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Size Based Pricing

Prevailing Wisdom

1. We buy a 100mg vial of a drug for \$10k, use a third, so have wasted \$3300 of drug
2. Policy prescription: sell smaller vials– a bottle that is 67mg will retail for \$6700
3. Assumes that prices reflect volume OR that unused vial can be resold to others (**which is forbidden**)
4. There may be **wasted product**, but it's not right to quantify **wasted dollars** as price x unused share of vial



Prevailing Wisdom?

1. Most medicines have high fixed cost and low marginal costs of production
2. Prices depend on marginal cost (low) and payers willingness to pay for treatment (high)
3. For example, Medicare has high WTP-- all FDA approved Rx must be covered
4. WTP for treatment doesn't vary by volume needed to treat (a 130lb patient doesn't have a lower WTP than a 250 lb person)
5. Forcing smaller vials does not change WTP but may increase marginal cost (extra packaging, higher inventory and distribution costs), increasing prices



Intuition from other markets

AIRLINES

1. Marginal cost of flying Boston -> LAX is greater than Boston -> Chicago, but fixed costs are high
2. WTP to pay for travel from Boston -> LAX is similar to that for Boston to Chicago (both are hard to drive to for work)
3. Implication: prices are weakly associated with distance given high fixed-costs and low marginal-costs
4. Forcing 'distance-based pricing' would not lower prices on Boston-Chicago; but it would increase them for Boston-LAX. Both airlines and passengers will be worse off because of trips to LA not taken



BUTTERMILK (!)


1. A gallon of buttermilk sells for \$2.84. I only need 1/4 gallon for recipe. So do we have \$2.10 of waste?
2. Wrong to value unused buttermilk at \$2.10, because I can't resell unused portion at this price
3. If we forced sale of 1/4 gallon sizes, **they will not sell for \$0.70**– they will sell for much more because of higher inventory+distribution costs– even a price of \$2.50 is possible



PRICING EXPENSIVE COATS

1. Should manufactures price larger sizes higher (reflecting higher cost of luxury inputs), or price the same across sizes (reflecting WTP to have a luxury coat that does not vary by size)?
2. If a smaller coat uses 80% of material in the larger one, does this mean that 20% of its price is waste (\$600)?
3. Only if it's possible to buy the larger coat, tailor it to a smaller coat, and sell the remaining material as a function of volume
4. Forcing 'size based pricing' (20% more material means 20% higher prices) would mean that the small coat still sells for \$3,000 but the larger coat will sell for $\$3000 + \$600 = \$3600$
5. Understand why smaller coat will not sell for \$2400 and larger coat for \$3000?

BURBERRY B GENERATION WOMEN MEN CHILDREN BAGS THE TRENCH COAT RUNWAY



Cashmere Trench Coat

\$2,990.00

Colour (2)
Navy

Size (US)
46


34	36	38	40	42
44	46	48	50	Size Help

Add to Bag

Apple Pay

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Closing Thoughts

1. Leap to conclude that wasted product = wasted dollars, which gets us to size-based pricing
2. There may be waste in health care, but it's at the level of whether the treatment was necessary– and whether the price justifies the treatment?
 - Incent providers to make these decisions
 - Allow formularies for infusion drugs (like Medicare Part D)
 - Allow biosimilars to enter
3. These are different, but harder, determinations, than size-based pricing

