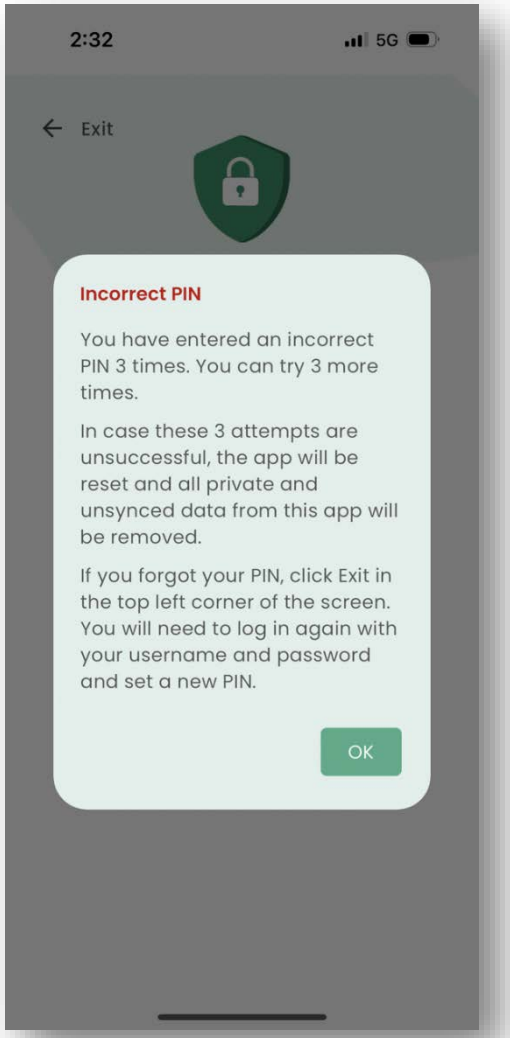


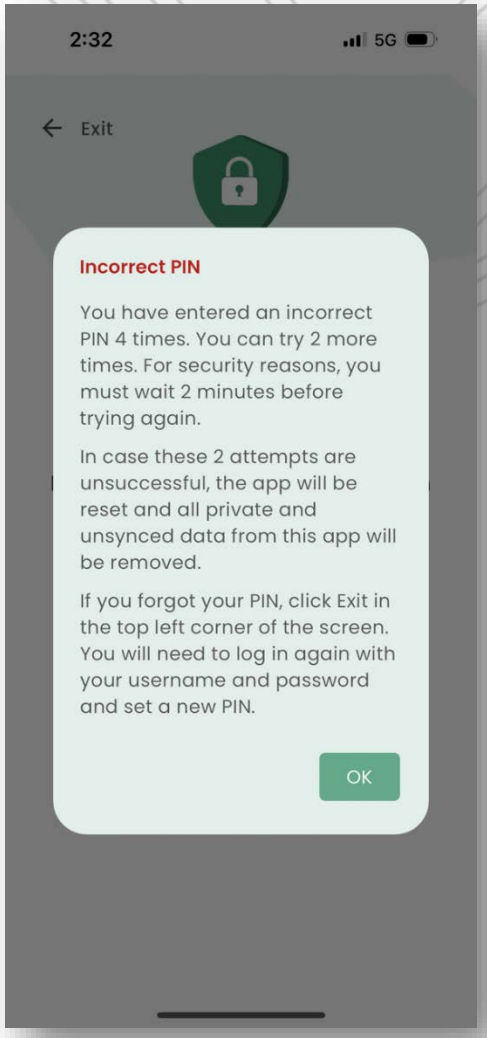


MOBILE

Incorrect PIN
3rd and 4th attempts

- After third incorrect PIN, an additional warning is added
  - “Unsynced data will be deleted”
- After fourth incorrect PIN, you must **wait two minutes**
  - Slow down repeated attempts

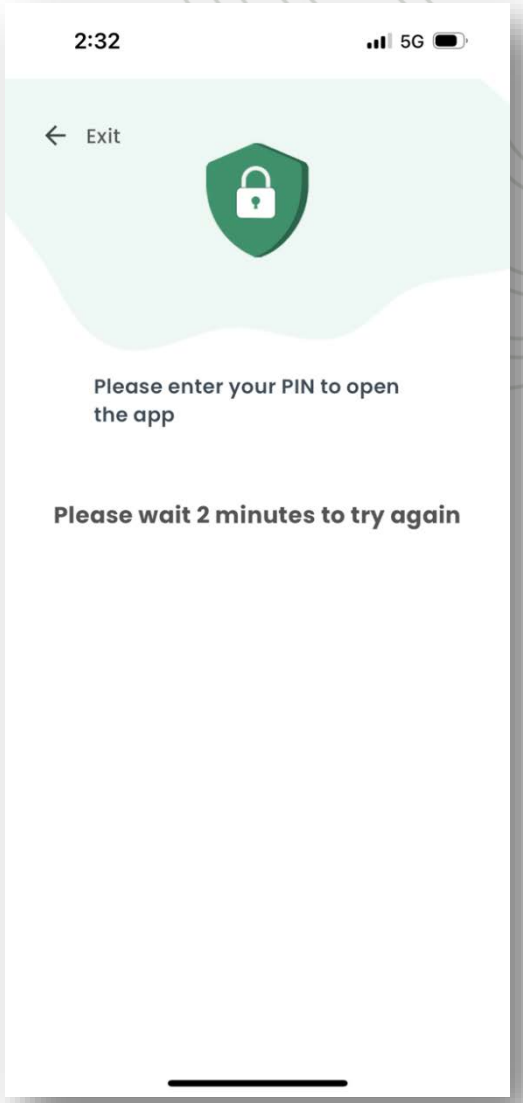




MOBILE

Incorrect PIN: 2-minute delay

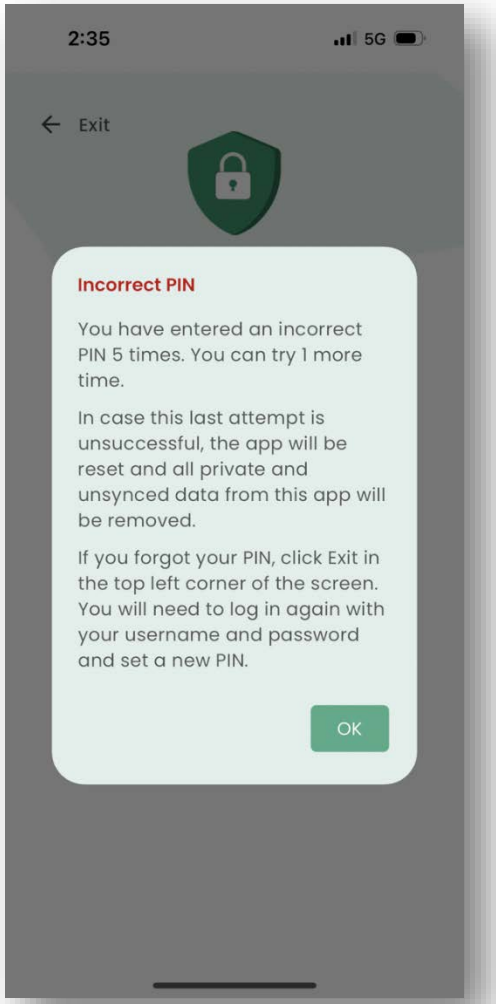
- Why a time delay?
- Perhaps a child is playing with the device and tapping random numbers, or the app has opened accidentally in your pocket
- The time delay slows down the number of attempts

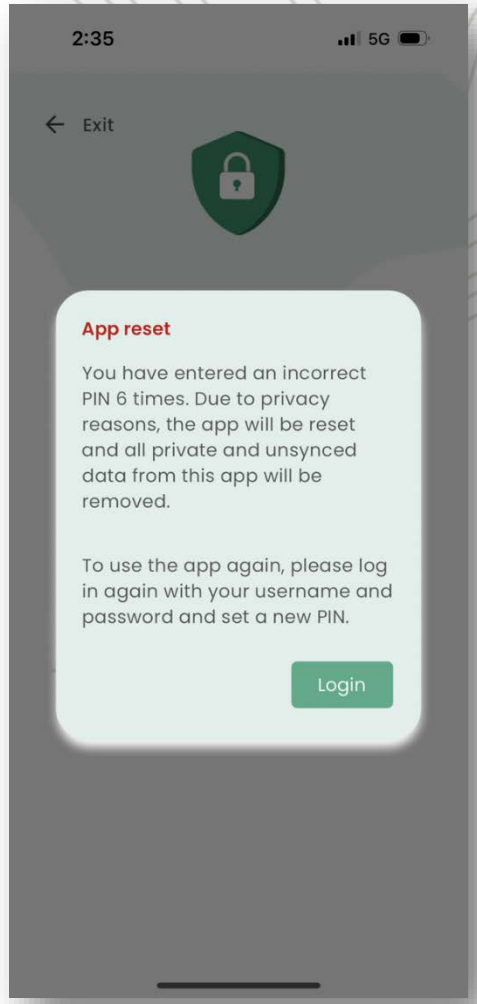


MOBILE

Incorrect PIN
5th and 6th attempts

- After fifth incorrect PIN, instructions given; one more attempt can be made
- After sixth wrong attempt, the app is **reset**
- Unsynced data and activity history are deleted
- Log in again with the same username and password, then set a new PIN





MOBILE

How is using a PIN secure?

- When you login and create a PIN, the app is empty (no data, no history)
- Any locally stored data is deleted after the sixth incorrect PIN
- If the phone is stolen or lost, there is no app data in local storage
- Any new unauthorized user (thief, lost and found, new owner) would need to know your username and password to use DFengage

MOBILE

How many notifications will I receive?

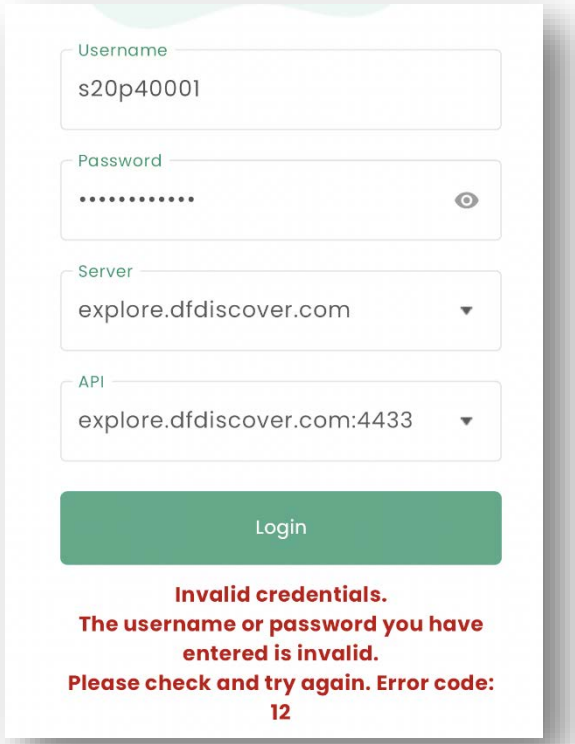
- You will receive a notification on your device when:
  - A new activity becomes available
  - An activity becomes overdue when you haven’t completed it when expected
- The research team determines how many notifications you receive and when you receive them
- Be sure to open DFengage when you receive a notification and complete your activities

MOBILE

What happens if my time zone changes?

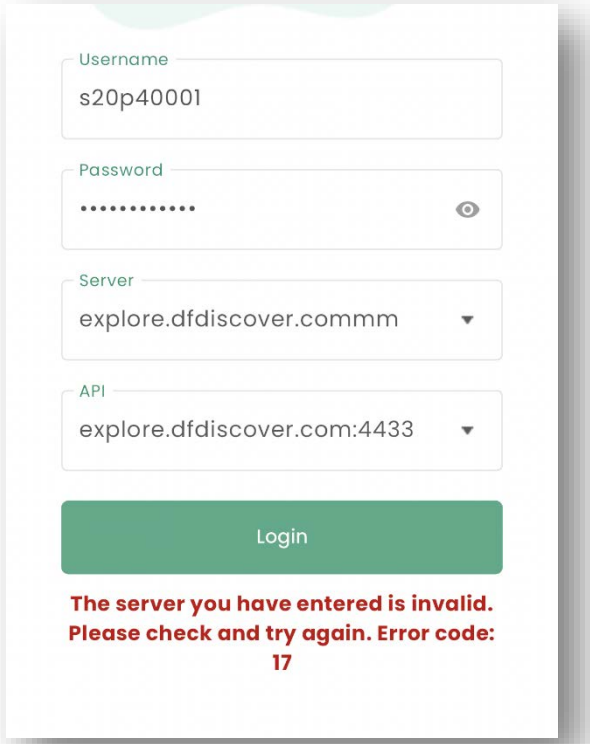
- If you are travelling and the time zone on your device changes, notifications from DFengage will appear according to the old time zone until you open DFengage in your new time zone
- Once you open DFengage, it will recognize your new time zone
- Moving forward, DFengage will send notifications in your new time zone

Common messages – Login screen



Invalid credentials

Check if username and password are typed correctly

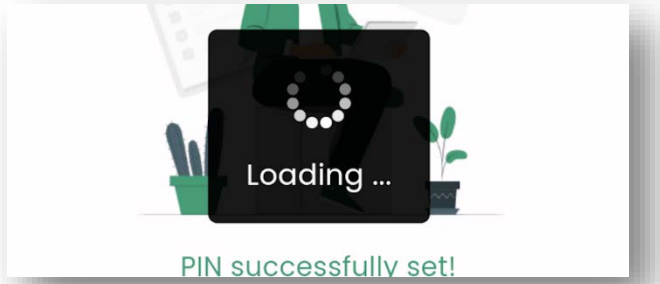


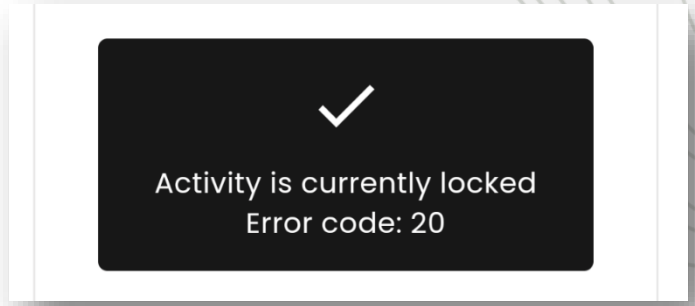
Server invalid

Check if server and API are typed correctly

Do not delete or uninstall app unless advised by the research team

Common messages





Loading …

The app is syncing with the server and updating your data.

This may take longer on a slow connection or during busy internet traffic times.

Activity is currently locked

Someone on the research team is reviewing your data, so the app can’t sync with the server right now.

Your activity is saved on your device/browser, but it can’t be saved to the server yet. Reopen the app later to try again (mobile) or wait a moment and press “Sync” to retry (web).

Do not delete or uninstall the mobile app unless advised by the research team

Troubleshooting for DFengage users

- Write down the error code, take a screenshot, and share with your study contact for help
- Avoid taking steps that delete any data that is not yet sent to the research team
- *On mobile:* **Do not uninstall or delete the app** or **log out of DFengage** unless informed by the research team
  - Any partial or pending activities will be deleted and your activity history will be removed
  - You will need to login again with username and password and set a new PIN
  - Instead, try closing or dismissing the app and reopening it to try again
- *On web:* **Do not log out of DFengage** or **refresh the page** or **close your browser** unless informed by the research team
  - Any partial or pending activities will be deleted (history of sent activities remain available)
  - Instead, contact the research team for help
  - Stay active on the page to avoid automatic logout after 20 minutes of inactivity

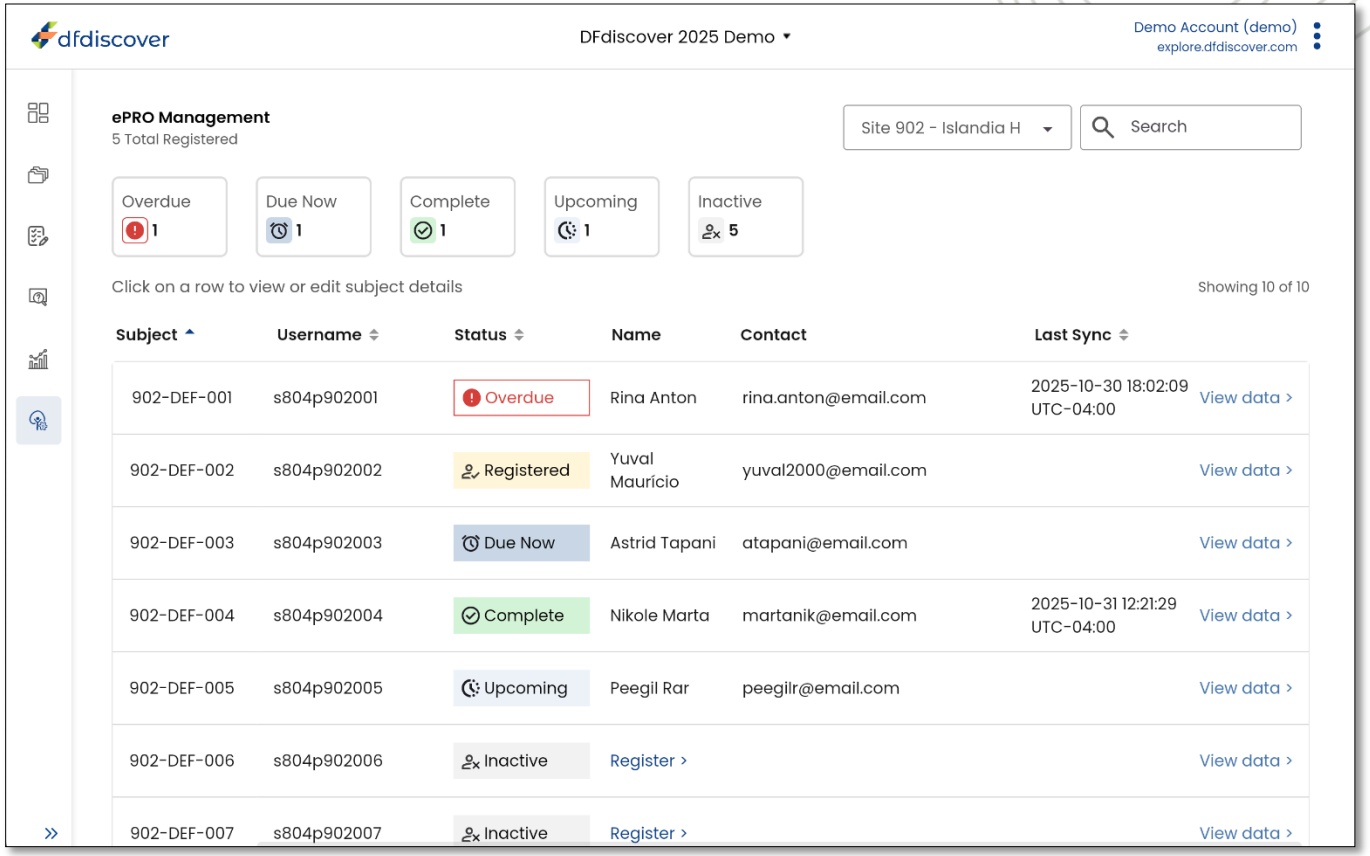
ePRO Management

For study teams

ePRO Management in DFweb

- Site staff register, track, and support ePRO participants
- Securely capture participant contact details
  - Support forgot password, two-factor authentication, email reminders
- Controlled access through user permissions
- ePRO user profile data encrypted and not accessible in DFadmin

Available in DFdiscover 5.10 and later



ePRO Management

ePRO Registration Purpose & Security

- Why is registration necessary? Email address allows:
  - Sending participant invite email to streamline onboarding
  - Sending new & overdue activity reminders by email
  - Sending login reminder emails on demand for participant support
  - Forgot password and two-factor authentication in DFengage
- Security & privacy considerations
  - Secure storage of participant profile data separate from standard users
  - Encryption of all user profile data to prevent backend access
  - Controlled access to ePRO management tools with or without PII access
  - Audit trail for ePRO admin access & ePRO user profile data

ePRO Management

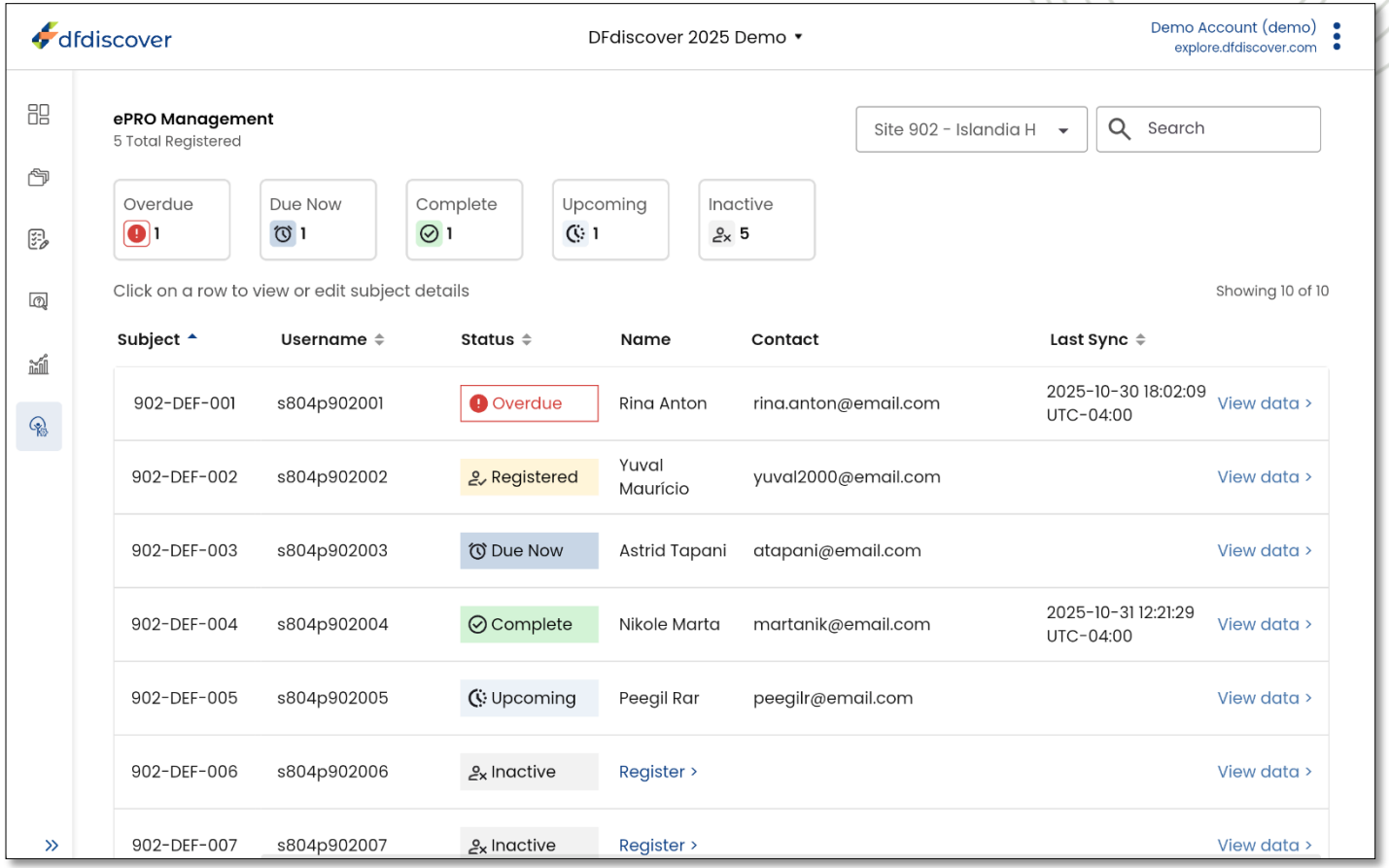
Key Features

- Register participants with their name, email address, and other details
- Send invitation email to participants to set up their DFengage account
- Track current ePRO status of participants
- Review & update participant registration details
- Support participants with new invite or login links (mobile & web, mobile only, web only)
- View audit trail of account updates and ePRO access
- **NOTES:**
  - User accounts must be created in DFadmin with subject ID and ePROdata role assignment before users appear in DFweb ePRO management tool
  - Baseline visit date must be entered in the CRF to initiate the ePRO visit schedule for each participant and make activities available to them in DFengage

ePRO Management

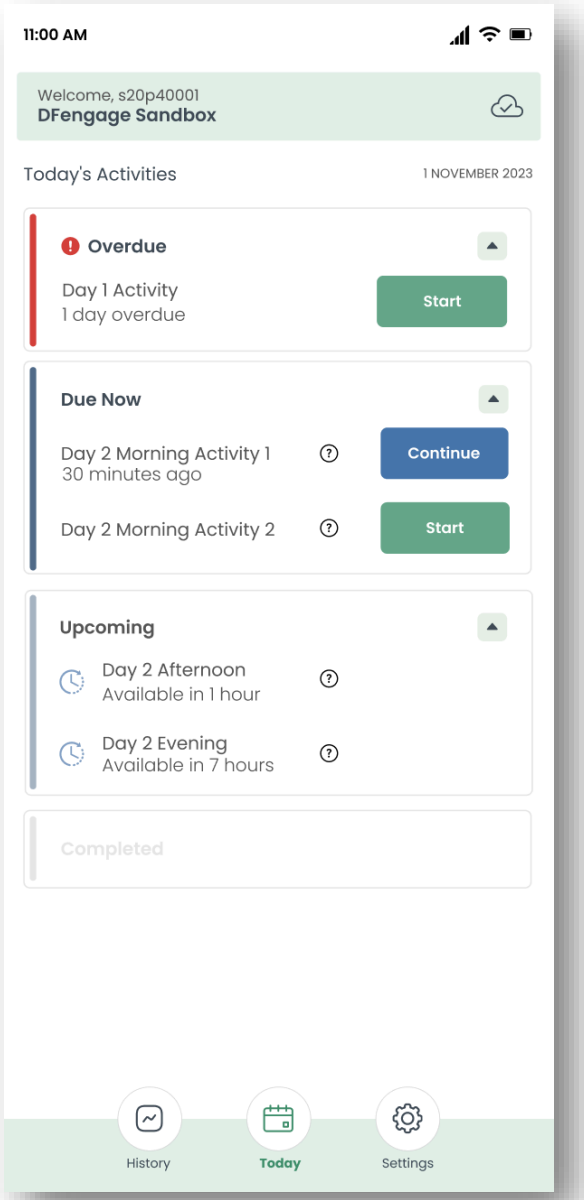
For more details, see:

