EXECUTIVE SUMMARY

- Bangladesh is experiencing a rapid evolution in healthcare, witnessing a shift towards lifestyle disease patterns
- The public sector is increasing its focus on healthcare, particularly through the Health Population and Nutrition Sector Development Program (HPNSDP)
  - Along with support from International Aid agencies
- However, the private sector is driving the world class health delivery in Bangladesh
- A lack of local know-how is driving the demand for imported healthcare products
- Business potential for international healthcare product companies exist both in the private and public segments
  - Public sector procurement is fairly centralized
  - Private sector purchasing appears to be the low hanging fruit
- A local presence either directly or through a partner is required to succeed in the market
- The regulatory frameworks is in a developing phase
- The country has a growing market for pharmaceuticals
  - Supply of raw material and equipment to local companies shows promise
  - Though there is potential in local R&D and development, companies have evident challenges such as IP protection and CSR
AGENDA

- Bangladesh economic overview
  - Investment scenario
  - Swedish presence in Bangladesh
- Healthcare market
  - Medical devices market
  - Pharmaceutical market
- Next steps
BANGLADESH IS EQUIVALENT TO HALF OF SWEDEN'S GDP BUT WITH 16 TIMES MORE POPULATION

<table>
<thead>
<tr>
<th>Bangladesh</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>450,295 sq km</td>
</tr>
<tr>
<td>Population</td>
<td>9.8 million</td>
</tr>
<tr>
<td>Population growth</td>
<td>0.85%</td>
</tr>
<tr>
<td>Adult literacy rate</td>
<td>99%</td>
</tr>
<tr>
<td>GDP (nominal)</td>
<td>USD 487 billion</td>
</tr>
<tr>
<td>GDP per capita (PPP)</td>
<td>USD 47,229</td>
</tr>
<tr>
<td>GDP growth</td>
<td>2.3%</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>-0.2%</td>
</tr>
<tr>
<td>Internet penetration</td>
<td>89.1% (2014)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bangladesh</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>147,570 sq km</td>
</tr>
<tr>
<td>Population</td>
<td>159 million</td>
</tr>
<tr>
<td>Population growth</td>
<td>1.2%</td>
</tr>
<tr>
<td>Adult literacy rate</td>
<td>57.7%</td>
</tr>
<tr>
<td>GDP (nominal)</td>
<td>USD 209 billion</td>
</tr>
<tr>
<td>GDP per capita (PPP)</td>
<td>USD 3,581</td>
</tr>
<tr>
<td>GDP growth</td>
<td>6.0%</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>6.1%</td>
</tr>
<tr>
<td>Internet penetration</td>
<td>6.7% (2014)</td>
</tr>
</tbody>
</table>

SOURCE: WORLD BANK, OECD, SVERIGES RIKS BANK, BANGLADESH BANK
DEMOCRATIC RULE AND SUPPORT FROM GLOBAL COMMUNITY INSTRUMENTAL IN LIFTING BANGLADESH

1947-1975
- Part of Pakistan
- Independence 1971

1975-1991
- Authoritarian rule
- Incentives launched for readymade garments and launch of structural adjustment policy

1991-2008
- Democracy introduced
- Ease of trade restrictions and launch of export incentives
- Strengthening of central bank supervision

2009 onwards
- Awami League government since 2009 under the leadership of Sheikh Hasina
- Government re-elected in 2014
- Sound economic policies

SOURCE: ECONOMIST INTELLIGENCE UNIT, CIA WORLD FACTBOOK
IMPROVING POLITICAL CLIMATE AFTER YEARS OF UNREST AND ANTI-GOVERNMENT PROTESTS

HEAD OF STATE

President: Abdul Hamid  
In current role since: 24 April 2013  
Political Party: Awami League

HEAD OF GOVERNMENT

Prime Minister: Sheikh Hasina  
In current role since: 6 January 2009 (Re-elected 2014)  
Political Party: Awami League

- People’s Republic of Bangladesh is a republic and unitary state
- Also is a founding member of SAARC and a member of the Commonwealth
- Elections take place every 5 years for the parliament, which in turn elects the President
- President appoints the Prime Minister
- The Prime Minister is formally appointed by the President but must also be a member of parliament and command the confidence of the majority
- The Prime Minister, as the head of government, selects the cabinet and the President formally appoints it

SOURCE: ECONOMIST INTELLIGENCE UNIT, CIA WORLD FACTBOOK
THE COUNTRY HAS SUSTAINED HEALTHY GROWTH RATE OF 6-7% OVER THE LAST DECADE...

Bangladeshi economy has been on a growth path since early 2000s

- Growth enabled by
  - Textile sourcing
  - High inward remittances
  - Rise in domestic consumption
  - SME growth
  - Support from global financial institutions including IMF, Japan International Cooperation Agency, Asian Development Bank, World Bank etc.

