

Thoracentesis: A case study in the failure of cost containment

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ABSTRACT

An argument advanced in favor of single payer health care is the alleged ability of a single payer to contain costs from increasing. This is known as cost containment. Austrian economic theory explains why price controls fail to contain costs, and an Austrian analysis of price controls is presented in this review. The history of thoracentesis since the 1980s is provided as an empiric example of Austrian analysis. This history illustrates how a price control to limit the Medicare reimbursement for outpatient thoracentesis to under \$100 has led to the contemporary situation of thoracentesis performed in hospital at costs exceeding \$50,000.

Keywords: Price Controls, Cost Containment, Health Care Costs, Thoracentesis Costs, Austrian Analysis of Health Care

It is commonly recognized that health care costs are rising faster than average prices or wages. Cost containment was one of the goals of the Affordable Care Act (ACA). Although the ACA did increase the number of people insured in the U.S., it failed badly at cost containment. It is a matter of debate how best to control the rising cost of health care. Some argue that a single payer system will succeed in controlling costs. Austrian economic theory demonstrates that price controls fail to work. Thoracentesis, a procedure to drain excess fluid from the pleural space, is a case study confirming Austrian theory.

Figure 1 illustrates the economics of a price control below the market clearing price. The blue curve is the supply curve. The supply curve must have a slope greater or equal to zero everywhere. That is, at a higher price, a greater quantity will be supplied. The red curve is the demand curve. The demand curve must have a slope less than or equal to zero

everywhere. That is, at a higher price, a lower quantity will be demanded. The supply and demand curve must intersect. The intersection defines the price (P^*) and quantity (Q^*) at which the free or unhampered market clears. At the market clearing price, there are no unsatisfied buyers or sellers. This is not to say that every seller makes a sale or that every buyer makes a purchase. Sellers who do not sell value the money P^* less than the good being traded. Buyers who do not buy value the money P^* more than the good being traded. Everyone ends up with what they value highest. Any deviation from the market clearing price will leave some participants worse off. This is known as Pareto Optimality.

The horizontal grey line is a price control at price P_C that is less than P^* . Exchanges at a price greater than P_C are illegal. Only Q_C sellers are wishing to sell at this price. The quantity ($Q^* - Q_C$) sellers are left unsatisfied and are worse off due to the price control. The quantity ($Q^* - Q_C$) buyers are also unsatisfied and are worse off due to the price control. Furthermore, a quantity ($Q_U - Q^*$) buyers are willing to pay the controlled price, but they are unable to find sellers, so they fail to improve their condition due to the price control. Fewer exchanges occur.

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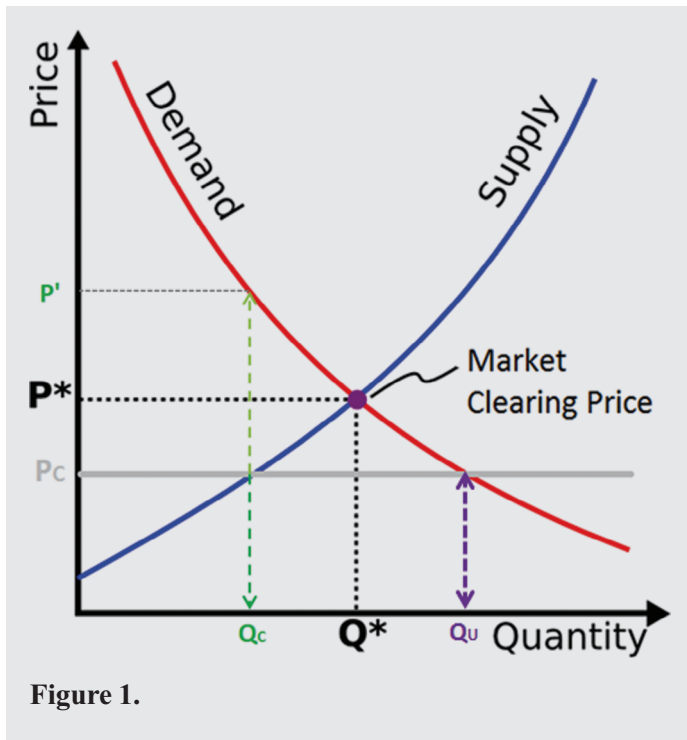


Figure 1.

The Quantity Q_c is necessarily less than Q^* . There are no exceptions. Due to the perceived shortage of sellers, some buyers are willing to pay more than the free or unhampered market price P^* in order to obtain the good. They will pay a price as high as P' to satisfy their demand. This presents an arbitrage opportunity that can be satisfied a number of ways. One way is a black market of illegal transactions, but this discussion is about legal reactions to price controls. The other way to take advantage of the arbitrage opportunity is to package the good with something else – a bundle. If the law considers the bundle to be a separate good not covered by the price control, exchanges can occur.

Rent control provides an example. Let's say that the market price of an apartment unit is \$500 per month. Let's further say that the city council establishes a price control making rents greater than \$200 per month illegal. One will see a shortage of unfurnished rentals available for \$200 per month, but one will be able to rent a furnished apartment for \$700

or an apartment with a parking space for \$1,000 per month.