[ePRO Management, DFweb User Guide]



DFengage Setup

Considerations for DFsetup

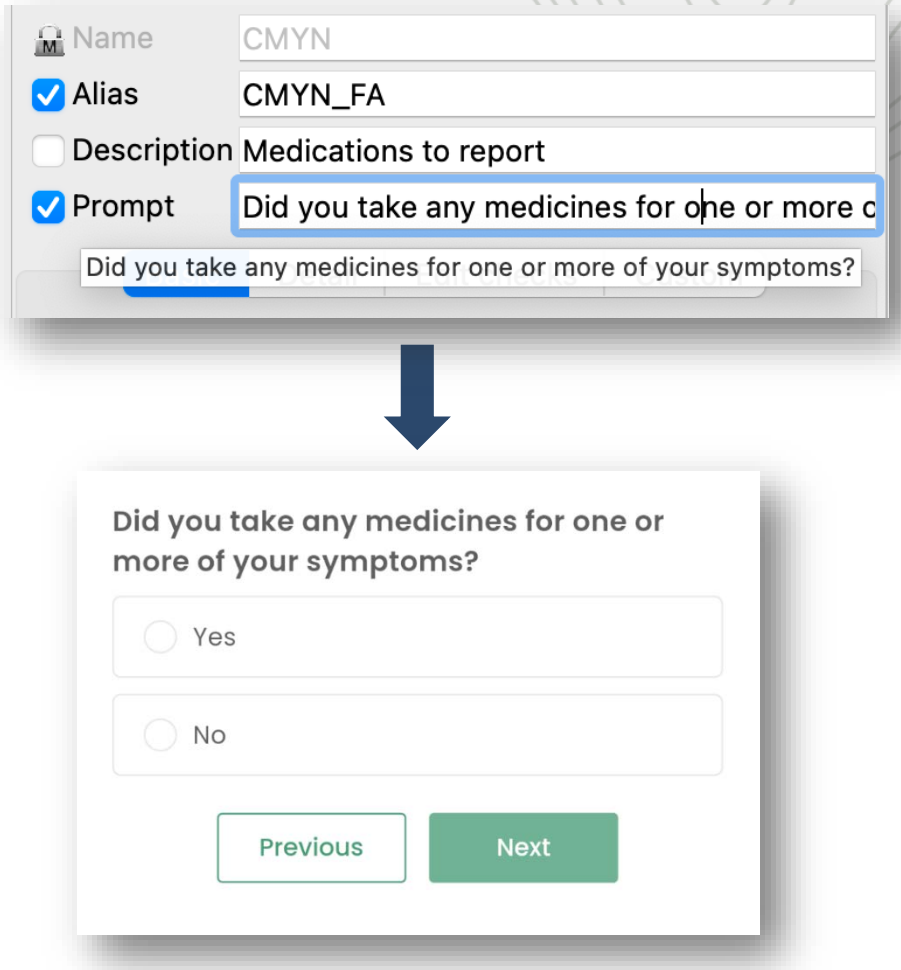


DFsetup: Plates

- One DFdiscover plate = one DFengage activity
- ePRO plates can be set up with CRF backgrounds or as eCRFs
  - Barcoded CRF background only required if also collecting on paper forms for image-based data capture (back-up for ePRO and EDC)
- Consider how to organize activities & questions
  - Will too many questions in an activity result in missed activities?
  - Will too many daily activities overwhelm users?

DFsetup: Fields

- One data field (or field group) per screen
- Displayed in field order starting with field 8
  - Visit number (6) and subject ID (7) not displayed
- Prompt displayed as question text
  - If no prompt, description is displayed
- Prompt supports basic HTML formatting



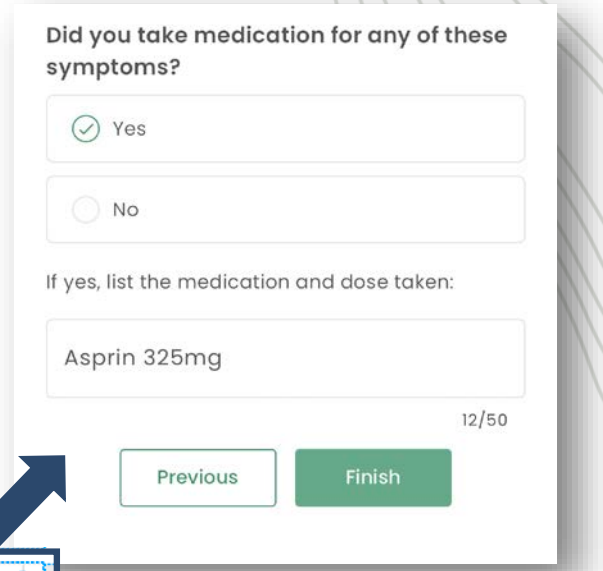
DFsetup: Data types

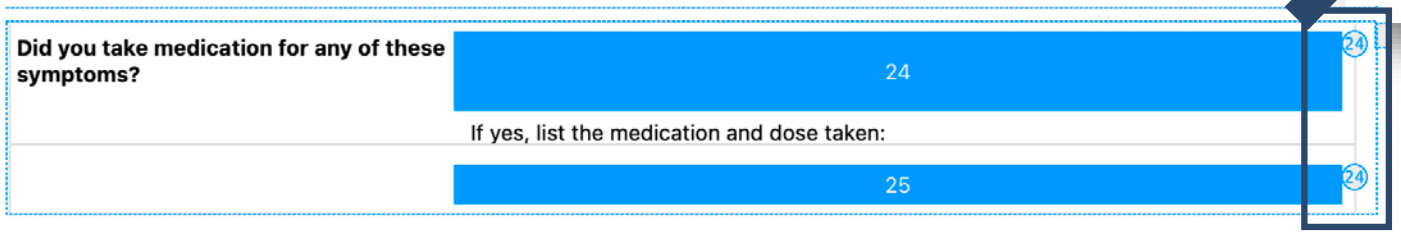
All DFdiscover data types are supported in DFengage:

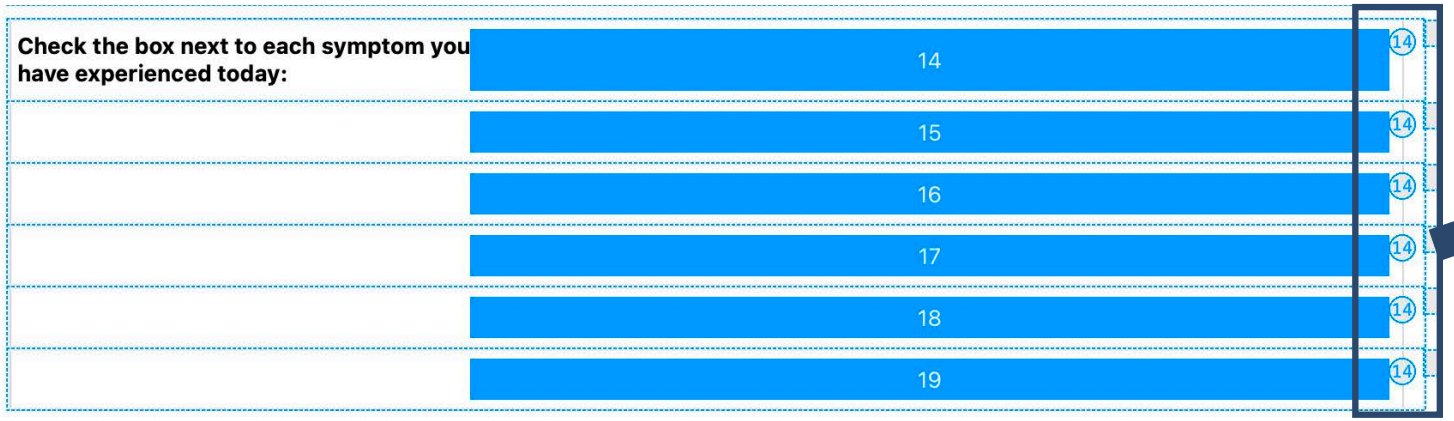
- Date – any format that includes day, month, and year (no partial dates)
- Time – hh:mm only
- Number – any format
- VAS – horizontal & vertical
- Choice – list and dropdown
- Check – grouped (for multiple-choice) and ungrouped
- String – short and long text responses

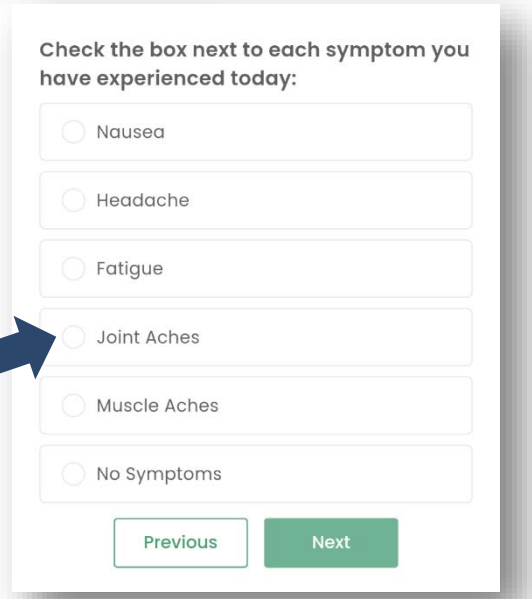
DFsetup: Grouped fields

Group fields of any data type together to include them on a single screen



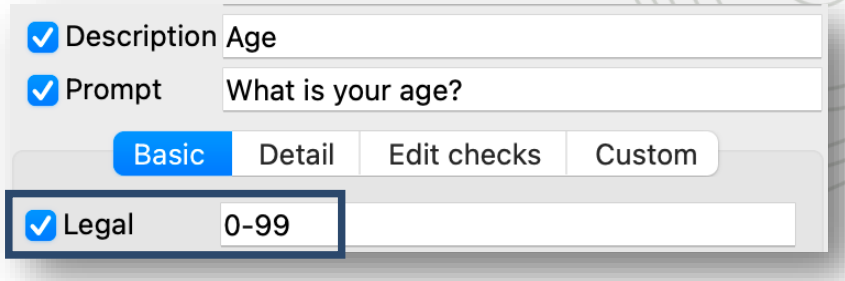


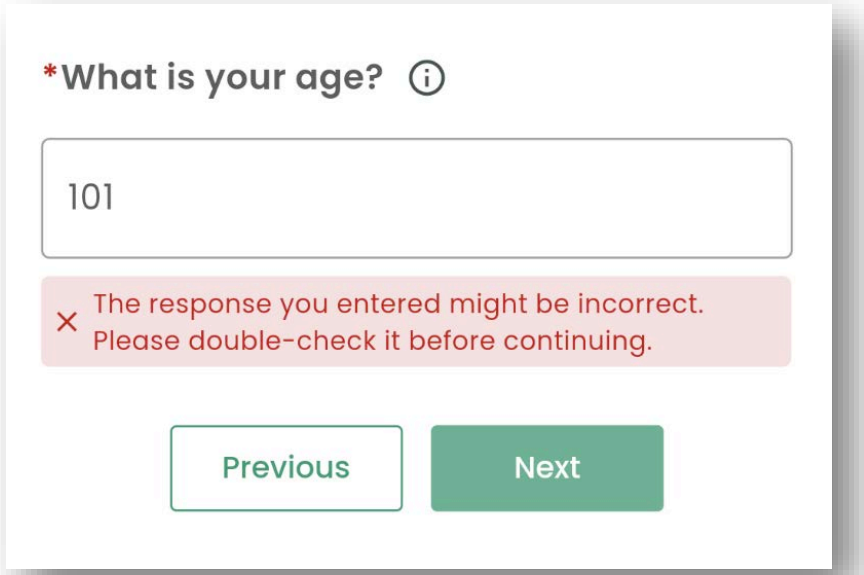




DFsetup: Legal ranges

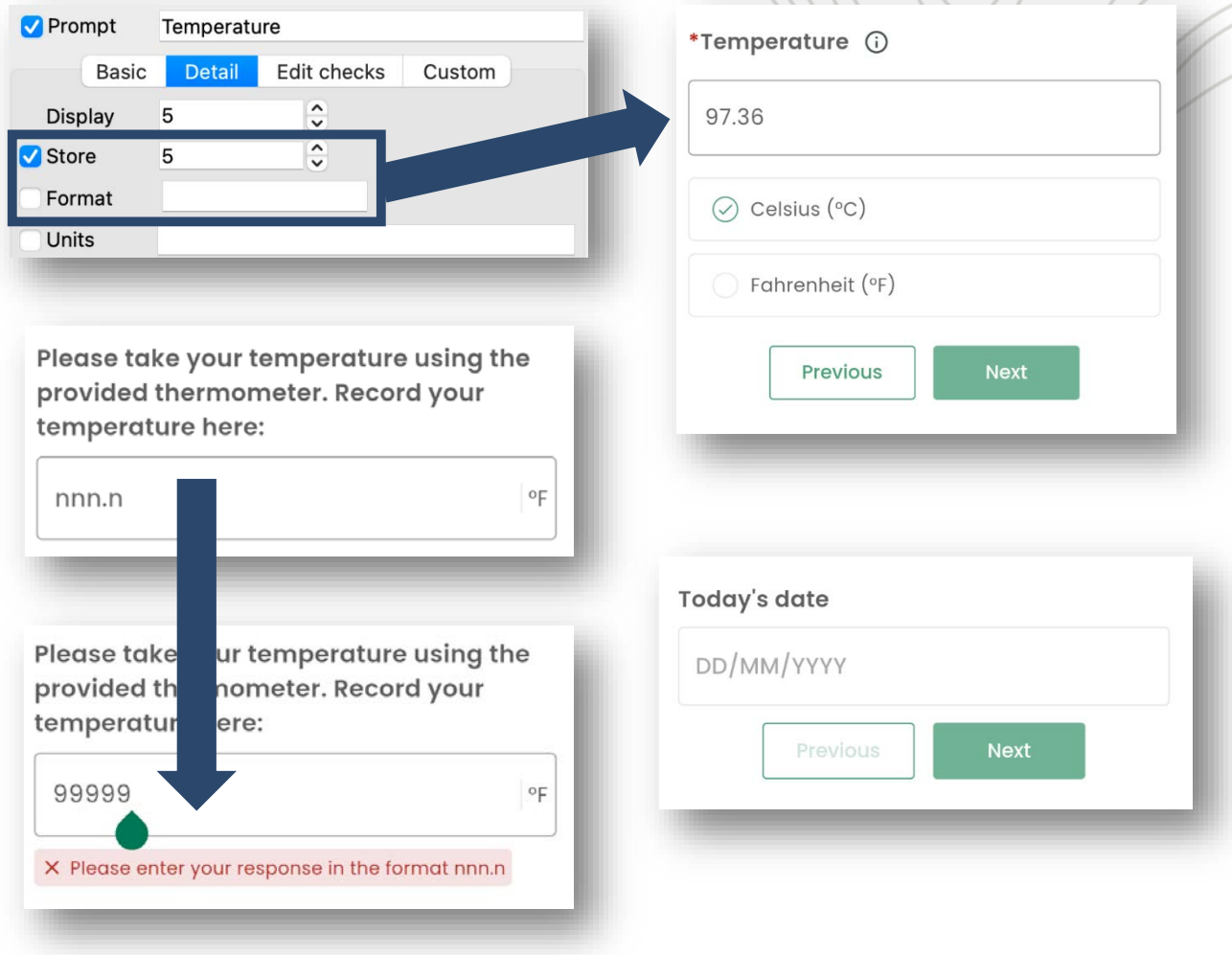
- If a value is entered outside the defined legal range:
  - Warning is displayed
  - User may continue to the next question
- Soft validation of illegal values to avoid data loss
- In DFexplore / DFweb / DFcollect, the value is illegal and the record is saved as incomplete





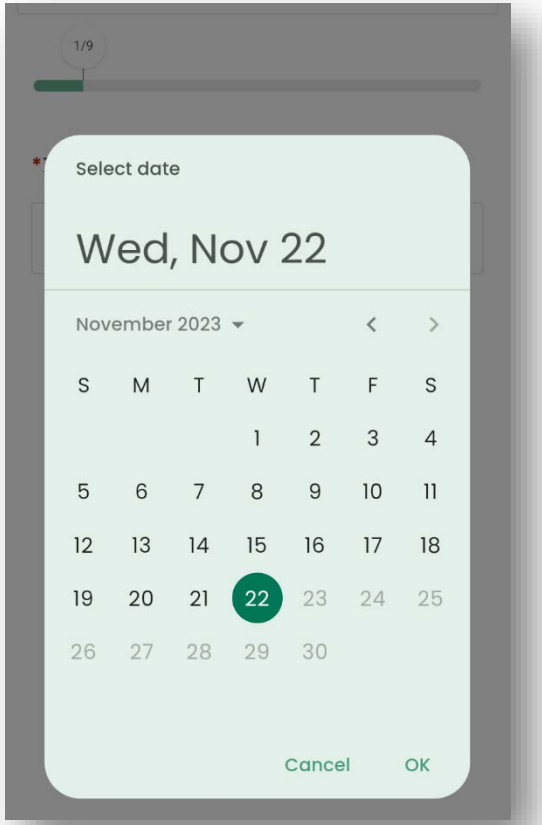
DFsetup: Data format

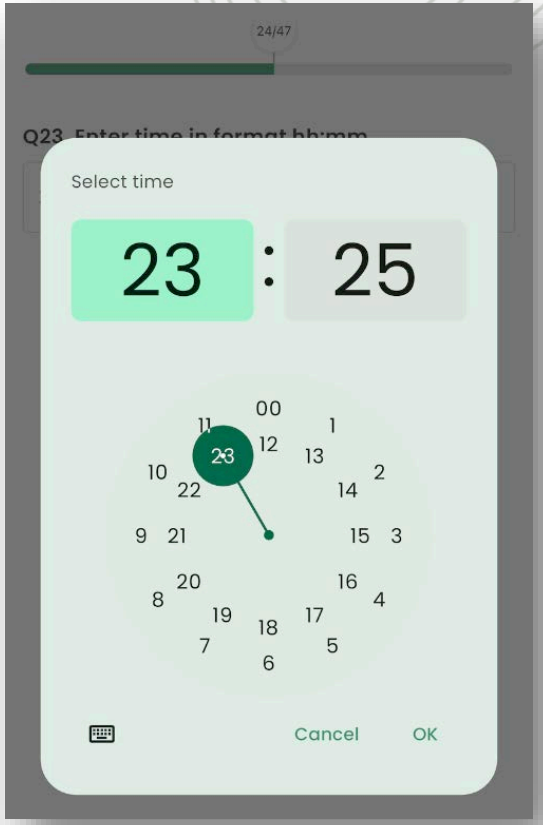
- If format is not defined, characters allowed by data type are valid up to the store limit
- If format is defined, format guides are displayed in DFengage input field
- If participants must provide responses in specific format, include instructions to avoid confusion
- Warning displayed for invalid response according to defined format



DFsetup: Date and time fields

- All date formats that include day, month, and year are supported in DFengage (no partial dates)
- Time captures hh:mm 24-hr clock only
- Calendar and clock widgets used to select date and time
  - Default to current date and time
  - Participant can change if needed
- Legal ranges are supported
- Option to “Clear this value” if participant selects an optional response in error



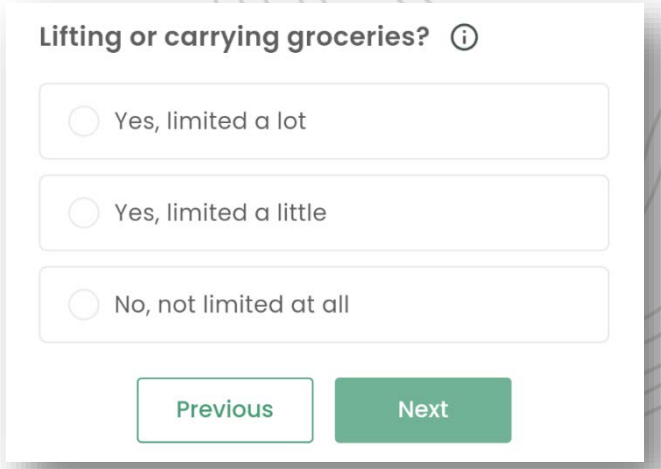


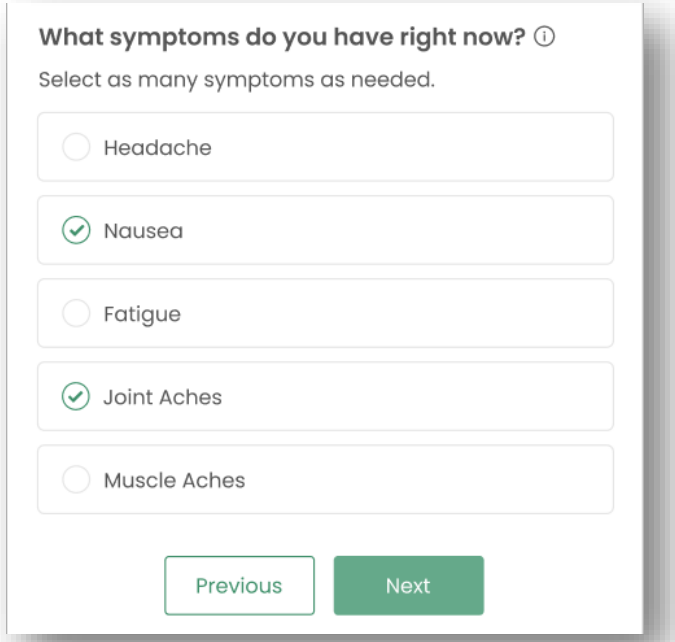
DFsetup: Baseline visit date fields

- DFdiscover 5.7 and earlier: Baseline visit date(s) must be in **DD/MM/YYYY** format, e.g.,: 28/02/2021
- DFdiscover 5.8 and later: Baseline visit date may be in **any format** when connecting to DFdiscover 5.8 and later

DFsetup: Choice and check fields

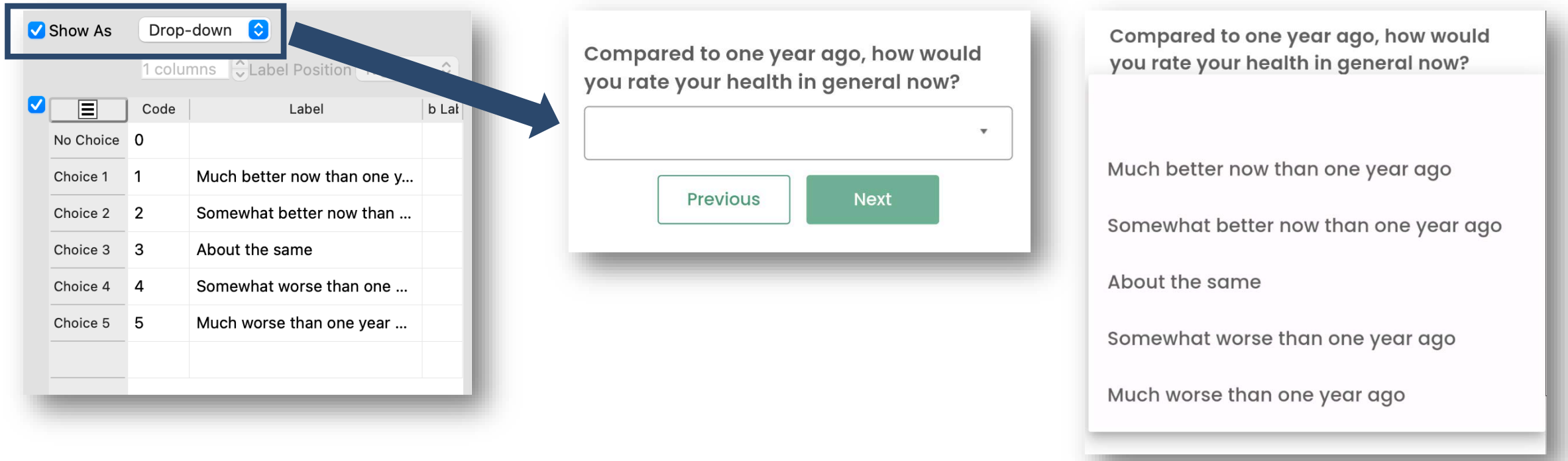
- Single-choice:
  - Choice data type for all options
  - Up to 98 options per question
  - Option to “Clear this value” if participant selects an optional response in error
- Multiple-choice:
  - Check data type for each option
  - Grouped to display as a single question
  - No limit to number of options
- Both single-choice and multiple-choice options are displayed with circles
- In the field prompt or instructions, include text such as “check all that apply” where necessary





