THE ACC'S GLOBAL PREVENTION PROGRAM

Educating The Health Care Workforce in the Fight Against Non-Communicable Diseases (NCDs)

AMERICAN COLLEGE *of* CARDIOLOGY

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Our Founding Sponsor:

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Our Global Partners:

World Heart Federation

NCD Alliance

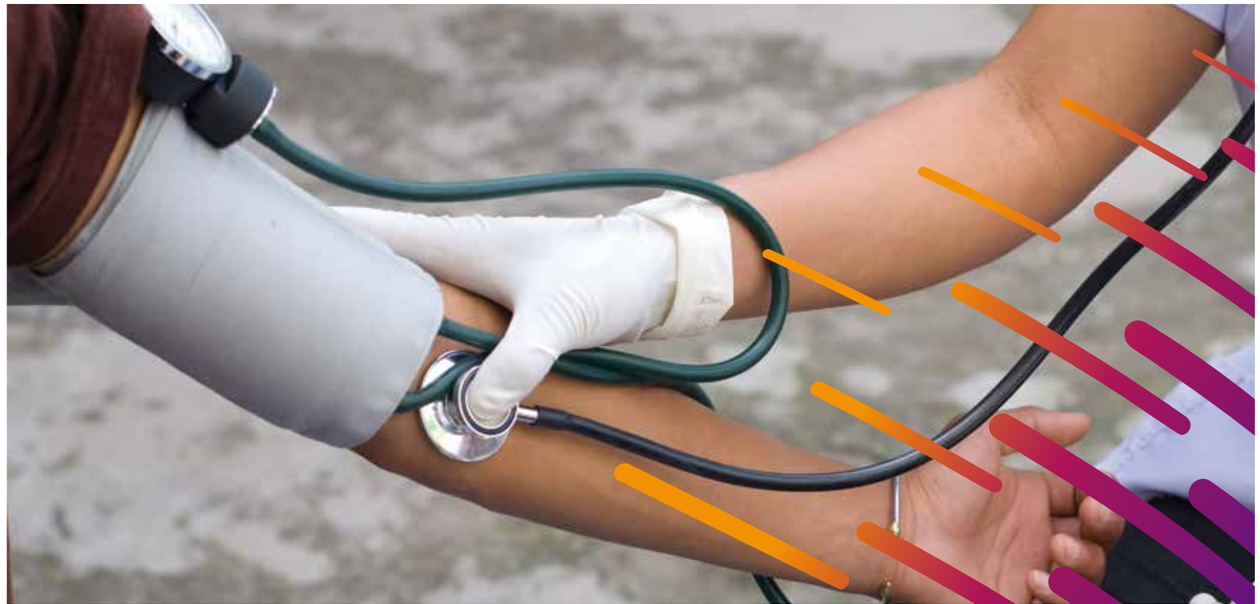
LOCAL PARTNERS

LOCAL CHAPTERS

ACC Argentina Chapter
ACC China Chapter
ACC Egypt Chapter
ACC Indonesia Chapter
ACC Malaysia Chapter
ACC Mexico Chapter
ACC Saudi Arabia Chapter
ACC United Arab Emirates Chapter

LOCAL SOCIETIES

Argentine Federation of Cardiology (FAC)
Argentine Society of Cardiology (SAC)
Chinese Society of Cardiology (CSC)
Egyptian Society of Cardiology (EgySC)
Emirates Cardiac Society (ECS)
Indonesian Heart Association (PERKI)
Mexican Society of Cardiology MSC)
Mexican National Advisory Committee for General Medicine (CONAMEGE)
National Association of Cardiologists of Mexico (ANCAM)
National Heart Association of Malaysia (NHAM)
Russian Society of Cardiology (RSC)
Saudi Heart Association (SHA)
Vietnam Heart Association (VHA)



FINANCIAL DISCLOSURE: The ACC thanks Pfizer Upjohn for providing unrestricted grant funding toward the Global Prevention Program. All education has been developed by faculty from the ACC and local partner societies, and the program has been accredited as continuing medical education (CME) in all participating countries where such recognition has been available at the time of activities (Argentina, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, UAE).

A LETTER FROM ACC FACULTY

Dear Reader,

Through over 70 years of history, the American College of Cardiology has learned that equipping clinicians with education and tools to improve their practice is among the most sustainable ways to promote positive outcomes and evidence-based care for patients. With cardiovascular disease ranked as the number one cause of mortality, the ACC is playing an active role as a change agent within the global health community as we work together to identify a comprehensive solution to managing the rise of NCDs. There is perhaps no clearer evidence of this than the College's Global Prevention Program, which to date has hosted education in ten countries for nearly 70,000 clinician attendees.

We have been incredibly grateful to represent the dozens of ACC faculty from the US and abroad who have lent their wealth of expertise in cardiovascular medicine as speakers at the 44 webinars the ACC has conducted under the Global Prevention Program banner. It would not have been possible to achieve quality clinical education on such a vast scale without the assistance of partners throughout the health care sector, and in particular the generous financial support of Pfizer Upjohn, whose longstanding sponsorship has allowed the ACC to offer the Global Prevention Program at no cost to participants.

This collaborative spirit will be even more important in the years ahead as the ACC introduces NCD Academy: an online, on-demand certificate program promoting core competencies and promising new methods to screen for and prevent the group of non-communicable diseases (NCDs) that unnecessarily claim the greatest number of lives today. In addition to spanning beyond cardiovascular disease for a more inclusive offering, NCD Academy will make prevention education at the ACC open-access for the first time to reach health care providers in low-and-middle-income countries where the NCD burden has accelerated the fastest and countermeasures are most needed.

The ACC is proud to be leading an expanded partnership consortium to see through this bold new direction, with Pfizer Upjohn as Founding Sponsor for the NCD Academy and new Global Partners in the NCD Alliance and the World Heart Federation. Whether you are a clinician yourself, an advocate, or a policy maker, we invite you to join us in bringing this important resource to those individuals on the front line of NCD prevention, including primary care clinicians, internists, and general practitioners, as well as nurses and community health workers. Whether an ACC member or not, we are all members of the global health community, and we will all be impacted by the steady increase in NCDs worldwide. Only together can we realize long-term gains on this complex and urgent issue for a healthier and more prosperous tomorrow.

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INTRODUCTION

THE BURDEN OF NON-COMMUNICABLE DISEASES (NCDs): A CRISIS THAT DEMANDS A NEW PARADIGM IN HEALTH CARE

Since the start of the twenty first century, the world has witnessed a striking shift in population health and wellbeing. Life expectancy has improved by more than five years—a remarkable feat—while rates of extreme poverty have sharply declined[1]. A major contributor to these gains has been the global health community's incredible success at curbing communicable illnesses including malaria and HIV through concerted investment in sanitation infrastructure, public education, and medical therapies, among other areas. Yet tragically, the reduction in communicable diseases has heralded an alarming uptick in deaths due to diseases of prosperity. Since 2000, mortality from non-communicable diseases (NCDs) has risen from 60% of global deaths to over 70%. In LMICs the rate has been even steeper[2]. For these countries, NCDs are more than a health issue; they also represent a severe constraint on economic development by weighing down workforce productivity[3].

