SHOULD BASIC RESEARCH CONTINUE TO BE FUNDED?

Applied research that leads to advances in health therapeutics usually outpaces basic research in generating media headlines. Meanwhile, the federal gas tank continues to function partially on fumes as evidenced by the amount of money that has to be borrowed to finance governmental activities. Recent legislation to fund the government for the remainder of fiscal year 2018 (it ends on September 30) adds one more trillion in debt to the national deficit. A reasonable query is whether funding from basic research discovery for its own sake should go to projects more applicable to human health, such as the discovery of better pharmaceuticals?

The launch of a Cancer Moonshot “to cure cancer once and for all” was announced in January 2016, an ambitious goal to be constructed on the shoulders of a War on Cancer that originally was declared by the Nixon Administration in 1971. The possible prevention and cure of Alzheimer’s disease are generating similar aspirations. Yet, some pharmaceutical companies already have abandoned plans to continue seeking miracle drugs for Alzheimer’s while the failure last month of a large clinical trial of a promising cancer immunotherapy drug from the biotech company Incyte suggests that some major retrenchment could grip that industry.

Often lost in the frenzy to develop monumental therapies through applied research is that many of the most transformative medicines exist because of fundamental discoveries that were made without regard to practical outcome and with their relevance to therapeutics appearing decades later. For example, an article in the April 25, 2018 issue of the journal Science Translational Medicine elaborates on the necessity of continuing to support basic research. The authors undertook to elucidate the scientific origins of some of today’s most important drugs involving cancer, AIDS, and hypertension to address the following questions: In a time of constrained resources, does such work need justification according to its practical outcomes? Should funding be shifted from discovery for its own sake to projects more definably linked to human health, particularly when it comes to the discovery of new pharmaceuticals? Would such a shift over the long run enhance the number of better long-term therapies?

Their analysis makes clear that many important new drugs rest upon one or a set of fundamental discoveries and that many years of ongoing basic work may have elapsed before the realization that such work holds the key to a medical breakthrough. The focus was on a compendium of the 28 “most transformative” medicines approved for clinical use by the FDA between 1985 and 2009. For each item, they determined whether it began with a basic discovery and whether it was apparent at the time that this discovery held the promise of a new therapeutic and, if not, how long it took for this to be appreciated. Of the medicines studied, 80% could be traced back to one or several fundamental discoveries. The average time period from first basic discovery to FDA approval was 31 years (median, 32 years).
In my message in the November 2017 issue, I indicated that I will be asking some of you to send a photo and answer a series of “fun” questions to be shared with our membership so that we can continue our collegiality through our newsletter. The fourth of many profiles is presented as follows:

**Name and Title:** Anthony Breitbach, PhD, ATC, Associate Professor/Director – Athletic Training Program

**Place of Birth:** Dubuque, Iowa

**University:** Saint Louis University

**How long have you been in your position?** 10 years

**What’s the value of a university education?**
I believe that the university educational experience prepares a person with far more than mere technical skills, but rather the ability to process and address the challenges and opportunities of the future.

**What is the value of ASAHP?**
ASAHP brings together a diverse group of stakeholders with a similar objective – to improve the lives of our students and eventually those with whom they provide care.

**Your philosophy on education in seven words:** Process dedicated to personal and professional transformation.

**If I could teach in another field, which one and why?** Marketing – I enjoy creating “wins” for others.

**Before I retire I want to:** Do a sabbatical abroad.

**In college, I was known for:** Being unafraid to try new things.

**What music is playing in my car/office?** R&B – Earth, Wind and Fire, Stevie Wonder, etc

**The last book I read for fun was:** Band of Brothers

**My favorite trip was:** England for All Together Better Health in 2016

**If I could travel anywhere it would be:** Australia

**Four people I’d take to coffee or have a glass of wine with:** Tom Hanks, Barack Obama, Neil DeGrasse Tyson and Jon Stewart

**The best advice I ever received was:** Instead of saying “why,” say “why not.”

**My hobby is:** Travel
PLETHORA OF HEALTH BILLS IN CONGRESS

Although the vast majority of bills introduced on Capitol Hill never advances to the stage of meriting a hearing to discuss their implications, they reflect the concerns of voters and interest groups that attempt to influence the work of legislators. Some bills languish for years, but their supporters continue to have them reintroduced in each new session of Congress. The Association of Schools of Allied Health Professions is no stranger to participating in this ritual. During the years 2003-2006, ASAHP held its Winter Meetings in Washington, DC for the purpose of having the Allied Health Reinvestment Act (AHRA) become law.

