

**Blueprint for Academic Excellence
Arnold School of Public Health
2016-2017**

Section I. Executive Summary

1) Describe how your unit contributes to meeting the Academic Dashboard targets.

The Arnold School offers three undergraduate programs that have grown rapidly the past 5 years (46% increase) including 6% growth from Fall 2014 to Fall 2015. Our students contribute strongly to higher retention rates and higher graduation rates for the University as a whole, (see Section II and Appendix E). Our freshmen declared majors have shown modestly lower SAT scores than the USC mean; but, through quality advising and personal effort, many of our undergraduate students show capability in public health sciences and indeed are recognized each semester by inclusion on the Dean's and President's Honor Lists for outstanding classroom performance and graduation with distinction. The average SAT score of our entering freshmen has increased 2.8% from 2010 to 2015, more than the campus average increase even with a doubling of freshmen entering public health. We continue to invest resources in professional academic advisement and other student services to further increase retention and graduation rates and to expand experiential educational opportunities and capstone experiences. Of particular note is that 46 of our CY 2015 graduates were recognized for *Graduation with Leadership Distinction (GLD)*; **we continue to lead USC in GLDs.**

The Arnold School has hired aggressively and strategically for five years; combined with internal tenure and promotion decisions, our net growth includes 4 tenure-track and 17 tenured faculty members, growth which has helped to improve student to faculty ratios and research competitiveness in every unit. The ASPH produces more doctoral graduates than five of USC's six peer and peer-aspirant universities with accredited schools of public health. Doctoral production is key to USC's Carnegie R1 (highest research activity) classification, and we contribute aggressively to this metric. **Our EXSC doctoral program was ranked No. 1 in Fall 2015 by the U.S. National Academy of Kinesiology.** We are proceeding with the charge from President Pastides and the BOT to expand ASPH education and research into the Greenville Health System with 9-10 tenure-track/tenured faculty members in-residence at GHS by AY2019. Embedded faculty/grad students will build our clinical research portfolio.

2) Describe how your unit contributes to the Key Performance Parameters (teaching, research, service and sustainability)

The Arnold School enjoys a durable reputation for outstanding teaching at all levels. We have always been committed to maintaining reasonable student to faculty ratios (SFRs). The majority of our degree programs are graduate level with smaller classes; so we contribute to lower SFRs overall at USC. Our SFR for Fall 2015 based on student FTE and tenure-track faculty was 17.2. In our larger undergraduate lecture classes, faculty intentionally include labs or case-study discussion groups to enhance opportunities for instructor-student interaction. Our student exit surveys in all majors are strongly positive.

We continue our role as the leading academic research unit on campus on a per capita basis (i.e., grants of \$422K per TT faculty/year; 535 peer-reviewed articles in 2015), and most notably high among the health sciences. For the seventh consecutive year, the Arnold

School has attracted over \$23.5 million in grants and contracts from external sponsors, with FY 2015 extramural total funding receipts hitting a record \$35.9M. Our principal investigators submitted proposals in FY2015 totaling over \$67.5 million in first-year requests, with over \$31.5 million to the NIH. The ASPH led the five health colleges in FY2015 in extramural research awards. In philanthropy, the School received an anchoring \$7M additional gift from Norman and Gerry Sue Arnold in 2015 to establish the "*Gerry Sue and Norman J. Arnold Institute for Aging*". This will be a unique "umbrella" institute whose sole purpose will be to seed and match large nationally-competitive center grants focused on research in, for example, childhood obesity prevention or healthy aging in the elderly.

Beyond the metrics of research and philanthropic dollars, our scholarship has a direct impact on the academic disciplines of public health, and, as importantly, on the health and wellness of SC citizens. Frequently our professional publications are promoted in the popular media because of "relevance" to societal concerns around health and wellness. Our faculty and students regularly receive national and international recognition by professional and academic organizations. Daily community outreach and engagement define the role of public health practitioners. Many of our faculty and staff are active volunteers in the University and local community, and our students complete practical/clinical experiences in many community agencies. Community-based involvement remains integral to academic public health. USC's Carnegie classification as "an institution of high service/community engagement" is due in large part to the many community-service activities delivered by our faculty, staff and students.

Section II. Meeting the University's Academic Dashboard Targets (2 pages)

Academic Dashboard: Student Measures

- Total undergraduate enrollment
 - a. The Arnold School undergraduate enrollment has grown to 1711 students in Fall 2015, more than triple the enrollment in Fall 2007 (531 students). Both exercise science and public health programs are popular options for pre-medical and other pre-health professions students, and we also receive a large number of transfer students and students who are not accepted into upper division for nursing or pharmacy (367 changes of major effective for academic year 2015, any term).
 - b. Our undergraduate advisors (n=10) participate in all campus recruitment events (both recruiting events for prospective students and major fairs for current students).
 - c. We are involved in health science / health professions magnet programs at Brookland-Cayce and C.A. Johnson high schools to generate interest in USC and Arnold School majors in particular.

- Average SAT score for entering freshmen
 - a. Average SAT scores have increased 16 points from 1150 in Fall 2012 to 1177 in Fall 2015, with a corresponding 42% increase in the number of entering freshmen over this period.

- Freshman to sophomore retention rates
 - a. The freshman-to-sophomore retention rates for the Arnold School have mildly exceeded University rates for several years (91%); sophomore retention is quite high (~95%).
 - b. Our 2015 establishment of an *Office of Public Health Education (OPHE)* has led to school-wide policies and procedures to maximize student success and provide higher quality student support services; e.g., identifying and implementing best advisement practices, enhancing partnerships with campus support services, standardizing and coordinating services across departments, and engaging in continuous assessment and data-informed process improvements.
 - c. The Arnold SPH provides a fully-staffed undergraduate student services center accessible from our PHRC atrium lobby. It coordinates advising, counseling and career advising for all undergraduates with ~4 OPHE faculty (3.75 FTE) available daily to ASPH students. Two of these faculty members have earned multiple competitive awards in teaching and for student support services. Other EXSC faculty advisors are located in Blatt, where many EXSC undergraduate courses are taught; our new first year advisor is located with the University Advising Center in Close-Hipp.
 - d. To promote academic collegiality, engagement and experiential learning, we engage our undergraduate students in field work, school-wide seminar series, receptions, honors recognitions, a school-wide picnic at Lake Murray, and other gatherings on campus.

- Graduation rates
 - a. Our 4, 5 and 6-year undergraduate graduation rates (69, 78, and 79%) are notably higher than those of the University as a whole, and especially for those who do not transfer from the Arnold School .
 - b. The Arnold SPH has always been engaged in summer session undergraduate course offerings for high demand courses, with substantial expansion over the past six years in response to growing enrollments and the President’s “on your own time” initiative.
 - c. Our advisors expend substantial effort tracking progression to degree and course demand to assure that required courses have adequate capacity. For both Exercise Science and Public Health, this has resulted in additional and/or larger sections in the major semesters and in summer.

Academic Dashboard: Faculty Success Measures

- Student-to-Faculty Ratios
 - a. Our student-to-faculty ratios are low to moderate (acceptable) across most Arnold SPH courses at the advanced undergraduate and graduate levels. However, we recognize that some of the required courses in both undergraduate programs are larger than ideal. Undergraduate enrollment has grown much faster than our faculty complement, but we have been intentional about hiring both tenure-track and instructional faculty disproportionately into Exercise Science since 2009 to address this issue. Our broader faculty hiring initiative has supported smaller student-to-faculty ratios across all departments teaching in the inter-departmental public health program. Departments have also been creative about course delivery, with development of online courses and blended courses. We continually monitor the quality of instruction and the number of sections taught by adjunct faculty and doctoral students. For Fall 2015, the student FTE to TT faculty ratio was 17.2. With limited faculty attrition and continued recruiting during 2015-2016, we anticipate that our SFR will be lower for Fall 2016.

- Research expenditures
 - a. The Arnold SPH has the highest well-sustained research expenditure per TT faculty member rate at USC. Our research expenditures have exceeded \$17 million in each of the last seven fiscal years, with total expenditures exceeding \$20.8 million in FY 2015. Of significant importance relative to our School’s mission “to create and disseminate new knowledge,” the Arnold School’s faculty published impactful articles in a range of academic journals across the disciplines (535 peer-reviewed journal articles 2015; 485 in 2014; 411 in 2013). The high diversity of USC author affiliations across units illustrates a thriving collaborative environment within the Arnold SPH.

