Providing access to healthcare for all those who need it is a significant and complex global challenge. We are making it easier for people to afford our medicines, especially in emerging markets. We focus, too, on strengthening healthcare capabilities, particularly in developing economies where the price of a medicine may not be the only barrier to healthcare.

We believe that we will be able to make the greatest contribution when our approach is commercially sustainable. It will also take a combined global effort involving all relevant stakeholders to drive sustainable progress worldwide. Many of our activities are, therefore, underpinned by collaboration with a wide range of partners.

As access to healthcare can also vary within a country, our activity is tailored locally to meet the needs of different patient populations.

2015 highlights

1 million* screenings for hypertension through Healthy Heart Africa

*2 million as at August 2016

3.5 million patients in emerging markets served by patient access programmes

1.7 million Brazilians using patient access cards through our Faz Bem programme
Our approach

At AstraZeneca we research, create, manufacture and market medicines and treatments for the whole world. We believe that everyone should have access to those medicines, regardless of where they live or how much money they have. We work hard to improve access to medicines for all, particularly those who have traditionally been underserved by the industry.

We have made significant progress in broadening the access to our products by making medicines more affordable and we are working towards greatly increasing access, particularly in low-income countries, through our patient access programmes. Our efforts to improve affordability are particularly focused on the ability to pay based on disposable household income. We continue to grow our capabilities and build on the experience of wellbeing initiatives and patient access programmes, which provide discounts on our medicines and other patient services.

Our access to healthcare strategy combines these three strands to address affordability and other healthcare barriers, while ensuring we continue to provide high-quality medicines to those who need them.

Our access to healthcare strategy:

1. To continue providing high-quality, effective and appropriate medicines to those who need them
2. To improve affordability, particularly focused on the ability to pay in emerging markets
3. To bring down healthcare barriers, particularly in developing countries

What we have achieved

<table>
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<th>Our aims</th>
<th>Goals</th>
<th>Progress highlights</th>
<th>Target progress</th>
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<tr>
<td>Increase access to healthcare for underserved patient populations</td>
<td>Expand sustainable patient access to our medicines to reach three million patients</td>
<td>3.5 million patients in emerging markets served by patient access programmes</td>
<td>Target exceeded</td>
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<tr>
<td></td>
<td>Reach one million people through Young Health Programme by 2015</td>
<td>Over 1.4 million young people engaged since 2010</td>
<td>Full target achieved</td>
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<td>Reach 10 million patients across Sub-Saharan Africa with treatment for hypertension (abnormally high blood pressure) by 2025 through Healthy Heart Africa</td>
<td>Over one million patients screened in 2015, exceeding its year one target</td>
<td>Ongoing progress</td>
</tr>
<tr>
<td></td>
<td>Screen over 750,000 people in 2015 through Healthy Heart Africa</td>
<td>UPDATE: over two million patients screened by end August 2016</td>
<td>Target not achieved, some progress</td>
</tr>
</tbody>
</table>
There are many barriers for people seeking healthcare, especially in developing economies. These include:

- Lack of infrastructure
- Availability of medicines and treatments
- Local culture, beliefs and traditions
- Cost
- Lack of knowledge

In 2015, we expanded efforts in Africa to enable greater access to hypertension medication and other essential services for patients who are otherwise unable to access medication or other forms of treatment. Through our Healthy Heart Africa programme, we have activated health facilities across Africa to provide training, education, screening, diagnosis and treatment for patients with hypertension. You can read more about our results on page 6.
Sustainable access

We aim to meet patient needs across the world, ranging from those for whom healthcare is readily available and who can afford our medicines, to those in emerging markets who may need help to access our medicines and those in developing economies where barriers to healthcare are not always price related.

We rely on sales of medicines in our established markets to help us generate the revenue we need to provide our shareholders with a return, to invest in continued innovation and to expand the availability and affordability of our medicines.

Pricing and access

We are working to make our medicines affordable to more people on a commercially and socially sustainable basis, based on an in-depth understanding of the economic conditions of the population in emerging countries and the economic burden placed on this population when it comes to health.

We do this through our mainstream operations, but also via patient programmes and a targeted pricing strategy that takes into account ability to pay, particularly in emerging and developing markets, where 45% of funding for healthcare is paid by patients out of their own pocket.

Currently this strategy focuses on chronic conditions, such as respiratory and cardiovascular disease. It is aimed at markets where there is significant unmet patient need and reflects two of our core therapy areas. We have developed an ability to pay evaluation framework\(^1\) to identify affordable price points for those who pay for their own healthcare, by assessing household budgets and the economic impact of medicines on a country-by-country basis, using World Health Organisation and other economic data sources.

