

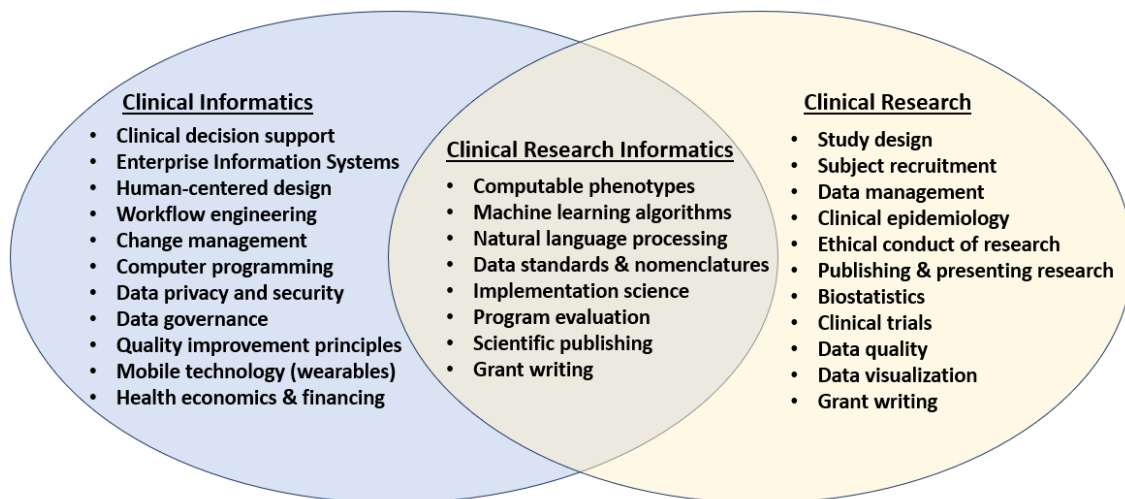
Clinical Research Informatics Postdoctoral Fellowship (CRISP)

Frequently Asked Questions (last updated 2/15/21)

What's the difference between clinical research informatics and clinical informatics?

Clinical informatics and clinical research informatics are two of the five domains of biomedical informatics supported by the American Medical Informatics Society. Essentially, the difference is a focus on operations vs. research. **Clinical Informatics** is the application of informatics and information technology to deliver healthcare services. It is also referred to as applied clinical informatics or operational informatics (as might be used by a Chief Medical Informatics Officer). **Clinical Research Informatics** uses clinical research methods and technology to conduct studies involving human subjects and their data. It shares many aspects of clinical informatics but focuses more on conducting academic investigations to answer scientific questions. This figure illustrates the overlap between the two disciplines.

Overlap between clinical informatics, clinical research informatics and clinical research



Will the CRISP fellowship make me board eligible in clinical informatics?

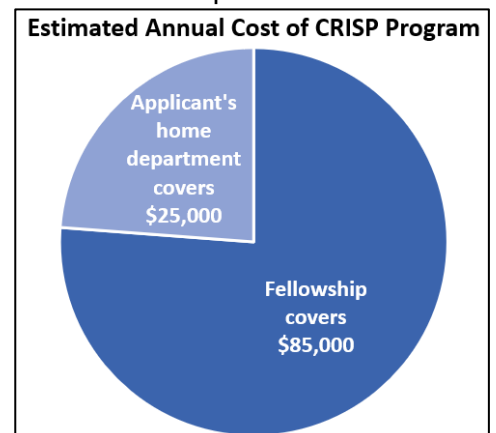
The CRISP fellowship alone will not make you board eligible in Clinical Informatics. However, the CRISP fellowship could be combined with the ACGME-accredited [UCSF clinical informatics fellowship](#) to obtain board certification.

What is the postdoctoral fellow stipend?

UCSF full-time [postdoctoral fellow stipends](#) are based on the [NIH scale](#). The bottom of the UC postdoc salary scale (level 0) is the same as level 2 on the NIH scale. The NIH stipend scale is published annually and increases by about 2% per year. Fellows will also receive a housing stipend (currently \$13,211/year).

