RESEARCH ADVISORY BOARD (RAB)
August 1, 2017
8:30-10am
Medical Sciences Building, Chancellors Conference Room S-118

Attendees: Clarice Estrada, John Ellis, Jim Kiriakis, Jennifer Grandis, Steven Lazarus, Vanessa Jacoby, Suzanne Murphy, Michael Nordberg, Christine Razler, Brian Smith, Eunice Stephens, Winona Ward, Wallace Marshall, James Sorenson, Paul Volberding, Elizabeth Sinclair, David Erle

On the phone: Georgina Lopez, Theresa O’Loneragan, Gretchen Kiser, Matt Springer, Sindy Mellon


Guests: Dan Lowenstein, Rich Schneider, Eunice Stephens

RAB Board Updates
- Welcome, David Erle and Diane Havlir to the board.

Approaches for Maximizing Space Utilization, Dan Lowenstein
See PowerPoint presentation attached
- Dan gives thanks to the Research Advisory Board for participating in the committee.
- Updates from the EVCP Office: 1) efforts looking for additional resources for research infrastructure. UCSF will hear more soon about the capital campaign and the focus of philanthropy to support the research. 2) Updates from Washington D.C. in regards to NIH funding. There is less concern about the overall NIH budget but much concern about indirect cost. 3) Parnassus and the challenges to support the faculty and research environment. 4) The need for optimizing the use of space.
- There is a space committee with Paul Jenny, Senior Vice Chancellor who serves as the chair with Dan Lowenstein, EVCP. The committee includes all of the direct reports to the Chancellor. There is a space management sub-committee, which is operational by applying the policy and dealing with high-level requests. There are also specific school space committees that deal more with specific operational issues.
- Recent key space-related plans and efforts include:
  - Re-visitation of space governance structure: Re-affirmation of key Space Policies and Principles.
  - Discussion by space subcommittee on non-permanence of space.
  - Extensive campus-wide field audit conducted to reconcile space data with inventory, identifying major areas of underutilization
  - Kaizen retreats held to address the underutilization.
- The Audit was conducted on about 80% of research space at Parnassus, Mission Bay, and Mt. Zion. The audit concluded that 45% of research space is underutilized; however, an acceptable level of underutilization is likely around 20-25%. A Kaizen training occurred in July, and some of the key findings were:
  - Space does not uniformly meet occupant’s functional needs.
  - Space policy & governance structures are not working optimally.
  - Underutilized space is typically not taken back for reassignment.
  - Some occupants do not use space productively.
- In conclusion, with the Kaizen, inventory, and audit, what are the next steps for creating a more effective policy? How does UCSF develop a culture with incentives to optimize the use of space? This effort will require the political will of UCSF leadership and consensus from the faculty.

Questions/Comments:
1. Is it the individual bench in a lab or at the department level that needs oversight? There should be a metric on space relating to the cost of space and use of space. There are two extremes to address this: 1) At the level of the school, there is $/sq. ft. 2) Hold each PI accountable.
   - Columbia University is one school that has been successful in holding PI’s accountable for their space. The decision was made top-down by the dean, and it was not a popular decision by the faculty. Overall, things have worked out well.

2. Why do more places not adopt a similar system at Columbia University?
   - The transition is very difficult.
What is open access (OA)? In 2002, the Budapest Open Access Initiative helped launch a global campaign for all peer-reviewed literature to be made open access and freely available online. This was followed shortly thereafter by the Bethesda Statement on OA Publishing, and the Berlin Declaration.

Tremendous time and money is spent writing grants and then using publically funded money to generate research articles which are then submitted to commercial journals. These journals ask our colleagues to handle the articles as editors and peer reviewers, for free. The publisher then takes these articles, capitalizes on all of the free labor that went into producing the work, demands copyright, puts the articles behind a subscription paywall, and then sells the articles back to our institutions at a cost of $8 to $10 billion dollars per year with profits of 30% to 40%.

Subscriptions costs continue to rise (60% over the past decade vs. CPI of 16%) and are unaffordable.

The goal of the OA movement is to transform the publication system such that all research results (especially taxpayer funded) become instantly and freely available to anyone who wants to read these results, and that authors retain their copyrights to this work rather than assign them to a publisher.

Currently, OA policies at institutions and funders have created repositories (e.g., PubMed Central at NIH, and eScholarship at UC) where published work can live and be freely accessible to other researchers and the public.