We recently analysed our biggest-selling brands in emerging countries and the 13 biggest markets in our International Region. As a result, we calculated that by pricing our medicines at no more than 5% of national disposable household income we can make our current respiratory and cardiovascular portfolio affordable for around 70% of the population, specifically the median income groups for which this represents increased access to medicines, plus those already in a position to pay full price. We expect to expand this methodology significantly.

Sustainable benefits

Wherever possible we integrate into our approach a wide range of localised support services for patients, ranging from disease education, health awareness and preventive measures, to discounted or free healthcare services, dietary advice and nurse counselling. We also partner directly with non-governmental organisations and governments to improve the underlying healthcare infrastructure and improve access to medical treatment.

Our medicines play an important role in treating unmet medical need and in doing so they also bring economic, as well as therapeutic benefits. Effective treatments can help lower healthcare costs by reducing the need for more expensive care, such as hospital stays or surgery, or through preventing patients from developing more serious or debilitating diseases. They also contribute to increased productivity by reducing or preventing the incidence of diseases that keep people away from work.

This provides a systematic evaluation taking into account:

- Target population
- Funding issues
- Level of current access
- Level of discount
- Patient access programme

\(^{1}\) AstraZeneca’s ability to pay evaluation framework and market assumptions were developed through primary research in collaboration with the University of Cape Town, Department of Public Health and the International Union Against Tuberculosis and Lung Disease.

\(^{2}\) Ibid
Case study: Brazilian Mosaic makes medicines affordable

In many of the countries where we operate, there are tremendous differences in income between the most and least wealthy, which have an obvious impact on access to healthcare, even where there is a universal healthcare system. Brazil is one such country where there are huge socio-economic disparities within the population and, despite the universal healthcare system, the main source of funding for medicines remains the private sector. In addition, the relative investment in medicines is lower than in comparable countries and the percentage of private expenditure is on a par with economies without universal healthcare. This has an impact on household disposable income and the ease of access to medicines.

To address this disparity, AstraZeneca Brazil has tried to understand how to apply the right discount to the right population, as well as determining how to incentivise people to continue with the treatment they need. The company’s innovative solution was to identify their economic patient profile, a unique and customised approach called Mosaic Segmentation. The starting point is using economic data supplied by data provider Experian to compile profiles across the population. These profiles incorporate the income segment linked to patients’ national ID number. When a patient registers on the programme they are automatically assigned a discount level based on their ability to pay. This link between individual levels of affordability and access to medicines has helped more than 150,000 patients since February 2016. It is the latest development in AstraZeneca Brazil’s Faz Bem programme, which has helped a total of two million patients since it was launched in 2008.

Further patient access programmes, which provide discounts on our medicines, and other patient services include Disfruto Mi Salud in Central America and the Caribbean, MAZ Salud in Mexico and Karta Zdorovia in Russia.

We have significantly expanded these initiatives across Latin America, the Middle East and Africa, and Asia Pacific, and the number of patient access programmes in emerging markets has more than doubled since 2013, reaching 3.5 million patients in total by the end of 2015.

In Central and Eastern Europe, we offer Patient Access Card programmes to provide discounts on some of our key medicines, along with educational materials that help people understand their disease and the importance of sticking to their treatment plans.

For example, in Romania, a Patient Access Card is distributed by doctors to appropriate patients to enable co-payment reductions. Typically, a separate card is required for each treatment, but we are simplifying the process by making a single card apply to reductions on a range of our key products, making it easier for patients to manage and reducing the administrative burden on pharmacists.

Patients in rural areas are also benefiting from a new dedicated call centre.

To date, we have reached an additional 30,000 cardiovascular patients through this single card programme.
Healthy Heart Africa

Healthy Heart Africa (HHA) is our leading access to medicines programme. Through HHA we are helping to tackle a silent killer in parts of the world where access to healthcare is at its lowest.

The number of deaths attributable to cardiovascular disease (CVD) in Africa grew more significantly than any other condition from 2000 to 2012, and is currently the third leading killer in the region, closely behind HIV/AIDS and respiratory infections. Moreover, CVD is the leading cause of non-communicable disease (NCD)-related mortality in the Africa region, accounting for more than one-third of all NCD deaths.