- National honors and awards
 - a. Arnold SPH faculty members are largely in the junior and mid-career ranks but are already competing for national grants at the highest levels. Scholarship worthy of national award recognition will most likely follow.
2016
 - Assistant Professor Gabrielle Turner-McGrievy won the 2016 *Early Career Investigator Award* from the Society of Behavioral Medicine.
 - Professor Sara Wilcox was named a *Fellow* in 2016 by the Society of Behavioral Medicine.
 - Assistant Professor Mohammed Baalousha won a 2016 *Faculty Early Career Award* from the National Science Foundation.**2015**
 - Assistant Professor Saurabh Chatterjee won the 2015 *Presidential Choice Distinction Award* from the American Association for the Study of Liver Diseases (http://www.sph.sc.edu/news/chatterjee_s.html).
 - Assistant Professor Jan Eberth won the 2015 *Mentored Research Scholar Grant* award from the American Cancer Society (http://www.sph.sc.edu/news/eberth_mentorship.html).
 - Professor Kenn Apel won the 2015 *Honors of the Association* award from the American Speech-Language-Hearing Association (http://www.sph.sc.edu/news/apel_ashaaward.html).
 - Professor Sara Wilcox was named an *Active Fellow* in 2015 by the National Academy of Kinesiology (http://www.sph.sc.edu/news/wilcox_nak.html).
 - Professor Russel Pate won the 2015 *Lifetime Achievement Award* from the President's Council on Fitness, Sports & Nutrition (http://sph.sc.edu/news/lifetimeachievement_pate.html).
 - Professor Kenn Apel won the 2015 *Honors of the Council* award from the Council of Academic Programs in Communication Sciences and Disorders (http://sph.sc.edu/news/apel_council_award.html).
 - Asst. Professor Saurabh Chatterjee won the 2015 *Young Investigator Award* from the Immunotoxicology Section of the American Society of Toxicology (http://sph.sc.edu/news/award_chatterjee.html).
 - Prof. Edward Frongillo won the 2015 *Sackler Institute for Nutrition Science Research Award*. (http://sph.sc.edu/news/sackleraward_frongillo.html).
 - Distinguished Professor Emeritus Robert McKeown was appointed in 2015 to the *Board of Scientific Counselors of the National Center for Health Statistics* (http://www.sph.sc.edu/news/mckeown_cdc.html).
 - Professor Ronnie Horner was appointed in 2015 to the *Research Advisory Committee on Gulf War Veterans' Illness* by the Department of Veterans Affairs (http://www.sph.sc.edu/news/horner_gulfwar.html).

ASPH chairs and senior faculty make concerted efforts to nominate junior faculty for regional to national awards and posts whenever appropriate. Several of our senior faculty members are heavily decorated in national awards because of the quality, impact and quantity of their scholarship. The discipline of public health does not often garner membership in NAS, IOM, NAE, etc. However our individual sub-disciplines do have national awards for which we compete. The Associate Dean for Research serves a lobbying role within the college to identify worthy faculty and then encourage chairs and others to write strong supporting letters of nomination.

- Doctoral degrees
 - a. The Norman J. Arnold original gift to the ASPH (nominally \$10 million) is presently valued at \$7.4 million. For the past 5 years we have used ~80% of the endowment proceeds, matched by department and grant funds, to exclusively recruit Arnold Doctoral Fellows to the School. This program supports annually about 30 PhD students up to three years, in addition to support from Presidential fellowships, other Graduate School fellowships, NIH-funded research assistantships and pre-doctoral fellowships, and other awards. The eight-year graduation rate for our PhD programs is consistently over 80%, with the DPT program experiencing a nearly 100% graduation rate in 4 years.
 - b. Six of the USC peer and peer-aspirant institutions have accredited schools of public health. Among those schools, we have the second highest number of doctoral graduates (after UNC with 114), but as a percentage of graduate degrees awarded, we rank higher than any of those peer institutions.
 - c. Relative to ALL fifty-five accredited schools of public health, we have the third highest proportion of doctoral graduates in our graduate student population and the fifth highest absolute number nationally. Our doctoral graduates are employed nationally/internationally in NGO's, federal/state agencies, health-care systems, consulting firms, industry, and corporate wellness and in academia. Among schools of public health in public universities, we now rank 15th in US NWR rankings. In 2015, the ASPH doctoral program in Exercise Science became **the No. 1 nationally-ranked program** by the National Association of Kinesiology. More generally, based on Academic Analytics data, it is now clear that our Exercise Science department is easily the top program among all U.S. universities, public or private.

Section III. Unit's Goals and their Contribution to the University's Key Performance Parameters

2016-2017 Academic Year Goals

1. *Through development of the community of scholars and effective mentoring, to develop and retain quality faculty to meet academic mission needs of the Arnold School, and to complete searches for three department chair vacancies and one SC SmartState chaired professor.*

Progress made to date:

- **7 tenure-track/tenured faculty hires in AY 2015-2016:** five assistant professors (BIOS, EXSC, HPEB, HSPM), one tenured associate professor (HSPM), and one tenured professor/SmartState chair (HPEB)
- Recruited a new department chair for HPEB (internal candidate Daniela Friedman) who will begin July 1, 2016. Will begin recruitment of next EPID/BIOS chair in July 2016.
- Recruited Professor Xiaoming Li from Wayne State University Medical Center (Detroit) to lead the *SC SmartState Center for Healthcare Quality Improvement*. Drs. Jan Ostermann (formerly Duke University; HSPM) and Shan Qiao (HPEB) hired as SS junior faculty, plus four post-doctoral fellows.
- Recruited a new director of the Master of Health Administration program (Dr. Bankie Olatosi), and a new director of the Office for the Study of Aging (internal candidate Dr. Ana Teixeira).
- Appointed Dr. Ronnie Horner (HSPM) Associate Dean for Clinical Public Health in Greenville.
- **Current tenure-track faculty searches in all six academic departments:** COMD (1 replacement), ENHS (1 replacement, 1 SS junior hire); EPID/BIOS (1 replacement, 3 positions for GHS expansion); EXSC (2 replacements); HPEB (2 replacements); HSPM (2 replacements); open department (1 SS junior hire). Two approved FRI positions (epigenetics and health information technology) have been indefinitely postponed.
- Faculty candidates often note our collegiality, infrastructure quality, and academic "quality of life" as attractive characteristics of our school. Increasingly, prospective faculty readily recognize that s/he would be joining a critical mass of researchers in her/his field.

Plans for 2016-2017:

- Complete open faculty searches (see list of ongoing searches above); continue current and open one new faculty search to meet departmental and SS center faculty-line commitments.
- **Continue recruitments of health services/clinical public health faculty for the ASPH satellite expansion to GHS per BOT, President and Provost December 2015 approval.**

2. *To promote quality, impactful and ethical research by developing strategies to increase extramural funding; increase publications, especially in top-tier journals; facilitate collaborations to compete for large, interdisciplinary grants; mentor junior faculty; and increase student and community engagement in scholarly endeavors.*

Progress made to date:

- The ASPH research environment has been restructured over the past 5 years to support and retain productive faculty, including central pre- and post-award support for investigators, technology support, web-based communication support, and public relations assistance. The school Office of Research hired a new staff person in March to provide additional pre- and post-award support.
- Associate deans Addy and Decho expanded new faculty orientation to provide broader resources for faculty development through an organized mentoring program coordinated between the Office of Academic Affairs and the Office of Research. Mentoring and other professional development activities focus on enhancing success of early grant submissions and competitiveness of revised applications by new and junior faculty, development of effective teaching methods and teaching portfolios, and selection of impactful service.
- Research productivity continues to grow. Publication rates have improved sharply. Extramural grant submissions have increased 32% to-date, however receipts per faculty member remain flat or down. The flat award levels likely reflect the contracted funding climate at present in the US, but our faculty are responding with greater effort.
- Julius Fridriksson has received notice of award for the University's first P50 grant (\$11 million) to establish the Center for the Study of Aphasia Recovery (C-STAR).
- Faculty in the Arnold School have received 43 ASPIRE awards from USC's Office of Research since 2012, with 15 received in 2015. In addition, five post doctoral scholars received the newly instituted ASPIRE I-II-B award in 2015. Faculty recipients include both tenure-track assistant professors and some of our most experienced senior faculty. Following is a list of ASPIRE awards received over the past four years:

COMD –

Aspire I-I	2012	Adlof
Aspire I-I	2013	Den Ouden
Aspire I-IV	2014	Apel
Aspire I-I	2015	Fogerty
Aspire I-II-B	2015	Hendricks (post doc)
Aspire III	2015	Adlof

