

Discussion on stakeholders behind unfair drug pricing: A scoping review

Arif Ibne Asad, Gul Shah Sabary

Abstract

An unsettling issue for people worldwide has been the rise in medicine prices. The news routinely reports on surprising drug price increases; however, the general public is less informed about the real reason for increasing medicine prices. Although there are a number of parties involved in the drug price increase, it is unclear to whom the increase can be directly attributed. This study used the scoping review method, to map the literature on the topic. It answers a research question concerning stakeholder responsibility for increased drug prices. To do so, the authors conducted a literature survey of different scientific research databases between 2018 to 2022, using two key phrases: “unfair drug price” and “drug price stakeholders.” In the study, a total of 26 papers were full-text reviewed out of 323 papers that were initially identified. The cost-effectiveness of new medications that must go through the pricing and reimbursement procedure is routinely assessed by the pharmaceutical industry. However, because there is a data gap, it is impossible to assess the relationship between drug costs and demand over a longer time period, to identify the drugs that are not covered by health insurance, or to determine the role of health insurance in rising drug prices. Even so, the scoping review reveals more evidence that pharmaceutical corporations have the ability to determine prices, undermining the idea that the health insurance industry is the primary cause of price increases.

Keywords: *Pharmaceutical Company, Stakeholders, Unfair Drug Price, Scoping Review*

JEL Classification: I13, L16, L65.

Article history: Received: September 2022; Accepted: August 2023; Published: October 2023

1. INTRODUCTION

Unexpected price increases for medications are frequently reported in the news. However, the general public is less aware of the true cause of drug price increases. So, who is to blame, whether a specific stakeholder or the entire industry system, e.g., patients, the insurance industry, employers, politicians, pharmaceutical boards, CEOs, and owners of corporation? Each of them has played a part in the situation and has been negatively impacted, both directly and indirectly (Baker, 2017). According to the Kaiser Family Foundation's (KFF) Employer Health Benefits Survey (2021), premiums for employer-sponsored family health coverage grew by 4% while salaries increased by 5%. Inflation, meanwhile, increased to 1.9 percent. While the pandemic has had an impact on health insurance, the tendency of premium hikes to surpass inflation (and, in many cases, wages) predates Covid-19 (Seefeldt, 2022). The scope, effects, and causes of the U.S. healthcare debt crisis were investigated through a year-long project by KFF's Kaiser Health News and National Public Radio (NPR). The research uses a KFF poll that was created specifically for the project, novel data analysis, and hundreds of interviews, and it reveals an issue that is much more widespread than previously thought; 4 in 10 adults are now in debt because of medical or dental bills (Levey, 2022).

While the United States is the largest pharmaceutical manufacturer and deals with prices, it is not surprising that this issue also exists in other continents. Moreover, the COVID-19 pandemic created inefficiencies in the healthcare system by having devastating consequences in European

countries, causing drug price increases. The European Union has the second largest market by sales in the world, and the increment of total investment more than doubled during the pre-pandemic period (Azierta, 2019). For instance, in 2019, the spending in the healthcare sector was an average 8.3% of GDP, and the pharmaceutical production cost was almost one-sixth of total healthcare expenditures. The retail pharmaceutical bill was around Euro 190 billion in 2018 (OECD, 2020). Europeans nowadays are pressured by the rising burden of diseases and the high demand for pharmaceutical products, difficulty in bearing the costs of medicines, the growing number of aging people, the manufacturers' struggles with widespread pharmaceutical fraud, a growing reliance on drugs and pharmaceuticals supplied from outside of Europe, and supply chain disruptions (European Commission, 2020; Jerome et al., 2021).

Morgan, Bathula, and Moon's (2020) study reveals that excessive drug prices, even beyond people's reach, are the result of manufacturers misusing their market power to increase profitability worldwide. In the Asia-Pacific region (APAC), healthcare costs have significantly increased. In several APAC nations over the last 15 years, including Indonesia, Vietnam, Thailand, Singapore, Myanmar, and the Philippines, health spending has accelerated. Additionally, the public sector has assumed a larger portion of health spending in many APAC nations, including Thailand, Vietnam, and Singapore, (Verghese, et. al., 2019). In addition, African governments are fighting the challenge of inflated drug costs. The issue of medicine prices and how to control them has come into sharp focus for policymakers as well (Ngozwana, 2016).

In a pharmaceutical company, the main stakeholders bear the greatest responsibility. They consist of the firm's suppliers, customers who purchase the pharmaceuticals the company sells, the medical research institute, staff members who work for the company including pharmacy benefit managers, and the shareholders. According to Pathak and Bhola (2014), stakeholders also include pharmacists, wholesalers, and retailers. That said, patients are the ultimate users of medicinal products, and since they are spending the money, medical professionals and retailers cater to them. The present study will answer the following research questions: Do pharmaceutical companies blame health insurance for unfair drug prices? Is the stakeholder responsible for the drug price increase?

Tab. 1- The number of papers from different databases

| Databases | Unfair drug price | Drug price stakeholders |
|-----------|-------------------|-------------------------|
| WOS | 10 (0) | 147 (13) |
| Scopus | 9 (4) | 157 (9) |

Source: Authors (2022).

In brackets (), the number of selected papers out of the total number of papers.

This study is distinctive since it is the first to simply focus on the stakeholders accountable for unfair drug prices. It has a number of sections, including theoretical background, data collecting and analysis, results and discussion, and subsequently a conclusion.

2 THEORETICAL BACKGROUND

2.1 Pharmaceutical stakeholders

The pharmaceutical sector has a complicated web of clients. Physicians, healthcare institutions, and patients make up the customer network. Pharmacists, health insurance funds, healthcare

policies, and pharmaceutical wholesalers are additional stakeholder groups (Pathak & Bhola, 2014). Strategic stakeholder involvement is one of the major factors affecting business success and directly affects the decision-making process (Hristov & Appolloni, 2022).

2.2 Unfair drug price

The world is increasingly unable to support the high expense of prescription medications. Prescription drug costs are rising more quickly than any other aspect of healthcare spending, and an increasing percentage of consumers say they struggle to pay for their medications. Some patients are being forced to skip doses of essential medications due to high drug prices, while others are being forced to decide between their health and basic needs like food and rent. The pharmaceutical industry is still launching new medications at outrageous costs, raising the cost of numerous older medications without rationale, and making record profits (Berman et al., 2017).