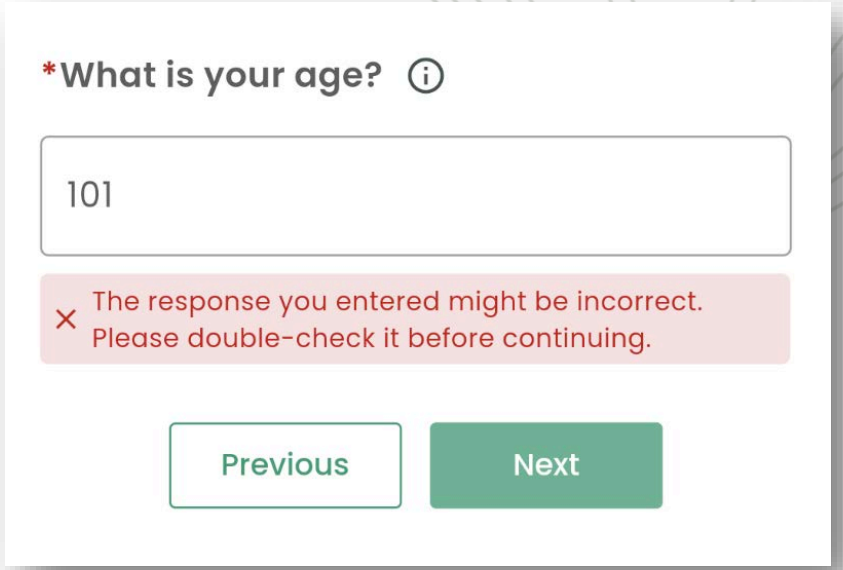
DFengage: Choice field dropdown

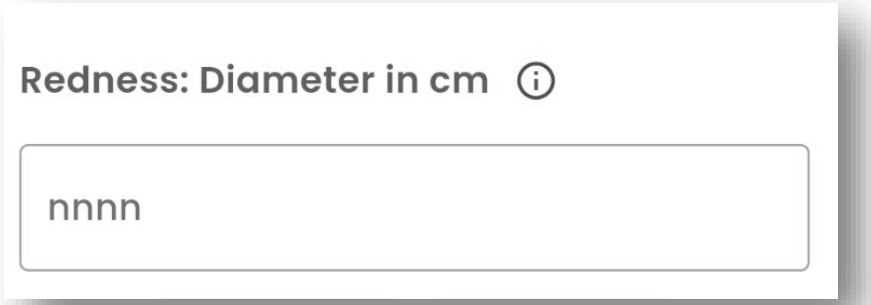
Single-choice fields may be displayed as dropdown instead of choice list

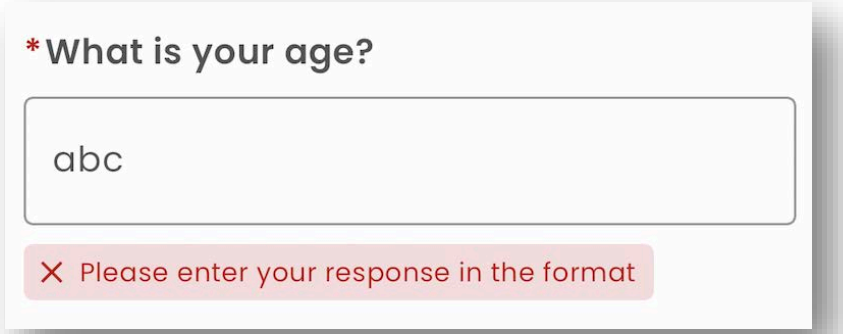


DFsetup: Number fields

- Input field is restricted based on format (if defined) and store field properties
- Input field displays format guide, if defined
- Warning displayed if illegal or invalid value is entered

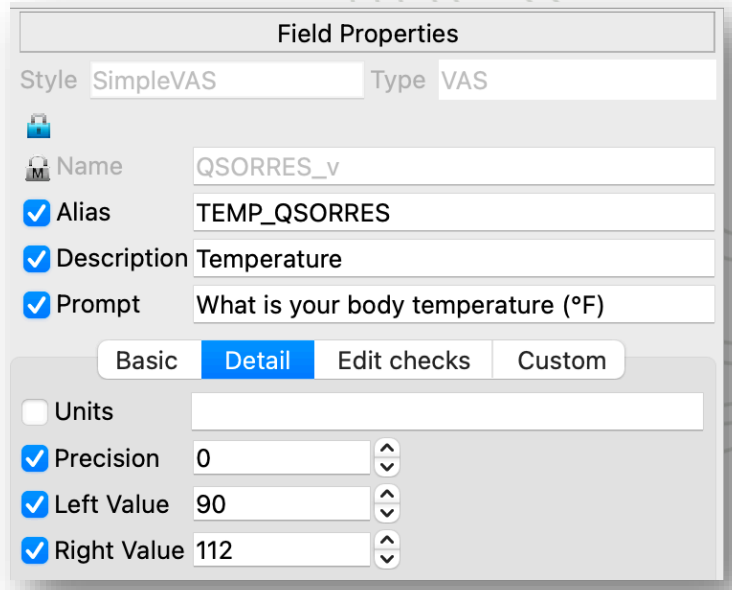


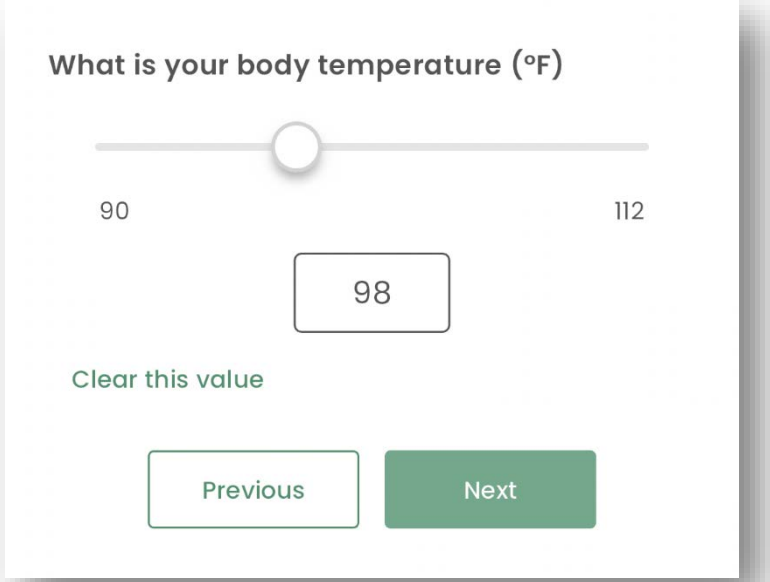




DFsetup: VAS fields

- Define left and right value along with precision as needed to allow for decimal places
- Consider VAS instead of number fields to fully restrict entry to a range of values
- VAS default: horizontal scale, left and right values displayed on the scale
- VAS customization using custom properties available from version 2.2

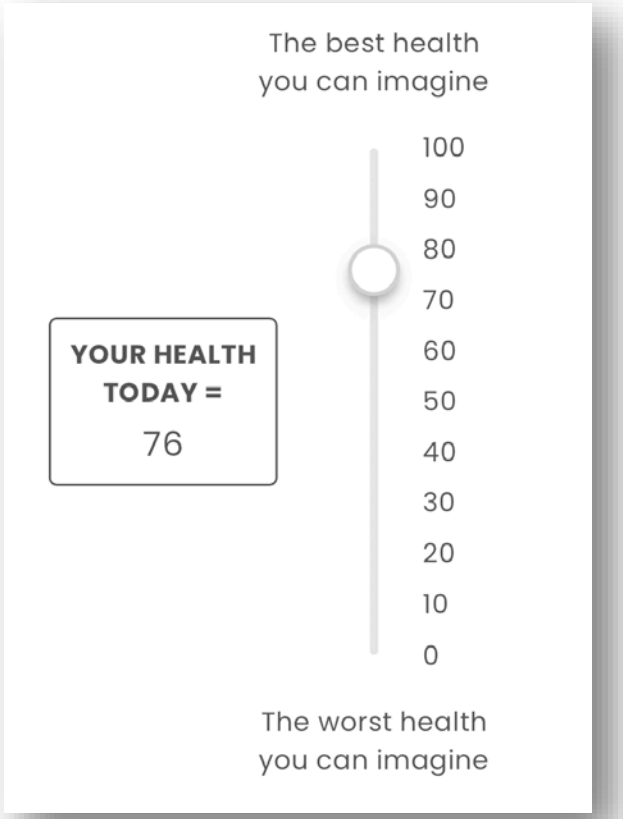




NEW IN 2.2

DFsetup: VAS customizations – Vertical scale

- Display VAS vertically instead of horizontally
- Use custom field property **ePRO_VAS_Layout** value of **Vertical**
- Left value on bottom, right value on top
- Affects DFengage only



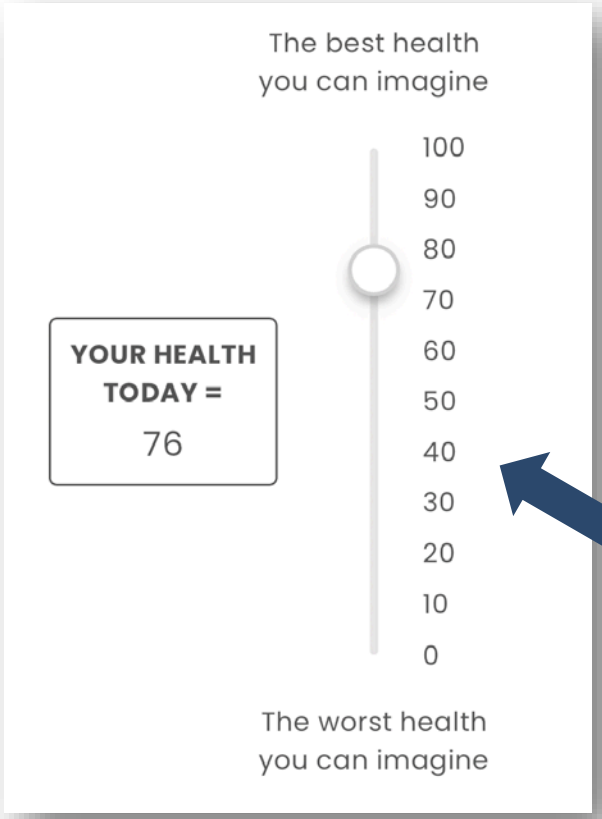
ePRO_VAS_Layout	Vertical
ePRO_VAS_ShowEveryXValues	10
ePRO_VAS_RightText	<p style="te
ePRO_VAS_LeftText	<p style="te
ePRO_VAS_CurrentText	<p style="te

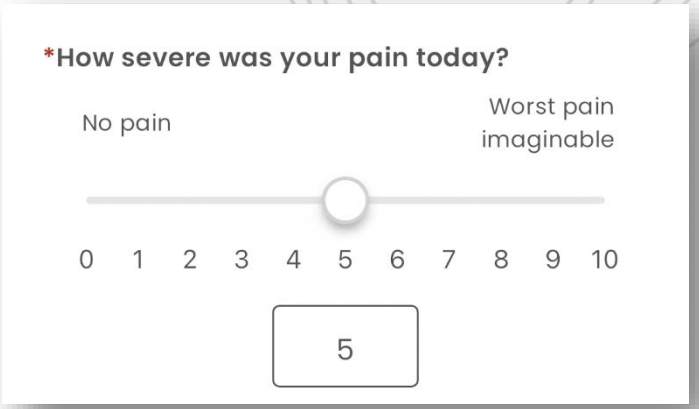
DFsetup field-level custom properties

NEW IN 2.2 & 2.3

DFsetup: VAS customizations – Additional values

- Display additional values on the scale
- Use custom field property **ePRO_VAS_ ShowEveryXValues** to indicate the increment of values to display
- If specified values do not fit, only the middle value is shown





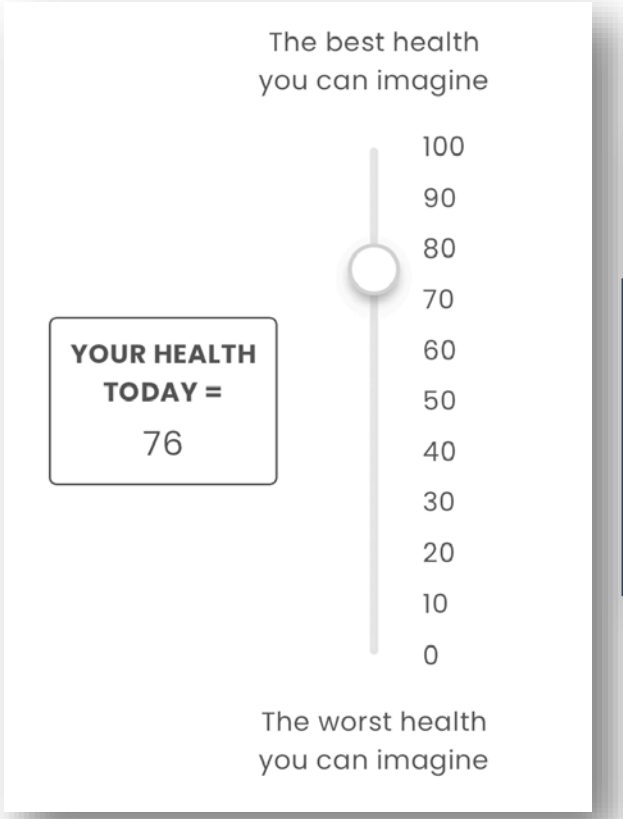
ePRO_VAS_Layout	Vertical
ePRO_VAS_ShowEveryXValues	10
ePRO_VAS_RightText	<p style="te
ePRO_VAS_LeftText	<p style="te
ePRO_VAS_CurrentText	<p style="te

DFsetup field-level custom properties

NEW IN 2.2

DFsetup: VAS customizations – Labels (vertical)

- Add labels to left, right, and current values
- Use custom field properties:
  - **ePRO_VAS_ RightText**
  - **ePRO_VAS_LeftText**
  - **ePRO_VAS_CurrentText**
- Text aligns left by default; line breaks added automatically
- Use HTML to add alignment, line breaks, and basic formatting



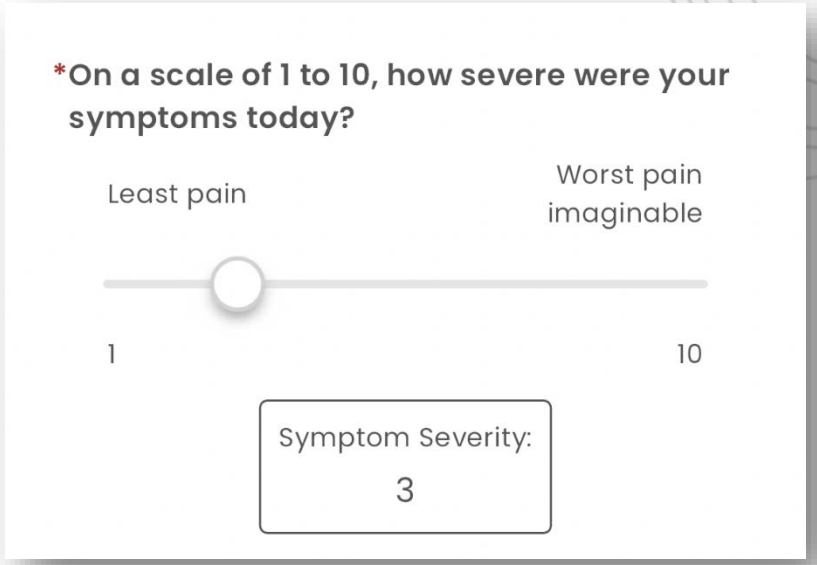
ePRO_HideField	
ePRO_VAS_Layout	Vertical
ePRO_VAS_ShowEveryX...	10
ePRO_VAS_RightText	The best health you can imagine
ePRO_VAS_LeftText	The worst health you can imagine
ePRO_VAS_CurrentText	YOUR HEALTH TODAY =

DFsetup field-level custom properties

NEW IN 2.2

DFsetup: VAS customizations – Labels (horizontal)

- Add labels to left, right, and current values
- Use custom field properties:
  - **ePRO_VAS_ RightText**
  - **ePRO_VAS_LeftText**
  - **ePRO_VAS_CurrentText**
- Text aligns left by default; line breaks added automatically
- Use HTML to add alignment, line breaks, and basic formatting



ePRO_VAS_RightText	Worst pain imaginable
ePRO_VAS_LeftText	Least pain
ePRO_VAS_CurrentText	Symptom Severity:

NEW IN 2.3

DFsetup: VAS customizations – Labels (horizontal)

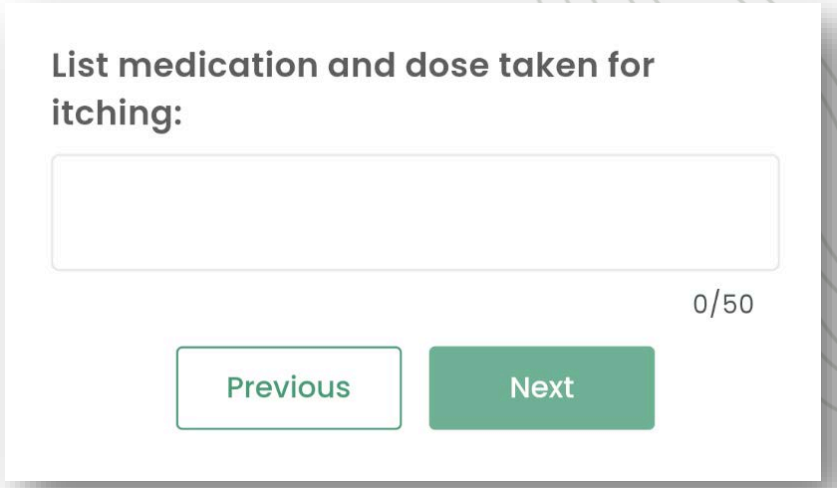
- By default, left and right labels are displayed above the scale
- Optionally display the labels below the scale
- Use custom field property **ePRO_VAS_LeftRightTextPosition** value of **Below**

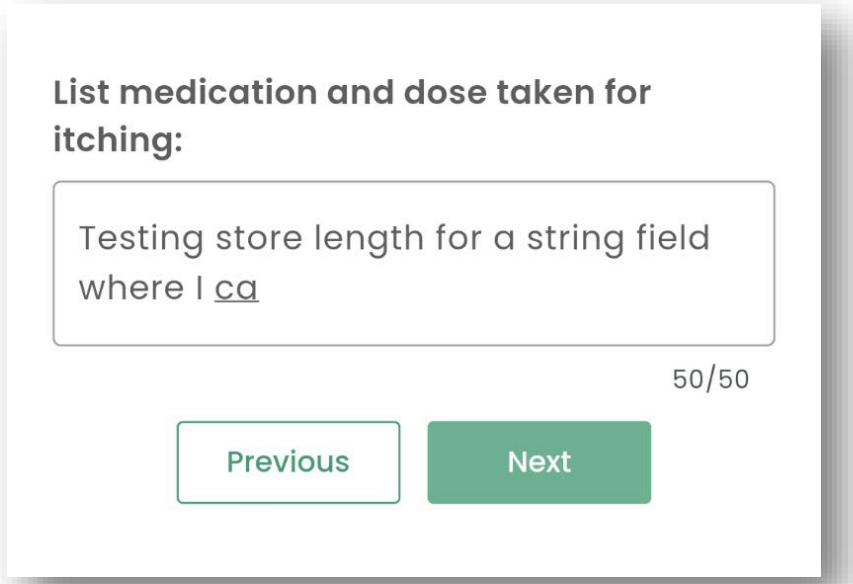


ePRO_VAS_ShowEveryXValues	1
ePRO_VAS_RightText	Worst pain imaginable
ePRO_VAS_LeftText	No pain
ePRO_VAS_CurrentText	
ePRO_VAS_LeftRightTextPosition	Below

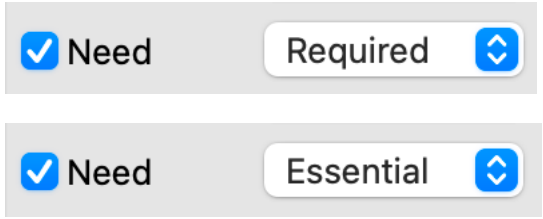
DFsetup: String fields

- Character limit (store length) is displayed at bottom right of input field
- Count is updated as data is entered
- Participant cannot continue typing when limit is reached

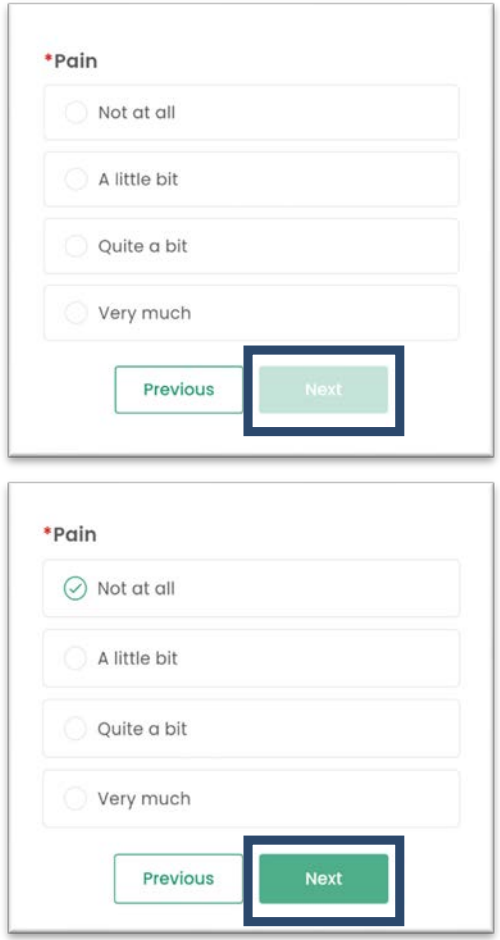


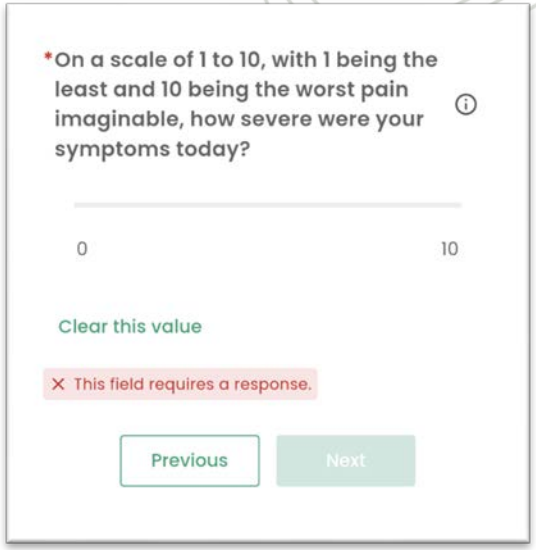


DFsetup: Required and essential fields

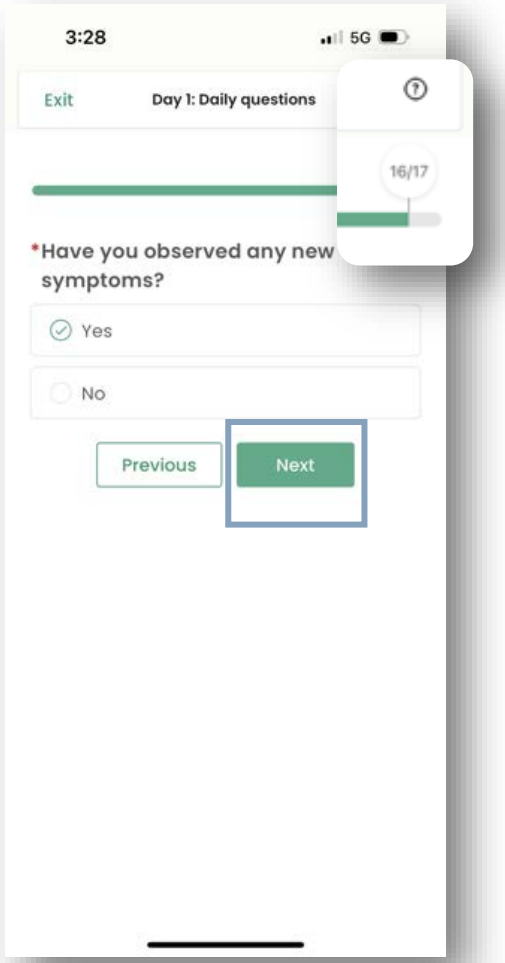


- In DFengage, required and essential fields are marked with red asterisk (*)
- **Next** button is disabled until response is provided
- Participant cannot proceed until they answer the question
- “This field requires a response” warning appears if participant enters and then deletes their response

