PA VISION 2020 | Building AAPA's Strategic Plan

AAPA STRATEGIC PLANNING WHITE PAPER

Introduction

As 2015 concludes, the AAPA Board of Directors is embarking on development of a new strategic plan to guide the Academy and the PA profession through the year 2020. Building on the progress and many notable accomplishments achieved under the 2013-2015 strategic plan, the Academy's next strategic plan must continue the momentum towards achieving our vision for the profession of PAs transforming health through patient-centered, team-based medical practice. Healthcare remains a dynamic environment. Perhaps one of the few constants is the rapid growth of the PA profession and its role as a key contributor to the health of America.

Prior to developing strategic priorities, AAPA recognized the need to conduct a robust environmental scan, identifying the key trends that will affect PA practice in the years to come. The scan identified four key trends that can provide the basis for the development of our new strategic plan.

A brief summary of each of those four trends is provided below. The subsequent sections of this white paper expand on each of these trends, identifying the factors that are driving the trend and positing potential implications for the PA profession. Each section concludes with a series of questions to serve as the framework for discussions with PA leaders and the profession at large.

Four Key Trends Affecting Healthcare and PA Practice

1. **Medicine Is Not What It Used to Be**

- Medical knowledge is expanding exponentially
- Pharmaceutical innovation is changing the treatment of disease
- New devices and robotics are changing diagnosis and treatments
- Technology, innovation and big data are driving change
- Government and private payer policies are easing drug and technology approvals
- Consumer expectations are changing dramatically

2. **More Patients … More Complex Conditions**

- More patients—many with chronic, complex conditions—are seeking care
- Chronic conditions are driving frequency and cost of healthcare
- Longer lifespans and Baby Boomers reaching old age are increasing demand
- Increased availability of insurance is driving demand

3. Value-Based Reimbursement Is a Game-Changer

- Value-based reimbursement (VBR) is driving a new focus on quality and improved patient outcomes
- The Medicare program has accelerated the move from fee-for-service to value-based payment
- The private sector is on a similarly rapid transition course

4. The Marketplace Is Driving Industry Transformation

- Consolidation is the name of the game—both vertical and horizontal
- Physicians are increasingly becoming employees not owners
- Consumers are demanding accessibility and convenience, including retail clinics and web-based services
- New models of care are being developed; new employers are hiring PAs

These trends were first presented to PA leaders as a keynote presentation during the 2015 Leadership and Advocacy Summit (LAS) in March. During a subsequent breakout session, a group of approximately 50 state chapter leaders, specialty organization leaders, Board of Directors members, PA educators and PA students were surveyed using an audience response system to collect some initial perceptions regarding the trends.

When asked which trend will have the most profound impact on PA practice over the next three years, the group selected "Value-Based Reimbursement Is a Game Changer" and "The Marketplace Is Driving Industry Consolidation," selected by 43 percent and 40 percent of respondents respectively, as the trends perceived to be most significant. When asked to identify which trend presents the biggest threat to PA practice over the next three years, a majority of these leaders identified "The Marketplace Is Driving Industry Consolidation" as the top threat (59 percent of respondents). In contrast, when asked to identify which trend presents the greatest opportunity, the results were distributed more evenly, suggesting that each trend presents significant opportunities for the profession. Finally, respondents were asked to indicate how well PAs are adapting to each trend today. Somewhat to our surprise, these leaders indicated that PAs are adapting well to both the "Medicine Is Not What It Used to Be" (36 percent very well, 38 percent somewhat well) and "More Patients … More Complex Conditions" (40 percent very well, 44 percent somewhat well) trends. In contrast, PAs do not appear to be adapting as well to the "Value-Based Reimbursement Is a Game-Changer" (45 percent neutral, 17 percent somewhat poorly, 12 percent very poorly) and "Marketplace Is Driving Industry Consolidation" trends (33 percent neutral, 29 percent somewhat poorly, 10 percent very poorly) trends.

While the feedback received from this group of leaders was eye opening and informative, it is just a preliminary step in a long process. By way of this white paper we intend to continue the discussion over the next four months, engaging the profession and external stakeholders broadly to ensure the strategies we develop are as well informed as possible.

Call to Action

AAPA members are encouraged to join the discussion on our new social collaboration suite—the Huddle (http://huddle.aapa.org). Each month through October, PA leaders will be using The Huddle to facilitate a discussion on one of the trends, using some of the discussion questions included at the end of each section of this white paper. The discussions will be summarized and provided to the Board of Directors for consideration in developing the next strategic plan for the Academy, which will begin in early 2016.

Trend 1: Medicine Is Not What It Used to Be

THE PACE OF CHANGE IS INCREASING

Medical knowledge is increasing rapidly.[1] Sixty-five years ago, medical knowledge doubled approximately every 50 years.[2] Currently it is doubling roughly every year, and by 2020, it is anticipated to double every 73 days.[2] A vivid example of the exponential growth of medical knowledge can be found in the pace at which gene variants for common diseases are discovered—in the year 2000 only one or two were discovered annually; just seven years later, thousands were discovered in a single year.[3] This dynamic has the power to potentially revolutionize our current medical system and the way in which providers approach medical treatment.[3] Clearly, the growth of knowledge at this pace is not sustainable for any single provider.[4]

WHAT IS DRIVING THE TREND?

The growth of medical knowledge is driven by several factors, including: (i) technology, innovation and big data; (ii) consumer engagement; and (iii) government policies. The Human Genome Project is just one example of groundbreaking innovation and rapid evolution. Steered by the U.S. Department of Energy and the National Institutes of Health (NIH), the $3 billion dollar project was completed on April 14, 2003.[5] It allowed us, for the first time, to discern nature's comprehensive genetic blueprint for creating a human being.[6] The cost to sequence (determine the exact order of the base pairs in a segment of DNA) the first human genome was approximately $1 billion dollars and required 13 years to complete; in 2013 it cost from $3,000 to $5,000 dollars, with a timeframe of two days or less.[7] At the beginning of 2014, the total cost to sequence a human genome had plummeted even further—to less than $1,000 dollars.[8] Figure 1 shows the rapidly declining costs of genome sequencing. Although its ability to accurately forecast

[1] Gillam M, Feied C, Handler J, et al. The healthcare singularity and the age of semantic medicine. In: Hey T, Tansley S, Tolle K, eds. *The Fourth Paradigm: Data-Intensive Scientific Discovery*. http://research.microsoft.com/en-us/collaboration/fourthparadigm/4th_paradigm_book_part2_gillam.pdf. Accessed June 5, 2015.

[2] Densen P. Challenges and opportunities facing medical education. *Trans Am Clin Climatol Assoc*. 2011;122: 48–58.

[3] Carroll J. Trend: the future of knowledge. https://www.jimcarroll.com/2011/10/trend-the-future-of-knowledge/#.VXC4Vs9Viko. Accessed June 4, 2015.

