Paying the Piper: An Overview of the U.S. Healthcare System
Kevin Hope, RPh

Live Activity Handout
4 slides per page
ACTIVITY DESCRIPTION
Despite spending the most money per capita on healthcare related expenses, key outcomes data for the United States lags behind that of many developed countries. From a very broad perspective, this session seeks to examine the components of various global healthcare systems and to identify the elements that have been woven into our own framework. The session additionally seeks to identify and discuss opportunities for healthcare personnel to positively influence the challenges that our unique system brings.

TARGET AUDIENCE
The target audience for this activity is pharmacists, pharmacy technicians, and nurses in hospital, community, and retail pharmacy settings.

LEARNING OBJECTIVES
After completing this activity, the pharmacist will be able to:
• Identify factors that increase healthcare costs in the United States, including the cost of prescription drugs
• Identify the characteristics of the 4 leading global healthcare models and how pharmaceutical services fit into those models
• Describe the role of pharmacists, pharmacy technicians, and nurses in addressing the challenges of today’s healthcare environment

After completing this activity, the pharmacy technician will be able to:
• Identify factors that increase healthcare costs in the United States, including the cost of prescription drugs
• Identify the characteristics of the 4 leading global healthcare models and how pharmaceutical services fit into those models
• Describe the role of pharmacists, pharmacy technicians, and nurses in addressing the challenges of today’s healthcare environment

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Kevin T. Hope, RPh is a Clinical Education Specialist with the PharmCon team in Conway, SC. Kevin began his career in pharmacy at an early age and has practiced as a pharmacist in a variety of settings, beginning with a retail pharmacy experience at Eckerd Drug Corporation in York, SC. Kevin transitioned from a retail setting to a Charleston, SC nuclear pharmacy setting in 2002, where he practiced for over 13 years. Kevin has served as an adjunct faculty member for the South Carolina College of Pharmacy, having coordinated and instructed the college’s ‘authorized user’ program for nuclear pharmacy. In addition, Kevin has direct experience in the education of pharmacy technicians, having directed the pharmacy technology program at Horry Georgetown Technical College in Myrtle Beach, SC prior to joining the PharmCon team.

Kevin has received several professional awards, including the Pfizer Leadership Award and the Innovative Pharmacy Practice Award from the South Carolina Pharmacy Association. Having served as a corporate communications trainer for Triad Isotopes, Kevin has presented to a variety of audiences, including a nuclear pharmacy symposium at the American Pharmacists Association annual meeting. Kevin has served as an independent editor for several Paradigm Publishing textbooks, and currently serves on the professional advisory board for Paradigm Publishing. Kevin’s passions lie in helping students achieve and surpass personal educational goals.

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U.S. Areas of Outcomes Success

• The United States does enjoy a few health advantages when compared with peer countries, including:
  • Lower cancer death rates
  • Greater control of blood pressure
  • Greater control of cholesterol levels

Institute of Medicine Outcome Data

When compared with the average of peer countries, Americans as a group, fare worse in many healthcare areas:

• Infant Mortality & Low Birth Weight
• Injuries & Homicides
• Adolescent pregnancy & Sexually Transmitted Infections
• HIV & AIDS
• Drug Related Deaths
• Obesity & Diabetes
• Heart Disease
• Chronic Lung Disease
• Disability

American Trends

POSITIVE
• Less likely to smoke
• Drink alcohol less heavily than people in peer countries

NEGATIVE
• Consume the most calories per person
• Higher rates of drug abuse
• Less likely to use seat belts
• Involved in more traffic accidents associated with alcohol use
• More likely to use firearms in acts of violence.
• Americans who do not smoke or are not overweight also appear to have higher rates of disease than similar groups in peer countries
Objectives

- Identify factors that increase healthcare costs in the United States, including the cost of prescription drugs
- Identify the characteristics of the 4 leading global healthcare models and how pharmaceutical services fit into those models
- Describe the role of pharmacists, pharmacy technicians, and nurses in addressing the challenges of today's healthcare environment

World Health Organization

The United States ranks less favorably than the other wealthiest nations:
- Average life expectancy at birth
- Infant and Maternal Mortality
- Healthy Life Expectancy At Birth
- Life Expectancy At Age 60

Commonwealth Fund Organization

Established in 1918 with the broad charge to enhance the common good.

