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November 19, 2018

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317 University Hall, #1150

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Vice Chancellor for Research
119 California Hall, #1500

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Chair, Committee on Committees
Professor of African American Studies
660 Barrows Hall #2572

Attached is the 2017-2018 Annual Report for the Committee for Protection of Human Subjects (CPHS). CPHS and the Office for Protection of Human Subjects (OPHS) strive to offer excellent customer service while ensuring the health, welfare and safety of subjects and supporting institutional regulatory compliance.

Please contact us with any questions or comments regarding this report:

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Respectfully Submitted,

William J. Jagust, M.D.

Chair, Committee for Protection of Human Subjects (CPHS-I)
Professor, School of Public Health and Helen Wills Neuroscience Institute

Jane Mauldon, Ph.D.
Chair, Committee for Protection of Human Subjects (CPHS-2)
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Enc. CPHS Membership Roster 2017-2018

Cc: Patrick Schlesinger, Assistant Vice Chancellor for Research
Rebecca Armstrong, Director, Research Subject Protection

Report to the Research Compliance Advisory Committee

I. Committee Title and Report Period

Committee for Protection of Human Subjects - Report for July 1, 2017 - June 30, 2018.

II. Executive Summary

From July 1, 2017 - June 30, 2018, the Office for Protection of Human Subjects (OPHS) and the Committee for Protection of Human Subjects (CPHS) reviewed and approved 1894 applications, consistent with the number of applications approved last fiscal year. The number of approvals for new protocols remained relatively steady, amendments increased, and continuing reviews decreased as compared to last year. Noncompliance submissions went up slightly, and official determinations of "not human subjects research" (NHSR) were slightly down. The number of withdrawn applications was up. Despite a continued heavy workload and further reduction in staff (see below for details), OPHS review turnaround times were down overall (see tables 4 and 5). UC Berkeley research remains primarily social-behaviorally focused, at 73% of total approved submissions. Of the 1894 applications approved, 32% of them were federally-funded.

In late 2015, UC Berkeley was the first UC System institution to roll out an Exempt Category #7. This new category permitted minimal risk, non-federally funded or regulated research studies, which formerly had to be reviewed under expedited level review processes, to now be reviewed under exempt level processes. Category #7 continues to benefit researchers in many ways, from filling out a shorter application form and reducing review time, to eliminating the need for continuing review. During the 2017-2018 fiscal year, OPHS made 105 new category #7 determinations, saving time for both OPHS staff and for investigators.

Furthermore, UC Berkeley continues to grant 10-year approval periods to qualifying, expedited level, minimal risk studies; and, OPHS staff continue to serve as alternate CPHS members in order to review minor amendments and continuing review applications to help reduce review timelines.

Throughout the last fiscal year, CPHS and OPHS revised eight guidelines, created five new guidelines, and revised three policies. The full listing can be found at the end of this report.

OPHS experienced a number of staff changes over the 2017-2018 fiscal year. IRB Coordinators Alexis Clasca and Carmen Lam left OPHS in July 2017 and August 2017, respectively. IRB Coordinator Carrie Des Roches and IRB Administrator Daisy Lubag joined OPHS in July 2017. IRB Coordinator Diana Holt was recalled into a part-time position after retiring in June 2017. In response to campus budget reductions required by UCOP to eliminate the deficit at UC Berkeley, OPHS has operated over the past year with a reduced staff, down by 14% (i.e. 1.07 FTE).

As an additional cost-saving measure, OPHS staff, along with all Research Administration Compliance (RAC) units, moved locations from 2150 Shattuck to 1608 Fourth Street in January 2018. OPHS staff worked diligently to keep up with protocol review and general workload despite the extra time, effort and planning the move required.

III. Committee Membership and Number of Meetings During the Report Period

The Committee is comprised of two panels, CPHS-1 and CPHS-2. While CPHS-1 tends to review more biomedical research and CPHS-2 reviews more social-behavioral research, both committees may review either type of research. During the '17-'18 fiscal year, CPHS-1 convened 10 times and CPHS-2 convened 9 times. CPHS-1 had 16 members and CPHS-2 had 13 members (the 2017-2018 CPHS Membership List is attached).

