



## PROGRAM TO ACCELERATE CLINICAL RESEARCH USING EPIC (PACE)

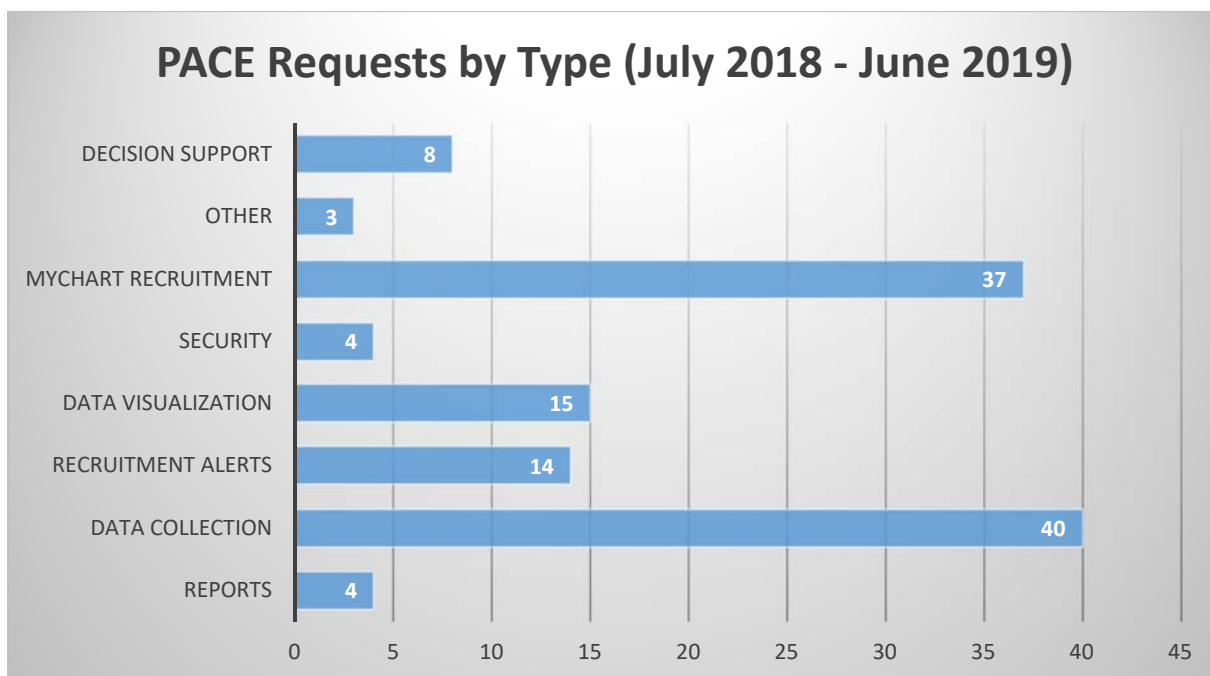
### ROLE OF OFFICE

PACE was established to help clinical researchers take full advantage of the Epic Electronic Health Record system for their research projects. We provide guidance regarding existing Epic research functionality as well as designing and building customized Epic content for your project to enhance the efficiency and standardization of the data collection process and improve data quality. Potential applications of customized Epic build are numerous, and some typical scenarios include:

1. Study recruitment using the Epic MyChart patient portal, with review and approval by the ICTR MyChart Epic-Based Recruitment team.  
[https://ictr.johnshopkins.edu/programs\\_resources/programs-resources/research-participant-recruitment-and-retention/my-chart-epic-based-recruitment/](https://ictr.johnshopkins.edu/programs_resources/programs-resources/research-participant-recruitment-and-retention/my-chart-epic-based-recruitment/)
2. Alerts that identify specific patient subsets in the clinic setting. This may include alerts that a patient may qualify for a research study or that important clinical data are missing for a specific study participant.
3. Tools that help providers collect discrete data on a population of interest. This may include documentation flowsheets and SmartForms as well as SmartSets that help populate Epic data fields in a standardized way. It may also include automatic calculation of patient scores based on multiple sources of data in Epic.
4. Collection of patient-reported outcomes through the Epic MyChart patient portal and tablets in the waiting room.
5. Tools that provide a comprehensive overview of the patient's specific phenotype by pulling in relevant available data in Epic.
6. Reports that aggregate and display data regarding a specific research study.

### PERFORMANCE IN THE PAST YEAR

In the past year, PACE completed 109 requests as compared with 53 requests the prior year. Of those 109 customer requests, 10% were informational consults-only and 90% resulted in new tools in Epic, or enhancements to existing tools. The median hours to complete a request were 25 hours, with a range of 3-80 hours; 3 hours for each Research Recruitment Report, all the way to 80 hours for more complex PMCoE tool development in Epic.



#### CHANGES IN THE PAST YEAR

In collaboration with Precision Medicine Centers of Excellence as well as the Epic Faculty Scholars Program, PACE built new data collection tools into Epic, establishing reusable patterns which can be applied to future studies. In addition to supporting individual research studies, PACE built and enhanced tools for general use by the research community, including:

- Implementing real-time study alerts via integration with the CORUS paging system.
- Shortening the time required to build a MyChart Recruitment Report in Epic by 50%, lowering the cost to the research study.

PACE was selected to present at this year’s Epic Expert Group Meeting, at which we described the PACE service. In April, in conjunction with the ICTR Third Thursday series, we presented a session on using Epic to support clinical research.

#### NEW DEVELOPMENTS FOR THE UPCOMING YEAR

We plan to improve the MyChart Research Recruitment process by adding a Research Studies page into MyChart. Patients designated as candidates through our current Reporting Workbench Report process will be able to easily find out more information about studies and respond with the click of the mouse.

With support from the Precision Medicine initiative, PACE will be recruiting an additional engineer so that we can keep up with growing demand for services. Also, with Precision Medicine support we will be adding the capability to administer PROMIS questionnaires with

computer adaptive testing, which minimizes the number of questions which need to be answered by study participants.

On the operational side, much of our effort in the coming year will be to prepare for the go-live of Epic at Johns Hopkins All Children's in the Fall of 2020. Additionally, we will have the opportunity to add new improvements to Epic more frequently due to the move to quarterly Epic upgrades. One anticipated improvement is the addition of a research administration data model to SlicerDicer.

PACE will continue to improve our outreach to faculty through improvements to our ICTR website, including publishing text for research teams to use in grant applications and publishing informational sheets with example projects and their associated time and cost. With the Epic Research operational team, we will host our 2nd annual informational session about how to use Epic to support clinical research.

#### **INCORPORATION OF SERVICES INTO GRANT APPLICATION**

PACE encourages researchers to contact us at least a few weeks ahead of grant submission so that we may provide you with information about how you can use Epic for your research project, including an estimate for the cost to build new tools in Epic. The ICTR provides two complimentary hours of service per faculty to underwrite this activity.

#### **BEST WAY TO WORK WITH PROGRAM**

To learn more about PACE and how to request a consultation for enhancements for your study, please visit our webpage on the ICTR website: <https://ictr.johnshopkins.edu/pace>

To learn more about Epic's standard offerings for clinical research use, please visit our webpage on the ICTR website: [https://ictr.johnshopkins.edu/programs\\_resources/programs-resources/i2c/epic-for-research/](https://ictr.johnshopkins.edu/programs_resources/programs-resources/i2c/epic-for-research/)