AACP REPORT


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EXECUTIVE SUMMARY

The Argus Commission was charged to critically examine the social forces that will likely have a significant impact on population health in the United States over the next 10-20 years. The confluence of the COVID-19 pandemic and numerous climate-change related disasters had profound and negative consequences for the US in the last several years, including exacerbation of health disparities already evident in populations of color. The Argus Commission advocates for changes in the curricular integration regarding these social forces and their consequences on individual and population health. Further, action by the academy to advocate and work for meaningful change is essential. A number of policy statements, recommendations and suggestions are included in the report.

INTRODUCTION AND COMMISSION CHARGES

The AACP Argus Commission is comprised of the last five AACP Presidents. Given their depth and breadth of leadership experience, the Commission is charged to examine significant issues and articulate how these might impact pharmacy education and practice. President Stuart Haines presented the following charge for this year’s commission to guide their endeavors.

Critically examine the social forces that will likely have a significant impact on population health in the United States over the next 10-20 years. These forces include (but are not limited to) disparities in healthcare access and delivery, demographic trends, migration, and climate change. Advise AACP leadership and member institutions on how best to prepare for these trends and the role that the academy and profession should play in addressing them.

For decades past, a pharmacy school graduate could consider themselves a “good pharmacist” by knowing and applying pharmaceutical and clinical knowledge with skills and professional attitudes and behaviors. While societal factors have always been present in the background, they now take center stage, impact health, and influence how we educate pharmacists and practice our profession.

Until now, major societal forces that influence care might not be a primary consideration of pharmacists as they devoted attention to their work as a health professional. Those problems were someone else’s responsibility to deal with. It is time for our academy to accept that it is no longer sufficient to have knowledge, skills, and behaviors just related to pharmacy. Social forces have dominating impact on the outcomes of the care that we provide as pharmacists, and pharmacists must become more involved in the responses to the greater influences on our world.

We now see more clearly that good health cannot be achieved or maintained in a society where there is insecurity of food and shelter, where climate change and accompanying natural disasters pose immediate and long-term threats to life, where social and financial inequities result in unequal access to healthcare, and where violence by firearms or other means is endemic. Health is determined by the interplay of all these influences, what we do as healthcare providers and what is happening in our society and world at large.

There is a clear connection between global temperature increase, climate change and worsening population health. The worst effects are already playing out in some areas of the world, including the United States, and the impact of climate change disproportionally falls on the most vulnerable, eventually affecting all communities.1

Our societal demographic patterns are rapidly changing in a world becoming ever smaller. The communities we serve are more multi-ethnic than in the past, with a
The last few decades has been healthcare reform. Much determines of health shape health care and the role of pharmacists. These issues are ever evolving and will require ongoing efforts to learn and understand how they shape health care and the role of pharmacists.

The legacy of health disparities/health inequity/social determinants of health

One of the most discussed public and political issues of the last few decades has been healthcare reform. Much of this conversation has focused on health disparities and health inequity including economic (overall cost, burden on patients, price of prescriptions, etc.) and social concerns (race, geographic location, ethnicity, access, sexual orientation, quality, etc.). Health disparities, and the debate over them, led to the passage of the Affordable Care Act, one of the most significant enhancements to healthcare in the history of the United States. Fueled by the COVID-19 pandemic and the social unrest caused by racism and systemic injustices in this country, these same inequities have again become the focus of public attention.

In 1979, U.S. Surgeon General Julius Richmond issued a landmark report titled “Healthy People: The Surgeon General’s Report on Health Promotion and Disease Prevention.” The following year, the U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion released Healthy People 1990. The report is now in its fifth iteration and continues to address the latest public health priorities. Healthy People 2020 defines health equity as the: “attainment of the highest level of health for all people.” Achieving health equity requires valuing everyone equally with focused and ongoing societal efforts to address avoidable inequalities, historical and contemporary injustices, and the elimination of health and health care disparities. The same report defines health disparity as: “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage. Health disparities adversely affect groups of people who have systematically experienced greater obstacles to health based on their racial or ethnic group; religion; socioeconomic status; gender; age; mental health; cognitive, sensory, or physical disability; sexual orientation or gender identity; geographic location; or other characteristics historically linked to discrimination or exclusion.” Building upon the work of Healthy People 2020, Healthy People 2030, has an increased focus on health equity, social determinants of health, and health literacy with a new focus on well-being.