If it is very easy to circumvent the price control by bundling, the competition for bundles will move the price towards the free or unhampered market clearing price P^* . Using our rent control example, if one were able to rent Pet Rocks with their own apartments, the rental might be very close to \$500. To the extent that it is difficult for bundles to satisfy the legal authorities that the transaction is outside the jurisdiction of the price control, there will be a shortage of goods available primarily at prices in excess of the market clearing price. In extreme situations where the legal authorities do not allow any creative bundling, the good may not be available at any price.

The beginning point for this discussion will be the start of my medical career in 1978. It should be made clear that there was no free market for thoracentesis in 1978. There were all sorts of regulations limiting who could provide thoracentesis. Medicare set requirements for what things had to be done to call a procedure a thoracentesis. However, a licensed and credentialed practitioner could provide a thoracentesis in the office to a Medicare patient for a fee less than \$300 in 1978.

In 1989, I left academia for private practice. I wanted to offer thoracentesis to my patients as an office procedure. Sometime between 1978 and 1989 Medicare had established a price control for the procedure. It turned out, at the time, that the price of the thoracentesis tray exceeded the reimbursement for the procedure. I had to find another way to provide thoracentesis to my patients.

The local hospital had to pay the same price for the thoracentesis tray, but the local hospital could charge a very high ER room fee for a patient receiving a thoracentesis in the ER. In effect, the hospital could bundle a thoracentesis in with an ER visit. I was able to schedule patients to have elective thoracentesis in the ER. Note that while the hospital was happy and the manufacturer of the thoracentesis tray was happy, the insurance company was paying more for the procedure than it would have paid if the procedure

were done in my office. I was still being paid less than my time was worth. I would perform thoracentesis only if it were absolutely necessary. There were situations where referring physicians or patients wanted a thoracentesis, but I declined to provide it.

Sometime later, Medicare changed its rules and would no longer pay for elective thoracentesis performed in the ER. The hospital agreed to allow the procedure in its outpatient surgery area, but I would have to use ultrasound guidance whether I needed it or not. In effect, the hospital bundled the thoracentesis procedure in with an outpatient surgery plus ultrasound imaging. The hospital gained the technical fee for the sometimes unnecessary ultrasound as well as the high fee for the use of the outpatient surgery center. The hospital was still happy. The manufacturer of the thoracentesis tray was still happy. The insurance company was paying even more for the procedure under this new arrangement than it had paid when I performed thoracentesis in the ER. I was still being paid less than my time was worth, so I continued to perform the procedure only when it was absolutely necessary.

Note that there were increasing situations where the patient or referring physician wanted a thoracentesis but I was unwilling to offer the procedure. Interventional radiology recognized the arbitrage opportunity and would bundle thoracentesis in with a CT scan of the chest for needle guidance. The guidance would be completely unnecessary for large effusions that were freely layering.

The situation continued to evolve. At the current time, pleural effusion is being handled by admitting the patient to the hospital for thoracentesis. The hospital collects an overnight observation fee or an admission Diagnosis Related Group (DRG) fee. For observations, the hospital collects a technical fee for ultrasound or CT guidance. A recent study examined the characteristics of 126,825 hospitalizations for malignant pleural effusion from the NIS2012 database.¹ Of these admissions, 24,300 were elective. The median length of stay for these elective admissions was 6.2 days with median hospital charges per

hospitalization of \$53,923. The price control placed by Medicare prevented me from offering an office procedure for \$300-\$1,000, but enabled a hospital based cost of over \$50,000 for the same procedure.

The physician fee for thoracentesis remains low. I receive \$90.17 from Medicare for performing a thoracentesis in the hospital. It takes me 45-60 minutes to perform the procedure. Thoracentesis is not a productive use of my time. I am more than happy to let the interventional radiologist perform the procedure. What was a 3rd year medical student procedure in 1978 is now a procedure suitable only for the pulmonologist or pulmonary fellow. Nobody wants to perform this procedure, because the reimbursement is too low. In the absence of the Medicare price control, every internist would be willing to perform the procedure in the office for a small fraction of the current inpatient charges. The primary reason that health care is unaffordable is that it is illegal to provide affordable health care.

Price controls do not work. Providers and consumers find ways to circumvent the price control. In the situation of a very lax enforcement of the price control, the controlled or hampered market price will be essentially unchanged from the truly free market price. In the situation of a strict enforcement of a price control, the controlled or hampered market price will be much higher than the truly free market price or the good/service will not be available at any price. The recent history of thoracentesis illustrates the failure of price controls to make health care more affordable. Contrary to what proponents of a single payer system claim, single payers make the situation worse rather than better. Medicare is a single payer. The recent history of thoracentesis demonstrates that Medicare is capable and willing to make prices lower than what physicians will accept, but this only enables hospitals to capture fees for unnecessary hospitalizations. The final cost ends up being multiples higher than what would exist in a competitive market. This is part of the reason that Medicare costs keep rising and now exceed \$11,000 per beneficiary per year.² Other reasons include the increase in demand resulting from

Medicare subsidies and the moral hazards introduced by disconnecting the beneficiary of services from the payer for those services, but these considerations are beyond the scope of this article.

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