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SUDDEN PRICE SPIKES IN OFF-PATENT DRUGS: PERSPECTIVES FROM THE FRONT LINES

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SUDDEN PRICE SPIKES IN OFF-PATENT DRUGS: PERSPECTIVES FROM THE FRONT LINES

WEDNESDAY, DECEMBER 9, 2015

U.S. SENATE,
SPECIAL COMMITTEE ON AGING,
Washington, DC.

The Committee met, pursuant to notice, at 2:29 p.m., Room G50, Dirksen Senate Office Building, Hon. Susan Collins, Chairman of the Committee, presiding.

Present: Senators Collins, Cotton, Perdue, Tillis, McCaskill, Whitehouse, Blumenthal, Donnelly, Warren, and Kaine.

OPENING STATEMENT OF SENATOR SUSAN M. COLLINS, CHAIRMAN

The CHAIRMAN. The Committee will come to order. Good afternoon. Before I begin my formal comments this afternoon, I want to recognize that this is the last hearing for the Committee on Aging Staff Director Priscilla Hanley. Priscilla and I have worked together for literally decades as our paths first crossed when we were both working for Senator Bill Cohen of Maine. When I was elected in 1996, Priscilla was one of the first people, if not the first person, to whom I turned and asked her to come and work with me, so 19 years after that, she has decided, for reasons I cannot understand, that she would like to retire from the Senate, so I just wanted to thank Priscilla for her leadership, friendship, and hard-work and commitment to good Government and good policy all these many years.

[Applause.]

Senator DONNELLY. David, it is not for you.

The CHAIRMAN. Today is the first hearing in this Committee's bipartisan investigation into the sudden and dramatic price increases charged by certain pharmaceutical companies for off-patent prescription drugs that they have acquired.

Prescription drugs are vital to the health and well-being of all Americans, especially our Nation's seniors, 90 percent of whom take at least one prescription drug in any given month. For many Americans, access to prescription drugs is not only critical to their quality of life, but can literally be a matter of life and death.

Developing these medicines is usually an enormously time-consuming, expensive, and uncertain process. It often takes more than a decade to bring a new drug from the laboratory to the market,

and estimates of the average costs of doing so range from hundreds of millions of dollars to upwards of $5 billion.

Moreover, the chance that a new drug will succeed is highly uncertain. Studies show that for drugs that do reach the clinical trial stage, just one in seven will ultimately receive FDA approval. If we want new medicines to reach consumers, the companies that invest in the research and development and take the risks necessary to bring these drugs to market must see a fair return on their investment.

At the same time, we cannot be blind to the cost of these drugs to individuals, health systems, and the Federal Government. Americans are expected to spend more than $328 billion on prescription drugs this year alone, of this amount, individuals will pay about $50 billion out-of-pocket. The Federal Government will pick up another $110 billion in payments through Medicare, Medicaid, the Veterans' Affairs programs, and others.

For many decades, Federal policy has sought to strike the right balance between maintaining the incentives needed to promote innovation and the development of new drugs and keeping medicines affordable. One way that we have done so is by granting pharmaceutical companies exclusive rights through our patent system to sell the prescription drugs that they have developed for approximately 20 years.

When these patents expire, other companies can seek approval to offer generic versions of these drugs. This increases competition and helps to put downward pressure on prices. That balance that we have struck never anticipated companies acquiring off-patent drugs and then jacking up their prices to enormous heights and doing so, as one executive essentially put it, because I can, but that is exactly what we have seen in recent months. Four companies in particular have come to our attention and are the focus of our investigation so far, Turing Pharmaceuticals, Valeant Pharmaceuticals, Retrophin Incorporated, and Rodelis Theraputics. Each of these companies has hiked the price of off-patent drugs they recently acquired by 20, 30 or even 40 times the prior price, at time putting these medicines out of reach for patients and for the doctors who treat them.

Keep in mind that these companies did not bear the R&D costs of developing these drugs. In fact, some of these companies appear to do comparatively little or no R&D or expensive clinical trials for prescription medicines. The information this Committee has received in the initial phase of our investigation is striking. For example, doctors at the Cleveland Clinic have told us that the price hikes on just two drugs supplied to Valeant increased that health system's total drug costs by $8.6 million.

Erin Fox, who will testify today, has seen a similar impact on the University of Utah Health System. As the director of the hospital's Drug Information Service, she has told us that these price increases have required her to literally put a critical drug under lock and key, pulling it from crash carts where it has long been available for emergency use.

In North Carolina, doctors for a child diagnosed with toxoplasmosis were unable to get Daraprim, the drug needed to treat that disease, because Turing Pharmaceuticals had hiked its price by

more than 40 times its original cost, forcing the local pharmacy to drop it from its inventory. As a consequence, the child had to be treated with an alternative that had not been rigorously tested in children.

The Turing and Valeant price spikes have been egregious, but these are not the only two companies to acquire the rights to off-patent brand name drugs and then jack up the price. Rodelis did the same with a medicine that has been on the market since 1955 that is used to treat drug resistant tuberculosis, and Retrophin did the same thing with a drug used to treat serious kidney disease.

What explains these dramatic price increases? Well, that is what our investigation is intended to answer, but one factor each of these drugs has in common is that they are needed by a relatively small number of people compared to so-called blockbuster drugs that are taken by millions of Americans. Another factor is that they have been off-patent for many years, and yet, there is currently no generic competition, likely because of the relatively small number of patients who require these drugs.

This investigation is not about the legitimate incentives to create, test, and market new drugs. After the patent on a prescription drug expires, however, our system traditionally has relied upon competition to bring more affordable generics to the marketplace, but when competition breaks down, when there has been a market failure, as may be the case here, the discipline that keeps prices in check and protects consumers can disappear.

Let me close by noting that some of the companies that have been the focus of our investigation look more like hedge funds than they do traditional pharmaceutical companies. As one industry expert I recently spoke with put it, these companies are to ethical pharmaceutical companies as the loan shark is to a bank. One goal of our bipartisan investigation is to understand why such companies can impose egregious price increases on off-patent drugs that they have acquired and what policies we should consider to counter this disturbing practice.

I look forward to hearing the testimony of our Ranking Member, Senator McCaskill, who has been extremely active in this investigation, as well as the testimony of our witnesses.

Senator McCaskill.

OPENING STATEMENT OF SENATOR CLAIRE MCCASKILL, RANKING MEMBER

Senator MCCASKILL. Thank you, Chairman Collins. You know, I have to think that my biggest challenge today is to not lose my temper. The facts that are underlying this hearing are so egregious that it is hard not to get emotional about it, but I know that our witnesses that are here today are here to help us understand why this has occurred and hopefully, enhance our ability to look at this problem in a reasonable and rational way that protects patients in this country.

Daraprim, a drug originally developed to treat malaria, is the medicine doctors use today to treat toxoplasmosis, a disease that affects about 22 percent of the U.S. population. While the majority of toxoplasmosis cases do not require treatment, the disease can be

deadly for babies and those with compromised immune systems like patients with cancer or HIV.

Daraprim was developed in the 1950's and has no current patent or other exclusivity protections. In 2005, a patient infected with toxoplasmosis could expect to spend $70 on a typical course of Daraprim. In 2010, a company named CorePharma, which was later acquired by Impax, purchased the rights to Daraprim and raised the cost of a course of treatment to roughly $900. That was in 2010. In August of this year, the rights of Daraprim were once again sold, this time to Turing Pharmaceuticals. The new price tag for the average course of treatment, $50,000, an increase of more than 6,000 percent since 2005. Nothing changed but the label.

At the time, Martin Shkreli, Chief Executive Officer of Turing, declared the new price his company set for Daraprim both reasonable and appropriate. More recently at a Forbes health care summit last Thursday, Mr. Shkreli lamented that he should have raised the price of Daraprim even more. I noticed in the morning paper this is the same guy who thought it was a great idea to pay millions of dollars for the only existing album of the Wu-Tang Clan.

An almost 1,200 percent increase in 2010 was bad enough, but an additional 5,500 percent price increase on a 62-year-old drug shocks the conscience, and this type of price increase, in the absence of any improvements to the drug whatsoever, is not an isolated incident. In July, I had the chance at a hearing to question another pharmaceutical executive, Howard Schiller of Valeant Pharmaceuticals, about an 820 percent price increase his company took in February 2015 after acquiring another off-patent drug called Isuprel which is used to treat cardiac arrest in a hospital setting.

When I asked Mr. Schiller at that hearing, in a different committee, how Valeant could justify such an increase on Isuprel, a drug to which no improvements had been made post-acquisition, Mr. Schiller could only tell me that Valeant had conducted a, ″complex analysis″ and had concluded that the drug was previously, ″significantly underpriced.″ He further asserted that such a price increase on a Valeant drug was an anomaly.

Following that hearing, I submitted questions for the record to Mr. Schiller requesting additional information from Valeant regarding the company's decision to hike the price of Isuprel so dramatically, as well as information on Valeant's 312 percent increase on another off-patent drug called Nitropress, which is also used to treat cardiac arrest. In response, Valeant refused to answer my questions and instead downplayed my concerns, noting that Isuprel and Nitropress are only two Valeant drugs selected out of a portfolio of hundreds of medications.

Unfortunately, over the past several months, we have learned that Isuprel and Nitropress are not an anomaly, as Valeant claimed. To the contrary, dramatic price hikes are seemingly business as usual for Valeant. This year alone, Valeant raised prices on its brand name drugs an average of 66 percent, about five times as much as its closest industry peers. At the same time, as of October 2015, Valeant's research and development expenditures for the past 12 months were reportedly equal to only three percent of its sales.

The American pharmaceutical industry leads the world in innovation and we rightly prize a system that allows discovery of medicines that save and improve lives, but it is imperative that we find out if that system is being taken advantage of by companies or individuals that seek deep profits while contributing little or nothing to advances in medical treatment through aggressive research and development. To me, there is a line at which these huge price increases on prescription drugs go from rewarding innovation to price gouging.

In particular, when these price hikes occur without any therapeutic change or improvement to the drug, it raised troubling questions about whether companies like Turing and Valeant are taking advantage of the patients who depend on their products for survival. These price increases come at a time when Americans are more worried than ever about the affordability of prescription drugs, and what Daraprim, Isuprel, Nitropress and the other drugs in our investigation have in common is they do not have market competition from generic alternatives. There is no market.

Therefore, they were ripe for companies and even investors and hedge funds to swoop in and snatch them up and charge whatever price they want regardless of the people who desperately rely on these medications every day, so even though these drugs no longer have a legal monopoly granted by a patent under our law, they end up having a defacto monopoly in the marketplace because if you need them, there is only one place you can get them. This is a market failure and when there is a market failure, the Government has a role in addressing it.

I hope that this hearing and the future hearings we are planning can start the process of developing solutions to safeguard the health care system, protect the taxpayer, and ensure that patients have access to life-saving medications at a reasonable price. I also hope to make clear that this is not just an individual pocketbook issue for Americans. If our health care system is being cheated, that has consequences for all Americans in the form of higher premiums and higher costs to Medicare and Medicaid.

We cannot sustain and improve these valuable programs if some bad actors are taking advantage of the system and extracting billions of dollars without adding value to the lives of patients or the system overall. This sort of action hurts the entire American economy.

Finally, I want to note that I am lucky to be paired with Susan Collins on this investigation. First of all, she calms me down, and the second of all, in my experience, quality congressional work is far easier to do in a cooperative and bipartisan fashion. When the price of your medication quadruples, you do not care whether the folks looking into it are Republicans or Democrats. You just want somebody to fight for you. The best answers are likely to be found when many people are asking questions, and Senator Collins and I both think that this is an area that deserves more scrutiny from Congress, the media, and the American public.

You can try to obfuscate, rationalize, or hide the truth, but if this is just greed, we have a duty to figure out how to protect patients who need this medicine. I thank the witnesses for being here today and I look forward to hearing their testimony.

The CHAIRMAN. Thank you very much, Senator, and now we will turn to our panel of witnesses. First, we will hear from Dr. Erin Fox, the Director of Drug Information at the University of Utah Health Care. We will then hear from Dr. David Kimberlin, Professor and Vice Chair for Clinical and Translational Research and Co-Director of the Division of Pediatric Infectious Diseases at the University of Alabama at Birmingham. The University has also provided documents under subpoena about a case that Dr. Kimberlin will discuss which I am noting for the record, and we are protecting all of the patient identification information in those documents.

Next we will hear from Dr. Gerard Anderson, a Professor of Health Policy and Management, Medicine and International Health at Johns Hopkins University, and finally, we will hear from Mark Merritt, the President and Chief Executive Officer of the Pharmaceutical Care Management Association.

I thank you all for joining us at this initial hearing and we are going to start with Dr. Fox.

STATEMENT OF ERIN R. FOX, PHARM.D., DIRECTOR, DRUG INFORMATION SERVICE, UNIVERSITY OF UTAH HEALTH CARE AND ADJUNCT ASSOCIATE PROFESSOR, UNIVERSITY OF UTAH COLLEGE OF PHARMACY, DEPARTMENT OF PHARMACOTHERAPY, SALT LAKE CITY, UTAH

Dr. FOX. Good afternoon and thank you, Chairman Collins, Ranking Member McCaskill, and distinguished members of the Committee for holding this hearing. I am here today to provide perspectives on how sudden price increases of off-patent drugs have impacted our health care system. University of Utah Health Care is the only academic medical center in Utah and it is also in a region that comprises about 10 percent of the continental United States, including Idaho, Wyoming, Montana, much of Nevada, and western Colorado.

In 2013, University of Utah Health Care paid approximately $50 for a dose of Nitroprusside and $50 for a dose of Isoproterenol. Those were sold by Hospira to us then. Marathon purchased those products from Hospira in 2014 and raised the price of a vial of Nitroprusside to about $215, and for two ampules of Isoproterenol to make one dose to about $440.

In 2015, Valeant purchased these drugs from Marathon and prices again increased. Nitroprusside went from about $215 to $650, and Isoproterenol, for a dose of two ampules, went from about $440 to about $2,700. When we became aware of these new price increases, we calculated the potential impact to our pharmacy budget and we discovered that if we continued to purchase the same amount of each drug, no increases, just the same amount, it would cost our organization over $1.6 million for just two medications compared to what we had paid for the previous year, and actually, that $1.6 billion was just for Isoproterenol. It would be almost $300,000 for Nitroprusside.

Recognizing that this type of arbitrary and unpredictable inflation is not sustainable for our hospital, especially when we receive capitated payments for most of our patients, we began to explore how we could minimize costs without impacting patient care. One

of the key strategies that we used was to remove Isuprel from our approximate 100 crash carts. We store these throughout our system to make sure that essential emergency medications are available in case of a critical emergency, a cardiac arrest, or sometimes called a code.

Our physicians reported that during a code, this is not the first medication they use. They do not always use this medication, but it can be very important in managing a critical emergency when a patient's heart rate is extremely low. With that in mind, our physicians agreed that we could store Isoproterenol just in our pharmacy backup boxes and take it out of the crash carts. In this way, physicians could still have access to the medication, albeit at some delay, but we would not face the full burden of $1.6 million for just one medication.

We have not found a way to drastically reduce the use of Nitropress. For now, we are working on educating our physicians on potential alternatives, when they are available, but in many cases, Nitropress use is very clinically appropriate. Our physicians are extraordinarily frustrated by having to make decisions about whether to use these critically important but extremely expensive medications in emergency situations, especially when they have been using these medications for years.

Why are there no generic competitors? I believe the reason is the same as the reason behind the ongoing drug shortages problem, namely, the supply chain for generic injectable, off-patent drugs is incredibly fragile. Most of the injections used in a hospital every day are manufactured by fewer than three companies and those companies are currently at capacity. Many of those companies are also still working through quality and manufacturing problems that have slowed or even halted production.

Our organization works hard to provide the highest quality of care at the lowest cost. For the sixth year in a row, University of Utah Health Care was recognized for quality leadership and our organization continues to be ranked in the top ten of all academic medical centers. In order to provide this high-quality care at the lowest cost, our leadership team is tasked with closely reviewing our budget. We work hard to predict potential inflation for medications and assess new medications coming to the market. What we cannot predict are older, off-patent medications with exponential price increases. Our ability to provide high quality clinical care to our patients suffers with unpredictable costs.

Thank you once again for holding this hearing and for the opportunity to appear before you to discuss how unpredictable price increases of off-patent drugs have impacted University of Utah Health Care. I look forward to learning more about potential solutions to this problem and offer my service if I can be of any assistance. I welcome any questions you may have.