[4] Newbury A. Cloud-based learning in health care. Hospitals and Health Networks Daily (2015). http://www.hhnmag.com/Daily/2015/January/cloud-learning-physicians-article-newbury. Accessed June 5, 2015.

[5] National Human Genome Research Institute. The human genome project completion: frequently asked questions, October 30, 2010. https://www.genome.gov/11006943. Accessed June 6, 2015.

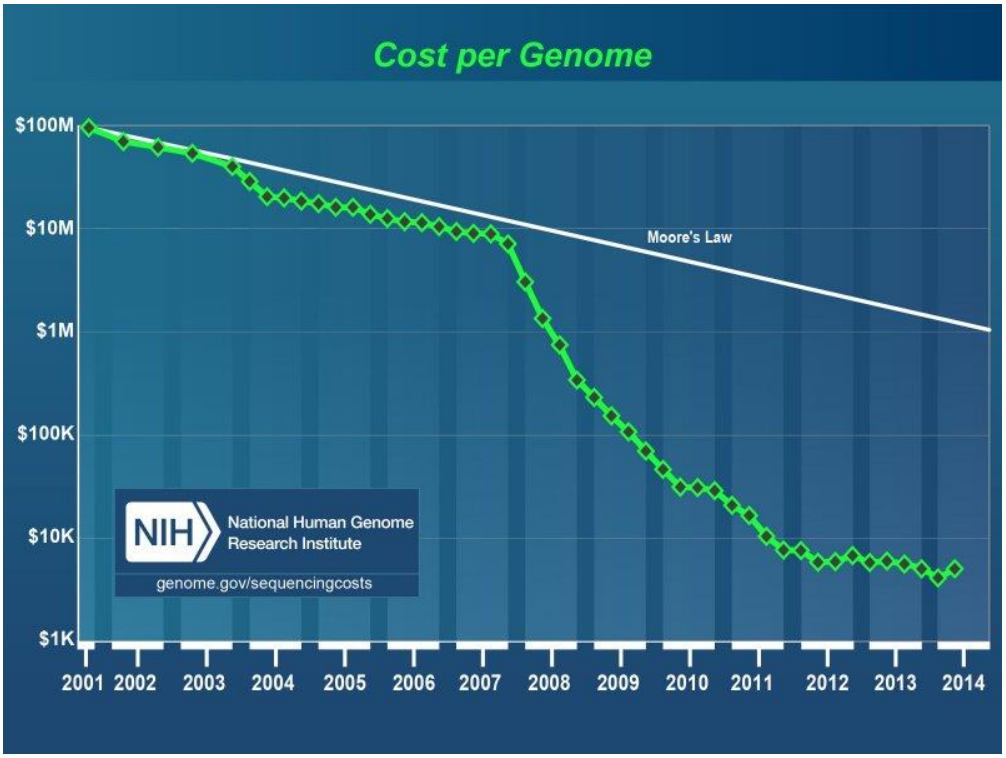
[6] National Human Genome Research Institute. The Human Genome Project completion: frequently asked questions. https://www.genome.gov/11006943. Updated October 30, 2010. Accessed June 6, 2015.

[7] Lewis T. Livescience Web site. Human genome project marks 10th anniversary. April 14, 2013. http://www.livescience.com/28708-human-genome-project-anniversary.html. Accessed June 6, 2015.

[8] Raj A. Soon, it will cost less to sequence a genome than to flush a toilet — and that will change medicine forever. *Business Insider*. October 2, 2014. http://www.businessinsider.com/super-cheap-genome-sequencing-by-2020-2014-10. Accessed June 5, 2015.

specific health events in individuals is uncertain, genome sequencing is invaluable to comprehending and synthesizing information about diseases and the discovery of novel treatments.[9]

Figure 1. Cost per Genome, 2001-2014



Consumer engagement also plays a critical role in the growth of medical knowledge, as evidenced by the use and ownership of smartphones and wearable health data tracking devices like Fit Bits and Apple Watches. In the last year alone, 62 percent of smartphone owners used their phones to look up information about a health condition.[10] Today it is evident that mobile technology has the capacity to revolutionize healthcare and clinical intervention. Numerous studies have assessed the use of wireless phones in healthcare and public health interventions, particularly in the compiling of information for healthcare research,[11] and in the furtherance of medical education and clinical practice.[12] Mobile health data is already being used in research. In a report released last fall, a pilot project alliance between GlaxoSmithKline and Medidata found that mHealth technologies can supply dependable FDA-compliant

[9] Kolata G. Study says DNA's power to predict illness is limited. *New York Times*. April 2, 2012. http://www.nytimes.com/2012/04/03/health/research/dnas-power-to-predict-is-limited-study-finds.html?_r=0. Accessed June 6, 2015.
[10] Pew Research Center. U.S. smartphone use in 2015. http://www.pewinternet.org/2015/04/01/us-smartphone-use-in-2015/. April 1, 2015. Accessed June 6, 2015.
[11] Blaya JA, Fraser HS, Holt B. E-health technologies show promise in developing countries. *Hlth Aff.* 2010; 29:244-251.
[12] Lindquist A, Johansson P, Petersson G, Saveman B-I, Nilsson G: The use of the personal digital assistant (PDA) among personnel and students in health care: a review. *J Med Internet Res.* 2008;10(4):e31. doi: 10.2196/jmir1038

data and enhance the clinical trial experience for patients.[13] This partnership facilitated the collection of more than 18 million FDA-compliant data points on movement and vital signs via mobile-enabled trials.[14] In another aspect of consumer engagement, the nation witnessed the ability of patient groups to raise millions of dollars for research through participation in events such as the ALS Ice Bucket Challenge.[15] Patient groups are also rich sources of data, who can provide insight into at-risk populations and serve as participants for trials.

Lastly, government policy continues to play a significant role in knowledge growth. In the coming years, it is anticipated that the passage of significant legislative and regulatory changes will not only speed up the approval process for new drugs and devices, but also fuel new discoveries. For example, in May 2015, the U.S. House of Representatives introduced the 21st Century Cures Act, with the objective of advancing the development and accelerating the approval of new pharmaceuticals and devices.[16] The legislation advocates for annual increases in the NIH's budget and also seeks to provide an additional $2 billion per year for five years to create the "NIH Innovation Fund."[17] Another beneficial provision of the legislation could make de-identified data from NIH-funded clinical trials more accessible to researchers.[18] In addition, as proposed, the bill modifies the evidence upon which high-risk devices may be authorized to include registries, case studies and medical literature in lieu of more arduous clinical trials.[19]

Innovation in the pharmaceutical industry is also changing the treatment of disease. Personalized medicine means the possibility of customized healthcare—of providing "the right patient with the right drug at the right dose at the right time."[20] The development of pharmacogenomics presents both a challenge and an opportunity for the pharmaceutical industry with regard to innovation and marketing, because drugs that are potentially tailored to only a small percentage of the population will not be so profitable.[21] Biological markers (also known as biomarkers)[22] provide a pathway to personalized medicine

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[13] Taylor N. GSK, Medidata report on positive pilot of mHealth in clinical trials. FierceBiotechIT Website. http://www.fiercebiotechit.com/story/gsk-medidata-report-positive-pilot-mhealth-clinical-trials/2014-11-18. Published November 18, 2014. Accessed June 6, 2015.

