TPG International Health Academy
Executive Trade/Study Mission
Stockholm, Sweden
October 12-17, 2019

Introduction

From October 12-17, 2019, the TPG International Health Academy and a delegation of 25 U.S.- and Canada-based senior healthcare executives visited Stockholm, Sweden to study the Swedish healthcare system. This was the second visit to Sweden by the Academy.

During the four days of study, the delegation learned about the country, the financing of its healthcare system, and how it is planning for a future of a changing population and increasing costs of healthcare. The delegation heard from a distinguished panel of experts and visited representatives of the best that the Swedish system offers.

Background

Sweden is a sparsely populated country, characterized by its long coastline, extensive forests and numerous lakes. It is one of the world's northernmost countries. As a result, Sweden experiences extreme contrasts between very long summer days and equally long winter nights. In the summer, the sun stays in the sky around the clock in the parts of Sweden north of the Arctic Circle.

In terms of surface area, Sweden is approximately the size of California. As shown on the image to the left, if placed on a map, it stretches from Toronto to Tallahassee. It has a population of approximately 10 million concentrated in the cities in the southern part of the country. The population has grown significantly in the last few years largely as a result of immigration. Nearly one-third of the population has at least one parent who was foreign-born.

Sweden has a parliamentary representative democratic constitutional monarchy. Executive power is held by the Prime Minister of Sweden. Legislative power is vested in both the government and parliament, elected within an eight-party system. The Judiciary is independent, appointed by the government and employed until retirement. Sweden is formally a monarchy with a king holding symbolic power. Since the Great Depression, Swedish national politics has largely been dominated by the Social Democratic Workers' Party, which has held a plurality (and sometimes a majority) in parliament since 1917.

The Swedish economy mixes capitalism with significant oversight and involvement of the government. As a result, Sweden has achieved an enviable standard of living with its combination that offers extensive government benefits, especially in the areas of healthcare, education, childcare and financial security. The country remains outside the euro zone largely out of concern that joining the European Economic and Monetary Union would diminish the country's sovereignty over its welfare system. Enviably, the Swedish government has no debt and enjoys a relatively high surplus of funds.

Healthcare Overview

The Swedish healthcare system is mainly government-funded, universal coverage for all citizens and decentralized within regions. A small amount of private healthcare also exists. The healthcare system in Sweden is financed primarily through taxes levied by county councils and municipalities. A total of 21 councils are in charge with primary and hospital care within the country.

Private healthcare is rarity in Sweden, and even those private institutions work under the mandated city councils.- In contrast to most countries where care for the elderly or those who need psychiatric help is conducted privately, in Sweden local, publicly funded authorities are responsible for providing this care.-The Swedish government makes an effort to limit private firms in healthcare and takes the precautions to eliminate profit seeking in the welfare/public health sector.

Sweden's healthcare system is organized and managed on three levels: national, regional and local and is based on three main principles:

- **Human dignity**: All human beings have an equal entitlement to dignity and have the same rights regardless of their status in the community.
- **Need and solidarity**: Those in greatest need take precedence in being treated.
- **Cost-effectiveness**: When a choice has to be made, there should be a reasonable balance between costs and benefits, with cost measured in relation to improvement in health and quality of life.

At the national level, the Ministry of Health and Social Affairs establishes principles and guidelines for care and sets the political agenda for health and medical care. The ministry along with other government bodies supervises activities at the lower levels, allocates grants and periodically evaluates services to ensure correspondence to national goals.

At the regional level, responsibility for financing and providing healthcare is decentralized to the 21 county councils. A county council is a political body whose representatives are elected by the public every four years on the same day as the national general election. The executive board or hospital board of a county council exercises authority over hospital structure and management and ensures efficient healthcare delivery. County councils also regulate prices and level of service offered by private providers. Private providers are required to enter into a contract with the county councils. Patients are not reimbursed for services from private providers who do not have an agreement with the county councils. According to the Swedish health and medical care policy, every county council must provide residents with good-quality health services and medical care and work toward promoting good health in the entire population.