The CHAIRMAN. Thank you for your testimony.

Dr. Kimberlin.

STATEMENT OF DAVID W. KIMBERLIN, M.D., PROFESSOR AND VICE CHAIR FOR CLINICAL AND TRANSLATIONAL RESEARCH; CO-DIRECTOR, DIVISION OF PEDIATRIC INFECTIOUS DISEASES, DEPARTMENT OF PEDIATRICS, UNIVERSITY OF ALABAMA, BIRMINGHAM, ALABAMA

Dr. KIMBERLIN. Madam Chair and members of the Committee, thank you for the opportunity to address the impact of recent changes in drug pricing for pediatric and adult health care. For the past 21 years, I have been a pediatric infectious diseases physician at the University of Alabama at Birmingham and Children's of Alabama where I serve as Co-Director of Pediatric Infectious Diseases Division and Vice Chair of Clinical and Translational Research for the Department of Pediatrics.

UAB is one of the top academic medical centers in the country, ranking in the top 25 of all institutions and the top ten of public institutions in NIH funding. That UAB Department of Pediatrics practices in Children's of Alabama which is the third-largest children's hospital in the country in physical size and is consistently among the top pediatric programs nationally.

I am the immediate past President of the Pediatric Infectious Diseases Society which is dedicated to the treatment and control of infectious diseases affecting children. I am also the editor of the American Academy of Pediatrics Red Book which is often referred to as the Bible describing infectious diseases for pediatricians across the country and throughout the world. The views I am expressing in this testimony are my own.

I personally treat and provide advice to physicians caring for babies and immuno-compromised patients who are infected with Toxoplasma gondii. This is a parasitic infection that causes life-threatening disease in patients whose immune systems are not strong. Specifically, when pregnant women acquire Toxoplasma infections, they can transmit the parasite to their fetus resulting in brain damage, blindness, deafness, and even death.

The Toxoplasma organism is carried by cats, and this is the reason that pregnant women are not supposed to change the litter box. Up to 4,000 babies are born each year in the United States with congenital toxoplasmosis. Toxoplasma gondii also can cause life-threatening brain and vision threatening eye infections in children and adults with weakened immune systems including cancer patients and patients with HIV.

The good news is that this infection can be successfully treated with a combination of two very old and well understood drugs, Pyrimethamine and Sulfadiazine. However, recently the price of Pyrimethamine has increased more than 5,000 percent and restrictions have been placed on where physicians can obtain it for their patients. I am very concerned that these changes will directly put the lives of patients with this very severe infection at risk.

I first became aware of the sale of Pyrimethamine to Turing Pharmaceuticals in late August. A pregnant woman at my institution had just been diagnosed with toxoplasmosis. Knowing that the baby would be delivered in early September, my team and I began seeking access to Pyrimethamine and Sulfadiazine for the baby. The barriers that we were facing, though, were twofold. One, the massively increased cost of the drug following Turing's purchase,

and two, the fact that a liquid compounded Pyrimethamine could not be acquired in the outpatient setting through Turing's distribution system using a specialty pharmacy.

The reason that the pharmacy issue was a challenge was because babies cannot swallow pills, but Pyrimethamine is only available in 25 milligram tablets. In order to get the medicine into a liquid formulation, the tablets must be compounded in a pharmacy. Prior to the Turing purchase of Pyrimethamine, the outpatient community pharmacy that we use in Birmingham could acquire the drug from the previous manufacturer. However, our pharmacy cannot acquire the drug from the distribution system set up by Turing due to restrictions in the sale of medications from one pharmacy to another which threatened to block our access to a liquid formulation that we would need.

When we contacted the specialty pharmacy, we had concerns about its experience in doing—with compounding with Pyrimethamine, so we were really facing a situation where we might not be able to acquire the drug in a form that the baby could take.

The other challenge that we faced was the price of Pyrimethamine. Initially, my patient required four tablets to make a 1-month supply of Pyrimethamine. Prior to Turing's purchase of the drug, this would cost approximately $54 per month. After Turing's purchase of Pyrimethamine, the cost is no less than $3,000 per month and probably more. Babies with congenital toxoplasmosis need to be treated for 12 months and the dose of the drug increases as the baby grows, so the total treatment cost before the Turing purchase was approximately $1,200, but now is estimated to be no less than $69,000 and probably significantly more.

Looked at from another angle, the total 12-month cost before the Turing purchase now would buy less than 2 weeks of Pyrimethamine at the new price. For HIV-infected adults with Toxoplasma brain and eye disease who require two or three tablets per day, the total cost now would approach no less than $500,000; whereas, in mid-summer before the price increase, it would have been approximately $8,500.

The key issue for this Committee, from my perspective, is the order of magnitude of this change. On behalf of babies being devastated by this infection, their mothers and families, I thank you for your consideration of these challenges. Babies' lives literally hang in the balance here and it is encouraging to me to see the Senate take up this important issue.

The CHAIRMAN. Thank you, Doctor.

Dr. Anderson.

STATEMENT OF GERARD ANDERSON, PH.D., PROFESSOR, HEALTH POLICY AND MANAGEMENT, MEDICINE, AND INTERNATIONAL HEALTH, JOHNS HOPKINS UNIVERSITY, BALTIMORE, MARYLAND

Dr. ANDERSON. Thank you, Senator Collins, McCaskill, and members of the Aging Committee for this opportunity to testify this afternoon. I too share in your outrage. In 2007, I had the opportunity of testifying before this Committee about the millions of Americans who have chronic conditions, and specifically the 15 percent of Medicare beneficiaries who have five or more chronic condi-

tions and take an average of 50 different prescriptions during the year. I did not have quite as many attendees at that last hearing.

The problem today, of course, is that high drug prices significantly restrict access to drugs leading to much poorer outcomes. For many years, the generic drug market worked reasonably well. Senator Hatch, a member of this Committee, did a wonderful job in developing the Hatch-Waxman act, although at Johns Hopkins for this year we are calling it the Waxman-Hatch Act because Congressman Waxman is working with us at Johns Hopkins.

Central to the whole issue of generic drugs is competition. The empirical studies suggest that every time a new drug company enters a particular market, the price goes down by about 20 or 25 percent. The first indication we had of problems in the generic market were not prices, they were shortages. Hospitals were having serious problems filling prescriptions, and you heard Erin Fox talk about this already.

The second manifestation that we are getting now is the higher prices for certain generic drugs. These two are very much related. They have the same root cause, a lack of competition in certain parts of the generic market. It is really hard to remember a recent month where we were not hearing about generic companies consolidating. These mergers and consolidations have resulted in less price competition, higher prices, and shortages for certain generic drugs. Without competition, companies like Turing can raise their prices several thousand percent simply overnight, so I am glad that you are taking a look at ways to increase competition.

What I would like to do is take this opportunity to suggest two different ways that the Committee should consider. The first one is to have the Department of Health and Human Services establish priority reviews for plate times when there is no competition. In the brand space, what you have are priority reviews when there is a very clinical compelling argument for a brand company, but what we do not have is something for the generic market where there is not particularly—it is not a clinical compelling market, it is really an economic argument when they have raised the prices.

You could also make it much easier to do compounding where there is competition. It is not an FDA thing, but we could do compounding, and finally, as a last resort, we can take a look at going to Canada and other places to import these drugs because they are being sold at much lower rates in other countries.

My second option is you have got to take a very close look at how pricing works in the generic market, not just for these drugs but broadly. The generic pricing market begins with a generic company announcing a price that no one pays. It is much higher than anybody pays and this behavior is peculiar to an industry. I mean, why would your grocery store announce a price that is ten times what anybody else would, in fact, pay?

The reason why they do this is the way most insurers reimburse pharmacies. The insurers are trying to reimburse the pharmacy the cost of acquiring the drug and then they pay them a dispensing fee in addition to that. The problem is, the insurers do not often know what the price that the pharmacy is, in fact, paying because there are confidential agreements between what the generic company is

paying and the pharmacy, and although insurers work very hard to get this information, it is really difficult.

I was working with the State of Wisconsin, their Medicaid program, and they had to go to veterinarians to find out what some prices of certain drugs were because they could not find it out any other way. The difference between what the insurer pays the pharmacy for the drug and what the pharmacy pays the manufacturer for that same drug in the industry is known as marketing the spread. The greater the spread, the greater the profit to the pharmacy, the more likely the pharmacy is going to buy the drug from that particular drug company.

I have actually seen internal drug memos where they essentially lower the price to the consumer and they raise the announced price at the same time, so they are trying to increase the spread in order to get their drug on the particular pharmacy's market.

The obvious question is why do issuers not ask them and some do, but insurers are under no legal obligation to tell an insurer what the prices are. Fortunately, there is a data base that allows you to do this, that reflects the true price. It is called the average manufacturer's price and it is already being calculated by the drug companies. It is already being sent to the states' Medicaid programs because that is determined how they get the rebates, so we know the actual prices that are there.

The problem is that Federal law prohibits the states from using these AMPs from being publicly available, so if this AMP information was publicly available, we would know the actual prices that are paid. We would have true price transparency. Thank you very much.

The CHAIRMAN. Thank you.

Mr. Merritt.

STATEMENT OF MARK MERRITT, PRESIDENT AND CHIEF EXECUTIVE OFFICER, PHARMACEUTICAL CARE MANAGEMENT ASSOCIATION, WASHINGTON, D.C.

Mr. MERRITT. Thank you, Senators Collins, McCaskill, the other members of the Committee. I appreciate you having me here today in addressing this important issue. Just by way of introduction, my name is Mark Merritt. I am President of the Pharmaceutical Care Management Association, the PBM industry's trade group, pharmacy benefit managers who administer drug benefits for 250 million Americans to employers, unions, State employee programs, TRICARE, FEHBP, probably most notably in this town anyway, and across America, Medicare Part D. We work for those who pay for the drugs and the patients they serve and use our marketplace presence and expertise to negotiate lower costs from drug companies, drug stores, and others in the supply chain.

Like you, we are concerned about the recent spikes in some drugs and the dubious practices that surround them. The most egregious of these, as has been mentioned, are surrounding the older off-patent brands that have no competitors and serve small populations. Manufacturers typically avoid these markets because they are unprofitable and the FDA approval process can take three years or more to complete. As a result, the pricing power of the one remaining drug in that space becomes so strong that some hedge

funds and others see a chance to acquire the drug, resell it at ridiculously high prices, as we all know.

Although this is, fortunately, limited to a small number of drugs and a relatively small population, and it is not indicative of the overall marketplace, it is a real problem, we take it seriously, and we are confronting it in real time. In many ways, it is a corollary of the drug shortage issue that was mentioned earlier that has been building up for several years, and here is the basic problem. What most people would see as a public health challenge, some see as a chance to exploit the lack of competition to profiteer. Some companies require the rights to resell these drugs, use abusive pharmacy and distribution practices in order to subvert formularies and other cost-saving tools that encourage people to start treatment with generics or even lower-cost brands instead of the most expensive product.

Some of these pharmacies also use fake names, alternative pharmacy licenses, and other sketchy tactics to distribute their products. In other cases where generic competitors are available, some companies use pharmacies that operate with bait-and-switch co-pay assistance programs to lure patients to start on the most expensive brand by offering to pay their co-pay, say $50, which is sometimes the only price people know, but they do not pay the cost of the actual drug which may be another $700 or $800 or $1,000, depends on what the drug is.

Those costs, hundreds, thousands, however much, are then put on the back of the payers which, of course, leads to higher premiums, and the same people who got the co-pay discount or co-pay assistance end up paying for it through higher premiums, and these co-pay assistance programs are banned in Federal programs under the Anti-Kickback statute, but they flourish in the commercial marketplace.

Now that I have outlined the problem and everybody else here has as well, the key is what can we do about it. Well, obviously, there is a role for the private sector and the Government, policymakers as well. First, PBMs are working to combat this in real time. A good example is with the Turing drug Daraprim whose prices, as we all know, have skyrocketed. Well, we have not found a silver bullet. We did recently find a compounding pharmacy, one of our companies did, and now many of those are companies who are using these. It sells the same drug for one dollar and that now is providing access to thousands of people around the country, or hundreds in this case.

We are also working to root out corrupt pharmacies and distributors like Philidor from our networks, essentially putting them out of business, and in that mode, I would like to thank policymakers for resisting so-called any willing pharmacy mandates that would force payers like us to include bad actors like Philidor in our pharmacy networks, whether they are good, bad or indifferent.

There is also an important role for Government. We all know FDA needs to approve generics faster. There is a 3-year backlog, 4,000 drugs there. That needs to be speeded up. I think we all know that, and I agree with the notion that there should be a special fast-track for ANDAs that are trying to compete with these off-patent products. We need to get them in the marketplace, we need

incentives to do that for them because businesswise, it is not going to make sense. If we wait for that to happen, it is not going to happen, and also in the interim, you might want to consider creating sort of a watch list of every off-patent drug that faces no competition in its class, just simply to let the owners of these products, the owners of these rights who have the rights to these products, and the potential hedge fund acquirers that are watching, we know these are the targeted products. There is going to be a lot of scrutiny on it and that they are going to have to deal with that.

The hedge funds have these lists; the Government might as well, too, so thank you for your time. I look forward to any questions you may have.

The CHAIRMAN. Thank you very much. Dr. Fox, I want to start with you and I want to ask you some questions about the justifications, and I put that word in quote, or excuses that manufacturers that are the subject of our investigation have given us to justify these extraordinarily high price hikes. Some of the manufacturers have claimed that these dramatic price increases are necessary to offset their research and development costs.

Well, I happen to know that in the case of Daraprim, that it has been around since the 1950's and Turing was founded in 2015, this year, so it is hard for me to see how there could possibly be a link between the R&D costs of developing Daraprim and the price increases that Turing imposed, but talk to me about the Valeant drugs that you mentioned, Isuprel and Nitropress.

Dr. FOX. Thank you for that question. That is a really good question, and I think one thing that is important to think about is, we have a system of contract manufacturing in the United States where one company makes a product or a medicine and another company just puts their sticker on it, and that is exactly what we have going on right now with those two products. Isuprel and Nitropress are not manufactured by Valeant. Valeant is not reinvesting in a factory. They are not spending that money to have a high-quality manufacturing system. They are simply putting their sticker on somebody else's manufactured item.

The CHAIRMAN. That is very helpful. When I saw that some of the drugs were older than the current company owning them, it seemed hard to see how there possibly could be a link to the R&D side. You gave us really extraordinary statistics on how much the University of Utah pays per vial of Isuprel. You said in 2013 it was $50 per vial; 2014 it was $440, which was a huge increase, but then when Valeant bought the drug in 2013, it increased the price to the current rate of, I think you said, $2,700 per vial.

Let me ask you an obvious question here. Did anything change about the drug during that short period of time? Was it compounded differently? Were improvements made? Or is it the exact same drug that you paid a lot less for just two years ago?

Dr. FOX. To my knowledge, the only thing that has changed is the label.

The CHAIRMAN. Thank you. Dr. Kimberlin, prior to Turing's acquisition of Daraprim, and I know you used the scientific name for Daraprim when you were giving your testimony, did you ever have any problems with promptly acquiring Daraprim at an affordable price?

Dr. KIMBERLIN. No, Senator. Pyrimethamine, or Daraprim, the brand name for it, were readily available and we never had any issues when we had an urgent situation of a patient needing to start on it prior to this past summer. This is a new phenomenon.

The CHAIRMAN. How important is it that you be able to administer this drug promptly when it is needed?

Dr. KIMBERLIN. It is very important. The Toxoplasma parasite destroys brain tissue, it destroys eye tissue, it can cause, obviously, massive problems if your immune system cannot keep it in check or if a baby is infected in utero, and the sooner that treatment is started, the better the outcome, so this is something—it may not be truly ours in terms of urgency, but certainly within a day or two you want to be able to start treatment instead of having delays while you are working through these newly identified problems that we have been having over the last handful of months.

The CHAIRMAN. You have been a real leader in infectious diseases. You have headed an association, so you have had contact with other physicians. Are they experiencing similar problems?

Dr. KIMBERLIN. Yes, they are. The HIV Medical Association, the Infectious Diseases Society of America, the Pediatric Infectious Diseases Society have all, working together as sister societies, queried members of those three groups and asked, Are you having issues getting access to Pyrimethamine? We have had more than 30 responses from at least 21 states. I suspect that if not more than that now, there will be virtually every State in the union affected by this. At least 30-plus cases where people could not, in a timely fashion, get Pyrimethamine given the new constraints on access as well as the cost issues.