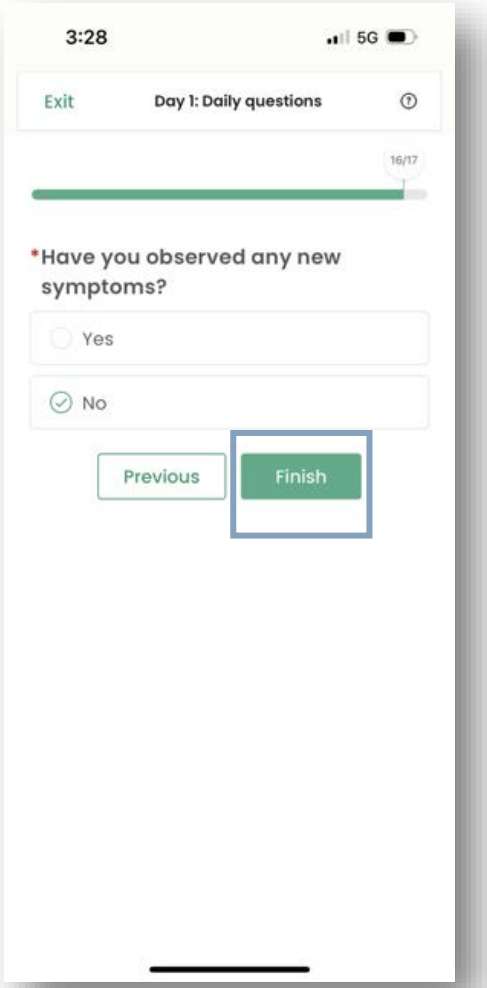




DFsetup: Skip pattern logic



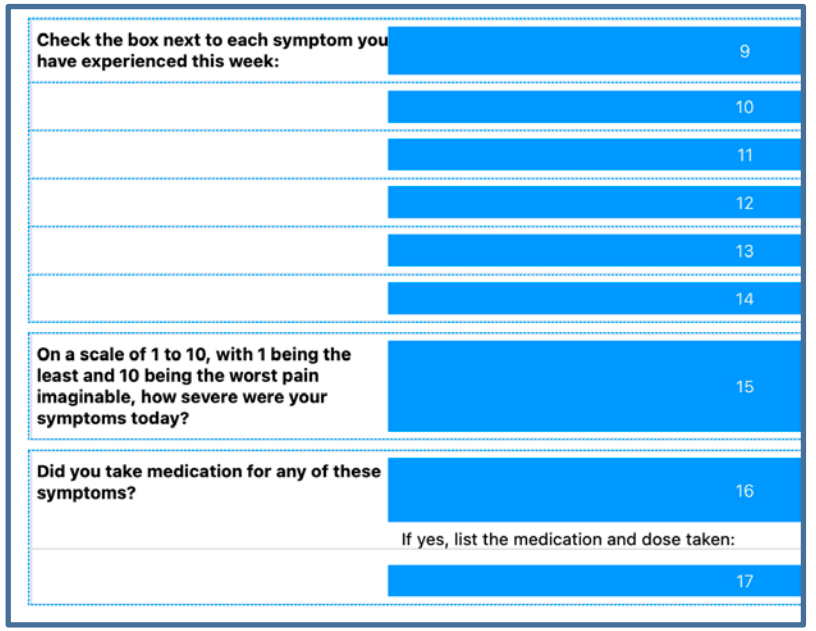
In this example, if yes, then “Next” brings you to question #17



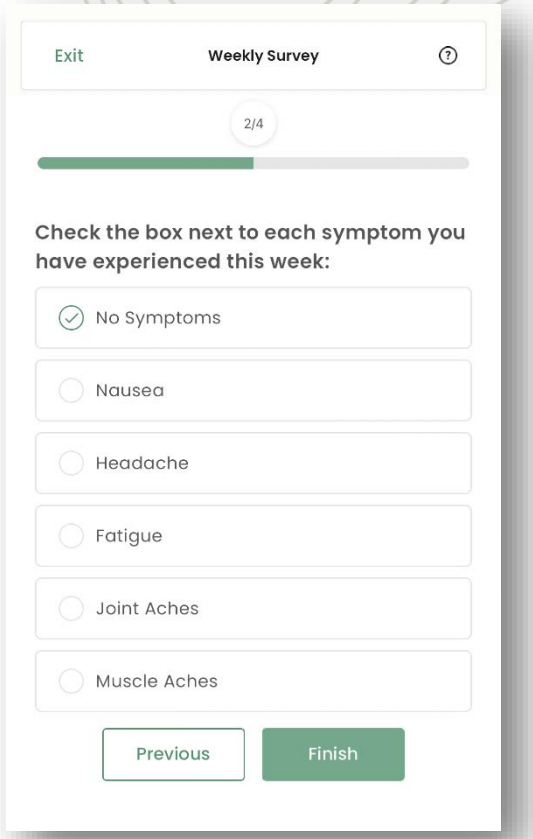
If no, then “Finish.” Question #17 will be skipped

DFsetup: Skip patterns with grouped fields

- Fields within a group now count as <u>separate</u> fields as in DFexplore/DFweb *(previously a group was counted as one field)*
- Example: Field 9 is “No symptoms” check type. If no symptoms = 1, then end of form
  - Field 9: skip 8 fields if value = 1
- If multiple skips within a group, the <u>last</u> skip determines next question
  - Skip patterns are checked in reverse order from last (highest field #) to first (lowest field #) within a group





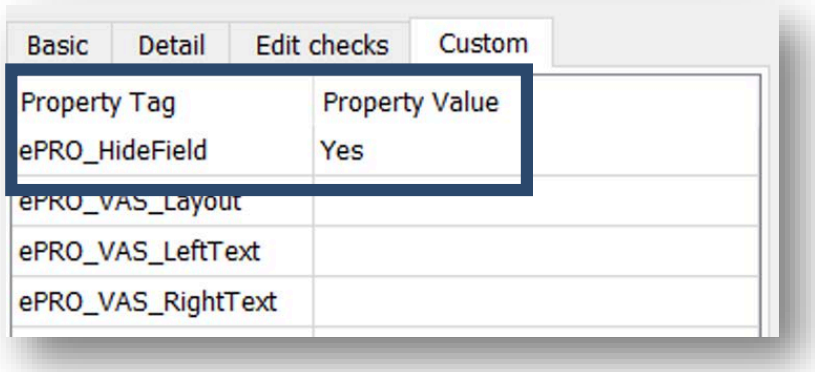


NEW IN 2.2

DFsetup: Text-only screens

- Need to have a screen with text only, no question to answer?
- Use custom field property **ePRO_HideField** value of **Yes**
- Field input area is hidden, but prompt, instructions, and footnote are displayed
- Affects DFengage only

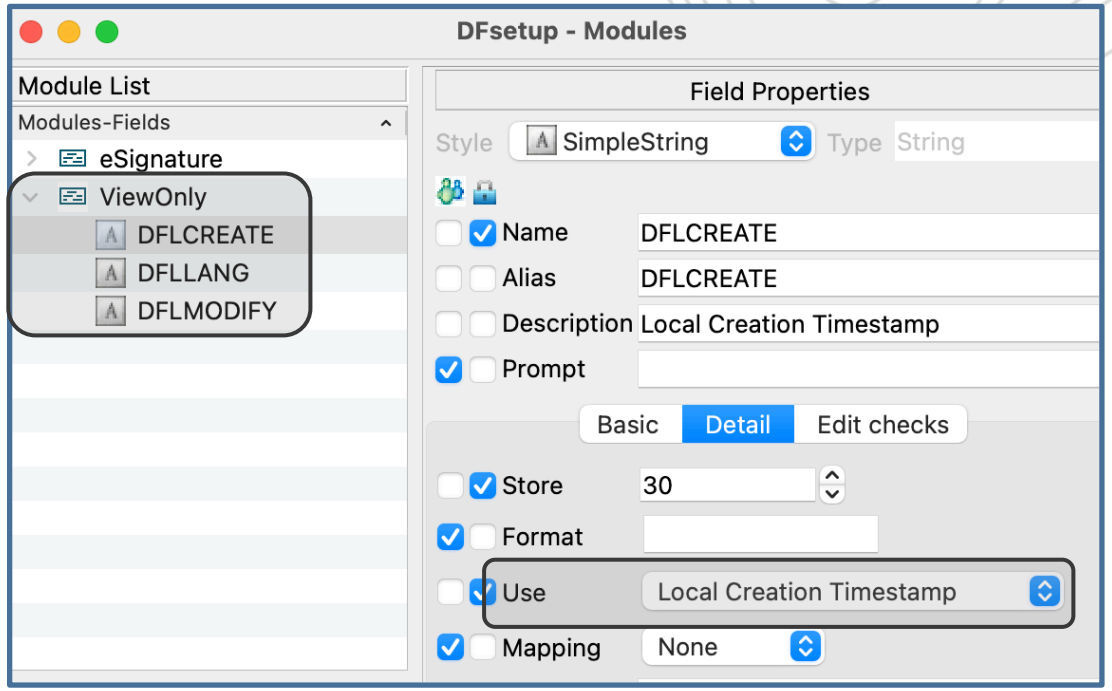




NEW IN 2.4

DFsetup: View-only hidden fields

- Capture hidden, view only fields:
  - **Language** to capture user's study language
  - **Local creation timestamp** to capture user's local time with UTC offset
- Defined via Use property or using built-in ViewOnly module
- Fields are always hidden in DFengage and auto-completed when the activity is completed
- Data values shown in EDC tools



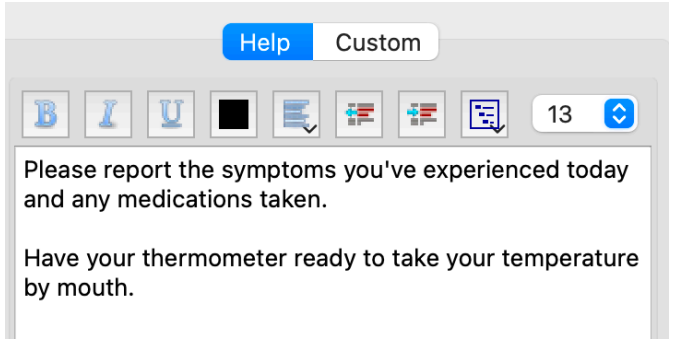


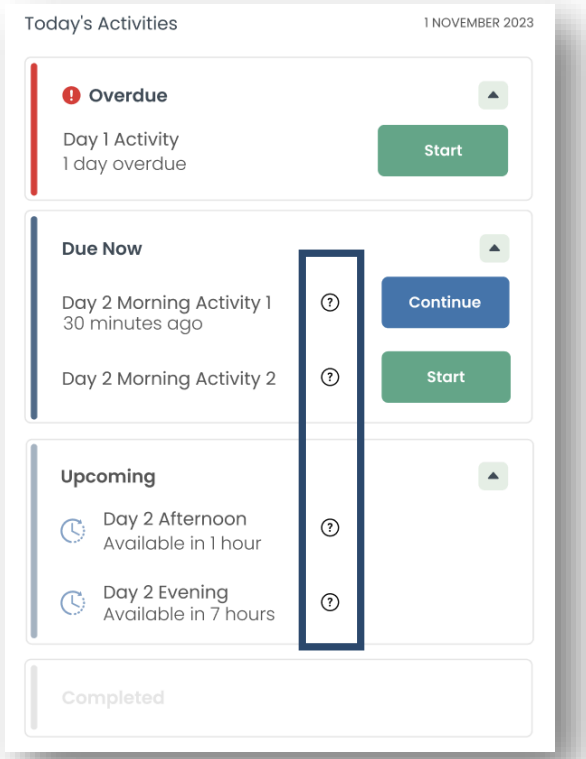
DFsetup: Hidden, masked, constant fields

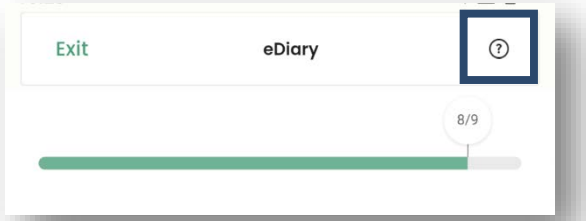
- Hidden fields are shown or hidden based on role permissions
  - Recommended: Disable “Show Hidden fields” in ePROdata role permissions
  - Limit use of hidden fields for non-ePRO fields (e.g., expiry, translations of text fields, etc.)
- Masked fields are blank, read only, and covered with grey box
  - **Not recommended for DFengage**
- Constant fields are displayed and read only
  - **Not recommended for DFengage**

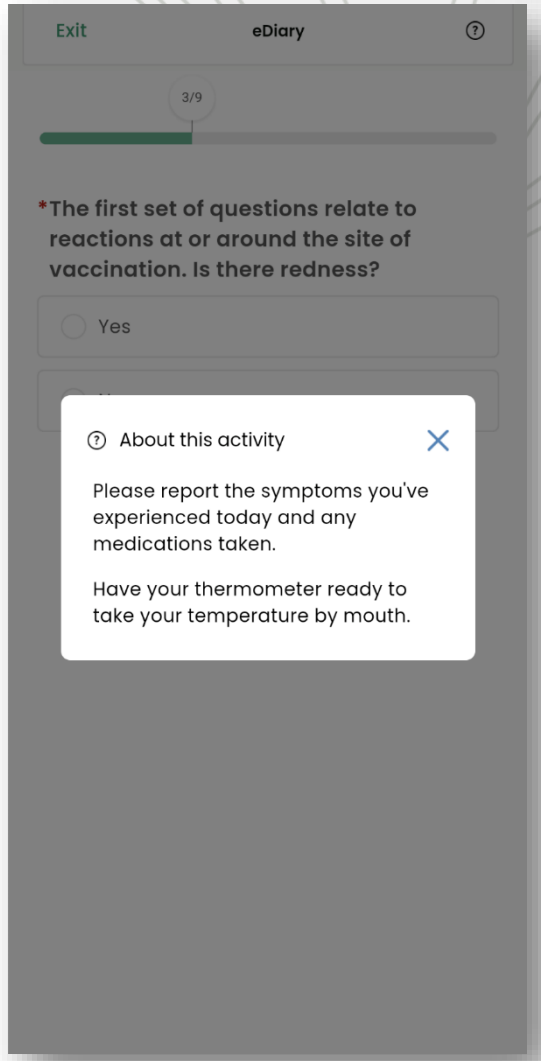
DFsetup: Plate help

- Define **Help** in DFsetup plate properties to provide additional information about an activity
- Accessed in DFengage via “?” icon on Today page and on each screen within an activity



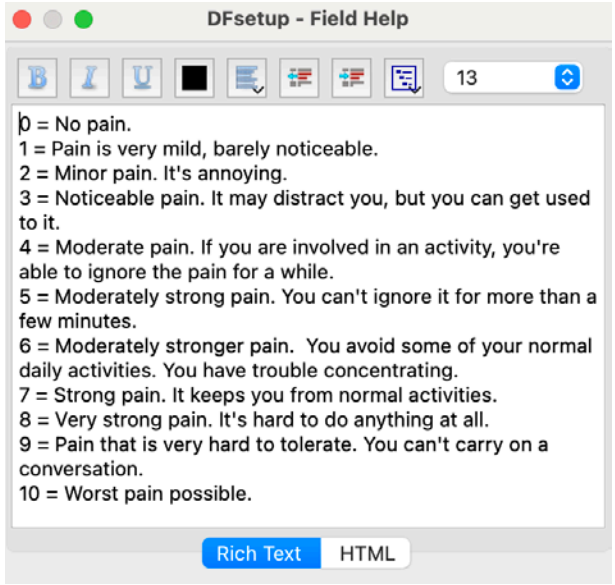


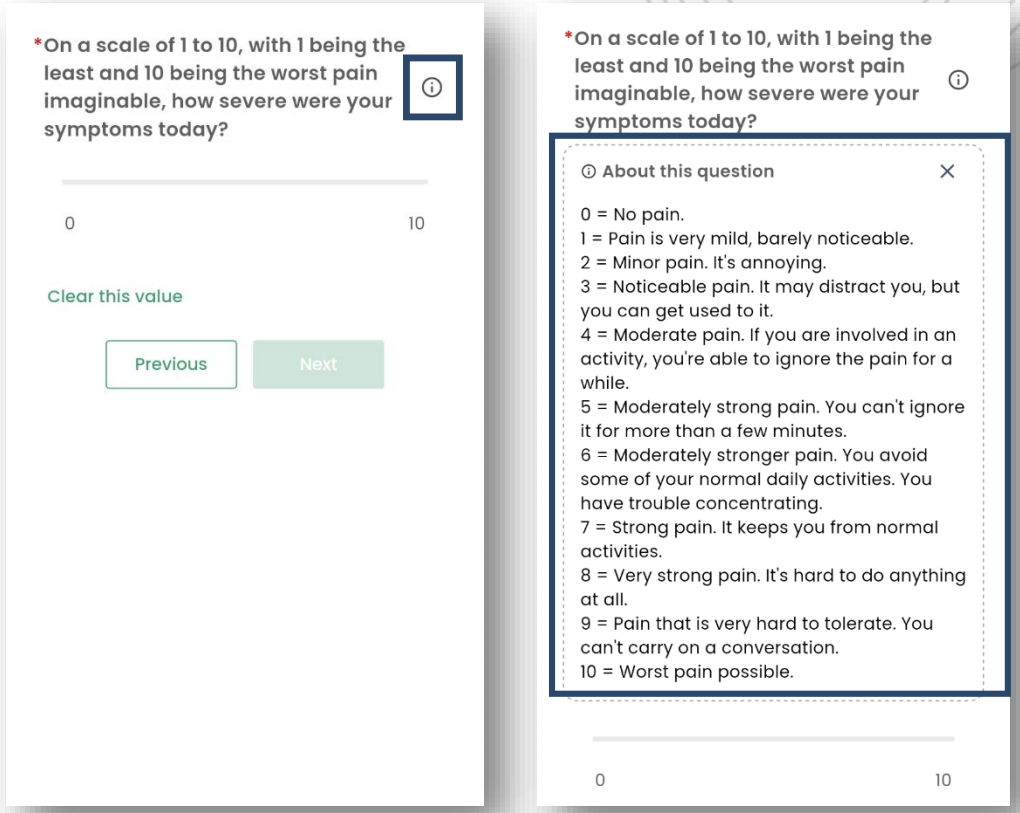




DFsetup: Field help

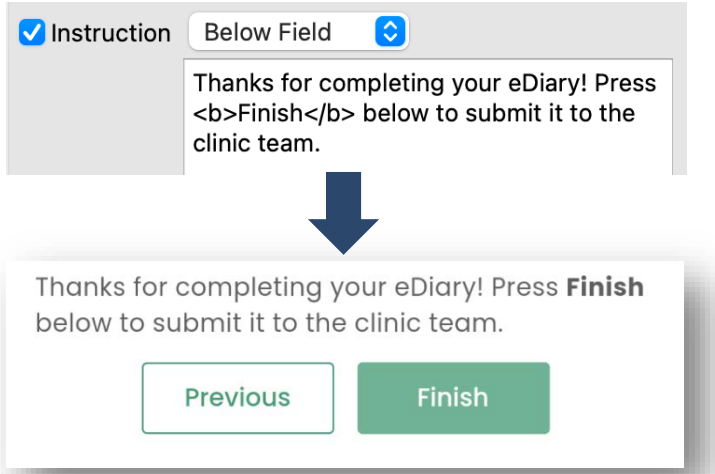
- Define **Help** in DFsetup field properties to provide additional information about a question
- Accessed in DFengage via “i” icon next to field prompt, shown on-screen below prompt

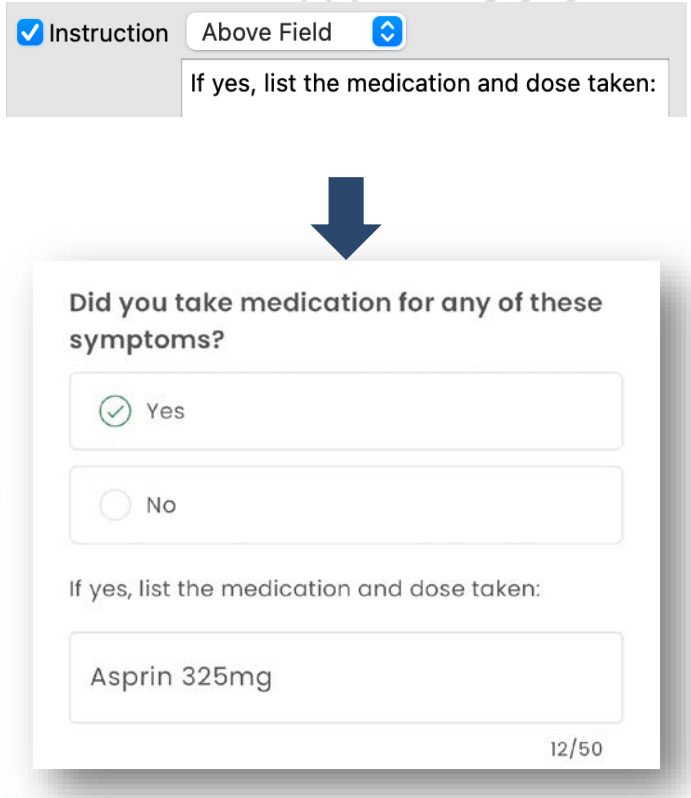




DFsetup: Field instructions

- Use field instructions to add on-screen text in addition to field prompt
- Displayed according to defined position
  - Above prompt and above field displayed as described
  - Field right/Below field/Below prompt are all displayed <u>below</u> DFengage input field
- Basic HTML formatting supported

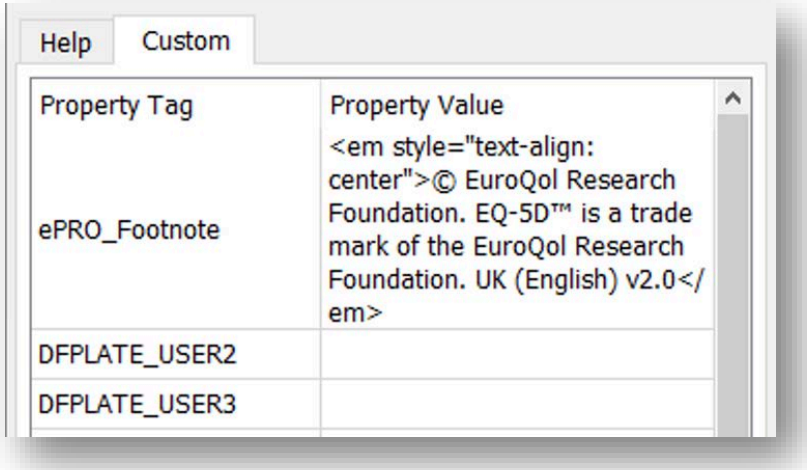


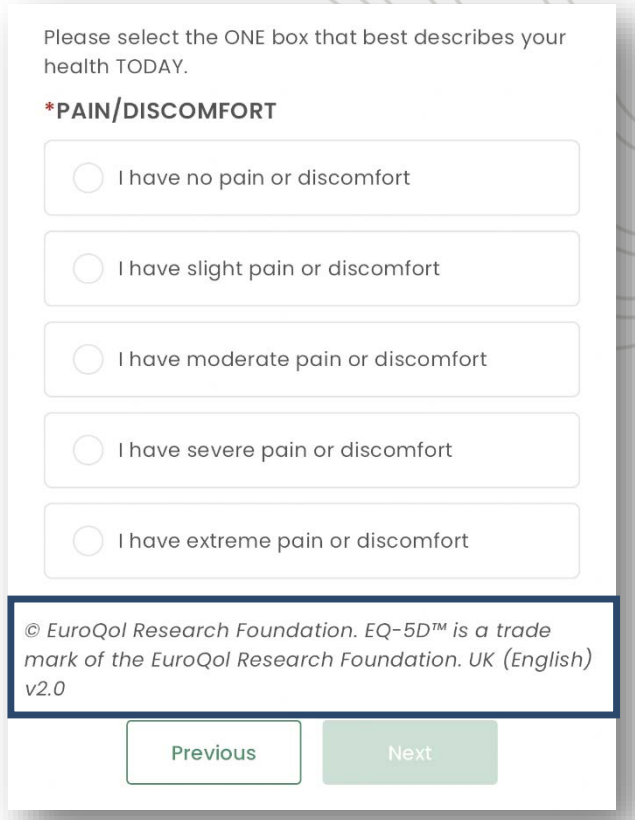


NEW IN 2.2

DFsetup: Plate footnotes

- Plate footnotes are displayed at the bottom of every screen for an activity
- Use custom plate property **ePRO_Footnote**
- Basic HTML formatting supported