"Mission promotes a high-performing health care system that achieves better access, improved quality, and greater efficiency, particularly for society’s most vulnerable, including low-income people, the uninsured, minority Americans, young children, and elderly adults."

Commonwealth Fund Rankings

<table>
<thead>
<tr>
<th></th>
<th>AUS</th>
<th>CAN</th>
<th>FRA</th>
<th>GER</th>
<th>NETH</th>
<th>NZ</th>
<th>NOR</th>
<th>SWE</th>
<th>SWIZ</th>
<th>UK</th>
<th>US</th>
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<tbody>
<tr>
<td>Overall Rank:</td>
<td>2</td>
<td>9</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>4</td>
<td>6</td>
<td>6</td>
<td>1</td>
<td>11</td>
<td></td>
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<tr>
<td>Care Process:</td>
<td>2</td>
<td>6</td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>3</td>
<td>10</td>
<td>11</td>
<td>7</td>
<td>1</td>
<td>5</td>
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<tr>
<td>Access:</td>
<td>4</td>
<td>10</td>
<td>9</td>
<td>2</td>
<td>1</td>
<td>7</td>
<td>5</td>
<td>6</td>
<td>8</td>
<td>3</td>
<td>11</td>
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<tr>
<td>Admin Efficiency:</td>
<td>1</td>
<td>6</td>
<td>11</td>
<td>6</td>
<td>9</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td>8</td>
<td>3</td>
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<td>Equity:</td>
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<td>4</td>
<td>1</td>
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<td>Health Outcomes:</td>
<td>1</td>
<td>9</td>
<td>5</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>10</td>
<td>11</td>
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</table>
Life Expectancy Numbers

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Overall</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Japan</td>
<td>83.74</td>
<td>80.91</td>
<td>86.58</td>
</tr>
<tr>
<td>2</td>
<td>Italy</td>
<td>83.31</td>
<td>80.00</td>
<td>86.49</td>
</tr>
<tr>
<td>3</td>
<td>Switzerland</td>
<td>82.84</td>
<td>80.27</td>
<td>85.23</td>
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<td>4</td>
<td>Singapore</td>
<td>82.66</td>
<td>80.43</td>
<td>84.74</td>
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<td>5</td>
<td>Israel</td>
<td>82.64</td>
<td>79.59</td>
<td>85.61</td>
</tr>
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<td>40</td>
<td>Costa Rica</td>
<td>79.16</td>
<td>76.70</td>
<td>81.69</td>
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<tr>
<td>41</td>
<td>Cuba</td>
<td>79.16</td>
<td>77.10</td>
<td>81.27</td>
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<td>42</td>
<td>French Guiana</td>
<td>78.98</td>
<td>75.75</td>
<td>82.58</td>
</tr>
<tr>
<td>43</td>
<td>United States</td>
<td>78.88*</td>
<td>76.47</td>
<td>81.25</td>
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<tr>
<td>44</td>
<td>Lebanon</td>
<td>78.86</td>
<td>77.14</td>
<td>80.87</td>
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<tr>
<td>45</td>
<td>Guam</td>
<td>78.72</td>
<td>76.14</td>
<td>81.47</td>
</tr>
</tbody>
</table>

*United States Overall Rating reduced to 78.7 years in February 2018
National Expenditures on Healthcare As a Percentage of GDP

- In 1950, the U.S. Spent ~ 4% of GDP on healthcare
- On a per-capita basis, the total cost of American healthcare is ~ $9,000/year/person.
  - Average annual housing expenditure: $18,000/family unit
  - Average annual transportation expenditures: $9,000/family unit
  - Average annual food costs: $7,000/family unit

Via government & private expenditures: Our Biggest source of outbound dollars!