**BANGLADESH - GDP DEVELOPMENT**
Size in USD Billion and change in %

<table>
<thead>
<tr>
<th>Year</th>
<th>GDP at current prices</th>
<th>%change(RHS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>4.8</td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2004</td>
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<td>2005</td>
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<td>2006</td>
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<td>2007</td>
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<td>2008</td>
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<td>2009</td>
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<td></td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td></td>
<td>6.5</td>
</tr>
<tr>
<td>2012</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td></td>
<td></td>
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<tr>
<td>2014</td>
<td></td>
<td></td>
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<tr>
<td>2015</td>
<td></td>
<td></td>
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<tr>
<td>2016</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td></td>
<td>7.2</td>
</tr>
</tbody>
</table>

SOURCE: IMF, ADB

NOTE: ABSOLUTE GDP IS MEASURED IN USD BILLION AT CURRENT PRICES. % CHANGE IS CALCULATED USING CONSTANT PRICES
..WITH SIGNIFICANT IMPROVEMENT IN TERMS OF MAJOR INDICATORS

MACRO ECONOMIC INDICATORS

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2005</th>
<th>2014</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDP nominal (USD, bn)</td>
<td>187</td>
<td>3,124</td>
<td>4,151</td>
</tr>
<tr>
<td>GDP per capita, PPP (USD)</td>
<td>3,124</td>
<td>4,151</td>
<td></td>
</tr>
<tr>
<td>Government revenues (USD, bn)</td>
<td>1,472</td>
<td>2,580</td>
<td></td>
</tr>
</tbody>
</table>

REAL GDP GROWTH
ANNUAL CHANGE IN PERCENTAGE, 2005-2020

SOURCE: WORLD BANK, IMF WEO 2015, IMF. STATISTICS TIMES
COUNTRY’S GDP IS EXPECTED TO TRIPLE FROM USD 187 BN IN 2014 TO USD 673 BN IN 2050

COMPARISON OF ECONOMIC SIZE, ECONOMIC GROWTH AND POPULATION
(SIZE OF BUBBLE INDICATIVE OF POPULATION)

BANGLADESH EXPECTED TO BE THE 31ST LARGEST ECONOMY IN TERMS OF GDP, BY 2050

SOURCE: EUROMONITOR, WORLD BANK, HSBC, ECONOMIC BUBBLE 2012

ATTRACTIVENESS SEEN AS A POTENTIAL MIXTURE OF ECONOMIC SIZE, GROWTH AND POPULATION.
MER: MARKET EXCHANGE RATE; PPP: PURCHASING POWER PARITY
COMMERCIAL ACTIVITY IN BANGLADESH FOCUSED AROUND DHAKA-CHITTAGONG-KHULNA AREA

THREE MAJOR CITIES FORMING A COMMERCIAL TRIANGLE

1. Dhaka: 12-16 million inhabitants
   - The national capital, the trade capital and the largest city in Bangladesh
   - The major FDI recipient and manufacturing hub
   - Garments manufacturing in metro area

2. Chittagong: 4-5 million inhabitants
   - Chittagong is the most important sea port of Bangladesh and handles 80% of the foreign trade traffic in the country
   - 40% of the heavy industrial activities are also located here

3. Khulna: 1.3 million inhabitants
   - Third largest domestic economy
   - Home to the country’s second largest sea port
   - Main industries include: shipbuilding, jute manufacturing, seafood packaging and power generation

SOURCE: WORLD BANK
AGENDA

- Bangladesh economic overview
  - Investment scenario
    - Swedish presence in Bangladesh
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      - Medical devices market
      - Pharmaceutical market
    - Next steps
THE COUNTRY HAS WITNESSED AVERAGE YEARLY FDI INFLOW OF USD 1.3 BN OVER THE PAST 5 YEARS

FDI INFLOWS IN BANGLADESH
USD Million

<table>
<thead>
<tr>
<th>Year</th>
<th>USD Million</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>913</td>
</tr>
<tr>
<td>2011</td>
<td>1,136</td>
</tr>
<tr>
<td>2012</td>
<td>1,292</td>
</tr>
<tr>
<td>2013</td>
<td>1,599</td>
</tr>
<tr>
<td>2014</td>
<td>1,527</td>
</tr>
</tbody>
</table>

Avg. 1,293

CAGR: 13.7%

SECTOR-WISE BREAKUP OF FDI
USD Million, 2014

- Textiles: 391
- Banking: 312
- Telecom: 227
- Food: 53
- Power & Fuels: 45
- Trading: 45
- Pharma & chemical: 40
- Other: 414
- Total: 1,527

READY MADE GARMENTS ALONG WITH OTHER MANUFACTURING SEGMENTS ARE PROMINENT FOR FDI

SOURCE: WORLD BANK, CIA FACTBOOK, TRADING ECONOMICS, BANGLADESH BANK
THE COUNTRY OFFERS PROMISING INVESTMENT OPPORTUNITIES ACROSS VARIOUS SECTORS

A. TEXTILE
Bangladesh is the 2nd largest exporter of knitwear in the World in 2011. Textile is the nation's number one export earner, accounting for USD 21.5 billion in 2013 – 80% of Bangladesh's total exports.

B. LEATHER
The leather industry earned USD 981 million in exports in fiscal 2012-13, indicating a growth of 28% in 2012-13 over the previous year.

C. FROZEN FOOD & PACKAGING INDUSTRY
Frozen food is the 2nd largest industry in Bangladesh with various organized and unorganized players present in the domestic market.

D. TELECOM
Mobile market in Bangladesh is growing at the rate of 30% from 2006-11 with the subscriber base have increased by almost 20 times. The 100 million mobile subscriber milestone was reached in 2013.

E. POWER GENERATION
Power generation in the country is largely through oil and natural gas exploration and extraction and the sector is open to foreign player. At present, 49% of the total population of Bangladesh is enjoying the electric facilities.

F. INFRASTRUCTURE
32% of the country’s area is covered by railways and the rest of the country is connected mostly by waterways. Port building and Infrastructure improvement are the growing sector for investments.

G. HEALTH CARE
Bangladesh is growing in the pharmaceutical and medical equipment industries with top international players entering in the market. Medicines are also exported from Bangladesh.
AGENDA

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GROWING TRADE RELATIONS BETWEEN SWEDEN AND BANGLADESH

Currently around 50 Swedish companies are present in Bangladesh.