Health disparities and inequities are not new. Such disadvantages have existed for many decades and reflect longstanding structural and systemic inequities rooted in racism and discrimination. Despite the recognition and documentation of disparities for decades and overall improvements in population health over time, many disparities have persisted, and, in some cases, widened. There also exist substantive concerns of trust between underserved or underrepresented groups and the health care system in the United States. This has been more apparent during the world-wide COVID-19 pandemic. Multiple analyses of available federal, state, and local data show that people of color are experiencing a disproportionate burden of COVID-19 cases and deaths. Additionally, the pandemic has taken a disproportionate toll on the financial security and mental health and well-being of people of color, low-income people, LGBT people, and other underserved groups. Further, these disparities also exist with respect to which groups of individuals have received the COVID-19 vaccine.

Addressing disparities in health and health care is important from both a social justice and equity standpoint. However, eliminating health and health care inequities is also important for improving the nation’s overall health and economic prosperity. In 2018, W.K. Kellogg Foundation released a report entitled: The Business Case for Racial Equity: A Strategy for Growth. The report notes that “the United States economy could be $8 trillion larger by 2050 if the country eliminated racial disparities in health, education, incarceration and employment.” Related to health care directly, there is a potential economic gain of $135 billion per year if racial disparities in health are eliminated, including $93 billion in excess medical care costs and $42 billion in untapped productivity.
"Achieving health equity, eliminating disparities, and improving the health of all groups is ... a top priority for the Centers for Disease Control and Prevention (CDC)."15 The federal government has identified equity as a priority and launched a range of initiatives to address disparities both in response to COVID-19 and more broadly. From 2008-2012, through their “Healthy Communities Program,” the CDC supported eliminating socioeconomic and racial/ethnic health disparities as an integral part of its chronic disease prevention and health promotion efforts. The CDC continues those efforts today through their Racial and Ethnic Approaches to Community Health (REACH) program which aims to reduce racial and ethnic health disparities.16

The current Presidential administration has also identified racial equity, including health equity, as a key priority.17 We are also seeing states, local communities, private organizations, and providers engaged in efforts to reduce health disparities. Ultimately, a broad range of efforts both within and beyond the health care system will be instrumental in advancing equity and eliminating health disparities. Healthcare reform is required to address health disparities and inequity and that force will likely be one of the most significant influencers on population health in the United States over the next 10-20 years.

The impact of social determinants of health on health outcomes has been extensively documented.18 The CDC National Center for HIV/AIDS, Viral Hepatitis, STD and TB Prevention (NCHHSTP) AtlasPlus is an interactive tool that gives access to surveillance data on these diseases as well as access to indicators on social determinants of health.19,20 One can see the correlation between social determinants of health and these diseases.

Social determinants of health can be categorized into 5 areas 1) economic stability; 2) education access and quality; 3) healthcare access and quality; 4) neighborhood and built environment; 5) social and community context.19 While they are separate categories, all the variables are interconnected. Addressing one category of issues without addressing the others will not solve the problem of health equity and disparities. This multifactorial problem can only be solved through collaborative efforts of government and private sectors. More importantly, improving health inequity requires society to accept responsibility for creating the current situation.

The COVID-19 pandemic has highlighted the impact of social determinants of health on the number of COVID-19 cases and death. U.S. counties with higher percentages of Black or Hispanic people had more cases of coronavirus. As would be expected, counties with fewer high school graduates, higher multi-unit households and more individuals with limited English proficiency all had a higher incidence of deaths.21,22

In order for the U.S. to improve patient health outcomes we must address health care access. The question is what can pharmacists and educators do to aid in this effort? Systemic racism is a part of our public health crisis and affects social determinants of health. As pharmacists and schools of pharmacy, we have a responsibility to address healthcare access and quality and work to eliminate systemic racism.23 This responsibility has been reinforced and clearly delineated in the revised Oath of the Pharmacist.24