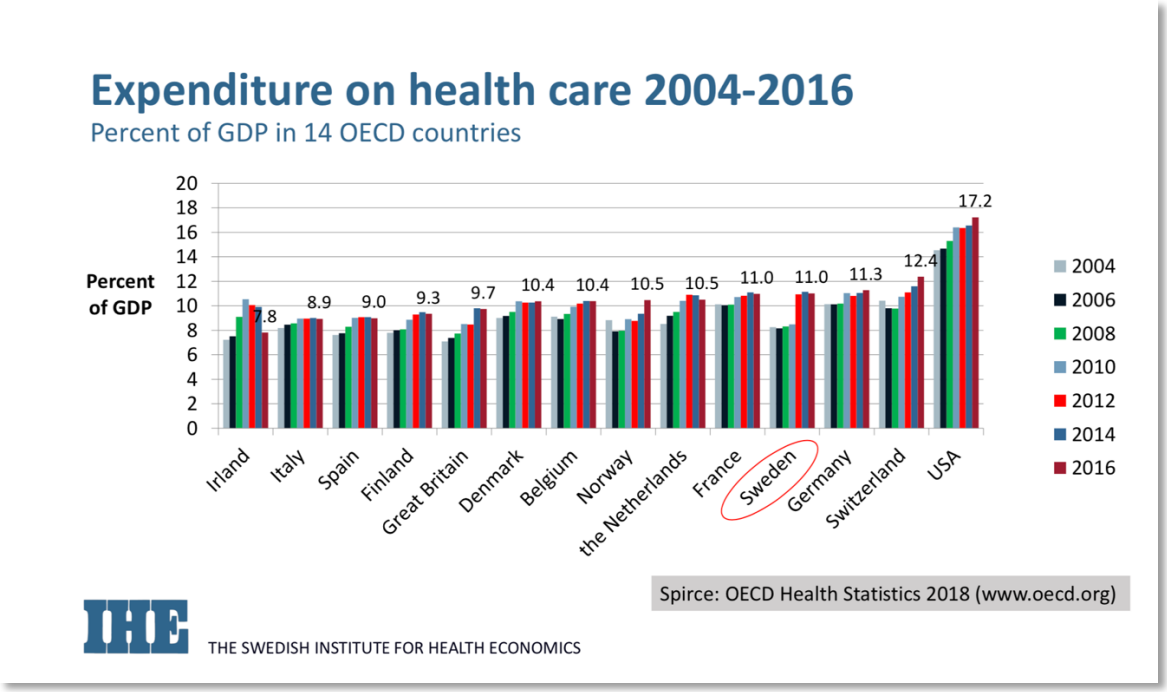
At the local level, municipalities are responsible for maintaining the immediate environment of citizens such as water supply and social welfare services. Recently, post discharge care for the

disabled and elderly, and long-term care for psychiatric patients was decentralized to the local municipalities.

County councils have considerable leeway in deciding how care should be planned and delivered. This has resulted in wide regional variations. Clinical care is divided into 7 sections: "Close-to-home care" (primary care clinics, maternity care clinics, out-patient psychiatric clinics, etc.), emergency care, elective care, in-patient care, out-patient care, specialist care, and dental care.

All citizens are to be given on-line access to their own electronic health records by 2020. Many different record systems are used which has caused problems for interoperability. A national patient portal is used by all systems, with both telephone and online access. As of June 2017, about 41% of the population had set up their own account to use personal e-services using this system. A national Health Information Exchange platform provides a single point of connectivity to the many different systems. There is not yet a national regulatory framework for patients' direct access to their health information.

Healthcare expenditures compared to other countries



Sweden vs. United State – Key Health Indicators

Key Health Indicators

	Sweden	U.S.
Birthrate (per 1000 people)	10.4	14.0
Adolescent Fertility (per 1000 women aged 15-19)	6.8	49.8
Maternal Death Rate (per 100,000 live births)	4	21
Births by C-Section (percentage of births)	16%	32%
Infant death rate (per 100,000 births)	2.3	6.8
Physician visits (per person/yr)	2.8	8.9
Obesity rate (percentage of population)	14%	33%
Healthcare costs (percentage of GNP)	11%	18%
Population covered by public or private insurance	100%	89%
World Health Organization ranking of healthcare system	23	37
Physicians (per 1000 people)	3.6	2.7

Summary of briefings

The delegation received several briefings during the educational summit from the distinguished faculty that included economic experts, leadership from one of the largest university hospitals in Europe, entrepreneurial experts in private healthcare and digital health and advisors to the pharmaceutical industry and the government.