However, the vast majority of scholarship (around 85%) still remains behind a subscription paywall due to low deposit rates by authors.

In order to “flip” the remaining content and make everything OA, UCSF, UCB, and UC Davis have signed on to an initiative spearheaded by the Max Plank Digital Library (https://oa2020.org/). A goal is to get more institutions on-board. UCSF, UCB, and UC Davis have articulated why they have signed on to OA2020:

http://www.lib.berkeley.edu/sites/default/files/files/Appendix%20C.pdf

Currently, 87 entities, representing around 30 countries have signed-on to this initiative, called OA2020.

A goal of OA2020 is to take all of the money spent on subscriptions (i.e., $8 to $10 billion dollars per year) and give it to authors and institutions to spend instead on a range of new models that meet the needs of individual stakeholders and support OA publishing.

During a defined transition period, all existing journals could be flipped to OA if institutions continued to pay an equivalent amount of money to publish the work by authors rather than pay for subscriptions. In so doing, this would keep all of the systems of existing journals intact (journal titles, impact factors, editors, peer reviewers, readers, etc.), but would have the added benefit of making everything OA.

Most existing journals already allow articles to be published OA if the author/funder/institution pays an article processing charge (APC). The average APC is around $2,000. The total amount of money required to pay for all publications would be around $4 billion dollars (based on 2 million peer-reviewed articles published each year), which is half of what is currently spent, so there is more than enough money in the system to make this flip.

Institutions have to figure out how much they spend in subscriptions versus how many articles they publish each year, to see what the immediate costs would be for them individually. However, OA2020 is designed to work at scale, and over time, market forces and other competitive/economic pressures will change the publishing ecosystem and likely continue to bring costs down.

Questions/Comments:

1. **Is the idea that a bill would go to the University anytime a PI has a paper accepted?**
   
   Yes, that is one possible scenario. Currently, when an author has a paper accepted, the author pays the APC to make the article OA. But different countries and entities are approaching this in different ways, and new payment flows will likely emerge where funders or institutions would receive an invoice. For example, libraries could potentially manage the payments on an annual basis for a given publisher. This could help keep costs down if funders and institutions set caps for what they are willing to pay. Like limits on an allowable expense.

2. **Has there been any movement with the publishers on this?**

   Most of the support for this is coming from the academic faculty/author community. Publishers seem to be in a “wait and see mode” but generally receptive to having a dialog. Most of the resistance is coming from the librarian community. There are several reasons for this: 1) many librarians are weary of creating a system where large amounts of money continue to flow to commercial publishers, they are skeptical that we could ever get out of an APC-based model once we get into it, and they basically want to reinvent the scholarly communication system from scratch by developing newer, more transformative, and ideally lower cost models of dissemination; 2) librarians (and the rest of us) have concerns about authors/institutions/countries (i.e., the global south) who don’t have the resources to cover publication costs and so librarians are hesitant to create a system that substitutes one existing barrier (i.e., subscription paywall) with another (i.e., pay to publish); and 3) some
librarians value the relationship they have with publishers, especially in negotiating licensing deals, and they feel that they, rather than authors, are in the best position to pressure publishers to set terms and keep costs down.

Clinical Research Coordinator Training, Eunice Stephens
See PowerPoint presentation attached
- The effort to standardize the clinical research coordinators (CRC) knowledge and processes across UCSF.
- In 2014, Provost, Jeff Bluestone spearheaded an analysis of where UCSF’s clinical research infrastructure and services stood regarding industry and best practices.
- There are currently 568 people in the CRC job family but no centralized knowledge for them on how to conduct clinical research at UCSF.
- The department of clinical research is trying to centralize information and resources in the best way possible.
- There used to be a training program at UCSF under the purview of IRB, and now the Clinical Research department is helping the program move forward in educating the current CRCs.
- A lean workshop was conducted to identify gaps, and as a result, a one-page document was created to give to the CRC’s before they work with participants.
- There was a 101 Training Series in November of 2016, which helped the Clinical Research department identify with the IRB a lot of work was needed to help people understand how important the informed consent document is.
- In March 2017 a 101 Training Series was conducted at SFGH. This training was not as successful. Feedback was that the trainees desired to know how to work with the population at SFGH.