[14] Taylor N. GSK, Medidata report on positive pilot of mHealth in clinical trials. FierceBiotechIT Website. http://www.fiercebiotechit.com/story/gsk-medidata-report-positive-pilot-mhealth-clinical-trials/2014-11-18. Published November 18, 2014. Accessed June 6, 2015.

[15] ALS Association. ALS ice bucket challenge takes U.S. by storm. http://www.alsa.org/news/archive/als-ice-bucket-challenge.html?referrer=https://www.google.com. Published August 12, 2014. Accessed June 6, 2015.

16 21st Century Cures Act, HR 6, 114th Cong, 1st Sess (2015). http://docs.house.gov/meetings/IF/IF00/20150519/103516/BILLS-1146ih.pdf

1721st Century Cures Act, HR 6, 114th Cong, 1st Sess, § 1002 (2015). http://docs.house.gov/meetings/IF/IF00/20150519/103516/BILLS-1146ih.pdf

18 21st Century Cures Act, HR 6, 114th Cong, 1st Sess, § 1121 (2015). http://docs.house.gov/meetings/IF/IF00/20150519/103516/BILLS-1146ih.pdf

19 21st Century Cures Act, HR 6, 114th Cong, 1st Sess, § 505F (2015). http://docs.house.gov/meetings/IF/IF00/20150519/103516/BILLS-1146ih.pdf

[20] US Food and Drug Administration. Personalized medicine: FDA's unique role and responsibilities in personalized medicine. http://www.fda.gov/scienceresearch/specialtopics/personalizedmedicine/default.htm. Updated January 30, 2015. Accessed June 6, 2015.

[21] Ferrara J. Personalized medicine: challenging pharmaceutical and diagnostic company business models. *McGill J Med*. 2007;10(1):59-61. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2323543/pdf/mjm1001p059.pdf. Accessed June 6, 2015.

[22] Biomarkers Definitions Working Group. Biomarkers and surrogate endpoints: preferred definitions and conceptual framework. *Clin Pharmacol Ther* 2001;69(3): 89–95. doi: 10.1067/mcp2001.113989.

by indicating the precise beneficial and healing intervention.[23] This increases the likelihood of foreseeable outcomes and improved effectiveness.[24] To that end, tests and targeted drugs and treatments are advancing rapidly and are likely to accelerate. In addition, the FDA is aiming to expedite the drug approval process.[25] The effects of research breakthroughs and FDA process improvements are evident in the 2014 results. In what has been described as a "banner year for pharmaceutical innovation,"[26] the FDA approved a record 41 new drugs and biologics in 2014, the most since 1996 when the agency approved 53.[27] Further, of the total drug approvals, 41% were rated "first-in-class" drugs—meaning drugs that, for example, use a new and unique mechanism of action for treating a medical condition.[28] One example is the approval of the first cure for hepatitis C—a disease that kills 15,000 Americans each year, according to the U.S. Centers for Disease Control and Prevention (CDC).[29]

In addition to advancing drug treatments, more accurate and less invasive diagnostic and treatment tools are also being introduced. For example, the hand-held Raman spectroscopy probe is a new device that allows brain cancer patients to live longer by enabling surgeons, for the first time, to accurately detect nearly all invasive brain cancer cells in real time during surgery.[30] Even more promising tools are on the horizon:

- 3-D printing has the potential to create human tissue, and even human organs, using living cell mixtures[31]
- Stem cell research shows promise for human tissue and organ regeneration
- Robotics is allowing more precise and intricate interventions
- Electronic health records (EHRs)—when the kinks are worked out—are anticipated to make possible a new generation of data-based decision support tools

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[23] Ferrara J. Personalized medicine: challenging pharmaceutical and diagnostic company business models. *Mcgill J Med*. 2007;10(1):59-61. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2323543/pdf/mjm1001p059.pdf. Accessed June 6, 2015.

[24] Ferrara J. Personalized medicine: challenging pharmaceutical and diagnostic company business models. *McGill J Med*. 2007;10(1):59-61. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2323543/pdf/mjm1001p059.pdf. Accessed June 6, 2015.

[25] US Food and Drug Administration. White paper: FDA and accelerating the development of new pharmaceutical therapies. http://www.fda.gov/AboutFDA/ReportsManualsForms/Reports/ucm439082.htm. Updated March 23, 2015. Accessed June 6, 2015.

[26] Rosenberg R. FDA approves record 41 new drugs in 2014, over 40% for rare diseases. CenterWatch News Online Web site. http://www.centerwatch.com/news-online/article/7433/fda-approves-record-41-new-drugs-in-2014-over-40-for-rare-diseases#sthash.TVOrkNGd.dpbs. Published January 16, 2015. Accessed June 6, 2015.

[27] Sullivan T. FDA approves 41 new medicines in 2014, the most since 1996. Policy and Medicine Web site. http://www.policymed.com/2015/01/fda-approves-41-new-medicines-in-2014-the-most-since-1996.html. Published January 5, 2015. Accessed June 6, 2015.

[28] US Food and Drug Administration Center for Drug Evaluation and Research. Novel New Drugs 2014 Summary. http://www.fda.gov/downloads/Drugs/DevelopmentApprovalProcess/DrugInnovation/UCM430299.pdf. Published January 2014. Accessed June 6, 2015.

[29] Centers for Disease Control and Prevention. Hepatitis C FAQs for the Public. http://www.cdc.gov/hepatitis/hcv/cfaq.htm. Updated May 31, 2015. Accessed June 6, 2015.

[30] McGill Faculty of Medicine Electronic Newsletter. Revolutionary new probe zooms in on cancer cells. McGill Publications Web site. http://publications.mcgill.ca/medenews/2015/02/11/revolutionary-new-probe-zooms-in-on-cancer-cells/. Published February 11, 2015. Accessed June 6, 2015.

[31] Griggs B. The next frontier in 3-D printing: human organs. CNN.com. http://www.cnn.com/2014/04/03/tech/innovation/3-d-printing-human-organs/. Updated April 5, 2015. Accessed June 6, 2015.