2.3 Scoping review

Scoping reviews, often called mapping reviews, are exploratory research initiatives that methodically map the body of literature on a subject by identifying essential ideas, theories, and data sources that guide field practice (Romund, 2017). Reviewing the evidence from health research is increasingly done through scoping studies. The first methodological framework for conducting scoping studies was published by Arksey and O'Malley in 2005. Although this framework offers a strong foundation for the methodology of scoping studies, further elaboration and improvement of this framework will support the authors' efforts to conduct and report their investigations consistently and may inspire academics and clinicians to participate in this process (Levac, Colquhoun, & O'Brien, 2010). According to Arksey and O'Malley (2005), the scoping review process has five stages.

Tab. 2- Stages involved in scoping review

| Stages | Criteria | Description | Description of the present study |
|--|---|---|---|
| Stage 1: identifying the research question | <ul style="list-style-type: none"> ● Research question. | The next steps can indeed be mapped out after determining the research question. | “Do Pharmaceutical companies blame health insurance for unfair drug prices?” |
| Stage 2: identifying relevant studies | <ul style="list-style-type: none"> ● Electronic databases. ● Reference lists. ● Hand-searching of key journals. ● Existing networks, relevant organizations, and conferences. | This stage entails locating the pertinent studies and developing a strategy for where to search, what terms to use, what sources to search for, how long to search for results, and what language to use. | Databases: Web of Science (WOS) and Scopus. Keywords: “unfair drug price” and “drug price stakeholders”. Duration: 3 months, period of study between 2018 to 2022. Language: English |
| Stage 3: study selection | <ul style="list-style-type: none"> ● Inclusion of studies <ul style="list-style-type: none"> - Type of Study. - Type of intervention. - care recipient group. ● Exclusion of studies <ul style="list-style-type: none"> - Irrelevant title. - Irrelevant to the research question. | Article inclusion and exclusion criteria are used in the study selection process. | Articles are included and published in WOS and Scopus-indexed journals or with an impact factor journal. Additionally, they match the title and the research question. |
| Stage 4: charting the data | <ul style="list-style-type: none"> ● Author(s), year of publication, study location. ● Intervention type, and comparator (if any); duration of the intervention. ● Study populations (care recipient group). ● Aims of the study. ● Methodology. ● Outcome measures. ● Important results. | To collect data from each study, a data-charting form is created and used. The material is extracted from each study using a "narrative review" or "descriptive analytical" method. | The research follows Hilary Arksey and Lisa O'Malley's framework for scoping reviews. |

| | | | |
|---|---|---|--|
| <p>Stage 5: collating, summarizing, and reporting the results</p> | <ul style="list-style-type: none"> • Prioritization of a certain aspect of literature. • Development of a template for reporting. | <p>An overview of the depth of the literature is presented using an analytical framework or thematic construction, but not a synthesis. The extent and type of investigations are numerically analyzed and presented using tables and charts.</p> | <p>All included articles are reviewed, and the results are extracted carefully, then presented through tables.</p> |
|---|---|---|--|

Source: (Arksey & O'Malley, 2005 ; Levac, Colquhoun, & O'Brien, 2010)

Scoping reviews are a relatively new approach to evidence synthesis (Munn et al., 2018); they are advancing the approach and enhancing consistency (Pham et al., 2014). The first two stages of the scoping review are included in the identification of the research question, and relevant studies refer to the identification phase. Indeed, it is required to clearly define the research question or the study's objective and importantly, to develop the search strategy. Firstly, our research question is, “do pharmaceutical companies blame health insurance for unfair drug prices?” Additionally, this stage entails locating relevant studies and developing a search strategy, including what terms to use, what sources for which to search, how long to search for results, and what language to use. To support the research question of the study, we conducted a literature search from different scientific databases, such as Web of Science (WOS), and Scopus, with two key phrases: “unfair drug price ” and “drug price stakeholders.” The years we selected are 2018 to 2022. The time duration for this study was 3 months and the language used to conduct the research was English. Consequently, the researcher screened the identified studies based on predefined inclusion and exclusion criteria. Following a broad screening of titles and abstracts, a more detailed examination of full-text articles was performed to determine their eligibility for inclusion (Beliveau et al., 2017). The inclusion and exclusion criteria were used in the study selection process, where articles were published in WOS and Scopus-indexed journals or with an impact factor journal. Additionally, they matched the title and the research question. The research follows Arksey and O'Malley’s framework for scoping reviews. To collect data from each study, a data-charting form was created and used. The material was extracted from each study using a "narrative review" or "descriptive analytical" method. Importantly, eligibility criteria were applied to choose 26 papers for scoping review. Of 181 eligible full-text articles reviewed, 155 articles were excluded due to different reasons, such as concern with technical issues (pharmacology, biochemical function, and others) rather than drug price unfairness and stakeholders behind it.

3 RESEARCH OBJECTIVE, METHODOLOGY AND DATA

A strategy that is becoming increasingly popular for examining the data from health research is scoping studies or scoping reviews (Davis et al., 2009). It is a method for mapping pertinent literature in the area of interest (Arksey & O'Malley, 2005). Scoping analyses are beneficial when it is not clear what other, more precise questions may be raised and usefully answered; looking at newly emerging evidence can be helpful (Joanna Briggs Institute, 2015; Levac et al., 2010). This research includes stages such as identifying the research question, identifying relevant studies, study selection, charting the data, collating, summarizing, and reporting the results (Arksey & O'Malley, 2005), Another optional stage is consultation (Levac et al., 2010).

3.1 Identifying the research question

Researchers should combine a wide research question with a precisely defined scope of investigation. To clarify the scope of the scoping study and create a strong search strategy, this includes defining the concept, target population, and health outcomes of interest (Levac et al., 2010). Our research question was, do pharmaceutical companies blame health insurance

companies for unfair drug prices? We considered all types of drugs to clarify the concept, which might have decreased the possibility of leaving out relevant articles, but could also have produced an excessive number of references.