Global Primary Care: A Bold Ambition: As cited in the Sustainable Development Goals (SDGs) adopted by UN member states under the 2030 Agenda for Sustainable Development, universal access to quality essential health care services will be critical to achieving NCD reduction targets[4]. NCDs too often go undiagnosed in LMICs because of weak surveillance. For example, most cases of breast cancer are detected in advanced stages, when a cure is impossible[5]. Recent studies show that only 20% of hypertensive Tanzanians and 14% of Mozambicans were aware of their disease[6]. Reversing such outcomes will require a significant expansion in facilities and services, as well as aggressive public education. Yet perhaps the most difficult and urgent task ahead in relieving NCDs will be to fundamentally change the focus and structure of health care systems. Risk factor management and screening for NCDs must be prioritized alongside, if not above, disease treatment. Further, policy makers must look beyond specialists—and in some cases beyond clinicians—for preventive services in order to achieve adequate coverage[7]. To illustrate this point, consider that 45% of WHO member countries have fewer than one clinician for every 1,000 residents[1]. In Kenya there is one cardiologist per one million residents[8].

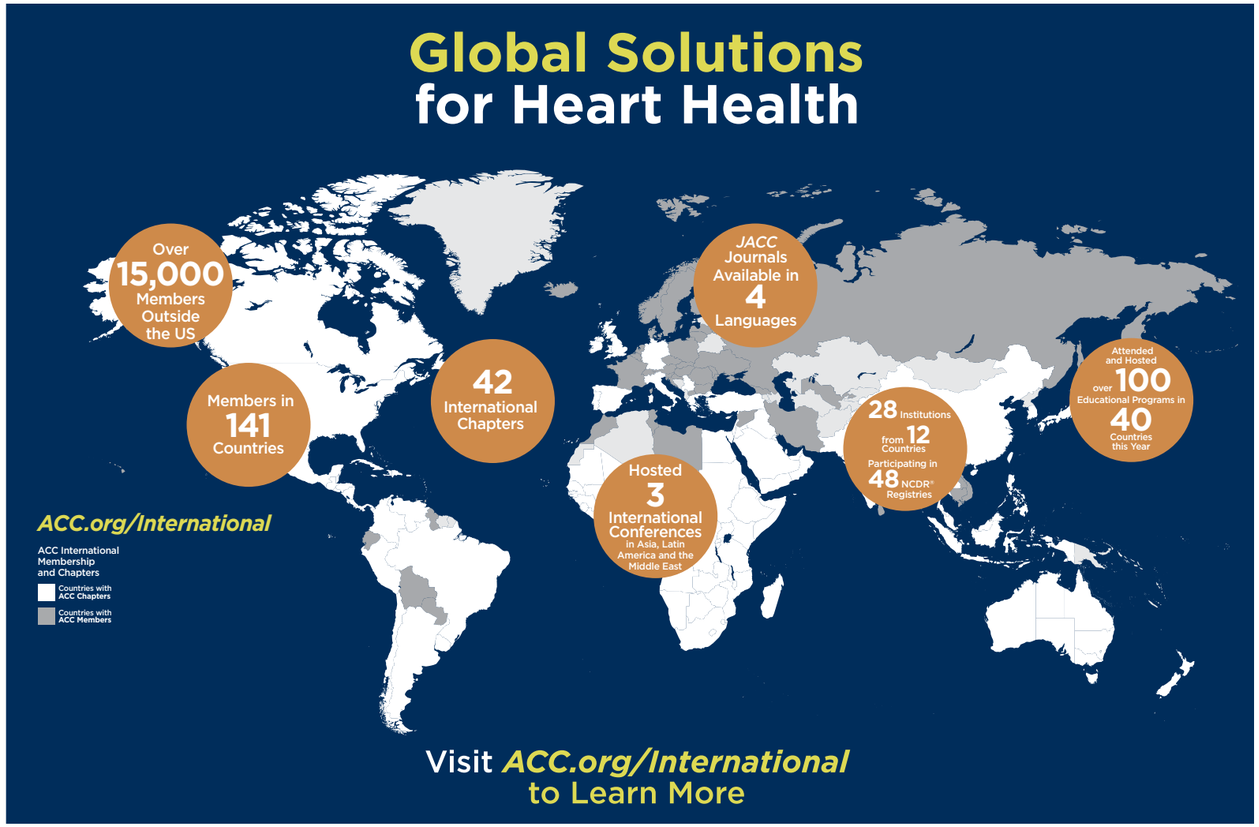
The Importance of Clinician Education: Effective prevention and management of NCDs depends on the broad adoption of health care models that empower non-specialists to promote healthy behaviors and halt risk factor progression through both lifestyle counseling and the use of proven therapies as necessary. Though clinical education alone will not enable this transition, it must not be disregarded. Given how quickly medical knowledge is advancing, primary care providers, family doctors, and internists in LMICs need quality continuing education to refresh their understanding of NCDs and stay up-to-date on evidence-based treatment strategies as they assume the mantle of disease prevention. Comparable steps must also be taken to upskill nurses and community health workers in rural and remote communities for tasks that have historically been reserved for medical doctors. In short, the proliferation of accessible, evidence-based education is vital to optimizing the health care workforce and realizing a future where NCDs are as well-contained as the infectious diseases that the global health community has fought so diligently to suppress.[7,9]

71%
Deaths attributable to NCDs in 2016, with the leading causes being CVD, cancer, diabetes, and chronic lung diseases[2]

17.9M
# of deaths due to CVD in 2016; CVD is the leading case of mortality, responsible for 31% of deaths[2]

15M
# of annual premature deaths due to NCDs as of 2016[2]

85%
Share of annual premature deaths due to NCDs that occur in LMICs[2]



GLOBAL HEALTH LEADERSHIP AT THE ACC: MAKING A DIFFERENCE FOR PROVIDERS AND THEIR PATIENTS

As an organization whose clinical guidelines and educational offerings shape cardiovascular medicine far beyond the United States, the ACC has pursued a vision and mission to push for action on NCDs and lend our member expertise and resources toward efforts by the greater global health community. The ACC was honored to work alongside partners including the NCD Alliance and World Heart Federation (WHF) in lobbying for the inclusion of NCDs in the SDGs. Cardiovascular disease (CVD) prevention has since become the focus of the ACC's largest, and one of its longest-running, global education programs, which the College now operates as a recently-added member of the WHO's Global Coordination Mechanism (GCM) on NCDs.

46%
The proportion of adults over 25 years old in Sub-Saharan Africa who suffer from hypertension[10]

3%
Percentage of global health spending that is allotted to NCDs[11]

$863B
The global cost (USD) of treating CVD alone in 2010[12]

$1,044B
Projected global cost (USD) for treating CVD in 2030[12]

OUR SUCCESS TO DATE: GLOBAL PREVENTION WEBINARS

BACKGROUND

In 2016, the ACC launched a three-part webinar series for cardiologists in China to reinforce best practices in key areas of care for patients along the cardiovascular disease continuum. The series began with the fundamentals of primary prevention, followed by installments on secondary prevention after acute coronary syndrome (ACS) and, finally, a webinar on mitigating CVD risk in patients with common comorbidities including hypertension and diabetes mellitus. The impact of this series—which reached an average of 3,000 providers and several hundred hospitals per webinar—revealed an opportunity to foster guideline-driven care in other countries that were also grappling with high rates of CVD and suboptimal patient outcomes. Over the following years, the ACC endeavored to replicate the program in nine additional locales as diverse as Argentina, Egypt, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, United Arab Emirates and Vietnam while also conducting a follow-up series in China on advanced CVD topics. Most recently, the ACC completed webinars targeted at primary care providers and non-specialists in a subset of partner countries to enhance competencies in CVD risk factor management and prevention among medical professionals at the ground level of health care systems with greatest access to patients. Over the past four years, what began as a relatively small program has since evolved into a major global initiative and organizational imperative at the ACC toward curbing the unacceptable burden of NCDs. The ACC remains committed to the Global Prevention Program in the years ahead as we look beyond webinars to even more innovative and flexible delivery formats.