Bangladesh has emerged as one of the key sourcing countries for Swedish companies.

Hence, Swedish imports from Bangladesh grew at a CAGR* of 12% during 2008-2014.

Major Swedish companies working with Bangladesh are:

- Getinge
- IKEA
- ABB
- KappAhl
- Atlas Copco
- ERICSSON
- Tetra Pak

**SWEDEN-BANGLADESH TRADE VOLUME OF GOODS**

In SEK Billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Swedish Export to Bangladesh</th>
<th>Bangladeshi Export to Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>2.2</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>1.9</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>2.9</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>3.3</td>
<td></td>
</tr>
</tbody>
</table>

2008-2014
CAGR Sweden-Bangladesh Trade: 7%
Growth percentage: 50%

**SOURCE:** UNCTAD. KOMMERS

CONVERTED FROM USD TO SEK AT THE AVERAGE CONVERSION RATE OF 2013 - 1USD=6.5 SEK
SWEDEN HAS A LONG STANDING DEVELOPMENT COOPERATION WITH BANGLADESH

- Sweden has a long-term engagement in Bangladesh
  - Has allocated approx. SEK 240 million per year under 2014-2020 Strategy

- In the healthcare sector, Sweden has a longstanding development support since the 1970’s
  - Swedish support to the Bangladeshi government’s sector program for healthcare amounts to approx. SEK 1 billion for 2006-2016
  - Support to the government’s health system on all levels throughout the country, with a particular focus on
    - Sexual and reproductive health
    - Human rights and democracy
    - Inclusive growth
    - Climate change and environment

- Phasing out of primary education
SWEDISH SUCCESS STORY 1: ABB IS WELL ESTABLISHED WITHIN THE POWER SECTOR

OVERVIEW OF ABB IN BANGLADESH

- ABB Bangladesh is headquartered in Dhaka, and has a service station in Chittagong
- The company has a proven history in Bangladesh and has been present since independence through agent/intermediaries
- Its supervisory control & data acquisition system has been successfully monitoring and controlling the distribution of electricity in the capital city Dhaka since 1998

EXAMPLES OF RECENT ABB PROJECTS IN BANGLADESH

ABB TO BUILD 4 SUBSTATIONS AND EXPAND 6 MORE
- A USD 30 million from PGCB to support the country in meeting the growing demand for electricity.
- The four new 132/33kV substations will be constructed at Rangamati, Khagrachori, Bianbazar and Sunamganj
- ABB will design, supply, install and commission the substations

ABB TO PROVIDE A TURNKEY 230KV SUBSTATION
- The project, worth USD 8.5 million, also includes the and renovation of existing 132kV substation at Fenchuganj
- The scope covers everything from transformers, control and relay panels, to complete system engineering, installation, testing and commissioning

ABB TO IMPROVE DHAKA’S DISTRIBUTION NETWORK
- Won contracts with Dhaka Power Distribution Company worth a total of USD 8 million
- Involving 14 distribution substations, adding approximately 800MVA
- Dhaka’s distribution network accounts for almost half of the country’s power consumption
Hifab International started its operation in Bangladesh in 1987, with a head office in Dhaka.

The company has implemented around 40 projects in Bangladesh and currently have 7 ongoing projects.

It has provided support to various cooperation projects funded by Sida, Asia Development Bank, World Bank, Danish International Development Agency, United Nations Development Programme, amongst others.

It has been closely working with Local Government Engineering Departments (LGED) in Bangladesh, which is one of the most prominent project execution agencies in the country.

HIFAB WINS NEW CLIMATE RESILIENT PROJECT
- Client: LGED
- Project covers 12 south-western coastal districts of Bangladesh
- Incorporating climate resilience principles in the design, construction and maintenance of all rural infrastructure

CITY REGION DEVELOPMENT PROJECT (CRDP)
- Management, design and supervision consultancy
- Enhancing growth potential and improving environmental sustainability of Dhaka and Khulna City regions

RURAL DEVELOPMENT PROJECT
- Management, design and supervision consultancy
- Improvement and construction of roads, bridges and culverts
- Also involves road safety improvement, tree plantation and maintenance of village roads
BANGLADESH FACES A FEW DIFFICULT CHALLENGES

- High level of poverty but decreasing
- Poor infrastructure
  - Transport
  - Access to water and energy
- Climate change and over population
- Risk of future political instability
- Lack of educated labor but trainable English speaking workforce
- Low tax revenue collection but scope for improving public revenue generation
- Less than 5% of the workers are organised and existing trade unions are weak and fragmented
- Widespread corruption
AGENDA

- Bangladesh economic overview
  - Investment scenario
  - Swedish presence in Bangladesh

- Healthcare market
  - Medical devices market
  - Pharmaceutical market
  - Next steps
BANGLADESH SPENDS 3.7% OF ITS GDP ON HEALTHCARE

The total healthcare market is estimated at USD 5.6 billion in 2014
- Growing at CAGR 12.8% since 2011
- Key drivers include:
  - Formulation of ‘National Drug Policy 2014‘ to modernise public health system and the ‘Health Population and Nutrition Sector Development Program’ (HPNSDP)
  - Increasing awareness to healthcare at rural level
  - Improved access to healthcare through ‘telecare initiative’