High blood pressure, or hypertension, one of the main risk factors for CVD, is meanwhile estimated to affect nearly half of adults aged 25 years and older across the region, and its prevalence is expected to grow, affecting 150 million adults in Sub-Saharan Africa alone by 2025.

Yet it is estimated that less than 10% of people with hypertension have access to effective treatment in some African countries. By diagnosing and treating hypertension, we can prevent the development of more severe forms of cardiovascular disease, reducing the strain on developing healthcare systems and keeping people healthier for longer.

Tackling the problem
We launched HHA in Kenya in 2014, as a first step towards our goal of treating 10 million people with hypertension in Africa over the following 10 years. Working with local partners, we set about providing training and establishing healthcare centres for screening and treating patients.

In our first year we:

- Conducted 1 million hypertension screenings in Kenya
- Activated over 250 health facilities
- Trained over 2,600 healthcare workers across 21 counties
- Diagnosed close to 150,000 patients with high blood pressure
- Started treatment for 25,000 patients

UPDATE: as at August 2016

- Conducted 2 million hypertension screenings
- Activated over 400 health facilities
- Trained over 3,000 healthcare workers across 31 counties
- Diagnosed over 300,000 patients with high blood pressure
- Started treatment for 80,000 patients
**Addressing the challenges**

### 1. Identifying the right patients

Healthcare facilities and household screening activities predominately reach women, with only 35% of those reached through the programme initially being men. In order to reach more males of working age in the area of Kibera (Kenya’s largest slum), a new ‘walkway’ screening location was established to capture male commuters walking home from work. We integrated this into an existing local health facility but one which was not previously part of our original programme. The new Kibera facility is open additional hours in the evening in order to manage the additional footfall. Through this new screening location we have seen a drastic increase in the number of males being screened. In addition, linkage rates have improved between screening and diagnosis, due to evening clinic hours and increased opportunity to engage with patients on a regular basis during their daily routine.

### 2. Leveraging large workplaces to bring treatment to the patient

Daily working hours can make it difficult for people to attend screening clinics. However, combining screening activities with outreach clinics at large workplaces ensures patients can not only get their blood pressure checked but also be treated at the same time by the attending health worker. This has worked well at both informal (e.g. factories and quarries) and formal workplaces (e.g. teacher meetings), and has resulted in an increased desire for companies to keep their workforce healthy and supported, with regular outreach clinics now visiting a number of large workplaces, ensuring continuity of care with limited impact on patients’ commitment to work.

### 3. Integrating NCD care into existing community-level care

Reaching rural patients can be challenging and linkage rates between community activities and attendance at health facilities were initially as low as 25% in some rural settings. Mobilising community health visitors (CHVs) to support their community and patients throughout the whole patient journey for multiple health conditions has helped to provide better patient care for both non-communicable and communicable diseases.

### 4. Ensuring no missed opportunities

The first point of entry for patients seeking acute care in a large health facility is generally the outpatient department. The focus of these departments has typically been to address only acute conditions, with limited or no time taken to check the overall health of the patient. Patients are often not routinely checked for high blood pressure, losing the opportunity to provide preventative or chronic care services. However, within facilities that have been mobilised through HHA, when screenings did take place, a higher prevalence of hypertension was observed than in community settings. Instigating routine blood pressure screening processes within outpatient departments and improving links with medical departments equipped to deliver chronic care services have, therefore, ensured that sick patients receive, not just the acute care they need but also longer-term chronic care services.

### 5. Reaching the faith-based community

Using religious services to help spread health messages is an important way to communicate to a large number of people and to bring information closer to patient populations. HHA has combined health talks with screenings and treatment outreach clinics at Kenyan churches to help diagnose and treat hypertension patients within their communities. Solely through this channel, HHA has screened over 120,000 people. This outreach is also reinforced by weekly visits to the church by community healthcare volunteers to ensure continuity of care for patients.

**Next steps**

Mid-2016 is the end of our HHA demonstration period, throughout which we have been refining our approach and developing the model for the programme. This knowledge will help us to launch HHA more widely in Kenya and in other African countries, such as Ethiopia (implemented in 2016).

In 2016, we will also establish new partnerships to continue to test approaches in Kenya and other countries in the region. There will also be an independent impact evaluation of the programme available to provide further insight about how HHA can be expanded and scaled up to other countries.

**UPDATE**

AstraZeneca launched a partnership with PEPFAR in September 2016 to jointly invest up to $10 million over five years to integrate hypertension services into existing HIV platforms across Africa.
Strengthening healthcare capabilities

Access to healthcare depends on having a functional healthcare system and the right allocation of resources to make sure that medicines are used appropriately as part of overall health management.

