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“THE ROLE OF HUMAN RESOURCES MANAGEMENT IN HOSPITALS”

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Part 1 –

GENERAL INFORMATION

1. About the Healthcare Industry

The **healthcare industry** (also called the **medical industry** or **health economy**) is an aggregation and integration of sectors within the economic system that provides goods and services to treat patients with curative, preventive, rehabilitative, and palliative care. It encompasses the creation and commercialization of products and services conducive to the preservation and restoration of well-being. The contemporary healthcare sector comprises three fundamental facets, namely services, products, and finance. It can be further subdivided into numerous sectors and categories and relies on interdisciplinary teams of highly skilled professionals and paraprofessionals to address the healthcare requirements of both individuals and communities.

The healthcare industry is one of the world's largest and fastest-growing industries. Consuming over 10 percent of gross domestic product (GDP) of most developed nations, health care can form an enormous part of a country's economy. U.S. healthcare spending grew 2.7 percent in 2021, reaching \$4.3 trillion or \$12,914 per person. As a share of the nation's Gross Domestic Product, health spending accounted for 18.3 percent. The per capita expenditure on health and pharmaceuticals in OECD countries has steadily grown from a couple of hundred in the 1970s to an average of US\$4'000 per year in current purchasing power parities.

For finance and management, the healthcare industry is typically divided into several areas. As a basic framework for defining the sector, the United Nations International Standard Industrial Classification (ISIC) categorizes the healthcare industry as generally consisting of:

1. Hospital activities.
2. Medical and dental practice activities.
3. "Other human health activities".

This third class involves activities of or under the supervision of, nurses, midwives, physiotherapists, scientific or diagnostic laboratories, pathology clinics, residential health facilities, or other allied health professions, e.g. in the field of optometry, hydrotherapy, medical massage, yoga therapy, music therapy, occupational therapy, speech therapy, chiropody, For the purpose of finance and management, the healthcare industry is typically divided into several areas. As a basic framework for defining the sector, the United Nations International Standard Industrial Classification (ISIC) categorizes the healthcare industry as generally consisting of:

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The Global Industry Classification Standard and the Industry Classification Benchmark further distinguish the industry into two main groups:

1. healthcare equipment and services
2. pharmaceuticals, biotechnology and related life sciences.

The healthcare equipment and services group consists of companies and entities that provide medical equipment, medical supplies, and healthcare services, such as hospitals, home healthcare providers, and nursing homes. The latter listed industry group includes companies that produce biotechnology, pharmaceuticals, and miscellaneous scientific services.

Other approaches to defining the scope of the healthcare industry tend to adopt a broader definition, also including other key actions related to health, such as education and training of health professionals, regulation and management of health services delivery, provision of traditional and complementary medicines, and administration of health insurance., chiropractic, acupuncture, etc.

A healthcare provider is an institution (such as a hospital or clinic) or person (such as a physician, nurse, allied health professional or community health worker) that provides preventive, curative, promotional, rehabilitative or palliative care services in a systematic way to individuals, families or communities.

The World Health Organization estimates there are 9.2 million physicians, 19.4 million nurses and midwives, 1.9 million dentists and other dentistry personnel, 2.6 million pharmacists and other pharmaceutical personnel, and over 1.3 million community health workers worldwide, making the health care industry one of the largest segments of the workforce.

The medical industry is also supported by many professions that do not directly provide health care itself, but are part of the management and support of the health care system. The incomes of managers and administrators, underwriters, and medical malpractice attorneys, marketers, investors, and shareholders of for-profit services, all are attributable to health care costs. In 2017, healthcare costs paid to hospitals, physicians, nursing homes, diagnostic laboratories, pharmacies, medical device manufacturers, and other components of the healthcare system, consumed 17.9 percent of the gross domestic product (GDP) of the United States, the largest of any country in the world. It is expected that the health share of the Gross domestic product (GDP) will continue its upward trend, reaching 19.9 percent of GDP by 2025. In 2001, for the OECD countries the average was 8.4 percent with the United States (13.9%), Switzerland (10.9%), and Germany (10.7%) being the top three. US health care expenditures total US\$2.2 trillion in

2006. According to Health Affairs, US\$7,498 be spent on every woman, man and child in the United States in 2007, 20 percent of all spending. Costs are projected to increase to \$12,782 by 2016.

The government does not ensure all-inclusive health care to every one of its residents. However, certain freely supported healthcare programs help to accommodate a portion of people who are elderly, disabled, or poor. Elected law guarantees community to crisis benefits paying little respect to the capacity to pay. Those without health protection scope are relied upon to pay secretly for therapeutic administrations. Health protection is costly and hospital expenses are overwhelmingly the most well-known explanation behind individual liquidation in the United States.

The Indian healthcare sector has become one of India's largest sectors, both in terms of revenue and employment. It has experienced rapid change in recent years and has become significantly more visible over the last decade, with a renewed focus from the government and growing market demand for healthcare services and products. The Indian population is growing at a rate of 1.6 percent per year and has an elderly population of over 100 million. Rapid economic growth, rising middle class incomes, and increased market penetration of health insurance providers are fueling growth in the industry. In addition, changing demographics and a shift from chronic to lifestyle diseases has led to a boom in government healthcare spending across the country.

The Indian healthcare industry reached over \$370 billion in 2022. According to Nexdigm, the healthcare industry is expected to reach over \$610 billion by 2026. This increase in market size is due to growing demand for specialized and higher quality healthcare facilities. The products and services driving this growth include hospitals, medical devices, clinical trials, telemedicine, medical tourism, health insurance, and medical and diagnostic equipment. The industry's rapid development is fueled by large investments from existing corporate hospital chains and new entrants backed by private equity investors.

Nonetheless, considerable challenges exist in terms of service accessibility and patient care quality. According to the Lancet Medical Journal's Global Burden of Disease Study, India ranks 145th among 195 countries surveyed. However, India's healthcare access and quality index score has improved in recent years, increasing from 44.8 (out of 100) in 2015 to 67.3 in 2020.

The COVID-19 pandemic awakened the Indian government and private sector around the importance of investing in healthcare. Industry experts believe there will be a significant increase in government healthcare spending in India over the next several years, in part spurred by lessons learned from the pandemic. Public spending on healthcare in India stood at two percent of GDP in 2022 versus 1.2 percent in 2020. The Indian government has proposed increasing this to 2.5 percent by 2025, with a special focus on underprivileged populations. As expenditures in the Indian healthcare sector increase, corresponding growth in the medical equipment sector is anticipated.

Although healthcare-related barriers to entry are low compared to other industries, non-tariff barriers and price controls on medical devices and medicines limit market prospects. Additionally, weak intellectual property protection and enforcement create hurdles for the biopharmaceutical industry's exports to India. While India's healthcare market has undergone significant economic growth over the last 25 years, it remains difficult to navigate. India tends to be a price sensitive market, and the country primarily produces low- to mid-tech products. International competition has been severe, and India is often described as a "crossroads" market in the middle of many production and trade routes.

Policy and Regulatory Environment

The Indian government regulates medical devices (including instruments, implants, and software intended for human or animal medical use) as "drugs," under the Drugs & Cosmetics Act (D&C Act), 1940. In July 2022, the Ministry of Health and Family Welfare (MOHFW) unveiled the New Drugs, Medical Devices and Cosmetics bill, intended to replace the D&C Act, to increase safety, effectiveness, and alignment with global standards of medical devices, drugs, and cosmetics available in India. The draft bill is expected to be presented during upcoming parliamentary proceedings. Once approved by the Parliament, the new bill will provide a regulatory regime governing medical devices, pharmaceuticals, and cosmetics in India.

In May 2023, the Government of India introduced the National Medical Device Policy, with the goals of achieving universal access to quality medical devices; boosting domestic manufacturing capacity for affordability; enhancing product quality and global competitiveness; improving clinical outcomes through early diagnosis and accurate treatment; promoting a healthier lifestyle through extensive device applications; fostering innovation in the sector; and developing strong local manufacturing capabilities and resilient supply chains. The policy also aims to streamline regulation, enabling infrastructure, R&D, and innovation to facilitate the sector's growth and development.

In January 2018, Medical Device Rules (MDR) became effective to regulate the Clinical Investigation, Manufacture, Import, Sale, and Distribution of the medical devices in the country. The MDR 2017 classified several categories of implantable devices under the provision of the regulation. Medical devices in India are classified according to the risk to patient health. The current risk classifications are Class A: devices with the lowest risk (e.g., surgical dressings and alcohol swabs); Class B: devices with low to moderate risk (e.g., needle kits and cervical drains); Class C: devices with moderate to high risk (e.g., bone cement, bifurcation stents and catheters); and Class D: devices with high risk (e.g., coronary stents and cardiac catheterization kits).

In January 2022, the Indian government issued a notification requiring all medical device companies to register their devices with the Central Drugs Standard Control Organization in compliance with a mandatory ISO 13485 certification. This requirement is designed to ensure the safe production and control of medical devices and in-vitro diagnostic products. Previously, medical devices were subject to a voluntary registration scheme. Starting in October 2021, Class A and B medical devices were subject to mandatory registration, and from September 2022, Class C and D medical devices will be subject to mandatory registration. When the mandatory registration period expires in September 2023, the medical device classes will transition to a licensing regime.

In June 2021, the Quality Council of India and the Association of Indian Medical Device Industry added new features to the Indian Certification for Medical Devices Scheme of 2016. This new scheme, called Indian Certification for Medical Devices Plus (2021), was designed to verify the quality, safety, and benefits of medical devices, and help government agencies identify counterfeit products and falsified certifications. In addition, the new rules eliminated the need for re-approval of manufacturing and import licenses.

In February 2022, the Ministry of Chemicals and Fertilizers' Department of Pharmaceuticals amended the list of medical devices that had been exempted from India's Procurement Order 2017 to ensure patient access to critical medical technologies not currently produced in India. The current relaxation on Global Tender Enquiry (GTE) under rule 161(iv) of General Financial Rules (GFRs) 2017 for procurement exempts a total of 364 medical devices due to non-availability of Class 1 and Class 2 suppliers.

Pricing: In July 2017, the Indian government introduced price controls on cardiac stents, and the selling price dropped by up to 70% **as a result of** this populist move. That order was followed by a similar cap on knee implants later in the year. The devices were price capped after inclusion in the National List of Essential Medicines.