OVERALL HEALTHCARE MARKET IN BANGLADESH
USD Billion

<table>
<thead>
<tr>
<th>Year</th>
<th>Market Size USD Billion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>3.9</td>
</tr>
<tr>
<td>2012</td>
<td>4.0</td>
</tr>
<tr>
<td>2013</td>
<td>4.9</td>
</tr>
<tr>
<td>2014</td>
<td>5.6</td>
</tr>
<tr>
<td>2015</td>
<td>6.3</td>
</tr>
<tr>
<td>2016</td>
<td>6.9</td>
</tr>
<tr>
<td>2017</td>
<td>8.4</td>
</tr>
<tr>
<td>2018</td>
<td>9.2</td>
</tr>
</tbody>
</table>

CAGR 12.8%
CAGR 13%

THE GDP SPEND ON HEALTHCARE IS EQUIVALENT AS COMPARED TO PEERS IN THE REGION

HEALTH EXPENDITURE, AS A % of TOTAL GDP
Selected countries, latest available year

<table>
<thead>
<tr>
<th>Country</th>
<th>Life expectancy (in years)</th>
<th>Health Expenditure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sweden</td>
<td>82</td>
<td>9.7</td>
</tr>
<tr>
<td>China</td>
<td>75</td>
<td>5.6</td>
</tr>
<tr>
<td>Malaysia</td>
<td>75</td>
<td>4.0</td>
</tr>
<tr>
<td>India</td>
<td>66</td>
<td>4.0</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>71</td>
<td>3.7</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>74</td>
<td>3.2</td>
</tr>
<tr>
<td>Indonesia</td>
<td>71</td>
<td>3.1</td>
</tr>
<tr>
<td>Pakistan</td>
<td>67</td>
<td>2.8</td>
</tr>
</tbody>
</table>

SOURCE: WORLD HEALTH ORGANIZATION, CIA – THE WORLD FACTBOOK, WORLD BANK, STATISTA
PHARMACEUTICALS AND MEDICAL DEVICES ACCOUNT FOR TWO-FIFTH OF TOTAL MARKET AT USD 2.2 BN

SEGMENT SPLIT OF THE HEALTHCARE MARKET IN BANGLADESH
USD 5.6 Billion, 2014

Healthcare spending as % of GDP

<table>
<thead>
<tr>
<th>Healthcare Spending</th>
<th>Total healthcare market</th>
<th>Pharma market</th>
<th>Medical devices market</th>
<th>Healthcare delivery market</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of total healthcare market</td>
<td>100%</td>
<td>36%</td>
<td>2%</td>
<td>61%</td>
</tr>
</tbody>
</table>

SOURCE: BMI RESEARCH
TWO-THIRD OF THE HEALTHCARE EXPENDITURE IS FROM THE PRIVATE SECTOR

PUBLIC-PRIVATE SPLIT OF HEALTHCARE EXPENDITURE IN BANGLADESH
100% = USD 5.6 Billion, 2014

- 93% of the private expenditure is paid by out-of-pocket savings of the people
- Insurance as a mechanism to fund healthcare is becoming more common
  - White collared private employees pay through private insurance
- Public expenditure is focused on national programs aimed at bottom of the pyramid
- Private players are concentrated on delivering healthcare in the developed areas
BANGLADESH HAS LOWER HEALTHCARE INFRASTRUCTURE THAN NEIGHBOURING COUNTRIES...

BED DENSITY PER THOUSAND PEOPLE
Selected countries, latest available year

<table>
<thead>
<tr>
<th>Country</th>
<th>Bed Density</th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>3.8</td>
</tr>
<tr>
<td>Sri Lanka</td>
<td>3.6</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1.9</td>
</tr>
<tr>
<td>Indonesia</td>
<td>0.9</td>
</tr>
<tr>
<td>India</td>
<td>0.7</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>0.6</td>
</tr>
<tr>
<td>Pakistan</td>
<td>0.6</td>
</tr>
</tbody>
</table>

World average 2.7

HOSPITAL BED SPLIT IN BANGLADESH
Total number of beds = 94,318 in 2014

- Public sector: 48%
- Private sector: 52%

SOURCE: DGHS 2014, WORLD HEALTH ORGANIZATION, CIA – THE WORLD FACTBOOK, WORLD BANK, STATISTA
...AND A LOWER NUMBER OF HEALTHCARE PROFESSIONALS

**Physicians per thousand people**
Selected countries, latest available year

- China: 1.9
- Malaysia: 1.2
- Pakistan: 0.8
- India: 0.7
- Sri Lanka: 0.7
- Bangladesh: 0.4
- Indonesia: 0.3

*World average: 1.4*

**Births attended by skilled health staff**
% of total births, Selected countries

- China: 100
- Malaysia: 99
- Sri Lanka: 99
- Indonesia: 83
- India: 67
- Pakistan: 52
- Bangladesh: 44

*World average: 74%*

INCREASE IN LIFE STYLE DISEASE BURDEN WHILE STILL COMBATING TRADITIONAL DISEASES

PROPORTIONAL MORTALITY IN BANGLADESH
As a % of total deaths in 2012, 100%= 886,000, All

- Non-communicable diseases: 59%
- Communicable, maternal, neonatal & nutritional diseases: 32%
- Injuries: 9%

TOP REASONS FOR MORTALITY
As a % of total deaths in 2012, 100%

- Cardiovascular diseases: 17%
- Chronic respiratory diseases: 11%
- Cancers: 10%
- Birth complications: 4%
- Diabetes: 3%
- Tuberculosis: 3%

SOURCE: WHO 2014, CENTERS FOR DISEASE CONTROL AND PREVENTION
THE HEALTH, POPULATION AND NUTRITION SECTOR DEVELOPMENT PROGRAM 2011-16