The CHAIRMAN. Dr. Fox, when the price of the two drugs made by Valeant that your hospital uses went sky high, did you contact the company to try to negotiate since you, as a hospital, might have some purchasing power that you could bring?

Dr. FOX. Yes, I did, and each time I called, I was referred back to my wholesaler for the purchase price. Even after I saw that Reuters had reported that Valeant might be decreasing the price, that prompted me to call again, and each time the answer was, talk to your distributor.

The CHAIRMAN. So no luck at all?

Dr. FOX. No luck.

The CHAIRMAN. Thank you. I have many more questions, but we have many members here today.

Senator McCaskill.

Senator MCCASKILL. Dr. Fox, you will get a kick out of the fact that when I asked Mr. Schiller at that hearing about the cost of this drug he said, Well, patients do not pay back, the hospital pay that, as if there was some magic fairy that took care of the costs that land on your bottom line. I think he is a sophisticated enough CEO, at least I would hope so, to understand that when you have those costs, they must be passed on and recovered. I am not aware of anybody who pays for that other than the taxpayers of this country or the patients of your hospitals. Are you aware of anyone else who would be paying for it?

Dr. FOX. I am not aware.

Senator MCCASKILL. Okay. I am confused a little bit about this restricting distribution to thwart generics. I want to come back to you, Dr. Kimberlin, on the constraints on access as it relates to the form of the drugs you could obtain for babies, but Mr. Merritt, or Dr. Anderson, I do not understand. Are they trying to keep this away from companies that can figure out how to make the generic to compete with them?

Mr. MERRITT. Yes.

Senator MCCASKILL. How are they doing that? Do I need to figure out a doctor to write me a script for one of these and get a bunch of them and give them to somebody so they can start getting after Mr. Wu-Tang?

Mr. MERRITT. You could try. I think it goes like this. There a lot of pharmacies that work, and sometimes an individual pharmacy, a small limited set of pharmacies, that work on the very high potent specialty products where there is a reason to have a good limited distribution network where they can collect data and so forth.

What Turing appears to have done is made a contract with Walgreens to be the exclusive distributor and not allow any sales to those who would test the drug for, you know, to try to get a generic approval. In other words, you can only get it at Walgreens, if I understand it, through a prescription, so it is kind of a weird—I have never heard of that contract provision before, but it does seem as though it was an active effort to keep a generic from coming onto the market to compete.

Senator MCCASKILL. Are you able to—you talked about compounding. Are you able to work on compounding to provide some competition to these drugs and does that—are there the same barriers on compounding that there is on getting a generic approved?

Mr. MERRITT. No, because a compounder can just put out the drug, and this is not our optimal way of doing things. This was just an egregious situation that we needed to deal with quickly because, as we have heard, people are getting hurt, and so we found a way to get a compound pharmacy to sell it for one dollar and, you know, that is what we do. We have 60,000 pharmacies in our network. We know what they all can do. We saw an opportunity here and took it to help us get us through this particular situation, but for compounding, they do not have all the restrictions that FDA does. It would be great if they did go through all that, but for this particular situation, we simply monitored the sites, monitored how these drugs were being produced for safety and so forth, for high standards, and then made the decision to go forth.

Senator MCCASKILL. It would be important for this Committee, through this investigation, to ferret out from—did you say it was Walgreens that got this contract?

Mr. MERRITT. I believe so, yes.

Senator MCCASKILL. It would seem to me that it would be important for us to determine whether or not this restriction has something to do with the safety of prescribing the drug and making sure someone has education about how properly to dose the drug or access the drug versus, ah-health, hedge fund finds drug to buy, ah-health, hedge fund figures out way to keep generics from being developed by artificially limiting access through one of these specialty

pharmacies. In other words, the reason that Walgreens would be used here is not for safety of the patient, but rather, to artificially keep the price of that drug very high.

Mr. MERRITT. Yes, and in Walgreens' case, I cannot speak for them.

Senator MCCASKILL. I do not mean to be throwing Walgreens under the bus here. It could be anybody.

Mr. MERRITT. Yes.

Senator MCCASKILL. Really, if the company that is using his specialty pharmacy, it typically would be because of the unique nature of the dosage or the application that you would need as a specialty pharmacy. What you are saying is it appears that these specialty pharmacies are being used for other purposes.

Mr. MERRITT. Yes. Some of these manufacturers have either created pharmacies, illegitimate pharmacies, to serve as——

Senator MCCASKILL. As part of their company.

Mr. MERRITT [continuing]. as part of their company to distribute the drugs, and here is what a real pharmacy does, for instance, if there is a generic available. You come in with an expensive brand, there is a big co-pay on it, the pharmacist says, Well, there is a generic alternative. Some of these pharmacies will not do it. They will just try to push you right to the brand and then they will use the drug company's patient's assistance program to cover any co-pay and then dump the rest of the cost on the insurer or the hospital.

I do not want to speak for Walgreens. I am sure they were not as familiar with Turing as we all are right now, but from what we understand so far and from the patterns we can see from Turing, it looks like the kind of thing that they would do to just try to prevent the competition from happening.

Senator MCCASKILL. I have lots more questions, too. Thank you.

The CHAIRMAN. Senator Tillis.

Senator TILLIS. Thank you, Chairman Collins. I have to go off to another meeting. I wanted to come over here just to underscore my own interest and concern with some of the practices that we have seen out there, so I will just ask a quick question for you all to respond to before I have to leave.

When we are considering certain policies to deal with sort of the hedge fund folks play, where I think they are very clearly abusive, what advice would you give us in terms of making sure that we do not overreact and then sweep in a number of good players? I do not believe that we should cast all pharmaceutical companies in the same light. There are egregious practices. We need to have a thoughtful discussion about what, if anything, we should do about it. What advice would you give this panel as we are going through to be careful about unintended consequences of overreaction? And we will start from right to left.

Mr. Merritt.

Mr. MERRITT. Well, I think we have to—this is a limited problem, it is a real problem. It is not indicative of normal manufacturer processes. We work with all the drug manufacturers or work with billions of prescriptions. This is an anomaly. It is a new development and it is just kind of vulture business practices that we have not seen before.

I think the key is, I think we open ourselves up to these kinds of hedge fund folks when there is no competition, when we slow down competition through the FDA process, when we do not provide enough incentives to see it as a national priority to take care of these small pockets of drugs, small population drugs that do not have any competition.

I see this as a problem limited particularly to that and solutions in that regard about getting competing generics to market faster to help bring these guys some discipline. One other thing I might add is, the key is we do not want to bring the price down if there is a Turing doing this. We want to pay zero. We want to have people go to another drug that is just as good and pay them a small part instead of paying Turing, you know, some discount of what they are already doing, but you cannot do that unless there is a competitor in the marketplace. Thank you.

Senator TILLIS. Thank you. Mr. Anderson or Dr. Anderson.

Dr. ANDERSON. Either one is fine, so essentially, when there is competition, basically the system works. When there is no competition, the system does not work, so we can tell you which drugs have no competition. There is a number of ways to do it. The FDA knows those and the Medicare and Medicaid programs know those, too, so we know what the targets are that the hedge funds are going to use to identify those specific drugs, and then we have got to figure out what is the alternative to that.

One of them, as I said in my testimony, is to try to give an expedited review by the FDA because there is this backlog, but that is going to take 6 months to a year to get that done, so in the interim, you do more compounding, you allow compounding to occur, and if we cannot figure out that or they bought the compounding companies, then we might have to take a look at getting some of these drugs in a very narrow market in from Canada or someplace else.

Senator TILLIS. Thank you. Dr. Kimberlin.

Dr. KIMBERLIN. Senator, my comfort with policy issues is a bit more limited. I will say this, though. In terms of thinking about different policy options, what I really would encourage is that the patient, the individual child in my case, or adult with my adult colleagues who were physicians taking care of these patients, that those patients remain, first and foremost, in everyone's sight. We need access to these drugs. We need the distribution system to work and we need to have the price not be a barrier or an impediment to trying to get these drugs to the patients who so desperately need them.

Senator TILLIS. Thank you. Dr. Fox.

Dr. FOX. I am not going to offer you advice on your policy areas, but I would ask that you keep one thing in mind and that would be around transparency. Right now our labeling laws do not require the disclosure of which company manufactured a product versus which company is labeling it, and so, purchasers actually have no way to even avoid purchasing from a company they would like to avoid because of that lack of transparency.

Senator TILLIS. Thank you. Thank you, Madam Chair.

The CHAIRMAN. Thank you. Senator Warren.

Senator WARREN. Thank you, Madam Chair. The system is rigged in a lot of ways and this Committee is right to open an in-

vestigation into drug practices, and we are very lucky to have Chairwoman Collins and Senator McCaskill leading us on this.

This is a no-competition problem. Drug manufacturers that are the sole source of a medicine and patients who are desperate for these medicines create market failures and a recipe for disaster here. In fact, the Senate Finance Committee published the findings of their bipartisan investigation of Sovaldi, the $84,000 Hepatitis C drug, and found that the manufacturer set the price solely to jack up profits with no regard for whether families would be able to afford it or whether patients would be denied a cure because they could not afford it, so it is time for Government to step in on the side of the American people to stop this extortion.

Dr. Anderson, I think we need to think broadly here. Rapidly increasing generic prices are the initial focus of this investigation and they are obviously a very serious problem, but the majority of drug costs are not for generics. We have seen price spikes across the industry, but more of the cost is for brand name drugs, so what can Congress do? Let us focus first to make sure that patients are protected from high drug costs and high co-pays for both brands and generics.

Dr. ANDERSON. You mentioned that whole issue Sovaldi and that is for Hepatitis C patients. There is about three million of them in the United States. Only about 300,000 people with Hepatitis C are right now getting that drugs because of the high cost, so it is a problem of access in the brand area and it is the problem that we are talking about today in the generic area.

Senator WARREN. We have a cure and 90 percent of the people who have this disease cannot to get cured because they cannot afford the drug?

Dr. ANDERSON. Well, there is a public side and a private side. On the public side is Medicaid, the VA, DoD are having trouble paying for the drug because the drug budgets is getting exceeded. In the Medicare program, it went from—just taking care of this it went from $300 million to $4.5 billion essentially overnight.

Senator WARREN. All right, so you were just going to give us a couple of ways in which we can make sure that patients stay protected here, things that we can look at.

Dr. ANDERSON. Well, essentially, we have got a whole series of ways and it is very different for generics and brands, so in the generic area, it is very important to have competition, and we have talked about that a lot. In the brand area, it is very important to take a look at the patents, when they are appropriate, when they are not appropriate, and essentially how long they should be.

Because right now—the patent law was originally established during the George Washington administration and it was originally for 14 years for two indentured servants. Now it is 17 and 20 years and it is not reflective of the investment that a drug company may make. Sometimes they invest a lot, sometimes they invest a little. We need to support the investments and we might want to figure out how to do that differently.

Senator WARREN. Mr. Merritt, would do you like to add to that, please?

Mr. MERRITT. Well, I think Government has a real important role here. Obviously, it is a huge purchaser and we think the role

is more in ensuring competition, making sure that there are safe products on the market, that people are getting the products they think they are getting, insurance that they think they are getting and so forth, and on the purchasing side, I think the challenge that we see is that it is such a complicated, fast-moving market. Just like what we did with Imprimis, this little pharmacy, compounding pharmacy, we found out kind of in real-time and helped drop the price of the product significantly, and the challenge—I mean, if you look at price controls or price inventions, direct negotiation, there are kind of two ways to do it.

One you could kind of peg it to the market prices and then get a discount on it, which does save money for public programs, will increase costs elsewhere, or you can just kind of try to make the price kind of drug by drug, and the danger there, ironically, is you could end up overpaying as we saw in this Turing thing. I know it is a temporary solution, but if a drug is $5,000 a day, it might seem good to charge $2,500 tomorrow or maybe even 100, but little did anybody know you could get the same drug basically for one dollar, and so, I think we all want to find ways to reduce costs and there are ways Government can help.

Senator WARREN. You know, no matter how the drug industry sugarcoats it, America pays the highest drug prices in the world, and it is not impossible to fix and it does not have to be partisan. Just last month, Congress passed legislation that created a new Medicaid inflation rate for generic drugs, which will require drug companies to rebate money when their prices go up faster than the inflation rate, so we have got a lot that we could be doing here.

I want to talk more about other countries. The Chairwoman rightly is trying to hold us to our five minutes, so I will just say thank you very much. You have laid out good steps, things we need to investigate, and again, thank you for starting this.

The CHAIRMAN. Thank you. Senator Casey.

Senator CASEY. Madam Chair, thank you for the hearing. We are grateful for the work that you are doing and Ranking Member McCaskill. I wanted to start, Dr. Anderson, with you with regard to the question of a priority review pathway, and I know you point to that as a potential remedy here. We are talking about a priority review pathway to speed the approval of new generic competitors.

One of the basic defects here, or potential defects or problems, is there is no or very limited economic incentives. In light of that, but in light of the issue you raised with regard to this pathway, how would you think that if we could achieve that, that this kind of a pathway would help on the question of competition?

Dr. ANDERSON. Well, essentially what you have is sometimes a two or a 3-year waiting period to get the drug to market, so I am a generic company. I want to engage in competition and I have to wait two or three years. That is a long time. I do not know who else is going to enter the market at the same time, so there is a lot of uncertainty. Am I going to spend the million dollars or so to try to go through the FDA to do it?

If I can find out very quickly that I am going to get approval, because it is pretty routine to get approval, then I am much more likely to engage in competition here, so saying to somebody, if there is no competition and you want to have a drug, go for it and we

will get it through the system very quickly. That, I think, would go a fairly long way to solving this problem.

Senator CASEY. I appreciate that. Senator Isakson and I worked on a priority review strategy for another context, in the context of young children, and we are working now to extend that. We are going to be running out of time by mid-March, so we are working on that together, but I appreciate that as a potential remedy.

The other question I have for you, Doctor, was one of the fundamental questions here is the issue of consolidation among generic manufacturers. Describe for us, and I know you have to a certain extent already, but describe for us what you think is driving that.

Dr. ANDERSON. Well, essentially, if you have fewer companies, you have less competition, so if I buy up all of my competitors, I do not have any competition, so what you are seeing is the number one company buying the number three company and the number two company buying the number five company, so the whole system has been predicated on having a lot of reasonably small companies all wanting to get a share of the market, and when these large companies buy them up, that does not happen any longer.

Senator CASEY. Dr. Fox, I was going to ask you, do you have anything to add to that question about what is driving it?

Dr. FOX. I completely agree with Dr. Anderson. I would suggest, when you are thinking about priority approvals, FDA does not have a rubric right now for approving manufacturers based on quality, and that would be something good because when FDA spends their time to approve a product from a company and then a year later has to do an import ban because that manufacturer really was not doing a good job after all, it wastes time in the system.

Senator CASEY. I appreciate that. Dr. Kimberlin, I was going to ask you, in the remaining time I have, about compounding which is, for a lot of Americans, rather new. I guess I would ask you as a physician, when would you choose a compound versus a—I should say a compound version of a drug rather than FDA approved drug. How would you assess that determination?

Dr. KIMBERLIN. Well, there are a couple of different ways that we are using the term, I think, this afternoon. The way that I used it in terms of this particular patient is simply taking a pill form and making it into a liquid form, so essentially you crush it up, you add some liquid flavoring, you get it suspended, and there are recipes or well-defined stability testing that has taken place with the Daraprim product for Pyrimethamine suspension preparation, so that is done in the situation I described simply from a practical standpoint. You cannot get a pill into a baby, and so you have to make it into a liquid that then can be measured up in a syringe and administered through the baby's mouth.

Now, the other way that we are talking about it is to take a chemical, a powder, and put it into a capsule, and in this case with the Imprimis, it also is adding Leucovorin, which is a vitamin that is used to kind of offset some of the toxicities that can occur with Pyrimethamine, so it is a different kind of an approach, and it is not so much to get it into a liquid form as it is being done, as I understand it from Imprimis, but rather simply to get another product on the market.

Senator CASEY. I appreciate that. Thank you.

The CHAIRMAN. Senator Donnelly.

Senator DONNELLY. Thank you, Madam Chair, and thank you so much for hosting this and having this hearing. I think it is critically important. This is a tale of two worlds, it seems in many ways. Some pharmaceutical companies spend billions to do research and try and find cures for Alzheimer's, cancer, diabetes, and now we are looking at companies that have done little or no R&D, act as a hedge fund, and have essentially jacked up their prices holding patients and health care hostage.