Of the 142 ACPE-accredited U.S. colleges and schools of pharmacy and the 10 Canadian schools, curricular content related to health disparities, cultural competence and health literacy varied, however, most were taught at an introductory or reinforcement level.25 In order to reinforce the importance of SDOH in practice and our responsibilities in addressing these issues, the integration of health equity and disparities and health competence need to be incorporated across the curriculum and into experiential learning, including co-curricular activities. An example of how this can be integrated throughout the curriculum is demonstrated by the AdvoCaring program at Notre Dame of Maryland University.26 Additionally, best practices for how to engage underserved populations as practices that can be used by community pharmacists to screen patients for social determinants of health should be integrated into didactic and experiential curricula.27,28

To truly affect change in health outcomes, we must go a step further in our educational process. Systemic racism and its roots are not typically covered in required pharmacy curricula. Gaps in health equity and anti-racism content across U.S. pharmacy curricula have been reported. While social work, nursing and medicine have introduced frameworks for teaching anti-racism, pharmacy has yet to do so. A five-phase framework, Rx-HEART, has been proposed for weaving health equity and anti-racism education longitudinally throughout pharmacy curricula.29 Calls for renewed efforts to teach cultural competence and recommended teaching strategies have been published.30-33 It is time for the pharmacy academy to recognize the relationship between systemic racism, social determinants of health and health equity, and not teach these topics in a cursory fashion, but rather as a critical component of the education of pharmacists. In addition, students must learn how health care systems and health benefits favor some segments of our population while disadvantaging others. Only through adequate preparation of student pharmacists for practice can the value of the accessibility of pharmacists be fully realized and advance health equity.
Societal demographic and economic trends

All those in the demographic bubble represented by the “baby boomers” will be aged 65 or older by 2030. At that time, one in five Americans will be at “retirement age.” By 2034, older adults will outnumber children for the first time in U.S. history. Growth of our oldest citizens (85 years of age and older) is expected to triple by 2060, reaching a population of 19 million people. Over the next two decades, the U.S. is expected to move from a youth-dependent population to that of an old aged-dependent population, shifting the majority age group dependent on the working-age population.

One of the implications of this shift to an increasingly older population is the change in health conditions that will be managed by the health care workforce. Of course, the incidence of chronic conditions that are a major focus now (diabetes, cardiovascular disease) will grow; however, the incidence of other illnesses may grow at a higher rate. For example, the number of people with cancer is expected to grow by nearly 60% by 2030. The number of people with dementia is expected to triple by 2050.

As the population ages, there have been calls to rethink how long-term care services are delivered in the U.S. One such strategy is a greater adoption of “home- and community-based services” (HCBS). Currently, only 15% of adults 80 years of age or older receive long-term care in their home, which is significantly below countries such as Sweden (33%) and Germany (29%). There is an expectation that HCBS will increase in the United States over the next 10-20 years. This change will be driven by patient and family preferences, increased application of technology and evolving payment policies with Medicare and Medicaid.

Secondary to population ageing, by 2034, immigration will overtake natural increase (births > deaths) as the primary driver of population growth. This trend, combined with the decline of the non-Hispanic White population (projected 10% decrease between 2020 and 2060), is expected to drive further racial and cultural diversification of the U.S. population. Yet, non-Hispanic Whites will still represent the largest race or ethnic group in the U.S. for the next 40 years. The impact of this dynamic on the challenges of care delivery to uninsured populations is unclear; however, immigration policy and citizenship status will be a key influence. In 2019, among the nonelderly population, 25% of lawfully present immigrants and more than four in ten (46%) undocumented immigrants were uninsured compared to less than one in ten (9%) citizens. Among citizen children, those with at least one noncitizen parent are more likely to be uninsured compared to those with citizen parents (9% vs. 5%).

A demographic trend of considerable focus over the past few years is the status of the American “middle class.” While there is some debate regarding whether this group is shrinking or maintaining in size (which depends on how “middle class” is defined), a general area of agreement is that it has become more difficult for the middle class to live comfortably. One factor is the burden of out-of-pocket healthcare expenses, which have increased as a percentage of income over the past several years. A continuation of this trend will disproportionately affect the middle class and potentially increase economic-related health disparities.