Total Health Expenditure as a Share of GDP (2010 Data)

Remember: Japan, Italy, & Israel were all in the 'top 5' for life expectancy

Public & Private Dollars Spent on Healthcare Per Person

**Public & Private Dollars Spent on Healthcare Per Person**

- **Canada**
- **France**
- **Germany**
- **United Kingdom**
- **United States**

<table>
<thead>
<tr>
<th>Country</th>
<th>Public Dollars</th>
<th>Private Dollars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Canada</td>
<td>1000</td>
<td>2000</td>
</tr>
<tr>
<td>France</td>
<td>5000</td>
<td>3000</td>
</tr>
<tr>
<td>Germany</td>
<td>7000</td>
<td>1000</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>9000</td>
<td>4000</td>
</tr>
<tr>
<td>United States</td>
<td>10000</td>
<td>8000</td>
</tr>
</tbody>
</table>

**“Baby Boomers”**

- “Baby Boomers”: the ratio of healthcare beneficiaries to healthy funders of private and public programs will rise ... a lot!
- Ages 65 and older will make up about 20 percent of the U.S. population by 2029 (up from almost 14 percent in 2012.)

**Where Do These Dollars Go?**

- Medical Sector Compensation
- Overuse of Resources
- Prescription Drug Costs
- End-of-Life Care
- Administration Costs

**“How can it be that ‘the best medical care in the world’ costs twice as much as the best medical care in the world?”**

- Uwe Reinhardt, Professor of Economics, Princeton University
### Expense Medical Sector Compensation

- United States
  - Primary Care Physician: $225,000
  - Specialists: $400,000
  - Ratio of 3:2 (Specialists : Generalists)

- United Kingdom, Germany, France, Canada
  - Average: $150,000
    (Generalists outnumber specialists)

- Norway, Sweden, Portugal, Italy
  - Average: $100,000
    (Generalists outnumber specialists)


### Average Incomes by Equivalent Purchasing Power

- United States
  - Primary Care Physician: $225,000
  - Specialists: $400,000
    - Ratio of 3:2 (Specialists : Generalists)

- United Kingdom, Germany, France, Canada
  - Average: $150,000
    (Generalists outnumber specialists)

- Norway, Sweden, Portugal, Italy
  - Average: $100,000
    (Generalists outnumber specialists)

### What About Pharmacists?

<table>
<thead>
<tr>
<th>Country</th>
<th>Average Pharmacist’s Salary (in USD)</th>
<th>Average Salaries in Country (in USD)</th>
<th>% increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>$113,000</td>
<td>$47,230</td>
<td>+ 139.3%</td>
</tr>
<tr>
<td>Canada</td>
<td>$ 80,700</td>
<td>$ 49,000</td>
<td>+ 64.7%</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>$ 57,000</td>
<td>$ 35,189</td>
<td>+ 62.0%</td>
</tr>
<tr>
<td>Germany</td>
<td>$ 44,800</td>
<td>$ 45,017</td>
<td>+ 0.48%</td>
</tr>
</tbody>
</table>

Represents 0.5 – 1 GDP point. Small part of the problem, but not the largest


### How Are Wage Expenses Being Controlled?

- Shifting work to skilled nurses / Physician’s Assistants
  - Technology is likely to encourage a continued reliance in paraprofessionals
- Salaried physicians rather than being paid in proportion to services rendered
  - Cleveland Clinic, Mayo Clinic, Kaiser Permanente
- Graduation numbers for healthcare professionals

Total Health Expenditure as a Share of GDP (2010 Data)

Expense: Over Use of Medical Resources

Remember: Japan, Italy, & Israel were all in the ‘top 5’ for life expectancy

Over Use of Medical Resources

- Potential to “up-code” Medicare and Medicaid patients
- Potential to refer to expensive out of network consults
- Potential for aggressive treatment initiation in lieu of ‘watch and wait’
- Potential for liberal follow-up visit schedule
- Potential to refer patients for unnecessary and expensive scans and/or tests
- Others ??

No Such Thing as a Free Lunch

- Patients overuse resources that appear to be almost free
  - Deductibles and co-payments used as a deterrent
- Providers of new equipment can sell their products to an unusually price insensitive market
Over-Use of Diagnostics

- An estimated 1/3 of the testing and diagnostic cost total is wasted
  - System incentivizes unnecessary testing
    - The American Board of Internal Medicine Foundation compiled a list of 25 medical specialty societies, recommending that over 130 different medical screenings, tests, and treatments be scaled back.
    - "Choosing Wisely": Encourages patients to question certain testing recommendations

www.choosingwisely.org

IMAGING TESTS
You may not need them for back pain.