We need to break loose from the stranglehold, not only for our patients, but for our patients and the costs they pay and for the costs the whole system pays. Mr. Merritt, one of the questions I wanted to ask you about was in regards to compounding as to when can you determine that this can be used and cannot be used.

For instance, with Valeant you have Nitroprusside and Isoproterenol. Can those be compounded as well? How do you make that decision? When your organization decides to take a stand like you did with the Turing drug, all of a sudden, the game is over, so how do we make it game over on all these other products?

Mr. MERRITT. Well, sure. I am not a pharmacist so I do not know the exact answer, but I do know there are lots of checks you can do, lots of audits you can do to make sure that best practices are being used in these pharmacies. Again, the ideal is to go all the way through FDA approval, but right now that is not an option in some cases, so I am not sure if a doctor or anybody else would have any specifics on that, but there are ways to ensure quality practices are taking place.

Senator DONNELLY. Do you have, as an organization, like a game plan to push back against this? More compounding? Obviously, we are going to try to work with the FDA to help change the way this moves forward, but do you have a game plan where you look and you go, Here are the top ten abusers, here are the top ten abused products, we have got to change this? Then it also sends a message to anybody who is sitting in an office right now thinking about doing this on another off-patent product.

Mr. MERRITT. Sure. On that particular issue, we are looking into a lot of different options. That is an option that worked right now, but in and of itself, it sent a strong message to the rest of these guys that this is not a free ride, just to raise prices as much as you want. Just like this hearing today is doing the same thing, and that is why I mentioned the importance of getting some sort of list or registry that you keep of these off-patent brands that are going to be subject to this kind of acquisition.

What we will do is go case-by-case. If we find competition in the market, if we see that there are drugs in the same class that can be prescribed, as I said, we will look into that, but it will really be a case-by-case thing. This is really a pretty new development that we have had to deal with rapidly and we are really on the front end of it.

Senator DONNELLY. I think that across the country, there was a loud cheer when we read the article that you had found a compounder who would do it for a dollar. People looked and said, ″You know, I am going to have a few bucks in my pocket instead of being completely broke, and for the insurers, for our own Gov-

ernment programs, the same thing." The real-world consequences of this, not only on the financial end, but Dr. Fox, you had mentioned this, how does this impact your patients and your operations, that a patient looks and says, This week I can afford it, next week I get sick?

Dr. FOX. Well, when patients cannot afford their medications or when hospitals cannot afford to stock medications, it basically creates a drug shortage, and so patients may not be adherent to their medicines. They may not get the full benefit if they cannot afford to continue taking their therapy, and hospitals have to treat these high prices exactly as they do a drug shortage and think about rationing, think about stocking less, and think about the huge hours of manpower it takes to manage those situations.

Senator DONNELLY. Dr. Anderson, do you know if any of the drugs currently under review for generic approval would create a competitor for some of these single source drugs?

Dr. ANDERSON. We would not have access to that because all that is confidential within the FDA, who has got the—who is applying and who is not applying, so we would not actually know that.

Senator DONNELLY. Do you have any suggestions as to how we can better expedite the review for generics with the FDA? You have given some. Especially on those where there is little competition.

Dr. ANDERSON. I think that is essentially—going through the process takes about six months to a year, but if you have to wait for two years, it is two-and-a-half years, so you are not going to enter the process if you know you are going to have to wait two-and-a-half years and you are going to enter the process if you have to wait six months, so having a priority review makes it much more likely for a company to decide that they are going to be a competitor, because what you do not know is how many other companies are going to enter the market in that period of time. It is great to be the second competitor. It is not so good to be the third, fourth, and fifth competitor, so you want to make sure that your competition, when the price was $13 and they raised it to $5,000 or $3,000, you jump in, you do not want to it when it was $13 and now it is going to be 10.

Senator DONNELLY. Well, we want to continue to work with all of you because we have a responsibility to taxpayers to not pay $750 for a pill that should actually cost a dollar, and we have a responsibility to the people of this country that they can get the care they need to be able to stay in good health. Thank you very much for being here.

The CHAIRMAN. Thank you. Senator Kaine.

Senator KAINE. Thank you, Madam Chair, and thank you all for this important testimony, so we are dealing with market failures and I am trying to kind to figure out the variety of market failures we are dealing with. Traditional market theory would be arms' length transaction between a disinterested buyer and seller with perfect information.

It seems like maybe the first market failure that has driven this is some geniuses realized patients equal hostages. I mean, is that not kind of the sickening part of it, that it is not an arms' length transaction between a disinterested buyer and seller. It is people who are in these extreme conditions. They are hostages.

I mean, they are not customers in the traditional market sense, and so some of this, the opening comments of both the Chair and Ranking Member kind of focused on a hedge fund mentality. We are not talking about health care here. We are talking about ransom to be paid by hostages, is what these folks are doing, which is shocking.

It strikes me that a second market failure is this informational transparency. I cannot remember which it was, it was either Dr. Fox or Dr. Kimberlin, you talked about, oh, no, wait, who cares about this? The patient does not pay the whole cost. There is a cost, but we do have a system, the health care system, that has not been transparent on the price side. I noticed that, Dr. Fox, some of your testimony, written testimony, you cite efforts that your hospital system is made to increase transparency so that staffers are more aware of the higher costs associated with services and medications.

Now, we wish the costs were not so high, but nevertheless, you guys are trying to make folks more aware. Have you seen a change of behavior in physicians and in practices at the hospital, the more information that you provided, and are those changes sometimes kind of negative in the sense that you feel like patient care gets impacted?

Dr. FOX. Absolutely. Our physicians were appalled. They were so frustrated to learn that these old medications that they had been using forever had just skyrocketed in price, and so they were very willing to sit down with us and think about solutions, how to keep the patients safe, and one of the ways was let us take this medicine out of the crash carts.

A part of me wonders and kind of wants the entire kitchen sink available in a code and to have everything right there ready, but our physicians said, ″You know what, this price, it is not worth it. You guys can bring it as a backup and it will be okay.″ We have not been doing this for that long so I do not have any data to see if any patients have been harmed. I am not aware of any, but it is concerning when we have to make changes based on cost alone.

Senator KAINE. Well, price transparency is something that I am a big fan of across the entire system. Just trying to understand a little bit more about the way the business works, and this is for Mr. Merritt, I understand that insurance companies normally share a portion of the price burden of pharmaceuticals. How is the ratio of the insurance company to the constituent determined? How much of the cost is traditionally borne by the patient? How much of the burden falls on the PBM companies and is that consistent across drug categories or does it kind of vary?

Mr. MERRITT. Well, I think generally speaking, the employer, union, whoever we are representing will pay about two-thirds of the cost and the patients will pay the other third through premiums and cost-sharing, and of course, we will have higher cost-sharing on products where there is a less expensive competitor to try to encourage people to use that less expensive competitor, but we look at a whole basket of drugs. We do not look at just one particular drug. We look at what is this going to cost the employer, what is it going to cost the patient, and in terms of transparency, transparency is important, but it has to be the right kind of trans-

parency. I think the best transparency is really what end price is and getting the competitors in there to show us that. For instance, with Turing, and Senator Collins asked, well, I guess there is no R&D here, I think one way to measure whether there is any R&D is if the drug is older than the founder of the company, there was no R&D. That is what we have in this case, but transparency, we know Turing's cost, they make no bones about R&D. They did nothing, but they are still charging it, so the question is what do you do. Going back to the doctor's point and the point I made, if you have even—if there was a law that put an expedited review for these particular products, even before the first review is approved, it would put this whole business practice out of business because nobody would want to get in the business where they knew a generic was coming online a year later.

Senator KAINE. I want to follow-up, so if there was a law that said what, in the event of a price spike there would be an expedited review to be able to develop a competitor, or how would you set up the threshold in the law?

Mr. MERRITT. I would say for off-patent drugs that do not have any competition, there will be an expedited review at FDA.

Senator KAINE. I see.

Mr. MERRITT. Then before that first review went through, that business practice would basically fold. There would be no point in it, because right now, they just see free rein and we have seen some of the responsible statements where people just see this as an arbitrage opportunity. They do not care. They are not health care people.

Senator KAINE. The public health justification for the expedited review, it is off-patent so we know what it is in it, so you do not need the full review that you would need for a first-time drug.

Mr. MERRITT. No, and the good thing is, this does not get involved in any of the innovation challenges that we have about stifling innovation by lowering the patent years, although I do think there should be a lower patent year for biologics down to seven years which would improve access there, but this would only affect drugs where there is no R&D. I think most manufacturers—this is not common practice and I am not here to defend the manufacturers. We cross swords with them all the time, but they do not like this business either. This is not the way business is usually done, so for this kind of outlier, I think there would be support for something like that.

Senator KAINE. Great, great. Thank you. Thanks, Madam Chair.

The CHAIRMAN. Senator Whitehouse.

Senator WHITEHOUSE. Thank you, Chairman. Like I think a lot of Americans, I have been fuming at reading these stories about these price hikes and I am really grateful to you for joining with Senator McCaskill in leading this hearing. I think it is really important.

I had written down the same word that Senator Kaine just used in reaction to listening to this testimony which was ransom. We have, it seems for starters, when you are dealing with health issues, it is really not just open consumer choice any longer. You really do have hostages and ransom. Second, you have got the

somebody-else-is-paying situation which also fouls up this being a proper market decision.

Third, you have got these pricing strategies that are designed not to meet competition because there is not any there, but to maximize the ransom for the maximum number of hostages you can let through, and then fourth, you have got the strange problem that you mentioned about the co-pays where the incumbent will reimburse the co-pay to the patient and sock the payer, the insurer, the Government, with the rest of it.

It strikes me that that is not being done just out of a charitable spirit. That is being done—I am seeing smiles and nods. That is being done, it strikes me, as a way to deter competitors from entering because you have found a way to make every patient want to come to your product, so when you look at that whole thing, it seems to me that the solution that most of you are proposing is a challenging one, which is how does the Government against a really determined incumbent who is using every pricing strategy to defeat competition, create competition against their wishes when they win by defeating those efforts?

It seems to me that once a finding is made that there is not competition for this drug, that there is some very old and established techniques that worked when the railroads were trying to crush American farmers, when the electric utilities could jack up rates because there was only one wire that you could afford to put out to the house, when Ma Bell still had you buy wire and you could not have competition over phones, you had simple price regulation, and the company came in and it proved its costs and it was entitled to recover 100 cents on the dollar of its costs and it made an argument about the kind of risks that it took and it brought in experts to say, Here is the rate of return suitable for our investment, and you would get your costs back and a return for your shareholders.

It seems to me that if we were to go straight to that only where there has been a finding of non-competitiveness, that would take away the motivation for the hedge fund that is playing in this market and arbitraging this market, to continue to defeat competition. It is much simpler, it is really established, everybody gets it. There is still regulatory commissions all over the country, and it just seems to me that that is an easier way to get at the problem than trying to create competition against a powerful, focused, relentless, clever incumbent who has all the strategies of price manipulation to discourage somebody from taking that chance. Even if you make it a short FDA procedure, they still have to, at some point, come up against the hedge fund character who is manipulating all the levers to try to keep them out and that makes it a dangerous proposition.

If you take away the incentive for the hedge fund arbitrager who is in there playing this game by saying, ″You know, when you create your perfect world of monopoly and you can charge hostage prices, actually we are changing the rules of the game at that point.″ We know how to handle that. It is railroad regulation, it is utility regulation, it is phone regulation, it is simple, you know, cost and rate of return pricing.

Dr. ANDERSON. What you have to recognize is that for most of these generic companies, the cost of production is pennies per pill,

so essentially, you would get pennies per pill as a cost of production, and many of these companies are not even producing the generic drugs themselves. They are hiring somebody else to do it and it is done in a batch system, so it is a very different model for generic companies than for brands.

Senator WHITEHOUSE. Do you agree that this is an analogy to those traditional things, to when the railroads were first breaking farmers by charging them super prices, when the—actually, the oil companies bought some of the railroads so they could put their competition out of business by not letting them travel, the utilities. This is not new. The idea that you take advantage of monopoly power to raise prices is as old as market failure.

Dr. ANDERSON. Absolutely and it is just——

Senator WHITEHOUSE. We have solved it before.

Dr. ANDERSON. You can and it is very easy to do that and you could put out a list of drugs that there is no competition for, because we already know those drugs there is no competition for, so if you put up those lists and said something like those prices should be stable for the next five years, or something like that when there is no competition——

Senator WHITEHOUSE. There is competition and you let the market do its thing. I have gone over my time. I appreciate it, Chairman. Thank you so much.

The CHAIRMAN. Thank you. Senator Cotton.

Senator COTTON. Thank you. I want to build on Senator Whitehouse's points about monopoly power over pricing and also on market failure. I know in prior questions we addressed the question of compounding, instances where it has succeeded in breaking that monopoly power, instances where it has not. Is there anything Congress can do to create more of the former and less of the latter to make compounding for these often very small, small batch limited demand drugs available through compounding pharmacists all around the country?

Mr. MERRITT. It is an interesting question. We could look into that and get back to you, and again, this is a new development that we responded to quickly and aggressively. Typically we would not use compounders for this, although they play a very valuable role, and we would need to look and see whether this is an interim solution or something that has more potential, but we are still looking into all of that.

Senator COTTON. You basically—if you, you want the FDA to approve these drugs because the compounding does not go through the same rigorous testing that the FDA puts the generic companies through, so it is, at best, a second-best solution, but it is a solution in an emergency.

Dr. KIMBERLIN. I would just say that it is not a solution for everyone, so if we take the Pyrimethamine or Daraprim example, the babies that I treat, we still have to get a powder or a tablet into a liquid formulation. We do not know what the stability is with this new Imprimis, I think it is, compounded material. We do know what it is and we know how long it is stable with the Daraprim product, so we cannot simply just swap out what we are adding the liquid to to make it a liquid formulation in the case of treating little babies, so it can be more complex.

Senator COTTON. Okay. Dr. Fox, do you want to add anything?

Dr. FOX. Thank you. I would add that compounding is not perfect. Patients have been harmed by poorly compounded drugs, but it also serves a very important option for some patients, so it is definitely a balance. I definitely echo my colleague.

Senator COTTON. I asked about Congress and what about FDA. Is there anything that FDA could do internally to say expedite the use of compounding pharmacies in these kinds of situations where you might have market failure?

Dr. ANDERSON. Again, it could, but I think it is just better to have a generic drug in there, so what I talk about is expedited review and putting that at the top of the queue for the FDA when there is no competition, and that, I think, would be better and really gives you those clinical safeguards that you would like to have.

Senator COTTON. I am glad you raised that because I wanted to return to the point you had made earlier about expedited review. What could Congress or the FDA, for that matter, do to accomplish what you are describing, to expedite the time for approval of these generic drugs which have often been on the market for a long time and have very limited demand so they might have not have the same kind of priority as companies, but if the regulatory process were simpler, it might move along faster.

Dr. ANDERSON. Essentially, there is a queuing problem and essentially if the FDA is essentially given that authority or that responsibility to say that there is no competition for this drug, we are going to put you at the top of the list to do the expedited review, then we would have competition in six months, but we would have competition, which was better than two-and-a-half-years which would probably be today.

Senator COTTON. That is the scale difference you are looking at then, six months versus, say, 30 months?

Dr. ANDERSON. Correct.

Senator COTTON. A pretty big difference. I would also like to touch on the point of pricing. One common claim you hear about pricing of drugs is the R&D costs that are built into them. I know there is some dispute about how much the R&D cost depends. There is a front-page story in the Wall Street Journal about it today. Some companies have been acquiring the rights to drugs.

Is there an economic difference between, say, a big pharmaceutical company spending $100 million to develop a new drug and then those costs being discounted into the price they are going to charge versus a big pharmaceutical company buying a company at $100 million price because that is the net present value they expect from that?

Mr. MERRITT. Well, yes. I mean, I think, obviously, you want the R&D costs to be part of it, but I think from our perspective, industries who get the transparency and so forth, we do not care so much about the inputs. Everybody has a great reason why they should be able to charge whatever they want for the drug.

What changes things, you say, that is great. Now we have a competitor in which every one of you gives us the best prices on the formulary and the other one is out. That is how you get prices down, and then we find that to be much more clarifying and effective than trying to kind of figure out the cost of certain inputs and

then adding this or adding that because I just do not think it would work.