Objective of HPNSDP*

- Improve access to and utilization of essential health, population and nutrition services, particularly by the poor

Components of HPNSDP

- The first component is to improve health services, by improving priority health services towards Millennium Development Goal (MDG) targets
- The second component is strengthening health systems

Cost and implementing departments

- Estimated cost at USD 7.7 billion over 5 years, of which government of Bangladesh is contributing USD 5.9 billion and USD 1.8 billion by development donor partners
- Focused Operational Plans headed by 32 Line Directors

New health services

- Focus on maternal, neonatal, child and adolescent healthcare, a new Operational Plan (OP) is implemented under DGHS
- Providing permanent method of contraception (sterilization)
- 24 hour emergency services with ICU/CCU facilities through secondary and tertiary hospitals
- All sorts of diagnostic tests
- Establishing e-health at all public facilities including the community clinics (CC)
- Introduction of midwifery services and training

SOURCE: WORLD BANK, MINISTRY OF HEALTH

* HPNSDP: HEALTH, POPULATION AND NUTRITION SECTOR DEVELOPMENT PROGRAM
Ministry of Health and Family Welfare formulates national-level policy, planning & decision making

National level policies are translated into actions by various implementing authorities across the country from national to community level

Public healthcare system is delivered through tertiary, secondary and primary centres across cities, towns & villages

DGFP runs project-based community centres focusing on family, maternal and child care

CMSD responsible for purchase of technical equipment
PRIVATE HEALTHCARE SYSTEM

- **Funding**
  - Highly dependent on the money received from treating the patients
  - Patients pay out-of-pocket and through private insurance for each & every service (bed, surgery, food, medicine, consultation etc.)

- **Users**
  - Used by embassy employees, middle class and high-income people
  - Mainly delivered in cities like Dhaka, Khulna and Chittagong

- **Disease focus**
  - Focus on lifestyle diseases
  - General surgery, cardiology, knee, cancer care, neuro, neonatal, gastroenterology, physiotherapy etc.
VIEW OF PUBLIC AND PRIVATE HOSPITAL IN DHAKA

PUBLIC

Patient ward inside a govt. hospital

Outside view of Dhaka Medical College Hospital

PRIVATE

Outside view of Apollo Hospital

Patient ward inside a private hospital

SOURCE: DEMOTIX, DMCH, SQUARE, APOLLO
AGENDA

- Bangladesh economic overview
  - Investment scenario
  - Swedish presence in Bangladesh
- Healthcare market
  - Medical devices market
  - Pharmaceutical market
- Next steps
The medical devices market is expected to grow at 8.3% CAGR.

The medical devices market is estimated at USD 177 million in 2014.

Key drivers are:
- Increased focus on quality of healthcare from both public and private sectors.
- Funding and support through international aid.

**MEDICAL DEVICES MARKET SIZE IN BANGLADESH**

USD Million

<table>
<thead>
<tr>
<th>Year</th>
<th>Value (USD Million)</th>
<th>CAGR (Yearly)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>144</td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>131</td>
<td>7.2%</td>
</tr>
<tr>
<td>2013</td>
<td>163</td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>177</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>192</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>208</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>225</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>244</td>
<td>8.3%</td>
</tr>
</tbody>
</table>
DIAGNOSTIC IMAGING CONSTITUTE ONE-THIRD OF THE MEDICAL DEVICES MARKET
- 96% OF THE MEDICAL DEVICES USED IS IMPORTED

SEGMENTS WITHIN MEDICAL DEVICES MARKET
100% = USD 177 Million, 2014

- 33% Diagnostic imaging
- 31% Consumables
- 19% Patient aids
- 8% Orthopedica & prosthetics
- 7% Dental products
- 2% Others*

SUPPLY OF MEDICAL DEVICES
Imports vs. domestic manufactured, 2014

- 96% Imported
- 4% Domestic

* OTHERS INCLUDE WHEELCHAIRS, OPHTHALMIC INSTRUMENTS, HOSPITAL FURNITURE, MEDICAL & SURGICAL STERILIZERS, UV APPARATUS, OTHER INSTRUMENTS AND APPLIANCES

SOURCE: BMI RESEARCH MEDICAL DEVICES REPORT
DIAGNOSTIC IMAGING AND CONSUMABLES CONSTITUTE OVER HALF OF THE IMPORTS

IMPORT OF MEDICAL DEVICES BY SEGMENT
100% = USD 170 Million, 2014

- Diagnostic imaging: 54% (32% of total imports)
- Consumables: 34% (20% of total imports)
- Patient aids: 15% (9% of total imports)
- Orthopedica & prosthetics: 8% (5% of total imports)
- Dental products: 4% (2% of total imports)
- Others*: 55% (33% of total imports)

- The majority of Bangladeshi imports are sourced from the EU
- 0.7% from Sweden
- China was the leading supplier in consumables and dental products
- India, Singapore and the US are other leading suppliers

* OTHERS INCLUDE WHEELCHAIRS, OPHTHALMIC INSTRUMENTS, HOSPITAL FURNITURE, MEDICAL & SURGICAL STERILIZERS, UV APPARATUS, OTHER INSTRUMENTS AND APPLIANCES
THE MEDICAL DEVICES MARKET IS NASCENT IN BANGLADESH