Technology is also changing patient expectations. Patients have become consumers of healthcare as they are of any other product, and when they enter the exam room they bring with them those same expectations of consumer empowerment and customer service. Some of their demands are for cutting edge medications, EHRs, convenient care, greater opportunities for outpatient care, and improved care coordination.[32] Online access to medical information means that patients often believe they know what condition they have and what treatment they want. Sometimes they are right; sometimes they are not. Furthermore, access to bad information can have disastrous consequences, as demonstrated by the measles outbreak earlier this year that was in part a result of the anti-vaccination movement.[33]

Also, there is new hope for telemonitoring services. Some technologies are already available that automatically send information about glucose test results and medication dosages to a healthcare provider. There is some indication that patients who use such services are more likely to check their blood sugar regularly, and follow their diet and medication plans.[34] Additional encouraging applications for telemonitoring include chronic illnesses such as cardiopulmonary disease, asthma and heart failure. This use of information technology for remote patient monitoring allows for the reduction of chronic disease complications due in part to better follow-up care; provides healthcare services while decreasing unnecessary hospitalization; and reduces patient travel, time off from work, and overall costs.

IMPLICATIONS FOR PAS

For PAs, these changes in modern medicine signal the continuing importance of lifelong learning. In addition, they indicate that the team-based care model will become *the* standard, since no single provider, including PAs, will be able to master the growing medical knowledge base. Practice-based learning and improvement are critical to closing the gap between the rapid progression of scientific understanding and patient care. The PI-CME requirement for PA certification maintenance is intended to foster development of that competency, helping PAs provide care that more accurately reflects current scientific understanding.

Lastly, tech savviness and the ability to manage information will be an integral requirement to practice. The need to manage greater amounts of information about patients will require a mastery of EHR systems, both to record data and to extract information to more effectively manage care. A PA's expanded skill set will have to include knowledge of medical technology in order to function in a highly complex patient care environment.

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[32] Doulgeris J, Bonvicino N. The top ten changes in patient expectations for 2013. Physicians Practice. http://www.physicianspractice.com/blog/top-ten-changes-patient-expectations-2013. Published April 25, 2013. Accessed June 6, 2015.

[33] Salzberg S. Anti-vaccine movement causes worst measles epidemic in 20 years. Forbes.com. http://www.forbes.com/sites/stevensalzberg/2015/02/01/anti-vaccine-movement-causes-worst-measles-epidemic-in-20-years/. Published February 1, 2015. Accessed June 6, 2015.

[34] Luley C, Blaik A, Reschke K, et al. Weight loss in obese patients with type 2 diabetes: effects of telemonitoring plus a diet combination - the active body control (ABC) program. Diabetes Research and Clinical Practice. 2011;91(3):286-292. doi: http://dx.doi.org/10.1016/j.diabres.2010.11.020.

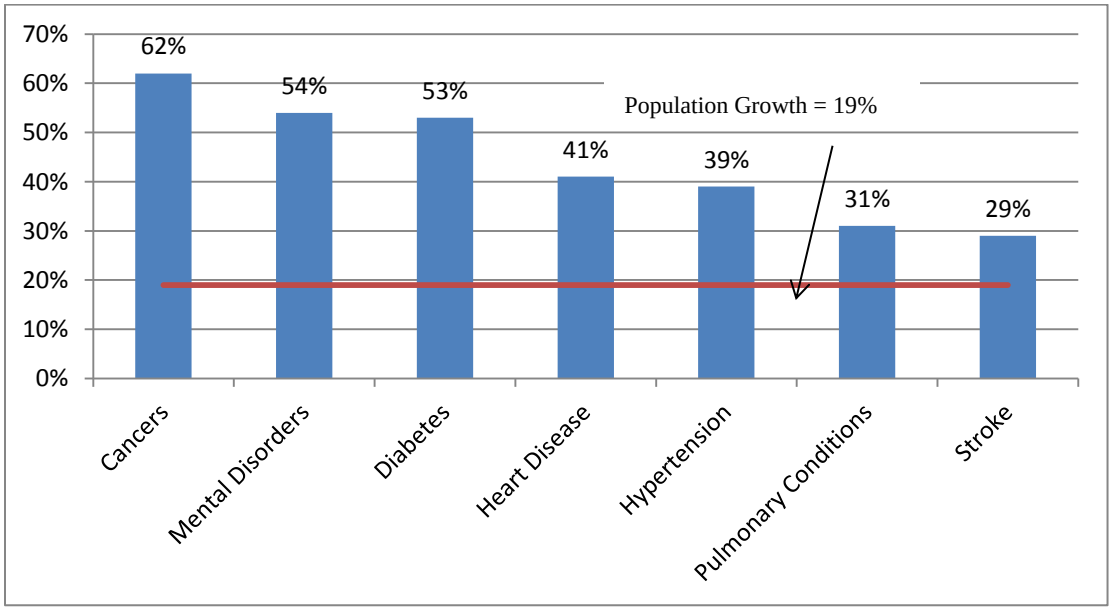
QUESTIONS FOR DISCUSSION:

1. What are the existing barriers that prevent PAs from fully participating in or taking advantage of the latest pharmaceutical, technological and medical innovations?
2. What educational opportunities on new technology should AAPA provide to advance life-long learning?
3. Given that PAs have always practiced medicine using a team-based care model, what makes PAs good team players as compared to other providers?
4. What prevents a full understanding and implementation of team-based care?

Trend 2: More Patients … More Complex Patients

The second trend that has implications for the PA profession is that there has been a significant increase in the number of patients in recent years, as well as an increase in the proportion of patients with complex, chronic conditions. Chronic conditions are now the leading cause of death and disability in the United States.[35] From 2003 to 2023, the U.S. population is projected to grow by 19 percent (see Figure 2). However, the reported cases of chronic disease are expected to grow at a much higher rate. For example, there is expected to be a 62 percent growth in the number of cancer cases.[36] The 2012 National Health Interview Survey examined 10 chronic conditions: hypertension, coronary heart disease, stroke, diabetes, cancer, arthritis, hepatitis, weak or failing kidneys, current asthma, and chronic obstructive pulmonary disease (COPD). The researchers found that about half of adults (117 million) in the United States have one or more of these chronic health conditions, and one in four adults has multiple chronic conditions.[37] Between 2000 and 2030 the number of Americans with chronic conditions is projected to increase by 46 million people, a 37 percent increase.[38] All of these patients will require more complex and sustained care. In fact, in the 2013 AAPA Annual Survey, 60 percent of PAs said they already regularly see patients with three or more comorbidities.

Figure 2. Projected Rise in Cases of Chronic Diseases, 2003–2023



Source: DeVol R, Bedroussian A. *An Unhealthy America: The Economic Burden of Chronic Disease*. Milken Institute; 2007.