Four COMD ASPIRE proposals are pending for 2016

ENHS –

Aspire II	2012	Decho
Aspire I-I	2013	Chatterjee
Aspire I-I	2014	Chatterjee
Aspire I-I	2015	Chanda

Aspire I-I 2015 Rothenberg

Seven ENHS ASPIRE proposals are pending for 2016

EPID/BIOS –

Aspire II 2012 Hebert

Aspire I-II 2012 Williams

Aspire II 2013 Liese

Aspire I-III 2013 Zhang

Aspire I-I 2014 Eberth

Aspire I-II 2014 Williams

Aspire I-IV 2014 Cai

Aspire I-IV 2014 Liese

Aspire I-I 2015 Boghossian

Aspire I-I 2015 Geraci

Two EPID/BIOS ASPIRE proposals are pending for 2016

EXSC –

Aspire I-III 2013 Carson

Aspire I-I 2013 Newman-Norlund

Aspire I-I 2013 Sui

Aspire II 2013 Herter

Aspire I-I 2014 Fayad

Aspire I 2015 Stewart

Aspire I-IIB 2015 Flynn, Monroe, Randel, Singh (post docs)

One EXSC ASPIRE proposal is pending for 2016

HPEB –

Aspire I-I 2012 Billings

Aspire I-I 2012 Kaczynski

Aspire I-I 2013 Blake

Aspire I-I 2013 Kaczynski

Aspire I-I 2014 Kaczynski

Aspire I-I 2014 Turner-McGrievy

Aspire I-IV 2014 Robillard

ASPIRE I-I 2015 Kaczynski

ASPIRE IIV 2015 Walsemann

Six HPEB ASPIRE proposals are pending for 2016.

HSPM –

Aspire I-1 2014 Qureshi

Aspire I-1 2014 Salloum

Aspire II 2015 Qureshi

Four HSPM ASPIRE proposals are pending for 2016.

Plans for 2016-2017

- Promote publication in top-tier journals of high impact through mentorship and broader professional development opportunities

- Actively engage department chairs and senior faculty/mentors in facilitating contacts for faculty across departments and colleges.
 - Increase submission and success of large program-project type proposals. A large NIEHS Superfund application (approximately \$12 million) is in preparation for 2016 submission. These multi-disciplinary grants require high national reputation and demonstrated competitiveness in an area of investigation. Some senior Arnold School investigators are poised to obtain this type of funding with appropriate institutional supports and commitment.
 - Continue a long-term effort begun in AY2014 to maintain a database of variables linked to scholarly productivity and research funding/expenditures. Dataset will allow trend examination over multiple years and identify determinants of research success in the School.
 - Encourage participation in interdisciplinary research groups (e.g., RCCF, CCCP, Nutrition and Health Disparities Center, Institute for Mind and Brain).
 - Lead and support collaborative research and service projects with GHS, HSSC, etc.
 - Encourage faculty to pursue external funding from more diverse sources, especially those with full IDC rates (e.g., industry, some NGO's and private foundations).
 - Continue incentivization of research competitiveness and expenditure rates by returning 10% of school IDC capture to PIs.
3. *To promote and enhance doctoral education in the Arnold School by increasing the number of doctoral students; funding support for doctoral students; interdisciplinary experiences for doctoral students.*

Progress made to date:

- Use of more than half of Arnold Endowment revenue generation to recruit/support doctoral students with match from grants/contracts/department.
- School-wide focus on providing adequate support for doctoral students through securing competitive stipends and tuition abatements from funding agencies.
- Dean's office commits at least \$15,000 per year to support student presentations at professional meetings; these travel grants require departmental matches.
- Leveraging of provost's doctoral incentive funds for student travel, publication, and other student needs. For both Fall 2015 and Fall 2016, we have at least four USC presidential fellowship awardees among our newly admitted doctoral students, in addition to those continuing from earlier years.

Plans for 2016-2017:

- Encourage professional development activities beyond research training for doctoral students including professional ethics, training as future faculty, research grantsmanship.
- Continue to support doctoral students to attend national/international meetings to network and present research findings; support student publication costs.

4. *To promote curriculum development, innovative teaching methodologies and assessment: develop appropriate responses to revised CEPH accreditation requirements, implement effective processes for continuing program assessment; improve learning outcomes and linkages to curriculum as needed; actively engage in interprofessional education; address curriculum requirements associated with the Carolina Core; enhance distributed education in the Arnold School; enhance involvement with USC Connect and other opportunities for community engagement*

Progress made to date:

- Enhanced academic program assessment with support of internal evaluation/assessment staff and personnel in OIRA; provided technical assistance to departments to review and revise learning outcomes and curriculum links to learning outcomes.
- Active involvement with USC Connect to promote community engagement and graduation with leadership distinctions among our undergraduate students. The total number of Exercise Science and Public Health Students who graduated with GLD in the Spring, Summer, and Fall of 2015 was 46 (24 were Exercise Science and 22 were Public Health majors). The Arnold School of Public Health has the highest percentage of GLD graduates (relative to its overall number of graduates) of any college/school at USC. Continued active leadership role in the *Interprofessional Education for Health Sciences* initiative.
- Online program delivery of MPH in HPEB and MHIT in collaboration with Academic Partnerships. Exploration of developing an MPH in HSPM for online delivery.
- Continued revisions of distributed education courses to USC's adaptation of "Quality Matters" standards. For 2015-2016, the focus has been the MCD program in COMD; by summer 2016, course updates will be completed for 10 courses in the program, which is on track for the USC scheduled process. PUBH 700 *Perspectives in Public Health* has been expanded for delivery to students in all graduate programs except the MPH and DrPH (per accreditation requirements). Dr. Mike Byrd has worked with faculty and community partners to present current material on a range of public health issues. Currently in its third semester, the student level of engagement and positive feedback has steadily increased.

Plans for 2016-2017:

- All departments will continue effective integration of content across courses and curricula; e.g., nutrition science, chronic disease prevention across multiple disciplines.
- All departments will consider development of course work to reflect expertise contributed by new faculty and school-identified areas of special research emphasis (e.g., global health, physical activity in built environments, technologies for public health, electronic medical records and medical "big data" exploration).
- The school will deliver course work for at least one MPH program in Greenville (e.g., Greenville Hospital System or University Center) via some combination of traditional

and distributed learning courses. Explore feasibility of 3+2 and 4+1 MPH degree programs with the China Medical University of Taiwan using U.S. trained public health doctoral faculty residing in Taichung, Taiwan.

- Visit Guilin Medical University, Guangxi Medical University and Nanjing Medical University in the People's Republic of China to explore student-faculty exchanges and joint degree programs.

5. *To actively plan for provision of improved infrastructure for the school including personnel, systematic mentoring and professional development, and provision of adequate buildings and facilities for faculty, staff and students.*

Progress made to date:

- OPHE is fully staffed now with 3.75 faculty FTE contributing to the interdisciplinary undergraduate public health courses, advising > 500 students, providing other student services, and coordinating school-level activities with Exercise Science. The school has one new first year advisor, as part of the provost's initiative within the new University Advising Center.
- Director of evaluation and academic assessment for the school has substantially enhanced our data collection processes (student course evaluations, exit questionnaires, alumni surveys) and our academic program assessments.
- The Office of Research under the current associate dean for research has been reorganized into four major service groups (research support; information technology; website development and communications; and evaluation, translation and community engagement).
- New staff members hired in 2015-2016 enhance support for various programs and activities: director of development, webmaster, and grants coordinator.

Plans for 2016-2017:

- Continue to develop and enhance student services to accommodate our large student population at the undergraduate level, and to support our new distributed-delivery degree programs at the graduate level
- Monitor and address staffing needs for other support services (e.g., school-level business and personnel administration, facilities management, grants management)
- Encourage the Provost's office to consider resources for a staff replenishment initiative (SRI) to support the large faculty and student growth seen all across the USC campus.

Five-Year Goals

Goal 1: To provide educational programs of excellence for public health professionals and scholars to gain recognition as one of the top ten schools of public health in public institutions of higher education.

In response to a widely recognized shrinkage of the public health workforce (>200K workers by 2018), the Arnold School of Public Health is preparing the next generation of public health professionals and scholars through a diverse curriculum, ranging from traditional baccalaureate programs to both professional and academic doctoral programs. As we continue to grow, we continually review our programs to keep them current with the rapidly developing science and practice of public health and responsive to workforce and community needs. In addition, with our recent growth in faculty, we are intentionally increasing enrollments in selected programs through enhanced distributed education. We continuously strive to gain national recognition through the impactful roles and positions held by our faculty and alumni, and by helping each other achieve goals such as publication in top journals, receipt of large, interdisciplinary grants, and recruitment of top doctoral students who will further spread our reputation for excellence.