Professor Bill Jagust, MD served as CPHS-1 Chair in the fall and Professor Silvia Bunge served as CPHS-1 Chair in the spring. Professor Jane Mauldon served as CPHS-2 Chair. Professor Jack Lesch served as CPHS-1 Vice Chair and Professor Oliver John served as CPHS-2 Vice Chair. OPHS Director Rebecca Armstrong served as a designated CPHS reviewer assisting with the expedited review of minor protocol amendments (e.g., reviewing the addition of funding), continuing review/renewal applications, and deviation reports. OPHS staff were authorized as alternate members for Dr. Armstrong in order to complete IRB review and approval duties, as determined appropriate based on their experience and role in OPHS. Assistant Director Adrienne Tanner served as Dr. Armstrong's alternate at CPHS meetings, as needed.

IV. Summary of Research Protocols Reviewed

Approvals

The total human subjects research approval activities for CPHS and OPHS remained steady as compared to last year at 1894 approvals. New protocol approvals also remained steady in comparison to last year, with a slight increase in expedited and full board approvals and a slight decrease in exempt approvals. Expedited amendment approvals were up by 80 protocols over last, while full board and exempt amendments were up slightly as well. Continuing review applications were down by 97 protocols, and full board continuing review applications were slightly up. Three-year approvals were first granted in April 2013. In April 2016, CPHS further extended the standard approval period to 10 years. As we continue to grant 10-year approvals for minimal risk, non-federally regulated research, we expect continuing reviews numbers to substantially decrease in the future. Further, new 45 CFR 46 regulations, scheduled to take effect in January 2019, no longer require continuing review for minimal risk research, regardless of funding.

Figure 1 shows the total number of applications approved over the last five years. Table 1 breaks down the applications approved over the same period of time based on the type of submission and level of review. These data exclude cases of potential noncompliance, adverse events, unanticipated problems, administrative actions, and withdrawn submissions, which are discussed later in this document.