3.2 Identifying relevant studies

We implemented Arksey and O'Malley's criteria to enhance the feasibility, breadth, and comprehensiveness of our research, as recommended by searchers in scoping studies (Arksey & O'Malley, 2005; Levac et al., 2010). Due to the limited time and usefulness of some sources of information (Levac et al., 2010; Joanna Briggs Institute, 2015), SCOPUS and the Web of Science were searched as electronic databases to list key articles from 2018 to 2022. In this way, we struggled to justify the feasibility, comprehensiveness, and breadth of our study. In order to find relevant research publications, we used the keyword phrases "drug price stakeholders" and "unfair drug pricing." Practically, the scope of the review's coverage in terms of time and language has to be decided upon at the outset (Joanna Briggs Institute, 2015). We concentrated only on publications in English. The inability among the researchers to speak another international language was the main reason for limiting the review in this way.

3.3 Study selection

Studies relevant to unfair drug prices and drug price stakeholders were included. Studies that were not relevant to these keywords or lack of any association with the drug price and stakeholders were excluded. Each title and abstract were individually reviewed and chosen by the authors. To find out if an article matched the requirements, full-text versions were collected and examined. The main requirements for article inclusion were as follows:

- It was related to unfair drug prices and drug price stakeholders
- It was published between 2018 and 2022.
- It was published or available in the English language.
- It was listed in Scopus or the Web of Science or it was published in an impact factor journal.

Articles were excluded for the following reasons

- They were irrelevant to unfair drug prices or drug price stakeholders
- They were focused on only pharmaceutical companies' behaviors.

3.4 Charting the data

In this stage, we applied certain criteria for charting our data, as in Table 2. Based on these criteria, we created a form, as in Figure 1. It includes four steps. Firstly, we checked the Scopus and Web of Science databases based on our research questions to identify relevant publications. For this step, we used the keywords "drug price stakeholders" and "unfair drug pricing." Secondly, we applied criteria for the selection of the articles. In this step, inclusion and exclusion criteria were applied. Therefore, we screened all of the identified articles and removed the duplicate studies. Additionally, irrelevant publications as well as non-English language publications were excluded. Then, we selected eligible studies. We checked further relevancy of the publications and excluded articles with reasons. Finally, a total of 26 articles were included in the present study.

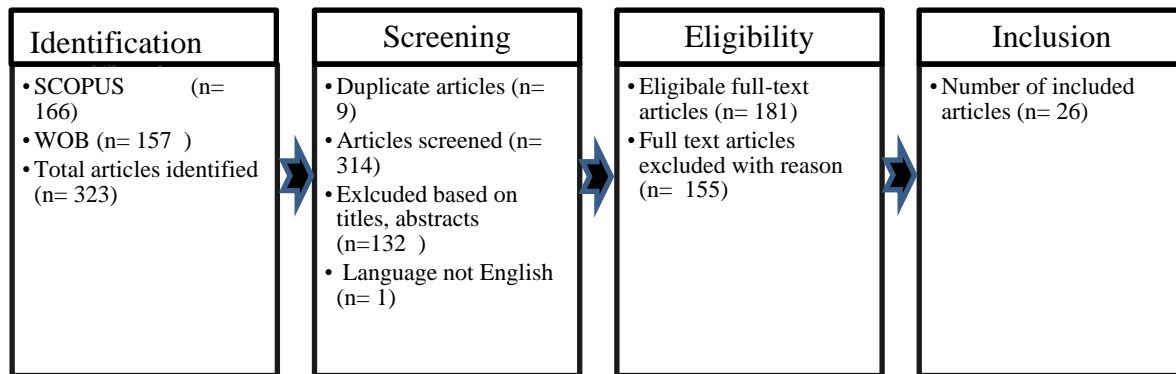


Fig.1- Charting the data for the scoping review
Source: Authors (2022)

4 RESULTS

4.1 Collating, Summarizing, and Reporting the Results

Beginning with the part on writing up the results, we chose a few sample papers to illustrate the title, author(s), the nation of the study, the name of the journal or proceeding, the methodology, and the explored variables. Table (3) lists the related papers that were reviewed, including those on the fairness of medication pricing, the causes of excessive drug pricing, mandatory drug licensing, and other topics including heterogeneity in the price elasticity of medicine. The majority of the studies were carried out in the United States, although some were also carried out in China, India, Bangladesh, and European nations. These publications employ a variety of methodologies, including survey research, a dynamic panel model built from product-level data, a cross-disciplinary ethical approach, and others.

The explored variables in the studies are somehow related to justifying the causes and consequences of unfair drug prices or monopolistic drug price control, for instance, Zhao, Nie, and Wu (2021) measure the price elasticity of medicine demand in the face of quality differences, unfair competition, and a regulated market. They found that the price elasticity of drug demand varies by drug category. The absolute value of the price elasticity of generic drugs is higher than that of originator drugs in cancer and cardiovascular disease therapeutic courses. This is because a person who requires a life-saving patented medicine must purchase it regardless of cost. Sharma et al. (2018) added that there is a considerable price difference between several anti-diabetic medications. To alleviate the unfair burden on individuals and the healthcare system in the United States, price regulation needs to be modified. Price adjustments will most likely have no effect on demand because demand for life-saving patented drugs is inelastic (Valencia, 2021). On account of the high level of unfair competition among enterprises, the role of illegal payments is dominant, lowering the price elasticity of demand for generic antimicrobial drugs (Zhao, Nie, & Wu, 2021). Additionally, Trujillo et al. (2020) applied the dual-entitlement theory to ask economists as well as citizens of the general public about the fairness of drug prices in the United States. While the public reaction to drug prices is unfair, 45% of economists agreed that drug prices are unfair when low-income people cannot afford prescription drugs. Emanuel (2019) found the same for U.S. drug price unfairness when comparing unjust drug prices to people's affordability (disposal income). The researcher defined a standard approach when drug price becomes unjust, called a cross-disciplinary ethical approach. A drug price is considered unfair if it exceeds 11 percent of the average American's disposable income. This implies that current drug prices are excessive and unjust. Overall, the

cost of therapies has an impact on increased longevity. Sociocultural factors affect the availability (access) or affordability (cost) of new drugs that are impacted by reimbursement agreements (Wettstein & Boes, 2021).