If you have back pain, your doctor may order an imaging test, such as an X-ray, CT scan, or MRI. You might not need these tests, unless you have had back pain that doesn’t get better after a month or two.

Get a physical exam first.

Before you get an imaging test, your doctor should give you a physical exam and review your medical history. These can help your doctor know what to look for and what tests to order.

Check your insurance.

Some imaging tests are expensive. Your insurance may not cover the full cost. Ask your insurance company what they will cover before you get the test. If tests show "false alarms," you may need other, more costly, tests.

Some imaging tests use radiation.

X-rays and CT scans expose you to radiation. The more scans you get the more radiation you get. This increases the risk of cancer.

Return On Investment

- Scenario: Hospital purchases an MRI machine; incentive of hospital is to recoup the investment by operating the machine frequently.

  - Where does our system place the incentive?
    - reduce number of scans
    - maximize usage of the machine

Medical Tests In the United States

The United States is the undisputed leader in the number of medical tests ordered

For example, MRI Scans ...
Why Over Testing?

A protective reaction to an overly litigious legal system?
- One study published in the Journal of the American Medical Association estimates that 28% of all testing and treatment is ordered, at least in part, for defensive reasons.

Expense: The Cost of Prescription Drugs

- 10% of the nation’s total healthcare bill
- An estimated 1/5 of Americans are actively using 5 or more prescription drugs
- Costs of prescription drugs are rising 4 times faster than wages in the U.S.

Prescription Drugs: Patent Laws

**POSITIVE**
- Protects the manufacturer
- Stimulates research spending

**NEGATIVE**
- Does not limit system costs
- Often keeps prices high, without generic competition
- Manufacturers may pull a product off the market and release a “new and improved” version

Prescription Drugs: Manufacturers Influence on Prescribers

- Direct commission on prescription drugs is illegal
- Indirect kickbacks and improper marketing has been under scrutiny
- Light duty consulting contracts, travel, meals, speaking fees, etc.

Expense: End of Life Care

Morally and philosophically complex issue
- How much would it be worth to you to live a year longer?
- How much would it be worth to see a loved one live a year longer?
- Does quality of life influence this choice?
- If someone else is paying, does this influence the choice?
- Who decides to stop spending money on life extension?
- The patient?
- The patient’s family?
- The patient’s doctor?
End of Life Care

- Approximately 1/3 of the Medicare portion of healthcare expenditures is devoted to treatment and care in the last month of life. (NIH estimate)
  - Represents approximately 1.5% of GDP
  - The most aggressive hospitals in end of life care have just about the same end of life outcomes as the hospitals who intervene less frequently (Dartmouth College study)
  - “Advance Care Planning Form”: Ask the patient!

Expense: Administrative Costs

- Marketing, Patient Billing, Reimbursement Management
  - An estimated 25% of U.S. hospital expenditures (City University of New York study)
  - Another study estimated at 30% in 2003 (New England Journal of Medicine)
  - At least ¼ of health sector employees work only at an administrative or clerical level.
Global Healthcare Models

**The Beveridge Model**
- Healthcare is provided by the government & paid for through taxes
- Most hospitals are owned by the government
- Some physicians are employees of the government; others are private and collect their fees through the government
- Government controls what physicians can do ... and what they can charge

Examples: Great Britain, Spain, Scandinavia, New Zealand, Cuba, Hong Kong

https://www.pbs.org/wgbh/pages/frontline/sickaroundtheworld/countries/models.html

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**The Bismarck Model**
- Uses an insurance system, typically funded partially by employers and partially by employees
- Insurance plans must cover everyone and be non-profit
- Most hospitals and physicians are private
- Government tightly controls costs that may be charged for medical procedures

Examples: Germany, France, Belgium, Netherlands, Japan, Switzerland

https://www.pbs.org/wgbh/pages/frontline/sickaroundtheworld/countries/models.html

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**The National Health Insurance Model**
- Payments come from a government run insurance company that all citizens pay into
- Providers are typically from the private sector
- Costs are controlled by limiting covered medical services
- Patient delays in receiving treatment

Examples: Canada, Taiwan, South Korea

https://www.pbs.org/wgbh/pages/frontline/sickaroundtheworld/countries/models.html
Global Healthcare Models: The Out-Of-Pocket Model

• Only about 40 of the world’s 200 countries have established healthcare systems

So, What About the United States?