PROGRAM GOAL

The ACC aims to support efforts at health care systems worldwide to implement more efficient models for CVD prevention by ensuring specialists and non-specialists are educated on, and committed to following the latest evidence-based recommendations for patient care.

PROGRAM OBJECTIVES

- Equip non-specialists with the knowledge to prevent and control CVD risk factors in most patients, refer serious cases for advanced consultation, and support secondary prevention in patients who are experiencing illness.
- Alleviate the challenge of provider non-adherence to clinical guidelines in their daily practice[13,14].
- Ensure providers understand scenarios that continue to warrant established therapies as first-line treatment, and most importantly, lifestyle behaviors that should be encouraged with all patients to improve CV outcomes.

PROGRAM OVERVIEW

INSTRUCTIONAL DESIGN METHODOLOGY

Webinars featured a mix of sessions over two to three hours imparted by experts from the ACC and local partner societies. Sessions were designed to explain guideline recommendations and help learners absorb updates through practice opportunities and expert engagement.

- **Patient Case Presentations:** ACC presenters would introduce an individual presenting with a common risk profile; conduct audience polling to gauge thoughts on the appropriate course of action; review evidence including new research and therapeutic options; and close by revisiting the case question to assess changes in learner perspective and knowledge. All ACC sessions featured multiple cases and questions.
- **Local Expert Presentations:** These segments enabled experts to speak to unique realities in their country or region that clinicians should keep in mind when providing care, such as the structure of health care systems, unique clinico-pathology and risk burden of local patient populations, and differences in available therapies.
- **Panel Discussion:** These open-ended sessions allowed experts to delve deeper into local application and address audience concerns.

EDUCATIONAL DELIVERY METHODOLOGY

A Focus on Accessibility: The ACC broadcasted all sessions via webinar as a way to bring prevention education to large numbers of providers throughout target countries with maximum efficiency. Sessions were filmed in-country in front of live audiences to facilitate local expert participation and cultivate a lively mood between presenters and learners, and sessions were often held in different major cities to allow more participants the opportunity for face-to-face interaction with global thought leaders. Webinar viewers included providers joining individually as well as audiences at coordinated viewing sites, generally hospitals. As an added benefit, the flexibility of the webinar format made it possible to involve clinicians in locations that had not originally been considered for the program. Over the course of the webinar series, viewing sites were hosted in additional countries including Algeria, Kuwait, and Bahrain.

An Interactive Experience for all Participants: The ACC was intent on ensuring that all participants, whether in-person or remote, were able to engage with experts given the importance of practice opportunities and knowledge checks to effective learning. Webinar viewers had equal access to polling questions spread throughout patient case presentations and were also able to submit questions and comments for panel discussion.

WEBINAR 1: CVD PREVENTION FUNDAMENTALS

- Compounding effect of multiple risk factors on absolute risk for CVD.
- Differences and similarities between leading risk calculators (ACC/AHA, Framingham, SCORE).
- Strategies for communicating with patients about risk.
- Lifestyle modification as the central strategy in primary prevention.
- Guidance on the use of statins and other therapies for primary prevention depending on the patient's risk profile.

WEBINAR 2: THE MULTI-RISK FACTOR PATIENT

- Guidelines on established therapies for CVD risk reduction in DM patients.
- Novel monotherapies for CVD risk reduction and glycemic control in DM patients.
- CVD as the leading cause of death in patients with diabetes mellitus (DM).
- Best practices for accurate blood pressure measurement.
- First line therapies for patients with hypertension (HTN).
- Treatment of resistant HTN.

WEBINAR 3: SECONDARY PREVENTION

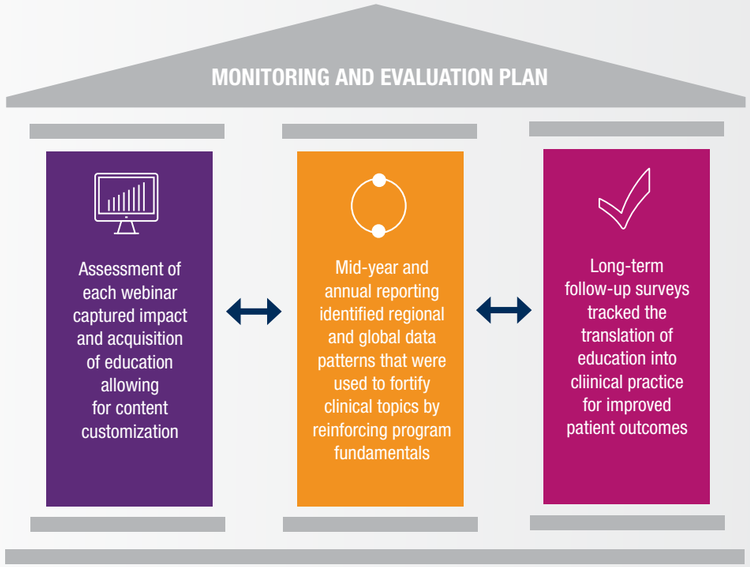
- PCI outcomes in ACS patients.
- Antiplatelet therapy post-ACS.
- Assessing and managing risk for stroke and thromboembolism post-ACS.
- Research on statin safety.
- Evaluating patients for statin intolerance and ways to improve tolerance.
- Underlying factors in patient non-adherence and strategies for promoting adherence to treatment.
- Introduction to cardiac rehabilitation.
- Science on PCSK9 therapies.

CURRICULUM SNAPSHOT

Topics and teaching points for webinars targeted at the primary care audience in 2019 are above. Topics in webinars under the program's initial series for CV specialists (2017-18) were virtually identical, though education went into greater detail on new research and therapies whereas the PCP program emphasized key takeaways. For webinar three, the CV specialist series gave greater attention to ACS care and discharge procedure whereas PCP webinars focused more on follow-up care.

MONITORING & EVALUATION PLAN
DESIGNED FOR MAXIMUM IMPACT

The Global Prevention Program curriculum was custom-created based on regionally relevant needs assessments and input from Key Opinion Leaders (KOLs) in all participating countries.



DESIGN AND DEVELOPMENT:

Based on needs assessment results, program chairs and ACC staff identified key performance indicators (KPIs) including reach, satisfaction, knowledge, competence, and performance. These KPIs were incorporated into an educational blueprint following a proven conceptual framework for assessing educational programs[15]. Using this blueprint, survey questions were aligned to program learning objectives and outcomes to assess educational effectiveness and clinician experience

REACH
Number of participating host countries, viewing countries, and attendees

SATISFACTION
Degree to which expectations of participants were met re: setting and delivery of the educational activity

KNOWLEDGE
Degree to which participants state what the educational activity intended them to know

COMPETENCE
Degree to which participants show how to do what the training intended them to do

PERFORMANCE
Degree to which participants do what the training intended them to adapt in their practice

MEASUREMENT & ANALYSIS:

A three-pronged approach was used to deliver monitoring and evaluating tools for the webinars including a pre-test, post-test, and outcomes survey. The needs assessment and pre-test were used to establish baseline data. The post-test measured KPIs including reach, satisfaction, knowledge and competence. Clinician behavior changes were assessed in the outcomes survey six months following the respective webinars.