Emanuel (2019) added that since drug costs have increased significantly as a proportion of the country's medical expenditures in recent years, the majority of Americans believe that lowering drug prices should be the federal government's top healthcare priority. Because drugs are basic necessities, and how much society should contribute to providing basic necessities is a question of justice, drug pricing policies must adhere to principles of justice rather than economic efficiency.

Tab. 3- List of sample literature and sources showing the reason for drug price hike

| Title | Author/Year | Country | Journal /Proceeding | Method | Explored variables |
|---|---------------------------|--|---|--|---|
| Heterogeneity in Price Elasticity of Medicine Demand in China: Moderate Effect From Economic Incentive and Quality Difference. | Zhao, Nie, & Wu (2021). | China | <i>Frontiers in Pharmacology</i> | Dynamic panel models are estimated from product-level data based on the Basic Medical Insurance database (2008–2010). | The price elasticity of medicine demand in the face of quality differences, unfair competition, and a regulated market. |
| Fairness in drug prices: Do economists think differently from the public? | Trujillo et al. (2020). | USA | <i>Health Economics, Policy and Law</i> | Using dual-entitlement theory a survey is conducted the economists about the fairness of drug prices in the United States. | Drug price unfairness. |
| When is the price of a drug unjust? The average lifetime earnings standard. | Emanuel (2019). | USA | <i>Health Affairs</i> | Authors defined a standard for when the price of a drug is unjust by using a cross-disciplinary ethical approach. | Measuring unjust drug prices with comparison to the affordability of people (disposal income). |
| Priceless knowledge: Attitudes and awareness around drug pricing among U.S. medical students. | Korenstein et al. (2021). | USA | <i>Medical Science Educator</i> | cross-sectional, web-based survey of U.S. medical students. | The attitudes and knowledge of U.S. medical students about drug pricing. |
| Whither to the public interest. The curious case of compulsory drug licensing in the Indian pharmaceutical industry. | Sehgal & Koul (2020). | India | <i>Indian Journal of Forensic Medicine & Toxicology</i> | Literature, acts and articles, and pharma law-based study. | Patent control admits monopolistic drug price determination. |
| Vaccine Prices: A Systematic Review of Literature. | Hussain et al. (2020). | China and European countries | <i>Vaccines</i> | Systematic literature review | Factors affecting the vaccine prices. |
| Pharmacoeconomics of Antidiabetic Drugs. | Sharma et al. (2018). | India and USA | <i>Asian Journal of Pharmaceutics</i> | Used price valuation method. | Percentage price variation among the market |
| Challenges in valuing and paying for combination regimens in oncology: reporting the perspectives of a multi-stakeholder, international workshop | Latimer et al. (2021). | Australasia, Asia, Europe, and North America | <i>BMC Health Services Research</i> | Stakeholders group discussion method. | Valuing and paying for combination therapies. |
| Assessing social preferences in reimbursement negotiations for new Pharmaceuticals in Oncology: an experimental design to analyze willingness to pay and willingness to accept. | Wettstein & Boes (2021). | Not specified | <i>BMC Health Services Research</i> | Online experiment through Amazon Mechanical Turk (MTurk) platform. | Drug price and reimbursement negotiation. |
| Controversy Over Using Quality-Adjusted Life-Years In Cost-Effectiveness Analyses: A Systematic Literature Review: Systematic literature review examines the controversy over the use of quality-adjusted life-year in cost-effectiveness analyses. | Rand & Kesselheim (2021). | USA | <i>Health Affairs</i> | A systematic literature review. | Criticism on quality-adjusted life year. |

| | | | | | |
|---|-----------------------------------|---------------|--|--|--|
| Availability and price changes of potential medicines and equipment for the prevention and treatment of COVID-19 among pharmacy and drug stores in Bangladesh; findings and implications. | Haque et al. (2020). | Bangladesh | <i>Bangladesh Journal of Medical Science</i> | There are several approaches, including a survey and assessment of pharmacies and retailers. | Price Changes for Medicines, personal protective equipment (PPE), and hand sanitizers. |
| The complexity of pharmaceutical prices: An economic analysis: Research and regulation. | Blackstone & Fuhr, Joseph (2019). | Not specified | <i>Journal of Commercial Biotechnology</i> | Descriptive study | Factors responsible for the complexity of drug price. |
| The challenge of variable costs in decisions based on cost-effectiveness evidence: A case study for Brodalumab. | Brixner et al. (2019). | Not specified | <i>American Health & Drug Benefits</i> | Drug's cost-effectiveness model. | Comparison of the drug's actual price after its approval. |

Source: Authors (2022).

Korenstein (2021) made a novel research investigation that focused on the attitudes and knowledge of U.S. medical students regarding drug pricing, which assesses medical students' perceptions, beliefs, and knowledge in relation to pharmaceutical drug pricing. As a result, once these students enter the medical profession, it would be beneficial for the United States to assist citizens with affordable drug prices by setting a just drug price with stakeholders; however, it is not in the hands of doctors; therefore, raising awareness among them is vital. Rand and Kesselheim (2021) proposed that value-based pricing and health technology evaluation are being investigated by researchers and policymakers in the United States as ways to negotiate drug prices and control spending. The U.S. policymakers identified high drug prices and healthcare spending and recommended value-based pricing.

Other countries, such as China, India, Bangladesh, and those in Europe, are also affected by the issue of unfair drug prices; for example, Sehgal and Koul (2020) showed that patent control admits monopolistic drug price determination in India. Through the original patents, which are intended to protect innovation, firms carry the consequential price determination power by monopolistic patented drugs. Nonetheless, the government works to correct anti-competitive practices in order to promote public interest or public health. Hussain et al. (2020) addressed the factors affecting the pricing of vaccines and found, due to high demand in China, vaccine prices are lower compared to many developed economies. Additionally, when vaccines have limited demand, prices become higher, as these vaccines do not meet the economies of scale. Moreover, in many healthcare systems, combining on-patent medications can lead to affordability and value-for-money issues that delay or prevent patient access to clinically effective treatments (Latimer et al., 2021). Concerns regarding rising costs and drug shortages for essential pharmaceuticals and personal protective equipment (PPE) to prevent and cure COVID-19 are made worse by incorrect information. Even these unjustifiable drug price spikes were not prevented during the humanitarian phenomenon of the COVID-19 pandemic. Importantly, Bangladesh's community pharmacists and drug stores significantly impact disease management because of high co-payments (Haque et al., 2020). Pharmacy managers have market power, allowing them to negotiate significant rebates from pharmaceutical manufacturers, which supports higher list pricing. R&D is encouraged by high prices during periods of market exclusivity or patent protection (Blackstone & Fuhr Joseph, 2019).