Goal 2: To achieve and maintain research excellence as demonstrated by the creation of knowledge of high impact and importance to public health.

We continually strive for growth in research and scholarly activities in most areas of public health. This goal emphasizes the centrality of research to our mission. While great progress has been made in understanding causes and **treatment** of diseases that create pain and suffering in our communities, opportunities (and challenges) for understanding how to initiate, plan, and implement large-scale **disease prevention** through public health education and intervention remain strong and quite fundable. Without dynamic research and practice programs and their accompanying expansion and translation of public health knowledge, the teaching and service components of our mission would become ineffective. The development of an integrated and effective ecological model of health would be impossible. Research focusing and investment planning have been successful outcomes of the Arnold School's research strategic planning over the past five years. Significant and enviable strengths of faculty and infrastructure are now in place in physical activity/exercise and health, nutrition and health, cancer/cancer prevention, neuroimaging, environmental toxicology, literacy, and global health. Looking forward, the challenge now is to identify and cultivate senior leadership that embraces our mentoring culture of interdisciplinary education and approaches to health promotion, disease prevention and environmental protection for these and other key interest areas of the Arnold School.

Goal 3: To utilize available knowledge to address health and environmental issues facing South Carolina, the nation and the world community.

Public health is inherently a service discipline by virtue of its mission to “fulfill society's interest in assuring those conditions in which people can be healthy”; thus the lines are intentionally blurred between traditional community service activities and our teaching and research missions. Because much of our research is community-based and translational and we intentionally train our students to be effective in the community, we have built strong relationships with public/private health and environmental entities throughout national/state/local communities for many specific purposes. However, all of these partnerships, whether established for our research objectives or for an agency's expressed needs, ultimately serve to address the health and environmental challenges of our local, national or international communities. In addition, most of the existing national public health workforce has minimal formal training in public health; so our ongoing continuing and distributed education efforts do make a critical contribution to workforce development for individuals unwilling or unable to complete a traditional public health degree program due to time, location or other resource constraints.

Goal 4: To provide the leadership, infrastructure and resources to meet the goals of education, research, and professional service.

Specific targets within this goal are the most diverse among our set of five-year goals.

1. **Administrative leadership:** As of July 2016, we will have five of six department chairs within the first four years of their initial appointment. While school-level leadership has been stable, the infusion of *new* leadership and ideas and renewed enthusiasm at the department level has pushed the school to higher levels of creativity and productivity.
2. **Space:** the PHRC now houses approximately half of the Arnold School faculty, staff and graduate students, with an additional three academic departments in Discovery I. The physical therapy and undergraduate exercise science programs of the Department of Exercise Science are housed separately on campus in deficient basement space of the Blatt PE Center. The BOT has expressed a desire for us to double the size of our physical therapy program. Two-fold increase will require identification of ~20K net new square footage for classrooms, offices and labs. The Department of Communication Sciences and Disorders is in leased off-campus space paid from college IDC returns and clinical revenues (\$260K/year). **Discussions must continue** on best strategies to acquire a third comprehensive clinical/classroom/office building beside the PHRC to accommodate these excluded units and the remarkable growth trajectory of the Arnold School. In addition, available laboratory space is already limited for the current research agenda, so long-term planning for the acquisition of additional laboratory space is critical if the University wishes that portion of our portfolio to continue its growth.

- 3. Staffing and budget:** We must have qualified faculty and staff to support all of our activities, and budget growth is required to recruit and retain quality individuals. We are encouraged by the prospect of enhanced tuition-return revenues through expanded summer-semester offerings and expanded partnerships with AP and ShoreLight. While the provost's various initiatives have expanded our faculty -- and we are grateful for that -- we have not identified resources to expand support staff accordingly. The President's directive to expand to Greenville with a satellite School brings special challenges and recurring resource needs that are just beginning to be identified. Hopefully as that program grows, central support will continue.

Appendix A. Resources Needed

Goal No.: 4			
Type of Resource	Existing	Additional: state source	Strategy
CLINICAL/TRANSLATIONAL RESEARCH BUILDING	Keenan Building (COMD) clinic, Blatt PE center (EXSC and PT)	Vacant lot: Pendleton & Assembly Streets.	Philanthropy and Public-Private partnership where USC provides land, corporate partner builds 140K sq. ft. facility with 20K reserved for retail, banking, service sector on ground level. Balance from bond issue, philanthropy, private/other.
FISCAL AND PERSONNEL RESOURCES FOR UNDERGRADUATE STUDENT SERVICES	Clinical/instructional faculty in EXSC and PH majors with multiple responsibilities beyond advising/student services	Funds to support 1-2 additional instructor/advisors and 1-2 staff to fulfill administrative /clerical responsibilities	We have moved two departmental clinical faculty positions to the central Office of Public Health Education and are exploring a more centralized structure for most undergraduate advisement and all student services.

Appendix B. Benchmarking Information

Universities with top Schools of Public Health

<i>Institution</i>	<i>Faculty FTE (Fall 2015)</i>	<i>Doctoral Graduates 2014-2015</i>	<i>Unrestricted Revenue FY2015 (000)</i>
Johns Hopkins University	524	153	\$191,004
Harvard University	191	79	\$111,894
Columbia University	165	29	\$89,662
University of North Carolina – Chapel Hill	249	114	\$83,169
University of Michigan	114	51	\$59,506
Boston University	143	18	\$46,452
University of Minnesota	126	20	\$47,736
Emory University	178	35	\$49,048
University of Washington	150	47	\$30,102
University of California – Los Angeles	70	44	\$29,159

Universities with peer Schools of Public Health

<i>Institution</i>	<i>Faculty FTE (Fall 2015)</i>	<i>Doctoral Graduates 2014-2015</i>	<i>Unrestricted Revenue FY2015 (000)</i>
Pittsburgh	163	52	\$44,290
University of Texas	153	61	\$46,084
University of Florida	131	141	\$41,455
University of South Carolina	120	58	\$35,632
University of Iowa	71	10	\$19,976
University of Alabama-Birmingham	62	26	\$13,679

Among the 55 accredited schools of public health, there is reasonably strong historical agreement on the top ten schools of public health. Similarly there is a group of schools in the lower third that we clearly surpass by a variety of metrics. However, the middle group of which we are a part, with five shown above as the peer group of institutions, is much more difficult to differentiate. Among these schools, some are perceived as surpassing the Arnold School in scholarship, usually because of being part of a larger research university and/or a comprehensive academic medical center, while being weaker in size and strength of academic programs; yet others may be stronger in academic programs but weaker in research.

Appendix C. Unit's top Strengths and Important Accomplishments

Strengths of the Arnold School of Public Health

- Talented, diverse, collaborative, interdisciplinary and widely-recognized faculty dedicated to excellence in both scholarship and academic missions
- Consistent leadership and success in competitively funded collaborations within and beyond the School: faculty are catalysts for major and numerous research and academic interdisciplinary initiatives across campus, and are national leaders in physical activity/kinesiology, cancer prevention, nutrition, tobacco control, neuro-imaging related to speech, literacy disorders, global health, and health disparities research
- Dedication to doctoral program growth (in selected disciplines) and enhancement, and nurturing “growth with quality” for our undergraduate programs

Accomplishments of the Arnold School in the past five years

- Successful recruitment of 26 faculty in all ranks and tracks over the past two years
- In FY 2015, the Arnold School achieved external funding totaling \$35.9M or ~ \$422,000 per tenure-track faculty member, among the highest per capita funding in the University. In addition, faculty published 535 articles in peer-reviewed journals
- Comprehensive provision of infrastructure for research activities within the school
- High quality candidates recruited from top programs in faculty searches
- Diversified and creative research portfolio in terms of research topics, extramural funding sources, and interdisciplinary nature of multiple collaborations
- Ability of faculty to be nimble and entrepreneurial in response to various opportunities
- Involvement in multiple successful proposals and recruitments for Centers for Economic Excellence/SmartState endowed chairs program: Health Care Quality Improvement, Technologies to Enhance Healthful Lifestyles, Effectiveness Research in Orthopedics, Nano-Environmental Research and Risk Assessment
- Development, implementation and rapid growth of undergraduate programs in the Arnold School to 1711 students in Fall 2015—triple the enrollment in Fall 2007
- Leading provider of speech, language and hearing services in the metro Columbia area with over 5000 visits per year to the Speech and Hearing Research Center
- Julius Fridriksson has received notice of award for the University's first P50 grant, Center for the Study of Aphasia Recovery (C-STAR).
- In 2015, the Arnolds gifted another \$7 million to create the *Gerry Sue and Norman J. Arnold Institute on Aging*, which will focus on aging well by addressing issues faced by our most vulnerable populations—children and older adults
- Continued development of collaborations with the Greenville Health System (GHS); GHS relationships have now led to a Presidential charge to begin a satellite School of Public Health in Greenville with a 9-10 faculty complement by AY 2019
- Continued development of collaborations with Health Sciences South Carolina (HSSC); HSSC named Professor Xiaoming Li as Chief Officer for Data Analytics in November 2015.
- Faculty awards earned during 2015 and early 2016 (see exhaustive list in Section II – Academic Dashboard Faculty Success Measures, page 4)