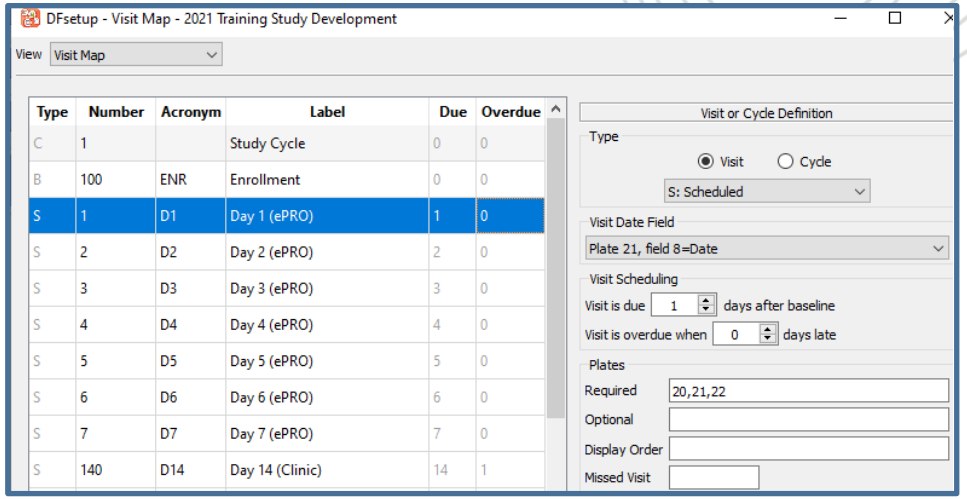




DFsetup plate-level custom properties

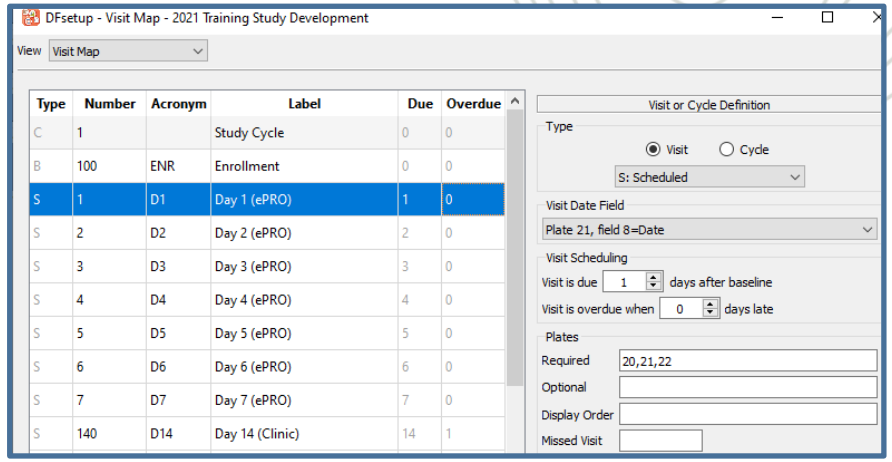
DFsetup: Visit Map in **DFdiscover 5.7** and earlier

- Visit types “S” and “T” are currently the only visit types available in DFengage with DFdiscover 5.7 or earlier
  - Plates must be required
- Schedule from baseline visit (visit date must be in DD/MM/YYYY format)
  - If using a different date format, use an edit check to autofill the date to a hidden visit date field in DD/MM/YYYY format
- Consider creating separate visits for DFengage (optional)
- Current release supports multiple cycles
- Current release does not support termination dates, missed visit plates, or conditional cycles, visits, plates, or termination



DFsetup: Visit Map in **DFdiscover 5.8** and later

- All visit types and conditional maps are supported in DFengage as of DFdiscover 5.8
- Any visit that is required and has a Schedule Date in the **Cycle Visits** report is available for completion in DFengage
  - New in 2.4: Includes repeating forms (using visit number range)
  - Requires role permissions that allow visit date calculations

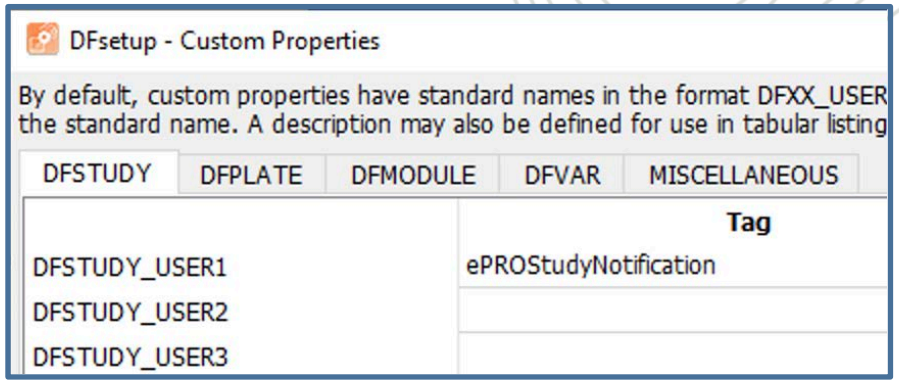


- Only required plates at required and scheduled visits are available in DFengage
  - Optional visits and optional plates are not available in DFengage
- Activity schedule is loaded at the start of a session or activity
  - Conditional changes to plates, visits, cycles, or termination are updated when each activity is completed
  - If the participant starts an activity and exits before finishing, setup and permissions are the same when they continue
- Baseline visit dates may use any date format (DD/MM/YYYY format no longer required)

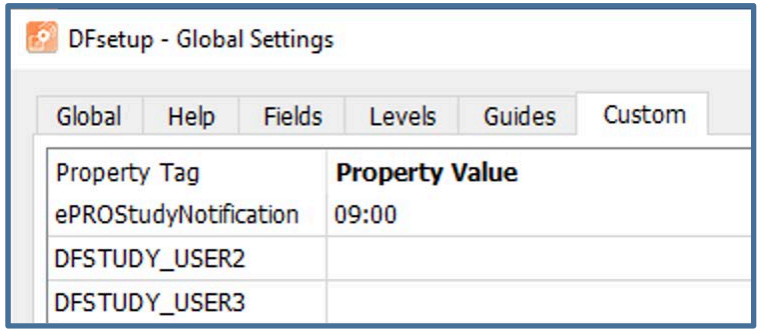
DFsetup: Custom Timing in **DFdiscover 5.10** and later

- Default activity timing is 08:00 (8am)
- Customize timing & notifications using the custom study property **ePROStudyNotification**
  1. Define the study property tag in Custom Properties *(use any DFSTUDY_USER property)*
  2. Define the property value in Global Settings > Custom as 24-hour clock, e.g., “00:00”, “18:00”, “23:59”
- If defined, this timing is used for all ePRO visits unless customized in the visit map (see next slide)
- If not defined, the default timing of 08:00 is used for all visits unless customized in the visit map (see next slide)

1. Study > Custom Properties



2. Study > Global Settings > Custom



DFsetup: Custom Timing – Visit

- Customize the visit-specific timing of activity availability & notifications by adding timing notation to the visit label
- Required format: **T-XX:XX** where XX:XX is the 24-hour clock time
- Must be placed at the end of the visit label (no characters after it)
- If visit timing is not defined for a visit, custom study timing is used (see previous slide); otherwise, default 8:00 timing is used

Visit Map

C	2		ePRO Cycle
B	40	INJ	Study Injection
S	41	ED1-1	eDiary Day 1 T-12:00
S	400	ED1-2	eDiary Day 1 T-18:00
S	42	ED2	eDiary Day 2 T-9:00
T	43	ED3	eDiary Day 3 T-9:00

NEW IN 2.5 MOBILE

DFsetup: Notifications in **DFdiscover 5.11** and later

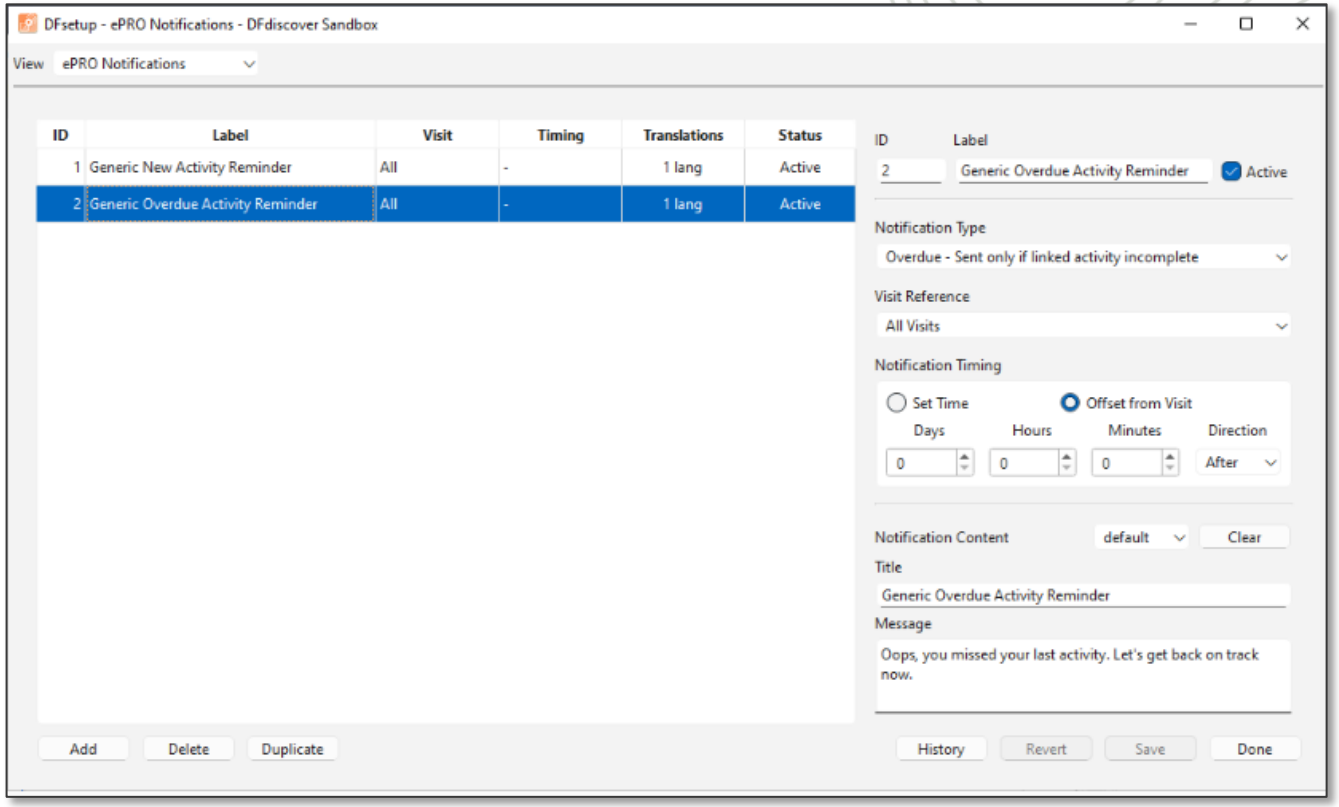
- View > ePRO Notifications
- For new studies using DFengage, or those upgrading to DFdiscover Version 5.11.0 or later with ongoing DFengage mobile data collection
  - The ePRO configurations **must be manually saved in DFsetup** to ensure existing generic reminders are delivered to study participants.
    - **Save** is disabled at first entry. User must make a small change in the dialog and then **Save**
    - NOTE: If not saved in DFsetup, existing DFengage mobile users may stop receiving new and overdue activity reminders via push notification, and new DFengage mobile users will not receive the expected push notifications.
  - Click **History** to check if saved
- Studies requiring French and Spanish notifications must add the necessary translations in order for participants to continue receiving push notifications in their language.

NEW IN 2.5

MOBILE

DFsetup: ePRO Notifications (1/5)

- Two generic notifications (new & overdue activity) are pre-populated in dialog
  - Can be modified as needed for study
  - Inactivate if using custom created notifications
- Click **Duplicate** to copy a row to edit or **Add** to create a new row
- Click **Delete** to delete a row

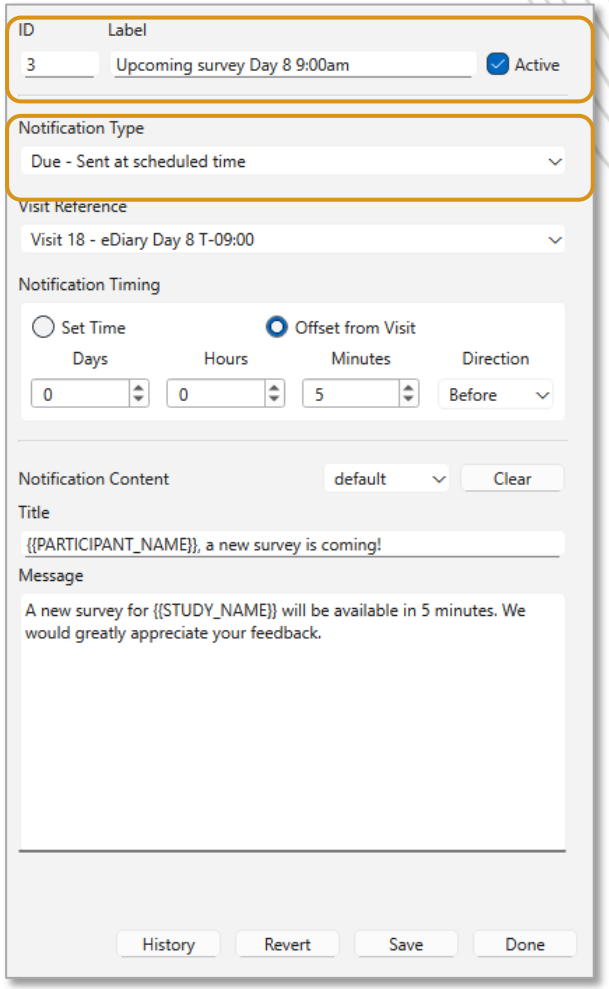


NEW IN 2.5

MOBILE

DFsetup: ePRO Notifications (2/5)

- **ID:** sequential auto-assigned number
- **Label:** short description of notification
- **Active:** notifications status. When inactive (unticked), notification is ignored by DFengage
- **Notification Type:**
  - Due = sent at scheduled time
  - Overdue = sent based on overdue window for a visit when an activity is not yet completed

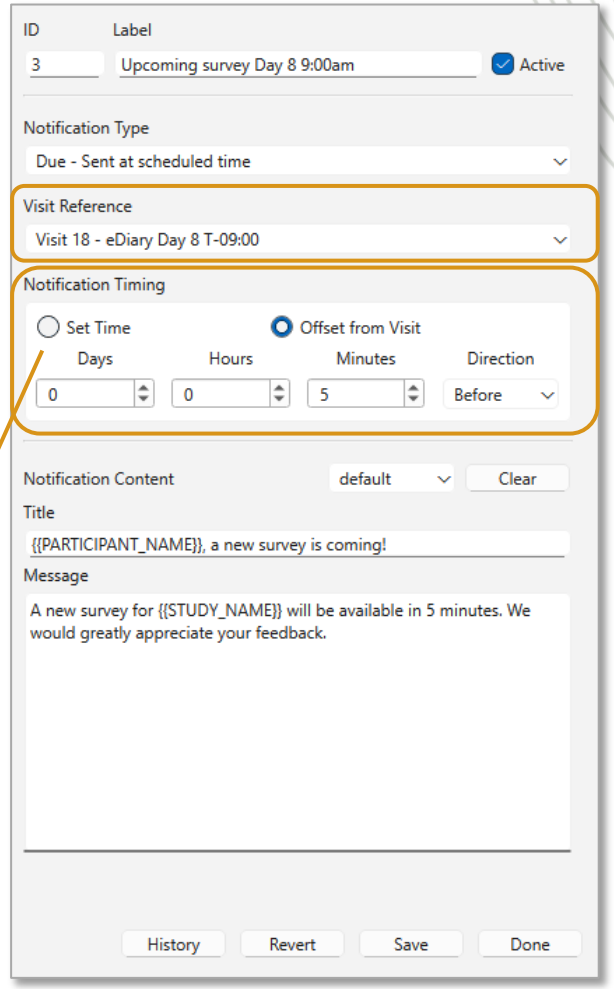


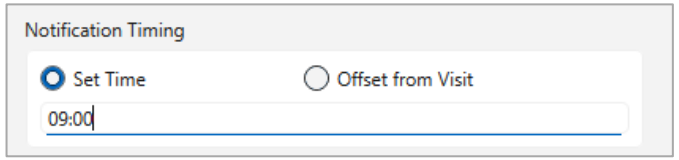
NEW IN 2.5

MOBILE

DFsetup: ePRO Notifications (3/5)

- **Visit Reference:** apply the reminder to a specific visit or all visits
- **Notification Timing:**
  - Define when notification is sent in relation to Visit Reference
  - Set Time: define a specific time (24-hour clock)
  - Offset from visit: define # days, hours and minutes before or after referenced visit due or overdue time

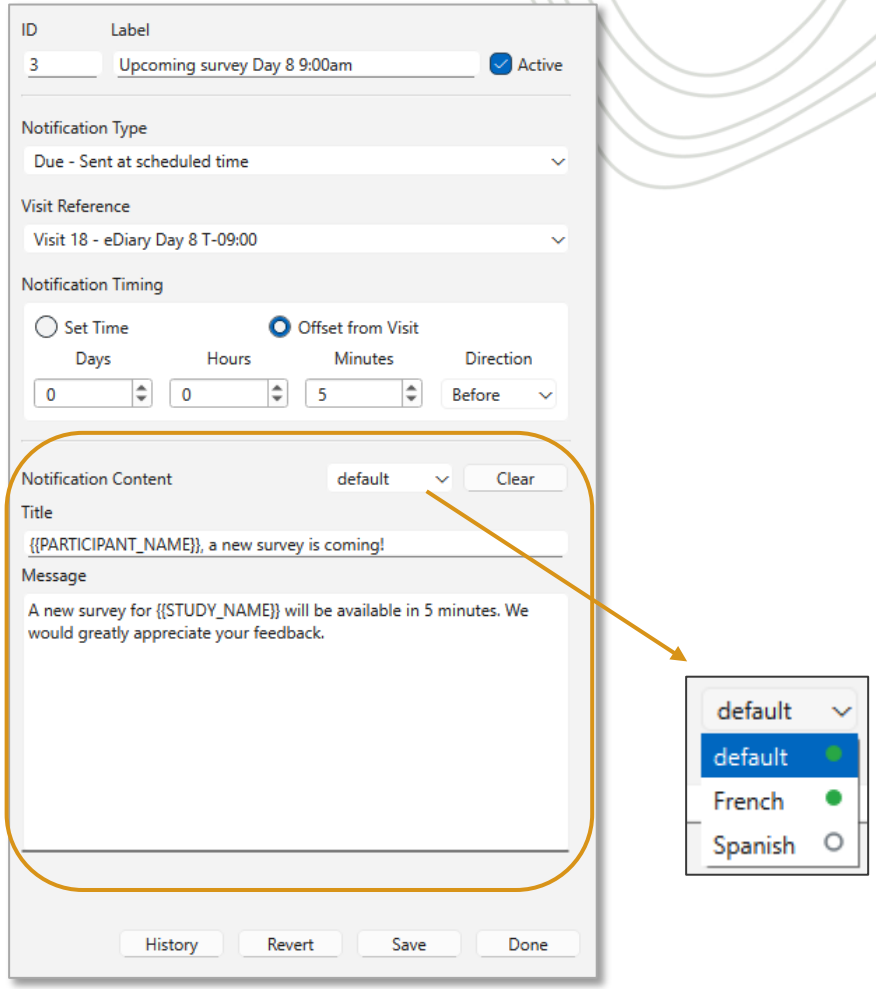




NEW IN 2.5 MOBILE

DFsetup: ePRO Notifications (4/5)

- **Notification Content:** Title and Message
  - Title: Maximum 65 characters
  - Message: Maximum 240 characters
  - Some devices may truncate longer titles
  - The title and message may include placeholders:
    - {{STUDY_NAME}}
    - {{PARTICIPANT_NAME}}
- **Notification Content:** Translations
  - Choose language and define content
  - Filled green dot = title & message defined
  - Empty white dot = no title & message defined

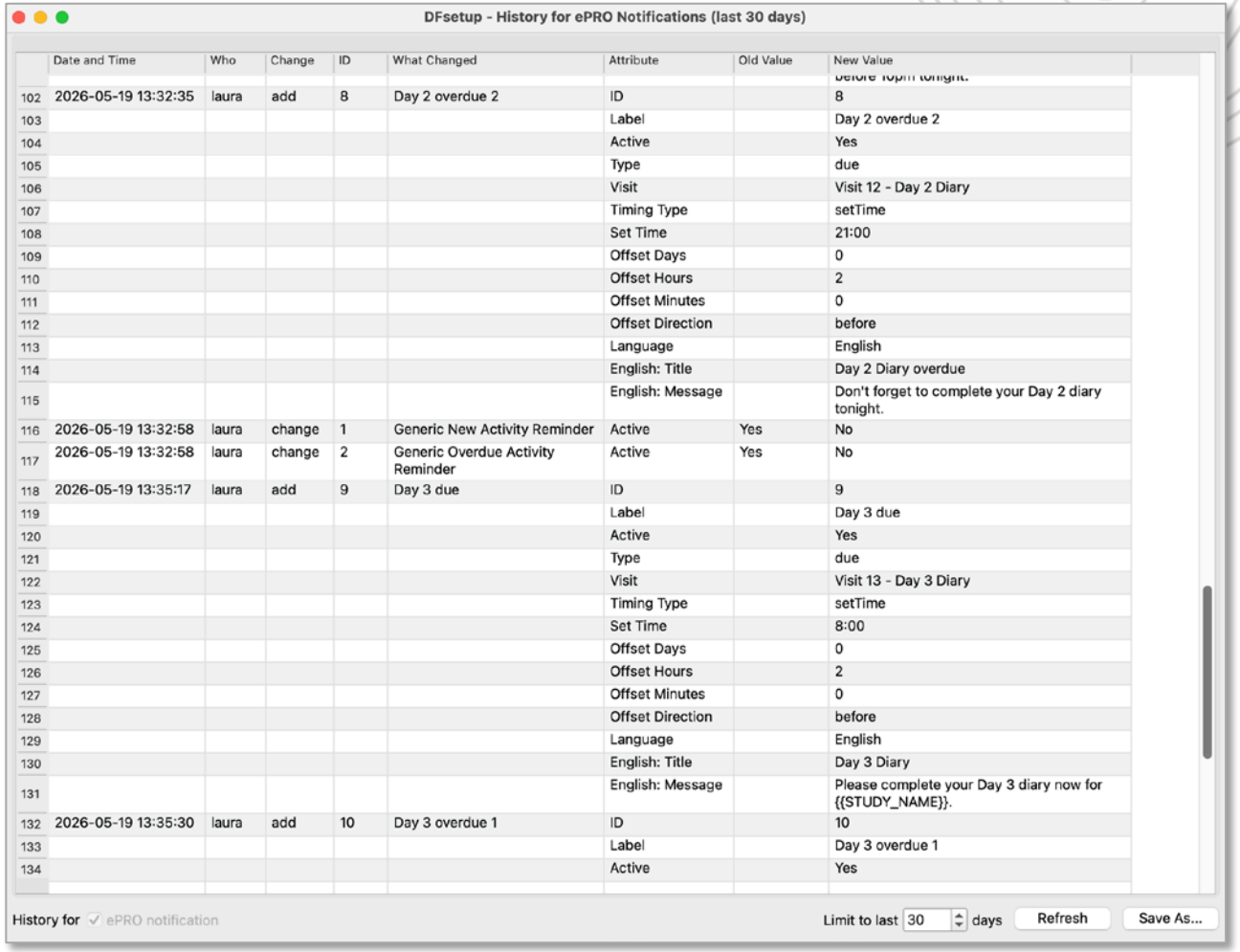


NEW IN 2.5

MOBILE

DFsetup: ePRO Notifications History

- To access history:
  - Click **History** or
  - File > View History > Config History
    - Tick **ePRO Notification** box on bottom left is not already ticked