4.2 The Role Played by Stakeholders in Unfair Drug Prices

Next, the researchers discussed the role played by stakeholders in unjust drug prices. When new pricing information becomes available, it may reveal significant cost differences to assist stakeholders in making better decisions about the healthcare outcomes and costs for their population. Payers, providers, and patients are all concerned with achieving better outcomes

while controlling costs (Brixner et al., 2019). The responsible stakeholders controlling drug prices are government regulation (Ashraf & Ong, 2021; Oliva-Moreno et al., 2020; Boateng et al., 2020), monopolistic vs. market competition by the business (Sivashanker, Fanikos, & Kachalia, 2018; Guan et al. 2018; Perehudoff et al., 2020; Balderrama, Schwartz, & Longo, 2020), high import taxes (Boateng et al., 2020; Shivdasani et al., 2021; Obeme et al., 2022), pharmaceutical companies, and drug manufacturers' rebate policies (Mola & Sasidharan, 2019; AMCP Partner Forum, 2020; Oliva-Moreno et al., 2020; Howell, Yin, & Robinson, 2021; Franzen, Retèl & van Harten, 2021).

Government regulation: This can have a variety of effects on drug pricing. Although it is not true that government regulation always results in higher drug prices, some regulatory actions can have this result. In Malaysia, the government regulates medicine prices. Using an average of the three lowest rates, pricing would be set at both the wholesale and retail levels with external reference prices, including those in clinics, pharmacies, and hospitals. The public sector largely supported the idea, while the commercial sector opposed it in the stakeholder reactions to the drug price control rule, (Ashraf & Ong, 2021). In Ghana, buying drugs is expensive, which is an out-of-pocket expense that most families cannot afford. High import taxes, fees associated with drug registration, a lack of drug pricing regulations, and few financing choices are some of the factors that contribute to high drug costs. The absence of locally manufactured drugs (child cancer drugs) and the lack of a nationally coordinated public procurement of drugs serve to both restrict medicine supply and drive up prices (Boateng et al. 2020). Before a new drug is introduced in Spain, the inter-ministerial committee on the pricing of medicines and healthcare products establishes the first price and decides if it can be covered by the national health service. After a medicine has obtained pricing and reimbursement approval at the federal level, regional payers are permitted to negotiate prices below the maximum official price. They can also give advice to prescribers and buyers about when to write prescriptions and make purchases. The pharmaceutical industry routinely evaluates the cost-effectiveness of new pharmaceuticals that must go through the pricing and reimbursement process. The budget impact is more important than cost-effectiveness when the Spanish Ministry of Health and the manufacturer are negotiating prices (Oliva-Moreno et al., 2020).

The government should be given more negotiating authority, according to experts, and price controls will only have a minimal detrimental effect on investments in pharmaceutical research and development (Trujillo, et al., 2020). Initiatives are being taken to increase the transparency of drug prices, informing the public and the government about the costs of the products as well as the factors, such as volume and product quality, that may affect the costs. The stakeholders' perspectives of medicine price transparency practice in the private healthcare system in Malaysia are important because the effectiveness of medicine price transparency crucially depends on how prices are communicated (Ahmad, Makmor-Bakry, & Hatah, 2020). Additionally, in Malaysia, external reference prices and ceiling prices are utilized. Prices are regulated at both the wholesale and retail levels (clinics, hospitals, and pharmacies), which have an impact on pharmaceutical companies and drug manufacturers (Mola & Sasidharan, 2019).

Monopolistic vs. market competition by the business: In the pharmaceutical sector, competition can spur branded pharmaceutical businesses to develop novel, improved medications, and generic pharmaceutical companies to provide lower-priced competitors. However, excessive regulation may prevent some enterprises from entering the market, leading to unhealthy competition in the small generic medication industry. This could result in market shortages and price increases (Sivashanker, Fanikos, & Kachalia, 2018). Some companies try to attain higher prices via their own patented drugs. Therefore, patent control allows for

monopolistic drug price determination (Sehgal & Koul, 2020). In response to this, monopolistic competition in the market for life-saving drugs has been legislated against in several nations. Anti-competitive behavior, such as aggressive pricing, withholding helpful products from customers, and creating regulations for rivals are prohibited in Africa. Additionally, in the Philippines, it is against the law to establish a cartel (Perehudoff et al., 2020).

Since pharmaceutical pricing is influenced by regulatory settings and market pressures, pharmaceutical companies find it difficult to set their prices profitably and maintain their competitiveness in the market. Development, innovation, and increased demand are the primary causes of price increases. Pharmaceutical companies, outside parties, and the general public are the main stakeholders, and it is their social responsibility to establish drug pricing so that those in need can afford the drugs (Balderrama, Schwartz, & Longo, 2020). However, branded pharmaceuticals cannot be exposed to this competitive nature. Guan et al. (2018) showed that the prices of name-brand antineoplastic drugs remained virtually the same or only marginally decreased once generic equivalents entered the market, even though the costs of the vast majority of generic drugs decreased over time. Because generic medicine prices frequently tend to be far lower than those of brand-name medications, the average cost of treatment significantly fell with the introduction of generic drugs. This illustrates that brand-name producers do not often lower the prices of their products despite generic competition. Moreover, doctors could benefit more from generic product providers than from brand-name product suppliers in terms of countervailing power (Zhao, Nie, & Wu, 2021). According to Guan et al. (2018), generic medicine prices frequently tend to be far lower than those of brand-name medications due to the fact that brand-name producers do not often lower the prices of their products despite the generic competition, and the average cost of treatment significantly fell with the introduction of generic drugs. While developing countries are fighting to afford basic medicines, even particularly low-income people in the United States hardly could afford their prescription drugs, as drug prices were unfair (Sehgal, & Koul, 2020; Trujillo et al., 2020).