For the profession of pharmacy to influence change in health care that responds to these trends, pharmacy educators must create educational opportunities for learners to recognize and contemplate the impact of the demographic, economic and epidemiologic changes they will experience over the course of their careers. Academic leaders must ensure that educational experiences reflect the need for practitioners to maintain awareness of important influences on health and health care delivery and develop a commitment to adapting contributions to care consistent with the needs of our society. Schools must consider their role in supporting workforce readiness for these dynamic changes through professional programs, but through post-professional professional development opportunities as well.

Climate Change and Health. The inclusion of migration, climate change and health in this year’s Argus charges could not be more timely or appropriate. A global summit aimed at stimulating world leaders to increase commitments to controlling those factors contributing to the acceleration of climate-related environmental degradation was held in Glasgow, Scotland in November. The impact of climate change on the United States was extremely evident in the months of June, July and August of 2021, with periods of extreme heat in regions not normally experiencing them, wildfires burning out of control, and hurricanes destroying entire communities on the Gulf Coast and damaging infrastructure, causing power outages and water contamination for millions of citizens. In addition, droughts, tornadoes, earthquakes and even volcanic eruptions in Alaska further exacerbated the health of individuals and well-being of communities. While not every one of these tragedies can be entirely attributed to climate change, scientists and policy experts have declared that what we are experiencing is an acceleration of the consequences of inaction that threatens the planet.

The present crises, coupled with both environmental and political instability around the world, have also increased the magnitude of migration dynamics as people seek to leave their homes and countries to migrate to and/or seek asylum.
for safety and to protect their families. Unfortunately, in too many cases, they put themselves and loved ones in harm’s way and may only end up in large, crowded, and unsanitary refugee camps as countries try to determine how to manage the volumes of desperate people crossing their borders.

The Global Change Research Act of 1990 mandates that the U.S. Global Change Research Program (USGCRP) deliver a report to Congress and the President no less than every four years that “1) integrates, evaluates, and interprets the findings of the Program … ; 2) analyzes the effects of global change on the natural environment, agriculture, energy production and use, land and water resources, transportation, human health and welfare, human social systems, and biological diversity; and 3) analyzes current trends in global change, both human-induced and natural, and projects major trends for the subsequent 25 to 100 years.”43 The fourth national report was delivered to Congress in two volumes.44 Volume I (2017) provides a detailed analysis of how climate change is affecting the physical earth system across the United States and provides the foundational physical science upon which much of the assessment of impacts in the second volume of the report is based. Volume II (2018) focuses on the human welfare, societal, and environmental elements of climate change and is the source for the most recent and reliable description of the current realities of how climate change is impacting the health of individuals, including migration dynamics.

With regard to health, the report notes the following risks

- Changes in temperature and precipitation are increasing air quality and health risks from wildfire and ground-level ozone pollution resulting in the frequency and severity of respiratory and allergic illnesses, including asthma and hay fever.
- Alterations in geographic range and distribution of disease-carrying insects and pests expose more people to ticks that carry Lyme disease and mosquitoes that transmit viruses such as Zika, West Nile, and dengue.
- Extreme weather and climate-related events can have lasting mental health consequences in affected communities, especially if they result in degradation of livelihoods or community relocation.
- Populations, including older adults, children, Indigenous people, low-income communities, and some communities of color, are often disproportionately affected by, and less resilient to, the impacts of climate change.
- Water quality and scarcity, already being experienced in the Southwestern United States, has implications for agriculture and other industries, while flooding and coastal sea rise displaces individuals and threatens sectors such as tourism and fisheries.

Dr. Victor Dzau, President of the National Academy of Medicine (NAM), elevated the issue of the impact of climate change on individual and population health as a central component of his annual address to the NAM membership in October 2020.45 His citation, attributed to President Lincoln whose action established the National Academy of Science as an unbiased source of analysis and expertise for issues confronting the American people, is pertinent: “You cannot escape the responsibility of tomorrow by evading it today.”