The effort included having participants at these meetings visit their elected officials on Capitol Hill to encourage them to support this legislation. Nineteen other health organizations, such as the American Hospital Association (AHA) became part of a coalition for this purpose and when their representatives visited Hill offices, the AHRA was included on their list of sought objectives. Meanwhile, organizations representing other kinds of health professions schools were pursuing similar aims. The mantra among legislators became rather than trying to deal with each set of issues separately, it was better to wait and consider them collectively when it becomes time to reauthorize health professions legislation. Similar to huge delays that now characterize an inability to reauthorize the important Higher Education Act, health professions reauthorizing legislation was placed on the back burner to simmer for many more years.

A glance at the plethora of bills introduced in the month of May 2018 alone reveals a series of attempts to address the many ramifications of the opioid crisis. Some examples are: H.R.5774 would require the HHS Secretary to develop guidance on pain management and other purposes. H.R.5775 would amend Title XVIII of the Social Security Act to require Medicare Advantage plans and part D prescription drug plans to include information on the risks associated with opioids, coverage of certain non-opioid treatments used to treat pain, and the safe disposal of prescription drugs. H.R.5779 would amend Title XVIII of the Social Security Act to require the Secretary to establish a technical expert panel for purposes of evaluating the use of opioid-related quality measures under the Medicare program.

Despite strong partisan differences, important measures occasionally are passed in both chambers and sent to the White House for the President to be signed into law. On May 22, 2018 right-to-try legislation that would give terminally ill patients access to investigational treatments and therapies was forwarded to President Trump. The bill would allow patients to bypass the Food and Drug Administration when requesting access to experimental drugs. The rationale is that really sick patients should have every tool at their disposal to try a drug that could extend their life and that the FDA's program letting patients request access to investigational drugs is time-consuming and burdensome.

2018-2019 ASSOCIATION CALENDAR OF EVENTS

July 28, 2018—ASAHP Interprofessional Education Summit in Minneapolis, MN

October 8-9, 2018—Part Two of Leadership Development Program in St. Petersburg, FL

October 10-12, 2018—ASAHP Annual Conference in St. Petersburg, FL

Fall 2018—Institutional Profile Survey Conducted

October 16-18, 2019—ASAHP Annual Conference in Charleston, SC
AFFORDABLE CARE ACT DEVELOPMENTS

The Patient Protection and Affordable Care Act (ACA), more commonly known as Obamacare, is in its ninth year of existence. Because of its monumental scope and the controversies surrounding its enactment—not a single Republican in Congress voted to approve this legislation—it should come as no surprise that enough developments occur on a regular basis to warrant the devotion of an entire page of this newsletter in every issue for the past several years.

The Commonwealth Fund is one of many organizations that attempts to keep pace with all the ACA elements as they unfold. For example, based on the likelihood that recent actions by Congress and the Trump Administration are likely to disrupt the ACA marketplaces in 2019, leading to higher premiums for individuals and families, the Fund has discussed how reinsurance could help lower premiums and federal spending. Reinsurance protects insurers by limiting their exposure to high, unpredictable medical expenses incurred by their members. While it was a critical feature of the ACA marketplaces in their first three years, the reinsurance program subsequently was phased out, since it was assumed that insurers would gain enough experience to price their products with greater certainty. Nonetheless, the focus among some health policy experts is that reinsurance once again could stabilize the individual market. One possibility is for states to establish their own programs through the ACA’s innovation waiver program.

State Initiatives To Foster Effective Health Reform

Millions of individuals through the ACA were successful in obtaining health insurance coverage through expansion of state Medicaid programs. A joint venture between the federal government and the states, Medicaid continues on the front lines of several efforts to produce more effective health reform policies. Apart from Medicaid, however, states undertake other kinds of initiatives to benefit their residents. An illustration is legislation signed earlier this month by the governor of Vermont to enable that state to be the first to legalize the importation of prescription drugs from Canada, where high-cost drugs sell for much lower prices. Whether the law will take effect remains in doubt because the program will have to be certified by the U.S. Department of Health & Human Services (HHS). The Trump Administration is opposed to drug importation, citing concerns of the possibility of increasing the number of unsafe drugs entering the United States.