High import taxes and huge customs duties: The price of imported drugs can be dramatically increased by high levies. High import taxes and duties, fees associated with drug registration, a lack of drug pricing regulations, and few financing choices are some of the factors that contribute to high drug costs in Ghana. The absence of locally manufactured drugs (child cancer drugs) and the lack of a nationally coordinated public procurement method, serve to both restrict medicine supply and drive up prices. As a result, buying drugs is expensive, which is an out-of-pocket expense that most families cannot afford (Boateng et al., 2020). Additionally, due to the unfriendly tax, some drug manufacturers produce drugs in other countries (China, India) and import the finished product into Nigeria. It is mandatory that drug importers and local manufacturers need to pay astronomical customs taxes, which raise the product's price at the retail level. Additionally, some other factors, such as high production costs, infrastructural deficits, weak support from the government, and a lack of access to low-interest rate loans, push pharmaceutical companies and local producers to underperform in the country (Obeme et al., 2022).

Even in the United States, the situation is legitimate, as the bulk of frequently used prescription pharmaceuticals and over-the-counter medications are made abroad, mainly in China and India. As a result, the United States is heavily dependent on imports of final dosage forms of medicinal products and active pharmaceutical ingredients. Incomplete price information that is only available to a specific group of individuals is likely to have a different impact on prices than full disclosure of drug prices, R&D costs, and value. Opinions vary on just what further information should be given to cut prescription prices (Shivdasani et al., 2021). Moreover,

unfriendly tax is a crucial reason to increase the drug price. Some drug manufacturers produce drugs in other countries and import the finished product into the domestic land. High production costs, infrastructural deficits, weak support from the government, and lack of access to low-interest rate loans combine to push pharmaceutical companies and local producers to underperform (Obeme et al., 2022). The pharmaceutical industry routinely evaluates the cost-effectiveness of new pharmaceuticals that must go through the pricing and reimbursement process (Oliva-Moreno et al., 2020).

Manufacturers often discontinue granting reimbursements: The pharmaceutical industry routinely evaluates the cost-effectiveness of new pharmaceuticals that must go through the pricing and reimbursement process (Oliva-Moreno et al., 2020). Drug prices increase due to a low volume of rebates (pharmaceutical industries might discontinue granting discounts), drug shortages, and delays in the registration process (Franzen, Retèl, & van Harten, 2021). A study from the AMCP Partner Forum (2020) illustrated that in order to improve efficiency and control costs, stakeholders come up with novel payment and benefit designs for specialist medications. They realized that rebates make drug prices more transparent, and therefore, it is preferable to give a portion of rebates to patients directly at the point of sale as opposed to pharmacy benefit managers or payers.

5. DISCUSSION

This study answered the research questions, “do pharmaceutical companies blame health insurance for unfair drug prices or are the stakeholder responsible for the drug price increase?” There have been several reasons to increase the in-drug prices in recent years, and respective stakeholders have played their roles in drug price hikes, such as through government regulations, monopolistic patented drug corporations setting prices, high import taxes on drugs, drug manufacturers discontinuing rebates, etc. Due to a lack of data, it is not possible to evaluate the relationship between drug prices and demand over a longer time period, or to identify the drugs that are not covered by health insurance, or to clarify the role of health insurance in increasing drug prices. As a result, the scope analysis reveals more evidence of pharmaceutical corporations using their monopolistic abilities to determine prices, negating the idea that the health insurance industry is the primary cause of price increases. Importantly, a de-escalation of utilization management, combining lower drug pricing with fewer obstacles to patient access, would be advantageous to all parties (manufacturers as well as insurance companies) involved in the pharmaceutical system (Howell, Yin, & Robinson, 2021).

Previous studies have identified many countries where medicine prices are unfair (Blackstone & Fuhr Joseph, 2019; Emanuel, 2019; Trujillo et al., 2020; Zhao, Nie, & Wu, 2021). However, there is no prior research demonstrating which stakeholder is playing a more significant role in this unfair medicine price-fixing. The approach of this study is also novel, as it makes use of a scoping review, which identifies and synthesizes an existing or developing body of literature on a particular issue. A systematic literature review was used to conduct some studies, including those by Sehgal and Koul (2020), who studied how patent controls allowed for monopolistic drug price determination, Hussain et al. (2020), who studied factors affecting vaccine prices, and Rand and Kesselheim (2021), who researched quality-adjusted life years using cost-effectiveness analyses. The current study, though, is distinctive in that it focuses on concerns of unfair medicine pricing and accountable players.

Pharmaceutical businesses weigh factors including a drug's effectiveness and distinctiveness against other firms' prices when setting their own prices. Companies also take into account the

price of the R&D necessary for commercializing a medicine. Public policy and drug price control authorities can benefit from this study, as it provides insight into the stakeholders contributing to drug price changes. Clearly, insurance companies are not the only cause of the current rise in medication prices. This study has a limitation in that it is solely based on prior research; more fruitful research could be conducted on the stakeholders' viewpoint, consumer opinions, insurance representative thoughts on the matter, and, most importantly, the response of manufacturers when asked the cause of a recent increase in drug prices. A more sophisticated methodology can be used to conduct studies in the future on cause and effect analyses. Market dominance, health insurance, and the absence of strong incentives to lower drug pricing should also be considered, as should the reality that buyers and sellers have unequal bargaining power.

6. CONCLUSION

Given the complexity of the production process, pharmaceutical product pricing is a complicated process. The scoping review reveals more research in which pharmaceutical corporations have monopolistic ability to determine prices, negating the idea that the health insurance industry is the primary cause of price increases. As the study's time frame is barely five years, the claim that the Covid 19 pandemic has recently caused a significant increase in pharmaceutical prices is unsupported by the majority of studies conducted so far. Therefore, further research is needed on this subject over a longer period of time, considering various medical science research sources and even grey literature.