Figure 1. Total applications approved over 5 years

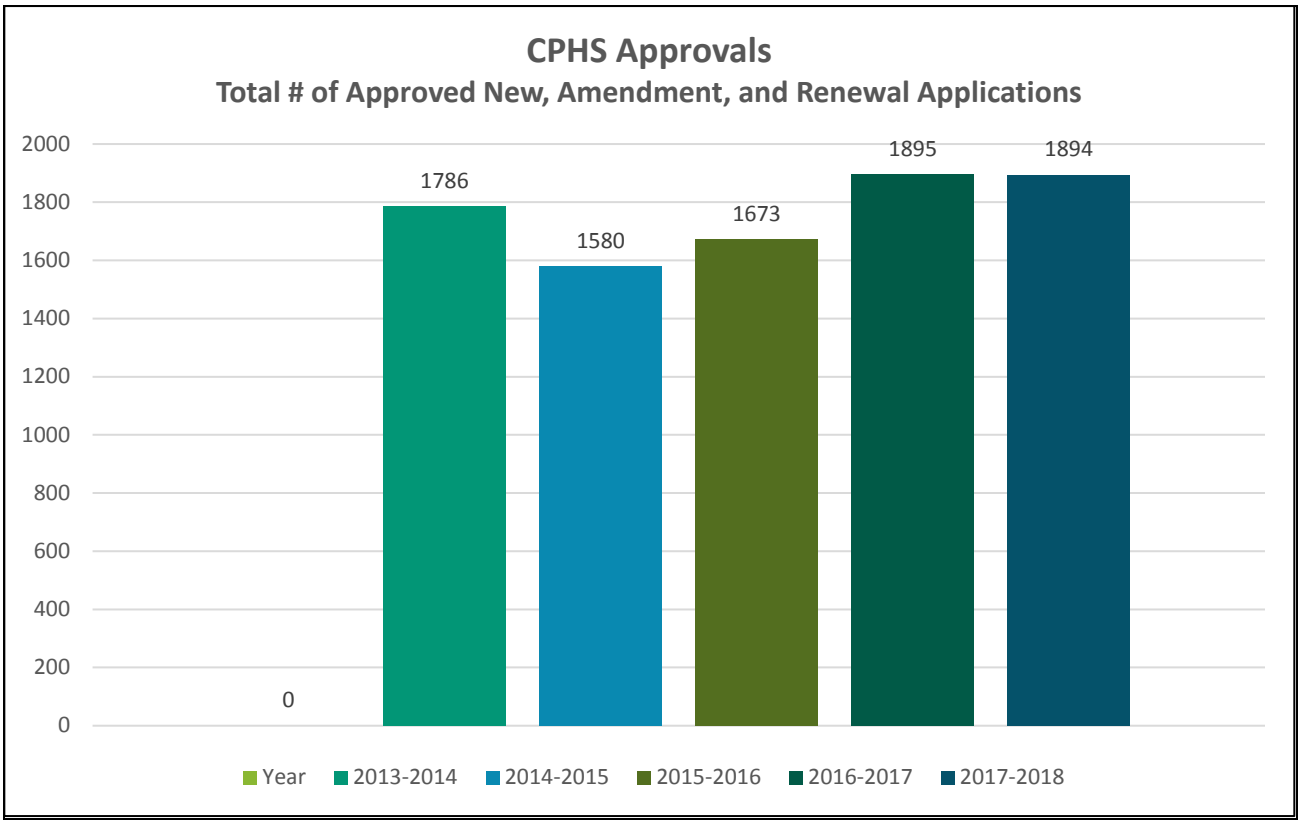


TABLE 1. Types of applications approved over 5 years

Application Type	Review Level	2013-14	2014-15	2015-16	2016-17	2017-18
New	Exempt:	205	178	200	244	224
	Expedited:	309	355	290	287	305
	Full Board:	29	44	81	55	62
	TOTAL	**539**	**577**	**571**	**586**	**591**
Amendment	Exempt:	100	116	132	131	137
	Expedited:	494	592	661	679	759
	Full Board:	27	34	19	13	15
	TOTAL	**621**	**742**	**812**	**823**	**911**
Continuing Review	Expedited:	603	235	260	453	356
	Full Board:	23	26	30	33	36
	TOTAL	**626**	**261**	**290**	**486**	**392**
Total Activity		**1786**	**1580**	**1673**	**1895**	**1894**

Withdrawn applications
There are times when applications received by CPHS/OPHS are reviewed and then later withdrawn from consideration by the researchers before final approval. The majority of these are new applications, but also include amendments, continuing reviews, and deviation submissions. Table 2 shows applications withdrawn over the last five years by level of review. Out of the 198 applications that were withdrawn this year, 88 were exempt applications, 101 were expedited applications, and 9 were full board applications.

TABLE 2. Applications withdrawn by level of review

Reporting Period	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Exempt	60	54	75	62	88
Expedited	64	88	96	82	101
Full Board	5	16	19	9	9
Total:	*125*	*158*	*190*	*153*	*198*

Adverse Events and Unanticipated Problems
There were 14 incidents reported in the last year. The majority of reports were not unanticipated problems involving risks to subjects. Of the reports that were directly related to the research, steps were taken to prevent similar incidents from happening in the future.

Noncompliances
Whenever a study deviates from the approved protocol, or when activities occur outside of an approval, this is deemed noncompliance and must be reported to CPHS. Most often these are found to be cases of simple noncompliance, such as exceeding the approved total number of subjects. Seventy-nine cases of potential noncompliance were reviewed in the last year, none of which were found to be a serious or continuing noncompliance. In one instance, investigators requested that they be permitted to use data they had already collected. However, since there was no IRB protocol in place to cover the human subjects research data collection, the investigators were not permitted to use the data for research purposes.

TABLE 3. Noncompliance

Reporting Period	2013-2014	2014-2015	2015-2016	2016-2017	2017-2018
Noncompliance cases	66	46	54	62	79

Subject complaints
OPHS received six subject complaints this past year which were unsubstantiated or the issue was quickly resolved with the Principal Investigator.

Administrative actions
OPHS provides consultation on whether an activity is or is "not human subjects research" (NHSR). At times a journal or sponsor may require an official determination of NHSR. OPHS issued twelve official NHSR determination letters last year. Many more determinations were issued informally by email through ophs@berkeley.edu.

If a protocol is submitted through eProtocol that is *not* found to meet the threshold definition of human subjects research, OPHS makes a NHSR determination. Last year, 27 determinations were made in

eProtocol. The eProtocol system provides a NHSR determination action notification for researchers as proof of determination.

IRB Reliances

OPHS also processes requests for an institution to rely on the IRB review of another. The process helps prevent duplicative IRB reviews of collaborative projects that involve more than one institution. Investigators can make use of the UC System Memorandum of Understanding (MOU) that permits one campus to rely on the IRB review of another. Outside of the UC system, investigators may request that UC Berkeley serve as the IRB of record for a collaborating institution or vice versa. These requests must be reviewed and approved by the OPHS Director. For non-UC collaborations, institutions may enter into Inter-Institutional IRB Authorization Agreements (IIAs), either formally documented with an IIA form or listed on a spreadsheet, depending on protocol specifics.