I mean, if there is a competitor in the market and a drug that is doing the exact same thing as the risk of not being on the formulary, we do not say, ″Here is how much to pay.″ We say, ″Whoever gives in the best offer wins, the other one loses.″ That is how to get really deep discounts.

Dr. ANDERSON. There is a new system. We are talking about generics, but in the brand side, there is the idea—normally Pfizer does the research themselves and their own R&D, but there are now companies out there that just buy companies that are almost ready and have gotten all through the FDA process. They buy the company and then they jack up the price there. On the brand side, there is something that you are going to have to pay attention to in that regard as well because they are doing the same thing and they are essentially the hedge funds of the brand side.

Senator COTTON. Okay. My time has expired, but I want to thank the Chairman and the Ranking for calling this very important hearing.

The CHAIRMAN. Thank you. Senator Blumenthal.

Senator BLUMENTHAL. Thanks. Let me begin where Senator Cotton ended and thank you for having this hearing. The subject at hand here has absolutely sweeping ramifications because we are talking not only about price spikes in some drugs, whose names we can barely pronounce and that are used for very narrowly felt or impacting diseases, but also the workhorse drugs that are used in surgical suites and operating rooms across the country and aesthetics that are in short supply, Narcan, a life-saving drug, literally saves lives every day in the State of Connecticut when overdoses occur, now widely administered by police and firefighters.

I was absolutely astonished to learn that the prices of Narcan have gone up by 50, 100, 150 percent so that local taxpayers are paying that much more, but also those drugs are in short supply. Very often, hospitals do a kind of triage, not medical triage, but drug market triage, exchanging drugs with each other, literally sending them to each other, and we are talking here not about the Turing drug or about some of the others that have been mentioned in the memo, Daraprim, Nitropress, Isuprel, they are not those esoteric drugs.

They are the real workhorse medicines of modern hospitals and health care and they are in short supply even though they are generic, they are manufactured, not necessarily by one company, but maybe by two or three, and the question for me is what to do about the underlying market conditions that result in short supply of those medicines, not the ones that appear in the headlines. The newspapers have written about Turing, but about some of our major drug companies that also do the same or keep the drugs in short supply.

Now, they have a variety of explanations, but I think to take Senator Whitehouse's very important and eloquent remarks on this subject, it is not only regarding these manufacturers as analogous to utilities, which produce something that is essential, these drugs are essential, but also to regard their products as we do energy and insurance, and the Government itself is not only a regulator, but

it is also a provider in some instances. The railroads are regulated, but the Government is also semi in the business through Amtrak. The Government has a strategic oil reserve and it also, through the independent system operator and FERC, Federal Energy Regulatory Commission, has control over the grid. The Government is not only an overseer and scrutinizer, it also is a provider in the case of some of these essential services.

When I respectfully suggest, and I ask for your comment is, should the Government play a more aggressive and proactive and involved role in this area? I have wrestled. I did a bill with Senator Burr, a bipartisan bill, that tried to address drug shortages. We knew at the time it would be limited in effect; it has been limited in effect and we need to do much more, so I invite your comments on that idea.

Mr. MERRITT. Well, I would say the Government has a huge role to play even in this hearing, even though it is not policy, it is very significant. It raises eyebrows. If I was a hedge fund guy and I saw this hearing going on, I would say, I do not think I want to buy one of those drugs and sell it at a higher price, so that is very significant.

In terms of the railroad analogy—I am actually reading a book on the transcontinental railroad, but I am not far long enough in it to really follow-up on your eloquent remarks, but I think the opportunity we have with drugs is, let us take the railroad analogy. We can build a railroad right next to it run by the competitor, and that is the difference, that if we can get an expedited review of these products that do not have competition, there is a product that is going to be on the market in a year or so, that is something we can do that the railroad folks could not do, and there is competition in most drug classes, but when there is not, we are a sitting duck for those off-patent products. Unless these hedge fund folks know another drug is coming online, that is the problem we are going to face consistently.

Dr. ANDERSON. There was a whole series of no competition for the railroads for a period of time and now there is a whole series of competition for them, other ways of transportation. They are no longer in the railroad business; they are in the transportation business, so essentially, the same idea here would be where there is no competition, you have got to intervene. Where there is competition, you probably do not have to intervene because the system for generics is generally working.

Senator BLUMENTHAL. Thank you, Madam Chairman.

The CHAIRMAN. Thank you. Dr. Anderson, when I learned that Turing was restricting the distribution network for Daraprim, red flags went up for me. Could you comment in general about whether this could be a means of making it more difficult for generic companies to get enough of the drug to reverse engineer it, essentially, and produce a generic? Do you think there is any connection there? I am trying to figure out why Turing would do that.

Dr. ANDERSON. Well, essentially, it is all about competition, so they want to make it more difficult for somebody to enter the market, and so they are going to do anything they can do to make it more challenging for you to enter the market, so that is one example. They could essentially say, oh, we raised our price to $750, but

if you enter the market, we will drop it to a dollar, and as soon as you do not enter the market, we will raise it back up to $750, so they are going to use a whole series of things to try to get at the most profit for the longest period of time that they can, and that is just one example of efforts they are going to use.

The CHAIRMAN. You also talked, in your written testimony, about the administrative costs of going through the FDA generic process. You earlier talked, in response to a question about the length of time, but is the administrative costs and the trials, the clinical trials that are necessary to show that it is a bioequivalent also barriers to access to the market for a generic, particularly one that is making a drug that is going to serve a smaller population?

Dr. ANDERSON. It is unlike the brand companies which have a huge undertaking for generics. It is a much more easier undertaking. It probably costs about one million to two million to actually go through the process, so that is a hurdle if you think that the market is only a few thousand people and you are only going to be able to charge a few dollars for the drugs.

It is a bit of a burden, but I do not think it is a huge burden, and we have not seen the problem in the past and the FDA has not gotten more difficult to work with over the recent period of time, so this is a system that is different not because of the FDA, not because of the regulatory burden. It really is a change in the marketplace and these companies finding this niche market where they can price gouge.

The CHAIRMAN. I would note that there is a big difference between what the generic drug association says is the backlog at FDA for processing generic drug applications versus what FDA says the backlog is, so that is something we are going to try to explore as well, but I have often thought, as I have learned more about this, that if there were a monopoly in pork bellies, they would be going after the pork belly market, that it truly is almost commodity-driven rather than—and it just happens to be life-saving, life and proving essential pharmaceuticals that have caught the attention of these individuals.

Dr. ANDERSON. The one major difference is insurance.

The CHAIRMAN. Correct.

Dr. ANDERSON. Where for pork bellies you are paying for it yourself. With insurance, you have an insurer that is paying for it, and so they actually have an even better monopoly than they would in other industries.

The CHAIRMAN. True, though I do want to emphasize the point because one of the arguments that these companies have given us is that, quote, real people do not pay these costs. Well, real people are paying insurance premiums, co-pays, deductibles. I mean, ultimately, as Senator McCaskill said, it either comes back to the consumer or the taxpayer one way or the other.

I want, in my remaining time, just to touch on another issue that has come up several times, and that is whether compounding is the answer to this problem or a partial answer. We have a wonderful compounding pharmacy that I am familiar with in Maine that does the kind of work that Dr. Kimberlin has described where they are tailoring the medicine for the needs of a specific patient, but that is very different from what is going on here with Express Scripts

and Imprimis where they are actually compounding two different drugs, the Daraprim plus the vitamin that helps to offset the negative effects, and that is a very different notion of compounding because it is not, I do not think, going through the kinds of trials and studies that would be required with a generic.

I want to ask our two medical doctors to comment a little more on this issue. I would love if that were the answer, if they are selling it for a dollar a pill, but I think we are talking about two different things, so Dr. Kimberlin and then Dr. Fox.

Dr. KIMBERLIN. Senator, I believe you are correct. These are separate things. They are both equally important, but they are not—I personally do not see the Imprimis compounding, at least as I understand it right now, announcements as the solution. Certainly not for the very young pediatric population that I take care of. They need a liquid form and for us as treating physicians to be able to ensure that they are getting a stable liquid form, we have got to use the data we have developed over many, many, many years with Daraprim. We cannot simply move to a new compounding formulation, make that into a liquid without doing those additional studies over again, so I welcome it. I think it is a good move personally, but I do not think it is the final answer.

The CHAIRMAN. Thank you. Dr. Fox.

Dr. FOX. Thank you, Senator. Compounding is really essential for some patients. We heard great examples from Dr. Kimberlin, but compounding should not be a blanket one-size-fits-all solution. These medications have not been rigorously tested and I really do not think it is a solution for many, many numbers of patients. For the one patient, one or two patients that need it, absolutely, critically important, but not a one-size-fits-all fix.

The CHAIRMAN. Thank you. Senator McCaskill.

Senator MCCASKILL. I understand the points on compounding. I know we have had some negative incidents that have occurred around compounding in this country, but I glanced through Mr. Shkreli's Twitter feed and I found it ironic that the very person who is jeopardizing the lives of babies by hiking up the prices of the drug he has a monopoly on, wants to cast aspersions on Express Scripts trying to compound that drug, and frankly, I think he is obviously not concerned about the safety or he would not have done what he did in the first place.

What he is concerned about is competition, taking away the monopoly that he has. I agree with you, Doctor, that we have to be careful about compounding, but to me, this is a dire circumstance. What are you doing now, Dr. Kimberlin? What if you are presented—what if doctors call you from around the country because of your expertise? What happens to the babies right now that—and I do not really clearly understand why this liquid form, why has Shkreli cutoff the liquid form? Obviously, it must have something to do with making money, but why has he done that? Why has he closed off the avenue for you to be able to treat babies with a liquid form?

Dr. KIMBERLIN. Senator, thank you for the opportunity to clarify briefly with that. There never was a liquid form of Pyrimethamine or Daraprim. Rather, there was years of experience within these pharmacies with turning it from a tablet form into a liquid form.

Senator MCCASKILL. Right.

Dr. KIMBERLIN. That is where the recipe had been well-developed and it works very well.

Senator MCCASKILL. Well, what happened to it, though? I do not understand why it went away when Shkreli bought the company.

Dr. KIMBERLIN. It has not. The challenge now is getting the tablets in the first place.

Senator MCCASKILL. Oh, I see.

Dr. ANDERSON. That is where the——

Senator MCCASKILL. You cannot afford to get the tablets——

Dr. KIMBERLIN. Yes, ma'am.

Senator MCCASKILL [continuing]. in order to turn it into the liquid.

Dr. KIMBERLIN. That is correct, and some pharmacies, this is a new development. That is the reason I am sure you all are bringing this before the American people now. Some pharmacies still have on their shelves stock that they purchased prior to the sale of the drug, so they have cheap medicine on their shelves and therefore they can pass along a cheap price to the patient or to the insurance company. What is going to happen a few months down the road, though, is those stocks are going to be depleted and then even for——

Senator MCCASKILL. I am surprised he has not gone out and bought them.

Dr. KIMBERLIN. He is not going to go out and buy them from hospitals.

Senator MCCASKILL. Oh, that is true. He could not get them from there. Go ahead.

Dr. KIMBERLIN. Well, I do think that over time—we are in kind of a window here where some people are really struggling to get access to this, you know, the 30-plus patients in 21 states are good examples of that. My patient could be an example of that, but it is going to get even worse, so this is the right time to be having this conversation.

Senator MCCASKILL. When that moment comes, what will you do?

Dr. KIMBERLIN. We will beg for getting access to these drugs. As you guys have already heard, this is life-saving chemical interventions for these patients, and as treating physicians, we will do everything. We will fight tooth and nail to get them for our patients. I hope the system is modifiable in the meantime so that that struggle, the struggle to keep the patient at the center of all of this so that that struggle is easier for us.

Senator MCCASKILL. Well, I certainly want to put out a public call to any doctors. I am tired of this. Well, we are going to give away to people who really need it and we are going to cut the price. That is all great as window dressing, but in reality, we know that—I mean, you gave an example, Dr. Fox. You called three times to try to renegotiate the price on Isuprel and the other drug you needed for cardiac arrest.

I hope that this Committee will hear from doctors who are faced with life-threatening disease and they are not able to get this drug at a price that is even within reach of their patients, because we need to know the real-life consequences to this behavior.

Let me finish up about the watch list of patent drugs. It seems to me a lot of what we are talking about today, and I think, Dr. Anderson, you may have mentioned it or Mr. Merritt, that hopefully this hearing may even have a deterrent effect. We are paying attention. Let the word go out to investors in hedge funds. We are paying attention to this practice, so if it is a matter of making a list of the off-patent drugs, I think that is a really good idea, and I am curious, does that list not exist somewhere? Does somebody not already have that list? Could we not get that list and maybe even publish it somewhere so that everyone would know that if somebody else thinks this is a brilliant idea, to create a monopoly at the expense of a patient that needs health care in this country, that we are going to be on it, so to speak?

Mr. MERRITT. Sure, we can help you with that.

Senator MCCASKILL. I think that would be really helpful to know. How many are we talking about? How many other potential drugs are there out there that a hedge fund could buy, put a new label on it, and increase the price 6,000 percent?

Mr. MERRITT. We are trying to clarify the final number, but it could be a couple of hundred with a small population, so it is a significant problem, but it is a targeted——

Senator MCCASKILL. Yes, you have to hit on all cylinders.

Mr. MERRITT. Yes.

Senator MCCASKILL. Right? It has to be off-patent, it has to be a relatively small market that will not attract immediately a generic competitor.

Mr. MERRITT. Right, right, so it could be a couple hundred drugs, but the population is still pretty low and manageable. We will get you that information.

Senator MCCASKILL. That would be great, and the other thing is, I think if we did the 6-month thing at FDA, that would be a deterrent.

Mr. MERRITT. Oh, yes.

Senator MCCASKILL. If these companies knew that a generic could get approved within six months, that gives them a very small window to skim the cream, so to speak, and rip people off because it would not be enough time to recover the money they would need to recover that all these people have invested in this hedge fund.

Dr. ANDERSON. There is a book called the FDA Orange Book which is approved drug products with therapeutic equivalence evaluations, which says, you know, these are approved for this drug, this drug and what companies are doing, so all you have to do is look on that list to say, there is no competitor on that list, so it is a fairly easy thing to do. In the reimbursement side, it is called MACS and folds, maximum allowable costs or folds where there is competition, these things are established, so we have got a lot of ways to identify these things if we can just stay one step ahead of the hedge funds.

Senator MCCASKILL. That sounds great. I will try to help. Thank you. Thank you. I want to compliment the Chairman. I think this is—everyone gets a nervous when we take on subjects that could have broad economic impact in our country, and I am pleased to be able to serve on this Committee with the Chairman who is—her

first allegiance is to the people of Maine and her second allegiance is to her fierce independence, and I am proud to serve with her.

The CHAIRMAN. Thank you very much for those very kind comments and for your extraordinary contributions to the Committee and to this investigation in particular. The Committee members will have until Monday, December 21st, to submit additional questions for the record, so we may be bothering you right before the holidays.

I do want to sincerely thank every member of this panel for enhancing our understanding of this problem. I find it so disturbing and, indeed, unconscionable that a company would buy up a decades-old drug that it had no role in developing, did not spend a dime on the R&D for it, and then would hike up the price to such egregious levels that it is having an impact on patient care. That is just plain wrong and that is why we have begun this investigation. We do want to proceed in a careful, thoughtful way.

Just recently I met with a small pharmaceutical company that has the potential of a breakthrough on a neurological disease and is spending a billion dollars on the clinical trials alone, so there is a balance here and we do not want to stifle innovation or stop that pipeline of potentially life-saving drugs, but neither do we want a company to be able to take advantage of a monopoly situation where there is no competition and no alternative and no downward pressure on prices.

It to me was so offensive when I saw some of the interviews with some of these CEOs and to hear them essentially say they were raising the prices, ″because we can″ and that is why we are working so hard to find the right balance, to fine-tune our laws, and I really appreciate the constructive suggestions that you have made today and sharing the experiences of practicing physicians, a hospital physician, a public health expert, and a pharmacy benefit manager, so thank you all for being here. This hearing is now adjourned.

[Whereupon, at 4:28 p.m., the hearing was adjourned.]