	Date and Time	Who	Change	ID	What Changed	Attribute	Old Value	New Value
102	2026-05-19 13:32:35	laura	add	8	Day 2 overdue 2	ID		8
103						Label		Day 2 overdue 2
104						Active		Yes
105						Type		due
106						Visit		Visit 12 - Day 2 Diary
107						Timing Type		setTime
108						Set Time		21:00
109						Offset Days		0
110						Offset Hours		2
111						Offset Minutes		0
112						Offset Direction		before
113						Language		English
114						English: Title		Day 2 Diary overdue
115						English: Message		Don't forget to complete your Day 2 diary tonight.
116	2026-05-19 13:32:58	laura	change	1	Generic New Activity Reminder	Active	Yes	No
117	2026-05-19 13:32:58	laura	change	2	Generic Overdue Activity Reminder	Active	Yes	No
118	2026-05-19 13:35:17	laura	add	9	Day 3 due	ID		9
119						Label		Day 3 due
120						Active		Yes
121						Type		due
122						Visit		Visit 13 - Day 3 Diary
123						Timing Type		setTime
124						Set Time		8:00
125						Offset Days		0
126						Offset Hours		2
127						Offset Minutes		0
128						Offset Direction		before
129						Language		English
130						English: Title		Day 3 Diary
131						English: Message		Please complete your Day 3 diary now for {{STUDY_NAME}}.
132	2026-05-19 13:35:30	laura	add	10	Day 3 overdue 1	ID		10
133						Label		Day 3 overdue 1
134						Active		Yes

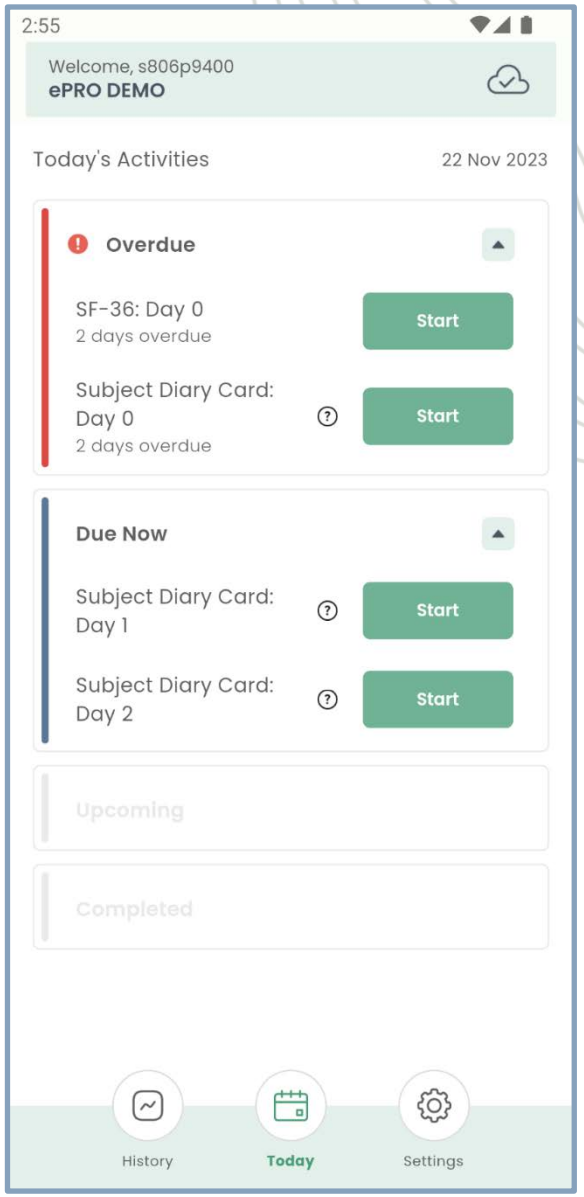
DFsetup: Page Map

Customize activity names by visit in Page Map

View: Page Map

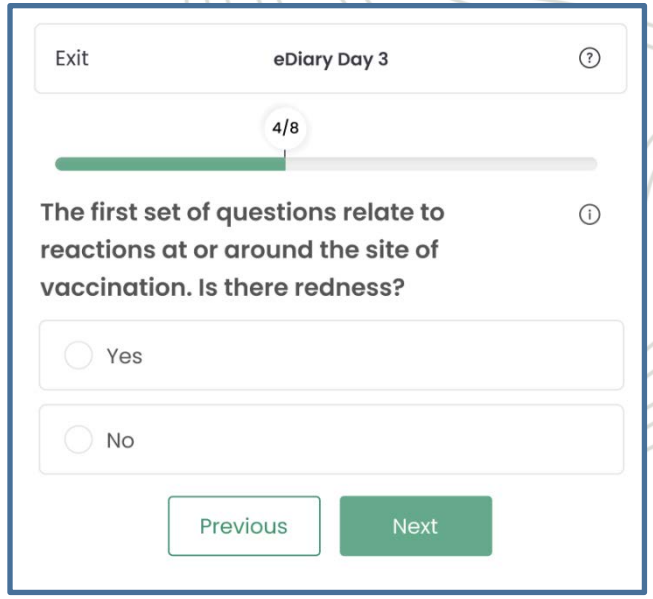
Plate/Visit Title

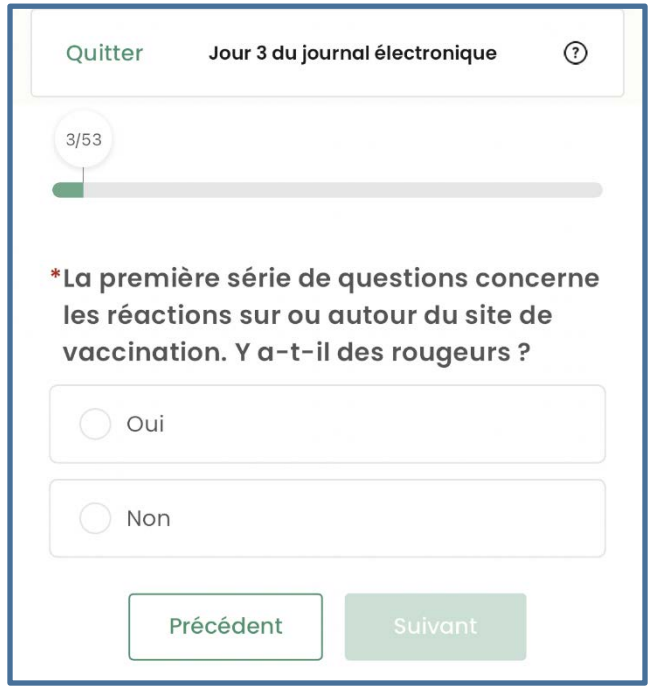
Plate(s)	Visit(s)	
26	03	SF-36: Day 0
40	03	Subject Diary Card: Day 0
40	10	Subject Diary Card: Day 1
40	20	Subject Diary Card: Day 2
40	30	Subject Diary Card: Day 3
40	40	Subject Diary Card: Day 4
40	50	Subject Diary Card: Day 5



DFsetup: Languages

- DFengage supports study-specific translations
  - Activity names (plate label, page map label)
  - Questions (prompt, instructions), help, responses (choice/check labels, units)
- App interface language is separate from study language, available in English, Spanish, French
  - Based on device language setting
  - English is default language
- DFengage auto-selects study language if one matches device language setting; otherwise, user manually selects their study language





DFengage: App vs. Study Language

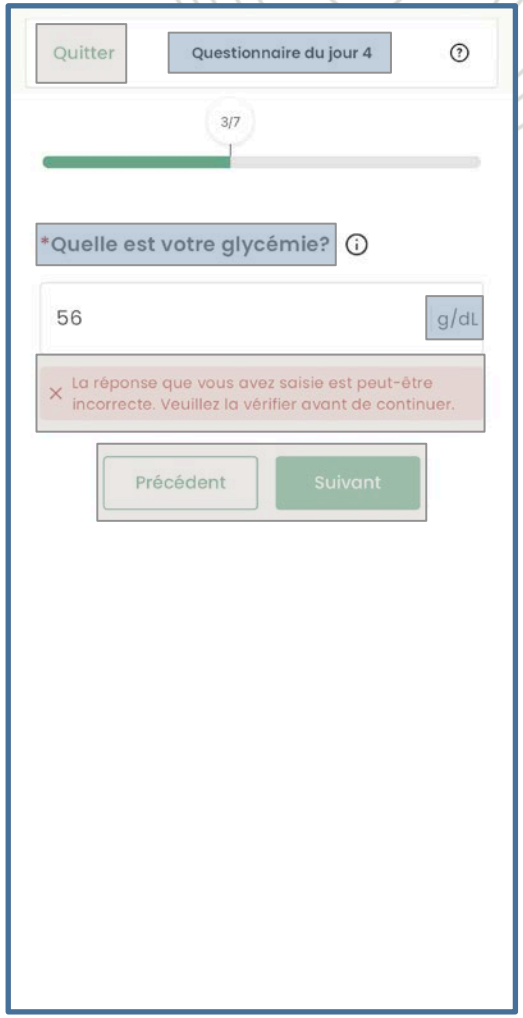
App language

Study language



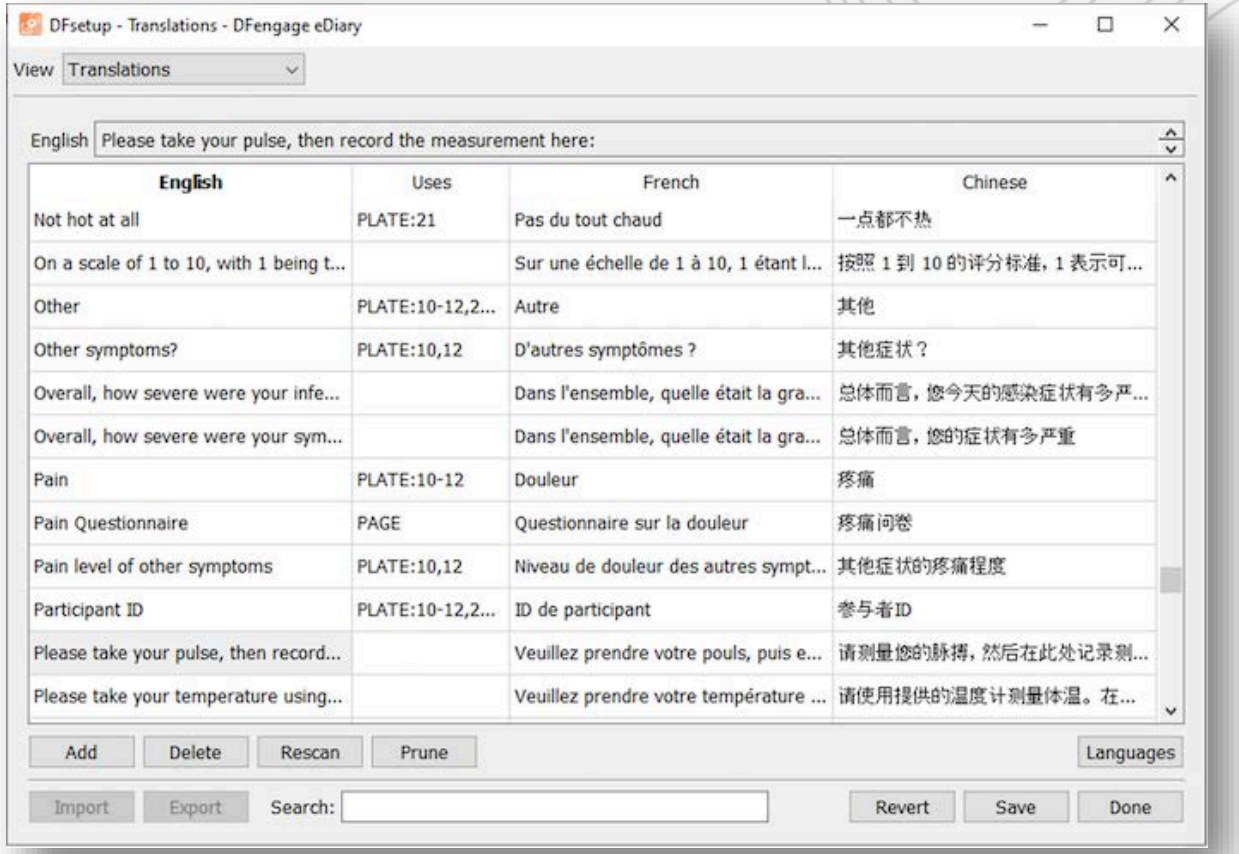






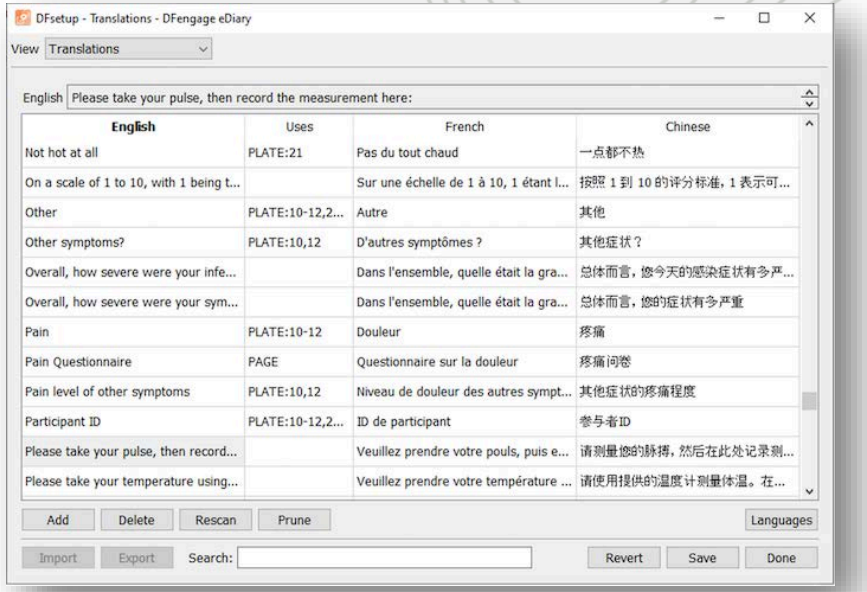
DFsetup: Translations (1/2)

- Table includes all text in the database including prompt, code labels, help, and instructions
- Use **Languages** to specify available languages (one column per language) and rename default language
  - To match with DFengage interface languages, use language labels “English”, ”Spanish”, and “French”
  - To prompt for language selection on English-language devices, use label other than “English” for the default language (e.g., “Default”, “Default-English”)



DFsetup: Translations (2/2)

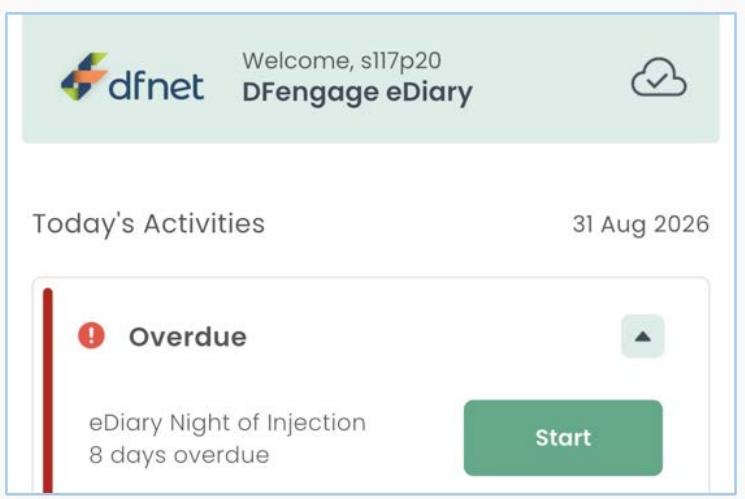
- **Uses** column restricts what is translated
  - Specify plate(s) the translation applies to
  - Add translations for plate/page labels
- Rows in alphabetical order by default language
- Add translations manually or import from a CSV or pipe-delimited text file
  - Manual: Use **Search** to find specific text in the table
  - Import: Click **Save,** click **Export** to save current table to a file, add translations in file outside DFsetup, then **Import**
- Use **Rescan** to pull all available text, **Add** to add a row



NEW IN 2.6

DFsetup: Study Logo (1/2)

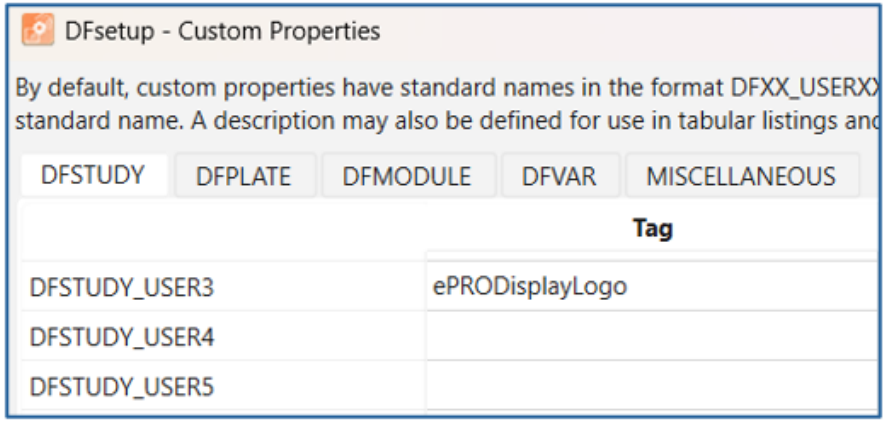
- **STEP 1:** Create logo and save as a PNG file:
  - Maximum dimension 64 pixels tall and 128 pixels wide
  - Scaled to fit the available space in DFengage based on size of screen. Logo may be cropped if positioned too close to edges
    - To prevent this, add at least 2px of transparent padding around the logo image
    - Images that exceed the maximum dimension require additional padding
- **STEP 2:** Copy the file to the study directory and save as lib/DFlogo.png
  - System administrator access to the server is required for this step
  - Study logo must have appropriate file permissions applied
  - Refer to *The Programmer Guide, DFlogo.png* section for information regarding the study logo



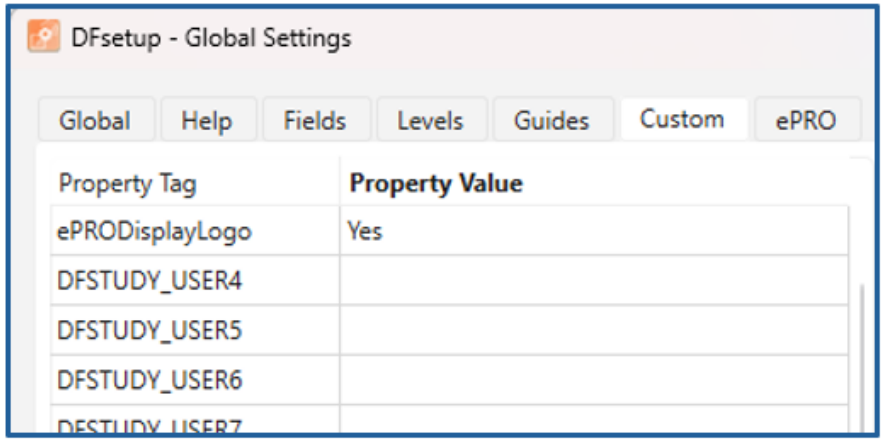
NEW IN 2.6

DFsetup: Study Logo (2/2)

- **STEP 3**: In DFsetup, add the **ePRODisplayLogo** custom study property tag in Custom Properties under the DFSTUDY section



- **STEP 4:** in Global Settings under the Custom section define the value for that property as “Yes”
  - If set to “No” or left blank, no logo is displayed in DFengage



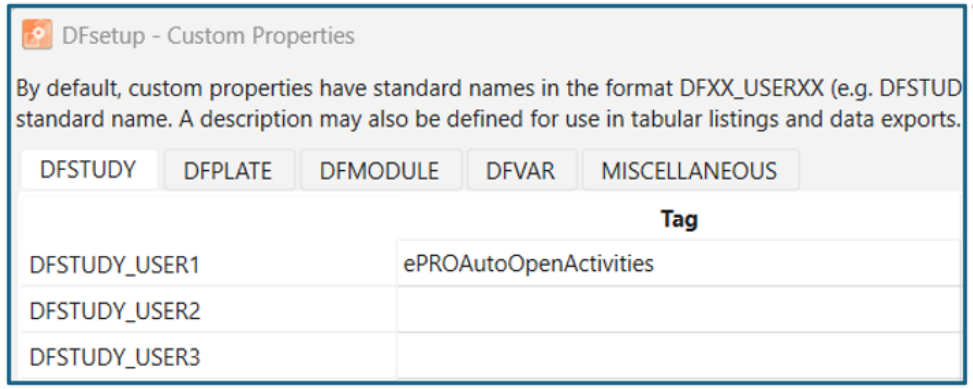
NEW IN 2.6

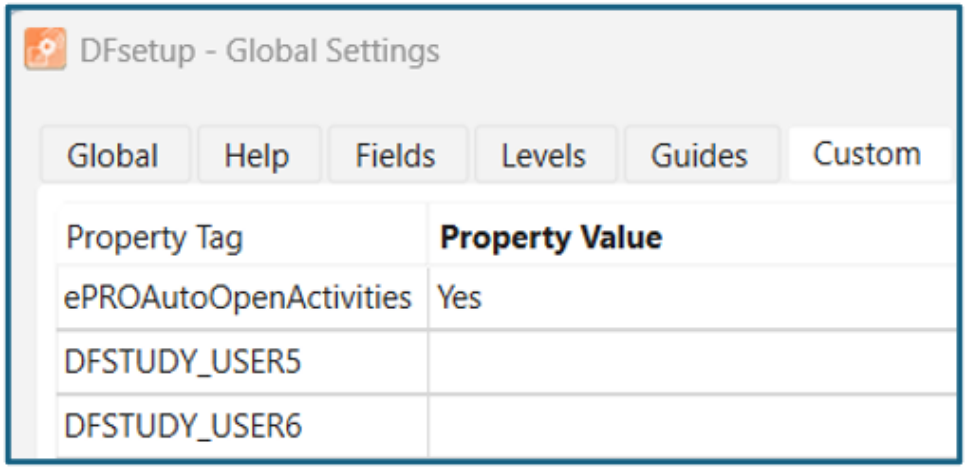
DFsetup: Auto-navigation (1/3)

When auto-navigation is enabled, participants are taken directly through their activities instead of manually starting activities from the Today page

- **STEP 1**: In DFsetup, add the **ePROAutoOpenActivities** custom study property tag in Custom Properties under the DFSTUDY section

- **STEP 2:** in Global Settings under the Custom section define the value for that property as “Yes” or “True”
  - If set to “No” or left blank, participants use the default manual activity navigation via the Today page





NEW IN 2.6

DFsetup: Auto-navigation (2/3)

- After login or PIN entry, DFengage opens the first **Overdue** or **Due Now** activity automatically
- After completing an activity, the participant continues to their next activity if any is available; if not, they go to the Today page
- Activities follow the order defined in the visit map, starting with **Overdue** activities first
- Participant can manually exit the activity to return to the Today page and save their progress
  - Auto-navigation will continue once the next activity is started

NEW IN 2.6

DFsetup: Auto-navigation (3/3)

- When online, the visit schedule is rechecked after each submission, so conditional scheduling can add or remove activities
- If the participant is offline or the record is locked, the completed activity is saved locally as Pending and the participant continues to the next activity
- If there is a slow connection, or the activity submission to the server is taking longer than expected, a dialog will display presenting the option to wait or defer the submission
  - If defer is selected, the participant is taken to the Today page

DFsetup: Mid-study Changes

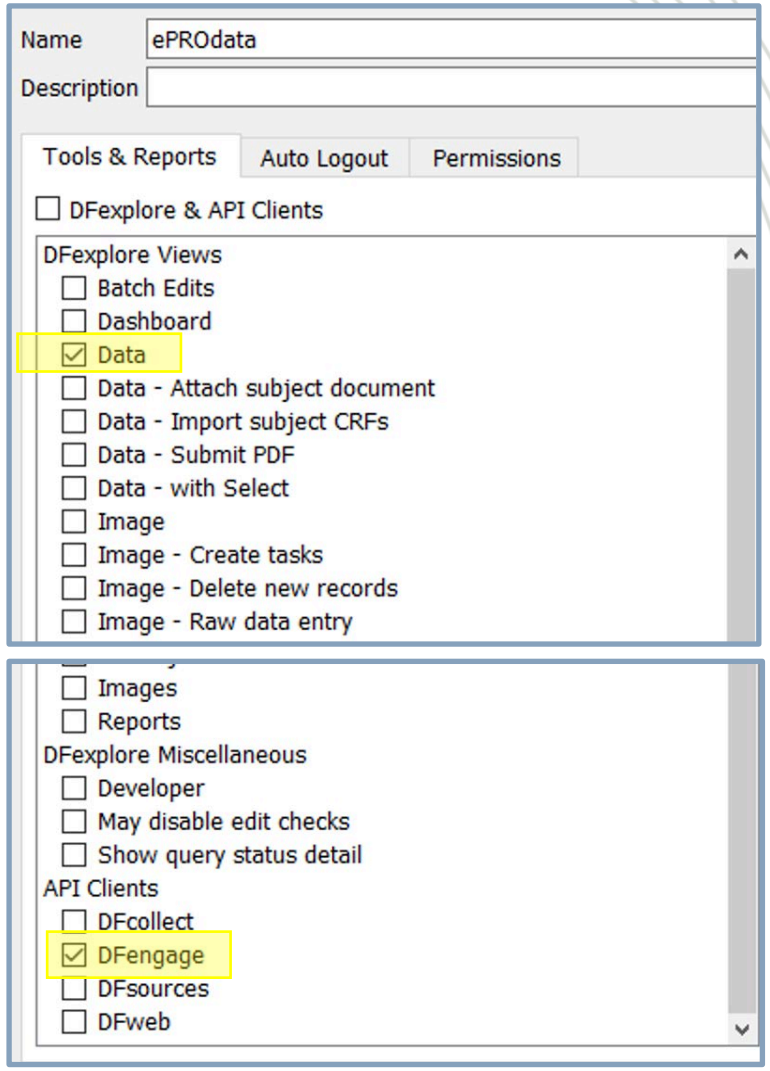
- Mid-study changes may not take effect immediately on participant devices
  - DFengage syncs with the DFdiscover server when the app is open while online
  - This helps reduce how much data DFengage uses on the participant's device
- Mid-study changes are available the next time the study participant opens DFengage while connected to the internet
  - Notifications are sent using previous timing before syncing with the server
  - If offline, DFengage shows the previous activities and questions before syncing
  - If online, DFengage shows the updated activities and questions
- Consider creating new plates if ePRO forms need to be changed in non-compatible ways (changes to the database structure)