[35] Chronic diseases: the leading causes of death and disability in the United States. Centers for Disease Control and Prevention. http://www.cdc.gov/chronicdisease/overview. Updated May 18, 2015. Accessed June 18, 2015.
[36] DeVol R, Bedroussian A. *An Unhealthy America: The Economic Burden of Chronic Disease*. Milken Institute. http://assets1c.milkeninstitute.org/assets/Publication/ResearchReport/PDF/chronic_disease_report.pdf. Published October 2007.
[37] Ward BW, Schiller JS, Goodman RA. Multiple chronic conditions among US adults: a 2012 update. *Prev Chronic Dis*. 2014;11:130389. DOI: http://dx.doi.org/10.5888/pcd11.130389.
[38] Anderson G. Chronic care: making the case for ongoing care. Robert Wood Johnson Foundation. http://www.rwjf.org/en/library/research/2010/01/chronic-care.html. Published February 2010.

WHAT IS DRIVING THE TREND?

Treatment of chronic conditions is one important driver of the cost of healthcare delivery. Not surprisingly, those with chronic conditions are the most frequent users of healthcare. Data from 2010 suggests that 86 percent of healthcare spending was for the approximately 50 percent of the population who have one or more chronic conditions. People with multiple chronic conditions account for 70 percent of all inpatient stays, 83 percent of all prescriptions, and 64 percent of all clinician visits.[39] Estimates from 2003 indicate that just seven chronic diseases cost the U.S. economy $1.3 trillion a year; by 2023, those costs are expected to reach $4.2 trillion a year.[36] Looking at just one of those chronic diseases—diabetes—helps provide valuable insight into this situation. In 2012, about 9.3 percent of the U.S. population had diabetes; among those over age 65, almost 26 percent had diabetes. The total estimated cost of diagnosed diabetes in the United States that year was $245 billion—$176 billion in direct medical costs and $69 billion in decreased productivity.[40]

Three factors seem to be driving this increase in the number of patients and the proportion of patients with complex, chronic conditions. First, people are living longer, and the Baby Boomers are now entering old age. Second, our lifestyle choices are catching up to us. Third, more people are seeking care because the ACA has increased access to insurance and healthcare.

The first factor that is contributing to the influx of patients and to the increase in the number of patients with chronic conditions is the aging population. In 2011, the first Baby Boomers reached age 65, making them eligible for Medicare. In 2010, 13 percent of the U.S. population was age 65 and older. By 2050, nearly 21 percent of the population will be 65 or older.[41] Additionally, people are living longer. Between 1970 and 2011, U.S. life expectancy at birth increased from 70.9 years to 78.7 years.[42] This dramatic shift in the age of the population means that a higher percentage of the patients seen will be over age 65, which will drive up demand for health services. People over age 65 visit physician offices two to three times more often than any other age cohort.[43] They are also from two to 10 times more likely to be hospitalized.[44]

Secondly, lifestyle choices are contributing to the rise in chronic conditions and the number of individuals seeking healthcare. Only 20 percent of adults meet the recommended levels of both aerobic activity and muscle strengthening.[45] Forty-seven percent of U.S. adults have at least one major risk factor for heart disease or stroke: uncontrolled high blood pressure, uncontrolled high LDL cholesterol, or being

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[39] Gerteis J, Izrael D, Deitz D, et al. Multiple chronic conditions chartbook. Agency for Healthcare Research and Quality. AHRQ Pub. No. 14-0038. Published April 2014. Accessed June 18, 2015.
[40] Centers for Disease Control and Prevention. National diabetes statistics report: estimates of diabetes and its burden in the United States. http://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf. Published 2014. Accessed June 3, 2015.
[41] West L, Cole S, Goodkind D, et al. 65+ in the United States: 2010 Report. US Census Bureau, P23-212. Published June 2014. Accessed June 3, 2015.
[42] Life expectancy at birth. OECD iLibrary Web site. doi: 10.1787/27e0fc9d-en. Accessed February 3, 2015.
[43] National ambulatory medical care survey: 2010 summary tables. Center for Disease Control and Prevention. http://www.cdc.gov/nchs/data/ahcd/namcs_summary/2010_namcs_web_tables.pdf. Accessed February 3, 2015.
[44] National Hospital Discharge Survey: 2010. Number and rate of hospital discharges table. Centers for Disease Control and Prevention. http://www.cdc.gov/nchs/data/nhds/1general/2010gen1_agesexalos.pdf. Updated August 28, 2012. Accessed February 3, 2015.
[45] Exercise or physical activity. Centers for Disease Control and Prevention Web site. http://www.cdc.gov/nchs/fastats/exercise.htm. Accessed on February 3, 2015.

a current smoker. In 2012, nearly 20 percent of American adults still smoked.[46] Furthermore, rates of obesity have been rising rapidly and are predicted to continue to rise. In 2012, 69 percent of U.S. adults were overweight (including those who were obese), and 35 percent were obese.[47] If obesity rates continue on their current trajectory, by 2030, more than 44 percent of U.S. adults would be obese.[48] Lack of physical activity, smoking, and obesity significantly increase the risk of chronic disease.

Finally, increased access to insurance due to the ACA is increasing the demand for healthcare. The latest nonpartisan budget forecast by the Congressional Budget Office showed that there was a 5 percent increase in the number of insured Americans in 2014; the same report showed that figure ballooning to 12 percent (from the 2013 baseline) by 2016.[49] Recent studies by the Health Resources and Service Administration (HRSA) suggest that the greatest demand for services is likely to be in primary care. Based on current patterns, this increased demand would result in a projected shortage of approximately 20,400 full-time equivalent (FTE) physicians by 2020. HRSA notes, however, that the supply of PAs and NPs is projected to grow rapidly and could mitigate the projected shortage. To make that happen, PAs and NPs must be effectively integrated into the primary care delivery system. If that happens, the physician shortfall could be reduced by two-thirds, to as few as 6,400 FTE.[50]

When the PA leaders at LAS were surveyed regarding the increase in the number of patients and the proportion with complex, chronic conditions, 84 percent of respondents thought that PAs are adapting "somewhat well" or "very well" to this trend. Data from the Kaiser/Commonwealth Fund 2015 National Survey of Primary Care Providers confirms this perception of the PA leaders. According to the Kaiser/Commonwealth survey, 64 percent of PAs and NPs say that since January 2014, they have seen either an increase in the number of Medicaid patients they serve or an increase in patients who were previously uninsured. However, PAs believe this is having little impact on their ability to provide high-quality care. Sixty-three percent of PAs and NPs surveyed reported no change in their ability to provide high-quality care to patients since January 2014. Approximately 20 percent of PAs and NPs said care had actually improved, while similar percentages reported that it had gotten worse.[51]

IMPLICATIONS FOR PAS

This trend has significant positive implications for the PA profession. Particularly, demand for PAs is at an all-time high. PAs provide acute, chronic and preventive care for all populations and in all settings—home, office, hospital and urgent care centers. PAs' rich foundation of general medical training and their

[46] Chronic diseases: the leading causes of death and disability in the United States. Chronic Disease Prevention and Health Promotion Web site. http://www.cdc.gov/chronicdisease/overview. Accessed on February 3, 2015.
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ability to move between specialties and settings make them extremely marketable and valuable to employers. There will be increased opportunities everywhere, including medically underserved areas, and a particularly high demand for providers with training and experience in geriatrics. Regardless of specialty, every PA is having productive conversations about lifestyle changes with patients. More patients with more complex, chronic conditions leads to the conclusion that America needs more PAs and that PAs need to practice at the top of their education and experience.