Currently, 37 medical devices are classified as drugs and regulated under the Drugs and Cosmetics Act. Of these, cardiac stents, drug-eluting stents, knee implants, condoms, and intra-uterine devices are included in the National List of Essential Medicines and are subject to price caps. In February 2020, the Indian government levied a five percent ad-valorem health tax on imports of a variety of medical, dental, surgical, and veterinary devices. Several medical device segments (such as orthopedic knee implants) that were previously exempt from customs duties were withdrawn from the duty exemption.

Effective June 2021, the National Pharmaceutical Pricing Authority issued orders to impose price controls on 6 medical devices namely: oxygen concentrators, blood glucose monitors, blood pressure monitors, pulse oximeters, nebulizers, and digital thermometers, in line with the Trade Margin Rationalization (TMR) approach, which is the difference between the price at which manufacturers sell to the trade and the price to patients. The National Pharmaceutical Pricing Authority had initially introduced the TMR policy for medical devices and drugs in 2018 to help improve patient access to affordable and accessible healthcare.

The Indian government is currently working to streamline trade margins for a wide range of essential drugs, including those that are patented, to reduce their costs and improve accessibility for patients. This initiative initially covers around 139 drugs and falls under the TMR framework. These drugs belong to categories such as anti-infectives, oncology medications, and treatments for chronic kidney conditions.

Public Procurement Order: In June 2020, the Department for Promotion of Industry and Internal Trade amended its 2017 Public Procurement Order, giving priority to Indian companies whose products contain 50 percent or more local content. Products with less than 20 percent local content are categorized as “non-local suppliers” and cannot participate in government tenders.

U.S.-India Trade Data for Medical Devices and Equipment (\$ million)

	2020	2021	2022
Total Market Size	10,360	11,914	13,701
Total Local Production	4,474	3,792	6,293
Total Exports	3,211	4,094	4,802
Total Imports	9,097	12,216	12,210
Imports from the U.S.	1,418	1,887	1,954

Total Market Size = (Total Local Production + Total Imports) – (Total Exports)

Total Imports, Total Exports, and Imports from the United States: U.S. Census Bureau and Global Trade Atlas (HS 90, 3821 and 3822)

Data Sources: Statistical data includes unofficial estimates from trade sources and industry.

Leading Subsectors

Medical Devices: The Indian medical device market is estimated at \$11 billion and is an attractive export sector for U.S. firms, despite numerous market challenges. Importing nearly 80 percent of its medical devices, India remains highly dependent on foreign suppliers, particularly with respect to higher end equipment such as cancer diagnostics, medical imaging, ultrasonic scans, and polymerase chain reaction technologies. Imports are growing rapidly as world-class hospital groups such as Max, Hinduja Group, Fortis, and Apollo build high-end infrastructure and spur on India’s medical tourism sector, which now contributes \$9 billion to the Indian healthcare market.

The Indian government’s newly introduced Production Linked Incentive scheme in medical device manufacturing aims to encourage domestic manufacturing, attract significant investments, and reduce reliance on imports in this industry. Opportunities for U.S. suppliers exist for a range of devices, including medical and surgical instruments; medical imaging equipment; electro-medical equipment; orthopedic and prosthetic appliances; cancer diagnostic solutions; ophthalmic instruments and appliances; orthodontic equipment and dental implants; Point of Care Testing (POCT) diagnostic devices; digital healthcare, health IT, and telemedicine services.

Health Insurance: Medical care in India is provided at-cost and most Indians pay out-of-pocket since they fall outside insurance schemes, which makes healthcare out of reach for many. Health insurance is gaining momentum, with 30 percent of the population covered by government insurance and private insurance. Several private insurance companies have entered the market and have petitioned hospitals to provide cashless treatment to subscribers of insurance companies.

Hospital and Medical Infrastructure: Healthcare is provided through primary, secondary, and tertiary care hospitals in India. The former two categories are fully managed by the government, while tertiary care hospitals are owned and managed by either the government or private companies. The private sector's contribution to healthcare has been growing at a faster pace than that of the government. The medical infrastructure market is growing at an estimated 15 percent annually. Both the government and the private sector are planning several new specialty hospitals, as well as modernization of existing hospitals. India faces a chronic shortage of healthcare infrastructure, especially in second and third tier cities and rural areas. Current estimates are that India will require up to 1.75 million more hospital beds by the end of 2025, which creates an opportunity for foreign companies to set up hospitals in India through FDI. According to industry sources, India's hospital industry is growing at a compound annual growth rate of over 5.75 percent and is expected to reach \$155 billion by 2032.

Biotech and Biopharma: Biotech and Biopharma are two of the fast-growing segments of the Indian life sciences sector and represent diverse opportunities for U.S. companies. The Indian biotech industry is comprised of over 800 companies and a market size of \$80 billion, constituting approximately three percent of the global biotech industry. India is also a leading destination for clinical trials, contract research, and manufacturing in this sector.

Digital Healthcare: Though in its infancy, digital healthcare and telemedicine have expanded rapidly since the onset of the COVID-19 pandemic. People are adapting to new health technologies and intelligent solutions to reduce barriers between hospitals and patients. Telemedicine technology and artificial intelligence will provide significant opportunities for U.S. firms in the coming years. Several major Indian players such as Apollo, AIIMS, and Narayana Hrudayalaya have adopted telemedicine services. The Ministry of Health and Family Welfare along with NITI Aayog, the Indian government's public policy think tank, have recently released official guidelines for telemedicine practices that allow registered medical practitioners to provide remote consultation under the supervision of the National Medical Commission, formerly the Medical Council of India. Healthcare services in rural India are not readily available, with the average rural Indian traveling over 60 miles to receive affordable healthcare at the nearest facility. Rural Indians will benefit from the increased focus on digital healthcare technologies by the Indian government and the private sector as India adjusts to this new service sector in the post-pandemic era.

Refurbished Medical Equipment: India medical equipment market is capital intensive, creating significant opportunities for suppliers of refurbished medical and laboratory instruments. These instruments are used as back-up equipment in higher end hospitals, while less sophisticated hospitals and district hospitals consider refurbished medical and laboratory equipment to be optimal due to the lower cost. Some international companies operating in India sell used medical laboratory instruments to their Indian customers. Because Indian hospitals and agents demand continuous service support and spare parts for refurbished instruments and equipment, U.S. companies operating in this area should consider establishing offices in India.

However, the import of used critical care medical equipment for reuse in India is regulated through Hazardous and other Wastes (Management, Handling and Transboundary Movement) Rules. Under Schedule VI (hazardous and other wastes prohibited for import) of the Hazardous and other Wastes Rules, 2016, the Ministry of Health and Family Welfare lists 27 critical care medical devices that are prohibited from import and reuse. Second-hand capital goods with a minimum residual life of five years can be imported by actual users without a license, and importers are required to furnish a self-declaration specifying the residual life of the goods. Refurbished equipment cannot be transferred, sold, or otherwise disposed of within a period of five years from the date of import, except with permission of the Director General of Foreign Trade. Parts, accessories, and tools up to 15 percent of the value of equipment may be imported for maintenance and operation. U.S. firms should remember that valuation of used equipment can result in disputes with Indian customs authorities.

Opportunities

The growing demand for quality healthcare and the absence of matching delivery mechanisms pose both a challenge and an opportunity in the Indian market. The need for equipment and medical consumables is a significant opportunity for U.S. companies, and several leading U.S. manufacturers of hospital equipment and medical supplies have already opened offices in India to serve this growing market.

Despite the Government of India's Make in India initiatives, the healthcare industry is heavily reliant on imports, with growth areas including diagnostic kits, reagents, hand-held diagnostic equipment, and operating room simulations, with 50 percent of these products imported into India. Hand-held, portable diagnostic equipment, including devices for blood sugar and blood pressure testing, is also a fast-growing segment as India has over 70 million diabetics, a number expected to swell to over 135 million by 2045.

India has become a leading destination for high-end diagnostic services, after large investments in advanced diagnostic facilities. Health insurance and hospital administration are other areas of opportunity for U.S. companies, including the introduction and maintenance of industry standards and the certification of healthcare centers. Construction, financing, and management of specialty hospitals to meet growing demand in India is also a burgeoning opportunity.



2. Major companies in the Healthcare Industry

The healthcare sector includes companies that produce medical goods, such as drugs and medical devices, and companies that provide medical services, such as health insurance or hospital administration.

UnitedHealth Group is the top healthcare company by revenue, with the average revenue for the last four quarters hitting \$333.5 billion.

CompaniesMarketCap.com tracks the revenue, earnings, market cap and more of publicly traded companies across the world. UnitedHealth Group tops the list for healthcare companies globally, and nine of the top 10 companies are U.S.-based.

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Here are the 10 biggest companies in the healthcare field based on revenue as of Dec. 21, 2022. This list is limited to companies that are publicly traded in the U.S. or Canada, either directly or through ADRs.

1. CVS Health Cooperation

Revenue: \$315.2 billion

Net Income: \$3.2 billion

Market Cap: \$124.8 billion

1-Year Trailing Total Return: -3.2%

Exchange: New York Stock Exchange

The parent company of a leading drugstore chain, CVS Health Corp. also is among the biggest pharmacy benefits management (PBM) companies. The company's strategy includes healthcare teams that address the “whole” patient’s physical and emotional needs, bringing care to where people need it, through the CVS Health Hub and locations.

2. UnitedHealth Group Inc. (UNH)

Revenue: \$313.1 billion

Net Income]: \$19.4 billion

Market Cap: \$486.6 billion

1-Year Trailing Total Return: -8.9%

Exchange: New York Stock Exchange

UnitedHealth Group is a health insurance company that also provides data analytics and consulting services to healthcare providers, as well as pharmacy care services. Its principal divisions include UnitedHealthcare, OptumHealth, OptumInsight, and OptumRx

3. McKesson Corp. (MCK)

Revenue: \$272 billion

Net Income: \$2.1 billion

Market Cap: \$53.3 billion

1-Year Trailing Total Return: 61.3%

Exchange: New York Stock Exchange

McKesson Corp. is a distributor of pharmaceuticals and other medical products in the U.S., Canada, and Europe. Working with biopharma companies, care providers, pharmacies, manufacturers, and governments, McKesson Corp delivers products and services to 14 count

4. AmerisourceBergen Corp.(ABC)

Revenue: \$238.6 billion

Net Income: \$1.7 billion

Market Cap: \$33.9 billion

1-Year Trailing Total Return: 34.5%

Exchange: New York Stock Exchange

AmerisourceBergen Corp. is a distributor of medications and medical supplies, helping people access the healthcare products they need through product sourcing and distribution, supporting community-based care, and partnering with manufacturers to bring products to market.