DFengage Administration

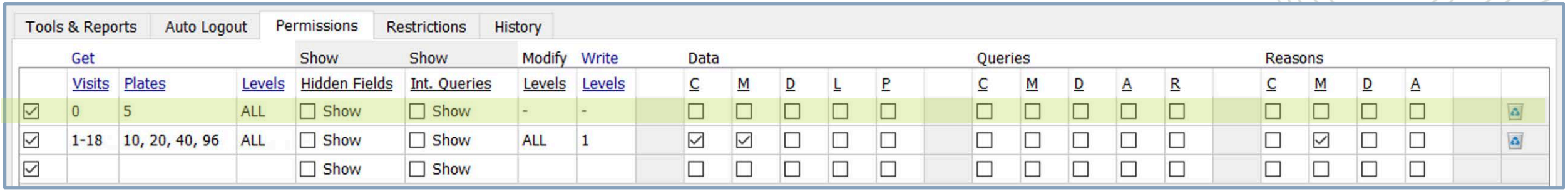
Considerations for DFadmin

DFadmin: Roles

- Create specific ePRO role with exact name: **ePROdata**
- Required Tools & Reports access:
  - DFexplore – Data
  - API Clients – DFengage

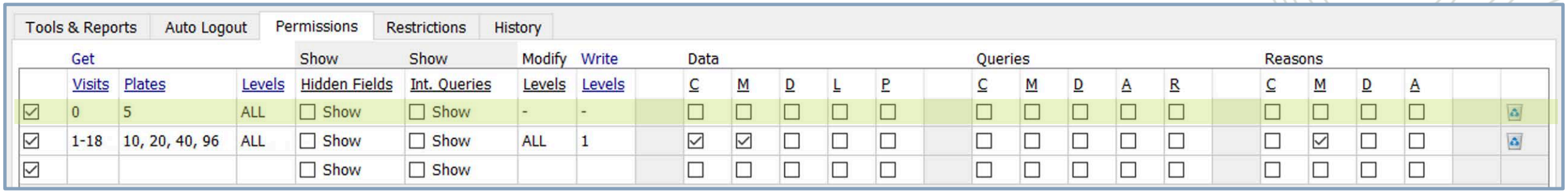


DFadmin: Role Permissions – View Access
DFdiscover 5.7 and earlier



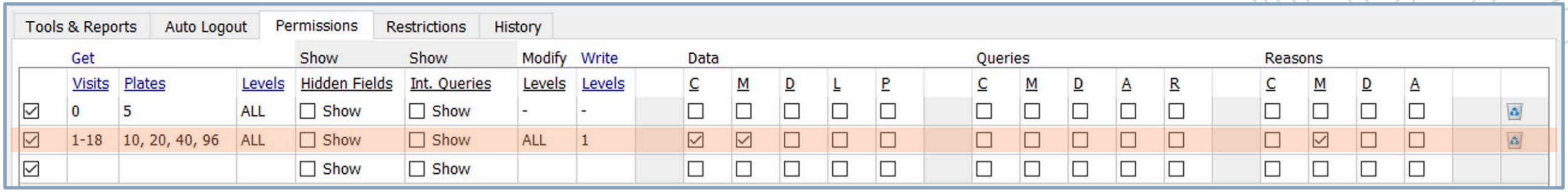
- View-only access to data record where the **baseline visit date** for ePRO visits is captured
  - View-only = No permissions for data, queries, or reasons
  - This record will not be displayed in DFengage
- Get - Levels: specify all levels the baseline data record could be saved to
- No permissions for Data, Queries, or Reasons (no boxes checked)

DFadmin: Role Permissions – View Access
DFdiscover 5.8 and later



- View-only access to data records with the **baseline visit date** for ePRO visits **and any other data** used for ePRO visit and plate requirements
  - If using cycle scheduling, conditional maps, missed visit plates, termination plates/visits that affect ePRO visits and plates, view only access is required to the referenced data records
- Get - Levels: specify all levels the data records could be saved to
- No permissions for Data, Queries, or Reasons (no boxes checked)
- These records are not visible in DFengage

DFadmin: Role Permissions – Write Access



- List ePRO visits and ePRO plates individually to help avoid errors or omissions
- Recommended: Do not show hidden fields (use hidden fields for non-ePRO fields on ePRO plates)
- Modify - Levels: include all workflow levels in use
  - When ePRO data is synced, it cannot be saved if the data record already exists at a level outside the modify level permissions. This may happen if ePRO is completed offline and the same data record has been previously entered in another manner (via paper or site EDC).
  - *Discuss with study team and test thoroughly to ensure that DFengage behavior fits within the overall data workflow*
- Write - Levels: API saves data to the server at level 1
- Data: Create and Modify, Reasons: Modify

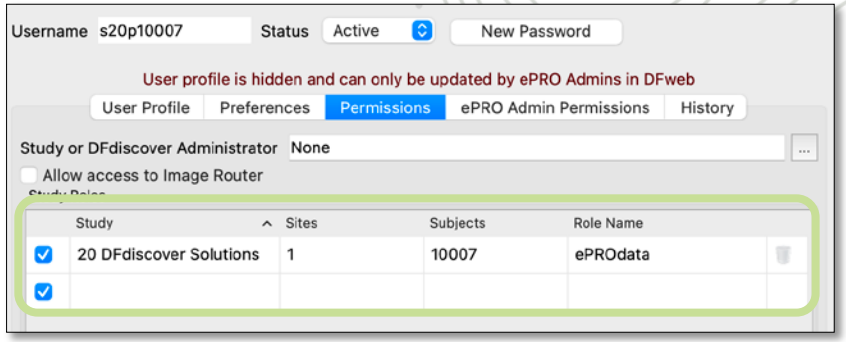
DFadmin: User Accounts

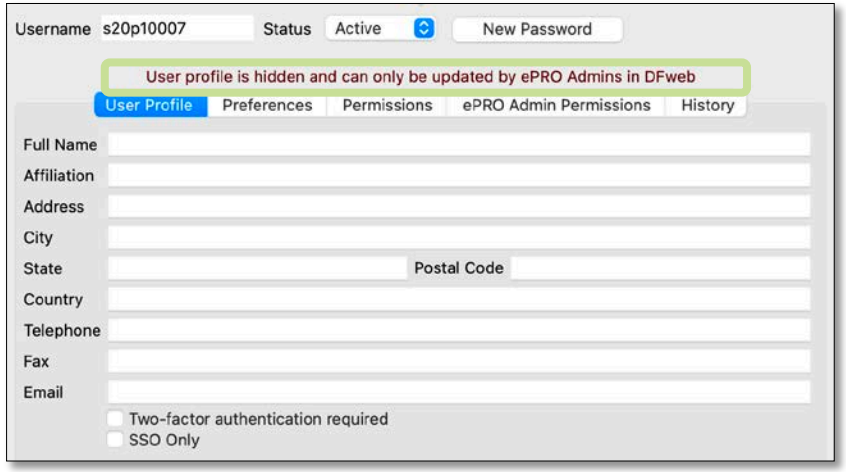
User profile data for ePRO study participants is protected from unauthorized access to support privacy requirements

- User account is designated as **ePRO** when ‘ePROdata’ role is assigned
  - For test accounts, add another permission with any role other than ‘ePROdata’
- For ePRO users only, user profile data (name, email address) is hidden in DFadmin and only available to authorized users in DFweb
- User profile data is encrypted to protect against unauthorized access
- Use generic, unique usernames with subject ID and study reference
  - test10001, xyz9999, s20p4001

DFadmin: ePRO User Profiles

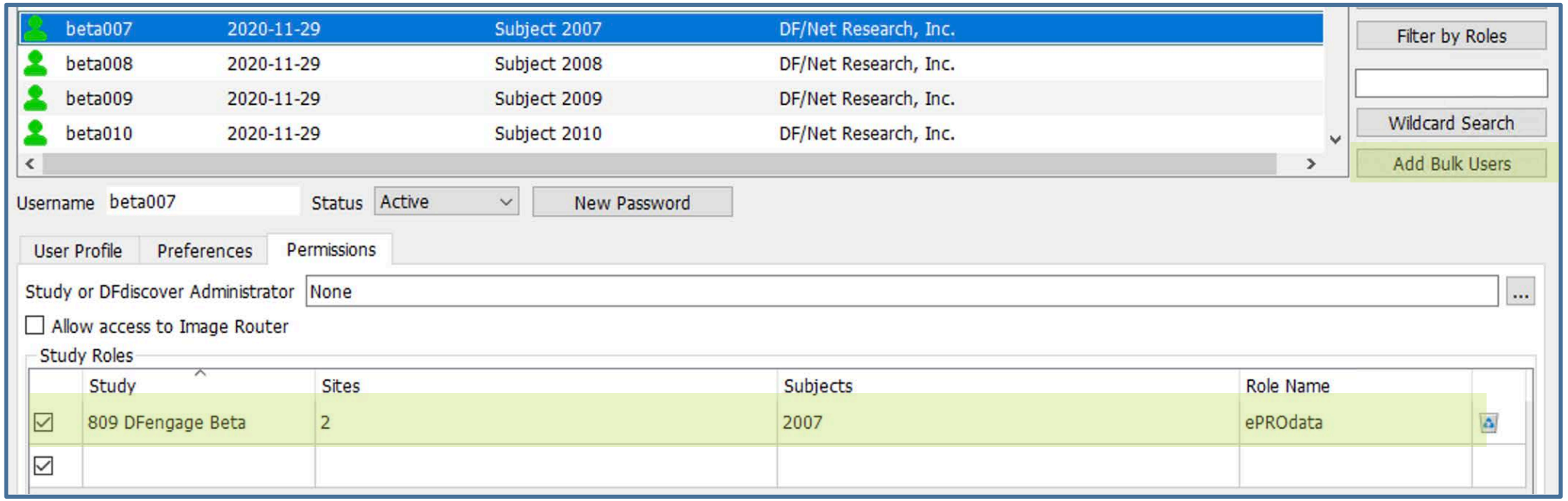
- Users are categorized as ePRO when **ePROdata** role is assigned for a single subject in a study
  - Role name is case sensitive
  - OK to append characters to role name, e.g., 'ePROdata Canada'
  - If any other active role is assigned, no longer an ePRO user
- User profile for ePRO users can only be viewed & modified on **DFweb** ePRO page by authorized users
- User profile cannot be viewed or updated in DFadmin, except 2FA setting (SSO only does not apply for DFengage)
- User profile data is encrypted in the database





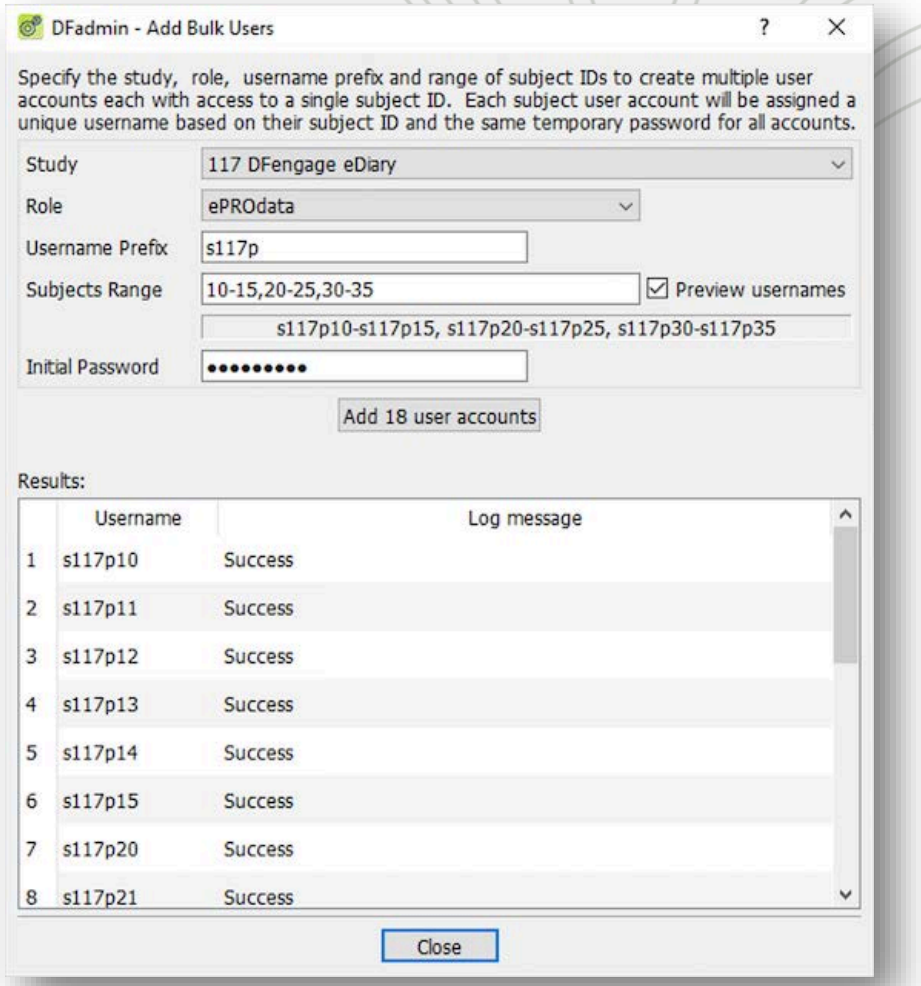
DFadmin: User Permissions

- Each ePRO user has a DFdiscover account with access to one study, one subject ID with ePRO role
- ePRO user accounts must be created in DFadmin to show in DFweb ePRO Management page
- **DFengage will not work if the user permissions have more than one study or subject ID assigned**
- Add multiple users at once with **Add Bulk Users** function or DFuserPerms command line program



DFadmin: Add Bulk Users

1. Under the Users tab, click **Add Bulk Users**
2. Select the study and role
3. Specify the username prefix and the range of subject IDs for the users to be created (e.g., sXp, where X is the study number)
   a) Subject IDs specified must be defined in the Sites configuration in DFsetup
   b) Maximum 100 subjects can be created at one time
4. Provide the initial, temporary password to be used for all accounts
5. Click **Add n user accounts** to create user accounts and assign study permissions and click **Yes** in confirmation dialog
   a) Results panel will list usernames and creation status



DFadmin: Finding ePRO users

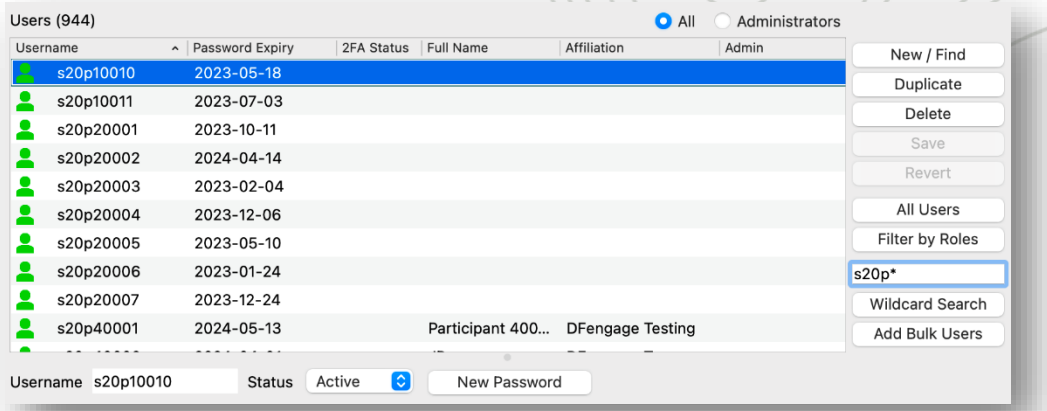
Wildcard search

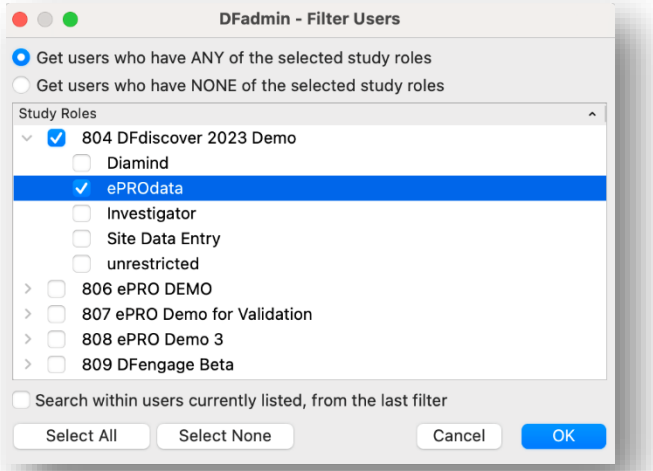
- Type any portion of the username with * before or after to find all matches
- Examples:
  - s20p* to find all usernames starting with s20p
  - *001 to find all usernames ending with 001
  - s20p10011 to find an exact match

Filter by roles

- Click **Filter by Roles**
- Select the study role(s) and click **OK**

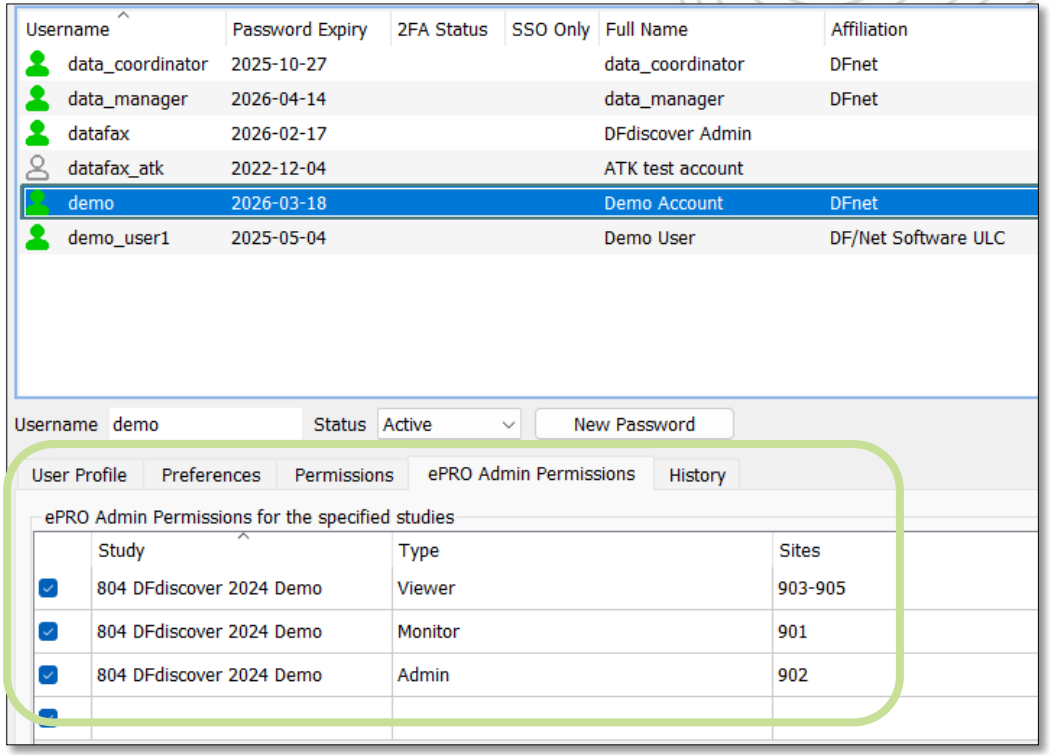
When complete, click **All Users** to remove filter





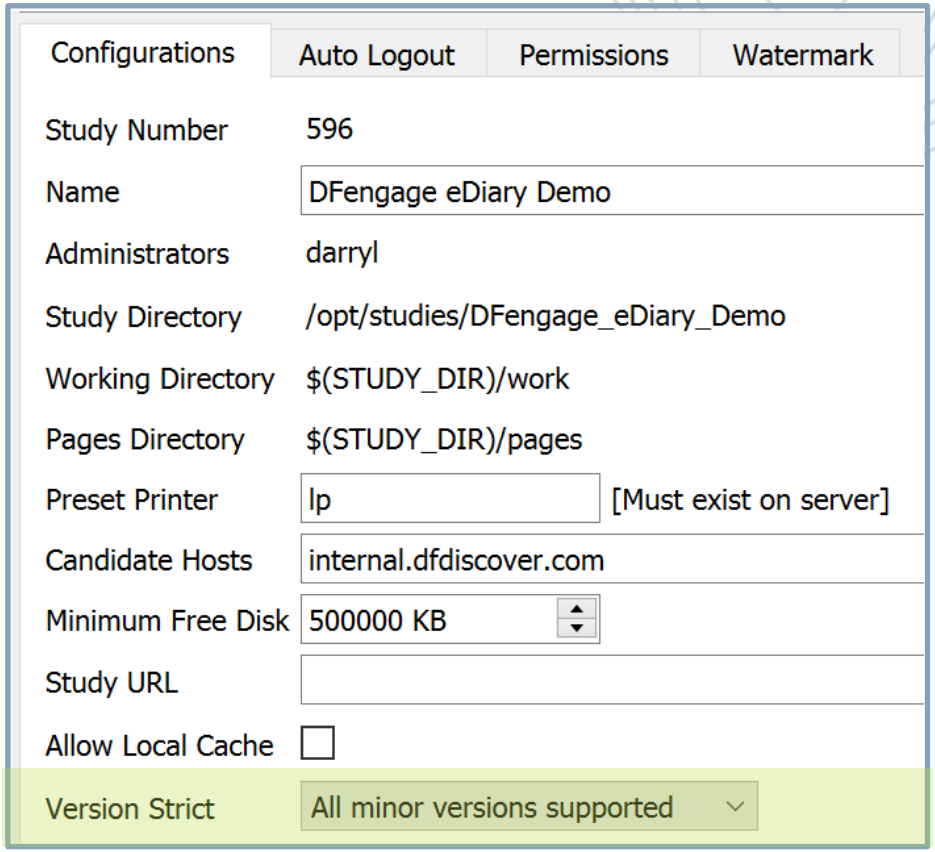
DFadmin: ePRO Management Permissions

- Access to DFweb ePRO Management page controlled for each user via **ePRO Admin Permissions** tab
- ePRO Admin permission types:
  - Admin: Full access
  - Monitor: View access with PII shown
  - Viewer: View access with no PII shown
- Specify study, type, and site(s)
- Only assign **Admin** and **Monitor** permissions to those authorized to view study participant PII



DFadmin: Study Configurations

- If using different API and DFdiscover server versions (not recommended), the study must be configured to accept connections from the API version
  - Version Strict: Select **All minor versions supported** or **Minimum version supported**
- If the DFdiscover server and API server versions used by DFengage match, **Only current version supported** is allowed





Best practices and considerations

Alternatives to DFengage ePRO

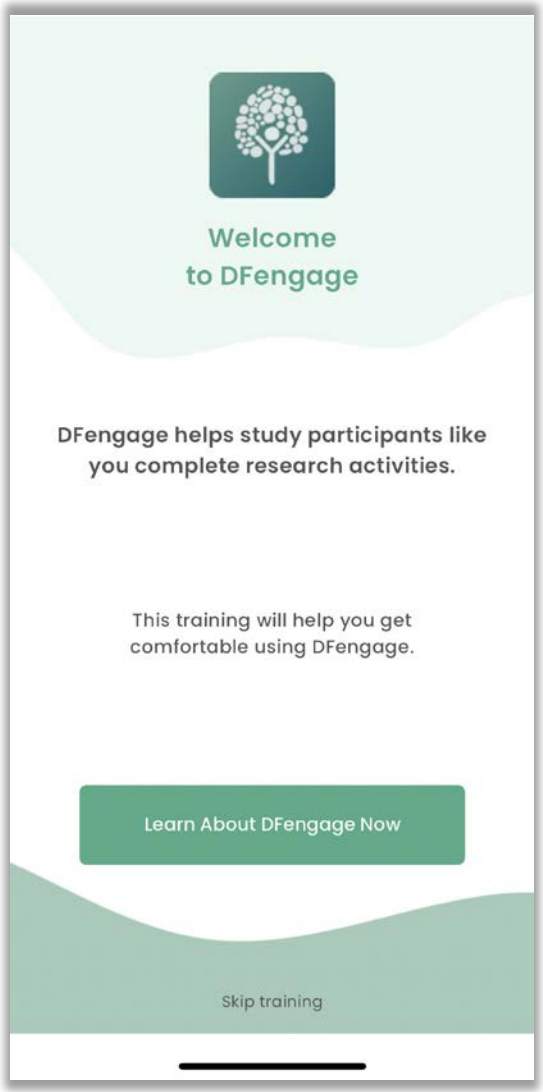
What if a participant can't or won't use DFengage (mobile or web)?