Questions/Comments:
1. How much of what they have to know during onboarding is specific to UCSF and how much is specific to how much they would have to know anywhere?
   50% of the issues at UCSF is unique at UCSF, and 50% are relevant elsewhere.
2. Are many of the people who come from the Bay Area and is there any value in engaging the students while they are still in college?
   Eunice’s team has started having interaction with UC Berkeley is where the majority of the CRC’s come.
3. Are there any plans for online training modules?
   Yes, but the content needs to be built first.
4. Because the CRC’s are usually a younger generation who are typically used to building online communities, are there any online communities CRC’s can engage?
   Yes, there is a listserv and a committee involved in building the training.
5. How does this align the training program for SOCRA training?
   Yes, Eunice’s team is hoping the training helps incentivizes and assists CRC’s in preparing for their certification exams.
Space at UCSF: What can we do to get it right?

Dan Lowenstein, MD
Research Advisory Board
August 1, 2017
Productive utilization of space is key to allowing UCSF to achieve its mission. Our space is limited and must therefore be carefully managed. Although there are multiple and competing demands on space, and a carefully crafted UCSF-wide space policy in place, existing research space remains underutilized.

Underutilized space results in all-round inefficiencies and challenges—preventing us from accurately identifying and providing space for critical, legitimate new program requests, and ultimately, hampering our research productivity and goals.

The need for space optimization is particularly urgent, given plans for new buildings at Mission Bay and for renewal of Parnassus—i.e. we need all the space we have, and we need to be operating at optimal productivity.

**What would the research community like to see as an ideal state in terms of space management and utilization at UCSF?**

- For example, what are the top 2-3 improvements to today’s situation you would like to see?

- What do you see as the key 1-2 obstacles to implementing of this ideal state, in today’s space environment?
Existing Space Governance Structure

UCSF Space Committee
{Previously called Space Development Committee}
EVCP Lowenstein and SVC Jenny CHAIRS

UCSF Space Management Subcommittee
{Previously called Space Committee}
EVCP LOWENSTEIN, CO-CHAIR
VICE DEAN WINTROUB, CO-CHAIR

School Space Committees
Individual Building Governance Committees
Space Management Working Group
{Currently called Space Subcommittee}

UCSF New Space Development Subcommittee
{New committee}

Building Programming Committees (ad hoc)
CHAIRS VARY BY BUILDING

Building Working Groups
MANAGED BY CAPITAL PROGRAMS OR REAL ESTATE SERVICES
Recent Key Space-Related Plans and Efforts

- Revisitation of space governance structure: Re-affirmation of key Space Policies and Principles
- Discussion by Space Subcommittee on non-permanence of space, potentially impacting Mission Hall reconfiguration approach
- Extensive campus-wide field audit conducted to reconcile space data with inventory, identifying major areas of underutilization
- 3 full day, multi-stakeholder Kaizen retreats held to address this underutilization. Recommended actions under consideration by SVC and EVCP
For an overview of how efficiently space is currently used, Campus Planning led walk-throughs at Mission Bay, Mt. Zion and Parnassus.

As of December 2016, three teams with broad campus representation walked ~80% of all on-campus research space. Data was updated in early 2017.
Audit Findings on Research Space: Productivity and Utilization

UCSF Research Space Utilization by Site
Based on 2016-17 Field Verification Walkthroughs

- Field verification walkthroughs in 2016: 45% of research space is underutilized. Underutilized space costs money to maintain and operate, and does not generate indirect cost recovery.
- Departments often retain underutilized space – in particular research space – which is then not perceived as recoverable by the Chancellor’s Direct Reports (CDRs). Such unrecovered space reduces the overall pool of UCSF space available for re-allocation.
- At the same time, campus units regularly submit requests for additional or different space, yet neither Planning nor CDRs are able to resolve them in a timely manner, if at all.