Ulf Persson, Ph.D., Professor of Health Economics & Senior Advisor, The Swedish Institute for Health Economics

Professor Persson's presentation, *Health care costs, cost of illness (COI) & Value based pricing (VBP) of pharmaceuticals in Sweden,* provided an overview of Swedish healthcare costs in relation to other European countries, costs of illness over time and value-based pricing of pharmaceuticals. His overview included a discussion of the key principles of Value Based Pricing of pharmaceuticals in Sweden.

Fredrik Öhrn, RN, Senior Advisor, Management Consultant, and Manager, Life Science, Bestor Consulting AB

Mr. Öhrn's presentation, *The Future of Healthcare in a One-Payer System*, provided an overview of changes faced by Sweden:

- Demographic and sociological changes, including urbanization
- Rapid technological development, including digitalization
- Globalization

Sara Lei, MD, Emergency Internal Medicine Physician, Karolinska University Hospital

Dr. Lei's presentation, *Digital Innovation in Swedish Health Care*, provided an overview of:

- Telemedicine and digital healthcare
- Innovation funding
- Landscape of health tech startups and scale-ups
- EMR systems and their role in digital innovation
- Digital innovation for improving patient engagement
- Collaboration with professional and union organizations

Anders Blanck, VD / Director General, LIF – The Swedish Association of the P{harmaceutical Industry AB

Mr. Blanck's presentation, *Financing, pricing & reimbursement of medicines: Opportunities & challenges for pharma companies in the Swedish single payor*

healthcare model, provided information related to the Swedish pharmaceutical market, value-based models, pharmaceutical financing and on-going developments of the cost-containment models.

Fredrik Westander, Senior Policy Analyst, Swedish Association of Local Authorities and Regions (SALAR)

Mr. Westander's presentation, *Quality measurement and public reporting of quality data in Swedish health care*, provided information on quality measurement and outcomes data, including a comparison between regions, and related policy discussions.

Zayed Yasin, MD, MBA, CEO, YA Health Solutions, LLC

Dr. Yasin's presentation, *The Role of the Private Sector in the Swedish Healthcare System*, included discussions on the role of private payers and providers in Sweden similarities and differences with the US system and perceived strengths and weaknesses of public vs. private care in Sweden.

Daniel Forsland, Commissioner for Innovation and E-Health, Stockholm County Council

Mr. Forsland's presentation, Innovating Healthcare – *digitalization in collaboration for creating new opportunities!*, highlighted the opportunities for improvements made by the big push to digitalization of and access to healthcare services.

Johanna Adami, MD, MPH, PhD, Professor and President, Sophiahemmet University

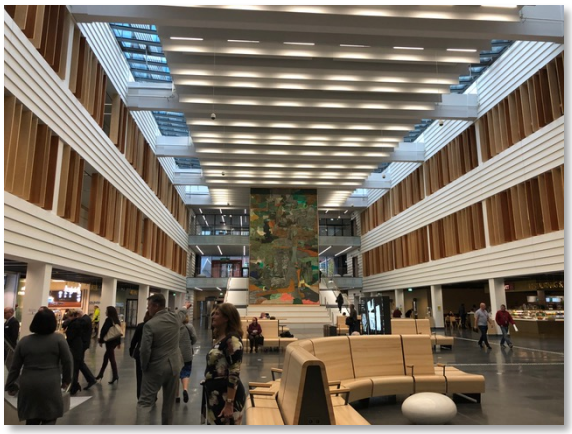
Dr. Adami's presentation provided and overview of Sophiahemmet University and their role in educating healthcare providers and in providing healthcare services.