5. Cardinal Health Inc (CAH)

Revenue: \$187 billion

Net Income: -\$1.1 billion

Market Cap: \$20.9 billion

1-Year Trailing Total Return: 67.7%

Exchange: New York Stock Exchange

Cardinal Health is a global manufacturer and distributor of medical and laboratory products and a provider of performance and data solutions for healthcare facilities. Through services like ambulatory surgery centers, home care, and long-term care, Cardinal Health serves 90% of all U.S. hospitals and 10,000 specialty physician offices and clinics.

6. Cigna Corp. (CI)

Revenue: \$180 billion

Net Income: \$6.6 billion

Market Cap: \$100.8 billion

1-Year Trailing Total Return: 54.4%

Exchange: New York Stock Exchange

Cigna is a global health services company with healthcare providers, clinics, and facilities serving customers and patients in more than 30 countries.

7. Elevance Health (ELV)

Revenue: \$153.2 billion

Net Income: \$6.2 billion

Market Cap: \$120.5 billion

1-Year Trailing Total Return: 16%

Exchange: New York Stock Exchange

Elevance Health supports health at every life stage, offering health plans and clinical, behavioral, pharmacy, and complex-care solutions that promote whole health. Through its affiliates such as Anthem and Wellpoint, Elevance Health offers commercial, Medicare, and Medicaid plans for employers, individuals, families, and communities.

8. Centene Corp. (CNC)

Revenue: \$141.6 billion

Net Income: \$2 billion

Market Cap: \$45.5 billion

1-Year Trailing Total Return: -2.5%

Exchange: New York Stock Exchange

Centene Corp. is a managed healthcare company, focusing on administering government-sponsored programs. With its acquisition of Well Care Health Plans Inc., Centene increased its market share in Medicaid, Medicare Advantage, and Medicare Prescription Drug Plans across 50 states.

9. Walgreens Boots Alliance Inc. (WBA)

Revenue: \$132.7 billion

Net Income: \$4.3 billion

Market Cap: \$34.2 billion

1-Year Trailing Total Return: -15.2%

Exchange: NASDAQ

Walgreens Boots Alliance operates drug stores in the U.S. under the Walgreens and Duane Reade names, and as Boots drug stores globally.

10. Pfizer (PFE)

Revenue: \$99.9 billion

Net Income: \$29.8 billion

Market Cap: \$288.1 billion

1-Year Trailing Total Return: -13.2%

Exchange: New York Stock Exchange

Pfizer is a leader in the pharmaceutical industry with innovation and development of products for internal medicine, oncology, immunology, and rare diseases. Pfizer is widely recognized for its response to the COVID-19 pandemic

Here are the 10 biggest companies in the health care field in India.

o Sun Pharmaceutical Industries Ltd:

Founded in 1983, Sun Pharma is one of India's largest pharmaceutical companies and ranks among the top pharmaceutical companies globally. It specializes in the development, manufacturing, and marketing of a wide range of pharmaceutical products, including prescription drugs, over-the-counter medications, and active pharmaceutical ingredients (APIs). Sun Pharma has a strong presence in multiple therapeutic areas such as cardiology, psychiatry, neurology, and gastroenterology. It operates in more than 150 countries and has manufacturing facilities complying with international quality standards.

○ **Dr. Reddy's Laboratories Ltd :**

Established in 1984, Dr. Reddy's is a leading pharmaceutical company involved in research, development, manufacturing, and marketing of generic medicines, biosimilars, and proprietary pharmaceuticals. It has a diverse product portfolio covering areas like cardiovascular, oncology, gastroenterology, and dermatology. Dr. Reddy's also has a presence in the United States, Europe, Russia, and other markets, catering to a global customer base.

○ **Cipla Ltd :**

Cipla is a renowned pharmaceutical company known for its focus on affordable healthcare solutions. Founded in 1935, it has a wide range of pharmaceutical products spanning therapeutic categories such as respiratory, anti-infectives, cardiovascular, and oncology. Cipla operates in over 80 countries, supplying both generic and branded medications. The company is also involved in research and development activities aimed at developing innovative treatments.

○ **Apollo Hospitals Enterprise Ltd :**

Apollo Hospitals is a leading healthcare provider in India, offering a comprehensive range of medical services including hospitals, clinics, diagnostics, and pharmacies. It has a network of hospitals across India equipped with advanced medical technology and skilled healthcare professionals. Apollo Hospitals specializes in various medical specialties such as cardiology, orthopedics, oncology, and organ transplantation.

○ **Fortis Healthcare Ltd :**

Fortis Healthcare operates a network of hospitals and healthcare facilities in India, providing a wide range of medical services and treatments. It offers services in areas such as cardiac care, neurology, orthopedics, oncology, and critical care. Fortis Healthcare is known for its focus on patient-centric care, advanced medical infrastructure, and clinical excellence.

○ **Biocon Ltd :**

Biocon is a biopharmaceutical company focused on biotechnology and research-based healthcare solutions. It specializes in the development and manufacturing of biopharmaceuticals, biosimilars, and generic formulations. Biocon's areas of expertise include diabetes care, oncology, immunology, and nephrology. The company has a global presence and collaborates with international partners for research and commercialization efforts.

○ **Lupin Ltd :**

Lupin is a pharmaceutical company engaged in the manufacturing and marketing of a diverse range of pharmaceutical formulations and APIs. It has a strong presence in therapeutic areas such as cardiovascular, respiratory, central nervous system, and anti-infectives. Lupin operates globally and has a significant market share in various regions, including the United States, Europe, Japan, and India.

○ **Cadila Healthcare Ltd (Zydus Cadila) :**

Zydus Cadila is a pharmaceutical company with a focus on research, development, manufacturing, and marketing of pharmaceutical products. It offers a wide range of generics, APIs, and biosimilars across multiple therapeutic categories.

○ **Max Healthcare Institute Ltd :**

Max Healthcare Institute Ltd operates hospitals and healthcare facilities across India, offering comprehensive medical services.

○ **Wockhardt Ltd :**

Wockhardt Ltd is a global pharmaceutical and biotechnology company with a focus on research, development, manufacturing, and marketing of pharmaceutical products.

3. Healthcare Industry Profile :

The healthcare industry is a vast and complex sector that plays a crucial role in society by providing medical services, products, and support to individuals and communities. It encompasses a wide range of organizations, professionals, technologies, regulations, and challenges.

The healthcare sector consists of businesses that provide medical services, manufacture medical equipment or drugs, provide medical insurance, or otherwise facilitate the provision of healthcare to patients.

The healthcare sector is one of the largest and most complex in the U.S. economy, accounting for 18% of gross domestic product (GDP) in 2020.¹ The U.S. healthcare sector benefits from a strong system of medical research and development, in cooperation with the higher education system and the technology industry. The aging U.S. population and the advancing senescence of the Baby Boomer generation are driving ongoing strong demand in the healthcare sector.

Economically, healthcare markets are marked by a few distinct factors. Government intervention in healthcare markets and activities is pervasive, in part due to some of these economic factors. Demand for healthcare services is highly price inelastic. Consumers and producers face inherent uncertainties regarding needs, outcomes, and the costs of services. Patients, providers, and other industry players possess widely asymmetric information and principal-agent problems are ubiquitous.

Major barriers to entry exist in the form of professional licensure, regulation, intellectual property protections, specialized expertise, research and development costs, and natural economies of scale. Consumption (or non-consumption) and production of medical services can involve significant externalities, particularly regarding infectious diseases. Transactions costs are high in both the provision of care and the coordination of care

The healthcare sector includes many industries, sub-industries, and a wide variety of companies. Any company involved in products and services related to health and medical care are represented in the healthcare sector and further categorized under six main industries. These industries include pharmaceuticals, biotechnology, equipment, distribution, facilities, and managed health care. In this report, we will discuss each industry in further detail, highlighting the various aspects of the supply chain as well as discuss the healthcare sector and its relation to the overall market.

○ **Healthcare Services:**

This sector includes hospitals, clinics, nursing homes, and other facilities that provide direct patient care. It also includes healthcare professionals such as doctors, nurses, therapists, and other allied health professionals.

○ **Healthcare Technology:**

This sector covers medical devices, equipment, and technology solutions used in diagnosis, treatment, and monitoring of patients. Examples include MRI machines, insulin pumps, electronic health records (EHRs), and telemedicine platforms.

- **Health Insurance:**

Health insurance companies and providers offer financial coverage and risk management services for medical expenses. They play a crucial role in ensuring access to healthcare services for individuals and families.

- **Healthcare Infrastructure:**

This sector involves infrastructure development, construction, and maintenance of healthcare facilities such as hospitals, laboratories, and medical offices. It also includes logistics and supply chain management for healthcare products.

- **Regulatory and Policy:**

Government agencies, regulatory bodies, and policymakers set standards, guidelines, and regulations for the healthcare industry. This includes issues related to patient safety, healthcare delivery, reimbursement, and data privacy.

- **Pharmaceuticals**

The pharmaceutical sub-industry has been interesting to follow lately because of these affects that the Affordable Care Act have had on it. When the Affordable Care Act first was signed into law the sub-industry struggled at first because of the new costs that stemmed from the bill. Those costs did not end up holding these firms back because once 2014 started a lot of firms, including Regeneron Pharmaceuticals, reported high revenues in their earnings reports. This is most likely because of all the new patients that the Affordable Care Act has given coverage to and thus allowing them to enter the market.

- **Drugs**

Drug manufacturers can further be broken down into biotechnology firms, major pharmaceutical firms, and makers of generic drugs. The biotech industry consists of companies that engage in research and development to create new drugs, devices, and treatment methods.

Many of these companies are small and lack dependable sources of revenue. Their market value may depend entirely on the expectation that a drug or treatment will gain regulatory approval, and FDA decisions or rulings in patent cases can lead to sharp, double-digit swings in share prices. Examples of (larger) biotech firms include Novo Nordisk (NVO), Regeneron (REGN), Alexion (ALXN), Vertex (VRTX), Gilead Sciences Inc. (GILD), and Celgene Corp. (CELG).