Over the last fiscal year, UCB entered into 66 new reliances under the UC MOU. UCB was the reviewing campus for 22 of those reliances and the relying campus for 44. Through IIAs for non-UC institutions, both formal and informal, UCB entered into 41 new reliances: 23 as the relying IRB and 18 as the reviewing IRB.

2017-2018 Turnaround times

The tables below show the amount of time (in number of calendar days) that a new application or amendment spent with CPHS/OPHS and the amount of time spent with the investigator(s) between submission and approval. Time spent with CPHS/OPHS includes the time taken to assign the submission to an OPHS analyst, time the analyst spent on the preliminary review, and time spent by the convened IRB or designated reviewer. Time spent with the designated reviewer may take 5-7 days, or longer. Time is measured in calendar days and a value of "0" indicates that action was taken by that party in less than 24 hours. Continuing review turnaround times are not included as they are processed by expiration date.

On the CPHS/OPHS side, turnaround times for this period compared to last period decreased for exempt and amendment applications, despite reduced staff and a steady number of protocol submissions, and increased slightly for full board protocols. (We focus here on the median values – see table below.)

Days spent with CPHS/OPHS for new submissions went down 5 days for exemptions, down 9 days for expedited protocols, and went up 3 days for full board applications. Days with investigators (not under CPHS control) went down for exempt and full board applications and up for expedited applications.

Table 4. Turnaround times for new protocols (in number of calendar days)

Application Type		Calendar Days with CPHS/OPHS				Calendar Days with Investigator(s)			
		2014-15	2015-16	2016-17	2017-18	2014-15	2015-16	2016-17	2017-18
Exempt	Range	-	0 to 62	0 to 47	0 to 50	-	0 to 217	0 to 159	0 to 216
	Median	8	11	17	12	6	9	6	5
	Average	9	13	17	13	17	18	13	12
	Protocol #	178	200	244	224				
Expedited	Range	-	0 to 229	3 to 130	3 to 124	-	0 to 242	0 to 206	0 to 234
	Median	38	46	42	33	12	14	10	12
	Average	39	47	44	36	25	26	18	23
	Protocol #	355	290	287	305				
Full Board	Range	-	11 to 83	19 to 141	10 to 95	-	0 to 217	0 to 178	0 to 103
	Median	38	40	38	41	38	22	16	13
	Average	42	42	45	44	15	32	29	21
	Protocol #	44	81	55	62				

On the CPHS/OPHS side, turnaround times for amendments went down by 1 day for exempt protocols, down by 2 days for expedited protocols, and up by 5 days for full board protocols. Turnaround times on the investigator side remained steady for exempt and expedited protocols and went up by 1 day for full board protocols.

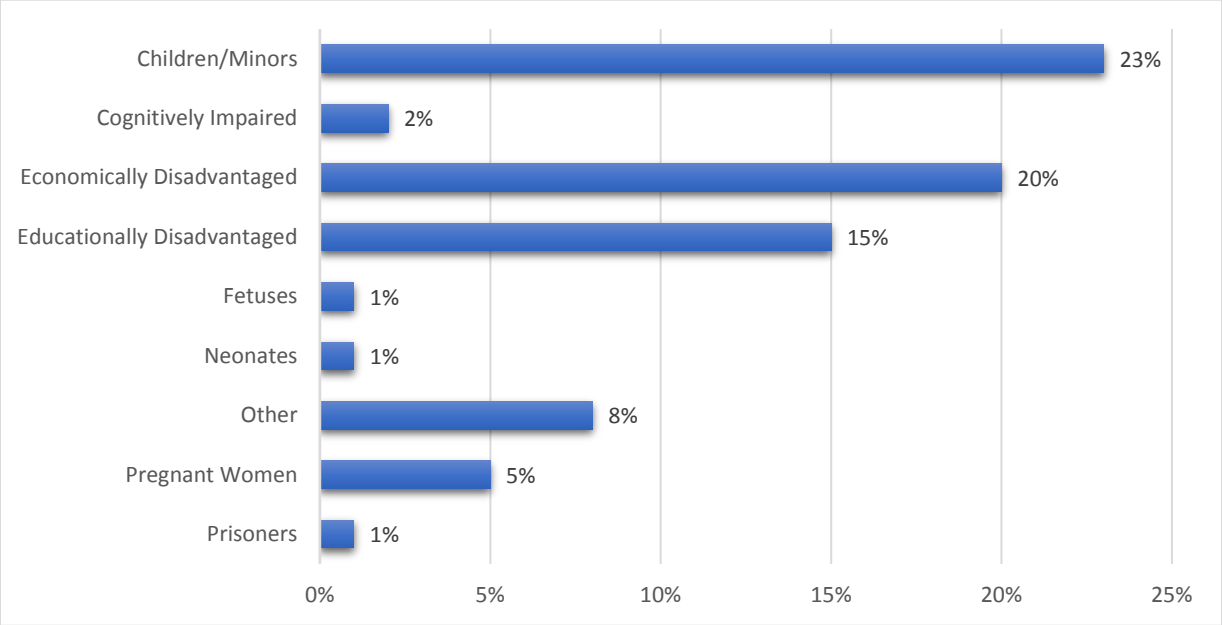
Table 5. Turnaround times for amendments (in number of calendar days)