<table>
<thead>
<tr>
<th>FOREIGN PLAYERS (LOCAL PRESENCE)</th>
<th>Siemens Healthcare</th>
<th>Philips Healthcare</th>
</tr>
</thead>
<tbody>
<tr>
<td>FOREIGN PLAYERS (PRODUCTS IMPORTED)</td>
<td>Johnson &amp; Johnson</td>
<td>Smith &amp; Nephew</td>
</tr>
<tr>
<td></td>
<td>Siemens Healthcare</td>
<td>Philips Healthcare</td>
</tr>
<tr>
<td></td>
<td>Bangladesh has virtually no domestic manufacturing of medical devices</td>
<td>Almost all medical devices are imported</td>
</tr>
</tbody>
</table>

DOMESTIC PLAYERS

JMI Medical Devices

SOURCE: BMI RESEARCH MEDICAL DEVICES REPORT
BUSINESS CHANNEL DIFFERS FOR PUBLIC AND PRIVATE CONSUMERS

Private procurement:
- Hospitals (doctors/ surgeons suggest requirements)
- Private clinics/ Healthcare centres (doctors/ surgeons/ practitioners)
- Dealers (in various cities)
- Consultants
- Agents/ Distributors
- Subsidiary office in Bangladesh

Public procurement:
- Research laboratories, academic institutions
- Govt. hospitals, community clinics & dispensaries
- CMDS* (for major Bangladesh)
- Tenders

Medical device and drug manufacturer (local + foreign)

SOURCE: INTERVIEWS

* CMSD CENTRAL MEDICAL STORES DEPOT (UNDER DIRECTORATE GENERAL OF HEALTH SERVICES)
PRIVATE HOSPITALS HAVE A WELL STRUCTURED PROCUREMENT PROCESS IN PLACE

- Medical service departments raise a requirement for a piece of equipment based on the suggestions from physicians, surgeons etc.
- Medical service director signs off the requirement
- Assessment by the SCM* department in collaboration with bio-medical engineering team
- SCM releases an RFI and request for RFQ to pre-qualified vendors
- Offers evaluated on commercial, technical and vendor capability parameters
- Price negotiation and final approval from the hospital purchasing committee
- Purchase order issued by SCM department and commercial import is initiated
- The approach and technique for procurement differs for medical devices and consumables

**Hospital purchasing committee**

- **Supply chain management (SCM) department**

**Medical service directors:**

- **City 1:** Medical service director
  - Cardiac
  - Oncology
  - Chemotherapy
  - Others...

- **City 2:** Medical service director
  - Cardiac
  - Oncology
  - Chemotherapy
  - Others...

**Requirements suggested by physicians, surgeons etc.**

* SCM: SUPPLY CHAIN MANAGEMENT
PUBLIC HOSPITALS PURCHASE HIGH VALUE AND HI-TECH EQUIPMENT CENTRALLY THROUGH THIS ROUTE

**Requirement gathering**
- Requirement gathering by DGHS – Director Hospital
- Yearly basis
- Inputs taken from the primary, secondary, tertiary centres
- Doctors, nurses and line director heads are usually the demand initiators

**Approval and pre-bidding**
- Evaluation of need for the product by CMSD*
- Preparation of package plan by CMSD*
- Preparation of technical specifications by CMSD
- Inputs collected from the World Bank
- Pre-bidding meeting of CMSD and bidders

**Open tender**
- Preparation of final specifications by CMSD*
- Technical and price assessment of bidders by CMSD
- Approval from “special committee” for decision on bidders

**Procurement**
- CMSD physically purchases the products
- Distribution of purchased products to line directors by CMSD

Timeline involving international bidders: 3-6 months

**Source:** Interviews

* CMSD: CENTRAL MEDICAL STORES DEPOT
### GOVERNMENT PROCUREMENT PROCESS DIFFERS FOR MEDICAL EQUIPMENT AND CONSUMABLE

#### Purchasing system
- **Medical equipment (yearly purchase)**
  - High value, hi-tech equipment is purchased centrally through CMSD at national level
  - Deals with principal foreign company and the distributors

- **Consumable (frequent purchase)**
  - Majorly purchase of low-value, non-expensive products at hospital level
  - Prefers to deal with a subsidiary of foreign company or local distributor

#### Key decision maker
- **Medical equipment**
  - Demand initiation and suggestion by the physicians and surgeons
  - Review shortlist and final negotiation done by central purchasing department

- **Consumable**
  - Demand initiation and suggestion by nurses
  - Review shortlist and final negotiation is done by internal purchasing team

#### Selection criteria
- **Medical equipment**
  - Have three years of experience in same/similar product
  - Quoting lowest price
  - Easy accessibility of distributors of principal company/after sale service

- **Consumable**
  - Competitive pricing
  - Regular availability of products at hospital level

*Source: Interviews*
LOWER CUSTOMS RATE EXIST FOR MEDICAL EQUIPMENT

Medical devices

- Customs duty rate for medical equipment varies from 0% to 10%
- Hi-tech products attract a lower customs duty
- Import of low-tech products which are being manufactured locally in Bangladesh such as needles, sutures etc. attract higher customs duty, where the government wants to promote the local industry
- Certain import duty exemptions on capital equipments for a project

Pharmaceutical

- 0% to 25% customs duty rate applies to raw pharmaceutical and products
- Vaccines for human and veterinary medicine, waste pharmaceutical attract lower customs duty rate
- For import of API pharmaceuticals, in addition to basic customs duty, Bangladesh has an additional duty in the form of AIT (Advance Income Tax) charged at 5% CIFD (Cost, Insurance, Freight, and Duty)
- Low concessional tariffs on the inputs and capital equipment for specified uses

SOURCE: NATIONAL BOARD OF REVENUE, BANGLADESH
Import and/or manufacture of drugs and medical devices is regulated by the DGDA (Directorate General of Drug Administration).