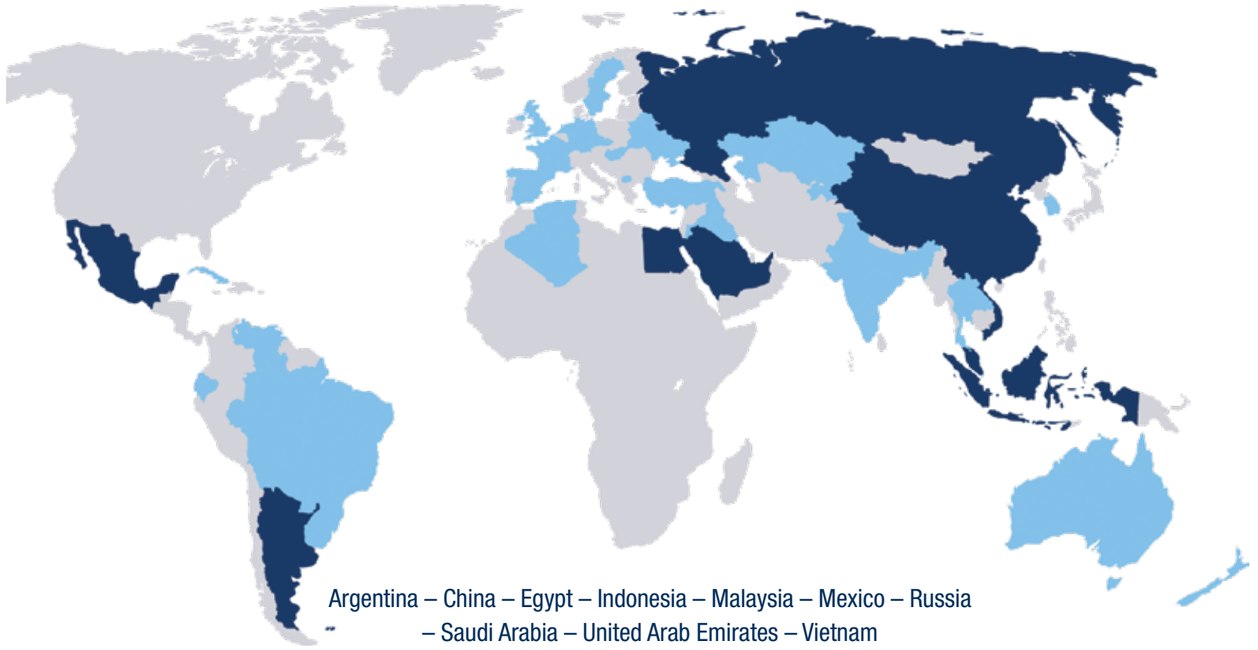
Descriptive statistics (e.g., frequency, percent, and mean) were used to analyze demographics and satisfaction ratings, as well as learning impact (e.g., knowledge and competence). When feasible, inferential statistics (e.g., independent samples t-test) were used to assess learning impact namely with subjective ratings of clinicians increased confidence and ability to treat patients as a result of attending the webinars.

LIMITATIONS

Initial data collection efforts captured unique identifiers for the pre-test and post-test allowing for robust paired analysis and the ability to generalize findings among participating clinicians. As the program expanded, country regulations and technological challenges made paired analysis challenging for most of the educational interventions. Moreover, the number of respondents to the pre-test and post-test surveys differed. Given the inability to pair the data and the imbalance of responses from pre to post, results were subsequently reported in aggregate.

OUR IMPACT

10 HOST COUNTRIES + 39 VIEWING COUNTRIES



Argentina – China – Egypt – Indonesia – Malaysia – Mexico – Russia – Saudi Arabia – United Arab Emirates – Vietnam

44 webinars

Total Number of Engagements

66,565

Attendance

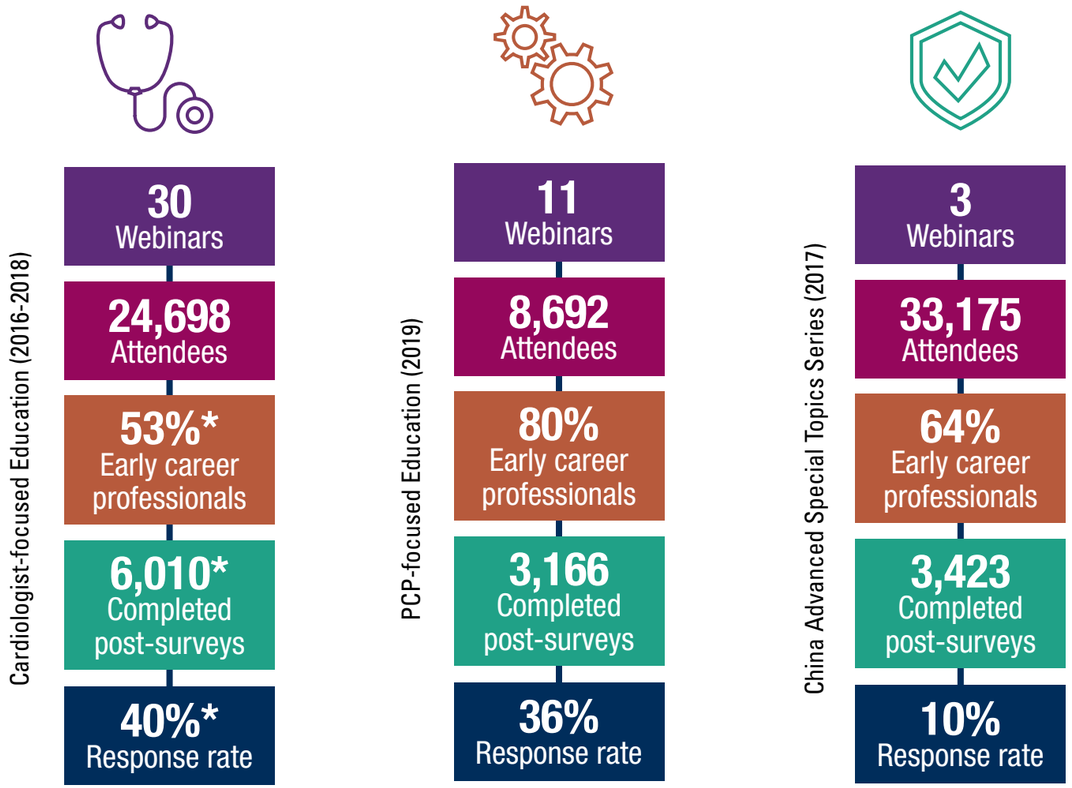
230,596,350

Annual Potential Patient Impact

OUR IMPACT: CLINICIAN REACH

KEY TAKEAWAYS

The Global Prevention Program has engaged thousands of clinicians in dozens of countries in live events led by key opinion leaders on how to apply the latest science and guideline updates to daily practice. Participation in most program post-surveys was sufficient to constitute a representative audience sample and provide extensive insights on attendees including demographics, understanding of clinical topics, adherence to guideline recommendations, and patient load. Alongside pre-assessment results, these data have enabled the ACC to draw broad conclusions about the program's direct impact on clinicians and downstream benefits for the communities they serve.



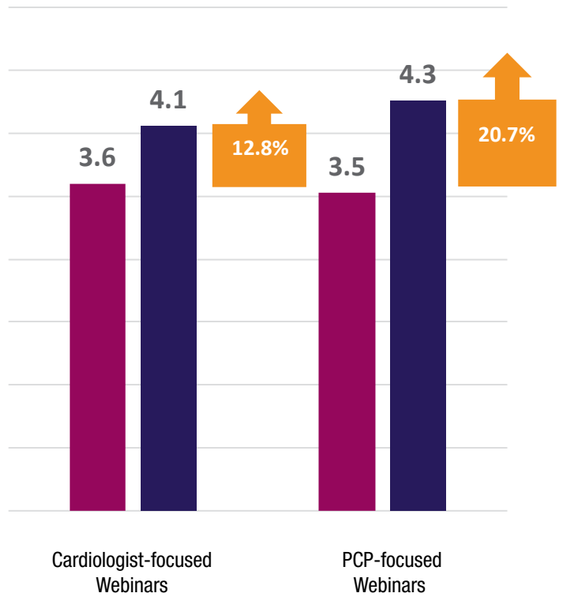
*Figures do not include three webinars conducted in China during program's pilot phase (2016).