Despite these positive implications, some believe that the flexibility that allows PAs to change specialties and settings to meet the growing demand could also create potential barriers for the profession. Due to the increasing complexity of care, it takes longer to provide new hires with the training that they need to succeed in their job and provide quality care to patients. Limiting the turnover and retaining qualified PA staff to care for patients with complex conditions can be a challenge as PAs are frequently changing to new specialties or settings where they do not have prior experience. PAs need tools to communicate with hospital/practice administration regarding the cost of turnover and the importance of retaining experienced PAs to improve patient care, particularly for those patients with complex conditions.

QUESTIONS FOR DISCUSSION:

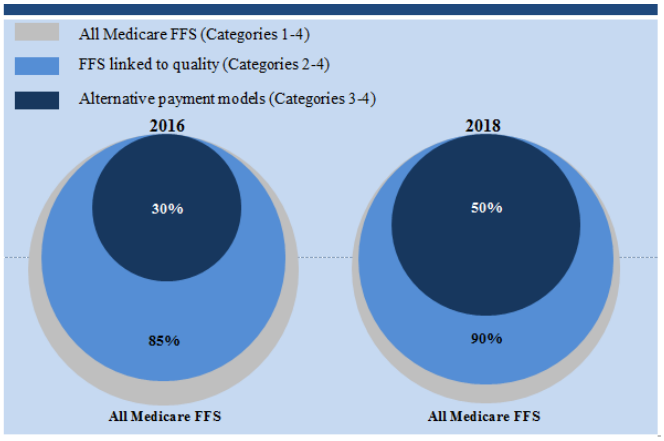
1. Are PAs appropriately prepared to provide quality care to a growing geriatric population? If not, how can AAPA support you in this mission?
2. With the increasing complexity of patients, are there areas where advanced training with recognition is beneficial, in order to help demonstrate competence?
3. Should the profession be concerned that more PAs are choosing specialty positions over primary care? If yes, why? If no, why not?
4. With the growing demand for PAs, how important is it for the public, employers, and legislators to understand what a PA is? How can AAPA help support this?

Trend 3: Value-Based Payment System Is a Game Changer

The move from fee-for-service payments, which reimburse for the quantity of patients seen and services provided, to value-based reimbursement (VBR), in which reimbursement is based on quality and outcomes, has started to accelerate. Public and private payers and providers are boldly shifting resources and setting targets that focus on achieving value, which is a combination of overall patient outcomes, safety and experience relative to their cost.

On January 26, 2015, the U.S. Department of Health and Human Services (HHS) announced a goal of transitioning 85 percent of Medicare fee-for-service reimbursement to value-based payments by 2016 and 90 percent by 2018, and shifting 30 percent of payments to alternative payment models by 2016 and 50 percent by 2018.[52]

Figure 3. Target Percentage of Medicare FFS Payments Linked to Quality and Alternative Payment Models in 2016 and 2018



Source: Centers for Disease Control and Prevention. Better Care. Smarter Spending. Healthier People: Paying Providers for Value, Not Volume.

Figure 3 shows the projected increase in the percentage of Medicare payments linked to quality. Each category of the HHS payment taxonomy framework represents a different degree of linkage to quality—with category 1 having no link to quality and category 4 having the highest.

Private payers and providers are also heightening their commitment to VBR. In 2014, the McKesson Health Solutions' report, "The State of Value-Based Reimbursement," found that 90 percent of payers and 81 percent of providers already offered a mix of fee-for-service and value-based reimbursement.[53] Both payers and providers expect the proportion of fee-for-service payments to decrease significantly over the next five years as they continue to move toward value. The McKesson report also predicted that by 2020, VBR will make up two-thirds of the market, up from one-third today.[53]

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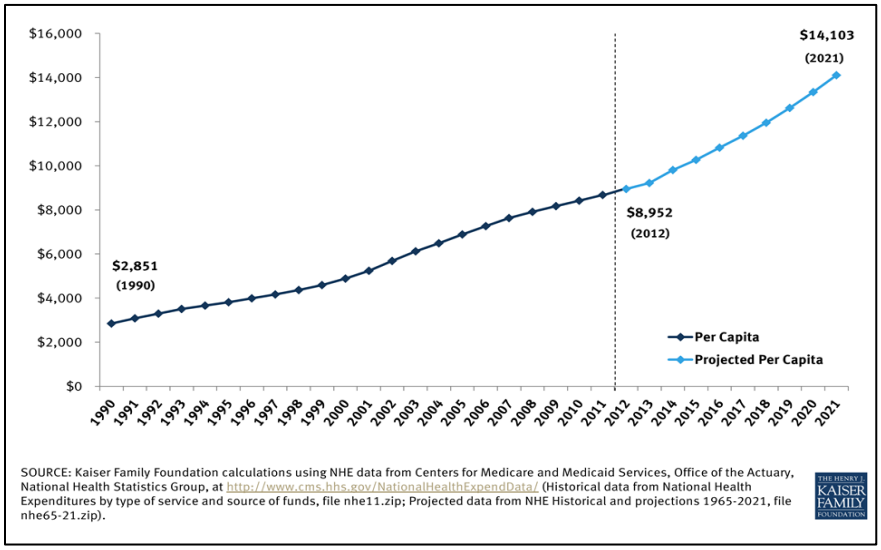
Private payers have also announced that they are committed to significantly increasing their payments tied to value-based arrangements.[54] For instance, UnitedHealth Group plans to increase VBR from 36 billion in 2014 to 65 billion by 2018,[55] while Aetna plans to increase the percent of claims paid for value-based care from 28 percent today to 50 percent by 2018.[56] A private sector consortium of top health systems and payers plans to move 75 percent of their businesses into value-based arrangements by 2020.[57]

WHAT IS DRIVING THE TREND?