Major pharmaceutical firms also engage in research and development but tend to focus more on manufacturing and marketing an existing portfolio of drugs than the typical biotech firm. These companies tend to have more dependable streams of revenue and a more diversified "pipeline" of drugs in the research and development stages, making them less dependent on make-or-break drug trials and their shares less volatile. Examples of major pharmaceutical firms include Johnson and Johnson, Roche, Pfizer, Eli Lilly, Novartis AG, GlaxoSmithKline, and Astrazeneca.

Some pharmaceutical firms specialize in generic drugs, which are identical to name-brand drugs but no longer enjoy patent protection. As a result, there is often competition to manufacture identical drugs, leading to lower prices and thinner profit margins. An example of a generic drugs firm is Teva Pharmaceutical Industries Ltd.

- **Biotechnology**

The biotechnology industry's constituents derive their value from their ability to develop, manufacture and market novel, patented medicines that generate multibillion dollar revenues [Wang]. Compared to pharmaceutical companies, biotechnology firms are regarded as younger, faster growing and more

innovative [Wang]. Biotech companies also differ from pharmaceutical companies because they seek to develop new drug therapies strictly using biological processes rather than the chemical processes. Biological processes use living factories such as microbes or cell lines that are genetically modified to produce treatments [Biotechnology by Amgen].

- **Medical Equipment**

Like drug companies, equipment is another important product of healthcare. The equipment industry consists of manufacturers of health care equipment and medical devices, creating products such as medical instruments, drug delivery systems, cardiovascular & orthopedic devices and diagnostic equipment [Investing]. These products are distributed to hospitals and doctors and are used in the medical treatment of patients. Medtronic is an example of an equipment company that specializes in producing devices that are implanted into patients during surgical procedures. As for its valuation ratios, they are all significantly lower than the sector average. Although this can indicate a somewhat cheap stock, all the ratios are very much in line with the equipment industry average [Medtronic]. With so many drug and equipment companies continuously creating products, there is need for a distribution industry.

- **Distribution**

Distribution is an essential part of the healthcare sector supply chain. It represents all distributors and wholesalers of health care products. This can include companies anywhere from pharmacies to wholesalers of equipment. With more and more drugs and equipment being produced, the distribution industry is quickly growing.

- **Facilities**

Healthcare facilities are the health care providers in the healthcare sector. It is where medicines are delivered to needing patients and where doctors practice medicine. In this sub-industry, companies provide a wide range of health care and social services through hospitals, doctors' offices, nursing homes, outpatient surgery centers, and other facilities. In the last two years, the industry growth is lower than the average healthcare sector growth. The healthcare facilities industry is under great pressure of revenue growth. The hospital industry has a combined revenue of \$ 700 billion per year, but the top 50 organizations generate less than 30% of revenue. Cost is relatively high in this industry because hospitals need expensive equipment such as CT and MRI machines in order to operate. Another cost factor is the labor cost, sometimes making up as high as 40% of total revenue. The current trend for the industry is merging with competing facilities or even health insurance companies in order to provide more cost-effective care.

- **Managed Health Care**

The managed health care sub-industry is described as a variety of techniques intended to reduce the cost of providing health benefits and improve the quality of care, in other words it is the health insurance industry. Compared with other sub-industries within the healthcare sector, managed health care has a higher rate of growth. As the health care act reform requires that everyone be insured, it is a great opportunity for insurance companies.

Key Trends in the Healthcare Industry

○ **Digital Transformation:**

The healthcare industry is undergoing a significant digital transformation, with the adoption of electronic health records (EHRs), telemedicine, mobile health apps, and remote monitoring devices. This trend enhances patient care, improves efficiency, and enables data-driven decision-making.

○ **Personalized Medicine:**

Advances in genomics, molecular biology, and biotechnology have led to the emergence of personalized medicine. This approach tailors medical treatments and interventions based on an individual's genetic makeup, lifestyle, and medical history, leading to better outcomes and reduced side effects.

○ **Value-Based Care:**

Healthcare providers are shifting from a fee-for-service model to a value-based care model, where payment is based on patient outcomes and quality of care rather than the volume of services provided. This trend incentivizes preventive care, care coordination, and patient engagement.

○ **Population Health Management:**

Healthcare organizations are increasingly focused on population health management, which involves improving the health outcomes of entire populations or communities. This includes efforts to address social determinants of health, promote health equity, and prevent chronic diseases.

○ **Artificial Intelligence (AI) and Machine Learning:**

AI and machine learning technologies are being used in healthcare for medical imaging analysis, predictive analytics, drug discovery, and decision support systems. These technologies have the potential to revolutionize diagnosis, treatment, and healthcare delivery.

○ **Healthcare Cybersecurity:**

With the digitization of healthcare data and the use of interconnected devices, cybersecurity has become a critical concern. Healthcare organizations must implement robust cybersecurity measures to protect patient information, prevent data breaches, and ensure regulatory compliance.

Challenges Facing the Healthcare Industry

Despite the progress and innovations in the healthcare industry, several challenges persist:

○ **Cost of Healthcare:**

Healthcare costs continue to rise, driven by factors such as medical inflation, expensive treatments, aging populations, and chronic disease management. This places financial strain on individuals, families, employers, and governments.

○ **Access to Care:**

Disparities in healthcare access and affordability exist, particularly for vulnerable populations such as low-income individuals, rural communities, and minorities. Improving access to primary care, preventive services, and specialty care remains a challenge.

- **Quality and Safety:**

Ensuring high-quality care and patient safety is a priority, but healthcare-associated infections, medical errors, and care variability are still significant concerns. Healthcare organizations must focus on evidence-based practices, quality improvement initiatives, and patient engagement strategies.

- **Health Information Exchange:**

Interoperability and health information exchange (HIE) among different healthcare systems, providers, and stakeholders are critical for coordinated care, care transitions, and population health management. However, technical barriers, data privacy issues, and lack of standardization hinder seamless HIE.

- **Workforce Shortages:**

The healthcare industry faces shortages of healthcare professionals, particularly in nursing, primary care, mental health, and rural areas. Recruiting and retaining skilled workers, addressing burnout, and supporting workforce diversity are ongoing challenges.

- **Regulatory Complexity:**

Healthcare regulations and compliance requirements are complex and constantly evolving. Healthcare organizations must navigate regulatory challenges related to reimbursement, privacy laws, electronic health records (EHRs), and healthcare reform initiatives.

Future Outlook of the Healthcare Industry

Looking ahead, several trends and developments are expected to shape the future of the healthcare industry:

- **Telehealth Expansion:**

Telehealth and virtual care services are projected to expand further, driven by advancements in technology, consumer demand for convenience, and regulatory changes facilitating telehealth reimbursement and licensure.

- **Data Analytics and Predictive Insights:**

The use of data analytics, artificial intelligence (AI), and predictive modeling will continue to grow, enabling healthcare organizations to derive actionable insights, personalize treatments, and improve population health outcomes.

- **Healthcare Consumerism:**

Patients are becoming more empowered and engaged in their healthcare decisions, demanding transparency, convenience, and personalized experiences. This trend will drive innovations in patient-centered care, digital health tools, and healthcare delivery models.

- **Value-Based Payment Models:**

Value-based payment models and alternative payment arrangements will gain momentum, incentivizing healthcare providers to focus on preventive care, care coordination, and outcomes-based performance.

- **Precision Medicine Advancements:**

Advances in genomics, biomarkers, and precision medicine technologies will lead to targeted therapies, disease prevention strategies, and personalized treatment plans tailored to individual patient needs. Healthcare

- **Collaboration and Partnerships:**

Healthcare organizations will increasingly collaborate and form partnerships with technology companies, life sciences firms, community organizations, and other stakeholders to drive innovation, improve care delivery, and address population health challenges.

Part 2 –

PRIMARY STUDY

4. Introduction – The role of human resources management in hospitals

The hospital, a facility committed to addressing human suffering, treating human illnesses, and promoting community health, must look out for the wellbeing of people who work there, or its staff. Whether a brilliant surgeon or an unskilled sweeper, each person working to further the goals and missions of a hospital is an essential link in the chain. It is never appropriate to refer to lower-level hospital employees as "labour" in trade union parlance. They should be regarded as being just as crucial to a hospital's operation as a doctor or a professional nurse.

Human Resource Management (HRM) is described as the formal systems devised for the management of people within an organization. The responsibilities of a human resource manager include staffing, employee compensation and benefits, defining/designing work and overall development of the workforce. Essentially, the purpose of HRM is to maximize the productivity of an organization by optimizing the effectiveness of its employees.

Mc Kinnies (2012) has stated that HRM comprises five broad functions, which are :

- I. **Resourcing:** Activities include HR planning, talent management, succession planning and ending the employment contract (including managing retirement and redundancy).
- II. **Performance:** Managing individual and team performance and the contribution of workers to the achievement of organizational goals, for example, through goal-setting and appraisals.
- III. **Reward system:** Designing and implementing reward systems covering individual and collective, financial and non-financial rewards, including pay structures, parks and pensions.
- IV. **Learning and Development:** Identifying individual, team and organizational development requirements and designing, implementing and evaluating training and development interventions.
- V. **Employment relations:** Managing employees, communication, handling union management relations, managing employee welfare and handling employee grievance and discipline.

Human resource management is used in the health care (hospital) industry, where a team of committed hospital staff members provide the greatest and noblest type of service to patients and the general public. A hospital is a place where sick or injured people can receive care, treatment, and research on various diseases as well as training for nurses and doctors.

Many employees of various categories can be found working in private hospitals that require multidisciplinary excellence and knowledge. The provision of healthcare services has been found to involve the doctors, paramedical personnel, nurses, technicians, and managerial cadre workers. A hospital manager

must be aware of the qualitative and quantitative needs of various departments and manage various aspects of people management in the appropriate way.

Hospitals and health care facilities are expected to play a significant role in an overpopulated nation like India where the bulk of the population lives below the poverty line. Of course, it falls on the hospitals to care for the public, secure the priceless endowment, and even protect their own interests by improving the Medicare facilities and fostering a positive reputation. Unquestionably, the creation of an all-encompassing, "alive" hospital system that integrates patients, physicians, and nurses into a synocratic whole is urgently required. In the Indian setting, a hospital's primary duty is to serve very large populations of people by offering the best services available.