Application Type		Calendar Days with CPHS/OPHS				Calendar Days with Investigator(s)			
		2014-15	2015-16	2016-17	2017-18	2014-15	2015-16	2016-17	2017-18
Exempt	Range	-	0 to 56	0 to 29	0 to 67	-	0 to 176	0 to 223	0 to 56
	Median	2	4	5	4	-	1	0	0
	Average	4	5	7	6	15	9	5	4
	Protocol #	116	132	131	137				
Expedited	Range	-	0 to 78	0 to 73	0 to 66	-	0 to 308	0 to 228	0 to 155
	Median	8	7	8	6	-	0	0	0
	Average	11	11	11	9	19	7	5	5
	Protocol #	592	661	679	759				
Full Board	Range	-	0 to 41	0 to 72	0 to 84	-	0 to 41	0 to 63	0 to 169
	Median	7	7	7	12	-	0	0	1
	Average	13	10	14	15	15	4	5	6
	Protocol #	34	19	13	15				

Significant details for 2017-2018 research

- *Social-behavioral vs. biomedical research:* 73% of protocols (new and continuing review applications) approved were for social-behavioral research.
- *International research:* 22% of the protocols reviewed and approved included international sites.
- *Federally funded research:* 32% of the protocols reviewed and approved indicated that they were supported by federal funds.
- *Research with vulnerable subject populations:* 41% of the protocols reviewed and approved included at least one vulnerable population. Economically and educationally disadvantaged subject populations are often present in the same study.

FIGURE 2. Vulnerable subjects 2017-2018



V. New Laws, Regulations, and Standards

Updated Common Rule

Changes to regulations governing human subjects research, as outlined in the Common Rule, 45 CFR 46, were published in the Federal Register in January 2017. The amended rules are the first significant changes to human subjects regulations since 1991. While some changes will reduce the burden on researchers and institutional compliance areas, other requirements come with additional responsibilities.

The rule changes were originally scheduled to take effect on January 19, 2018, but were delayed until July 19, 2018. Based on feedback from the research compliance community, the rule has since been further delayed until January 21, 2019. The University of California, Berkeley, consistent with other campuses in the University of California System, has developed an implementation plan to accommodate the changes and provisions of the revised Common Rule that will go into effect on January 21, 2019.

NIH's Revised Clinical Trial Policies

Implementation of New NIH Clinical Trial Definition and Procedures:

In 2014, NIH began a multi-faceted effort to enhance the quality, relevance, feasibility, and transparency of NIH-funded clinical trials. A key element of these stewardship reforms was the development of a clearer, more comprehensive definition of clinical trial. The NIH clinical trial definition is:

A research study in which one or more human subjects are prospectively assigned to one or more interventions (which may include placebo or other control) to evaluate the effects of those interventions on health-related biomedical or behavioral outcomes (https://grants.nih.gov/policy/clinical-trials/definition.htm).

The revision is designed to make the distinction between clinical trials and clinical research studies clearer and to enhance the precision of the information NIH collects, tracks, and reports on clinical trials. When determining whether or not a study qualifies as a clinical trial, investigators must ask the following questions:

a) Does the study involve human participants?
b) Are the participants prospectively assigned to an intervention?
c) Is the study designed to evaluate the effect of the intervention on the participants?
d) Is the effect being evaluated a health-related biomedical or behavioral outcome ?