Rising national healthcare costs and the increasing recognition of inefficiencies and waste in the system paved the way for the transition from fee-for-service to value-based reimbursement. From 1970 to 2000, U.S. healthcare spending increased 18-fold, from $75 billion to $1.4 trillion.[58] And just 13 years later, it had doubled again to $2.9 trillion.[59] Looking ahead, the Kaiser Family Foundation has projected a 57 percent increase in national health expenditures per capita from 2012 to 2021 (see Figure 4).[60]

Figure 4. National Health Expenditures per Capita, 1990-2021



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These widely acknowledged challenges and the desire to provide better quality care to all patients helped pave the way for the passage of the ACA in 2010. One of the ACA's key goals is to strengthen healthcare by improving healthcare quality and patient safety while reducing cost.[61] The policy associated with this goal helped establish the framework for the transition to value-based reimbursement. For instance, the ACA encouraged the establishment of accountable care organizations (ACOs), which incentivize providers to better coordinate patient care and keep patients healthy and out of the hospital. Since the passage of the ACA, the number of ACOs has grown from 41 to 606 in just three years—and many of these new ACOs are already documenting cost savings and improved patient care.[53]

IMPLICATIONS FOR PAS

When surveyed, 43 percent of PA leaders (the highest percentage for any of the trends) indicated that of the four trends the transition to VBR would have the most profound impact on PA practice. PA leaders feel that this trend provides both opportunities and threats to PA practice. They are excited about the opportunities for increased teamwork, collaboration, whole patient care, quality and transparency that VBR affords. However, there is still some confusion and concern about how HHS' lofty goals for the expansion of VBR will be implemented and whether adequate resources, training and support will be provided during this time of transition. HHS has not yet provided many details on these questions.

And at least one answer likely lies within the PA profession. As the profession continues to rapidly grow PAs are increasingly expanding their role in value-based care and playing a critical role in alternative care models like ACOs.[62] In fact, a Health Leaders magazine survey of hospital and health systems executives found that the number one anticipated investment in moving towards value-based systems is improving access to PAs and NPs.[63] Also, because PAs have often taken on the role of coordinating important aspects of patient care and treatment, the profession is in a great position to increasingly take the lead on important discussions from the front end on how to transform care within their units all the way to the C-Suite.

QUESTIONS FOR DISCUSSION:

1. How do you think VBR will impact how PAs practice and the delivery of patient care? Will this affect whether PAs practice in primary care or specialties?
2. Do you think you have a good understanding of VBR? What topics/questions related to VBR are uppermost in your mind?
3. How do you think VBR will shape your relationship with physicians, other healthcare professionals and healthcare administrators? What are the biggest opportunities for and barriers to increased collaboration?
4. Are PAs part of your employer's strategy to successfully transition from fee-for-service to VBR? What role do you have or would you like to have in implementing/advancing the transition to VBR and an overall focus on quality of care?

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Trend 4: The Marketplace Is Driving Industry Transformation

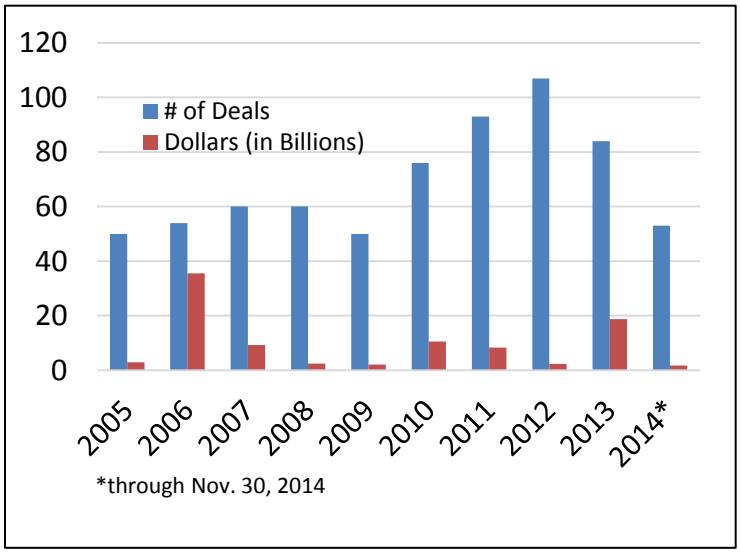
CONSOLIDATION IS THE NAME OF THE GAME

Consolidation of hospitals and health systems didn't begin with passage of the ACA in 2010, but the trend has accelerated since the passage of the reform bill. Between 2009 and 2014, hundreds of mergers worth billions of dollars have occurred, a trend that is expected to continue with increasingly complex deals[64] (see Figure 5).

Practices, hospitals and health systems consolidate for a variety of reasons. Among the benefits are:

- Economies of scale
- Access to capital
- Increased bargaining power
- Improved patient care coordination, for better efficiency[65]

Figure 5. Hospital Mergers and Acquisitions Number of Deals and Dollar Value, 2005-2014



Source: Gooch K. Breaking down the 5 most interesting hospital M&A deals of the year. *Becker's Hospital Review*. December 11, 2014.

In 2008, the top 100 hospitals accounted for 40 percent of all hospital spending, a share that will increase to 60 percent by 2020 because of consolidations.[66] But merger alone is not enough to increase capacity and achieve financial health. New payment incentives for meeting quality, efficiency and patient satisfaction goals, and penalties for missing them, require more efficient operations and medical staffs that are working closely with the new system, to better coordinate care, reduce inefficiencies and earn the incentives.[65]

[64] Gooch K. Breaking down the 5 most interesting hospital M&A deals of the year. *Becker's Hospital Review*. Published December 11, 2014.
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WHAT IS DRIVING THE TREND?

What are the factors driving this significant transformation?

- A system of hospitals can operate far more efficiently than one hospital alone.
- Increased access to capital is a major incentive for merger. Small, independent hospitals and medical practices struggle to raise capital. Merging can provide capital for renovations, information technology, other improvements and expansion.
- These consolidated groups are able to bring greater bargaining power to the table on everything from value-based purchasing, to insurance company negotiations, to real estate transactions. Many economists predict that mergers will push healthcare prices higher resulting from the increased bargaining power of merged systems.[67,68,69]

Consolidation can improve efficiencies as well. Health systems that focus on care coordination stand to doubly benefit—efficiencies from consolidation and efficiencies from improved patient outcomes that lower costs.[70]

These factors are also pushing a move of physicians toward employment by hospitals, as shown in Figure 6. The percentage of physician specialists employed by hospitals increased five-fold from 2000 to 2012,[71] while the percentage of physicians in private practice decreased to 39 percent from 57 percent.[72] Meanwhile, the share of medical practices owned by hospitals more than doubled from 2002 to 2008.[73]

The combination of these factors means that employment opportunities for PAs are increasing in health systems, not in private practice.

