

# COMPETITIVE EFFECTS OF HOSPITAL MERGERS

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# Introduction

- In the 1990s, FTC/DOJ lost several prospective court challenges of hospital mergers
- For a while after that FTC/DOJ did not challenge any hospital mergers
- Starting in the early 2000s, the FTC began a new hospital merger enforcement agenda that continues until today
- I will describe this agenda, and assess its impact

# Background

- One major cause of the losses in the 1990s involved the methodology for defining the geographic market
- The FTC developed responses
- Flawed market definition concepts were replaced
  - “Elzinga-Hogarty” vs. the Hypothetical Monopolist Test
  - The “Silent Majority Fallacy”
  - Capps et al. (2001), Elzinga & Swisher (2011)

# Competitive Effects

- New competitive effects framework
- Key fact: Hospital prices are set via bilateral bargaining
  - Hospitals and insurers bargain over the “in-network” price
  - If no agreement is reached, the hospital will be “out-of-network”
  - Out-of-network hospitals are much more expensive for the insurer’s subscribers to use than are in-network hospitals
  - Note: Insured patients’ out-of-pocket expenditure is largely independent of these negotiated prices

# Competitive Effects

- The insurer has some bargaining power because the hospital wants access to its subscribers
  - Without the insurer's subscribers, the hospital will have fewer patients and will make less money
- The hospital has some bargaining power because its absence from the insurer's network makes that network less attractive
  - Without that hospital in its network, the network will charge a lower premium and/or get fewer subscribers
- Negotiated price will reflect **relative** bargaining power

# Competitive Effects

- Now suppose that two hospitals merge with each other
- After the merger, the merged entity usually negotiates with the insurer on an “all-or-nothing” basis
  - The merged hospitals could continue to bargain independently
  - In this case, the analysis would be slightly different
  - But the same basic idea would apply
- Failure to reach a deal now means that the insurer loses **both** hospitals from its network
- How does this change the negotiated price?

# Competitive Effects

- First imagine that the merging hospitals did not compete with each other at all
  - No patient who used one would ever use the other one
- Merged entity has twice as much to lose as before
  - Two hospitals will now lack the insurer's patients instead of one
- Insurer also has twice as much to lose as before
  - It now has a two-hospital "hole" in its network
  - But those two holes are unrelated to each other
- The stakes doubled for both sides, so it cancels out
- The post-merger price is equal to the pre-merger price
  - (Assuming no cost efficiencies)
- This is what we would expect from standard theory

# Competitive Effects

- Now imagine that the merging hospitals did compete
- Merged entity still has twice as much to lose as before
  - Two hospitals will now lack the insurer's patients instead of one
- But now losing both hospitals is **more than twice as bad** for the insurer as losing only one (concavity)
  - It still has a two-hospital hole in its network
  - But now those two holes are related to each other
- Before the merger, the availability of each hospital mitigated the harm from losing the other, but this mitigation is eliminated by the merger
- Now the post-merger price will be higher
  - (Again, assuming no cost efficiencies)



# Competitive Effects

- To see this more clearly, consider a stylized example
- Hospital A and Hospital B merge
- They are close substitutes
  - Many of Hospital A's patients have Hospital B as a close 2<sup>nd</sup>
  - Many of Hospital B's patients have Hospital A as a close 2<sup>nd</sup>
- Pre-merger, failing to reach an agreement with **one** of the two hospitals (say A) is not so bad for the insurer
  - If it is missing A from its network, most A-likers won't care much
  - Because B is available and they like it almost as much
- The network will not be much less attractive
  - So neither hospital will have much bargaining power
  - And the negotiated prices will be low

# Competitive Effects

- Post-merger, losing both hospitals means that the patients who like both A and B must use their **third** choice hospital instead
- They might like this much less than they like A or B
- In that case, losing both hospitals makes the insurer's network **much** less attractive
  - This gives the merged entity a lot of bargaining power
  - So the negotiated prices will be high
- How much higher the negotiated prices will be will depend on the closeness of substitution between A and B, and the closeness between them and the “third choice” hospitals