OUR IMPACT: CLINICIAN KNOWLEDGE & COMPETENCE

THE BIG PICTURE

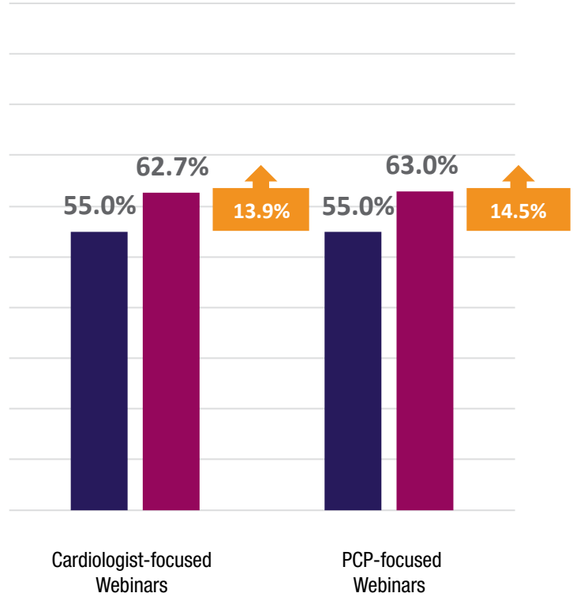
Increase in Clinician **CONFIDENCE** due to Improved Knowledge of CVD Fundamentals

(Subjective Pre/Post measure: "Rate your ability to do the following clinical activities.")



Increase in Clinician **ABILITY** to Translate Education into Improved Patient Outcomes

(Objective Pre/Post measure: Score comparisons of real-world patient case clinical scenarios.)



5-point Likert scale (1 is not confident; 5 is highly confident) Cardiologist-focused: Pre-test n=5,194; Post-test n=6,010 PCP-focused: Pre-test n=2,925; Post-test n=3,166 Independent samples t-test ($p<0.05$)

KEY TAKEAWAYS

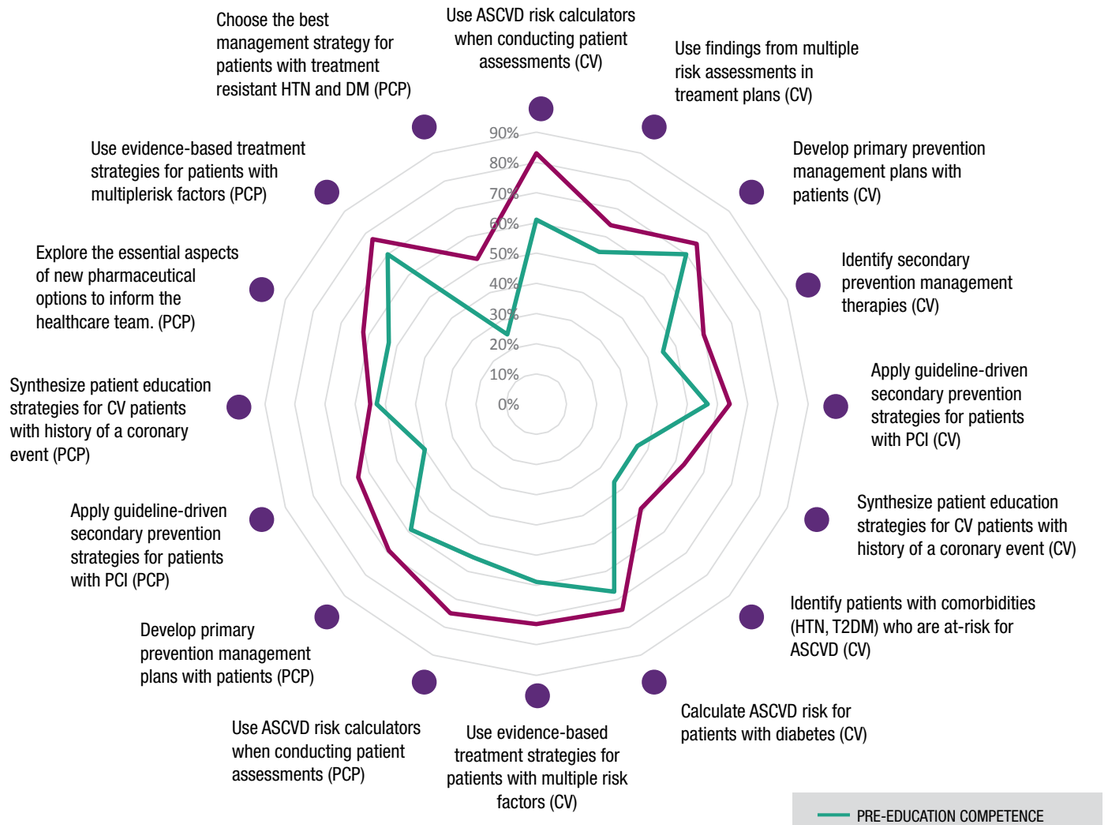
While the ACC is limited to evaluating unpaired data pre webinar vs. post, the significant degree of improvement in topline, aggregate scores broadly suggests the Global Prevention Program is having a meaningful and positive influence both on practitioners' sense of mastery of key concepts for CVD prevention, as well as their ability to apply best practices with their patients. Outcomes suggest efforts aimed at the primary care community have been especially impactful. Both confidence and competence metrics saw greatest improvement at programs geared toward clinicians on the front line of patient care.

OUR IMPACT: CLINICIAN KNOWLEDGE & COMPETENCE

LEARNING OBJECTIVE DRILL DOWN

KEY TAKEAWAYS

Webinars focused on a set of skills for CVD prevention that needs assessment efforts had shown were not fully understood among local practitioners. The fact pre-surveys averaged a correct response rate of only 53% underscores the program's success at aligning with pain points among target audiences, as well as the importance of continuing education for trained health care providers. In all topic areas, performance on objective patient case questions was better post-program (mean=66%). Post-survey results speak to the value of ACC education for enhancing clinician knowledge and competence, while also surfacing especially complex skills in secondary prevention and care for comorbid patients that require further reinforcement.



Cardiologist-focused: Pre-test n=5,194; Post-test n=6,010 PCP-focused: Pre-test n=2,925; Post-test n=3,166

OUR IMPACT: PATIENTS

Potential Patient Encounters Annually

230,596,350

Cardiologist-focused Education

Argentina, China, Egypt, Indonesia, Malaysia, Mexico, Russia, Saudi Arabia, UAE, Vietnam

24,698 Attendees x **21 avg.** weekly patient visits x **50 weeks** =

25,932,900

PCP-focused Education

Indonesia, Mexico, Russia, UAE

8,692 Attendees x **32 avg.** weekly patient visits x **50 weeks** =

13,907,200

China Advanced Series

33,175 Attendees x **115 avg.** weekly patient visits x **50** weeks =

190,756,250

Note: *Total number of patients is based on HCP reported patients seen each week, some of who may be recurring.

KEY TAKEAWAYS

Enhancing the knowledge and performance of a single clinician can translate to better-quality care for hundreds of patients each year. Achieving United Nations goals to ensure quality universal health coverage for all patients will require efforts on multiple fronts including changes to health care policy, workforce recruitment, and infrastructure development, to name only a few. But curbing CVD and other NCDs cannot wait. As a means of impacting care for entire communities relatively quickly and sustainably, accessible clinician education is vital to improving patient outcomes and realizing Sustainable Development Goals (SDGs) by the UN's 2030 deadline.