It serves as a location for human disease diagnosis and treatment, for education, training, and research, for the promotion of health care activities, and to some extent as a centre for bio-social research. The conceptual aspect is clearly explained in the World Health Organization [WHO] paper. According to the document, hospitals are "an integral part of a social and medical organisation, whose function is to provide for the population complete health care, both curative and preventive, and whose outpatient services reach out to the family in its home environment, it is also a centre for the training of health workers and for bio-social research."

The functional space in modern hospitals has increased. The hospitals rekindle new dreams and goals for the society against this backdrop. In addition, the WHO papers describe hospitals as complex organisations. It is complicated in that numerous social changes have increased the users' or potential customers' awareness of their legal rights. Recently, they have demanded the most advanced methods of medical care and health education. They want everything not just inside the hospital's walls, but also at their doorstep or close to where they live. The hospital is now a sophisticated organisation as a result.

We also view hospitals as social institutions that provide healthcare and have benefits for both patients and society. It is regarded as a location for the identification and treatment of human illnesses as well as the restoration of health and wellbeing for individuals who have been momentarily deprived.

4.1 Literature Review

The development of human resource management follows the development of the economy and the advent of innovation during all 4 industrial revolutions. The first HR managers and the first HR departments appeared in manufacturing companies at the turn of the 19th and 20th centuries and their work was initially limited to administration, accounting and resource planning. For the purpose of knowing the level of quality of human resource management in healthcare, we consider it necessary to describe the developmental stages and to recognize the development of personnel management. The development of human resource management can be briefly described by 4 basic developmental stages.

The basic level of human resource management (HRM) is the personnel department, which provides personnel administration, payroll accounting and basic labour law. In the second tier, there is a specialization of HRM into selection, training, organizational design management, and compensation. The HR function includes HR service centres that provide services to employees and HR business partners that support managers at a strategic level. The third level is a superstructure in which HRM provides integrated talent management. New roles are succession planning, talent management, leadership support, and the development of a coaching culture. The most advanced departments of HRM are fully integrated with the business, are digitized and can predict future developments and deliver value through big data analytics. They are constantly expanding their knowledge and their impact. They are not focused on what they do, but on what they deliver. The impact of HRM activities on the performance of the organization is measured and evaluated.

The impact of the 4.0 era on HRM through changes in the values, roles, architecture and content of HRM is described by Blstakova's model, which, through conceptual issues of HRM, can form the basis for setting a developed HRM strategy and subsequent sub strategies.

Several global studies have confirmed the relationship between the use of modern, developed HRM systems and the organizational performance of a company. Similarly, Jankelova's research in 44 Slovak hospitals confirmed the positive impact of the blended role (mature role) of HRM in healthcare facilities (hospitals) on their organizational performance. For example, West et al. reported that HRM systems in healthcare facilities directly influence the quality of healthcare provided and the mortality rate of patients in hospitals.

West et al. list specific practices of developed HRM that previous research suggests are most important to use - sophisticated management appraisal systems, staff safety, and the level of investment in people (as expressed by effective human resource management and, in particular, investment in training and development). Similarly, Townsend et al. state that, an HRM system must use advanced techniques (such as miracle question) to understand employee problems and solve them. West points out that it is not enough to use advanced HRM techniques in isolation, but it must be a group of interrelated high performance HRM practices. Townsend et al. state that the growing importance of HRM is a signal to employees that employees also have a strong position in the company. The development of HRM strategies and tools is not homogeneous. The development of HRM is often positively influenced by the competitive environment, the form of ownership of the organization and its size. HRM develops fastest in highly competitive environments with high demand for quality labour (e.g., IT services, telecommunications sector). In sectors such as primary agricultural production, human resource management is sufficient to cover basic staffing activities in the long term.

The positive relationship between a well-developed HRM system and transformational leadership of managers in the healthcare sector, which in turn has a positive impact on employee satisfaction and loyalty, has been described in studies by several authors.

According to Joniaková and Jankelová, burnout and low job satisfaction are among the problems of contemporary healthcare. Meanwhile, according to West et al. the satisfaction and motivation of medical staff is crucial for their stabilization (reduction of attrition to other departments, increased interest in studying and working in healthcare) and quality work performance (reduction of patient mortality, compliance with procedures and regulations, reduction of nosocomial infections, etc.). Other studies show that job satisfaction is among the key factors for health professionals worldwide. The positive impact of HRM practices on increasing employee satisfaction and motivation has been scientifically proven by several authors. It is desirable to make full use of the current knowledge on human resource management in healthcare.

According to Michael A. West, Carol Borrill, Jeremy Dawson, Judy Scully, Matthew Carter, Stephen Anelay, Malcolm Patterson & Justin Waring (2002). The relationship between human resource management practices and organizational performance (including quality of care in health-care organizations) is an important topic in the organizational sciences but little research has been conducted examining this relationship in hospital settings. Human resource (HR) directors from sixty-one acute hospitals in England (Hospital Trusts) completed questionnaires or interviews exploring HR practices and procedures. The interviews probed for information about the extensiveness and sophistication of appraisal for employees, the extent and sophistication of training for employees and the percentage of staff working in teams. Data on patient mortality were also gathered. The findings revealed strong associations between HR practices and patient mortality generally. The extent and sophistication of appraisal in the hospitals was particularly strongly related, but there were links too with the sophistication of training for staff, and also with the percentages of staff working in teams

According to Susan C. Eaton(2006) This study examines the link between human resource management, (HRM), work organization, and patient care quality in U.S. long-term care settings, proposing a key role for both management philosophy and improved front line staffing arrangements in delivering consistently higher quality care, defined to include both physical and psychological outcomes. Using the “high performance” model from industrial relations as a lens, the paper identifies three distinct systems of HR and nursing home management: traditional low-service quality, high service quality medical rehabilitative, and 'new paradigm regenerative.'

According to Michaela. West James, P. Guthrie, Jeremy F. Dawson, Carol S. Borrill And Matthew Carter (2006) Developing effective health care organizations is increasingly complex as a result of demographic changes, globalization, and developments in medicine. This study examines the potential contribution of organizational behaviour theory and research by investigating the relationship between systems of human resource management (HRM) practices and effectiveness of patient care in hospitals. Relatively little research has been conducted to explore these issues in health care settings. In a sample of 52 hospitals in England, we examine the relationship between the HRM system and health care outcome. Specifically, we study the association between high performance HRM policies and practices and standardized patient mortality rates. The research reveals that, after controlling for prior mortality and other potentially confounding factors such as the ratio of doctors to patients, greater use of a complementary set of HRM practices has a statistically and practically significant relationship with patient mortality. The findings suggest that managers and policy makers should focus sharply on improving the functioning of relevant

According to Stefane M Kabene, Carole Orchard, John M Howard, Mark A Soriano and Raymond Leduc (2006) This paper addresses the health care system from a global perspective and the importance of human resources management (HRM) in improving overall patient health outcomes and delivery of health care services. We explored the published literature and collected data through secondary sources. Various key success factors emerge that clearly affect health care practices and human resources management. This paper will reveal how human resources management is essential to any health care system and how it can improve health care models.

Challenges in the health care systems in Canada, the United States of America and various developing countries are examined, with suggestions for ways to overcome these problems through the proper implementation of human resources management practices. Comparing and contrasting selected countries allowed a deeper understanding of the practical and crucial role of human resources management in health care. Proper management of human resources is critical in providing a high quality of health care. A refocus on human resources management in health care and more research are needed to develop new policies. Effective human resources management strategies are greatly needed to achieve better outcomes from and access to health care around the world.

Priya Sinha and Sigamani P (2016) in their paper “Key challenges of human resources for health in India” have revealed that the government expenditure on health has remained at not more than 1% of Gross Domestic Product which is very less compared to world standard. The biggest challenge is the shortage of skilled human resource in the healthcare delivery system at all levels. Another challenge that they have highlighted is the attrition of the workforce in the healthcare industry and emigration of skilled health workforce.

Christoph Aluttis et al (2014) in their paper “The workforce for health in a globalized context – global shortages and international migration” highlights that the World Health Organisation has estimated a global shortage of almost 4.3 million doctors, midwives, nurses and other healthcare professionals. The study also focuses on the current scope of health workforce migration patterns and its effect on both high and low income countries in an interdependent world. It also reviews the internal and external factors that make an impact on the migration of health workers.

In the paper “HRM issues and challenges in healthcare”, Dr. E. Mubarak Ali et al. (2016) reveals that the human resource management has a strong impact on health care quality and improving the performance of the hospital workforce. The authors explained that the workforce of a hospital is relatively large, diverse and includes separate occupation and above that they have to work round the clock in a service sector organisation like a hospital. Hence, to manage this vast workforce and to motivate them to work efficiently and effectively to achieve patient satisfaction is a great challenge for the human resource managers. The authors also highlight an important challenge of inadequate training among the healthcare workers. They have stated that there is a lack of training for health education, interpersonal communication, doctor- patient and doctor staff interactions and counselling leading to a gap between the healthcare workforce (including the doctors) and the clients which includes the patients and the patient parties.

Anuska Kalita et al. (2009) in their study “Empowering health personnel for decentralized health planning in India: The Public Health Resource Network” have highlighted that there is a lack of technical knowledge, skills and absence of a supportive network or educational opportunities among some categories of health worker and these inadequacies act as a hindrance for the health personnel from making professional and career improvements. Hence there is a strong need for trained, motivated, empowered and networked health personnel. The authors have emphasized on the importance of the Public Health Resource Network to motivate and empower often isolated health workers.

Mc Alearney (2006) in the study “Leadership Development in Healthcare: A qualitative study” has emphasized on the leadership challenges in the healthcare organisation. The study reveals that healthcare organisations experience major challenges in designing and delivering Leadership Development Programmes.

Guest and Woodrow (2012) in their study “Exploring the Boundaries of Human Resource Managers’ Responsibilities” emphasizes on the longstanding challenges for human resource managers as how far it is realistic for them to represent the interest of both management and workers.