45% of research space underutilized; likely 15-25% of lab space underutilized at any given time
# Existing Space Process: Pros and Cons

<table>
<thead>
<tr>
<th>Identify need for space</th>
<th>Submit space request</th>
<th>Analyze request and ID options</th>
<th>Receive space assignment</th>
<th>Utilize space</th>
<th>Manage &amp; report space usage</th>
<th>Vacate space</th>
<th>Return and re-assign space</th>
</tr>
</thead>
</table>

### What Works:
- Consistent format (template) and process (through Chancellor Direct Report) to request space
- Follows official UCSF space policy principles and metric of $/ASF
- Based on an “honor code” of occupant accurately reporting space usage and utilization

### What DOESN’T Work:
- This only works if ALL follow the “honor code” and report space need and usage accurately and honestly.
- $/ASF metric is artificially low, and therefore not effective in improving productivity of space utilization
- Timeline and bureaucracy to obtain needed space lead to deal-making and informal loans- perpetuating the challenge!
June 2017 Kaizen: Key Findings

An intensive, three day workshop facilitated by the PMO involved administrative representative stakeholders from all segments of the campus.
June 2017 Kaizen: Key Findings

3. Target Condition

Future State Vision for Assignment and Management of UCSF Campus Research and Administrative Space (by end of FY 2020)

- Enforceable Policy | Aligned Incentives | Objective Metrics
- Accountable Governance | Responsible Management
- Accurate Space Data

Culture Shift
- No space hoarding
- No answer shopping
- Durable decisions
- Trust in the process

Effective Use of Space

New Construction Cost Avoidance
Available core funding ↑
$ for renovations & programming ↑
June 2017 Kaizen: Key Findings

4. Gap Analysis
Eight major problems were identified:

- Space doesn’t meet occupants’ functional needs; renovations are difficult and expensive
- Space policy & governance structures don’t work
  Decisions ≠ timely or effective
  Policy ≠ enforced or followed
- Underutilized space is not taken back for reassignment
- Some occupants don’t use space productively
- It is difficult to impossible to fill space requests
- Occupants don’t voluntarily return space for reassignment
- Occupants make space loans without higher-level, comparative review
- Space data in Archibus is not accurate or complete

Space is treated as currency; space = power
Culture of entitlement/ownership (e.g., offer letters make indefinite space commitments)
No incentives or penalties to promote policy enforcement or adherence
No clear metrics or objective standards exist
No consistent approach to evaluate space requests
Political repercussions inhibit decision-making
No faith or trust in the system / process
Key parts of space policy are vague/subjective
Concluding Comments

- Despite the hard work that came out of the kaizen, the space inventory and audit, and detailed capital programs analyses, the heart of the issue around space optimization- or lack thereof- is our political will to properly manage space that is underutilized.

- We need to develop a culture where there are incentives- and disincentives- for optimal/suboptimal space utilization.

- This is a bottom-up, enterprise wide effort- we won’t achieve this through even the most elaborate top down policy. For faculty at all levels to comply, the benefits need to be clear and consistent.

- What can we do at the space governance/leadership level to make this happen?
Initiative for the Large-Scale Transformation to Open Access

Rich Schneider
Chair, UCSF COLASC
Acknowledgements

- **OA2020:** Ralf Schimmer – Max Planck Institute
- **Working Group on UC OA2020 Roadmap:** Jeff Mackie-Mason & Rachael Samberg (UC Berkeley-led group); University Librarians from UCB, UCD, UCI, UCM, UCSC, UCSF; and Guenter Waibel and Ivy Anderson from CDL
- **Pay-it-Forward Project:** Mackenzie Smith (UC Davis), Ivy Anderson and Mat Willmott (CDL)
- **Multi-Institutional Working Group for Transitioning to Large-Scale Open Access:** Rich Schneider (UCSF), Stuart Shieber and Peter Suber (Harvard), Ellen Finnie (MIT), Ivy Anderson (CDL), Eric Bakovic (UCSD), Anneliese Taylor (UCSF), & others
Predominant subscription model for commercial publishing is unsustainable

- $8 – $10B spent annually for journal subscriptions
- 1.5 – 2M papers published worldwide
- Large commercial publishers still dominate (Reed-Elsevier, Wiley-Blackwell, Springer, Taylor & Francis, etc.)
- Subscriptions costs continue to rise (60% over the past decade vs. CPI of 16%).
- 50% of all papers are from top five publishers who extract over $2B in profits annually with margins of 30-40%
- The U.S. contributes ~ 1/3 of the global journal publications but is responsible for > 50% of the publisher revenues
Typical strategy for transforming scholarly communication

Research Institution

- OA policy
- Institutional repository
- University press
- Community services
- Cooperative models
UCSF OA Policy: May 2012
UC Open Access Policy: July 2013
UC Presidential OA Policy: October 2015

• UC authors retain copyright to their scholarly work
• All UC articles can be freely and immediately available though our institutional repository (eScholarship)
• Currently over 800 OA mandates and policies
But this approach has had a nominal effect on transforming scholarly communication.