Site Visits

Karolinska University Hospital

In April 2008, the Stockholm County Council approved the construction of a new university hospital in Stockholm. The new hospital was designed to be more cost effective than renovating and refurbishing the older facilities which were spread over more than 40 buildings. The new Karolinska University Hospital which opened in 2016 in Solina (north of Stockholm) approximately 15,000 employees and includes 1,340 patient beds. The Karolinska University Hospital is closely affiliated with the Karolinska Institute. It incorporates the Astrid Lindgren Children's hospital in Solna and the Children's Hospital in Huddinge.

Presenters during the visit included Lennart Adamsson, MD, Chief Physician, Director of department for Trauma, emergency and reconstructive surgery and Kristoffer Stralin, MD, PhD, Associate Professor, Senior Consultant, Department of Infectious Diseases.

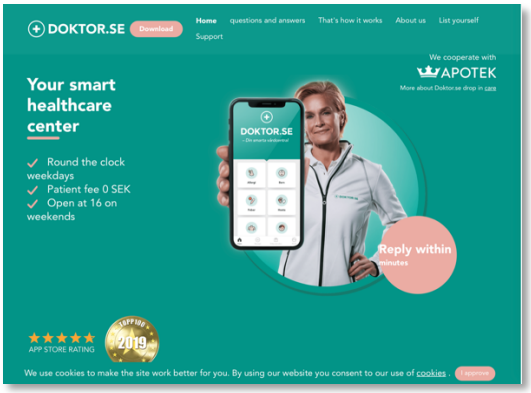


HerCare

HerCare is a private women's healthcare clinic that employs a comprehensive prospective of patients physical, behavioral and social issues. The visit was led by Mia Lundin, RNC, NP, Founder, HerCare.

Doktor.se

Doktor.se is a Stockholm-based e-health company that has developed an app that allows members to chat, call, or video chat with nurses, doctors, and psychologists. It also allows members to receive a prescription or a referral for a physical exam, blood test, or specialized care. The app is free and its "visits" are covered by the Swedish health system.



REMEO

REMEO is an innovative program for long-term ventilator patients that helps patients wean off of ventilators and transition to the patient's home. The traditional clinical pathway for long-term mechanically ventilated patients tends to involve progressing from an intensive care unit (ICU) directly to a home or non-specialized nursing home setting. This is not ideal from either the patient's or hospital's perspective as the patient needs structured support along an integrated ventilation care path.

Although long-term mechanically ventilated patients only account for around 10 percent of all ICU patients, they can consume up to 50 percent of an ICU resources. This is compounded by the fact that ICUs generally do not have specialized respiratory rehabilitation and weaning programs. As a result, long-term mechanically ventilated patients do not receive the integrated rehabilitation or therapy programs they require. Also, hospital resources can become strained at the expense of more urgent and complex cases.

Summary

At the conclusion of the four-day Summit, the delegation came together to answer four questions.

What did you find most similar to the US healthcare system?

- Changing demographics, including an aging population
- Shortage of nurses and primary care providers
- Increasing costs of treatments, including pharmaceuticals
- Increase in digital health
- Entrepreneurial providers
- Similar to Indian Health Service

What did you find most different to the US healthcare system?

- Over 40% of care is delivered by primary care providers
- Lack of insurance carriers – Single payer system
- Governmental price setting
- Size and demographics of Sweden are very different
- Lack of physician extenders (only physician and nurse positions)
- Electronic medical record (EMR) for entire country

What surprised you most?

- Self-care is used to reduce use of healthcare system
- More power over healthcare is held by 21 regions rather than federal government
- It is successful at holding costs
- Lack of independent non-profit sector
- Taxes seem to be lower than expected for coverage and total benefits

What can we use to improve the US system?

- Increase use of digital/virtual visits to improve access to care
- Increase use of primary care and self-care
- Management technique – Fika, a time for management to meet with employees to improve relationships

TPG International Health Academy

EDUCATING THE WORLD

Stockholm, Sweden Trade/Study Mission

October 12 – 17, 2019

Executive Summary Slide Deck

Covered Topics

- Swedish culture
- Financing of the healthcare system
- Planning for the future of a changing population
- Increasing costs of healthcare