How much must the clinical department contribute?

Most funding for the fellowship will be provided by a [TL1 grant](#) from the National Center for Advancing Translational Science. However, some costs (such as UCSF housing stipends and tuition expenses beyond the NIH allowance) cannot be charged to the [TL1 grant](#) and must be covered by the applicant's department. The exact amount varies by fellow but is estimated to be around \$25,000 per year. Revenue generated from the fellow's clinical work can be used to offset these costs.



How is the CRISP fellowship structured? All CRISP fellows will complete a program comprised of five central elements:

1. Mentored research project. CRISP will provide postdoctoral education in the methods of clinical research informatics within a unique environment where fellows will learn from nationally recognized faculty, seasoned investigators, and innovators. CRISP fellows will be expected to complete at least one research project (leading to a publication and presentation) during their training. Because both Zuckerberg San Francisco General (ZSFG) and SFVA are closely affiliated with UCSF, and clinical trainees are accustomed to working across all sites, CRISP fellows will have a wide range of opportunities to work with electronic health record (EHR) data from UCSF's (EPIC-based) data warehouse, ZSFG's (EPIC-based) EHR, and the VA's national standardized EHR data repository representing over 20 million patients who have been followed for over 20 years (2000-2021). Claims data from the Center for Medicare and Medicaid Services, including the US Renal Data System, are also available.

2. Works-in-Progress sessions. CRISP WIP sessions will be held twice monthly for one hour. The group will discuss one or more works-in-progress being conducted by fellows or other local investigators who are using secondary analysis of EHR, registry, public health, administrative, or claims data to answer clinical research questions. These seminars will highlight the challenges of using big data for research, including the lack of standardized methods for ensuring that data quality, completeness, and provenance are sufficient to assess the appropriateness of its use for research. Discussion will include methods for linking with and integrating data from heterogeneous sources, natural language processing, use of computable phenotypes for both pragmatic clinical trials and observational investigations, data governance to control the quality and security of enterprise data, and promotion of national standards for representing and using clinical data. Project mentors will be invited to attend the sessions.

3. Career Development Seminars. CRISP career development seminars will be held twice monthly, on weeks alternating with WIP sessions. A faculty member will lead a discussion based on one of the 22 chapters in the recently published second edition of "Clinical Research Informatics" (Richesson and Andrews, 2019) or invite senior faculty to discuss a career development topic such as finding a mentor, managing time, setting priorities, balancing work-life demands, writing manuscripts, conducting peer review of manuscripts, responding to reviews, choosing a journal, deciding on authorship order, obtaining grants, negotiating for resources, or securing a job. Finally, CRISP fellows will join the Fellows in Advanced Skills Training in Clinical Research (FAST CaR) seminars. FAST CaR ensures that clinical fellows pursuing a career in clinical research have foundational skills in scientific writing, evidence presentation, research dissemination, professional networking, and readiness to compete for research faculty positions. Clinical fellows from many other UCSF T32 programs also participate in FAST CaR, promoting workforce development and interdisciplinary collaboration.

4. Clinical Experience. A key distinguishing feature of CRISP will be embedding clinicians (physicians, nurses, dentists, physical therapists, pharmacists) within the health system that they are working to improve. For this reason, CRISP postdoctoral fellows must apply from within a clinical department that specifies how the fellow will be involved in clinical care. The goal will be for the fellow to devote 20% effort to patient care so that s/he will learn to leverage their knowledge of medicine, data systems, and analytics to identify and address pressing research questions in need of timely answers. Notably, clinical and research activities need not be conducted at the same site. For example, a dermatologist might care for melanoma patients at UCSF but conduct research on melanoma using VA data. By focusing on timely research questions, clinical research informaticians directly inform learning healthcare systems and improve quality of care.

5. Completion of ACR Certificate or Master's degree, including individually tailored didactic coursework. Under the guidance of the mentor, each CRISP fellow will create a structured career development plan tailored to their level of training. Based on this plan, an individualized trajectory of coursework and other programmatic activity will be developed that includes submission of a first-author manuscript for publication and presentation of research findings at a national meeting.