APPENDIX

Prepared Witness Statements

Senate Special Committee on Aging

Hearing on: "Sudden Price Spikes in Off-Patent Drugs:
Perspectives from the Front Lines"

December 9, 2015

Oral Statement for the Record
Submitted by Erin R. Fox, PharmD
Director, Drug Information Service

Good afternoon and thank you Chairman Collins, Ranking Member McCaskill, and distinguished Members of the Committee for holding this hearing. My name is Erin Fox, and I am Director of Drug Information at University of Utah Health Care. I am here today to provide perspective on how sudden price increases of off-patent drugs have impacted our health system.

University of Utah Health Care is the only academic medical center in Utah and in a region that spans over 10% of the continental United States, including Idaho, Wyoming, Montana, much of Nevada, and western Colorado. The Drug Information Service is nationally recognized for providing all drug shortage content for the public website of the American Society of Health-System Pharmacists (www.ashp.org/shortage). As part of my role at our organization, I work to help manage drug shortages, assist with developing our drug budgets, and lead and guide medication use policy.

Our organization has been adversely impacted by recent price increases of medications we have used for years. Two key examples are nitroprusside and isoproterenol. These are critical medications used to treat very sick patients. Nitroprusside is particularly important for patients with severe high blood pressure or heart failure. Isoproterenol can be potentially life-saving for patients with very slow heart rates in emergency situations.

In 2013, University of Utah Health Care paid approximately $50 a vial for nitroprusside and isoproterenol, which were sold by Hospira. Marathon purchased these products from Hospira in 2014, and raised the price of nitroprusside to about $215 and

isoproterenol to about $440. In 2015, Valeant purchased these drugs from Marathon, and prices increased again – nitroprusside went from $215 to about $650, and isoproterenol went from $440 to about $2700. When we became aware of these new price increases, we calculated the potential impact to our inpatient pharmacy budget and discovered that if we continued to purchase the same amount of each drug, it would cost our organization just over 1.6 million dollars more for isoproterenol and approximately $290,000 more for nitroprusside compared to what we paid the previous year.

Recognizing that this type of arbitrary and unpredictable inflation is not sustainable in our hospitals, especially when we receive capitated payments for most of our patients, we began exploring how we could minimize costs without impacting patient care. We started by educating our physicians on the drug price increases and developing cost-reduction strategies. One of the key strategies we used was to remove isoproterenol from our approximate 100 crash carts, which we store throughout our system to ensure essential emergency medications are available in case of a critical emergency or cardiac arrest, often described as a "code." Our physicians reported that they rarely used isoproterenol, but that the medication can be very important in managing an emergency where a patient's heart rate is extremely low. With that in mind, our physicians decided that, instead of stocking isoproterenol in crash carts, we would only stock isoproterenol in the pharmacy back-up boxes that our pharmacists bring to the "codes." In this way, the physicians could still have access to a critically important

medication, but we wouldn't face the full burden of 1.6 million dollars for just one medication.

Unlike isoproterenol, we have not found a way to drastically reduce use of nitroprusside, a drug that is critically important for some patients. For now, we are working on educating our physicians on the higher costs associated with nitroprusside, and are providing suggestions for alternatives when it makes sense, but most of the time, the use of nitroprusside is clinically appropriate and there are no good alternatives.

We have put reasonable strategies in place to protect against extreme increases in medications costs, but our physicians are extraordinarily frustrated by having to make decisions about whether to use these critically important but extremely expensive medications in emergency situations, especially when they have been using these drugs for years.

Nitroprusside was approved in 1974, and while FDA approved two Abbreviated New Drug Applications for generic products, nitroprusside is currently a single-source product sold by Valeant as Nitropress®. Isoproterenol was approved in 1956, and while generic products were once available, isoproterenol is also now a single-source product and is sold by Valeant as Isuprel®. Although Valeant sells these products, Valeant does not manufacture them – Hospira manufactures them on a contract basis. The Valeant packaging doesn't disclose that Hospira manufactures these products because, unfortunately, United States' labeling laws do not require transparency as to which

company manufactures a medication or the country of origin. Under 21 C.F.R. § 201.1(a) (2015), a medication label is only required to list the "name and place of business of the manufacturer, packer, or distributor." The end result is that hospitals are purchasing the same drug they used to purchase for about $50, but at a much higher price – the only difference is the label.

Why doesn't the free market fix this market failure? Why are there no generic competitors? I believe the reason is the same as the reason behind the ongoing drug shortages problem – namely, the supply chain for generic injectable off-patent drugs is incredibly fragile. Most of the injections used by hospitals every day are manufactured by three or fewer companies, and those companies are at capacity and cannot manufacture sufficient product to alleviate a shortage. Additionally, many manufacturers of injectable generics continue to work through quality and manufacturing problems that have slowed or halted production. The system of contract manufacturing where one company makes a product for another company to label is particularly problematic, because there is no required transparency. In the case of Isuprel® and Nitropress®, Valeant is not manufacturing these products.

Some have suggested that overseas production may help with shortages, but it may not be an answer as FDA continues to find quality problems at foreign manufacturing facilities, with the Office of Manufacturing Quality issuing 16 Warning Letters to date in 2015 due to poor manufacturing quality. These Warning Letters outline serious quality problems at the manufacturing sites, yet the specific products are not disclosed to

clinicians or the public. This lack of transparency leaves clinicians who would like to purchase medications based on a record of good quality, unable to do so.

Our organization works hard to provide the highest quality of care at the lowest cost. For the sixth year in a row, University of Utah Health Care was recognized for quality leadership, and our organization continues to be ranked in the top 10 of all academic medical centers. In order to provide this high quality care at the lowest cost, our leadership team is tasked with closely reviewing our budget. We work hard to predict potential inflation for medications and also to predict new drug approvals that will increase our budget. What we cannot predict are older, off-patent medications with exponential price increases. It is impossible to predict double or triple digit price increases. Our ability to provide high quality clinical care to our patients suffers with unpredictable costs.

When medication prices increase in an unpredictable and dramatic way, this can create an access issue for hospitals and patients. If hospitals cannot afford to stock a product in the same amount due to price increases, this effectively creates a shortage. Hospitals are unfortunately well versed in managing critical drug shortages and can use a variety of strategies to minimize patient impact. These strategies can include limiting stocking to only critical areas, using alternatives whenever appropriate, and rationing product for the most critical patients. These management strategies are effective only if some product remains available. Additionally, these strategies take an inordinate amount of time to implement. Many hospitals devote full-time staff just for drug shortage

management. If prices for off-patent injectable drugs continue to rise at unpredictable rates, hospitals may be forced to devote additional manpower just for cost avoidance to be able to maintain current levels of care.

Thank you once again for holding this hearing and for the opportunity to appear before you to discuss how unpredictable price increases of off-patent drugs have impacted University of Utah Health Care. I look forward to learning more about potential solutions to this problem and offer my service if I can be of any assistance. I welcome any questions you may have.

Testimony of David Kimberlin, MD
Professor and Vice Chair for Clinical and Translational Research
Co-Director, Division of Pediatric Infectious Diseases
Department of Pediatrics
University of Alabama at Birmingham
Birmingham, AL

Sudden Price Spikes in Off-Patent Drugs: Perspectives from the Front Lines
Wednesday, December 9, 2015, at 2:30 p.m.
Before the
United States Senate Special Committee on Aging
Dirksen Senate Office Building, Room G-50
Washington, D.C.

Madam Chair and Members of the Committee, thank you for the opportunity to address the impact of recent changes in drug pricing for pediatric and adult health care. For the past 21 years I have been a pediatric infectious diseases physician at the University of Alabama at Birmingham and Children's of Alabama, where I serve as Co-Director of the Pediatric Infectious Diseases Division and as Vice Chair of Clinical and Translational Research for the Department of Pediatrics. UAB is one of the top academic medical centers in the country, ranking in the top 25 of all institutions and the top 10 of public institutions in NIH funding. The UAB Department of Pediatrics practices in Children's of Alabama, which is the third largest children's hospital in the country in physical size and is consistently among the top pediatric programs nationally. I am the immediate-past president of the Pediatric Infectious Diseases Society, which is dedicated to the treatment and control of infectious diseases affecting children. I also am the editor of the American Academy of Pediatrics Red Book, which is often referred to as the 'bible' describing infectious diseases for pediatricians across the country and throughout the world. The views expressed in this testimony are my own.

I personally treat and provide advice to physicians caring for babies and immunocompromised patients who are infected with *Toxoplasma gondii*. This is a parasitic infection that causes life-threatening disease in patients whose immune systems are not strong. Specifically, when pregnant women acquire toxoplasma infections they can transmit the parasite to their fetus, resulting in brain damage, blindness, deafness, and even death. The toxoplasma organism is carried by cats, and this is the reason that pregnant women are not supposed to change the litter box. Up to 4,000 babies are born each year in the United States with congenital toxoplasmosis. *Toxoplasma gondii* also can cause life-threatening brain and vision-threatening eye infections in

children and adults with weakened immune systems, including cancer patients and people with HIV. The good news is that the infection can be successfully treated with a combination of two very old and well understood drugs, pyrimethamine and sulfadiazine. However, recently the price of pyrimethamine has increased more than 5000%, and restrictions have been placed on where physicians can obtain it for their patients. I am very concerned that these changes will directly put the lives of patients with this very severe infection at risk.

I first became aware of the sale of pyrimethamine to Turing Pharmaceuticals in late August. A pregnant woman at my institution had just been diagnosed with toxoplasmosis. Knowing that the baby would be delivered in early September, my team and I began seeking access to pyrimethamine and sulfadiazine for the baby. The barriers that we were facing, though, were two-fold: 1) the massively increased cost of the drug following Turing's purchase; and 2) the fact that a liquid compounded pyrimethamine could not be acquired in the outpatient setting through Turing's distribution system using a specialty pharmacy.

The reason that the pharmacy issue was a challenge is because babies cannot swallow pills, but pyrimethamine is only available in 25 mg tablets. In order to get the medicine into a liquid formulation, the tablets must be compounded in a pharmacy. Prior to Turing's purchase of pyrimethamine, the outpatient community pharmacy that we use in Birmingham could acquire the drug from the previous manufacturer. However, our pharmacy cannot acquire the drug from the distribution system set up by Turing due to restrictions in the sale of medications from one pharmacy to another, which threatened to block our access to a liquid formulation that we would need. When we contacted the specialty pharmacy, we had concerns about its experience in doing

such compounding with pyrimethamine, so we were facing a situation where we might not be able to acquire the drug in a form that could be taken by a baby.

The other challenge that we faced was the price of pyrimethamine. Initially my patient required four tablets to make a one month supply of pyrimethamine. Prior to Turing's purchase of the drug, this would cost approximately $54 per month. After Turing's purchase of pyrimethamine, the cost is no less than $3000 per month and probably more. Babies with congenital toxoplasmosis need to be treated for 12 months and the dose of the drug increases as the baby grows, so the total treatment cost before the Turing purchase was approximately $1,200 but now is estimated to be no less than $69,000 and probably significantly more. Looked at from another angle, the total 12 month cost before the Turing purchase now would buy less than two weeks of treatment at the new price. For HIV-infected adults with toxoplasma brain or eye disease, who require 2 or 3 tablets per day, the total costs now would approach no less than $500,000 whereas in mid-summer before the price increase it would have been approximately $8,500. The key issue for this Committee, from my perspective, is the order of magnitude of this change.

As we explored our options for the treatment of this little baby, we had a fortunate break develop. The pharmacist who works with me went to the outpatient community pharmacy in person and found a supply of pyrimethamine already on their shelves that had been purchased prior to the price increase. As a result, I was able to start my patient on pyrimethamine and sulfadiazine within the first two weeks of her life. The monthly cost so far has been $64.26 per month, and my patient is doing well.

On behalf of the babies being devastated by this infection, their mothers and families, I thank you for your consideration of these challenges. Babies' lives literally hang in the balance here, and it is encouraging to me to see the Senate take up this important issue.

Testimony for the Record
Submitted to the
U.S. Senate Special Committee on Aging
for the Hearing on
"Sudden Price Spikes in Off-Patent Drugs: Perspectives from the Front Lines"

December 9, 2015

Gerard Anderson, PhD
Director, Center for Hospital Finance and Management and
Professor, Johns Hopkins Bloomberg School of Public Health

Senators Collins, McCaskill and members of the Senate Aging Committee, thank you for inviting me to speak this afternoon. My name is Gerard Anderson and I am a professor of health policy and management, medicine, and international health at Johns Hopkins University. The opinions expressed herein are my own and do not necessarily reflect the views of The Johns Hopkins University.

Several years ago, I had the privilege of testifying before the Senate Aging Committee about the problems faced by millions of Medicare beneficiaries with chronic conditions. This hearing on drug prices is related to my prior testimony because Medicare beneficiaries with 5 or more chronic conditions (about 15 percent of the Medicare population) fill an average of 50 prescriptions during the year.

In my testimony today, I will discuss how millions of Americans, and especially those millions of Medicare beneficiaries with chronic conditions, are affected by high drug prices. In keeping with the focus of the hearing, I will concentrate my testimony on those generic drugs that have shown very rapid price increases in the last few years and the adverse impact they are having on people with chronic conditions.

Pharmaceuticals have the potential to significantly improve health when people have access to the appropriate drugs. Innovation in the drug industry is something that needs to be supported. However, it must be noted that generic drug companies do not sponsor innovation because they do not undertake research and development (R&D).

At Johns Hopkins, my colleagues and I are conducting a series of studies demonstrating how high drug prices affect access to drugs. The reasons are very different for generic and brand name drugs. I would like to share with you some of our preliminary findings and how the recent price increases are adversely impacting millions of people.

Problems with Access to Generic Drugs

For many years, the generic drug market worked reasonably well. Prices for generic pharmaceuticals were relatively inexpensive in the US and almost everyone could afford them.

Numerous empirical studies found that having more generic pharmaceutical competitors in the market significantly lowers the price of generic drugs[1]. Generic companies compete exclusively on price since each company has to use the exact same chemical compound as the brand name drug when they manufacture the drug. When a new generic competitor enters the market, it must offer a lower price in order to attract business. When there were 3 or more generic companies selling the same drug, it was quite common for the generic companies to sell drugs at 25% of the brand prices – and I have seen generic drugs with 99% discounts off of the price of the brand drug when there are multiple competitors.

[1] Berndt E, et al. Authorized generic drugs, price competition, and consumer welfare Health Affairs, 26.3 (2007): 790-799

Generic drug companies can still earn a profit at these prices because the cost of actually producing most drugs is pennies per pill. You can easily see this in the pricing algorithms of generic companies – a 100-milligram dose is often the same price as a 200-milligram dose or maybe a penny cheaper. This is because the cost of actually manufacturing the product is small for nearly all drugs. Unlike brand name drugs, generic companies do not have any R&D expenses and since each generic drug is selling the exact same chemical compound as the brand product there are no marketing expenses.

Because of this robust price competition, the prices for generic drugs were often lower in the US than they were in other industrialized countries. **Senator Hatch, a member of this committee, deserves considerable credit for these lower generic drug prices. The bill he coauthored in 1984 (Hatch Waxman) was landmark legislation to promote price competition in the generic drug market.** After over 30 years, it is time for Congress to revisit the issue of the generic market place and how generic drugs prices are determined.

Several years ago, Wal-Mart began selling generic drugs for $5.00 and people with health insurance paid nothing or very little out of pocket for most generic drugs. Access to generic drugs was reasonably good, although some Americans still had problems accessing certain generic drugs.

Price Competition Begins to Break Down in the Generic Drug Market

Unfortunately, in the last 5-10 years, the competitive market for generic pharmaceuticals has begun to break down. The Turing example of a several thousand percent price increase is only the tip of the iceberg. Many other generic companies are doing the same thing - their price increases are just not quite as egregious and so they do not get quite as much media attention.

The prices began to increase as the generic pharmaceutical industry started to consolidate. Mergers and acquisitions of generic drug companies have been common in the last 5-10 years-which is still happening today with Allergan's $40 billion spinoff of its generic division to Teva Pharmaceuticals[2]. The consolidation has resulted in less price competition, higher prices and increased shortages for generic drugs.

A second concern about consolidation within the generic drug market is harder to substantiate and is something the Aging Committee should investigate. Generic drug companies recognize that greater competition is not beneficial to them. It is better for the generic companies if there are fewer generic companies selling the drug. If they can reduce the amount of competition, then they all can earn higher profits.

For example, if my generic drug company competes with your company on a product then your company earns a lower profit. If your generic drug company competes with my company then my company earns a lower profit. With only a few generic drug companies in the market, the decision not to compete on certain drugs is much more likely to occur. Recently, we are seeing many generic companies choosing not to enter certain drug markets. The Turing example shows what happens when there is no competition in the generic drug market. This is something for the Aging Committee to consider as it considers options.