Current registration (to be phased out shortly) is fairly modest with an application required along with certain documentation to get an IRC (import registration certificate).

- The process takes around 4 months to get approval.
- Example of documentation include certificate of origin, product dossier, existing clinical data, packaging details.

The authorities are in the process of introducing an updated regime for regulations based on risk classifications, and GHTF guidelines (Global Harmonization Task Force).

Regulation of medical devices is based on four class classifications, based on the level of risk.

<table>
<thead>
<tr>
<th>Medical device class</th>
<th>Risk level</th>
<th>Registration requirement with DGDA</th>
<th>Device examples (non-exhaustive)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Low</td>
<td>No registration requirement</td>
<td>Surgical retractors, tongue depressors</td>
</tr>
<tr>
<td>B</td>
<td>Low-moderate</td>
<td>Registration required</td>
<td>Hypodermic needles, suction equipment</td>
</tr>
<tr>
<td>C</td>
<td>Moderate-high</td>
<td>Registration required</td>
<td>Lung ventilator, bone fixation plate</td>
</tr>
<tr>
<td>D</td>
<td>High</td>
<td>Registration required</td>
<td>Heart valves, implantable defibrillator</td>
</tr>
</tbody>
</table>

SOURCE: INTERVIEWS, DGDA MEDICAL DEVICE GUIDELINE 2015
MEDICAL EQUIPMENT IMPORT - PROCEDURE FOR REGISTRATION (PLANNED IMPLEMENTATION IN 2016)

Submission of application form for import / manufacturing registration with below details

- Device class, details, description, principle use, users manual
- Short description of the manufacturing process, and details of accessories (if any)
- International standard of the product (like ISO, ASTM* etc.)
- Regulatory status in the country of manufacture and other developed economies
  - Class B devices, FSC from country of origin
  - Class C & D devices, FSC from developed economies** and the country of origin
  - Conformity assessment certificate by the respective National regulatory authority
- Countries where device is marketed, and details on market recall/ withdrawal from regulatory authority in the last 2 years
- Sales, service and distribution model of the product

Timeline: 4-6 months

SOURCE: INTERVIEWS, DGDA MEDICAL DEVICE GUIDELINE 2015

* FSC: FREE SALES CERTIFICATE, ASTM: AMERICAN SOCIETY FOR TESTING AND MATERIAL
** INCLUDES EU, USA, JAPAN, AUSTRALIA AND CANADA
ESSENTIALS TO SELL MEDICAL EQUIPMENT AND DEVICES IN THE BANGLADESHI MARKET

Local presence (subsidiary or through distributor)

After sale service

References

Success factors for foreign healthcare companies in Bangladesh

Locally based engineering team capability

Training support for hospital staff

Brand recognition

SOURCE: INTERVIEWS
### EXAMPLES OF BUSINESS OPPORTUNITIES

<table>
<thead>
<tr>
<th>PRIVATE</th>
<th>PUBLIC</th>
</tr>
</thead>
</table>
| - Apollo Hospital is constructing a new 50 bed hospital in Chittagong  
- United Hospital to come-up with a new hospital unit in Dhaka  
- Parkway Pantai of Singapore is planning to open a hospital in the next 2-4 years  
- In general new healthcare treatment areas in the private sector include  
  - Robotic surgery  
  - Comprehensive cancer treatment  
  - Kidney transplantation  
  - Gastrointestinal speciality  
  - Haematology and bone marrow transplantation, requiring equipment such as  
    - Transfusion machines  
    - Liquid nitrogen freezers  
    - Interventional radiology | - As per the health sector-wide program, the government of Bangladesh is currently adding new healthcare facilities and upgrading selected healthcare facilities spread across the country  
  - Construction of 48 new 10 bed Mother and Child Health Care hospital  
  - Addition of 8 Nursing colleges  
  - Building of 4 new medical college and hospitals  
  - Upgradation of 18 district hospitals ranging from 50 to 250 beds  
  - Upgradation of 15 nursing training institutes  
  - 5 new Medical Assistant Training Schools (MATS) |

SOURCE: INTERVIEWS, HPNSDP
AGENDA

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- Next steps
BANGLADESH HAS A GROWING MARKET FOR PHARMACEUTICALS

Bangladesh’s pharmaceutical market is estimated at USD 2 billion in 2014.
- The market expected to grow at CAGR 10%.

Key drivers are:
- Increase in private spend
- Government support through creation of industrial parks
- Adoption of modern marketing techniques by local drug manufacturers

PHARMACEUTICAL MARKET SIZE IN BANGLADESH
USD Billion

- 1.5 billion in 2011
- 1.5 billion in 2012
- 1.8 billion in 2013
- 2.0 billion in 2014
- 2.2 billion in 2015
- 2.4 billion in 2016
- 2.6 billion in 2017
- 2.9 billion in 2018

CAGR 8.2%
CAGR 10.1%
A NET IMPORTER OF PHARMACEUTICAL PRODUCTS WITH FEW EXPORT STRENGTHS

- Bangladesh is reliant on pharmaceutical imports
- Imports were estimated at USD 219 million over same year, projected to increase at CAGR 9.6%
- 80% of pharmaceutical raw materials are imported using imported APIs
- Exports stood at USD 110 million in 2014, and are projected to grow at CAGR 7%
- Include high-tech specialised products such as steroids, oncology, inhalers, suppositories, hydro-fluoro-alkanes, nasal sprays, injectables and intravenous infusions
- Bangladesh exports drugs to 107 countries, including Germany, USA, France, Italy, UK and Canada