In his address, President Dzau outlined new action as a top priority for NAM in partnership with the national academies of science and engineering. Jointly with the Burroughs Welcome Fund, nine opportunity grants were awarded to support interdisciplinary teams across the National Academies to stimulate new projects. A signature initiative has been announced for NAM identified as the Grand Challenge on Human Health and Climate Change, a five-year, multi-million dollar strategic initiative that aims to:

- Develop a comprehensive and long-term road map for transforming systems (e.g., health care, transportation, energy) impacted by climate change with a focus on human health.
- Mobilize the full spectrum of actors and institutions in the health community and other sectors to reduce the health sector’s environmental impact.
- Launch a global competition to foster innovative interdisciplinary research and actionable solutions at the intersection of climate change and health.

Climate change threatens the ability of health professionals to prevent disease and improve health and disrupts health care delivery.46,47 The intensification of focus at local, state, regional, national and global levels on climate change and its consequences requires commensurate attention in health professions education and continuing education. However, the realities of curricular overload can be seen as an impediment to increasing the focus on the issue of climate change and health.

A recent article published in Academic Medicine offers a model for medical education, Climate Change and Medical Education: An Integrative Model48 sets forth five curricular goals and a process using a practical, multi-stakeholder approach for weaving meaningful climate change and health examples into current curricular activities. The model includes a table mapping how such content can be integrated into a wide array of curricular activities, including journal clubs, basic- and clinical-science based problem-based learning units, communication skills courses, and practice experiences. This offers a
model for consideration by pharmacy educators and is potentially an appropriate focus for interprofessional learning.

As the health sector identifies and implements strategies to decrease its impact on climate change, the pharmaceutical sector in general must accept responsibility for addressing its unique responsibilities as well. There is a movement referred to as “green pharmacy” that critically examines the environmental impact of pharmaceuticals, including their production, distribution and elimination. Championed by the International Pharmaceutical Federation, the call to action includes pharmaceutical manufacturers, prescribers, pharmacists and consumers to develop and implement eco-friendly methods for producing and disposing of pharmaceutical products to mitigate the environmental impact of these products which too frequently are found in wastewater and soil.

On September 6, 2021, the editors of multiple journals simultaneously published a call for emergency action to limit global temperature increases, restore biodiversity, and protect health. The call highlights the disproportionate impact of temperature rise on poorer countries and individuals (e.g., the elderly) least capable of addressing the root causes of climate change and calls upon those nations, including the United States, to accelerate meaningful efforts to reach net zero emissions before 2050.

Natural and man-made disasters (e.g, hurricanes, fires, floods) and emergency preparedness

The occurrence of natural disasters (hurricanes, tornadoes, wildfires, droughts, prolonged periods of heat, excessive rainfall with flooding) is as old as recorded history. Their impact on societies and events at the time of their occurrence has been well documented. While some natural disasters have been accentuated by human actions, little that can be done to prevent some natural disasters, and little has been written about the impact of these events on healthcare other than the need for emergency preparedness by the healthcare system and public health officials. Sparse attention has been placed on the potential impact of natural disasters on population health. The recent attention on the impact of climate change on healthcare along with the recognition that natural disasters have been occurring more frequently than in the past and with greater intensity has resulted in a recognition that these more frequent natural disasters may have a potential to impact population health in the next 10-20 years.

Natural disasters have classically been thought of as both infrequent and impacting a limited number of individuals in relatively isolated locations, especially along coastal areas. Findings from the Third U.S. Climate Assessment emphasize that the global climate change is having impact on every U.S. state, territory, community and sector and are expected to become increasingly disruptive across the nation throughout this century and beyond. No longer will natural disasters be limited to just coastal areas. Extreme weather events and wildfires are occurring more frequently than in the past and have been scientifically linked to climate change which has resulted in significant elevation of ocean temperatures. The tracking of billion-dollar weather and climate disasters by NOAA has clearly demonstrated the dramatic increase in these events. These more frequent natural disasters are starting to have a damaging impact on the infrastructure where populations live but also where our healthcare systems are located as well as their associated supply chains.

The past twenty years has provided us with several examples of how natural disasters have impacted regional populations within the U.S. (primarily in the South) along with the healthcare systems and providers who served these populations. In 2005, Hurricane Katrina ravaged the New Orleans area and devasted much of the healthcare infrastructure and services in the gulf coast area resulting in over 1800 deaths and $100 billion in damage. Associated flooding disrupted all supply chains, including medical supplies and pharmaceuticals. Hurricane Harvey and severe associated flooding impacted one of our nation’s largest cities, Houston, TX, in 2017. In addition to the personal property damage and loss of life, the associated flooding negatively impacted the provision of healthcare services in the area.