The first indication of a market failure in the generic market was drug shortages.[3] Several years ago, hospitals, physicians and patients suddenly found it almost impossible to fill certain prescriptions for generic drugs. These drugs had been available for many years without shortages. Without multiple competitors there can be spot shortages. The problem is most likely to occur when there is only one manufacturer and that manufacturer has a production problem. When a person relies on a specific drug for their health and suddenly that drug is unavailable, there is a personal and a public health crisis. Consolidation in the generic drug industry has resulted in less competition and more solo manufacturers of a generic drug. The Aging Committee could examine why only one generic drug company is

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[2] Koons, C. (2015, August 5). *Teva's Just the Start as More Generic Drug makers Poised to Merge.* www.bloomberg.com

[3] Chabner, BA. "Drug Shortages – a critical challenge for the generic-drug market" NEJM 365 (23), 2147-2149

manufacturing a specific drug. Is it simply a small market for that drug or are generic companies cooperating with each other? Are certain markets too small to permit two companies manufacturing the drug?

The second indication of a problem in the generic market is the recent price increases. When patients have limited access due to high prices, they often end up in the hospital with worsening of their medical condition. At Johns Hopkins Hospital, a patient contracted a brain infection that rendered her confused and unable to communicate. Her treatment regimen included the anti-parasite drug, pyrimethamine, the drug made by Turing. For four years she was on the drug and all of a sudden the price increased several thousand percent. Because of the price increase and a change in distribution she was unable to get the drug. The patient's infection returned and she was hospitalized again. Fortunately after an extensive hospital stay, the patient recovered fully. Her own cost and the cost to the health system, however, were enormous. This does not even consider the pain and suffering she endured.

Time and again escalations of prices and shortages of generic drugs have been observed for common medications such as doxycycline (for infections), propofol (anesthesia), digoxin (heart failure), pravastatin (high cholesterol) and naloxone (antidote for heroin abuse) significantly affecting both morbidity and mortality.

The drug shortages and the recent increases in drug prices are most likely related. Following a series of shortages, the generic companies realized that they could raise their prices – there would be no competition entering the market. The hearings today are a response to these price increases.

The reason for both the shortages and the price increases are essentially the same – a growing lack of price competition in the generic drug industry because of the recent consolidation. It is hard to remember a recent month when one or more generic drug companies were not in merger discussions or acquisition negotiations[4].

Larger generic drug companies means less price competition. Generic companies could argue that larger generic companies have economies of scale – larger firms can produce the drugs more efficiently. However, as noted earlier, the cost of producing a pill is only pennies so economies of scale play only a small factor. It appears the main reason for the mergers is to reduce the level of price competition.

A second problem with the recent consolidation is that the larger generic companies appear to be less likely to enter smaller drug markets. Many of the larger generic companies do not choose to sell products with less than $100 million in annual sales. Turing, for example, found a generic product in a relatively small niche market with no competitors and they used this market failure to raise the price for that drug by several thousand percent. A large generic company like Teva is less likely to enter a market with less than $100 million in total sales. Companies like Turing look for markets that the larger generic companies are not likely to enter. With fewer generic companies overall and larger generic companies, it becomes easier for companies like Turing to find these market niches. The Aging Committee could ask the larger companies why many of them do not compete in the drugs with less than $100 million in sales.

While your company is the only seller of the drug, you can set the price. This can happen until another generic drug company is able to go through the FDA process of getting their drug approved for sale. However, the regulatory burden cannot explain the rapid increases in generic drug prices or the rapid change in the market. In markets where sales are less than $100 million, the administrative cost of going through the FDA process might be a sufficient barrier to restrict entry.

In addition to mergers/acquisitions and the size of generic markets monopoly can be created when companies divert their resources towards drugs whose patents have recently expired because the profit margins are greater. This leaves behind older generics in the hands of fewer companies. Not only does it create price hikes; fewer companies are also not able to handle the volume of demand leading to shortages.

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[4] Wieczner J. "The real reasons for the pharma merger boom." Fortune magazine July 28,2015

A Possible Solution: An Expedited Review Process for Generic Drugs Where There is Little or No Price Competition

There are many ways to further increase competition in the generic industry. One option is for DHHS to establish a priority review process for generic drugs when there is little price competition for that generic drug. The process would be similar to the process the FDA offers to brand name drug companies. Under current law, they can get a priority review if there is the possibility of significant clinical benefit. However, instead of significant clinical benefit, the system for generic companies would apply if there were significant economic benefit. The priority review would be triggered if there were little or no price competition for that generic drug. If the federal government determined that approval of a particular generic drug would help the market become more competitive then an expedited review would be triggered.

The evaluation should be made by an agency outside the FDA since the FDA typically does not have the expertise in economic evaluation. One possibly entity to conduct the review is the Assistant Secretary for Planning and Evaluation in DHHS.

It is relatively easy to see what drugs do not have competition. The drugs with two or more competitors will be subject to a federal upper limit (FUL) established by the federal government or maximum allowable costs (MAC) established by the states. FULs and MACs are calculated when there are 2 or 3 more generic drugs competing for business so it is easy to identify drugs where there is competition.

Unresolved questions

There are several questions that as an academic researcher that I cannot answer because they require data from the generic drug companies. They are important questions, however in order to understand the behavior of the generic drug industry.

The first question is how big the generic market needs to be before it can support competition? Some drugs are sold to only a few patients and only one manufacturer is economical in that space. There may be natural monopolies in the generic market and something will need to be done when this naturally occurs because of the small number of patients taking a specific drug. This is where shortages and price hikes are most likely to occur.

The second question is what causes a generic firm to enter a specific market? There are many different considerations including the cost of getting FDA approval and the uncertainty of know if other competitors will enter the market as well. There is very little information about how generic firms decide to enter the market and which markets they decide to enter.

About all that we seem to know is that larger generic companies are less likely to enter small markets. If we want to know how to increase competition in the generic drug market we need to know what causes firms to enter the market.

What we think we know (but more work needs to be done) is that the cost of production is not significant (pennies per pill) and that retooling the product to produce a new drug is relatively small expense. The reasons for not entering a market do not seem to be based in the cost of manufacturing the product but more in the uncertainty of who else will enter the market and the cost of regulation.

Restoring Price Competition in the Generic Drug Industry While Promoting Greater Access

Congress and the Federal Trade Commission should take a careful look at the recent consolidation in the generic drug industry. One possibility is to severely restrict any new mergers or acquisitions until there is more competition in the generic industry. The recent consolidation are already having an adverse impact on access and allowing generic companies to raise prices. In addition, the Congress should consider giving the

FDA the flexibility to a conduct priority reviews when there is evidence of limited price competition in the generic industry.

Pricing in the Generic Drug Industry

In addition to restoring competition in the generic drug industry, it is also important to examine the method for setting generic drugs prices. Even when there is robust price competition, the pricing system for generic drugs needs significant revision.

It is difficult to think of a pricing system that is more opaque than for generic drugs. **It begins by the generic drug company announcing a high price that no one actually pays.**

Surprisingly, the generic company announcing a higher price for its drug typically means greater sales for its product – something contrary to most markets. This is called marketing the spread in the generic drug industry. The spread is the difference between what the insurer pays and the actual price the pharmacy pays to acquire the drug.

This can be quite large because what the insurer pays is partially based on the price that generic company announces which is always larger than what the pharmacy actually pays. Thus a higher announced price results in a larger spread. The reason for this strange behavior is how health insurers like Medicare, Medicaid and most private insurers pay for drugs. It is partially why Turing announced a very high price and is now unwilling to lower the price.

While pricing for generic drugs is very complicated, I will try to simplify the way that generic drugs are paid by health insurers. It is important to understand this in order to understand why the generic companies are raising their prices. **The payment incentives in the generic industry require close examination by the Aging Committee.**

Most insurers want to reimburse pharmacies based on the price they paid to acquire the drug plus a dispensing fee. The insurer wants to pay the pharmacy for its acquisition cost. This assumes the insurer knows the actual acquisition price the pharmacy actually pays.

However, the insurer does not know the actual acquisition price because it is not what the generic company says it is. For reasons described below, when the generic company announces a higher price it allows the pharmacy to earn a greater profit on selling its generic drugs. Because the pharmacy can earn a greater profit selling a generic drug from one generic drug company than another company, the pharmacy chooses to buy that drug from the generic drug company that gives them the highest profit. Since all the drugs made by different generic drug companies have the same chemical compound and the manufacturing prices are low and the costs to manufacture the drugs are similar, the spread becomes a deciding factor on which generic drug to select. This is why generic drug companies set a high price and then market the spread between the announced price and the actual price.

Since the insurers are likely to use the higher price announced by the generic drug company as the starting point for paying the pharmacy they end up overpaying for the drug. The generic drug company with the highest published price is likely to get more business because the profits (the difference between what the insurer thinks the pharmacy pays and what the pharmacy actually pays) are greater when the announced price is greater. This is most striking when two generic drug companies sell the same drug at exactly the same price. The generic company with the higher announced price gets the business because the spread is larger.

The process begins by the generic drug company announcing something called the average wholesale price (AWP). Generic drug companies need to announce prices in order to sell their drugs. This price is typically published in a compendium and everyone in the pharmaceutical industry uses this information. If you apply the literal meaning of the term average wholesale price it is the price that the pharmacy pays the wholesaler for the generic drug. Generic drug companies sell the drug to wholesalers who then sell the drugs to the pharmacy.

The problem is that the average wholesale price announced by the generic drug company is not the actual price that the pharmacy pays for the generic drug. Often it is not even close – sometimes off by a factor of 10 or more. So the important question is – why would a generic drug company announce a price that no one actually pays?

The answer is that because the AWP is not the actual price; the insurer must guess the price the pharmacy is actually paying. When the insurer guesses too high, then the pharmacy is able to earn a profit on the acquisition cost. By setting the AWP price higher than the actual price the generic company allows the pharmacy to earn a profit when the insurer bases the payment on the AWP. Since all the generic companies selling the same drug will have the same compound, the only reason for a pharmacy to choose a drug from a specific company is the potential profit to the pharmacy. This is known in the drug industry as marketing the spread and is pervasive in the generic industry.

Medicare, Medicaid and most private insurers use the published price or average wholesale price to determine how much they will pay the pharmacy for many drugs. Unfortunately, there is no relationship between the actual sales price and the AWP for generic drugs. There are all sorts of arrangements in the generic drug industry called chargebacks, rebates, stocking allowances and many other discounts. These are all confidential arrangements between the drug company and the purchaser that preclude the health insurers from determining the actual prices that the pharmacies are paying. Because of the actions of the generic drug companies submitting false prices, a perfectly good system of determining prices the AWP results in marketing the spread.

Estimating the actual acquisition cost is extremely difficult for insurers like Medicaid. Federal law requires the state Medicaid programs to pay estimated acquisition cost.[5] The states typically look at a variety of sources to find the true prices. These prices are hard to find since the arrangements between the generic companies, the wholesalers and pharmacies are hidden in confidential agreements. The Wisconsin Medicaid program went so far as to use information on what veterinarians in Wisconsin were paying for the same drugs to determine an actual sales price. Other insurers have similar problems determining the prices that are paid.

As mentioned earlier, when there is robust price competition, the actual price for generic drugs is on average only 25% of the published price, but it varies from drug to drug. For some generic drugs it might be 50% of AWP and other drugs 5% of AWP. Insurers cannot use one markdown number to determine the actual price because the relationship between the actual price and AWP varies considerably from drug to drug. Because these deals are confidential no insurer knows exactly the price that is being paid for any specific drug. When the insurers use the AWP to set the prices they pay pharmacies they are relying on the prices established by the generic drug companies. Companies with the highest announced prices get the most business.

This is a game the generic drug companies' play that costs the public billions of dollars. State Medicaid agencies have been suing the generic drug companies for years over this practice and recovering billions of dollars in overcharges from the generic companies. Other insurers have done the same. If the whole process for determining how much to pay for a generic drug sounds complicated it is because it is. **The entire generic drug pricing is designed to earn profits for the generic drug company and the pharmacy.**

This very strange way of pricing should be investigated by Congress. Generic drug companies are routinely announcing AWPs that are two to 10 times their actual price. The local grocery store could not remain in business if it adopted this pricing model and neither would Apple computer.

<u>How Can Congress Increase Price Transparency for Generic Drugs?</u>

The obvious question is why insurers don't simply ask the pharmacies for the actual prices that they are paying. The insurers want to pay the pharmacies their actual acquisition cost plus a dispensing fee. First of all, pharmacies are

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[5] CFR447.502. An estimate of the price paid by providers for a drug.

under no legal obligation to provide this information to private companies. This applies to insurers in the Medicare Part D program since they are private companies.

Recently, state Medicaid programs have begun surveying the pharmacies for the prices they actually pay. While this seems reasonable for each Medicaid program to try to learn the actual prices that are being paid by the pharmacies in their state, it is a huge cumbersome undertaking for the Medicaid program. There are over 50,000 different drugs that are sold when you consider each dose, manufacturer and means of administration as a unique drug. Each one of these 50,000 drugs has its own price and the prices can change daily. Surveying pharmacies to determine the actual price for each drug is tremendously time consuming. More importantly, a survey is going to reflect prices that were paid weeks or months ago. Using a survey to determine prices is not a good approach – but it may be the best option for states unless something else is done. Clearly a better approach is to have the generic companies announce true prices not fictitious prices when it first enters the market and every time there is a material change in the price.

A Potential Solution to the Generic Pricing Problem

Congress could compel generic drug companies to announce their actual average wholesale prices**.** By this I do not mean the price that a specific company like Wal-Mart pays to a generic drug company for a specific generic drug. This would seriously interfere with the market place since every pharmacy would want to get the prices that Wal-Mart or some other larger retailer gets.

The DHHS Office of Inspector General told the generic drug companies to publish the real prices in 2002.[6] The key section of the OIG report is entitled "Integrity of data used to establish or determine government reimbursement." The OIG guidance says that the "manufacturers reported prices should accurately take into account price reductions, cash discounts...." Unfortunately this is only OIG guidance and does not have the force of law or regulation. **Congress should determine if it wants to legislate that generic drug companies report the actual prices that are paid or some fictitious price that no one pays.**

Congress could compel the generic drug company to publish the average price it actually receives for that drug. Fortunately this information is already available. In the drug company pricing terminology this is known as the average manufacturers price or AMP. Years ago the Congress told the drug companies how to calculate AMP and DHHS has issued regulations for calculating the AMP.

States are required to pay estimated acquisition costs under federal law. The problem is that while the state Medicaid agency has this information, the state cannot actually use the AMP to determine the rates it pays to pharmacies. **Federal law prevents state Medicaid programs from actually using the AMP to set rates.** These rates are a very close approximation of the actual transaction prices and the generic drug prices would be transparent if the AMPs were made public.

If states were permitted to use the AMP prices to set rates, then the states would not have to guess the prices that the pharmacies are paying. They would save considerable money since they would be paying actual acquisition cost and not making a guess at the acquisition costs.

A huge added advantage is that announcing the AMP publicly would make the prices transparent and other insurers could use the information to set their rates. Patients and insurers would know the average prices that pharmacies are paying to purchase the drugs and the insurers could pay actual acquisition costs to the pharmacies. There would be no marketing the spread.

There has been general agreement that price transparency in health care is beneficial and allowing the Medicaid programs to use pricing information they already have to set prices would enhance price

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[6] DHHS Office of Inspector General. "Compliance Program for Pharmaceutical Manufacturers". October 5, 2002.

transparency in the pharmaceutical industry. Other insurers could also use the information if it was publicly available.

How would this increased price transparency improve access to care? Consumers would be able to actually compare true prices of the various drugs and would be able to choose the least expensive generic drug. The current system makes this impossible. A company like Turing would not be able to increase the price several thousand percent and then give discounts to only a selected few purchasers.

I am happy to answer any questions.

Testimony of Mark Merritt

Pharmaceutical Care Management Association

Before the

UNITED STATES SENATE

SPECIAL COMMITTEE ON AGING

"Sudden Price Spikes in Off-Patent Drugs: Perspectives from the Front Lines"

December 9, 2015

Introduction

Good afternoon. My name is Mark Merritt, President and CEO of the Pharmaceutical Care Management Association (PCMA). I appreciate this opportunity to appear before the Committee for this hearing examining sudden price spikes in off-patent drugs. PCMA is the national association representing America's pharmacy benefit managers (PBMs), which administer prescription drug plans for more than 253 million Americans with health coverage provided through Fortune 500 employers, health insurers, labor unions, Medicare, Medicaid, the Federal Employees Health Benefits Program (FEHBP), and the ACA Exchanges.