Federal Efforts To Lower Drug Prices, Increase Competition, And Reduce Out-Of-Pocket Costs

Vermont’s attempt to lower prices through importation competes with a plan announced by President Trump in May 2018. Known as American Patients First, the proposal represents a mix of policies already delineated in the White House budget proposal for fiscal year 2019 in addition to some new facets. The purpose is to address the following major aspects related to the cost of prescription drugs: high list prices, a lack of negotiating tools in government programs, rising out-of-pocket costs for consumers, and foreign governments that benefit unfairly from U.S. innovations. Consisting of both immediate actions and long-term strategies, it may be possible to achieve these objectives through administrative action rather than legislation.

Specific components include:

• Changing the Medicare program by offering free generic drugs to the aged, requiring Part D Medicare plans to pass on a portion of rebates to the consumer, and capping certain out-of-pocket costs for Part D beneficiaries.

• Reforming how drugs in Medicare Part B are paid for and potentially shifting more treatments into Part D, which is more competitive.

• Possibly requiring the disclosure of prices in direct-to-consumer (DTC) advertising.
DEVELOPMENTS IN HIGHER EDUCATION

The realm of higher education occupies a considerable space in the life of the United States. Developments involving thousands of academic institutions and millions of students pursuing degrees occur on a daily basis. Academic administrators must keep a close watch on emerging situations to determine if at some future point they will be affected by them. This newsletter of the Association of Schools of Allied Health Professions (ASAHP) is called TRENDS. Accordingly, it may be worth considering whether the following items signal noteworthy trends or belong more in the category of transitory events that warrant little sustained interest.

- For decades, assessments of performance by faculty have included student opinions of instructional quality. The University of Southern California recently announced that student evaluation of teaching (SETs) no longer will be an element of tenure and promotion review. A concern influencing this change is that student evaluations may be perceived as inherently favoring white men over women and minority faculty members. The university, however, intends to continue using student assessments to help faculty members to improve their instructional design.

- Data cited by the firm Eduventures indicate that in 2016, there were 236,000 academic programs offered by 6,700 Title IV eligible institutions of higher education in the U.S. That amount represents an increase of 34,500 academic programs since 2012, or one new program per institution per year, not counting program closures. Recently, there has been an increase in requests around special focus programs, so it is worth asking whether these kinds of niche programs, which often are sub-areas of broader academic fields, are a good idea. Prior to embarking on a new venture that may entail high risks, it would be worthwhile to consider the following questions: Does the proposed program play to an institution’s strengths and reputation in the market from the perspective of fitting into its mission and identity? Will the investment in a program be low due to already existing resources? Is the program needed to counter decreasing enrollments and will it attract enough students to cover costs and add revenue?

Building A Postsecondary Education For The 21st Century Through The HEA Reauthorization

The Committee for Economic Development of The Conference Board (CED) hosted a Capitol Hill briefing in the Rayburn House Office Building on April 30, 2018 to discuss how to build a postsecondary education for the 21st century through the reauthorization of the Higher Education Act (HEA). A distinguished group of panelists offered views on such matters as how higher education can do a more effective job of meeting the needs of students and the U.S. economy. Examples are:

Scott Pulsipher, President of Western Governors University, noted that around two-thirds of jobs are going to require some postsecondary credential, while only about 42% of adults currently have any postsecondary credential of any sort. It does not mean, however, that everyone needs a bachelor's degree. The traditional higher education model is going to have to change. The whole notion of "the stackable credential is going to become real," he said and "we’ll no longer talk about a four-year grad rate, because if I just scaffold my credentials, that may take 20 years."

Gordon Gee, President of West Virginia University, stated "If someone were to ask me what is the single-biggest issue facing higher education in this country right now — [other] people will say innovation, they would say financial issues and so forth. I think the biggest issue facing higher education right now is complacency." He said he has been a longtime advocate of the notion that leaders need to "blow up the box" in order for the industry to survive, getting rid of what he calls the "tyranny in the way we are organized" into restricted silos that prevent creativity.
QUICK STAT (SHORT, TIMELY, AND TOPICAL)

**Annual Report To The Nation On The Status Of Cancer**

According to the latest annual report to the nation on the status of cancer published in the journal *Cancer* on May 22 of this year, overall cancer death rates continue to decline for U.S. men, women, and children in all major racial and ethnic groups. Overall cancer incidence, or rates of new cancers, decreased in men and were stable in women from 1999 to 2014. In a companion study, researchers reported an increase in late-stage prostate cancers and leveling off in prostate cancer mortality after years of decline. For all cancer sites combined, black men and white women had the highest incidence rates compared with other racial groups, and black men and black women had the highest death rates compared with other racial groups. Non-Hispanic men and women had higher incidence and mortality rates than those of Hispanic ethnicity. The annual report is produced by the National Cancer Institute, the Centers for Disease Control and Prevention, the American Cancer Society, and the North American Association of Central Cancer Registries.