REFERENCES

1. Ahmad, N. S., Makmor-Bakry, M., & Hatah, E. (2020). Multi stakeholders of health and industries perspectives on medicine price transparency initiative in private health care settings in Malaysia. *Saudi Pharmaceutical Journal*, 28(7), 850–858. <https://doi.org/10.1016/j.jsps.2020.06.003>
2. AMCP Partner Forum. (2020). AMCP partnership forum: What's next for specialty medications benefit design and reimbursement? *Journal of Managed Care & Specialty Pharmacy*, 26(10), 1206–1213. <https://www.jmcp.org/doi/abs/10.18553/jmcp.2020.20121>
3. Arksey, H., & O'Malley, L. (2005). Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology*, 8(1), 19–32. <https://doi.org/10.1080/1364557032000119616>
4. Ashraf, A., & Ong, S.C. (2021). Drug price control in Malaysia: A stakeholder analysis. *International Journal of Health Governance*, 26(4), 333–347. <https://doi.org/10.1108/IJHG-02-2021-0014>
5. Azierta. (2019). Pharmaceutical market in EU, Roma – 08940 Barcelona. www.azierta.com/en/blog/azierta/pharmaceutical-market-in-eu
6. Baker, D. E. (2017). High drug prices: So who is to blame? *Hospital Pharmacy*, 52(1), 5–6. <https://doi.org/10.1310/hpj5201-5>
7. Balderrama, F., Schwartz, L. J., & Longo, C. J. (2020). When are pharmaceuticals priced fairly? An alternative risk-sharing model for pharmaceutical pricing. *Health Care Analysis*, 28(2), 121–136.
8. Beliveau, P. J., Wong, J. J., Sutton, D. A., Simon, N. B., Bussi eres, A. E., Mior, S. A., & French, S. D. (2017). The chiropractic profession: A scoping review of utilization rates, reasons for seeking care, patient profiles, and

- provided. *Chiropractic & Manual Therapies*, 25(1), 1–17.
<https://doi.org/10.1186/s12998-017-0165-8>
9. Berman, A., et al. (2017). Curbing unfair drug prices: A primer for states. Global Health Justice Partnership Policy Paper. <https://ssrn.com/abstract=3071003>
 10. Blackstone, E. A., & Fuhr Joseph, Jr., P. (2019). The complexity of pharmaceutical prices: An economic analysis: Research and regulation. *Journal of Commercial Biotechnology*, 24(4) <https://www.proquest.com/scholarly-journals/complexity-pharmaceutical-prices-economic/docview/2299482603/se-2>
 11. Boateng, R., Renner, L., Petricca, K., Gupta, S., & Denburg, A. (2020). Health system determinants of access to essential medicines for children with cancer in Ghana. *BMJ Global Health*, 5(9), e002906.
 12. Brixner, D., Oderda, G., Biskupiak, J., Burgoyne, D. S., Avey, S. G., & Feldman, S. R. (2019). The challenge of variable costs in decisions based on cost-effectiveness evidence: A case study for Brodalumab. *American Health & Drug Benefits*, 12(1), 22–26.
 13. Davis K., Drey, N., & Gould, D. (2009). What are scoping studies? A review of the nursing literature. *International Journal of Nursing Studies*, 46,1386–1400.
 14. Emanuel, E. J. (2019). When is the price of a drug unjust? The average lifetime earnings standard. *Health Affairs*, 38(4), 604–612.
<https://doi.org/10.1377/hlthaff.2018.05052> 604-612.
 15. European Commission. (2020). A pharmaceutical strategy for Europe: Challenges facing the sector. https://ec.europa.eu/health/human-use/strategy_en
 16. Franzen, N., Retèl, V., & van Harten, W. (2021). Securing sustainable price levels of innovative anticancer drugs: How to move forward? *Journal of Cancer Policy*, 27, 100266.
 17. Guan, X., Tian, Y., Ross-Degnan, D., Man, C., & Shi, L. (2018). Interrupted time-series analysis of the impact of generic market entry of antineoplastic products in China. *BMJ Open*, 8(7), e022328.
 18. Haque, M., et al. (2020). Availability and price changes of potential medicines and equipment for the prevention and treatment of COVID-19 among pharmacy and drug stores in Bangladesh: Findings and implications. *Bangladesh Journal of Medical Science*, 36 (Summer). <https://doi.org/10.3329/bjms.v19i0.48106>
 19. Howell, S., Yin, P. T., & Robinson, J. C. (2021). The role of utilization management/reply. *Health Affairs*, 40(11), 1814–1814A.
<http://doi.org/10.1377/hlthaff.2021.01436>
 20. Hristov, I., & Appolloni, A. (2022). Stakeholders' engagement in the business strategy as a key driver to increase companies' performance: Evidence from managerial and stakeholders' practices. *Business Strategy and the Environment*, 31(4), 1488–1503.
 21. Hussain, R., Bukhari, N. I., Ur Rehman, A., Hassali, M. A., & Babar, Z. U. D. (2020). Vaccine prices: A systematic review of literature. *Vaccines*, 8(4), 629.
<https://doi.org/10.3390/vaccines8040629>

22. Joseph Jerome, J. J., Saxena, D., Sonwaney, V., & Foropon, C. (2021). Procurement 4.0 to the rescue: Catalysing its adoption by modelling the challenges. *Benchmarking*, 29(1), 217-254. <https://doi.org/10.1108/BIJ-01-2021-0030>
23. Kaiser Family Foundation (2021). Employer health benefits 2021 annual survey. <https://files.kff.org/attachment/Report-Employer-Health-Benefits-2021-Annual-Survey.pdf>
24. Korenstein, D., et al. (2021). Priceless knowledge: Attitudes and awareness around drug pricing among US medical students. *Medical Science Educator*, 31, 489–494. <https://doi.org/10.1007/s40670-020-01190-x>
25. Latimer, N., et al. (2021). Challenges in valuing and paying for combination regimens in oncology: Reporting the perspectives of a multi-stakeholder, international workshop. *BMC Health Services Research*, 21(1), 1–9.
26. Levac, D., Colquhoun, H., & O'Brien, K. K. (2010). Scoping studies: Advancing the methodology. *Implementation Science*, 5(1), 1-9. <https://doi.org/10.1186/1748-5908-5-69>
27. Levey, N. N. (2022). 100 million people in America are saddled with health care debt. Kaiser Health News. <https://khn.org/news/article/diagnosis-debt-investigation-100-million-americans-hidden-medical-debt/>
28. Mola, F. L., & Sasidharan, A. (2019). What drug price controls in Malaysia mean for the pharmaceutical industry? *L.E.K. Consulting: Executive Insights*, 21(32), 1–6. <https://www.lek.com/sites/default/files/insights/pdf-attachments/2131-Malaysia-Drug-Price-Controls-v2.pdf>
29. Morgan, S. G., Bathula, H. S., & Moon, S. (2020). Pricing of pharmaceuticals is becoming a major challenge for health systems. *BMJ*, 368(8229). doi: <https://doi.org/10.1136/bmj.l4627>
30. Munn, Z., Peters, M. D., Stern, C., Tufanaru, C., McArthur, A., & Aromataris, E. (2018). Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology*, 18, 1-7. <https://doi.org/10.1186/s12874-018-0611-x>
31. Ngozwana, S. (2016). Policies to control prices of medicines: Does the South African experience have lessons for other African countries? In M. Mackintosh et al. (Eds.), *Making medicines in Africa* (pp. 203–223). Palgrave Macmillan.
32. Obeme, T.A., et al. (2022). Implication of national tax policy on local pharmaceutical production in southwestern state Nigeria - Qualitative research for the interaction of national pharmaceutical policy on health systems development. *BMC Health Services Research*, 22(264). <https://doi.org/10.1186/s12913-022-07579-1>
33. OECD, E.U. (2020). Pharmaceutical expenditure. Health at a glance: Europe 2020: State of health in the EU cycle. <https://www.oecd-ilibrary.org/>
34. Oliva-Moreno, J., Puig-Junoy, J., Trapero-Bertran, M., Epstein, D., Pinyol, C., & Sacristán, J. A. (2020). Economic evaluation for pricing and reimbursement of new drugs in Spain: Fable or desideratum? *Value in Health*, 23(1), 25–31.