Swedish Geography

- Sparsely populated – characterized by its long coastline, extensive forests and numerous lakes. It is one of the world's northernmost countries.
- Approximately the size of California
- Population of about 10 million
  - Concentrated in the cities in the southern part of the country
  - Population has grown significantly in the last few years largely as a result of immigration
    - Nearly one-third of the population has at least one parent who was foreign-born

Swedish Government

- Parliamentary representative democratic constitutional monarchy
- Executive power is held by the Prime Minister
- Legislative power is vested in both the government and parliament, elected within an eight-party system
- The Judiciary is independent, appointed by the government and employed until retirement
- Sweden is formally a monarchy with a king holding symbolic power
- Since the Great Depression, Swedish national politics has largely been dominated by the Social Democratic Workers' Party, which has held a plurality (and sometimes a majority) in parliament since 1917

Swedish Economy

- Mixes capitalism with significant oversight and involvement of the government
- Achieved an enviable standard of living with its combination that offers extensive government benefits, especially in the areas of healthcare, education, childcare, and financial security
- Remains outside the euro zone largely out of concern that joining the European Economic and Monetary Union would diminish the country's sovereignty over its welfare system
- Enviably, the Swedish government has no debt and enjoys a relatively high surplus of funds

Healthcare Overview

- Mainly government-funded, universal coverage for all citizens and decentralized within regions
- Primarily financed through taxes levied by county councils and municipalities
- A total of 21 councils are in charge with primary and hospital care within the country
- Private healthcare is a rarity– even private institutions work under the mandated city councils
    - The Swedish government makes an effort to limit private firms in healthcare and takes precautions to eliminate profit-seeking in the welfare/public health sector
- Organized and managed on three levels: national, regional, and local
    - National: the Ministry of Health and Social Affairs establishes principles and guidelines for care and sets the political agenda for health and medical care
        - The ministry, along with other government bodies, supervises activities at the lower levels, allocates grants, and periodically evaluates services to ensure correspondence to national goals
    - Regional: responsibility for financing and providing healthcare is decentralized to the 21 county councils
        - This has resulted in wide regional variations
        - County councils regulate prices and level of service offered by private providers
        - Private providers are required to enter into a contract with the county councils
    - Local: municipalities are responsible for maintaining the immediate environment of citizens such as water supply and social welfare services. Recently, post discharge care for the disabled and elderly, and long-term care for psychiatric patients, was decentralized to the local municipalities

Healthcare Overview Continued

- Based on Three Main Principles
  - **Human dignity**: all human beings have an equal entitlement to dignity and have the same rights regardless of their status in the community
  - **Need and solidarity**: those in greatest need take precedence in being treated
  - **Cost-effectiveness**: when a choice has to be made, there should be a reasonable balance between costs and benefits, with cost measured in relation to improvement in health and quality of life
- Clinical care is divided into 7 sections
  - "Close-to-home care" (primary care clinics, maternity care clinics, out-patient psychiatric clinics, etc.)
  - Emergency care
  - Elective care
  - In-patient care
  - Out-patient care
  - Specialist care
  - Dental care
- All citizens are to be given on-line access to their own electronic health records by 2020
  - As of June 2017, about 41% of the population had set up their own account to use personal e-services using this system

Key Health Indicators

	Sweden	United States
Birthrate (per 1000 people)	10.4	14.0
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Speaker Presentations

- **Ulf Persson, PhD, Professor of Health Economics & Senior Advisor, The Swedish Institute for Health Economics**
  - *Health care costs, cost of illness (COI) & Value based pricing (VBP) of pharmaceuticals in Sweden*
  - Overview of Swedish healthcare costs in relation to other European countries, costs of illness over time and value-based pricing of pharmaceuticals
- **Fredrik Öhrn, RN, Senior Advisor, Management Consultant, and Manager, Life Science, Bestor Consulting AB**
  - *The Future of Healthcare in a One-Payer System*
  - Overview of changes faced by Sweden: demographic and sociological changes, urbanization, rapid technological development, digitalization, and globalization
- **Sara Lei, MD, Emergency Internal Medicine Physician, Karolinska University Hospital**
  - *Digital Innovation in Swedish Health Care*
  - Overview of telemedicine and digital healthcare, innovation funding, landscape of health tech startups and scale-ups , EMR systems and their role in digital innovation, digital innovation for improving patient engagement, and collaboration with professional and union organizations
- **Anders Blanck, VD / Director General, LIF – The Swedish Association of the Pharmaceutical Industry AB**
  - *Financing, pricing & reimbursement of medicines: Opportunities & challenges for pharma companies in the Swedish single payor healthcare model*
  - Information related to the Swedish pharmaceutical market, value-based models, pharmaceutical financing, and on-going developments of the cost- containment models