**Deaths From Falls Among Individuals 65 Years Of Age And Older—United States**

Nearly 30,000 Americans aged 65 or older died from a fall in 2016, up from 18,334 in 2007, according to a new report from the Centers for Disease Control and Prevention published on May 11, 2018. The death rate from falls rose 31% for seniors over the period, with the largest increase among adults aged 85 and older. State rates in 2016 ranged from 24.4 per 100,000 in Alabama to 142.7 in Wisconsin. Deaths from unintentional injuries are the seventh leading cause of death among older adults and falls account for the largest percentage of those deaths. “Health care providers should be aware that deaths from falls are increasing nationally among older adults but that falls are preventable,” the authors said. “Falls and fall prevention should be discussed during annual wellness visits, when health care providers can assess fall risk, educate patients about falls, and select appropriate interventions.”

**HEALTH TECHNOLOGY CORNER**

**Needle-Free Approach For Diabetics To Monitor Blood Glucose Levels**

The World Health Organization predicts that the global incidence of diabetes will increase from 171 million in 2000 to 366 million in 2030. An essential feature of diabetic care is the regular monitoring of blood glucose, which conventionally is carried out via an invasive finger-stick procedure. This approach suffers from significant user resistance, however, primarily because of the pain and discomfort associated with it. Currently, there is no available needle-free approach for diabetics to monitor glucose levels in the interstitial fluid. An article in the April 9, 2018 issue of the journal *Nature Nanotechnology* reports a path-selective, non-invasive, transdermal glucose monitoring system based on a miniaturized pixel array platform (realized either by graphene-based thin-film technology, or screen-printing). This approach paves the way to clinically relevant glucose detection in diabetics without the need for invasive, finger-stick blood sampling.

**Using Robots To Place Hospital Gowns On Patients**

A paper entitled “Deep Haptic Model Predictive Control for Robot-Assisted Dressing” scheduled for presentation on May 21-25, 2018 in Australia during the International Conference on Robotics and Automation (ICRA) describes efforts underway at the Georgia Institute of Technology to enable a robot to slide hospital gowns on the arms of patients. The machine doesn't use its eyes as it pulls the cloth. Instead, it relies on the forces it feels as it guides the garment onto a person's hand, around the elbow and onto the shoulder. The machine, a PR2, taught itself in one day, by analyzing nearly 11,000 simulated examples of a robot putting a gown onto a human arm. Some attempts were flawless. Others were spectacular failures -- the simulated robot applied dangerous forces to the arm when the cloth would catch on the individual’s hand or elbow.
AVAILABLE RESOURCES ACCESSIBLE ELECTRONICALLY

Behavioral Health Integration And Workforce Development

Providers, payers, and state policymakers are moving to implement behavioral health integration (BHI) models as evidence of their effectiveness builds. BHI models bring together behavioral health and medical health providers to improve outcomes and enhance the efficiency of the delivery system. Many states face an obstacle—the lack of a health care workforce that has the legal authority, training, and skills necessary to practice in these new models. How can the development of a workforce able to do this important work be accelerated? An issue brief from the Milbank Memorial Fund drawing on best practices, research, and previous experiences in health care workforce development focuses on a set of steps necessary to scale behavioral health integration: assessing workforce needs; identifying legal and policy barriers; and aligning training resources. The issue brief can be obtained at https://www.milbank.org/wp-content/uploads/2018/05/Milbank-Memorial-Fund-issue-brief-BHI-workforce-development-FINAL.pdf.

Open-Data Visualization Platform Features Higher Education Institutions

Data USA, a free-and-open data-visualization platform launched in April 2016, added profiles on more than 7,300 higher education institutions, with information including: tuition costs; demographics; acceptance rates; graduation rates, financial aid and endowments sizes, and student default rates, among other statistics gleaned from U.S. Department of Education's Integrated Postsecondary Education Data System (IPEDS). The platform, a collaboration between Deloitte, the Massachusetts Institute of Technology, and Datawheel, enables users to observe publicly available data in an integrated, visualized format. Users can compare yields, how many of the students accepted at a university decided to go there, and much more. A feature of the platform is that it includes automated comparison data from peer institutions. Data USA can be obtained at https://datausa.io/.