Publishing wall

- University Presses/OJS
- SCOAP³
- Biomed Central
- arXiv
- OA mandates
- PLOS
- Repositories
- PubMed Central
- Cooperative models
- Community journal initiatives (e.g. LINGOA)

Ralf Schimmer – Max Planck Institute
Slow Growth of OA Publishing
OA Publishing Today

• After more than a decade of global effort, paywall access and the subscription system are as prosperous as ever
• Only ~ 13% of papers are Gold Open Access
• Publishers collect even more revenue by combining subscription and hybrid journals often for the same content (i.e., “double-dipping”)
• Funder and institutional repositories help make more content available, but there remain challenges and burdens with workflow, author participation, licensing, publisher compliance, and article versions
Large Scale Transition

“Instead of the black box of subscription price calculations, we need models based on actual publication costs and characterized by transparency and sustainability. The money from existing subscription budgets must be transferred to publication budgets from which the authors’ publications can then be financed via open access.”

- Peter Gruss, President of the Max Planck Society, 2013
International Initiative

OA2020 – initiative for the large-scale transition to open access

http://oa2020.org

OA2020 video

http://dx.doi.org/10.17617/1.3
The Money’s Already in the System

Worldwide annual figures:
• $8 – $10B spent in journal subscriptions
• 1.5M – 2M papers published
• In effect, $4,000 - $5,200 paid per research article

Yet current gold OA APC averages are lower:
• Worldwide: ~ $2,000
• Max Planck Society: $1,300
• Wellcome Trust: $2,600
• UCSF: $2,300
## UCSF Figures (Pay-It-Forward)

<table>
<thead>
<tr>
<th>Category</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redirectable Library Expenditures</td>
<td>$1.53MM</td>
</tr>
<tr>
<td>Subscription Expenditures</td>
<td>$1.5MM</td>
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<tr>
<td><strong>Total papers published</strong></td>
<td>3,104</td>
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<tr>
<td>Papers acknowledging a grant</td>
<td>2,205</td>
</tr>
<tr>
<td>Papers not acknowledging a grant</td>
<td>899</td>
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<tr>
<td><strong>Break-even level based on Library budget</strong></td>
<td></td>
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<tr>
<td>All papers</td>
<td>$493</td>
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<tr>
<td>Papers with no grant</td>
<td>$1,703</td>
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<tr>
<td><strong>Total Estimated APCs</strong></td>
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<tr>
<td>All papers</td>
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<td>Papers with no grant</td>
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<td><strong>Average Estimated APC</strong></td>
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<td>Papers with no grant</td>
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<tr>
<td><strong>Total Extramural Research Funding</strong></td>
<td>$891MM</td>
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</table>
Expression of Interest (EoI)

• We aim to transform a majority of today’s scholarly journals from subscription to OA publishing in accordance with community-specific publication preferences. At the same time, we continue to support new and improved forms of OA publishing.

• We will pursue this transformation process by converting resources currently spent on journal subscriptions into funds to support sustainable OA business models. Accordingly, we intend to re-organize the underlying cash flows, to establish transparency with regard to costs and potential savings, and to adopt mechanisms to avoid undue publication barriers.

• We invite all parties involved in scholarly publishing, in particular universities, research institutions, funders, libraries, and publishers to collaborate on a swift and efficient transition for the benefit of scholarship and society at large.
OA2020 Roadmap for the Expression of Interest (EoI)

- Non-binding
- Living document
- Activation Phase – initial steps
- Library budget-focused
- Potential frameworks (e.g., offsetting models)
- Allows for community-specific preferences (e.g., by country, institution, discipline, publisher, etc.)
- UC-customized version of Roadmap
- Currently, 71 scholarly organizations have signed the EoI. The only U.S. signatory thus far is Cal. State, Northridge.
Benefits of the OA2020 Initiative

- Existing journals and their systems (e.g., editorial boards, peer reviews, prestige, impact, etc.) can remain intact
- Vast majority of articles would become OA immediately (increases visibility for work, authors retain copyright, facilitates data mining, eliminates need for green OA repositories)
- Authors, funders, and institutions would have a direct market influence on keeping prices (e.g., APCs) down
- Publishers would have to compete for authors’ “business” by providing services and products
- Subscription money can be reallocated to support new academic publishing models and platforms
Impact of OA2020 Transition