35. Pathak, G., & Bhola, S. S. (2014). Stakeholders in pharmaceutical business. *ZENITH International Journal of Multidisciplinary Research*, 4(3).
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2589467
36. Pham, M. T., Rajić, A., Greig, J. D., Sargeant, J. M., Papadopoulos, A., & McEwen, S. A. (2014). A scoping review of scoping reviews: Advancing the approach and enhancing the consistency. *Research Synthesis Methods*, 5(4), 371–385.
<https://doi.org/10.1002/jrsm.1123>
37. Perehudoff, K., et al. (2020). Essential medicines in universal health coverage: A scoping review of public health law interventions and how they are measured in five middle-income countries. *International Journal of Environmental Research and Public Health*, 17(24), 9524.
38. Rand, L. Z., & Kesselheim, A. S. (2021). Controversy over using quality-adjusted life-years in cost-effectiveness analyses: A systematic literature review. *Health Affairs*, 40(9), 1402–1410. <https://doi.org/10.1377/hlthaff.2021.00343>
39. Romund, G. (2017). Understanding review types: Scoping reviews. Neil John Maclean Health Sciences Library (University of Manitoba).
<https://libguides.lib.umanitoba.ca/reviewtypes/scoping>
40. Seefeldt, B. (2022, February 4). A bump in insurance premiums: What it means for 2022 and beyond. Forbes Business Council.
<https://www.forbes.com/sites/forbesbusinesscouncil/2022/02/04/a-bump-in-insurance-premiums-what-it-means-for-2022-and-beyond/?sh=454046954b86>
41. Sehgal, R. K., & Koul, R. L. (2020). Whither to public interest- The curious case of compulsory drug licensing in Indian pharmaceutical industry. *Indian Journal of Forensic Medicine & Toxicology*, 14(4).
<https://medicopublication.com/index.php/ijfimt/article/download/13202/12162/25217>
42. Sharma, N., Mehta, M., Dureja, H., & Chandra, A. (2018). Pharmacoeconomics of antidiabetic drugs. *Asian Journal of Pharmaceutics*, 12(4), S1324.
<https://doi.org/10.22377/ajp.v12i04.2930>
43. Shivdasani, Y., Kaygisiz, N. B., Berndt, E. R., & Conti, R. M. (2021). The geography of prescription pharmaceuticals supplied to the USA: Levels, trends, and implications. *Journal of Law and the Biosciences*, 8(1), Isaa085.
44. Sivashanker, K., Fanikos, J., & Kachalia, A. (2018). Addressing the lack of competition in generic drugs to improve healthcare quality and safety. *Journal of General Internal Medicine*, 33(11), 2005–2007.
45. The Joanna Briggs Institute. (2015). Methodology for JBI scoping reviews.
<https://nursing.lsuhs.edu/jbi/docs/reviewersmanuals/scoping-.pdf>
46. Trujillo, A., Karmarkar, T., Alexander, C., Padula, W., Greene, J., & Anderson, G. (2020). Fairness in drug prices: Do economists think differently from the public? *Health Economics, Policy and Law*, 15(1), 18–29.
[doi:10.1017/S1744133118000427](https://doi.org/10.1017/S1744133118000427)
47. Valencia, E. (2021, 17 May). Price elasticity of demand in pharma, an introduction. Price elasticity of demand. Konplik. <https://konplik.health/price-elasticity-of-demand-in-pharma-introduction/>

48. Verghese, N. R., et al. (2019). Government pharmaceutical pricing strategies in the Asia-Pacific region: An overview. *Journal of Market Access & Health Policy*, 7(1), 1601060. <http://doi.org/10.1080/20016689.2019.1601060>
49. Wettstein, D.J., & Boes, S. (2021). Assessing social preferences in reimbursement negotiations for new pharmaceuticals in oncology: An experimental design to analyze willingness to pay and willingness to accept. *BMC Health Services Research*, 21(234). <https://doi.org/10.1186/s12913-021-06231-8>
50. Zhao, M., Nie, P., & Wu, J. (2021). Heterogeneity in price elasticity of medicine demand in China: Moderate effect from economic incentive and quality difference. *Frontiers in Pharmacology*, 12. <http://doi.org/10.3389/fphar.2021.688069>

Contact information

Arif Ibne Asad, Ph.D. candidate

Department of Economics, Faculty of Management & Economics
Tomas Bata University in Zlín
Zlín, Czech Republic
E-mail: asad@utb.cz, arifru07@gmail.com
ORCID: 0000-0001-8622-0941

Gul Shah Sabary, Ph.D. candidate

Department of Enterprise Economics, Faculty of Management & Economics
Tomas Bata University in Zlín
Zlín, Czech Republic
E-mail: sabary@utb.cz, gul_khost@hotmail.com
ORCID: 0000-0001-5316-3514