2018 Scorecard On Health System Performance

The Commonwealth Fund used recently available data to assess every state and Washington, DC on more than 40 measures of health care access, quality, efficiency, health outcomes and disparities. Overall, rising death rates, high levels of obesity, and gaps in care are pressing challenges for states. Regional differences in performance persist, as do within-state disparities. Many states are not receiving good value for their health care dollars. Hawaii, Massachusetts, Minnesota, Vermont, and Utah are the top-ranked states according to the Commonwealth Fund’s 2018 Scorecard on State Health System Performance, which assesses all 50 states and the District of Columbia on more than 40 measures of access to health care, quality of care, efficiency in care delivery, health outcomes, and income-based health care disparities. The 2018 Scorecard reveals that states are losing ground on key measures related to life expectancy. On most other measures, performance continues to vary widely across states. Even within individual states, large disparities are common. Nonetheless, on balance, the Scorecard finds more improvement than decline between 2013 and 2016 in the functioning of state health care systems. This represents a reversal of sorts from the first decade of the century, when stagnating or worsening performance was the norm. The Scorecard can be obtained at http://www.commonwealthfund.org/interactives/2018/may/state-scorecard/?omnicid=EALERT1396775&mid=thomas@asahp.org.
THE NEW HEALTH ECONOMY IN THE AGE OF DISRUPTION

According to the PricewaterhouseCoopers (pwc) Health Research Institute, while the U.S. health industry has experienced active deal-making in recent years, deals announced in recent months have been unusual. New business models are emerging in an industry that long has resisted significant change, signaling the possibility that profound disruption may occur. These new models—Vertical Integrators, Employer Activists, Technology Invaders and Health Retailers—largely involve new entrants combining with traditional players to offer consumers more convenient, affordable, and effective care while reducing costs and creating value and scale to compete more effectively. Their arrival in the industry should prompt players new and old to reconsider their roles, business models, and strategies.

The period October 2017-April 2018 involved an explosion in unusual deals with the potential to reshape the U.S. health ecosystem. CVS Health announced its intention to purchase Aetna for $69 billion. Cigna Corp. announced an agreement to buy Express Scripts Holding Co. for $67 billion. UnitedHealth Group’s Optum purchased DaVita Medical Group for $4.9 billion. Several unusual partnerships also have been announced, including one among Amazon, JPMorgan Chase & Co., and Berkshire Hathaway Inc. In 2017, 967 deals occurred in the U.S. health services market, including healthcare payers and providers. Thus, the health industry is undergoing seismic change generated by a collision of forces, including the shift from volume to value, rising consumerism, and the decentralization of care. This shifting terrain is creating uneven opportunities in the New Health Economy and likely will drive players new and established to reconsider their business models and strike the sorts of deals announced in the aforementioned six-month period. Some organizations will be driven to seek returns in new markets as their core revenues shrink. Others will find success creating value for other players, including consumers. Still others will thrive by building infrastructure for the emerging virtual health system.

BEHAVIORAL PHENOTYPING IN HEALTH PROMOTION

Self-monitoring is considered to be an effective tool for keeping individuals focused on their health through the use of metrics and goals for regulating their behavior. Many approaches to patient engagement highlight the benefits of feedback and self-monitoring as if most individuals naturally increase resolve when they encounter failure. These programs are premised on the belief that patients are eager to meet challenges with renewed effort. As cautioned, however, in a paper appearing in the May 22/29, 2018 issue of the *Journal of the American Medical Association*, these programs largely ignore individuals who, when they experience the same signal, become demoralized and avoidant. In actively avoiding worrisome feedback—whether real or anticipated—they disengage from otherwise beneficial programs or clinical care when monitoring is emphasized. Consequently, they do not benefit from monitoring and might be harmed.

The behavioral science literature affirms that when failure occurs, individuals have two kinds of reactions: emotional (How do I feel about this failure?) and cognitive (What caused this failure?) One group may react with emotions of despair or believe that the failure was out of their control. Given the same failure, others might feel only mild regret and a sense that they can correct course. When failure appears devastating and inevitable, avoidance behavior prevails. Suggested remedies involve: (1) Understanding who benefits from monitoring, who does not, and why. (2) Health promotion program designers need to utilize strategies from the psychology literature that help individuals learn from failure instead of being discouraged. (3) Behavioral phenotyping, such as helping clinicians distinguish patients more likely to be motivated by failure from those at risk of avoidance, and perhaps revealing other phenotypes yet unexplored. Changing health behavior in a more positive direction can be quite challenging. When anticipated results fail to materialize, both health personnel and their patients should try to move beyond feeling discouraged and continue to try to explore new ways of achieving desirable objectives.