CHINA (2016, 2017, 2018)

Total Number of Participants: 42,892

Webinar Locations:
Beijing
Shanghai
Xi'an
Shenyang
Jinan
Guangzhou

Total Number of Webinars: 6

Satisfaction:

1. Enhanced professional effectiveness: **91%**
2. Program topics relevant to clinical practice: **83%**
3. Overall satisfaction with the program: **89%**

Outcomes:

208,997,464

potential patient encounters annually receiving care from physicians who attended the Prevention training series

What is the greatest challenge facing health care providers and policy makers in your country today with regard to NCD reduction?

The greatest challenge in NCD prevention facing Chinese policy makers and health care providers is rapidly increasing numbers of population with various NCD risk factors and relatively limited capacity in prevention and treatment of these risk factors. For example, there are rapidly increasing prevalence of hypertension, dyslipidemia, obesity and diabetes in China, but very low awareness rate, treatment rate and control rate for these major risk factors.

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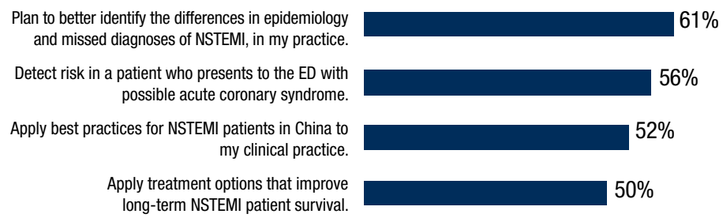
What structural changes has the Chinese health care system implemented to improve care for CVD and other NCDs?

The key structural change includes to strengthen the upstream prevention of major NCD risk factors, and also to increase more resources on the primary care system and capacity building of primary care providers in China.

In your opinion, what is the greatest need right now among primary care providers in your country to better serve NCD patients?

The greatest need for primary care providers in China is the availability and accessibility of extensive, effective and continuous capacity training, to improve their ability in correctly applying major prevention and treatment strategies for NCD in their daily clinical practice.

Commitment to Guideline-based Care



"The program addressed the discrepancy between guidelines and clinical practice and how to customize treatment for our patients."

"After the program I began to use these guidelines in the treatment of my patients."

NCD Statistics

89%
Percentage of deaths due to NCDs[16].

2%
Rate of diabetes in adults—well below the global average and a bright spot in China's NCD profile[16].

23%
Annual deaths due to cancer[16].

2030
Deadline for Healthy China 2030 initiative, a comprehensive plan developed at the highest levels of government to reduce NCDs by investing in new systems for health promotion and preventive services[17].

MEXICO (2017, 2018, 2019)

Total Number of Participants: 2,557

Webinar Locations: Chihuahua, Queretaro, Merida, Mexico City, Guadalajara, Monterrey

Total Number of Webinars: 6

Outcomes:

3,330,288

potential patient encounters annually receiving care from physicians who attended the Prevention training series

Satisfaction:

1. Enhanced professional effectiveness: **94%**
2. Program topics relevant to clinical practice: **91%**
3. Overall satisfaction with the program: **91%**

NCD Statistics

33.5%

Burden of mental, neurological, and substance use disorders and suicide on total years lived with disability (YLDs)[18].

19%

Prevalence of raised blood pressure among adults. According to WHO estimates Mexico is not on track to achieve targets for reducing HTN incidence[16].

1/4

Portion of adult males who lead a sedentary lifestyle. Among women, rates are higher at 32%[16].

24%

Share of deaths from cardiovascular disease[16].

How has collaboration with the ACC helped advance programs in your country to strengthen primary care?

The collaboration with the ACC in Mexico has been very important to strengthen primary care. We organized, with the help of ACC, 6 seminars in the last 2 years around the country to promote the idea of prevention between cardiologists, internal medicine physicians and primary care physicians.

Erick Alexanderson, MD, FACC
Professor of Medicine, National Autonomous University of Mexico
Governor, ACC Assembly of International Governors

What is the greatest challenge facing health care providers and policy makers in your country today with regard to NCD reduction?

The greatest challenge is the increased number of persons with cardiovascular risk factors in our population. The incidence of hypertension, diabetes, dyslipidemia and obesity are very high. We are doing more diagnostic and therapeutic procedures, but we are not promoting prevention.

What steps did your society take to maximize the value of the global prevention program to health care providers in your country?

To establish an important role of the prevention in our society, educating not only the population but also the primary care physicians to identify risk population and establish appropriate interventions to reduce their risk.

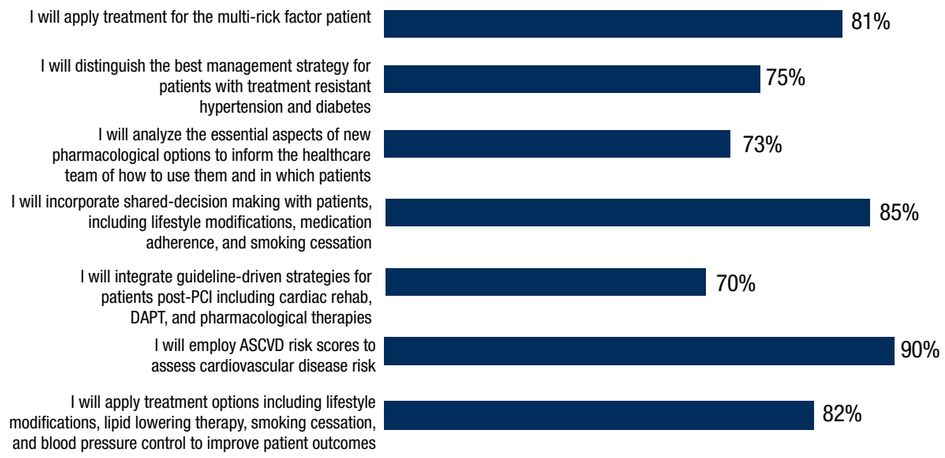
How has the roll of general practitioners, nurses, and other providers outside the CV specialty been impacted by structural changes in your country's health system to better manage NCDs?

We are trying to strengthen the recognition of populations with risk factors, to identify the development of the disease earlier and to promote prevention and changing the lifestyle of the population.

In your opinion, what is the greatest need right now among primary care providers in your country to better serve NCD patients?

To train our physicians appropriately about the importance of primary prevention to improve their ability to apply correctly all the strategies to have a successful prevention program that will reduce the incidence of NCDs.

Commitment to Guideline-based Care



INDONESIA (2017, 2018, 2019)

Total Number of Participants: 9,287

Webinar Locations: Jakarta

Total Number of Webinars: 6

Outcomes:

14,234,636

potential patient encounters annually receiving care from physicians who attended the Prevention training series

Satisfaction:

1. Enhanced professional effectiveness: **92%**
2. Program topics relevant to clinical practice: **90%**
3. Overall satisfaction with the program: **91%**

NCD Statistics

25%

Percentage of primary health care centers that reported offering CVD risk stratification in 2017[16].

76%

Percentage of adult male smokers; rates have followed an upward trajectory in recent decades and are projected to continue rising[16].

193,900

Estimated # of lives that would be saved by 2025 if WHO "Best Buys" were all implemented[16].

42%

Percentage of population who rely on polluting fuels and technologies[16].

Ade Meidian Ambari, MD
Cardiologist, National Cardiac Center Harapan Kita Hospital
Faculty of Medicine, University Indonesia

What is the greatest challenge facing health care providers and policymakers in your country today with regard to NCD reduction?

The imbalanced distribution of facilities and resources throughout the country. Low access to health care providers in some parts of Indonesia make more burden for the patient especially for the costs, despite the health coverage, they still need transportation and accommodation in the referral hospitals (far access).