Speaker Presentations Continued

- **Fredrik Westander, Senior Policy Analyst, Swedish Association of Local Authorities and Regions (SALAR)**
  - *Quality measurement and public reporting of quality data in Swedish health care*
  - Information on quality measurement and outcomes data, including a comparison between regions and related policy discussions
- **Zayed Yasin, MD, MBA, CEO, YA Health Solutions, LLC**
  - *The Role of the Private Sector in the Swedish Healthcare System*
  - The role of private payers and providers in Sweden similarities and differences with the US system and perceived strengths and weaknesses of public vs. private care in Sweden
- **Daniel Forsland, Commissioner for Innovation and E-Health, Stockholm County Council**
  - *Digitalization in collaboration for creating new opportunities!*
  - Highlighted the opportunities for improvements made by the big push to digitalization of and access to healthcare services
- **Johanna Adami, MD, MPH, PhD, Professor and President, Sophiahemmet University**
  - Overview of Sophiahemmet University and their role in educating healthcare providers and in providing healthcare services.

Karolinska University Hospital Site Visit

- Opened in 2016 in Solina (north of Stockholm)
- Employs approximately 15,000 employees
- Includes 1,340 patient beds
- Closely affiliated with the Karolinska Institute
- It incorporates the Astrid Lindgren Children's hospitals in Solina and Huddinge
- Speakers:
  - Lennart Adamsson, MD, Chief Physician, Director of Department for Trauma, Emergency, and Reconstructive Surgery
  - Kristoffer Stralin, MD, PhD, Associate Professor, Senior Consultant, Department of Infectious Diseases

HerCare Site Visit

- Private women's healthcare clinic
- Employs comprehensive prospective of patient's physical, behavioral, and social issues
- Speaker
    - Mia Lundin, RNC, NP, Founder

Doktor.se Site Visit

- Stockholm-based e-health company
- Developed an app that allows members to chat, call, or video with nurses, doctors, and psychologists
- Allows members to receive a prescription or referral for a physical exam, blood test, or specialized care
- App is free
- “Visits” are covered by the Swedish healthcare system

REMEO Site Visit

- Innovative program for long-term ventilator patients that helps patients wean off ventilators and transition to the patient's home
- The traditional clinical pathway for long- term, mechanically-ventilated patients tends to involve progressing from an intensive care unit (ICU) directly to a home or non-specialized nursing home setting
- Although long-term, mechanically-ventilated patients only account for around 10% of all ICU patients, they can consume up to 50 percent of an ICU's resources
    - As a result, long-term, mechanically-ventilated patients do not receive the integrated rehabilitation or therapy programs they require

Summary
Question
Answers

What Was the Most Similar to the US Healthcare System?

- Changing demographics – including an aging population
- Shortage of nurses and primary care providers
- Increasing costs of treatments – including pharmaceuticals
- Increase in digital health
- Entrepreneurial providers
- Comparable to Indian Health Service

What Was the Most Different to the US Healthcare System?

- Over 40% of care is delivered by primary care providers
- Lack of insurance carriers – single-payer system
- Governmental price setting
- Size and demographics of Sweden are very different
- Lack of physician extenders (only physician and nurse positions)
- Electronic medical record (EMR) for entire country

What Was The Most Surprising?

- Self-care is used to reduce use of healthcare system
- More power over healthcare is held by the 21 regions rather than the federal government
- It is successful at holding costs
- Lack of independent non-profit sector
- Taxes seem to be lower than expected for coverage and total benefits

What Can Be Used to Improve the US Healthcare System?

- Increase use of digital/virtual visits to improve access to care
- Increase use of primary care and self-care
- Management technique – Fika, a time for management to meet with employees to improve relationships