# Competitive Effects

- This comports with standard merger theory
  - Merger effects larger if merging hospitals are close substitutes
  - Also larger if non-merging hospitals are distant substitutes
- So in important ways our hospital merger model is not very different from standard “posted price” models
- Imagine these were movie theaters instead of hospitals
  - Still have a geographic distribution of sellers and buyers
  - Sellers are still horizontally and/or vertically differentiated
- A merger of proximate theaters will tend to raise price
  - Mechanism is recapture instead of “all or nothing” bargaining
- This is true even though there are other competitors
  - Including competitors that are **outside** the geographic market
  - (**No** contradiction with the hypothetical monopolist test)

# Competitive Effects

- Despite this similarity to standard models, we still need a hospital-specific model, for three main reasons:
- First, models should be on point as a general principle
- Second, there are quantitative merger simulation methods that rely on the hospital-specific model
  - Town & Vistnes (2001), Capps et al. (2003), Farrell et al. (2011)
  - Garmon (2015) and Balan & Brand (2016) evaluate them
- Third, relevant questions require the new theory
  - Can two hospitals in the same town be complements?
  - Must a merger create a “must-have” in order to raise prices?
  - These could not be studied correctly with a posted-price model

# Clinical Quality Effects

- Clinical quality especially important in healthcare cases
- Reduced competition tends to reduce quality
- But there might be quality efficiencies
  - Might also be cost efficiencies, but we won't discuss those today
  - Cost efficiencies tend to reduce price, quality efficiencies tend to increase quality
- Net effect of competition on quality therefore ambiguous
- Empirical literature mostly finds that competition on net has a positive effect on quality
  - Gaynor & Town (2012), Gaynor et al. (2015)
- No basis for strong priors that mergers improve quality
- But also not implausible that strong case-specific evidence of quality efficiencies could be persuasive

# Clinical Quality Effects

- Framework for evaluating clinical quality claims in horizontal hospital merger cases
  - Romano & Balan (2011)
  - A different clinical quality analysis would apply to cases in which a hospital was buying a physician practice
- Three possible sources of quality benefits:
  - Clinical Superiority
  - Economies of Scale (broadly construed)
  - Financial Resources
- Of these, only the ones that would not be achieved absent the merger are credited (“merger specificity”)
- Most likely to be those that involve geographic proximity

# Evanston/Highland Park Merger

- New agenda started with a **retrospective** case
- The 2004 FTC challenge of the acquisition of Highland Park Hospital by Evanston Northwestern Healthcare
  - Showed directly a measured price effect
  - Launched the new price and quality frameworks
- Difference-in-differences analysis showed a price  $\uparrow$ 
  - Haas-Wilson & Garmon (2011)
- The “learning about demand” defense was rejected
  - Balan & Garmon (2008)
- Difference-in-differences analysis refuted the claim that the merger had improved quality at Highland Park
  - Romano & Balan (2011)

# Subsequent Cases

- Since then, the FTC has challenged a number of prospective hospital mergers
  - Inova, Promedica, Carilion, Rockford, Reading, Pinnacle
- The FTC successfully blocked all of these mergers
  - Some court proceedings, some abandoned
  - Pinnacle only recently on appeal



# Impact Assessment

- Direct impacts of Evanston case:
  - Demonstrate actual measured mergers effects
  - Begin to establish the new price and quality frameworks
- Direct impacts of subsequent prospective cases
  - Block those mergers, preserving significant competition
  - Further entrench the new price and quality frameworks
  - Difficult to know what deterrence effect this has had

# Impact Assessment

- An additional impact is that, in most cases, the would-be acquired firms in the blocked mergers subsequently found alternative partners
- This fact is relevant for the evaluation of **future** mergers
  - Suggests (but does not prove) that a substantial portion of hospitals' anticipated merger-related efficiencies may not be merger-specific
  - Balan (2016)

# Conclusions

- Hospital merger enforcement has been a central part of the FTC's antitrust agenda for well over a decade
- The FTC has established a framework (evolving but stable in its essentials) for thinking about price and quality effects of mergers
- It has had a substantial direct impact by using this framework to successfully block a number of proposed hospital mergers
- There have been a number of indirect effects as well
- Thank you!!

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