We face the problem of the health care system that cannot meet the idealism of the guidelines; the national health insurance is also still not stable. Some treatments and facilities are also under expectation in some parts of Indonesia, especially outside Java. The citizen's mindset is also still not directed to primary prevention. They still focused on treating the diseases and only come to the health care provider if they feel sick. The health care insurance also more focused on curative management than the prevention and rehabilitation program.

How has the role of general practitioners, nurses, and other providers outside the CV speciality been impacted by structural changes in your country's health system to better manage NCDs?

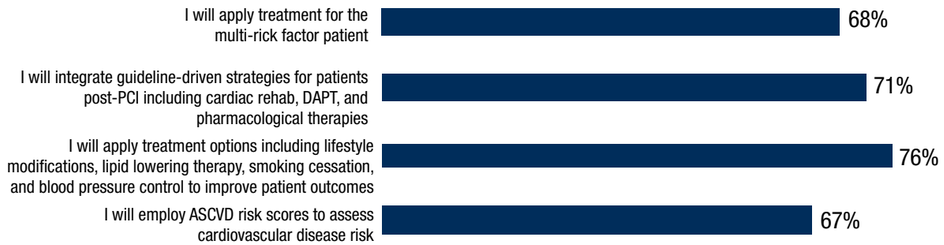
General practitioners, nurses, and other providers outside the CV speciality, especially for their roles in primary health care, have been impacted by the structural changes, because they are the first portal to face the patients and they become the important key to the primary prevention in primary health care.

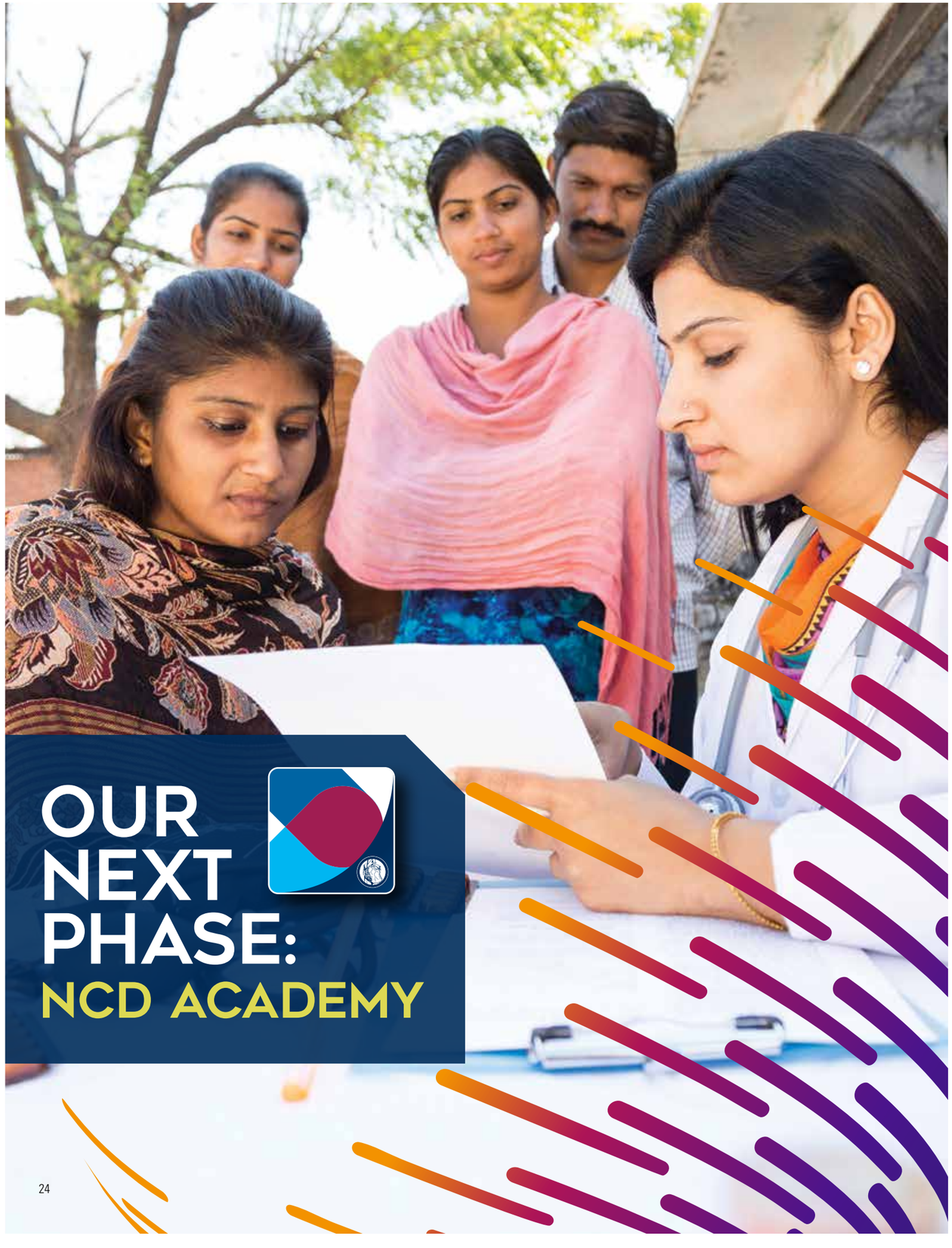
What steps did your society take to maximize the value of the global prevention program to health care providers in your country?

Health promotion and education: health promotion, especially for NCDs has been promoted in social media, televisions, and also a presentation in primary health care.

- Screening programs. Active screening and passive screening has been done.
- Surveillance and epidemiology: example: Riskesdas
- Preventive program in primary health care, for an example monitoring program for diabetics, hypertension, and geriatric patients.
- Empowering individuals, families, and communities to optimize their health.
- Advocacies and policies: government program to manage and control NCD, such as smoking taxation, and health strategic policies.

Commitment to Guideline-based Care





OUR NEXT PHASE: NCD ACADEMY

OVERVIEW

Rather than webinars and live events, the ACC is looking to other formats for the Global Prevention Program moving forward. With NCD Academy the ACC offers providers a suite of online certificate programs for enhancing, refreshing, and showcasing their knowledge of techniques and therapies for NCD prevention and screening in the primary care setting—starting with a course on cardiovascular disease, with plans to add courses on other prominent NCDs in collaboration with peer member organizations. While the program had previously been limited to health care practitioners (HCPs) in select countries, that is no longer the case with this next program iteration. With NCD Academy the ACC endeavors to deliver a one-stop resource for primary care providers worldwide to stay current on changing guidelines and resources for optimal NCD care.

KEY DRIVERS

Continued Impediments to Universal Health Coverage (UHC): Though the inclusion of NCDs in the SDGs has accelerated investment and innovation around the NCD crisis, a recent report from the NCD Alliance, "Protecting Populations, Preserving Futures: Optimising the Health Workforce to Combat NCDs and Achieve UHC"[8] draws attention to enduring challenges that the global health community must approach differently and more proactively in order to achieve effective primary care systems globally. Inadequate human resources for health care is a key issue. While increasing the number of health care personnel is critical long term, maximizing the quality and range of care that existing HCPs are empowered to offer is essential to achieving SDG targets within the desired timeframe. Specialists are scarce, and clinicians in general are too few and far between in many LMICs to meet the needs of patients. Of the five recommendations the NCD Alliance report proposes to mitigate shortages in the health care workforce, NCD Academy responds to three:

1. Enhance multi-sectoral collaboration to strengthen the health workforce.
2. Leverage multidisciplinary care teams, with a robust role for community health workers to deliver primary health care for NCDs
3. Leverage digital tools to enhance the capacity and reach of the health workforce

NCD Intersectionality: Harmful behaviors including poor diet, smoking, sedentary lifestyle, and excessive drinking are linked to most major NCDs[19]. Cardiovascular disease is the leading cause of death in patients with diabetes, and diabetes dramatically increases risk for major cancers including liver, pancreatic, breast, and bladder cancers[20].While it has long been known that NCDs share similar root causes and mutually exacerbate risk, the medical community is only now beginning to embrace unified care. In cardiovascular medicine this has been evidenced by the surge in cross-disciplinary subspecialties such as cardiodiabetology and cardiooncology. Novel cardioprotective therapies for diabetic patients and mounting research on the cardiotoxicity of chemotherapy[21] are among the factors driving this shift, and they point to an era of better insights on the bidirectional impacts of NCDs and more sophisticated dual-management. Considering these developments, the ACC believes it is now especially critical for clinical education to upend silos so that providers understand the overlap in NCDs from pathogenesis to treatment.