Appendix D. Unit's Weaknesses and Plans for Addressing the Weaknesses

Internal Weaknesses of the Arnold School

- **Retention of qualified faculty and staff** at competitive salaries: While we have resources to be more competitive with initial salaries and start-up packages to recruit high quality junior and some senior (e.g., SS Chairs) faculty, we are exacerbating existing problems of salary compression for some very productive, dedicated and experienced faculty (some who are as productive as SS Chairs). We have been successful in countering offers from other institutions in some cases, but this is becoming increasingly difficult with most carry-forward resources committed to faculty start-up costs. Six high-quality faculty have been recruited away in the past two years.
- **Speech and Hearing Research Center is now in leased space** (\$260K/year) in order to vacate abysmal conditions four miles from campus in a dangerous neighborhood (Middleburg Plaza). EXSC is the top national program but >50% of faculty/staff is housed in Blatt basement with unstable facilities and frequent floods.
- **Inadequate student financial support** from TA's, grants, etc. for competitive stipends, tuition waivers and health insurance to recruit top doctoral candidates. Arnold endowment income is helpful but insufficient for a college of our size (\$192,000/year school-wide with 290 doctoral students). Doctoral student cost per year with tuition and health insurance is now the same or more than a postdoctoral associate, which presents a major faculty disincentive to support doctoral trainees. Several faculty members lost this year cited lack of funded assistantships for graduate students as a key reason for taking other offers (Florida and UC-Riverside).

Additional Weakness impacting the Arnold School

- **Lack of sufficient facilities:** With the move into Discovery and new leased space for Communication Sciences and Disorders, five of our six departments are now in high quality space. However, laboratory space is already fully committed, and the current allocations cannot meet growth expectations of research/teaching beyond 4 years. In addition, present space cannot meet existing needs of Exercise Science (undergraduate and PT programs) and leasing space for the entire COMD department is a significant drain on financial resources.
- **Shortage of classroom space**, especially large classrooms in the Innovista area of campus creates difficult and time-consuming commutes for faculty.
- **Insufficient student pedestrian safety** for transit to/from the PHRC and Discovery buildings at the Assembly and College Streets intersection. Multiple pedestrian-auto collisions (> 6) have been reported in past 4 years. The beautification project on Assembly has helped some, but drivers often ignore pedestrians in crosswalks and restrictions on U-turns and right turns on red.
- **Distance (distributed) education technology**, support, and instructor training is less than adequate at USC. There is a strong need for public health distributed education in South Carolina and the southeast generally. We had been hopeful that Academic Partnerships would remediate most needs, but this has not yet materialized.

- **Less than adequate professional staff support** at the institutional level for, e.g., contract and grant accounting, human resources and payroll, computer services, research computing, development of web presence and content, communications, publications and presentations, and IT infrastructure development (e.g., People Soft, Banner/OIRA).
- **Unfair competition** from MUSC: raiding of star faculty; duplication of degree offerings.
- **Insufficient institutional electronic-records oversight** for HIPPA and other data security requirements mandated by Federal agencies.
- **Financial support and policies to benefit graduate students** (e.g., tuition waivers, USC matching of grant-provided funds won for student support)
- **Another year of no central coordinated plan or vision for research computing on this campus.** The possibility (hope) of e.g., IBM Watson computing availability in 2-3 years is not a coordinated plan for the more prevalent sub-Watson immediate big-data needs in fields such as bioinformatics, health informatics, and genomics. Internet band-width and next-generation internet is sorely deficient at USC.

Appendix E. Unit Statistical Profile – Arnold School of Public Health

Student Enrollment and Credit Hours

1. Number of entering freshmen for Fall 2012, Fall 2013, Fall 2014, and Fall 2015 classes and their average SAT and ACT scores.

	<u>Fall 2012</u>	<u>Fall 2013</u>	<u>Fall 2014</u>	<u>Fall 2015</u>
Test Scores (average)				
# New Fresh/ ACT	225/26	260/26	251/27	319/27
# New Fresh/ SAT	225/1150	260/1178	251/1180	319/1177

2. Freshmen retention rate for classes entering Fall 2012, Fall 2013, and Fall 2014.

Retention Rates		2011 Cohort Returned '12	2012 Cohort Returned '13	2013 Cohort Returned '14	2014 Cohort Returned '15
Public Health	Same school	71.8%	69.6%	71.4%	78.0%
	Other school	15.8%	16.5%	13.1%	12.8%
	Total	87.6%	86.2%	84.5%	90.8%
USC Overall	Same school	71.4%	73.1%	73.8%	76.5%
	Other school	15.8%	15.1%	14.1%	11.6%
	Total	87.2%	88.2%	87.9%	88.1%

3. Sophomore retention rates for classes entering Fall 2011, Fall 2012, and Fall 2013.

Retention Rates		2010 Cohort Returned '12	2011 Cohort Returned '13	2012 Cohort Returned '14	2013 Cohort Returned '15
Public Health	Same school	84.7%	82.5%	75.3%	88.7%
	Other school	6.9%	10.3%	14.4%	6.0%
	Total	91.6%	92.8%	89.7%	94.7%
USC Overall	Same school	75.2%	77.5%	77.1%	77.3%
	Other school	14.0%	13.1%	12.7%	14.0%
	Total	89.2%	90.6%	89.8%	91.3%

4. Number of majors enrolled in Fall 2012, Fall 2013, Fall 2014, and Fall 2015 by level: undergraduate, certificate, first professional, masters, or doctoral (headcount).

Student Headcount	<u>Fall 2012</u>	<u>Fall 2013</u>	<u>Fall 2014</u>	<u>Fall 2015</u>
Undergraduate	1,393	1,529	1,608	1,711
Masters	402	413	431	407
Certificate	9	9	8	7
First Professional	0	0	0	0
Doctoral	281	278	289	290
Total	2,085	2,229	2,336	2,415

5. Number of entering first professional and graduate students: Fall 2012, Fall 2013, Fall 2014, and Fall 2015 and their average GRE, MCAT, LSAT scores, etc.
All data below show the number of students for whom we have data from internal records, along with their average scores. The GRE test and its scoring changed, beginning August 1, 2011.

	<u>Fall 2012</u>	<u>Fall 2013</u>	<u>Fall 2014</u>	<u>Fall 2015</u>
<u>GRE scores (average)</u>				
Original Test/Scoring	N=114	N=45	N=33	N=27
GRE Quantitative	600	620	614	636
GRE Verbal	482	493	504	521
Revised Test/Scoring	N=88	N=193	N=212	N=196
GRE Quantitative	150	151	150	150
GRE Verbal	153	152	151	152

GMAT and MCAT are accepted as alternative tests for certain programs, but the numbers of applicants reporting these scores are too small for aggregate reporting.

6. Number of graduates in Fall 2014, Spring 2015, and Summer 2015 by level (undergraduate, certificate, first professional, masters, doctoral).

	<u>Fall 2014</u>	<u>Spring 2015</u>	<u>Summer 2015</u>	<u>Total</u>
<u>Degrees Awarded</u>				
Undergraduate	97	319	58	474
Masters	25	67	77	168
Certificate	1	0	1	2
First Professional	0	0	0	0
Doctoral	22	19	15	56
Total	145	408	155	701

7. Four-, five- and six-year graduation rates for the three most recent applicable classes (undergraduate only).

		<u>2007 Cohort</u>			<u>2008 Cohort</u>			<u>2009 Cohort</u>		
		<u>4-Year</u>	<u>5-Year</u>	<u>6-Year</u>	<u>4-Year</u>	<u>5-Year</u>	<u>6-Year</u>	<u>4-Year</u>	<u>5-Year</u>	<u>6-Year</u>
		<u>Grad</u>	<u>Grad</u>	<u>Grad</u>	<u>Grad</u>	<u>Grad</u>	<u>Grad</u>	<u>Grad</u>	<u>Grad</u>	<u>Grad</u>
<u>Started</u>	<u>Ended</u>									
Public Health	Same school	50.0%	55.2%	56.3%	58.3%	63.5%	63.5%	55.7%	57.3%	57.3%
	Other school	13.5%	18.8%	19.8%	12.2%	16.5%	17.4%	13.7%	20.6%	22.1%
	Total	63.5%	74.0%	76.1%	70.4%	80.0%	80.9%	69.5%	77.9%	79.4%
USC Overall	Same school	43.0%	52.1%	53.4%	41.6%	50.1%	50.9%	41.3%	48.8%	49.9%
	Other school	10.9%	17.6%	19.0%	13.9%	21.0%	22.0%	13.5%	20.9%	22.4%
	Total	53.9%	69.7%	72.4%	55.5%	71.2%	72.9%	54.7%	69.7%	72.3%

8. Total credit hours generated by the Arnold School of Public Health regardless of major for Fall 2014, Spring 2015, and Summer 2015.