No hurricane or natural disaster impacted the entire U.S. healthcare system to the degree that Hurricane Maria did when it devasted the island of Puerto Rico in 2017. Decades of U.S. government tax policies encouraged a significant proportion of U.S. pharmaceutical manufacturing to concentrate in one geographically-confined area in Puerto Rico. With 50+ pharmaceutical manufacturing sites compressed onto a landmass the size of Connecticut, Puerto Rico is a key component in the global drug supply chain. Pharmaceutical products made in Puerto Rico account for nearly 10 percent of all drugs consumed in the United States. Perhaps the greatest impact was the severe disruption in the supply of parenteral solutions (especially saline), IV bags, and generic injectable products from the Baxter facility. Prior to Katrina, 43% of the saline used in the U.S. was manufactured in Puerto Rico. Few hospitals escaped drug shortages associated with this natural disaster.

Hurricane Maria exposed the vulnerabilities in the global pharmaceutical supply chain. Gone are the days when there were several manufactures of commonly used pharmaceuticals and parenteral products in the United States.
States. Major pharmaceutical companies today rely on networks of contractors and suppliers for other key functions in drug production and distribution. Greater than 50% of finished dosage forms come from manufacturing facilities overseas and at least one-third of active pharmaceutical ingredients facilities are in India and China. The supply chain formerly had redundancy if one manufacturing plant was closed as the result of a natural disaster; another could pick up the slack. Lower labor and production costs in other countries resulted in the pharmaceutical industry moving most manufacturing offshore not only to Puerto Rico, but now to India, China, and other less developed Asian countries. Likewise, the number of pharmaceutical manufactures has consolidated to the point where either a plant shut down due to a regulatory violation or a natural disaster in a far-off land might result in a major disruption to the pharmaceutical supply chain here in the United States. Supply disruptions have now become a routine occurrence that are now factored into care of patients.

Although we typically do not think about how natural disasters impact population health, the increased frequency of these catastrophic events in the Gulf Coast and other regions are likely to impact the health of the population in those areas and compromise the ability of healthcare professionals to provide care to those populations. Likewise, larger populations throughout the world are likely to experience disruptions in the supply chain of pharmaceuticals and medical supplies if natural disasters strike areas of the world where pharmaceutical manufacturing facilities are concentrated. Some of these areas may be at greater risk of disruption from natural disasters as most other countries have a lower standard for regulations safeguarding building codes, infrastructure and electric and communication grids. A summit of interested parties called on government officials to make the pharmaceutical supply chain a matter of national security, create more transparency in the pharmaceutical supply chain, create incentives for the pharmaceutical industry to onshore production of essential medicines and active pharmaceutical ingredients, and work with international partners to better predict supply chain risks.

The potential impact of natural disasters on schools of pharmacy is difficult to speculate but should be considered and prepared for with systems that are more robust. The University of Puerto Rico experienced disruptions in didactic and experiential education following Hurricane Maria. All schools may wish to expose students to topics such as how to provide pharmacy services during or after a natural disaster, the ethics of practice during disasters, and how to function as a health care team member in response to a public health disaster. Schools may also benefit from discussions regarding deploying faculty and students to assist with disaster relief.

The Argus Commission is pleased that the American Pharmacist Association has just released a new book – *Disasters and Emergencies: A Planning and Resource Guide for Pharmacy Professionals*. This will enhance other resources from public health and emergency preparedness sources for teaching and planning purposes. According to the marketing description:

*The first of its kind, this handbook provides unbiased and timely information to guide pharmacy professionals, educators, leaders, and policy makers to plan for emergencies and disasters. Drawing upon experiences of seasoned leaders in the field, this cutting-edge handbook provides guidance for training, exercises, and self-reflection questions to address rapidly evolving situations, as well as practical strategies for advocational, legal, and ethical issues pertaining to emergencies and disasters.*

**CONCLUSIONS AND IMPLICATIONS**

*How can schools prepare for the societal trends?*

For the first time in contemporary AACP committee activities, President Haines’ charge to the Argus Commission initiated a studied analysis of major social forces that likely have a significant impact on population health over the next 10-20 years. The confluence of how COVID-19 and climate change have exacerbated and exposed serious challenges to health equity, access, and outcomes in the United States and globally becomes so obvious and acute in this analysis.