If the answer to all four questions is "yes," then the clinical study would be considered a clinical trial according to the NIH definition. Updated case studies can be found here: https://grants.nih.gov/policy/clinical-trials/case-studies.htm

All NIH applications proposing clinical trials that are submitted on or after 1/25/2018 must be submitted under a funding opportunity announcement (FOA) designated specifically for clinical trials.

NIH Single IRB Policy

The Final NIH Policy on the Use of a Single Institutional Review Board for Multi-Site Research issued June 2016 states that all domestic sites of NIH-funded non-exempt multi-site studies where the same research protocol is being conducted at more than one site must use a single IRB (sIRB) for review, while all other sites rely upon that single review. The policy does not apply to multi-site studies when the sites have different roles in carrying out the research. With certain exceptions in their proposals, investigators must submit a plan to NIH stating which IRB is the sIRB. The policy was originally scheduled to go into effect starting May 25, 2017. However, in response to feedback from the national research community, the implementation date was delayed to January 25, 2018. Guidance and Frequently Asked Questions to assist in the implementation of the policy are available at: https://osp.od.nih.gov/clinical-research/irb-review/.

Waiver or Alteration of Consent for FDA-Regulated Research

On July 25, 2017, the FDA issued guidance entitled, ''IRB Waiver or Alteration of Informed Consent for Clinical Investigations Involving No More Than Minimal Risk to Human Subjects.'' This guidance informs sponsors, investigators, IRBs, and other interested parties that the FDA does not intend to object to an IRB waiving or altering informed consent requirements, as described in the guidance, for certain minimal risk clinical investigations. In addition, this guidance explains that the FDA does not intend to object to a sponsor initiating, or an investigator conducting, a minimal risk clinical investigation for which an IRB waives or alters the informed consent requirements as described in the guidance.

NIH Policy on Certificates of Confidentiality (CoC)

The NIH has updated its policy on issuing Certificates of Confidentiality (Certificate) for all biomedical, behavioral, clinical, or other NIH-funded research projects that collect and use identifiable, sensitive information. Effective October 1st, 2017, the NIH will automatically supply Certificates for new and non-competing NIH-award recipients conducting research applicable to this Policy. According to the NIH,

Certificates "allow researchers to refuse to disclose names or other identifying characteristics of research subjects in response to legal demands." Non-federally funded research projects may still apply and obtain Certificates as per current NIH policy. More details on the changes in Certificate policy are available at https://humansubjects.nih.gov/coc/index. OPHS is currently working on a guidance document to assist investigators who are subject to a CoC.

General Data Protection Regulation (GDPR)
GDPR was approved by the EU Parliament on April 14, 2016, replacing and repealing the Data Protection Directive 95/46/EU, and intends to strengthen and unify data protection for all individuals within the European Economic Area (EEA). Effective May 25, 2018, any research that involves subjects located in the EEA must comply with GDPR or face heavy penalties (up to 20 million Euros or 4% global revenues).

GDPR protects the processing of a natural person's personal data, including any information relating to an identified or identifiable natural person such as: name, identification number, location data, online identifiers (e.g., IP address), and any data element specific to the physical, physiological, genetic, mental, economic, cultural, or social identity of that natural person.

Among other requirements, GDPR stipulates that personal data must be processed pursuant to a lawful basis, collected for legitimate purposes, limited to what is necessary, and kept in a secure form permitting identification for no longer than necessary. Subjects must give free and informed consent for the collection/use of their personally identifiable information, and must be given the right to withdraw consent at any time. See the following website for additional information: https://gdpr-info.eu/

OPHS is working on providing guidance to the UC Berkeley research community regarding how to comply with the GDPR.

Marijuana Research
Proposition 64, the initiative that legalized adult-use marijuana under state law, but which did not alter federal law in this area, has raised questions in regards to policies related to marijuana and industrial hemp research conducted at the UC. In response, UCOP has created an updated guidance document on Conducting Marijuana Research at the University of California. As before, this document affirms that UC research remains subject to the same federal laws and regulations as before the passage of Proposition 64. Federal laws and regulations generally prohibit cultivation, possession, distribution, sale or use of cannabis absent federal DEA authorization. The guidance document states that before applying for/accepting non-governmental research funding from individuals or entities whose income is known to be directly derived from cannabis activities that appear to fall outside of what is permitted by federal law, researchers must consult with their campus sponsored projects office (for grants/contracts) or external relations/development office (for gifts), which in turn must contact UCOP's RPAC office.

