	Clinical Data Pull	Clinical Data Mart
Most common uses	• Real-time data collection • Prospective clinical studies/trials • Longitudinal and/or multi-arm studies	• Registries • Prospective or retrospective clinical studies/trials • Searching for specific lab values or diagnosis codes for a cohort of patients over a set time period
Data mapping to EHR fields	• Field mapping must be set up prior to data pull by a user with CDP Setup/Mapping privileges in the project. This is completed via the CDP mapping page (accessed via the Project Setup page). • Mapping can be adjusted at any time in a CDP project, and it can be complex when mapping EHR fields to REDCap fields (allows for one-to-many, many-to-one, or many-to-many mapping). • Temporal data (e.g., vital signs and labs) must have an accompanying date or date/time field (e.g., visit date) for determining the window of time in which to pull data (using the ± day offset). Temporal data can be mapped to fields in a classic project, to events in a longitudinal project, or to repeating instruments/events. • All values for Allergies, Medications, and Problem List will be merged together for each category and each saved in its own a Notes/Paragraph field (if mapped).	• Mapping is not required since the project structure/instruments are pre-defined when the project is created. Demographics is created as a single data collection form, and the following forms are created as repeating instruments: Vital Signs, Labs, Allergies, Medications, and Problem List. Each data value on the repeating instruments are represented as a separate repeating instance of the form. • User defines the data pull configuration when creating the project - e.g., chooses specific MRNs, date range, and data fields from the EHR. • Project-level settings control whether or not users in the project can 1) fetch data just one time or as often as they wish, 2) modify the data pull configuration or not and 3) if new data is pulled automatically with a cron job once a day. These settings may be changed only by a REDCap administrator.
Activation process	• The local institution may have a formal process to evaluate the users/project prior to approval (recommended) - e.g., check IRB status, check users' EHR access. • REDCap administrator must enable CDP for the project on the project's Project Setup page.	• The local institution may have a formal process to evaluate the users/project prior to approval (recommended) - e.g., check IRB status, check users' EHR access. • Project is first created by a user, but each revision of the data pull configuration will go through an audit process and approved by a REDCap administrator via the To-Do List (if the project-level setting has been enabled to allow configuration changes).
User privileges	• Project users can set up field mapping and adjudicate data from the EHR if they have project-level rights to do so. In order to adjudicate data from the EHR, users must have access to the EHR and must have launched at least one patient in the REDCap window inside the EHR user interface. • REDCap administrator and team can optionally create a User Access Web Service to further control user access during adjudication (info documented on this page).	• A user's REDCap account must be given Data Mart privileges by a REDCap administrator on the Browse Users page in the Control Center, after which the user will be able to create a Data Mart project and pull EHR data. (Note: This is not a project-level user right but a REDCap user account privilege.) Also, there is no optional User Access Web Service as there is with CDP to further control user access for pulling data. • In order to pull data from the EHR, users must have access to the EHR and must have launched at least one patient in the REDCap window inside the EHR user interface. • Users with Project Setup/Design rights in a Data Mart project will be able to request changes to the data pull configuration (if needed and if the project-level setting has been enabled).

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Usage	• Users must launch a patient in the REDCap window inside the EHR user interface, and will be able to add the patient to any CDP-enabled REDCap project to which they have access. Once the patient is in a project, the user can manually pull data from the EHR for the patient. • Data pulled from the EHR is not saved immediately in the project but is stored temporarily in a cache, in which users must first review/adjudicate all data values before being saved in the project. • Once a patient has been added to a project, CDP will automatically (via a cron job) continue to look for any new data added to the EHR for up to X days, in which X is the value of the setting "Time of inactivity after which REDCap will stop checking for new data" (info documented on this page).	• Data Mart will pull data from the EHR when a user with appropriate privileges clicks the "Fetch clinical data" button. Also a cron job may be set from the Project-level settings control to pull any new data once a day automatically. • To pull new data values in the EHR, a user must manually click the Fetch button again (assuming the project-level setting is enabled to allow more than one data pull). • Extra instruments or events may be added to the Data Mart Project, but if any of the pre-defined fields or instruments are modified, it may prevent the data pull from working successfully thereafter.