	<u>Fall 2014</u>	<u>Spring 2015</u>	<u>Summer 2015</u>	<u>Total AY 2014-2015</u>
Student Credit Hours				
Undergraduate	15,687	12,288	1,933	29,908
Masters	5,962	4,030	2,915	12,907
Doctoral	2,267	2,073	720	5,060
Total	23,916	18,391	5,568	47,875

9. Percent of credit hours by undergraduate major taught by faculty with a highest terminal degree.

As noted last year, the following table does not reflect Arnold School performance since a majority of the credit hours completed by our undergraduate students is taken outside of the Arnold School (e.g., Arts and Sciences).

	<u>Fall 2014</u>	<u>Fall 2015</u>
Program		
Exercise Science, Health Fitness, B.S.	85.29%	77.14%
Exercise Science, Motor Development, B.S.	80.58%	72.38%
Exercise Science, Public Health, B.S.	94.06%	74.65%
Exercise Science, Scientific Foundations, B.S.	87.62%	79.31%
Public Health, B.A.	61.47%	59.39%
Public Health, B.S.	73.71%	61.61%
Total	79.47%	70.73%

10. Percent of credit hours by undergraduate major taught by full-time faculty.

[See note above about interpretation of data.]

	<u>Fall 2014</u>	<u>Fall 2015</u>
Program		
Exercise Science, Health Fitness, B.S.	92.42%	100.00%
Exercise Science, Motor Development, B.S.	87.73%	94.45%
Exercise Science, Public Health, B.S.	94.89%	100.00%
Exercise Science, Scientific Foundations, B.S.	91.37%	88.54%
Public Health, B.A.	63.96%	71.00%
Public Health, B.S.	75.03%	69.14%
Total	83.36%	84.96%

Faculty counts

11. Number of faculty by title (tenure-track by rank, non-tenure track (research or clinical) by rank) as of Fall 2013, Fall 2014, and Fall 2015 (by department where applicable).

	<u>FALL 2013</u>	<u>FALL 2014</u>	<u>FALL 2015</u>
<u>Tenure Track Faculty</u>			
Professor	25	23/24	24
Associate Professor	23/25	26/29	26/28
Assistant Professor	31/32	32	33
<u>Research Faculty</u>			
Professor	1/2	1	1/2
Associate Professor	1	1/2	1/2
Assistant Professor	8	9/13	5/12
<u>Clinical Faculty</u>			
Professor	1	2/3	2/3
Associate Professor	5/6	5/7	6/8
Assistant Professor	14/16	13/15	9/13
Instructor	6	6/7	6
<u>Other Non-tenure faculty</u>			
Instructor	4/5	4/5	2/5
Senior Instructor			1
Adjunct Faculty	61	21/51	25/51

Where internal records do not agree with data from the Office of Institutional Research and Assessment (OIRA), two counts are shown in the cells above. The first faculty count is the number reported by OIRA; second number is based on internal records. Some discrepancies are due to temporary grant appointments; several may reflect fall hires or promotions.

Faculty by department, Fall 2015 (internal records)

	<u>COMD</u>	<u>ENHS</u>	<u>EPID/ BIOS</u>	<u>EXSC</u>	<u>HPEB</u>	<u>HSPM</u>	<u>OAA</u>	<u>Total</u>
<u>Tenure Track Faculty</u>								
Professor	2	3	5	6	3	5		24
Associate Professor	1	2	10	2	11	2		28
Assistant Professor	5	4	5	8	6	5		33
<u>Research Faculty</u>								
Research Professor	1			1				2
Research Associate Professor		2						2
Research Assistant Professor		1	2	3		6		12
<u>Clinical Faculty</u>								
Professor	1	1		1				3
Associate Professor	1		1	2	1	1	2	8

	<u>COMD</u>	<u>ENHS</u>	<u>EPID/ BIOS</u>	<u>EXSC</u>	<u>HPEB</u>	<u>HSPM</u>	<u>OAA</u>	<u>Total</u>
Assistant Professor	4		4	3			2	13
Senior Instructor	1							1
Instructor	6							6
<u>Other Non-tenure faculty</u>								
Instructor				2	2		1	5
Total	22	13	27	28	23	19	5	137

12. Current number and change in the number of tenure-track and tenured faculty from underrepresented minority groups from FY 2014 (from OIRA data and internal data).

OIRA data:

<u>Faculty numbers</u>	<u>Asian</u>	<u>Black or African American</u>	<u>Hispanic</u>	<u>Two or More Races</u>
FALL 2014	12	6	1	4
FALL 2015	19	5	0	1
Net change from Fall 2014	+7	-1	-1	-3

Data from internal records (tenure-track and tenured)

<u>Faculty numbers</u>	<u>Asian</u>	<u>Black or African American</u>	<u>Hispanic</u>	<u>Two or More Races</u>
FALL 2014	18	5	0	1
FALL 2015	19	5	0	1
Net change from Fall 2013	+1	=	=	=

Data from internal records (all faculty)

<u>Faculty numbers</u>	<u>Asian</u>	<u>Black or African American</u>	<u>Hispanic</u>	<u>Two or More Races</u>
FALL 2014	20	10	1	1
FALL 2015	20	9	1	1
Net change from Fall 2014	=	-1	=	=

**Appendix F. Unit Statistical Research Data
Scholarship, Research, and Creative Accomplishments**

1. The total number and amount of externally sponsored research proposal submissions by funding source for FY 2015

Total number of external research proposal submissions	281
Total dollar amount of external research proposal submissions - 1st year request	\$53,824,827

Research Proposal Submissions by Funding Source			
AHRQ	2	154,116	Federal
CDC	15	6,641,806	Federal
DOD	1	33,278	Federal
HHS (other)	2	1,057,770	Federal
HRSA	4	219,553	Federal
NIH	140	31,269,185	Federal
NOAA	8	868,930	Federal
NPS	1	10,000	Federal
NSF	11	2,576,167	Federal
USDA	20	2,500,540	Federal
USDE	2	990,003	Federal
Total	206	46,321,348	Federal
A Quiver Full, Inc - Frosty Towel	1	11,930	Corporate
ATI Physical Therapy	1	67,600	Corporate
JAWBONE	1	32,003	Corporate
Monty's Plant & Soil Products	1	11,239	Corporate
MoveITsc, LLC	1	11,000	Corporate
The Coca-Cola Company	1	639,672	Corporate
Total	6	773,444	Corporate
Academy of Nutrition & Dietetics Foundation	2	7,500	Non-Profit
American Cancer Society	7	1,051,150	Non-Profit
American College of Sports Medicine	2	14,842	Non-Profit
American Diabetes Association	2	180,508	Non-Profit
American Heart Association	10	802,946	Non-Profit
American Institute for Cancer Research	1	81,996	Non-Profit
American Speech, Language, Hearing Foundation	2	43,493	Non-Profit
BC&BS Foundation	1	35,211	Non-Profit
Bill & Melinda Gates Foundation	4	707,293	Non-Profit
DentaQuest	1	45,000	Non-Profit
Duke Endowment	1	350,000	Non-Profit
ENVIRON Foundation	1	50,207	Non-Profit
Environmental Research & Education Foundation	1	138,523	Non-Profit
Gulf of Mexico Research Initiative (GoMRI)	2	662,336	Non-Profit