VI. New or Modified Campus Procedures and Programs

OPHS staff updated and/or created a large amount of content on http://cphs.berkeley.edu over the last fiscal year to aid investigators and research participants alike:

CPHS Guidelines
OPHS and CPHS updated the following guidelines for investigators:
- Children in Research
- Compensation of Research Subjects
- Electrical and/or Magnetic Brain Stimulation in Research
- Genetic/Genomic Research
- Informed Consent

- International Research
- Magnetic Resonance Imaging (MRI) in Research
- Mechanical Turk for Online Research

OPHS and CPHS developed the following guidelines:
- Child Assent and Parent Permission for Federally Regulated Research
- Classroom Observations with Media Recording
- Engagement in Human Subjects Research
- Suicidal Ideation
- Suicidal Ideation Decision Tree

CPHS Policies and Procedures
OPHS and CPHS updated the following policies:
- Initial Review
- Prisoners

OPHS and CPHS split the training policy into two separate documents and developed the following policies:
- Training and Education for IRB Members and OPHS Staff
- Training and Education for Investigators

CPHS Website
- A Self-certification Qualtrics survey was developed to help investigators determine whether or not they are conducting human subjects research: Am I conducting "Research"?
- Consent/permission/assent templates were updated and new templates were added specifically for federally-regulated research in preparation for the updated Common Rule: http://cphs.berkeley.edu/informedconsent.html
- An FAQ on recruiting one's own students for research was developed and added: https://cphs.berkeley.edu/faqs.html#e5
- An FAQ on who to contact for assistance with research using large secondary data sets was developed and added: https://cphs.berkeley.edu/faqs.html#e12
- An FAQ on volunteer research assistants was developed and added: https://cphs.berkeley.edu/faqs.html#e13

VII. Agency Inspections and Enforcement Actions

No inspections took place between 7/1/17 and 6/30/18. However, the final outcome letter from the FDA's audit in February 2017 was received. The outcome letter stated that there was no action indicated (no objectionable conditions or practices were found during the inspection). It will be approximately five years before CPHS/OPHS might expect another FDA auditing visit.

VIII. Education and Outreach

Education of UCB's research community
OPHS conducted 11 training sessions for the research community in the past year, down from last year's 18 presentations. The reduction in number of presentations was due to a reduction in staff and subsequent lack of availability to prepare, travel to campus, and give presentations. However, OPHS combined presentation requests in order to reach as many investigators as possible. Therefore, while the number of presentations decreased, a similar amount of UC Berkeley's research community attended education outreach presentations. See a breakdown of presentations by unit in the below table.

Table 6. Education Outreach

College/School/Department	# of Presentations
EECS	1
Graduate Student Workshop	2
Law School Clinical Faculty	1
McNair Scholars/SURF/Haas Scholars	1
Psychology	1
Optometry	1
School of Public Health (combined group)	1
Political Science Graduate Students	1
Sociology/Political Science Undergraduate Students	1
South and Southeast Asian Studies	1

Educational and Professional Staff Development

OPHS staff participated in the following webinars:

- Huron, "Prepare Your IRB Operations for the Revised Common Rule," July 2017
- SBER Network, "Things to Consider when Implementing the Final Rule," September 2017
- UCSF, "NIH Single IRB Webinar," October 2017
- Public Responsibility in Medicine and Research (PRIM&R), "Digital Health Technology and Human Subjects Research," February 2018.
- PRIM&R, SBER Network Virtual Roundtable, "Student PIs in SBER," February 2018
- PRIM&R, SBER Across Borders: "IRB Considerations and Cases for International Studies," February 2018
- PRIM&R, "EU General Data Protection Regulations: What US Research Institutions Need to Know," April 2018

Certified IRB Professional (CIP) Certification:

Daisy Lubag and Emily Harden-Antonio took and successfully passed the CIP exam in spring 2018, becoming OPHS' newest CIP-certified staff members.

General issues under discussion in the IRB world (in addition to items described above regarding new regulations, policies and definitions):

- Implementation of updated Common Rule.
- Data sharing and data ownership.
- California Consumer Privacy Act of 2018 (beginning January 1, 2020)
- Genetic research