In an interesting study “Working While the World Sleeps: A Consideration of Sleep and Shift Work Design” authors Robert D. Oexman et al. (2002) have focused on the problem of sleep deprivation and related problems facing shift workers and the organizations employing them. The study discusses the move towards shift work and some sleep problems associated with it. The authors have also suggested some alternative schedules for shift work implementation like Fixed or Rotating Schedule, Straight shifts & Oscillating shift. In the paper the authors also highlight the fact that a lack of attention to the sleep needs of employees leads to higher absenteeism, a decrease in health (with an increase in health care costs), lower employee morale, an increase in accidents, and a decrease in productivity. The consequences associated with sleep problems may be even greater than those associated with drug and alcohol abuse on the job A.

Manimaran et al. (2016) in their paper “Human Resource Management in the Healthcare Industry – A Literature Review” have studied about the various viewpoints on the multiple issues regarding the human resource management of a health care professional. They have identified some critical challenges faced in the healthcare industry, which are- Change management, Leadership Development, Staffing Challenges, Performance Management Challenges and Challenges related to rewards and recognitions.

Farokhzadian J et al (2017) in their study Challenges of Human Resources Management in Quality Improvement by Clinical Risk Management: A Qualitative Study on Iranian Nurses' experiences carried out a survey of 22 nurses from three hospitals in the South East of Iran. The study highlights on six dimensions of the challenges faced by human resource management in the hospitals- (1) Inadequate productivity. (2) Recession of empowerment. (3) Inappropriate evaluation of performance. (4) Lack of motivation. (5) Personal Characteristics and Professional competencies. (6) Ethical and professional commitments.

Cogin et al. (2016) in their paper “Controlling healthcare professionals: how human resource management influences job attitudes and operational efficiency”, provide insights into the HR approach adopted by

Australian Hospitals and the implications of employee attitudes and hospital operations. The study revealed that behavioural control has been used as the predominant form of control used to manage nurses, allied health workers and junior doctors. However the senior physicians were managed with an element of commitment based HRM and a mix between behaviour and input controls. The study also throws light on the negative job attitudes of the employees as a challenge of HRM which at times leads to inefficient operations.

4.2 Background of the study

This research paper addresses the health care system from a global perspective and the importance of human resources management in improving overall patient health outcomes and delivery of health care services. The evolution of healthcare systems and recognition of the importance of effectively managing personnel to ensure quality patient care. The growth of health care organizations and advancement in medical technology, the role of human resources management expanded to encompass a wider range of functions. Human resources management in hospitals plays a crucial role in ensuring compliance with regulations and implementing policies that promote ethical and legal practices.

Within many health care systems worldwide, increased attention is being focused on human resources management. Specifically, human resources are one of three principle health system inputs, with the other two major inputs being physical capital and consumables.

4.3 Problem Statement of the study

The role of human resource management in the health care industry, one of the world's largest employers. Managing the flow of the health care force is a tall order that reassures creativity, knowledge, insight and most of all team works. An important indicator of health care facility's competitiveness is its Hospital consumer Assessment of Health care providers and system scores. The HRM Department helps to get better Scores by training its employee in the delivery of good customer service. Hence the investigator is interested to understand the value of Human on resource management in hospitals. Therefore the present the study is entitled as ' The role of the human resources management in hospitals.'

The problem statement of the role of human resources management (HRM) in hospitals can be framed around several key challenges and issues that HR professionals in healthcare settings often face. These include:

- **Talent Shortages:**

Hospitals often struggle with recruiting and retaining qualified healthcare professionals, including nurses, physicians, and specialists. HRM faces the challenge of addressing talent shortages, especially in high-demand areas such as critical care, mental health, and rural healthcare.

- **Workforce Diversity:**

Ensuring diversity and inclusion in the healthcare workforce is a significant challenge for HRM. Hospitals need to attract and retain a diverse range of professionals to meet the needs of diverse patient populations and promote cultural competence within the organization.

- **Workforce Burnout and Stress:**

Healthcare professionals, particularly frontline workers, face high levels of stress and burnout due to long hours, heavy workloads, and emotionally demanding situations. HRM must implement strategies to support employee well-being, reduce burnout, and promote a healthy work-life balance.

- **Skills Gaps and Training Needs:**

With advancements in medical technology and evolving healthcare practices, HRM faces the challenge of addressing skills gaps and providing ongoing training and development opportunities for healthcare staff. This includes training on new medical procedures, technology systems, and regulatory changes.

- **Compliance and Regulatory Complexity:**

The healthcare industry is highly regulated, with complex laws and regulations governing areas such as patient privacy, billing practices, and quality standards. HRM must ensure compliance with these regulations while also navigating the intricacies of healthcare reimbursement and reporting requirements.

- **Succession Planning:**

Succession planning is a critical issue for HRM in hospitals, especially as experienced healthcare professionals retire or leave the workforce. HRM must develop strategies for identifying and developing future leaders within the organization to ensure continuity of care and leadership.

- **Employee Engagement and Retention:**

Engaging and retaining top talent is a constant challenge for HRM in hospitals. HRM must focus on creating a positive work environment, providing opportunities for career growth and development, and implementing retention strategies such as mentorship programs and recognition initiatives.

- **Workforce Agility and Flexibility:**

The healthcare landscape is dynamic, with changing patient needs, technological advancements, and healthcare delivery models. HRM must ensure that the workforce is agile and adaptable, able to respond effectively to changes in healthcare trends and demands.

Addressing these challenges requires HRM in hospitals to adopt strategic approaches, collaborate with other departments, leverage technology solutions, and prioritize employee well-being and professional development.

4.4 Objectives of the study

The broad objective of HRM is to contribute towards realisation of the hospital's goals. The specific objectives are to:

- Achieve and maintain good human relations within the hospital.
- Enable each employee to make his/her maximum personal contribution to the effective working of the hospital.
- Ensure respect and the well being of the individual employee.
- Ensure the maximum development for the individual to help the employee contribute his/her best to the hospital.
- Ensure satisfaction of various needs of individuals for obtaining their maximum contribution to achieve the hospital goals.
- To suggest probable solutions that can help in overcoming the challenges.

4.5 Hypothesis

- Alternative Hypothesis [HI] systematic and scientific HRM practices leads to higher employee satisfaction.
- Null Hypothesis [HO] systematic and scientific HRM practices do not lead to higher employee satisfaction.

5. Research Methodology

The aim of this paper is to identify and define the challenges of human resource management in healthcare and to explain the importance of implementing well-developed human resource management practices to improve the role of human resources management in hospitals. The research method is a literature search. The article is the result of analysis of the data collected and comparison of relevant findings. The result is the role of human resource management in hospitals. The research findings and discussion are enriched with her own empirical knowledge about the practical human resource management in the context of hospital.

This research has chosen few Hospital for the study. The data have been collected from the hospital with the help of structured questionnaire. Questionnaire were circulated and filled by hospital administrators, managers, doctors, nurses & staff members of the hospital.

The nature of the data is both primary and secondary data. The primary data collected through structured questionnaire and visiting to the hospitals that were selected for the research purpose. The secondary data were collected from records and documents available in journals, website, etc. Data gathered through questionnaire were analyzed. Analysis presented with the help of pie chart were applied.

5.1 Research Design

The research design for this study will be a quantitative research methods. This will allow for a comprehensive understanding of the role of human resources management in hospitals. The study mainly involves a Descriptive Research as it gives a description of the challenges faced in managing the human resources of the hospitals and an effort has been made to suggest the probable solutions

5.2 Sources of the Data

There are several potential sources to obtain data on the role of human resources management in hospitals:

1. Hospital databases: Many hospitals have their own internal databases where they maintain records and information related to human resources management. These databases may contain data on employee demographics, recruitment and hiring practices, training and development programs, employee retention, performance management, and other aspects relevant to human resources management in hospitals.

2. Surveys: Surveys can be conducted to gather data on specific aspects of human resources management in hospitals. These surveys can be administered to hospital administrators, human resources professionals, managers, and employees to collect information on various topics such as recruitment and selection processes, employee satisfaction, training and development programs, performance management practices, and organizational culture.

3. Human Resources Information Systems (HRIS): Many hospitals use HRIS software to manage their human resources functions. These systems collect and store data on employee demographics, employment history, performance evaluations, training records, compensation and benefits, and other relevant metrics. Analyzing data from HRIS can provide insights into various elements of human resources management in hospitals.

4. Professional associations and organizations: Professional associations and organizations in the healthcare industry often conduct research or maintain databases related to human resources management in hospitals. These organizations may offer resources, reports, and publications that provide valuable insights and data on topics such as recruitment trends, employee engagement, workforce planning, and other components of human resources management.

5. Research studies and academic literature: Research studies conducted by scholars and experts can provide valuable insights into the role of human resources management in hospitals. Academic journals, conference proceedings, and books are good sources to find published research on this topic. Additionally, government agencies and research institutions often publish reports and studies that encompass human resources management in healthcare settings.

It is important to consider the credibility, relevance, and representativeness of the sources when analyzing data on the role of human resources management in hospitals. Combining information from multiple sources can provide a more comprehensive and well-rounded understanding of the topic.

5.3 Data collection method

To collect data on the role of human resources management in hospitals, several data collection methods can be employed. Here are some commonly used methods:

1. Primary data

The primary data was collected through the survey method, whereas we have used data collection instrument i.e. structured questionnaire. The data was collected from the staff of the hospitals. Conducting surveys among hospital staff, including HR managers and employees, to gather information about HR practices, challenges, and employee satisfaction. Surveys has been delivered online. Observing HR practices and interactions within the hospital setting to understand how HR policies are implemented and the impact on staff performance and satisfaction. Observations can provide insights into day-to-day HR management activities. Reviewing HR policies, job descriptions, training materials, and other relevant documents to gather information about HR practices and policies implemented in hospitals. Using quantitative research methods, such as surveys or questionnaires, to collect numerical data on various HR metrics, including employee turnover, retention rates, training effectiveness, and performance management outcomes

2. Secondary data

The secondary data was collected through the statistical process. Reviewing HR policies, job descriptions, training materials, and other relevant documents to gather information about HR practices and policies implemented in hospitals. Analyzing existing datasets or reports related to HR management in hospitals, such as employee turnover rates, recruitment and selection metrics, training and development programs, and employee satisfaction surveys.

It is advisable to use a combination of these methods to gather comprehensive data about the role of HR management in hospitals. The data collection approach should align with the research objectives, available resources, and ethical considerations while ensuring the privacy and confidentiality of participants.

