

Background

- Trial systems have bespoke data, but have many common reporting requirements
- Even with bespoke data requirements, it is possible to standardise commonly used fields to facilitate report design sharing.
- REDCap standard reports can't be easily copied into different projects, and are also very limited in functionality and format.

Key Benefits

- The Advanced Reports external module allows export and import of report definitions in JSON format from one project to another. Works best with most generic kinds of reports, but even those that refer to project specific instruments and fields can be shared with only simple editing of referenced names required.
- Instrument query (Fig. 1) allows forms to be joined as tables. SQL query (Fig. 2) allows highly flexible report building. Embed reports in forms by retrieving as image (Fig. 3) Tabular reports (Fig. 4) allow sorting, filtering and csv download. Gantt chart report (Fig. 5) allows date fields to be displayed as task start and end points.
- PDF reports can convert other reports into a PDF file. It allows flexible letter or form generation with a source template in HTML.
- NCTU continuing to develop and share our REDCap external modules, now with following added: API client, Custom Record Naming, Extra Calculation Functions, Locking, Minimisation, REDCap UI Tweaker, Role Switcher, User Management Wizard, Validation Tweaker

Fig.1

All instruments accessed as tables with user defined joins. Any arm, event or instrument

Instruments

randomisation - Randomisation alias (optional)

Inner Join sms_enquiry - SMS Enquiry alias (optional)

On Condition [sms_enquiry][record_id] = [randomisation][record_id] and datediff([sms_enquiry][sms_date], 'today', 'd', true)

Left Join exacerbation_follow_up - Exacerbation follow up alias (optional)

On Condition [exacerbation_follow_up][record_id] = [randomisation][record_id] and [exacerbation_follow_up][redcap_event_id]

Left Join change_of_trial_status - Change of trial status alias (optional)

On Condition [randomisation][record_id] = [change_of_trial_status][record_id]

Condition condition logic

Sorting concat(mid([randomisation][record_id], 6, 4), right(concat('0', [sms_enquiry][sms_timepoint]), 2))

Fields to display

[if(length([exacerbation_follow_up][redcap_form_url])>0, Participant ID, grouping (optional)]

[randomisation][redcap_data_access_group] Site Name grouping (optional)

[randomisation][rando_date] Date Randomised grouping (optional)

[sms_enquiry][sms_timepoint] Month grouping (optional)

[sms_enquiry][sms_date] SMS Enquiry Date grouping (optional)

[sms_enquiry][sms_sent_date] First SMS Sent grouping (optional)

[sms_enquiry][sms_sent2_date] Second SMS Sent grouping (optional)

[sms_enquiry][sms_sent3_date] Third SMS Sent grouping (optional)

[sms_enquiry][sms_recv_date] SMS Response Received grouping (optional)

[if([sms_enquiry][sms_response]='', 'Response', grouping (optional)]

[if([sms_enquiry][sms_response_text]='Undetermined', 'Undetermined Response', grouping (optional)]

[exacerbation_follow_up][exac_date] Telephone Interview Date grouping (optional)

Field aliases and grouping (count/sum) may be used

Fig. 2

Grant access to roles

Administrator
Data Management
Data Management+
Trial Management

Enter each role name on a separate line. If left blank, the report will be accessible to users with edit access. Enter * to grant access to all users.

Allow downloads Yes No

Grant downloads to roles

Administrator
Data Management
Data Management+
Trial Management

Enter each role name on a separate line. Reports can only be downloaded by users with access. If left blank, the report can be downloaded by users with edit access. Enter * to allow downloads by all users with access.

Allow retrieval as image Yes No

If enabled, the report can be retrieved as an image by all users with access.

Access permissions can be granted to project roles

Retrieve report table as image to show report data as read-only table on forms.

Report Definition

Description Displays all free text fields not flagged as 'Identifier' for easy review.

Optional. If specified, displays this text above the report. Supports <a>, and <i> HTML tags.

SQL Query

```
SELECT DISTINCT
  record_id,
  concat('<a href=""', $$WEBROOT$$, 'DataEntry/index.php?n=', $$PROJECTS$$, '&id=',
    record_id, '&page=', redcap_metadata.form_name, '&event_id=', RD.event_id,
    '&instance=', ifnull(RD.instance_id, '') '>', redcap_metadata.form_name, '</a>') AS form_name,
  redcap_events_metadata.description AS event,
  RD.instance_id,
  RD.field_name,
  redcap_metadata.element_label,
  RD.value
FROM
  $$DATATABLES$$ RD
INNER JOIN
  redcap_metadata
ON
  RD.field_name = redcap_metadata.field_name
AND
  RD.project_id = redcap_metadata.project_id
INNER JOIN
  redcap_events_metadata
ON
  RD.event_id = redcap_events_metadata.event_id
WHERE
  RD.project_id = $$PROJECTS$$
AND
  redcap_metadata.element_type in ('textarea', 'text')
AND
  isnull(redcap_metadata.element_validation_type)
```

Placeholders included for DAG-IDs, REDCap data and log tables, current user and role, and web URL root

Expressions may be used for conditions, sorting, and fields selected. Fields may also be made as hyperlinks back to forms to see the data.

Placeholders for project specific object names or IDs can be used to make the views portable across different projects and servers.

Fig. 3

Trial name FAMOUS

request status	request count
Complete	16
In progress	3
Dropped	1
Not yet scheduled	2

Instrument query with grouping retrieved as image embedded on a form, filtered on record

Fig. 4

Monthly Accrual 3

Back to Advanced Reports Download report

Display figures with accumulative for the month with lots of records

Site	09/2021	10/2021	11/2021	12/2021	01/2022
888 Nottingham Site	0 (+0)	0 (+0)	0 (+0)	0 (+0)	2 (+2)
999 Test Site	2 (+2)	4 (+2)	5 (+1)	5 (+0)	6 (+1)

Total rows returned: 2

Sort and filter on multiple columns, download csv

Trials List

Back to Advanced Reports Edit report

Zoom: - +

Data range: standard | show all forthcoming

Trial	Status	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
POSNOC	Follow up (closed to recruitment)	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J
FEED-1	Recruiting	2	30	28	25	23	20	17	17	14	12	9	7	4	1	29	27	24
CAUTI	Discontinued																	
GB53	Follow up (closed to recruitment)																	
Hand-2	Follow up (closed to recruitment)																	
POISE	Recruiting																	

Tool tip when hover over task shows start and end dates

Fig. 5

