**Supplemental Table.** Research systems and data exchanges involved in the CTMS/RINS integration**\***

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **System** | **Purpose** | **Primary stakeholders** | **Source-of-truth data fields\*\*** | **Data types consuming from another primary system\*\*** |
| Research Master ID | Unique Identifier Ticketing | Institutional research community | RMID | Protocol titles; Principal investigator; Pro #; IRB state; SPARC IDCayuse Award ID |
| eIRB | Electronic institutional review board | Institutional compliance administrators and review board | Protocol titles; IRB of record (i.e. Pro #);Principal investigatorType of IRB;IRB status; Date of IRB approval; Planned enrollment | RMID |
| SPARC- Request | Research transaction management  | CTSA and institutional administrators and researchers | SPARC IDCTSA service involvementOCR involvementSponsor name | RMIDProtocol titlesPrincipal investigatorPro #IRB status |
| EPIC | Electronic health record | Clinicians and clinical researchers | Patient registryRecruitment start date\*\*\*Last patient enrollment date\*\*\*Enrollment counts\*\*\* | SPARC IDProtocol titlesPrincipal investigatorStudy calendarParticipant enrollment status |
| Cayuse  | Grants and contracts | Grants and contracts administrators | Sponsor protocol #Award #Award titleAward amount | RMID |
| Clincard  | Participant remuneration | Clinical trials financial office | Participant remunerationCards distributionTax information | RMIDPro #SPARC ID |
| Smart-Stream | Financial | Clinical trials financial office | Award received amountExpenditures | Award # |
| OnCore | Clinical trials management | Clinical trials study teams and administrators | Study calendarParticipant enrollment status | SPARC IDProtocol titlesRMID \*\*\*\*Patient registry |

**\*** This Table lists the research systems already in use at the Medical University of South Carolina before the implementation of an enterprise-wide clinical trial management system (CTMS) and its integration with the Research Integrated Network of Systems (RINS), along with the source-of-truth data fields and data adoption from other primary systems for data consistency. The last row also details the vision for the role that the CTMS will play in this network of systems, and some of the source-of-truth records' transitioning plans. Among these systems, the SPARCRequest® (<https://github.com/sparc-request/sparc-request>) and SPARCFulfillment applications (<https://github.com/sparc-request/sparc-fulfillment>) and the ​​​​Research Master Identifier (RMID) (<https://github.com/sparc-request/research-master-id>), have all been released as open-source software on Github with a BSD3 license. CTSA = Clinical and Translational Science Awards; eIRB = electronic institutional review board; OCR = Office of Clinical Research; SPARCRequest = Services, Pricing, & Application for Research Centers.

**\*\*** This table listssome but not all key data fields.

\*\*\* These fields could only be reported from EPIC before the implementation of the CTMS; as the CTMS is being mandated across the institution, the source-of-truth will shift.

\*\*\*\* A feature undergoing development.