PHARMACEUTICAL TRADE IN BANGLADESH
USD Million

<table>
<thead>
<tr>
<th>Year</th>
<th>Exports</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>110</td>
<td>-219</td>
</tr>
<tr>
<td>2015</td>
<td>121</td>
<td>-242</td>
</tr>
<tr>
<td>2016</td>
<td>130</td>
<td>-264</td>
</tr>
<tr>
<td>2017</td>
<td>138</td>
<td>-289</td>
</tr>
<tr>
<td>2018</td>
<td>144</td>
<td>-316</td>
</tr>
</tbody>
</table>

CAGR 7%
CAGR 9.6%
BANGLADESH HAS THREE US-FDA APPROVED GMP SITES

- US-FDA approved GMP facility is a recent event in Bangladesh
- Three facilities receiving approval in June 2015

![US-FDA APPROVED GMP* FACILITIES](chart)

Number of manufacturing facilities (selected countries)

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>India</td>
<td>260</td>
</tr>
<tr>
<td>China</td>
<td>176</td>
</tr>
<tr>
<td>Germany</td>
<td>163</td>
</tr>
<tr>
<td>France</td>
<td>58</td>
</tr>
<tr>
<td>Canada</td>
<td>57</td>
</tr>
<tr>
<td>Italy</td>
<td>56</td>
</tr>
<tr>
<td>Spain</td>
<td>37</td>
</tr>
<tr>
<td>Israel</td>
<td>6</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>3</td>
</tr>
<tr>
<td>Thailand</td>
<td>2</td>
</tr>
<tr>
<td>Malaysia</td>
<td>1</td>
</tr>
<tr>
<td>Singapore</td>
<td>1</td>
</tr>
</tbody>
</table>


GMP: GOOD MANUFACTURING PRACTICE
Bangladesh as a status of being a LDC* economy is allowed to avoid applying and enforcing IP rights on pharmaceutical products for the coming 16 years until 1 January 2033, as announced by WTO in November 2015. Reverse-engineered patented generics are sold locally and exported globally.

Currently despite no patent protection, multinational pharmaceutical companies are applying for ‘product patents’, as per ‘mailbox provision’ of WTO. Local patent office has also granted ‘patents for processes’ for production of pharma.

Bangladesh has poor law enforcement due to gaps in regulatory framework. Institutions are weak and lack the commitment for legal enforcement.

Source: IP Watch, WTO

* LDC: LEAST DEVELOPED COUNTRY
BANGLADESH HAS A LARGE NUMBER OF LOCAL PHARMACEUTICAL PLAYERS

- Bangladesh has 258 companies that comprise the pharmaceutical industry
- Over 90% of the pharmaceutical market is controlled by local firms
- Top 10 pharmaceutical players are from Bangladesh
- Next 5 players (all foreign-owned) control 10% of the market
  - Includes Sanofi-Aventis, GlaxoSmithKline, Novo Nordisk, Sandoz, and Novartis

TOP 10 PHARMACEUTICAL PLAYERS

- Square Pharmaceuticals
- Beximco Pharmaceuticals
- Eskayef Pharmaceuticals
- Incepta Pharmaceuticals
- ACME Laboratories
- Advanced Chemical Industries
- Opsonin Pharmaceuticals
- Renata
- Aristopharma
- Drug International
DHAKA AND CHITTAGONG ARE THE TWO LARGEST PHARMACEUTICAL CLUSTERS IN BANGLADESH

- Government role has been central in promoting domestic pharma companies
- Policies such as Drug Control Ordinance 1982, and National Drug Policy (NDP) 2005
- Encouraging local companies to adopt internationally recognized good manufacturing practices (GMP)
- GMP inspections performed by Drug Administration (DGDA)
- Incentives and support provided for the set-up of manufacturing units in the pharmaceutical sector

SOURCE: BANGLADESH PHARMACEUTICAL SOCIETY, VELKI, INTER PRESS SERVICE, DHAKA TRIBUNE, THE DAILY STAR
EXECUTIVE SUMMARY

- Bangladesh is experiencing a rapid evolution in healthcare, witnessing a shift towards lifestyle disease patterns
- The public sector is increasing its focus on healthcare, particularly through the Health Population and Nutrition Sector Development Program (HPNSDP)
  - Along with support from International Aid agencies
- However, the private sector is driving the world class health delivery in Bangladesh
- A lack of local know-how is driving the demand for imported healthcare products
- Business potential for international healthcare product companies exist both in the private and public segments
  - Public sector procurement is fairly centralized
  - Private sector purchasing appears to be the low hanging fruit
- A local presence either directly or through a partner is required to succeed in the market
- The regulatory frameworks is in a developing phase
- The country has a growing market for pharmaceuticals
  - Supply of raw material and equipment to local companies shows promise
  - Though there is potential in local R&D and development, companies have evident challenges such as IP protection and CSR
AGENDA

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- Next steps
WE WELCOME YOU TO JOIN THE SWEDISH BUSINESS HEALTHCARE DELEGATION TO BANGLADESH

- Lead by Mr. Johan Frisell, Ambassador of Sweden to Bangladesh
- Week 12 (March 13-17), 2016 in Dhaka, Bangladesh
- Focus on meeting key stakeholders in the Bangladesh healthcare market
FOR MORE INFORMATION AND SUPPORT ON THE BANGLADESH MARKET

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