5.4 Population

The population for studying the role of human resources management in hospitals typically includes all hospitals within a different area. In some cases, the population may be narrowed down further based on specific criteria or characteristics of interest.

It's important to define the population clearly and precisely to ensure that the study findings accurately represent the role of human resources management in hospitals within the identified population. Additionally, the population could be stratified based on factors such as hospital size, ownership type, or geographic location to allow for more targeted analyses and comparisons within the studied population.

5.5 Sampling method

The sampling method used for studying the role of human resources management in hospitals – non probability convenience sampling method, typically aim to select a representative sample that reflects the diversity of hospitals and their HR practices. For the purpose of the research study I have taken the sample size about 110 respondent from different hospitals. Every hospital in the population has an equal chance of being selected. Hospitals are divided into different locations and size and a random sample is selected from each hospitals. Researchers deliberately select hospitals based on specific criteria to meet the research objectives.

5.6 Sampling frame

The sampling frame for studying the role of human resources management in hospitals would typically include a hospitals within the target population. The specific criteria for selecting hospitals to be included in the sampling frame may vary depending on the research objectives and scope of the study. Some possible criteria could include:

1. Geographic location: The sampling frame has include hospitals from different regions or areas to ensure representation of diverse geographic locations.
2. Hospital size: The sampling frame may include hospitals of different sizes, such as small community hospitals and large multispeciality care centre , to capture variations in human resources management practices.
3. Ownership type: The sampling frame could consider hospitals with different ownership types, including public, private, non profit, or for-profit hospitals, as HR practices may vary based on ownership.

5.7 Data collection instrument

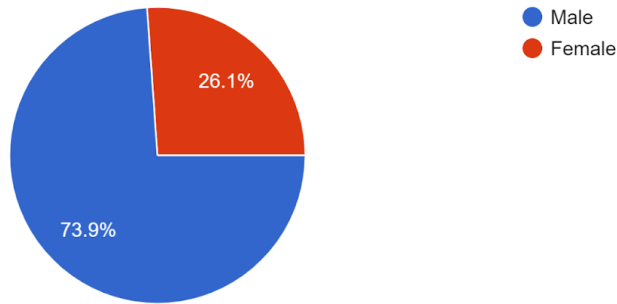
- Basic information : name , position , hospital /organization and contact information.
- Utilize online surveys to gather primary data on the role of human resources management in hospitals.
- Design a questionnaire consisting of multiple-choice questions, ranking scales and open ended questions.
- Include questions related to the role of human resources management in hospitals.

6. Data analysis and interpretation

- Analyse the collected data using statistical software
- Conduct a descriptive statistics to evaluate the role of human resources management in hospitals.
- Utilize to identify significant relationships between the variables.

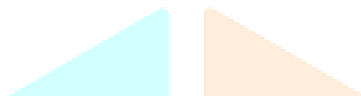
Gender

111 responses



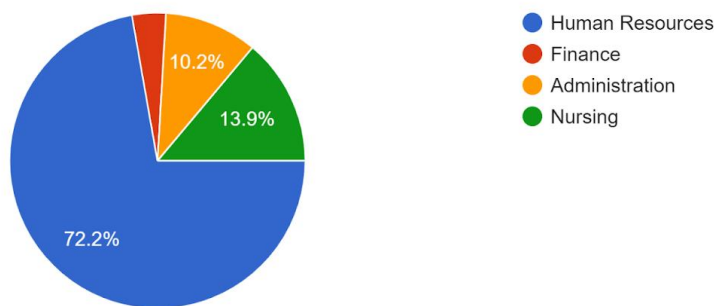
Interpretation :

The responses reflected that more than 73% of respondents were male, while 26% of respondents were female.



Which department in hospitals is responsible for managing employee relations?

108 responses



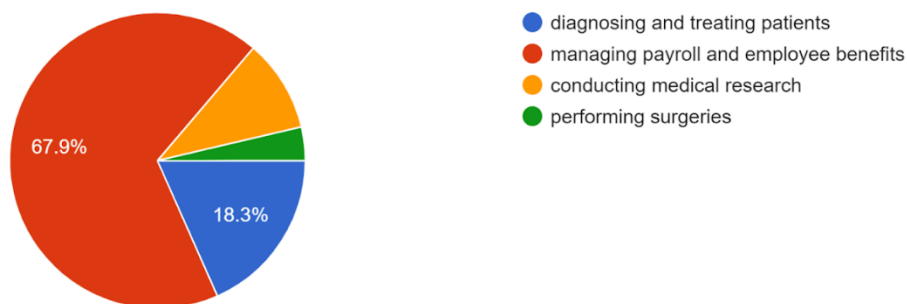
Interpretation :

The responses stated that the human resources management is responsible for managing the employee relations in overall hospitals



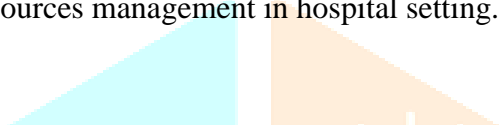
Which of the following tasks falls under the preview of human resources management in a hospital setting?

109 responses



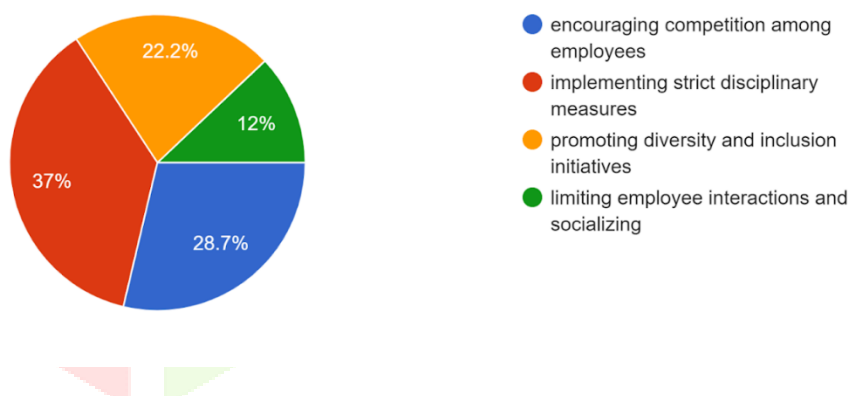
Interpretation :

Around 67% respondents says that managing payroll and employee benefits falls under the preview of human resources management in hospital setting.



what measures does human resources management take to foster a positive and inclusive work environment in hospitals?

108 responses

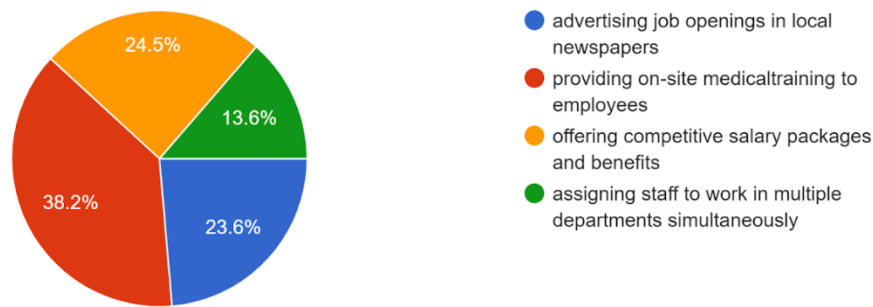


Interpretation :

The 37% respondent stated that HRM is implementing strict disciplinary measures, 28% respondent stated that HRM is encouraging competition among employees, 22% respondent stated that HRM promoting diversity and inclusion initiatives and other 12% respondent stated that HRM is limiting employee interactions and socializing.

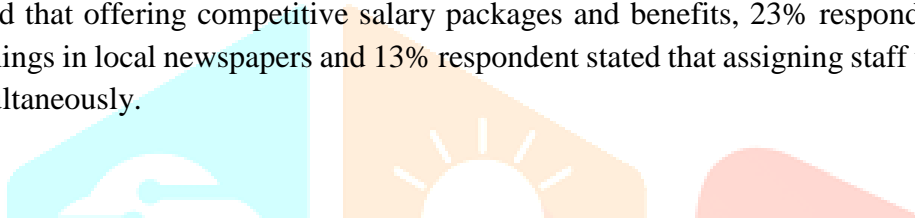
What is one strategy employed by human resource management to support the recruitment and retention of healthcare professionals in hospitals.

110 responses



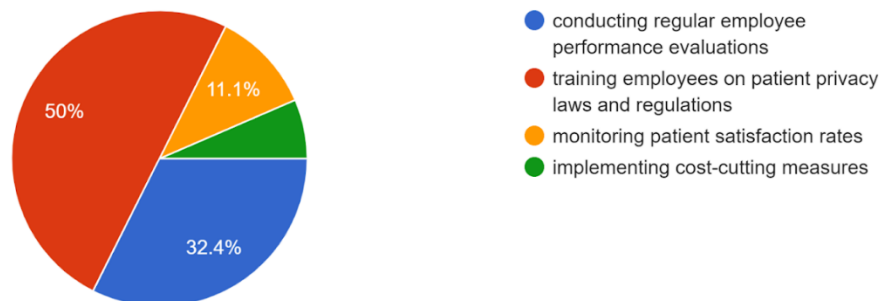
Interpretation :

The 38% respondent stated that HRM provides on – site medical training to employees , 24% respondent stated that offering competitive salary packages and benefits, 23% respondent stated that advertising job openings in local newspapers and 13% respondent stated that assigning staff to work in multiple department simultaneously.



How does human resources management ensure compliance with legal and regulatory requirement in healthcare settings?

108 responses

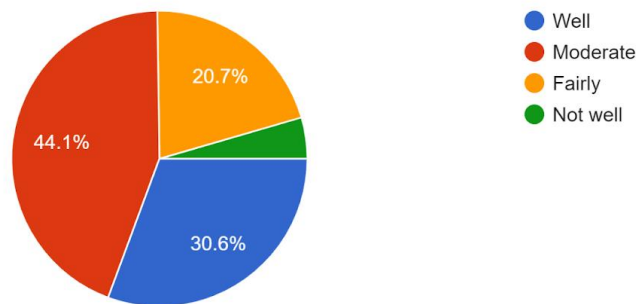


Interpretation :

The 50% respondent stated that training employees on patient privacy laws and regulations, 32% respondent – conducting regular employee performance evaluations, 11% respondent – monitoring patient satisfaction rates and other respondent – implementing cost-cutting measures.