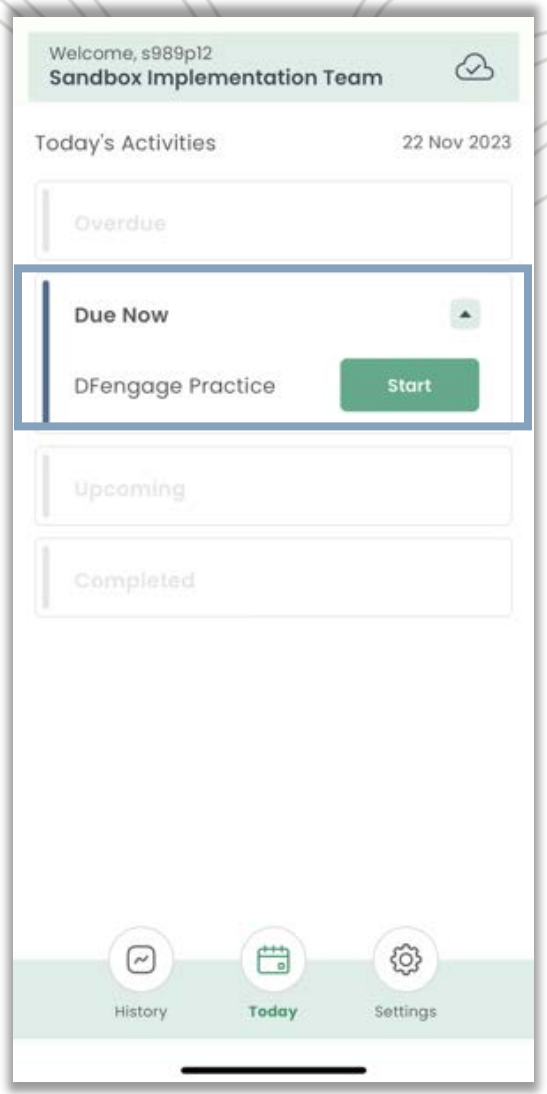
Options to consider depending on data, protocol, study feasibility & requirements:

- Site staff conducts interview (phone/in person) & enters data in EDC
- Participant completes the PRO on paper forms
  - Paper forms are barcoded, then scanned & submitted by sites for image-based entry by data team; or site staff transcribe from paper in EDC
- Sponsor/site provides device to participant with DFengage pre-installed
  - Device provision, device management and return procedures
- Protocol includes BYOD (bring your own device) use of ePRO app in eligibility criteria, if critical to the study

Training & practice activity

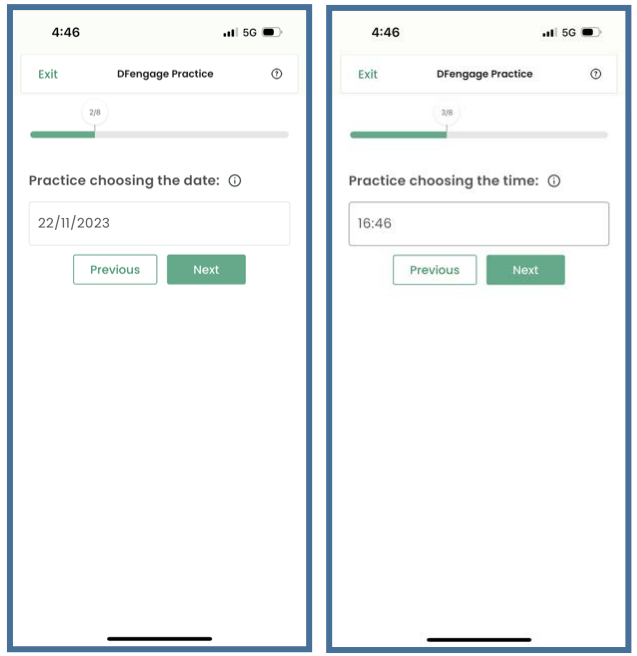
- Training is provided in-app on first login and available on demand from the Settings page
  - Available both online & offline
- If hands-on experience is needed, consider creating a practice activity
  - Participants can complete while at clinic
  - Add as first activity in DFengage (baseline visit date is required)
  - Clinic staff can answer questions
  - Try out all data field types



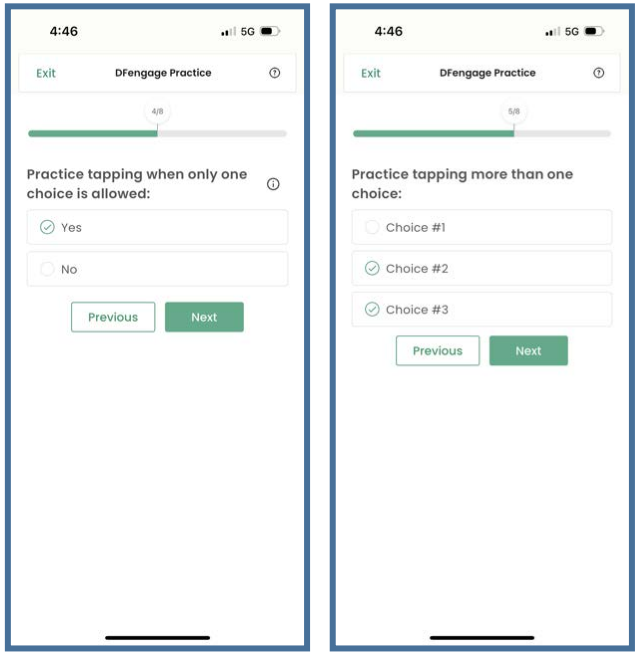


Example practice activity questions

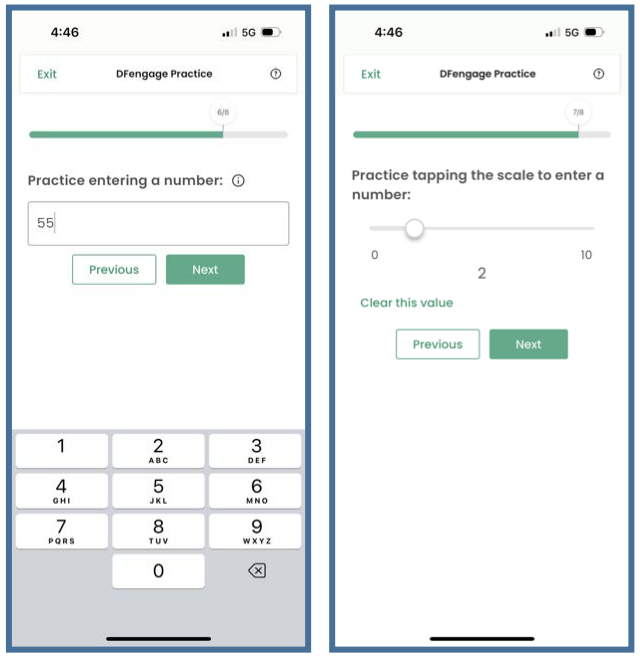
Suggestion for text field: Enter device details to help with future troubleshooting



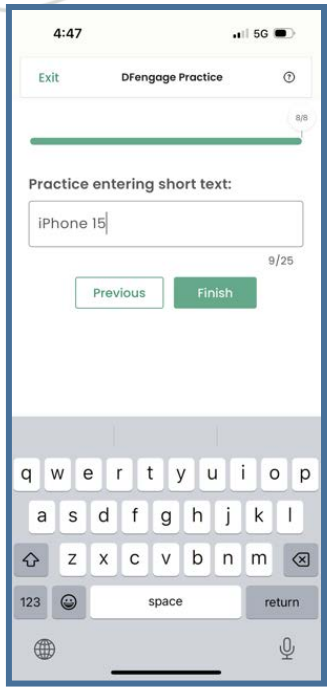
Date & time fields



Choice & check fields



Number & VAS fields



String (text) field

Notification limitations (iOS only)

- If the participant does not open DFengage after multiple notifications, the app may stop sending notifications
  - Notifications are scheduled for next 72 hours or at least 32 notifications
  - Notifications may stop after 72 hours (if more than 32) or after 32 notifications
- Make a plan for site staff to follow up with participants in case of missed ePRO activities, to avoid missing data
  - Send email notifications for overdue activities
  - Create tasks or listings of overdue activities

Training & communication flow

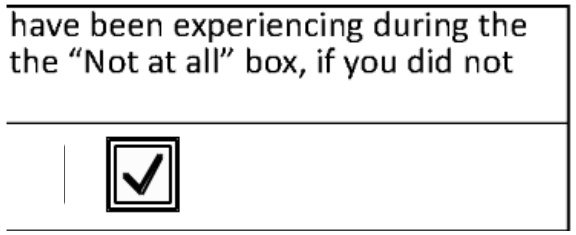
- Train site staff on issue handling and communication plan
  - Capture error code and screenshots if possible
- Example communication flow:
  - Study participants contact site staff
  - If not resolved, site staff contacts sponsor/CRO/coordinating center/study team
  - If not resolved, escalate to DFnet software team for technical support (help@dfnetresearch.com)
- Ensure that participant confidentiality & privacy are maintained

Password resets for DFengage users

- ePRO registration via DFweb is required to enable **forgot password** functionality in DFengage
  - Forgot password requires participant email address
  - ePRO management page in DFweb securely captures participant email address from site staff
- If participant email addresses are not registered, study administrator manually performs the password reset
  - Reset password requests are forwarded to study/DFdiscover administrator
  - Administrator resets password in DFadmin and provides it to the requestor

Activity expiry

- What if participant does not complete an activity within required timeframe?
  - Completing the record in DFexplore/DFweb/DFcollect removes the activity from DFengage
  - Pages set as missed are also excluded from DFengage
- Option: use a hidden “expiry” checkbox and edit check run in batch
  - Batch edit check marks expiry checkbox to “expire” ePRO record on study-defined schedule. This removes it from DFengage and shows it as “expired” in EDC
  - Contact DFnet software support team (help@dfnetresearch.com) for details



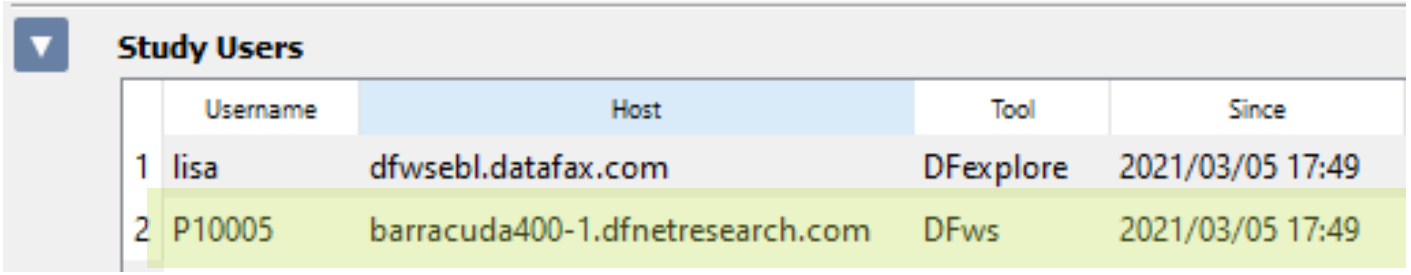

```
edit SetExpiry() {

        string message;
        string window;
        number target = 0; #Target number of days
        number expiry = 1; #days after expected visit date to expire ePRO plates
        number k=10; #make fields missing/blank starting on field 10
        number l=10; #
        number lastfield = dfplateinfo(@[5],DFPLATE_FIELDS);
        number chk = 0; #check for any non-blank fields before running

        date dt_zero; #Day 0 Date
        date dt_target; #date target
        date dt_expiry; #expiry date
        date dt_term; #study termination date
```

Avoiding “Activity is currently locked” message

- In DFexplore, work in **View** mode where feasible
  - View mode does not block user from sending activities via DFengage
  - Consider setting view mode as default for some users via edit checks
    - Use tasks or manually switch to use other modes
- Where possible, use DFweb or DFcollect for site data entry
  - DFweb and DFcollect lock at page-level; DFexplore at subject-level
- Check for ePRO users in DFexplore Status View when needed

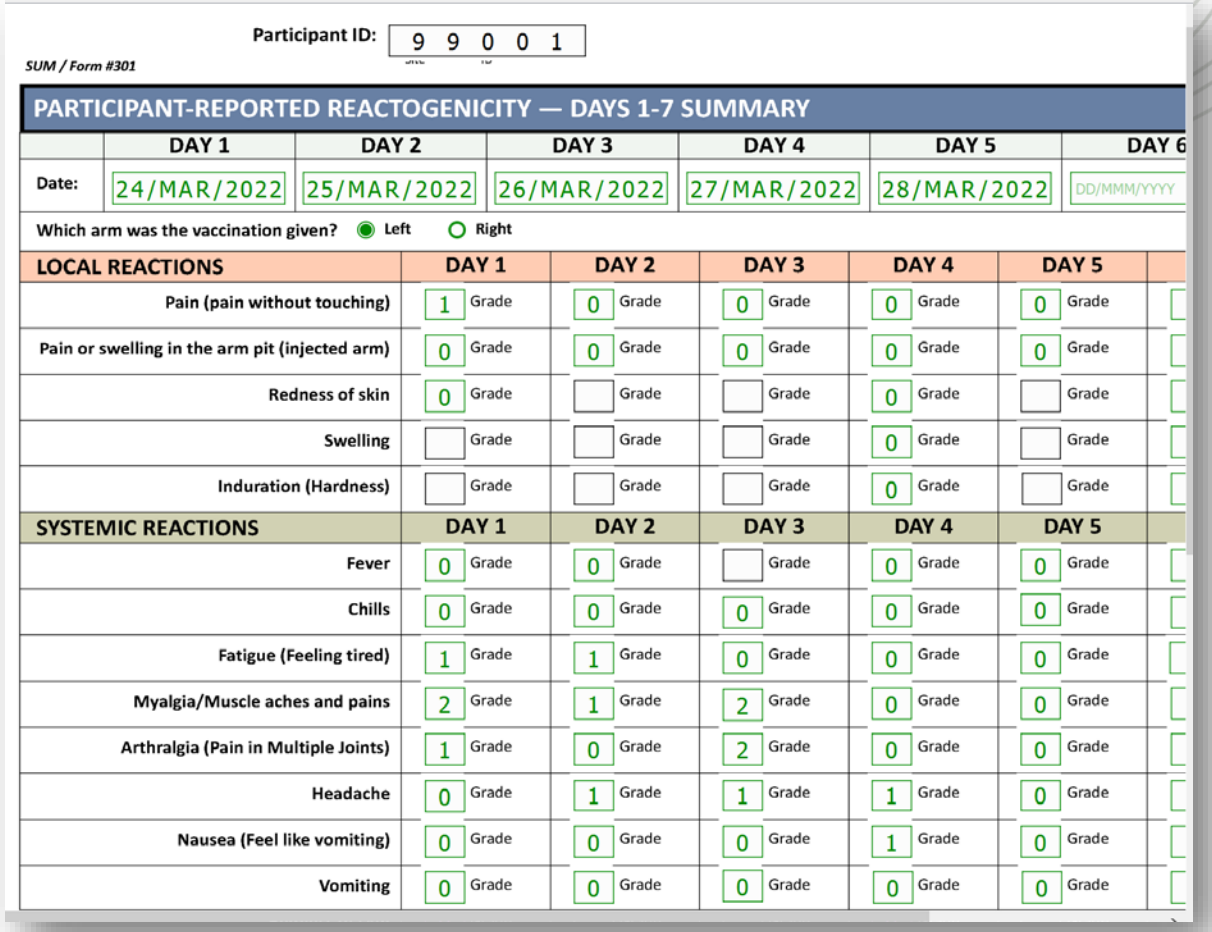


Blank fields submitted from DFengage

- When the user sees a question in DFengage but provides no response, the field is left blank except for choice and check fields
  - Defined “no choice” code value is entered for choice and check fields only
  - Example: choice field where 0=blank, 1=Yes, 2=No; user provides no response; value = 0
- When a field is skipped or hidden in DFengage (user doesn’t see the question), no data value is assigned to the field, including for choice and check fields
- Consider any impact on edit checks or data analysis once data is received in DFdiscover

Consolidated summary plate

- Consider creating a separate summary plate consolidating separate activities into one page via batch edit check to simplify data review
- Contact DFnet software support team (help@dfnetresearch.com) for details



Participant ID: 9 9 0 0 1

SUM / Form #301

PARTICIPANT-REPORTED REACTOGENICITY — DAYS 1-7 SUMMARY

	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6
Date:	24/MAR/2022	25/MAR/2022	26/MAR/2022	27/MAR/2022	28/MAR/2022	DD/MMM/YYYY

Which arm was the vaccination given? (•) Left ( ) Right

LOCAL REACTIONS	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5
Pain (pain without touching)	1 Grade	0 Grade	0 Grade	0 Grade	0 Grade
Pain or swelling in the arm pit (injected arm)	0 Grade	0 Grade	0 Grade	0 Grade	0 Grade
Redness of skin	0 Grade	Grade	Grade	0 Grade	Grade
Swelling	Grade	Grade	Grade	0 Grade	Grade
Induration (Hardness)	Grade	Grade	Grade	0 Grade	Grade
SYSTEMIC REACTIONS	**DAY 1**	**DAY 2**	**DAY 3**	**DAY 4**	**DAY 5**
Fever	0 Grade	0 Grade	Grade	0 Grade	0 Grade
Chills	0 Grade	0 Grade	0 Grade	0 Grade	0 Grade
Fatigue (Feeling tired)	1 Grade	1 Grade	0 Grade	0 Grade	0 Grade
Myalgia/Muscle aches and pains	2 Grade	1 Grade	2 Grade	0 Grade	0 Grade
Arthralgia (Pain in Multiple Joints)	1 Grade	0 Grade	2 Grade	0 Grade	0 Grade
Headache	0 Grade	1 Grade	1 Grade	1 Grade	0 Grade
Nausea (Feel like vomiting)	0 Grade	0 Grade	0 Grade	1 Grade	0 Grade
Vomiting	0 Grade	0 Grade	0 Grade	0 Grade	0 Grade

Troubleshooting

Support and Error Codes

Troubleshooting – Common Issues

Unable to log in

- Check for typos in the username, password, server, and API
- Check that user account is active with ePROdata role assigned; check ePROdata role definition
- Check with DFdiscover server administrator to confirm server and API setup
- Make sure not to move between browsers/devices if confirming email/resetting password on DFengage web

Able to log in, but unable to proceed past PIN setup

- Check user permissions: user must have access to one subject ID in one study only
- Check role definition: role name ePROdata; DFexplore – Data; API Clients – DFengage
- Confirm Version Strict study setting allows API and server versions to connect

Able to log in, but expected activities do not appear on Today screen

- Check role definition (view access to records with dates required for visit calculations, write access to ePRO records)
- Check Subject Schedule of Pages standard report or DFexplore Schedule View for visit scheduling issues
  - Only visits with a ‘Schedule date’ available and required plates will appear in DFengage
  - Review visit map and conditional maps to verify visit scheduling and plate requirements

Troubleshooting

- Unable to submit data to DFdiscover?
  - Check for subject or page lock by a user in DFexplore/DFweb/DFcollect
  - *On mobile:* **Do not delete or uninstall DFengage**, since this will delete all data stored locally
  - *On web:* **Do not log out of DFengage**, since this will delete all data not yet synced
  - Ask participants to report error codes and share screenshots where possible to help with diagnosing any issues
- All error codes and how to resolve them are described in the following slides
- Contact help@dfnetresearch.com with other issues or bug reports

DFengage errors and how to resolve them (1/4)

Error code	Error message	Issue	Instructions
01	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	Server could not retrieve the study that the user was trying to access.	Check if user has access to the correct site and subject in DFadmin. Check for any errors in DFsetup.
02	Study is currently being edited. We can't receive/send study info since your study is currently being edited. Please close the app and try again later.	Another user has the subject binder locked in DFexplore or the record locked in DFweb or DFcollect. Another user may have DFsetup open in exclusive or developer mode.	Ask other users to close binder (check DFexplore Status View to see who is connected) or exit DFsetup.
03	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The data returned from the server was an unrecognized format.	Check for incorrect format of fields and variables in DFsetup.
04	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant site data. Possible internal server error retrieving data.	Check if user has access to the correct site in DFadmin.
05	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant subject data. Possible internal server error retrieving data.	Check if user has access to the correct subject in DFadmin.

DFengage errors and how to resolve them (2/4)

Error code	Error message	Issue	Instructions
06	Can’t receive study info. We’re having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant binder data. Possible internal server error retrieving data.	Check if user has access to the correct subject in DFadmin.
07	Can’t receive study info. We’re having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant visit map data. Possible internal server error retrieving data.	Check visit permissions in DFadmin. Check for any errors in DFsetup.
08	Can’t receive study info. We’re having trouble receiving your study info. Please close the app and try again later.	The server could not respond with relevant baseline data. Possible internal server error retrieving data.	Check that baseline visit date has been entered. Review visit map in DFsetup. Review role permissions for view access to visit and plate with baseline visit date in DFadmin.
09	Can't finalise questions. We're having trouble sending data to the server. Please make sure you have internet access.	User was trying to submit the answers to the server and an error occurred (other than study currently being edited).	User may have to redo questionnaire. Ask user to retry.
10	Can’t receive study info. We’re having trouble receiving your study info. Please make sure you have internet access.	This error will only occur if the user has no internet access and has not saved any local data for them to work offline.	Ask the DFengage user to close the app, connect the device to the internet, and open the app again to retrieve data from the server.

DFengage errors and how to resolve them (3/4)

Error code	Error message	Issue	Instructions
11	Can't receive study info. We couldn't retrieve one of your questionnaires. Please close the app and try again later.	The server could not respond with relevant plate data. Possible internal server error retrieving data.	Check plate permissions in DFadmin. Check for any errors in DFsetup.
12	Invalid credentials. The username or password you have entered is invalid. Please check and try again.	Incorrect username or password.	Confirm correct username and password. Ask DFengage user to use eye icon in password field to check for typing errors in the password.
13	Sync failed: We're having trouble syncing your data. Please make sure you have internet access, close the app and try again later. If this issue persists, please contact support	The app cannot sync data to the server.	Similar to error code 02. Ask other DFdiscover users to close binder (check Status View in DFexplore) or exit DFsetup.
14	Can't retrieve languages. We're having trouble receiving the languages of your study. Please close the app and try again later.	The app cannot retrieve languages.	Check translation map in DFsetup.
15	Connection timeout. Please check your connection and try again. If this issue persists, please contact support.	VPN or IP has no access	Contact your DFdiscover server administrator.
16	The server or API you have entered is invalid. Please check and try again	Incorrect server or API.	Confirm correct server and API. Contact your DFdiscover server administrator if the problem persists.

DFengage errors and how to resolve them (4/4)

Error code	Error message	Issue	Instructions
17	The server you have entered is invalid. Please check and try again.	Received 'Host not found' error (status 600) from the server	Confirm correct server and API. Contact your DFdiscover server administrator if the problem persists.
18	Can't receive study info. We're having trouble receiving your study info. Please close the app and try again later.	Session timeout due to some reason	Contact your DFdiscover server administrator.
19	The app could not access the server or API you have entered. Please contact support.	Invalid authorization token	Server is not configured to allow DFengage to connect. Contact your DFdiscover server administrator.
20	Activity is currently locked.	Another user has the subject binder locked in DFexplore or the record locked in DFweb or DFcollect.	Ask other users to close subject binder. App will automatically retry when opened later.
21	Your password has expired. Please set a new password.	The user's password has expired.	The DFengage user must set a new password to continue using the app.
99	An error has occurred. We have encountered an unknown error. Please close the app and try again later.	Generic error. May occur if more than one of the above errors exists.	Review user permissions and role definition in DFadmin. Review baseline visit date entered for the subject. Check for visit map or plate definition errors in DFsetup. Contact your DFdiscover server administrator if the problem persists.



Welcome to DFengage!

Thank you

Contact help@dfnetresearch.com for DFnet software support

Contact info@dfnetresearch.com for DFnet sales and licensing inquiries