For people in communities with limited healthcare infrastructure, we partner with others to help strengthen healthcare frameworks and capabilities.

Tackling breast cancer in Africa

Breast cancer is the most common cancer and greatest cause of cancer death among women in South Africa. Poor education and lack of awareness of breast health issues, cultural barriers and no access to healthcare facilities have hindered efforts by the government to combat the disease among low-income communities.

Phakamisa brings together different organisations to help raise breast cancer awareness, increase early diagnosis, and improve access to treatment and effective support networks. AstraZeneca is also working to ensure that our comprehensive range of hormonal treatments is made available to the health service in a cost-effective way.

In collaboration with South Africa’s Foundation for Professional Development, we are providing accredited courses in cancer diagnosis, treatment and care to doctors, nurses and other healthcare professionals. And in partnership with the Cancer Association of South Africa and the Breast Health Foundation, we are training teams of volunteers and counsellors to go out into the community, raising awareness and supporting patients, as Phakamisa ‘Navigators’.

Since the launch of Phakamisa in 2011, more than 600 healthcare professionals have been provided with courses and 400 people have been trained as Navigators. Continued education for the Navigators has also covered socially relevant issues such as cervical cancer, HIV, gender-based violence and child abuse.

Phakamisa is in its fifth year of operation and, to date, 1,606,978 women have been reached by Navigators across the country. The primary objective of these Navigators is to support patients that are diagnosed with breast cancer in the public system. However, their interaction with people when raising awareness of breast health in their communities made it possible for close to 3,800 malignant lumps to be identified and referred for effective treatment, something which might not have been discovered if the services of the Phakamisa Navigators were not around. During the four years since the programme started, a monthly average of 2,501 patients have been supported by Phakamisa Navigators in the public health sector.
Addressing prostate cancer
Prostate cancer affects one in six men in South Africa. Although it is not as widely addressed as breast cancer, the mortality of prostate cancer is much higher than that of breast cancer.

With this reality facing South African communities, Phakamisa embarked on another challenge during 2016 and started to implement the aspects of the breast cancer model so that prostate cancer patients can also be supported when diagnosed. Phakamisa Prostate is currently being rolled out in three of the country’s nine provinces, with implementation in the rest of the country planned for 2017.

Phakamisa Prostate offers the same service as the breast cancer programme through the collaboration of non-governmental organisations and private entities that join Phakamisa in the worthy cause to change and impact the lives of cancer patients and their families in South Africa.

Building on success
Building on the successful and ongoing Phakamisa collaboration in South Africa, in 2012 we set up a new partnership in Kenya, where breast cancer is a particular problem. During the year, we trained 150 healthcare practitioners and 60 volunteers through a series of workshops in four major Kenyan cities. The programme was successfully introduced to Ghana in 2013. Support to prostate cancer patients will also be given from 2016 in Kenya and Ghana. In 2016, AstraZeneca is extending the programme to more countries in sub-Saharan Africa such as Nigeria, Angola, and Ethiopia.
Intellectual property

Intellectual property (IP) rights are the lifeblood of the biopharmaceutical industry, providing the incentives required to conduct the research and development (R&D) that produces new medicines to treat patients and improve patients’ lives. It takes approximately 10 to 15 years to develop a new medicine, and for every one medicine that reaches patients, there are thousands of drug candidates that fail. The ability to obtain patent protection for innovations in R&D, under a robust IP protection and enforcement framework, is one of the main incentives for innovation and provides a sustainable framework for the innovative, pharmaceutical R&D that produces life-saving medicines.

AstraZeneca seeks to protect innovations worldwide. However, we have a position of not filing patent applications in the countries listed in Table 1. We have prioritised the countries where we seek patent protection for our products and accept that we cannot file patent applications in every country of the world. In Sub-Saharan Africa AstraZeneca does seek patents of invention for new chemical entities in Angola, Ethiopia, Gambia, Ghana, Kenya and Nigeria, and also seeks them for new chemical entities and other types of inventions in South Africa.

Unless constrained by contract, AstraZeneca proactively abandons all patent property that does not support a product, or an actual or potential pipeline asset, and is therefore of no use to it. This makes the innovations disclosed in that patent property available for all to use without the necessity of seeking a licence from AstraZeneca or anyone else.