How well does the department handle employees relation issues within hospital

111 responses



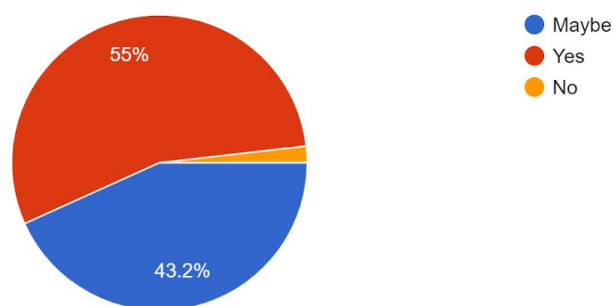
Interpretation :

The HRM department handle employees relation issues within hospitals – 44% respondent moderate, 30% respondent well, 20% respondent fairly and other respondent says not well



Does Hr department provide sufficient training and development and opportunities for hospital staff

111 responses



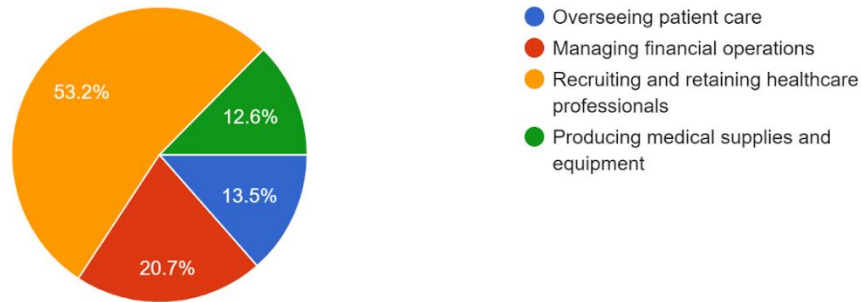
Interpretation :

The 55% respondent stated that HR department provide sufficient training and development and opportunities for hospital staff and 43% respondent states maybe.



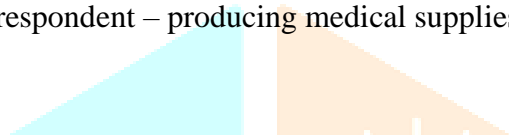
What is the primary role of human resources management in hospitals?

111 responses



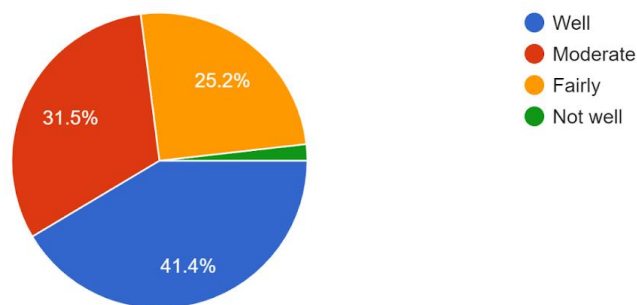
Interpretation :

The primary role of HRM in hospital is 53% respondent describe that recruiting and retaining healthcare professionals , 20% respondent – managing financial operations, 13 % respondent – overseeing patient care and 12% respondent – producing medical supplies and equipment.



How well does Hr department recruit and hire qualified HC professional

111 responses



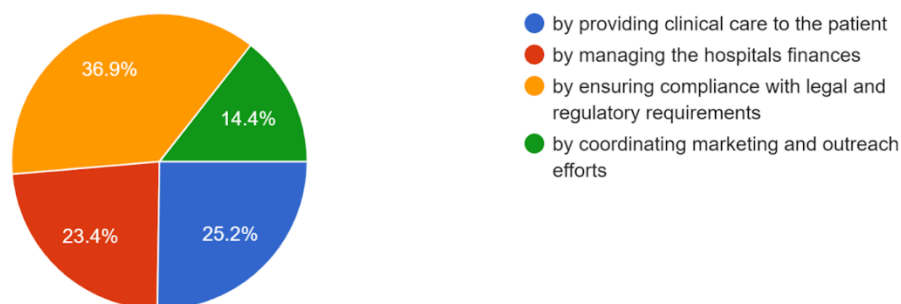
Interpretation :

The HR department recruit and hire qualified HC professional is 41% respondent says well, 31% respondent – moderate , 25% respondent – fairly and other respondent – not well.



How does human resources management contribute to the overall success and functioning of a hospital?

111 responses

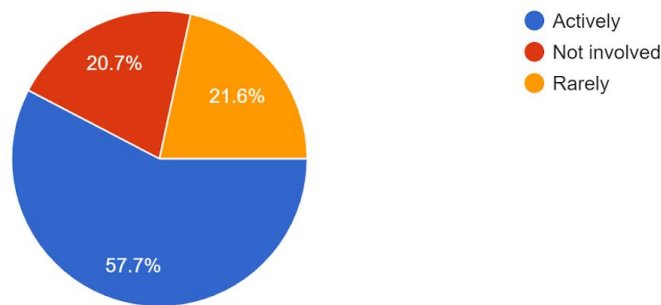


Interpretation :

The HRM contribute 36% respondent by ensuring compliance with legal and regulatory requirements , 25% respondent by providing clinical care to the patient, 23% respondent by managing the hospital finances and other 14% respondent by coordinating marketing and outreach efforts to the overall success and functioning of a hospital.

How HR department is involved in strategic decision making within hospital

111 responses

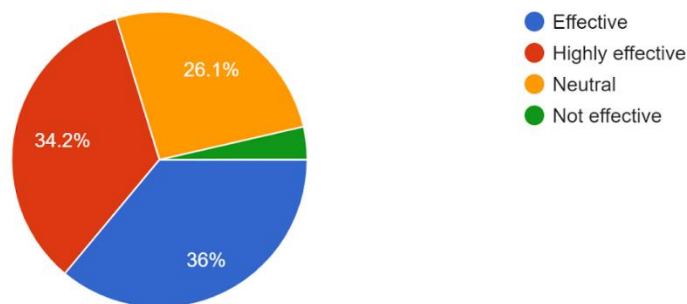


Interpretation :

The HR department 57% respondent is actively, 21% respondent is rarely and 20% respondent is involved in strategic decision making within hospital.

How would you rate the effectiveness of human resources management department in hospital

111 responses

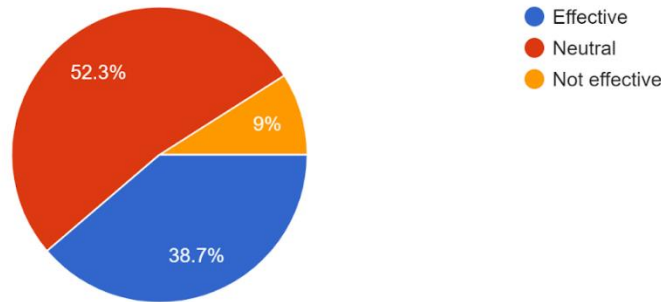


Interpretation :

The respondent stated that HRM in hospital is 36% effective, 34% highly effective, 26% neutral and other says it is not effective.

How effective the HR department in managing the employee performance and development

111 responses



Interpretation :

The HR department is 52% respondent is neutral, 38% respondent is effective and 9% respondent is not effective in managing the employee performance and development.

7. Results and findings

The role of human resources management (HRM) in hospitals has produced several key findings:

- **Employee Satisfaction and Retention :** Effective HRM practices contribute to higher employee satisfaction and retention rates in hospitals. This includes strategies such as competitive compensation, opportunities for career growth, and supportive work environments.
- **Quality of Patient Care:** There is a positive correlation between good HRM practices and the quality of patient care. Hospitals that invest in training, development, and engagement of their healthcare staff often experience better patient outcomes and higher levels of patient satisfaction.
- **Cost Management:** HRM plays a crucial role in cost management within hospitals. Effective HR practices can lead to reduced turnover costs, improved productivity, and better resource allocation, ultimately contributing to financial sustainability.
- **Compliance and Regulation:** HRM is essential for ensuring compliance with healthcare regulations and standards. This includes managing certifications, licenses, and training requirements for healthcare professionals to maintain a safe and legally compliant environment.
- **Workforce Diversity and Inclusion:** HRM practices that promote workforce diversity and inclusion have been shown to enhance innovation, cultural competence, and overall organizational performance in hospitals.

8. Limitations of the study

The role of human resources management in hospitals faces several limitations, including:

- **Budget Constraints :** Hospitals often operate on tight budgets, limiting the resources available for HR initiatives such as training, development, and employee benefits.
- **Staffing Challenges :** High turnover rates and shortages of healthcare professionals can strain HR efforts to recruit and retain skilled staff, impacting patient care and organizational effectiveness.
- **Complex Regulatory Environment :** Healthcare regulations and compliance requirements can be intricate and constantly changing, requiring HR departments to stay updated and ensure adherence, which can be challenging and time-consuming.

- **Technological Integration** : Integrating new technologies into HR processes, such as electronic health records (EHR) or workforce management systems, can be costly and require specialized expertise.
- **Workplace Diversity and Inclusion** : Managing a diverse workforce and fostering an inclusive culture can be complex, requiring HR to implement effective diversity programs and address issues of bias and discrimination.
- **Employee Wellness and Burnout** : Addressing issues related to employee wellness, mental health, and burnout is crucial in healthcare settings but can be challenging due to the demanding nature of the work and limited resources.
- **Unionization and Collective Bargaining** : In hospitals with unionized staff, HR may face additional challenges related to negotiating collective bargaining agreements, managing labour relations, and addressing union grievances.

These limitations highlight the multifaceted challenges that HR departments in hospitals must navigate to effectively support the organization and its employees.

9. Conclusions

In conclusion, the role of human resources management in hospitals is a very challenging job, because of the dynamic nature of the human element. This research identifies employees relation, takes foster a positive and inclusive work, ensure compliance with legal and regulatory requirement, provide sufficient training and development and opportunities for hospital staff and the challenges faced by the human resources management of the hospitals. The human resources decide the destiny of hospitals, there is a need for a properly organised HRM department. The HR function is a dynamic, formally qualified professional ,who understand the need of personnel in the hospital and plan the entire HR strategy that includes development, procuring, compensating, integrating, maintaining and separating human resources in hospitals. From control prospective to commitment prospective HRM is needed in the hospital for the effective and efficient function of hospital.

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