• Veteran Care: Mostly Beveridge Model
• Ages 65+: Mostly National Health Insurance Model
• Working Americans: Mostly Bismarck Model
• Uninsured: Mostly Out-Of-Pocket Model

U.S. Healthcare: Historical Perspective

• 1847: Boston company offered ‘sickness insurance’
• Coal Mining & Railroad companies: company doctor, with fees taken out of paycheck
• 1913: International Garment Workers Union negotiated a group insurance policy

U.S. Healthcare: Historical Perspective

• National Health Insurance Programs were proposed
  • AMA was worried that this would impact the financial security of its providers
  • AMA persuaded the federal government to support private insurance efforts
• 1929: Texas teachers were offered a group hospital insurance plan
  • Foundation for the non-profit Blue Cross plans
Capitalist Model?

**Capitalism**: An economic system characterized by private or corporate ownership of capital goods, by investments that are determined by private decision, and by prices, production, and the distribution of goods that are determined mainly by competition in a free market.

https://www.merriam-webster.com/dictionary/capitalism

Competition: Adam Smith

“Markets and trade are, in principle, good things—provided there is competition and a regulatory framework that prevents ruthless selfishness, greed and rapacity from leading to socially harmful outcomes. But competition and market regulations are always in danger of being undermined and circumnavigated, giving way to monopolies that are very comfortable and highly profitable to monopolists and may spell great trouble for many people.”


U.S. Healthcare: Historical Perspective

- Social Security Act
- Medicare & Medicaid
- Emergency Medical Treatment & Active Labor Act
- COBRA
- Family Medical Leave Act (FMLA)
- HIPPA
- Medicare Modernization Act
- Affordable Care Act
- ‘Certificate of Need’ Concept
- CMS pricing data


Insurance Breakdown By Sector, 2016

- **% of Adults Under Age 65**
  - Private Insurance 60%
  - Public Insurance 26.3%
  - Uninsured 8.7%

- **% of Children Under Age 18**
  - Private Insurance 52.3%
  - Public Insurance 41%
  - Uninsured 3.2%
The Uninsured

- Hospitals have an ‘official price list’ for their services (much like the sticker price on a car)
  - Insurers, HMO groups, Medicare negotiate to obtain volume discounts
  - Uninsured may pay much more than an insurance company

<table>
<thead>
<tr>
<th>Hospital / Procedure</th>
<th>Negotiated Insurance Rate:</th>
<th>Uninsured Rate:</th>
<th>% Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oklahoma For Profit Hospital / Craniotomy</td>
<td>$15,600</td>
<td>$85,400</td>
<td>447%</td>
</tr>
<tr>
<td>Florida Church Owned Hospital / Appendectomy</td>
<td>$6,200</td>
<td>$35,200</td>
<td>468%</td>
</tr>
</tbody>
</table>

Affordable Care Act

- Patient Protection and Affordable Care Act of 2010
  - Attempt to increase access to affordable healthcare
  - Places health insurance policies into a ‘market place’ for consumers to choose between services and costs
  - Requires that individuals not qualifying for a limited number of exemptions purchase healthcare

Cost: Family of Four in South Carolina

- BlueEssentials
  - Deductible: $14,000
  - Max. out of Pocket: $14,700
  - Monthly Cost: $1,123.90
- BlueEssentials
  - Deductible: $13,100
  - Max. out of Pocket: $15,100
  - Monthly Cost: $1,147.07
- BlueEssentials
  - Deductible: $12,800
  - Max. out of Pocket: $15,100
  - Monthly Cost: $1,147.31
- BlueEssentials
  - Deductible: $10,400
  - Max. out of Pocket: $13,100
  - Monthly Cost: $1,157.92
The Healthcare Worker

• Recognize Limitations of the System
• Advocate for Improvement
  • Patient Specific Medication Therapy Management
  • Professional Organizations
• Help Patients Navigate
  • Medicare Part D
  • State Medicaid
  • Insurance Formularies
• Educate

Where Do These Dollars Go?

• Medical Sector Compensation
• Overuse of Resources
• Prescription Drug Costs
• End-of-Life Care
• Administration Costs
Sources Cited

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