AstraZeneca will license (i.e. not enforce) its patent rights in the neglected tropical disease (NTD) space regardless of country. AstraZeneca also has a position of accepting licence terms, i.e. not enforcing its patent property in any low-income countries (LICs) or least developed countries (LDCs). While we do currently seek to patent inventions directed to new chemical entities in Angola, Ethiopia and/or Gambia (which equates to about 6% of the total number of LICs and LDCs), we would not consider enforcing such rights unless the economy of a country improved to enable that country to cease to be classified as an LIC and/or LDC. There is precedent for such a transition as Botswana and Cape Verde moved out of LDC status in 1994 and 2008 respectively.
We seek to improve the visibility of the existence of our patent rights covering products that may be used to treat Index Diseases and Index Countries both as defined by the Access to Medicine Index (listed on page 24 and 22 respectively in the Access to Medicine Index – Methodology Report 2016). It is not always straightforward to access information about the expiry of patent rights from publicly available sources. To help with this we include patent expiry information for China, the EU, Japan and the US for key products in our Annual Report. Table 2 provides details of the patent rights we have in Index Countries for medicines that are used to treat Index Diseases, together with an indication of the expiry of those rights.

We recognise the right of developing countries to use the flexibilities in the World Trade Organization’s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), including the DOHA Declaration (14 November 2001) in certain circumstances, such as a public health emergency. This is enshrined in our Public Policy Issue for Compulsory Licensing.

Licensing is an important way of allowing access to patent-protected inventions. Our Non-Exclusive Voluntary Licence (NEVL) Public Policy Issue sets out the criteria under which we would grant such a licence. We are flexible and will consider proposals concerning the geographic scope of any NEVL.

Also, AstraZeneca will license its patent rights in LICs, LDCs and LMICs for all Index Diseases (for all Index Diseases see page 22 of the Access to Medicine Index – Methodology Report 2015) except non-communicable disease uses. We reserve the right to enforce these patents in LMICs for all other uses. AstraZeneca will license any patent rights covering medicines on the Essential Medicines List for supply of those Essential Medicines to LICs, LDCs and LMICs, and would also consider licensing any patent rights to third parties for supply in or to MHDCs. AstraZeneca supports the Bolar research exemption (or safe harbour exemption) under which a third party may prepare for and obtain regulatory approval so that a generic product can be available on patent expiry; but this does not mean that the company interprets Bolar as extending to commercial manufacture, importation or stockpiling during the lifetime of a patent.
Young Health Programme

The Young Health Programme (YHP) is our global community investment initiative. It has a unique focus on young people and primary prevention of the most common non-communicable diseases (NCDs), such as type 2 diabetes, cancer, and heart and respiratory disease. Significant global health issues that have human, social and economic consequences, NCDs have become the leading cause of death and disability worldwide and are responsible for an estimated 38 million deaths each year.

We work with over 30 expert organisations, combining on-the-ground programmes, research and advocacy to target the four most prevalent risk factors for NCDs: tobacco use, alcohol abuse, lack of exercise and unhealthy eating.

When we launched YHP in 2010, we committed to reach one million young people through the programme by the end of 2015. We have now reached over 1.4 million young people in more than 20 countries. Kenya was the latest addition in 2015.

Over 14,000 young people have now been trained to share health information with their peers and the community, and over 12,000 frontline health providers have been trained in adolescent health.

You can find stories of the young people helped by YHP at www.yhpvoices.com and further information on the programme at www.younghealthprogrammeyhp.com.

Case study: The Young Health Programme in India

In India, YHP is helping young people make sense of the physical, mental and social changes going on in their lives. Through community meetings and peer education, young people are able to get the information they need about their health and their bodies, instead of relying on misinformation shared by their friends. In many cases, young people are learning about health issues for the first time through YHP and are gaining increased awareness of how the body works, the impacts of smoking, substance abuse, diet and lack of exercise.

Before I got involved in YHP, I was in bad company. I had personal problems and no one to talk to about them. Sharing these problems with my friends was just sharing poor information. I didn’t understand the importance of education. I initially joined YHP for access to the computers. YHP taught us about drugs and substance abuse, which is a huge problem. We also learned about reproductive health, which is related to many of our personal problems.

Through YHP I have participated in street plays, spoken in public and shared knowledge with the community at large. Being part of YHP renewed my interest in, and commitment to, education and now I’m in my final year of a BA degree at Delhi University. I’m also a YHP Ambassador, speaking up for the health needs of young people around the world.”

Suraj is 21 and has been involved with YHP in India for four years.