Hawkins Foundation	1	21,643	Non-Profit
Mallinckrodt Foundation	1	60,000	Non-Profit
Muscular Dystrophy Association	1	110,000	Non-Profit
National Academy of Sciences	1	40,697	Non-Profit
New York Academy of Sciences	1	42,868	Non-Profit
Obesity Society	1	39,919	Non-Profit
Patient-Centered Outcomes Research Institute (PCORI)	2	661,235	Non-Profit
Society for Family Planning	1	13,795	Non-Profit
Spencer Foundation	2	96,411	Non-Profit
WT Grant Foundation	2	10,077	Non-Profit
Total	50	5,267,650	Non-Profit
SC Department of Health and Human Services	1	36,312	State
SC Seagrant Consortium	1	50,000	State
SC State Treasurer's Office	1	400,000	State
Total	3	486,312	State
Al Jalila Foundation	1	13,558	Other
American University of Beirut	1	81,247	Other
Biotechnology Industry Research Assistance Council	1	20,000	Other
Carolina Colonoscopy Center	1	12,000	Other
European Commission	1	171,740	Other
Georgia Department of Public Health	1	15,000	Other
Greenville Health Systems	2	35,000	Other
Instituto Nacional de Salud Publica (INSP)	1	15,440	Other
International Development Research Canada	1	33,286	Other
International Food Policy Research Institute (IFPRI)	1	15,719	Other
National Academy of Sciences	1	67,473	Other
Sackler Institute	1	37,850	Other
Sisters of Charity-Providence Hospital	2	19,000	Other
World Bank	1	438,760	Other
Total	16	976,073	Other

Note: Sponsor shown is the origin of the funds. Flow-through funds are attributed to the sponsor of origin. Does not include \$13.5 million in non-research submissions. Total submissions = \$67.3 million. Data Source: USCeRA.

2a. Summary of externally sponsored research awards by funding source for FY 2015

Total dollar amount of research awards	\$24,035,885
Total number of research awards	136

Research Awards by Sponsor			
CDC	17	3,758,080	Federal
DOI	1	10,000	Federal
HHS	5	1,178,828	Federal
HRSA	3	622,085	Federal
NIH	62	11,203,173	Federal
NOAA	6	1,064,374	Federal
NSF	3	859,064	Federal
USDA	4	449,994	Federal
USDE	1	983,706	Federal
VA	2	9,452	Federal
Total	104	20,138,756	Federal
FTZ Coca-Cola Service Company, LTDA	1	80,000	Corporate
Monty's Plant & Soil Products	1	11,239	Corporate
MoveITsc, LLC	1	11,000	Corporate
PerkinElmer Health Sciences, Inc.	1	10,000	Corporate
PROAXIS Physical Therapy	1	67,600	Corporate
The Coca-Cola Company	3	639,222	Corporate
Total	8	819,061	Corporate
American Cancer Society	2	41,123	Non-Profit
American College of Sports Medicine	1	4,842	Non-Profit
American Heart Association	2	154,000	Non-Profit
American Institute for Cancer Research	1	165,000	Non-Profit
Bill & Melinda Gates Foundation	3	578,891	Non-Profit
BC&BS Foundation	1	155,895	Non-Profit
Duke Endowment	2	655,239	Non-Profit
ENVIRON Foundation	1	50,207	Non-Profit
Sackler Institute for Nutrition Science	1	50,000	Non-Profit
SC Research Foundation	1	209,500	Non-Profit
Total	15	2,064,697	Non-Profit
SC DHHS	1	36,312	State
SC State Treasurer's Office	1	400,000	State
Total	2	436,312	State
Greenville Health Systems	1	15,000	Other
Instituto Nacional de Salud Publica (INSP)	1	15,440	Other
International Food Policy Research Institute (IFPRI)	1	39,009	Other
Sackler Institute for Nutrition Science	1	37,850	Other
SC Medical Endoscopy Center	1	12,000	Other
Sisters of Charity Providence Hospital	1	19,000	Other
World Bank	1	438,760	Other
Total	7	577,059	Other

2b. Total extramural funding processed through Sponsored Awards Management (SAM) in FY 2015 and federal extramural funding processed through SAM in FY 2015

Total extramural funding (research & non-research)	\$35,926,065
Total federal extramural funding (research & non-research)	\$28,560,428

2c. Amount of sponsored research funding per faculty member [as PI] in FY 2015 (by rank, type of funding, e.g., federal, state, etc., and by department, if applicable)*

Faculty PI	Rank	Dept	Federal	State	Corp	Non-Profit	Other	Total
Adlof S	Asst Prof	COMD	1,271,249	0	0	0	0	1,271,249
Annang-Ingram L	Assoc Prof	HPEB	10,071	0	0	0	0	10,071
Baalousha M	Asst Prof	ENHS	324,928	0	0	0	0	324,928
Beets M	Assoc Prof	EXSC	1,770,433	0	0	0	0	1,770,433
Blair S	Prof	EXSC	0	0	570,156	0	0	570,156
Blake C	Asst Prof	HPEB	0	0	0	112,020	0	112,020
Boghossian N	Asst Prof	EPID/BIOS	0	0	0	466,871	0	466,871
Brandt H	Assoc Prof	HPEB	496,018	0	0	0	0	496,018
Burch J	Assoc Prof	EPID/BIOS	0	0	0	0	27,000	27,000
Cai B	Assoc Prof	EPID/BIOS	43,039	0	0	0	0	43,039
Carson J	Prof	EXSC	346,478	0	0	0	0	346,478
Chanda A	Asst Prof	ENHS	50,750	0	0	0	0	50,750
Chatterjee S	Asst Prof	ENHS	421,966	0	0	0	0	421,966
Davis R	Asst Prof	HPEB	594,622	0	0	11,123	0	605,745
Fayad R	Assoc Prof	EXSC	53,807	0	0	0	0	53,807
Feigley G	Prof	ENHS	0	0	0	50,207	0	50,207
Fleischer N	Asst Prof	EPID/BIOS	15,440	0	0	30,000	0	45,440
Fridriksson J	Prof	COMD	1,396,477	0	0	0	0	1,396,477
Friedman D	Assoc Prof	HPEB	369,999	0	0	0	0	369,999
Fritz S	Assoc Prof	EXSC	0	0	67,600	0	0	67,600
Frongillo E	Prof	HPEB	122,388	36,312	0	50,000	76,859	285,559
Hale N	Res Asst Prof	HSPM	29,646	0	0	0	0	29,646
Hébert J	Prof	EPID/BIOS	1,030,709	0	0	0	0	1,030,709
Jones S	Assoc Prof	HPEB	350,000	0	0	0	0	350,000
Kaczynski A	Asst Prof	HPEB	8,000	0	11,000	0	0	19,000
Kenison K	Res Asst Prof	HSPM	55,341	0	0	0	0	55,341
Khan M	Prof	HSPM	0	0	0	0	438,760	438,760
Kloot B	Res Asst Prof	ENHS	30,000	0	11,239	0	0	41,239
Koh H	Asst Prof	EXSC	117,200	0	0	0	0	117,200
Lead J	Prof	ENHS	389,768	0	10,000	0	0	399,768

Faculty PI	Rank	Dept	Federal	State	Corp	Non-	Other	Total
Liese A	Prof	EPID/BIOS	124,539	0	0	0	0	124,539
McDermott S	Prof	EPID/BIOS	3,318,781	0	0	0	0	3,318,781
McLain A	Asst Prof	EPID/BIOS	27,075	0	0	0	0	27,075
Merchant A	Assoc Prof	EPID/BIOS	192,416	0	0	0	0	192,416
Moore J	Asst Prof	HPEB	401,036	0	0	0	0	401,036
Norman S	Assoc Prof	ENHS	169,367	0	0	0	0	169,367
Pate R	Prof	EXSC	940,090	0	80,000	511,134	0	1,531,224
Porter D	Assoc Prof	ENHS	1,039,375	0	0	0	0	1,039,375
Probst J	Prof	HSPM	592,439	0	0	0	0	592,439
Salloum R	Asst Prof	HSPM	29,848	0	0	0	0	29,848
Scott G	Clin Prof	ENHS	10,000	0	0	0	0	10,000
Steck S	Assoc Prof	EPID/BIOS	0	0	0	165,000	0	165,000
Stewart J	Asst Prof	EXSC	0	0	0	77,000	0	77,000
Teixeira A	Res Asst Prof	EPID/BIOS	1,004,031	0	0	0	0	1,004,031
Thrasher J	Assoc Prof	HPEB	650,335	0	0	0	0	650,335
Turner-McGrievy B	Asst Prof	HPEB	354,751	0	0	0	0	354,751
Volz D	Asst Prof	ENHS	185,859	0	0	0	0	185,859
Wang X	Asst Prof	EXSC	0	0	0	77,000	0	77,000
Werfel K	Asst Prof	COMD	146,500	0	0	0	0	146,500
West D	Prof	EXSC	246,823	0	0	0	0	246,823
Wilcox S	Prof	EXSC	1,188,869	0	0	0	0	1,188,869
Williams E	Res Asst Prof	EPID/BIOS	111,912	0	0	0	0	111,912
Workman L	Res Asst Prof	HSPM	5,340	0	0	0	0	5,340
Xirasagar S	Assoc Prof	HSPM	0	0	0	0	19,000	19,000
Zhang J	Asst Prof	EPID/BIOS	71,212	0	0	0	0	71,212
Totals			20,108,927	36,312	749,995	1,550,355	561,619	23,007,208