It is no longer sufficient for pharmacy and other health professions education programs to simply equip graduates with the knowledge, skills, and abilities to provide patient-centered, team-based care to prevent and treat illness. The health workforce must embrace its responsibilities as learned citizens and community activists to accelerate efforts to mitigate the impact of social determinants on health disparities at the local, regional, national, and global levels. Similarly, we cannot remain on the sidelines of efforts to combat climate change which threatens to destabilize and, in extreme cases, destroy communities and their health delivery infrastructure.

Fortunately, there are growing numbers of resources to enable pharmacy educators and our interprofessional colleagues to increase the integration of relevant content throughout our curricula. AACP, as well as our IPEC partners, can play leading roles through delivering institutes and other faculty development initiatives to accelerate such change. Sharing information on faculty and student outreach activities aimed at addressing unmet needs and
emergencies through AACP Connect and in programming will also facilitate increased action.

The Argus Commission offers two proposed policy statements, six recommendations to AACP, and two suggestions for member institutions based on this analysis. As evidenced by extreme weather-related disasters and the continuing disparate impact of COVID-19 on vulnerable individuals and communities, the time is now for sustained action by AACP and our members.

**POLICY STATEMENTS, RECOMMENDATIONS AND SUGGESTIONS**

**Proposed Policy Statements**

**Policy Statement #1:** AACP supports the integration of diverse curricular components related to social forces and environmental factors on health and the impact on the environment, health, and health equity within Doctor of Pharmacy and graduate education programs to support the development of knowledge necessary to understand the role pharmacists, pharmaceutical scientists, and other health care professionals must play in reducing the negative impact of global climate change. (Source: Argus Commission, 2022)

**Policy Statement #2:** AACP supports the expansion of public and private resources to make health care services more accessible to address the needs of growing numbers of migrants and refugees around the world. (Source: Argus Commission, 2022)

**Recommendations**

**Recommendation #1:** AACP encourages the Center to Accelerate Pharmacy Practice Transformation and Academic Innovation to prioritize development of a curricular framework and educational resources for integrating materials and active learning opportunities on climate change in pharmacy and interprofessional education.

**Recommendation #2:** AACP should include recommendations as part of input on revisions to the doctor of pharmacy standards related to social forces and environmental factors affecting individual and population health.

**Recommendation #3:** AACP should plan a faculty development institute focused on the implementation of the curricular framework focused on social forces, (including structural racism) and environmental factors such as climate change and its impact on health and health equity. Content related to social forces and environmental factors influencing health and healthcare should be a part of AACP annual and interim meetings.

**Recommendation #4:** AACP should develop resources that will support schools and colleges of pharmacy to adapt educational activities to meet pharmacy workforce needs secondary to evolving epidemiologic, economic and service delivery patters in the United States, including but not limited to chronic illness patterns and therapies, geriatric and long-term care strategies, and emerging health disparities.

**Recommendation #5:** As the increasing frequency of natural disasters related to climate change creates risk of adversely impacting the health of populations in the United States, AACP should join with other pharmacy and healthcare organizations to call for public and private efforts and policies geared to slow the progression of climate change.

**Recommendation #6:** AACP should partner with NASPA to identify and promote models of state-level coordination of disaster response.

**Suggestions**

**Suggestion #1:** Schools and colleges of pharmacy should increase coverage of competencies, instructional objectives, course content, and interprofessional and experiential learning related to social forces and determinants of health, including disparities in healthcare access and delivery, demographic trends, migration, and climate change.

**Suggestion #2:** Schools and colleges of pharmacy should ensure that students are educated regarding the pharmaceutical supply chain and emergency preparedness as natural disasters can disrupt the availability of essential drugs and medical supplies, and pharmaceutical services.

**REFERENCES**