PBMs offer a wide variety of services aimed at making prescription drug benefit programs operate safely, efficiently, and affordably for their clients, including health plans, employers, unions, and governments.

While many PBMs are independently owned and operated, some are subsidiaries of managed care plans, major chain drug stores or other retail outlets. PBMs compete to win business by offering their clients a range of sophisticated administrative and clinically based services, enabling them to manage drug spending by enhancing price competition and increasing the cost-effectiveness of covered medications.

All PBMs offer a core set of services to manage the cost and utilization of prescription drugs and improve the value of plan sponsors' drug benefits. Some offer additional tools, such as disease management, that can target specific clinical problems for intervention. It is up to the client of the PBM, however, to determine the extent to which these tools will be employed.

PBMs aggregate the buying clout of millions of enrollees through their client health plans, enabling plan sponsors and individuals to obtain lower prices for their prescription drugs through price discounts from retail pharmacies, rebates from pharmaceutical manufacturers, and the efficiencies of mail-service pharmacies.

PBMs typically form pharmacy networks and bargain to set a rate at which the PBM will reimburse the pharmacy for each prescription that the pharmacy fills as a network provider. Most PBMs also operate their own mail-service and specialty pharmacies, and fill prescriptions through these outlets. PBMs also take the lead role in helping patients adhere to their prescribed therapies to improve medical outcomes.

This testimony will outline the services that PBMs perform to provide patients, employers, and governments at all levels with the highest value prescription drug benefits. It will also contrast the valuable services that true specialty pharmacies provide to patients, versus the actions of certain "bad apple" pharmacies that are little more than a marketing outlet. In addition, it will

discuss challenges arising from price shocks when competition among drugs—specifically, those off patent but without a generic or other brand substitute—is lacking. It also will highlight the exploiting of legitimate drug safety protections to inappropriately thwart generic competition. Finally, it will discuss potential policy solutions to increase such competition to better manage drug spending.

Lowering Costs, Managing Benefits

It is important to note that PBMs do not make patient coverage decisions; rather, they provide their clients—health plan sponsors—with various options for savings on prescription drug costs. PBMs advise their clients on ways to structure drug benefits to encourage the use of lower cost drug alternatives—such as generics—when appropriate. The PBM's role is advisory; the plan sponsor client retains responsibility for establishing the plan design. Plan sponsors themselves guide how actively pharmacy benefits are managed. For example, plan sponsors determine formulary coverage, copayment tiers, utilization management, and pharmacy channel options based on PBM recommendations. In addition, PBMs use a variety of tools such as drug utilization review and medication management to encourage the best clinical outcomes for patients. In making these choices, the plan sponsors weigh a multitude of factors, including cost, quality, and their employee/enrollee needs, and member satisfaction.

Leveraging Market Competition among Manufacturers

PBMs are able to extract savings from brand drug manufacturers directly through rebating. Rebating is a practice in which manufacturers pay negotiated, after-the-fact rebates to PBMs upon demonstration that the PBM has moved market share to that manufacturer's brand drug.

PBMs typically negotiate with their commercial health plan and large employer clients the proportion of rebate savings returned to the plan—in some cases 100 percent—and the proportion used by the PBM in lieu of other fees to pay for their services. When passed through to clients, rebates reduce the cost that they pay for their prescription drug benefit; when not passed through fully, rebates reduce fees owed the PBM. In Medicare Part D—which is of particular interest to the Special Committee on Aging—these rebates must largely be passed back to the beneficiary or federal government through reduced premiums or other means.

The rebate amount is generally based on the market share a PBM can demonstrate it moved, through formulary and drug benefit design, to that drug. In these cases, the end or "net" price of a product to the client cannot be determined until after the end of the time period for the agreement and the resulting total sales volume is known.

Hepatitis C Drugs: A Classic Case of Leveraging Competition

The recent introduction of effective drugs to treat—and cure—hepatitis C demonstrates how effectively competition can work to bring down high drug costs when there are two or more substitutable drugs on the market. A breakthrough hepatitis C drug entered the market two years ago priced at $84,000. Upon the subsequent introduction of a competitor product, PBMs immediately drove manufacturers to compete to include their drugs in their formularies. Ultimately, market competition forced a steep drop in cost for those enrolled in Medicare Part D and commercial insurance, as compared to each drug's original price. Earlier this year, one hepatitis C manufacturer publicly stated that PBMs had negotiated a roughly 46 percent rebate,[i] saving billions of dollars, and equally importantly, allowing insurers to make the drug available to far more people. The large negotiated discount resulted in a price tens of thousands of dollars lower than the drug's initial price in countries with government-driven drug price regimes such as Germany and the United Kingdom.[ii]

Delivering Quality Care and Value through Specialty Pharmacies

Another important service PBMs offer is the range of patient supports in specialty pharmacies. The number and range of specialty drug and biologic products available to patients has increased dramatically in recent years. As a general rule, specialty drugs treat more complex conditions requiring greater clinical oversight, may have more side effects requiring active clinical management, and involve more intense patient education. They are also typically very expensive—the highest priced specialty drugs can cost over $400,000 per patient per year. Thus, it is critical to help patients comply with their treatment regimens and ensure they are receiving the greatest value from their medications.

Payers increasingly rely on specialty pharmacies to dispense these medications. Specialty pharmacies are distinct from retail pharmacies in that they coordinate the many aspects of care for people with complex and chronic conditions and provide robust offerings of clinical and operational specialty pharmacy services. These entities manage drug regimens for those with complex, chronic conditions, such as multiple sclerosis, hepatitis C, and rheumatoid arthritis; or rare medical conditions, such as cystic fibrosis, hemophilia, or multiple myeloma. Using dedicated, specialized personnel, a specialty pharmacy provides patient education and clinical support beyond traditional dispensing activities. Specialty pharmacies typically manage therapies where the drug is an oral, injectable, inhalable, or infusible drug product with unique storage or shipment requirements, such as refrigeration.

Recent Incidents Highlight Problems of Manufacturer-Controlled Specialty Pharmacies

Recent reports have shown the actions and practices of certain bad apple pharmacies—controlled or owned by drug manufacturers—that call themselves specialty pharmacies, but in reality, represent a marketing strategy to skirt plan formularies, which are time-tested tools to provide for the dispensing of safe, high-value drugs. These pharmacies often: generate a disproportionate share of sales from a single manufacturer's products; dispense primarily non-specialty branded generics; and processes a large number of co-pay offset programs for non-specialty products.

These "bad apple" pharmacies typically fill brand-name drug prescriptions for the brand manufacturer's own drugs, often providing a manufacturer-sponsored co-pay offset for the patient, instead of a more affordable generic. This raises costs in the drug benefit system, because most other pharmacies would substitute a more affordable alternative or generic drug. This, in turn, results in higher benefit costs for employers and the government, and higher premiums for patients and their families.

A few examples will better illustrate the problem. Recent investigations have found that the manufacturer Horizon Pharma was employing an affiliated pharmacy to sell low-value drugs, such as Duexis. The pain reliever Duexis is a combination of two old and common drugs, the generic equivalents of Motrin and Pepcid. If prescribed separately, the two drugs together would cost no more than $20 or $40 a month.[iii] By contrast, Duexis, which contains both in a single pill, costs about $1,500 a month.[iv] This price represents poor value for both patient and payer when much cheaper generic drugs are available. Nevertheless, Horizon has urged doctors to submit prescriptions directly to a so-called specialty pharmacy affiliated with the drug company.[v] The pharmacy delivers the drug to the patient, circumventing the insurers' formulary and utilization management systems, which are designed to deliver the safest, highest-value drugs.

Similar is the case of the drug manufacturer Valeant's affiliated pharmacy, Philidor, which encouraged doctors to have prescriptions filled through itself, rather than by traditional pharmacies.[vi] That made it harder for pharmacists and insurers to substitute a less expensive drug. Reports emerged that Philidor had used questionable tactics—such as changing doctor's prescriptions and using other pharmacies' identification numbers—to get insurers to pay for the drugs it dispensed.[vii] As a result, PBMs have cut business ties with Philidor.

Moreover, these cases illustrate the danger of policies, such as any-willing-pharmacy laws, that would require insurers and payers to include any pharmacy in a pharmacy network. Such policies greatly increase the possibility of fraud and unnecessary inefficiencies by tying the hands of payers from excluding such bad apples or dubious actors from their networks.

The Need to Increase Competition in the Marketplace

While PBMs can negotiate significant discounts and rebates when drugs are subject to competition, the options to achieve lower prices are limited when there is an absence of it. When a sole-source brand drug with no close substitutes enters the market, often similar competing brand drugs will subsequently enter the market, and eventually the original drug's patent will expire and generic versions of it will be produced. However, for various reasons, generic versions of brand drugs do not always come to market after the original drug's market exclusivity has expired.

A number of recent high-profile cases of drug price increases shows the effects of a lack of generic competition. One recent case is Daraprim. The drug was first approved by the FDA in 1953.[viii] Through a chain of title that included three different manufacturers, Turing Pharmaceuticals acquired the rights of Daraprim in August 2015. Daraprim is a listed drug in the FDA's Orange Book[ix] with no generic version currently available, despite having no patent protection.[x]

Shortly after Daraprim's acquisition last August by Turing Pharmaceuticals, the manufacturer raised the price to $750 a tablet from $13.50, bringing the annual cost of treatment for some patients to hundreds of thousands of dollars.

One reason no generic may have been available is the small number of patients who take Daraprim. The U.S. market for the drug is estimated to be about 2,000 patients. The relatively small number of patients, coupled with a previous comparatively modest price of $17.50 per pill for the brand product (which a generic would likely lower), seems not to have created a sufficient financial incentive for a generic manufacturer to enter the market.

Thwarting Generic Competition

In June 2015, apparently as a condition of the sale to Turing, the previous maker Impax Laboratories by fiat switched to an unnecessarily anticompetitive system, making it extremely difficult for potential generic competitors to obtain samples needed for bioequivalence testing.[xi] For a manufacturer to implement such a program, purely of its own volition, more than six decades after a drug's introduction, with an absence of any new emerging safety considerations is unusual and seems motivated by pricing concerns rather than patient concerns.

The use of such schemes to thwart generic competition has gotten the notice of the Federal Trade Commission (FTC), which has expressed concern over "the possibility that procedures intended to ensure the safe distribution of certain prescription drugs may be exploited by brand drug companies to thwart generic competition."[xii] Further, survey results indicate that brand manufacturers are indeed using REMS or similar systems to deny generic manufacturers' access to brand drug samples.[xiii] Not only this, but brand manufacturers have also begun applying these

anticompetitive distribution practices to drugs carrying no notable safety concerns, and for which the FDA has not required a REMS program,[xiv] as seems to be the case with Daraprim.

Market Response

As is often the case, a market solution came about to address the price shock. The PBM Express Scripts said earlier this month it will partner with Imprimis Pharmaceuticals to provide a $1 alternative to Daraprim.[xv] Imprimis said it would make the alternative—a compounded formulation of the active ingredient in Daraprim, pyrimethamine, and another drug, leucovorin—available for $99 for a 100-count bottle, or less than $1 per pill.[xvi] Under the partnership, Express Scripts added Imprimis to its pharmacy network and says it will work with organizations including the Infectious Diseases Society of America (IDSA) and the HIV Medicine Association (HIVMA) to communicate the availability of the Daraprim alternative to physicians.[xvii] At $1 per pill, Imprimis said it will still turn a profit on pyrimethamine.[xviii]

While this example illustrates a creative solution to one particular problem, we will not be able to count on such actions for all drugs subject to such price hikes from lack of competition. Indeed, Express Scripts regarded the action as "unique" and that it would not be a new standard.[xix] However, we believe a number of policy changes could enhance competition to eliminate or mitigate the kinds of exploitation of existing law that enable legal profiteering on off-patent prescription drugs.

Enhancing Competition to Manage Drug Spending

A number of policy changes to enhance competition could lessen the ability to exploit loopholes in the law that allow manufacturers to implement price gouging and anticompetitive distribution regimes, or to lower the cost of drugs generally:

Solving the Problem of Off-Patent Drugs not Subject to Competition: As a first step, the FDA or other qualified entity should compile a list of all drugs and concomitant indications for which market exclusivity has expired, but do not currently have generic or other brand substitutes. This initial indexing will allow stakeholders to understand the number and types of such products. Additionally, policymakers and stakeholders alike should explore ways to encourage competition for such drugs, to help prevent the kinds of pricing actions discussed in this hearing. This might be accomplished through providing accelerated review of abbreviated new drug applications (ANDAs) for these products or providing regulatory flexibility to allow more solutions similar to the Express Scripts/Imprimis solution discussed above.

Removing the Generic Drug Backlog: PBMs could bring additional competition to the market for other drugs, but FDA prioritizes breakthrough therapies, leaving generic and

"me-too" brand drugs languishing on the approval sidelines. The generic approval backlog, at 42 months, is longer than it has ever been.[xx]

Speedier Approval of Drugs Based on Economic Need: A number of recently approved drug and biologic therapies have entered the market with historically high manufacturer prices. While many of these drugs represent needed breakthroughs to fight devastating and debilitating illness, their cost can be a barrier to access for patients who need these medications and strain health budgets in both the public and private sectors. Additionally, although drug trend has been historically low in recent years, current projections show that the greater availability and use of specialty drugs and clinical guidelines encouraging drug use at earlier stages are poised to dramatically increase overall drug trend. Rather than directly intervening in manufacturer pricing, policymakers could better encourage price competition in the marketplace by accelerating approval of drugs in development for conditions where the cost of existing medications is a barrier to treatment and where manufacturers of current therapies have little incentive to compete on price.

Unlocking More Innovative Pricing Arrangements: The rapid increase in the cost of specialty drugs is driving the market to begin to consider alternative ways of paying for expensive therapies. The move to bundled payments, accountable care, comparative effectiveness research (CER), evidence-based medicine (EBM), and payments linked to performance are the direct result of regulatory and market pressures to reduce health costs without compromising safety and quality. For PBMs and drug manufacturers, these trends will demand innovative approaches to pricing. To enable more creative value-based arrangements, however, our laws and regulations will need to be updated. For example, Medicaid best-price rules make drug manufacturers reluctant to offer pricing schedules that could, in theory, result in very low unit prices for some groups of patients, because manufacturers must then give that price to all Medicaid enrollees.[xxi]

Price Controls and Cost Sharing Limits Are Not the Answers

We believe the U.S. drug manufacturing and distribution system is the best in the world because it relies on market forces and competition to deliver high quality benefits and services to patients who need them. We urge the Committee to pursue policies that foster and encourage competition to keep drug costs and pharmacy benefits affordable. We especially urge the Subcommittee to consider carefully the likely harm of certain proposals that would impose federal price controls on drug products and pharmacy services, impose limits on patient cost sharing, or expand coverage mandates. Such policies do not address the underlying problem at hand—rising drug costs and spending—and only serve to shift costs or reduce availability. In particular, limits on cost sharing may only serve to allow drug manufacturers to further increase prices on drugs.

Those increased costs are borne by employers, governments, and patients themselves in the form of higher premiums.

Conclusion

PBMs exist because they increase the value of prescription drug benefits. PCMA's member companies harness market forces and competition to corral drugs costs and deliver high-quality benefits and services to their health plan clients and enrollees. We urge the Committee to pursue policies that foster and encourage competition to keep prescription drug costs and pharmacy benefits more affordable for employers, enrollees, taxpayers, and government programs. Improving drug approval times and encouraging competition, as well as resisting the urge to unduly regulate PBMs and prescription drug benefits, will go a long way toward helping to constrain drug manufacturers' demonstrated impulses[xxii] to price their products high.

PCMA looks forward to working with the Congress to find additional ways to promote savings while continuing to deliver the highest quality, highest value prescription drug benefits for all.

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[xxi] Dana Goldman and Darius Lakdawalla, "Moving Beyond Price-Per-Dose In The Pharmaceutical Industry," Health Affairs Blog, September 30, 2015
[xxii] *See, e.g.*, The Staffs of Ranking Member Ron Wyden and Committee Member Charles E. Grassley, Committee On Finance United States Senate "The Price Of Sovaldi And Its Impact On The U.S. Health Care System," December 2015, pp. 45-46.

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