*Does not include \$1,029,515 in research funding to non-faculty PIs. Does not include awards to ongoing faculty research projects that received their funding the in the previous fiscal year and thus none in FY 2015.
Data Source: USCeRA

3. Total Sponsored Research Expenditures per T/TT Faculty by Rank and Department for FY 2015*

Professor	9,942,599
Associate Professor	5,073,801
Assistant Professor	2,900,209
Total	17,916,608

Communication Sciences and Disorders (COMD)		
Adlof S	Assistant Professor	569,101
Fogerty D	Assistant Professor	114,014
Fridriksson J	Professor	1,102,527

Richardson J	Assistant Professor	6,953
Werfel K	Assistant Professor	4,053
Environmental Health Sciences (ENHS)		
Baalousha M	Assistant Professor	42,099
Chanda A	Assistant Professor	32,690
Chandler T	Professor	170
Chatterjee S	Assistant Professor	425,420
Decho A	Professor	53,193
Lead J	Professor	34,997
Norman S	Associate Professor	307,998
Porter D	Associate Professor	656,111
Rothenberg S	Assistant Professor	119,625
Volz D	Assistant Professor	360,214
Epidemiology and Biostatistics (EPID/BIOS)		
Boghossian N	Assistant Professor	12,935
Burch J	Associate Professor	6,789
Cai B	Associate Professor	49,440
Eberth J	Assistant Professor	25,090
Fleischer N	Assistant Professor	27,791
Forthofer M	Associate Professor	131,923
Hardin J	Associate Professor	48,371
Hebert J	Professor	990,281
Liese A	Professor	125,454
McDermott S	Professor	1,550,862
McLain A	Assistant Professor	26,925
Merchant A	Professor	206,195
Steck S	Associate Professor	206,972
Zhang J	Associate Professor	103,710
Exercise Science (EXSC)		
Beets M	Associate Professor	1,188,645
Blair S	Professor	469,306
Carson J	Professor	257,052
Fayad R	Associate Professor	49,046
Fritz S	Associate Professor	35,003
Hand G	Professor	129,207
Koh H	Assistant Professor	128,833
Pate R	Professor	1,422,836
Wang X	Assistant Professor	200,810
West D	Professor	246,766
Wilcox S	Professor	1,037,728
Youngstedt S	Associate Professor	49,314
Health Promotion, Education, and Behavior (HPEB)		

Annang-Ingram L	Associate Professor	4,841
Blake C	Associate Professor	54,389
Brandt H	Associate Professor	544,126
Davis R	Assistant Professor	473,130
Friedman D	Associate Professor	355,945
Frongillo E	Professor	147,228
Jones S	Associate Professor	446,698
Kaczynski A	Assistant Professor	48,854
Moore J	Assistant Professor	136,140
Spencer M	Associate Professor	3,000
Thrasher J	Associate Professor	781,459
Turner-McGrievy B	Assistant Professor	77,995
Walsemann K	Associate Professor	38,031
Health Services Policy and Management (HSPM)		
Brooks J	Professor	374,786
Chen B	Assistant Professor	28,313
Glover S	Professor	656,063
Khan M	Professor	469,370
Probst J	Professor	668,578
Salloum R	Assistant Professor	39,225
Xirasagar S	Associate Professor	11,989

**Note: Research awards to non-tenure track- and non-faculty are not included, nor are awards to ongoing research projects that received and expended their funding in the previous fiscal year.

Data Source: SAM

4. Number of patents, disclosures and licensing agreements in fiscal years 2012, 2013, 2014, 2015.

	Invention Disclosures	Provisional Patent Applications	Non-Provisional Patent Applications	Invention Disclosures	License Agreements
FY 2015	1	2	1	1	0
FY 2014	3	2	1	1	0
FY 2013	1	1	0	1	0
FY 2012	1	0	0	1	0

Non-provisional patent applications include only newly filed US Utility and PCT applications (no nationalized PCTs, divisionals or continuations).

Data Source: USC Office of Economic Engagement

Appendix G. Challenges

- 1. Enhancing Diversity and Inclusion** – The ASPH is not as diverse or inclusive as it should be with regard to disparities in race, sexual orientation, religious affiliation, and physical ability. For example, our present African American tenure-track faculty complement is only 6%, and our AA graduate student composition is 12% (among US citizens and permanent residents). We do not track LGBT status among our faculty, staff and students but are aware of individuals in our community who are openly LGBT. These are our challenges. In 2015 we developed a strategic plan for a school-wide effort to create a climate of inclusion and enhanced faculty/staff/student diversity in the Arnold SPH. We hired an Associate Dean for Diversity, Equity and Inclusion (~20% time/effort; Dr. David Simmons) and provided a recurring budget of \$30-35K per year to hire consultants, provide training, recruit seminar speakers, and organize/deliver social events around themes of improving our School-wide climate for diversity. This effort is new. We have little to report other than it is well-received thus far by our under-represented and also our regular faculty in Arnold.
- 2. Promoting Innovation in Research and Teaching** – Many high-achieving faculty candidates from strong, highly-regarded programs leave those programs unable to conceive and write nationally-competitive grant proposals. They often need and require intensive mentoring in grantsmanship to be successful in our research-centric culture. That is a challenge that we continuously work to address in our college. Therefore the Arnold SPH is very intentional about hiring junior faculty with demonstrably high communication skills in addition to high science and pedagogical experience. We assess this ability in interviews, The associate deans provide an internal new faculty orientation, monitor individual faculty mentoring activities, provide a variety of other professional development activities within the school and promote campus/system level opportunities such as the New Faculty Academy and workshops and resources provided by the Center for Teaching Excellence and the university Office of Research.
- 3. Enhancing Access and Affordability** – The ASPH has no control over admissions or costs of education at the undergraduate level. We have no undergraduate scholarships in Arnold at present, but we are approaching potential donors to assist with that unmet need. At the graduate level, our graduate admissions committees work diligently to identify disadvantaged candidates that may not meet our published standards for admission/access and then conduct verbal interviews to determine if access standards are non-predictive of individual success in a given program. Graduate program affordability is enhanced greatly in Arnold by the provision of endowment proceeds to meritorious doctoral candidates, and especially meritorious candidates from disadvantaged backgrounds. These decisions are decentralized and made in each of our

six departments. The challenge is insufficient funds at present to support more than ~25-30 students.

4. **Promoting Collaboration** – The ASPH is not challenged with promotion of collaboration. Almost all of our research projects, community service engagements, publications and research centers/facilities are strongly collaborative. These collaborations extend well beyond Arnold to almost every college at USC.
5. **Enhancing Global Engagement** – The ASPH has a rich collection of internationally-trained and reared faculty in every department. This ethnic and cultural diversity is having a strong impact on building interests in global health research and education. We received the USC's largest Gates Foundation award in 2015 (\$5.5M) for maternal and child health and nutrition in sub-Saharan Africa. Our faculty in 2016 are doing agency funded work in China, Tanzania, Ethiopia, Nigeria, Saudi Arabia, Europe, Mexico, Haiti, Bangladesh, India, Korea, and the Bahamas. The largest challenge with work in global health is finding strong funding sources that pay indirect costs to the institution and also exhibit high funding fidelity to good researchers. There are however more opportunities for faculty in public health to get funding and do research domestically even when s/he has broad international experience and is competitive for international grants. T&P standards do not account for this lower success rate among internationally-focused researchers. Yet the global health concerns of today are often far more interesting and unique than what we experience here locally or nationally. The challenge is how to create and maintain a nucleus/critical-mass of committed global-health researchers and educators at USC across multiple departments who can leverage one another's distinctive abilities to compete for large multi-investigator grants and interesting projects. Such grants would rapidly elevate USC's global engagement and research profile. This will require intentional hiring and also curriculum development not presently "on the books" at USC. UNC-Chapel Hill is a wonderful example of what can be done to elevate an institution's world profile using global engagement around health. That institution had a minimal international profile until their SPH became a "School of Global Public Health" following a \$50M gift from the Gillings family in 2007.