PROSPECTIVE TOPICS

The ACC intends to align NCD Academy courses with the four NCDs that claim the most lives globally plus mental illness given the much-needed attention this spectrum of diseases has garnered in the form of a dedicated WHO action plan[22] and, most recently, a WHO special initiative[23].

- **CARDIOVASCULAR DISEASE:** Responsible for more global deaths than any other disease, and the topic of the first NCD Academy course available spring 2020 .
- **CANCER:** Responsible for over 21% of NCD deaths, and more deaths than AIDS, tuberculosis, and malaria combined[24].
- **CHRONIC RESPIRATORY DISEASES:** The third leading cause of NCD deaths, with asthma, COPD, and asthma being the main culprits[24].
- **DIABETES:** Afflicts over 400M individuals, with approximately 83% of sufferers living in LMICs and half being unaware of their condition[24].
- **MENTAL HEALTH DISORDERS:** A frequent comorbidity with other NCDs. Around 350M people worldwide experience depression, and dementia is on track to nearly triple by 2050[24].

KEY FEATURES
of the NCD Academy

Digital & On-Demand:
The ACC has prioritized mobile-friendliness in designing the NCD Academy interface and lessons. A desktop version is also available. NCD Academy may be downloaded free of charge for iOS and Android in the App Store and Google Play, with other versions coming soon. Individual lessons may be downloaded when WIFI is available to be completed later offline.

Practice-based Learning:
Lessons are designed to present evidence and care recommendations in a variety of formats including video and text animation, and courses embody similar variety in how learners are able to test their knowledge. Gamification is present throughout. Think Jeopardy, for example.

Global Vision on Care:
NCD Academy is not limited to ACC guidelines. In areas where there are diverging schools of thought or multiple popular and distinct resources at clinicians' disposal — such as blood pressure targets and risk stratification tools in the case of CVD — course lessons acknowledge and compare these different approaches. At their crux, lessons emphasize key messages that sit within the broad areas of consensus between major guidelines.

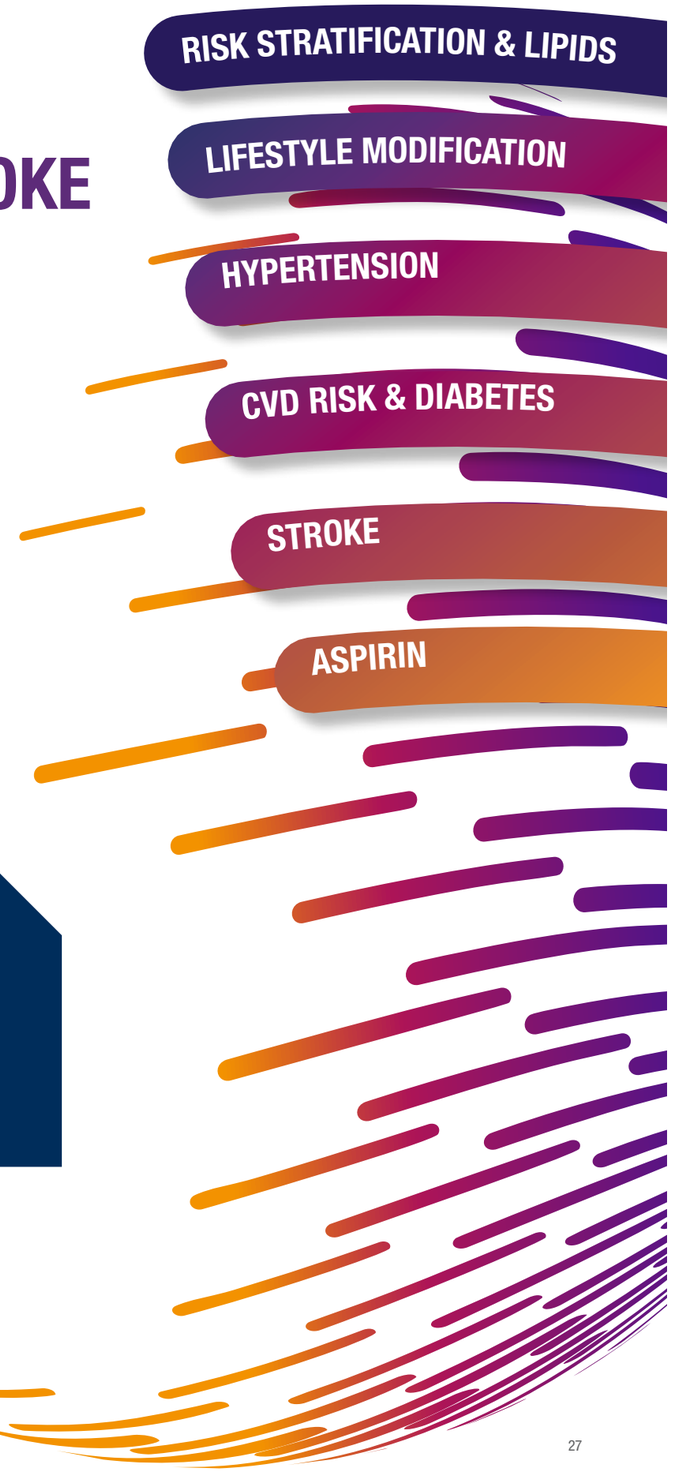
Localized Content:
Following the launch of courses in English, the ACC plans to translate courses into other prominent languages including Chinese, Spanish, and possibly others depending on demand. Leveraging the program's international advisory board, course content may also be tailored to reflect regional differences and further enhance the applicability of NCD Academy lessons to users' daily practice environment.

Learner Recognition:
Following lessons, NCD Academy courses close with a rigorous cumulative assessment covering all learning objectives. Participants who pass this final exam will receive a digital badge from the ACC that may be shared on social media, embedded in resumes, or printed for display as evidence of participants' mastery of course concepts.

ACC CERTIFICATE COURSE IN
CARDIOVASCULAR DISEASE AND STROKE PREVENTION

TAKE THE COURSE! NCD Academy uniquely brings education designed by sub-specialists in cardiovascular medicine to the global primary care community as a central feature of the College's work toward a sustainable solution for the NCD crisis. Health care practitioners who are especially encouraged to utilize this free resource include:

- General practitioners and nurses based at community clinics who act as the main source of care for patients seeking medical guidance and treatment in rural and remote areas.
- Internists and nurses at hospitals who are tasked with assessing newly-admitted patients and providing non-critical care.
- Community health workers who support preventive efforts and early detection in underserved communities through health promotion and disease screening.



HELP SPREAD THE WORD
The ACC and our global partners, World Heart Federation and NCD Alliance, invite our international members and colleagues in the global health community to join us as program advocates. Sample materials including social media, printable flyers, and other resources for sharing NCD Academy with primary care providers in your network may soon be found on ACC and partner websites.

Coming **Spring 2020**

GET IT ON Google Play

Download on the App Store

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