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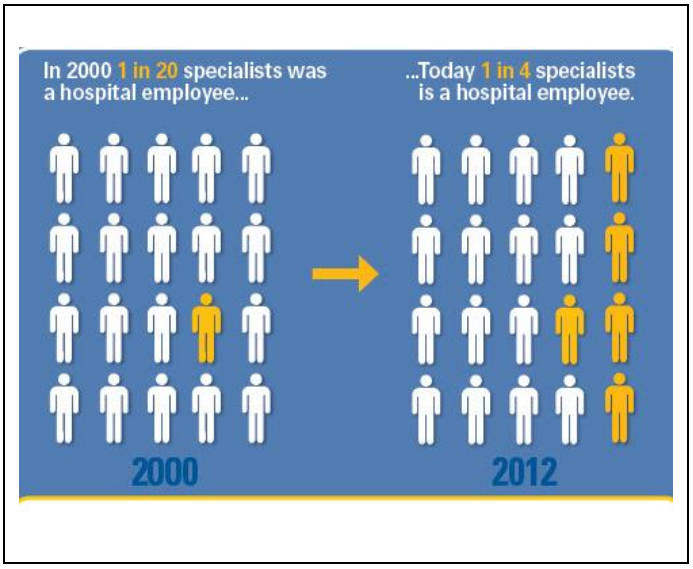
Figure 6. Physicians Are Becoming Hospital Employees



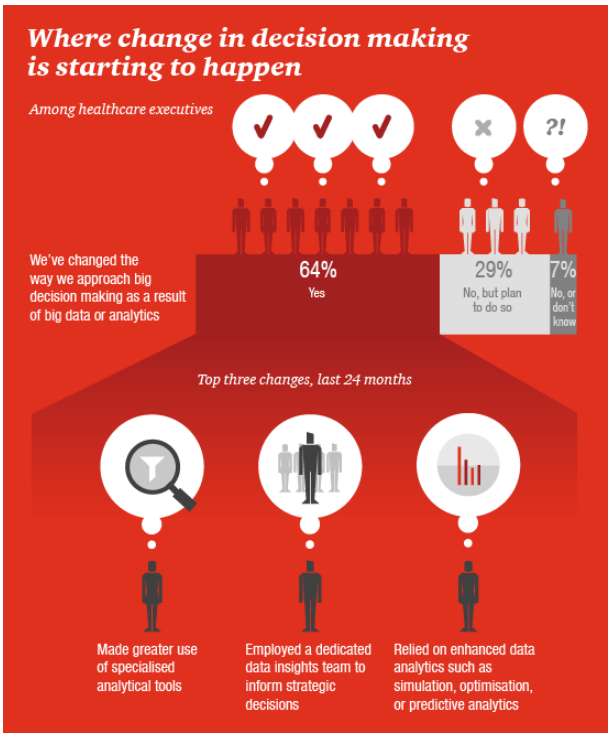
Source: America's Health Insurance Plans. Provider consolidation: less competition and higher costs. http://www.ahipcoverage.com/wpcontent/uploads/2012/11/ProviderConsolidation.

AVAILABILITY OF DATA IS CHANGING THE WAY DECISIONS ARE MADE

As more and more data and analytics become available, healthcare executives are using the information to make decisions about how healthcare can be provided "faster, better, cheaper," according to international audit and consulting company PricewaterhouseCoopers (PwC)[74] "More healthcare executives relied on data and analytics than experience or intuition when making their last big decision, PwC states on its website. "Increasingly they're relying on dedicated insight teams to help them make the decisions that matter most."

[74] PricewaterhouseCoopers Global Data and Analytics Survey. How is decision making changing in healthcare as a result of data and analytics? PwC Web site. www.pwc.com/gx/en/issues/data-and-analytics/big-decisions-survey/industry/healthcare.jhtml. Published September 2014.

Figure 7. Where Change in Decision Making Is Starting to Happen



Source: Data and analytics for healthcare industry: PricewaterhouseCoopers.
www.pwc.com/gx/en/issues/data-and-analytics/big-decisions-survey/industry/healthcare.jhtml

IMPLICATIONS FOR PAS

This industry transformation is causing not only financial changes, but structural, technological and cultural changes within the provider community. The transformation of the healthcare marketplace holds promise for PAs. The profession stands to benefit from more work settings, new care models, better opportunities and different employers. Despite consolidations, PAs are finding themselves with more choices about where they work and in what environment. Not surprisingly, most new opportunities are found in consolidated health systems, not small private practices.

The traditional "physician as employer/PA as employee" model is becoming less and less the rule, which may be leading to fundamental changes in the PA practice model. When decisions about hiring, compensation, team structure, workload and roles are being made by system executives rather than by a single physician hiring one or two PAs, physicians may not be invested in collaborating the way they were when the clinical and financial decisions to hire PAs were theirs.

As systems consolidate, we also see leveling of the clinical hierarchy. Team care is de rigeur, physicians are increasingly employees, PAs' potential as clinical leaders is being recognized more, and NPs continue their push for independence from physicians. These changes are associated with a shift away from delegated authority and supervision to increased clinical autonomy for PAs. The PA profession must be involved in reform of our own practice model, lest we have unwanted change thrust upon us.

PAs *will* be presented with increasing opportunities to lead. We see more and more PAs stepping up to the challenge already. PAs are increasingly visible at the executive level in institutions and systems. There seems to be a timely confluence of forces at play—PAs want these roles, employers are creating structures that support PAs, and the profession today believes PAs should be executive decision makers and leaders.

In this new context, PAs do not have the luxury of just providing care. PAs must expand their views about what it means to be a PA, not only as a caregiver, but as a designer of care management. Opportunities that may not have been available in the past will be offered as PAs in large health systems reach "critical mass." Industry consolidation is resulting in more PAs employed by the same entity, increasing their visibility within systems and opening doors to the creation of centralized PA services.

The profession will miss out on opportunities to lead and shape its future if PAs lack business skills and cannot understand business models and principles. PAs will need to prepare by becoming more business savvy and understanding the business models of their employers. For instance, PAs are far more valuable to their employers if they understand and practice appropriate billing that maximizes revenue. PAs will always support the tradition of providing excellent customer service and compassionate care, but they must understand how to do that in the context of this new business model.

AAPA is focused on fostering (if not jumpstarting) this PA leadership role through professional development events like the healthcare administration and leadership conferences held recently at Cleveland Clinic and Wake Forest, and through meetings with senior hospital officials looking for the Academy's advice on how to create PA-friendly work environments.

QUESTIONS FOR DISCUSSION:

1. As the traditional 1:1 PA-physician relationship becomes less common, what changes should be made to the PA education? PA practice laws?
2. What resources do PAs need when facing a merger?
3. What are the barriers to quantifying PA value to the healthcare system?
4. What should the PA profession be doing to ensure full employability in this new marketplace—now and in the future?
5. What competencies do PAs need to advance into executive leadership roles within consolidated systems?

Join the Conversation

This white paper is the first step in the development of the next AAPA strategic plan, PA Vision 2020, which will guide the Academy's major initiatives and establish its priorities through the year 2020. We invite all PAs to contribute to the dialogue that will shape the plan, scheduled to be approved in early 2016. There are two ways to do this:

- Go to the Huddle (http://huddle.aapa.org) after July 30 and join in the online conversations that will be taking place about each of the four trends.
- Send your thoughts to strategicplan@aapa.org.

Feel free to do both if you like. Remember, every PA's voice is important.