• Only 1-2% of research budgets affected worldwide (likely < 1% for UCSF)
• New workflows for payment needed (e.g., combinations of library, university, and grant funding)
• Higher costs for research-intensive institutions with high output (like UCSF) but potentially lower overall payments to publishers worldwide
• Loss of negotiation leverage and control for UC libraries (“contracts” would be between authors and publishers instead of libraries and publishers)
CRC Training Program
Eunice Stephens
Director, Office of Clinical Research
Background- Office of Clinical Research

- In 2014, then-Provost Jeff Bluestone spearheaded an analysis of where UCSF’s clinical research infrastructure and services stood in terms of industry and peer best practices. The 2014 external assessment/strategic plan identified numerous shortcomings in UCSF’s clinical research enterprise. These include:
  
  - UCSF’s clinical research operations today are decentralized, uncoordinated, and not data driven
  
  - Business data not being captured centrally, not readily available, and of uneven quality: difficult to improve and make decisions without data
  
  - Lack of coordination and duplication of effort leads to delays in study activation, lost revenue and customer dissatisfaction (faculty and industry partners)

- Acting on the recommendations of the resulting consultant report, Dr. Bluestone recommended the formation of an Office of Clinical Research (OCR) at UCSF. Eunice Stephens was recruited to lead the effort following her successes improving partnerships between the Med Center and CTSI’s Clinical Research Services (CRS). Jennifer Grandis was recruited to lead the effort as the AVC of Clinical and Translational Research, responsible for OCR oversight and strategic vision.

- Moving forward with this optimal structure, UCSF creates a broader office that encompasses regulatory, compliance, and clinical research services in alignment with peers.
Why Are We Doing This?

Compliance
- Documentation of training (NIH, FDA, Industry)
- Potential serious repercussions for investigators and UCSF

Standardization
- Baseline knowledge and guidelines
- Standardize quality of work (patient safety and data quality)

Decreased Turnover
- Cost of losing specialized skills and knowledge
- Loss of production to hire and train

Shared Resources
- Better utilization of CRCs
- Support PIs
CRCs at UCSF

- Clinical Research Coordinators (CRCs) are vitally important to the successful completion of clinical research projects at UCSF.

- Investigators rely on CRCs to perform a large variety of tasks that require specialized knowledge and training.

- There has existed no formal institutionally-provided, or suggested, onboarding or training for CRCs resulting in a widely varied quality of work. Currently an Investigator must hire, train and supervise the CRC themselves.

- Lack of training and appropriate documentation of training is a common finding of independent audits. There are serious repercussions for investigators and UCSF if good clinical practice (GCP) is not adhered to.
The Importance of CRC Training

- One of the roles of the CRC is to help assure protocol adherence and compliance with federal and state regulatory laws guiding the conduct of clinical research.

- CRC training is important to
  - Protect UCSF from potentially serious compliance issues
  - Protect our patients in the conduct of clinical research
  - Instill a robust clinical research program
What We’ve Done So Far

- Lean workgroup formed January 2016
  - Representation from Pediatrics, Cardiology, Clinical Pharmacy, Neurology, Ob/Gyn, Center for AIDS Prevention, Ophthalmology, HDFCCC, and SFGH
  - Produced A3 document including summary issues and recommendations
  - Prioritized CRC Training
  - Produced “one-pager” suggested Training Checklist
    - New Hire and Onboarding Resources
    - Core Training
    - Supplemental and Advanced Training and Resources
What We’ve Done So Far

- Conducted two pilots for CRC 101 Training Series
  - Pilot 1 – November 2016
    - Role and Basics, IRB & Informed Consent, Billing & Budget
  - Pilot 2 – March 2017
    - Improved classroom interactivity and design
    - Orientation, Consent ing, IRB & Safety Reporting, Study Management

Both: Collected feedback for content improvement and collaborated with Research Administration Group for content expertise
Next Steps

- Leadership support for broader implementation
  - More regular and frequent opportunities for CRCs to get the training
- Continuous improvement approach: measure, monitor, and update training as we go
- Next Pilot for 101 Series (Orientation and Fundamentals) planned Summer (June)
- First Advanced Class Series Pilot planned Fall (October)
- Create Training Program Plan
  - Conduct focus groups for performance, skills, and knowledge
  - Include detailed measurement plans
  - Goal to complete by January 2018