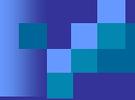




Defining Hospital Markets

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Flaws in Current Approach to Hospital Market Definition

- In the absence of transaction prices, markets are defined based on flows
- Elzinga-Hogarty does not recognize heterogeneity on both supply and (especially!) demand side of hospital markets
- Result in hospital markets that are too large and do not convey true competitive implications of proposed mergers

My Underlying Assumptions

- Selective contracting by managed care plans has promoted hospital price-based competition
- Anti-trust enforcement must protect this capability of selective contracting
- Market definition, as part of an anti-trust analysis, must assess its impact on selective contracting



Selective Contracting Involves Basic Tradeoff

- Value competition
- Managed care plans need hospital networks that provide
 - access to full range of services
 - relatively low travel time
 - high quality
 - low prices

Defining Hospital Products (1)

- The bulk of hospital revenue from services where limited (if any) non-hospital competition
- Inpatient services
 - supply based on physician specialization
 - (approx 50 services)
 - patient perspective may be even more disaggregate
 - plan perspective much smaller number
 - (primary, secondary, tertiary/quaternary)

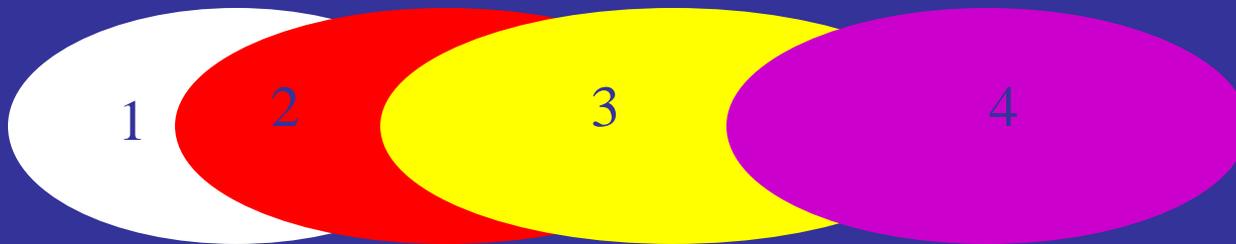
Defining Hospital Products (2)

- Outpatient area of rapid growth
 - primary care (ED, and primary care clinics)
 - compete with office-based care but tend to care for vulnerable populations
 - specialty clinics, outpatient surgery, chemotherapy, radiology, etc
 - broader patient mix
 - face some competition from physician groups, free-standing operations etc
 - differ in difficulty of competitive entry

Mean Herfindahl Index (HHI) by Service Categories

<i>Service Categories</i>	<i>Mean HHI</i>
<i>Hospital Level HHI</i>	0.34
<i>Hospital level HHI for 3 service categories</i>	0.38
<i>Hospital level HHI for 48 service categories</i>	0.52

Pattern of Hospital Markets



Defining Hospital Market Areas

- Series of overlapping markets
- Local areas of concentration
- “A patient is a patient”
- Product definition will help a little but
 - Unmeasured severity differences
 - Differences in patient preferences (eg quality or religious affiliation vs travel)

Elzinga-Hogarty-based Approach

- E-H markets tend to be very large to accommodate substantial patient inflows and outflows
- But empirical analyses show
 - travel distance/time as most important determinant of hospital choice
 - mean travel distance not affected by managed care
 - measured and unmeasured heterogeneity underlies much travel

Proposed Approach to Defining Hospital Markets

- From plan (and patient perspective): what are the alternatives available to patients living in a given area?
- Hospital-specific market and the corresponding measure of competition
- Better empirical predictor of prices
- Operationally:
 - zip code areas as geographic units
 - hospital HHI as weighted average over zip code areas

Mean Herfindahl Index (HHI) by Year

<i>Year</i>	<i>Hospital level HHI</i>	<i>System level HHI</i>
<i>1989</i>	0.31	0.33
<i>1995</i>	0.31	0.35
<i>2001</i>	0.33	0.39



Local Hospital Systems

- Anecdotal and qualitative results suggesting a substantial impact
- Large variability is system characteristics
- Analytical results inconsistent based on inconsistent definitions, data etc

Little Competitive Effect of System Formation

- Hospital in system:3
- Saint Francis Care, Connecticut

Name of hospital	Hospital HHI	System HHI	% Change in HHI
SAINT FRANCIS HOSP AND MED CTR	0.37	0.38	2.70
ST MARY'S HOSPITAL	0.39	0.40	2.56
BRISTOL HOSPITAL	0.51	0.58	13.73

Large Competitive Effect of System Formation

- Hospital in system: 10
- System: Cleveland clinic,Cleveland-OH

Name of hospital	Hospital HHI	System HHI	% Change in HHI
FAIRVIEW GENERAL HOSPITAL	0.28	0.51	82.14
MERIDIA EUCLID HOSPITAL	0.32	0.57	78.12
LUTHERAN MEDICAL CENTER	0.26	0.42	61.54
MERIDIA HURON HOSPITAL	0.22	0.50	127.27
MARYMOUNT HOSPITAL	0.27	0.49	81.48
MERIDIA SOUTH POINTE HOSPITAL	0.22	0.50	127.27
CLEVELAND CLINIC HOSPITAL	0.31	0.42	35.48
LAKWOOD HOSPITAL	0.35	0.60	71.43
MERIDIA HILLCREST HOSPITAL	0.28	0.53	89.29

Savings Depend on the Level of Competition in the Provider Market

Reduction in Total Hospital Expenses in High Penetration Markets in the US, 1989 – 1994

Managed Care Model	% Reduction		
HMO	15.0	9.0	3.5
PPO	7.9	3.9	0.0
HMO + PPO	22.9	12.9	3.5
Level of Penetration (HMO, PPO)	High	High	High
Level of Hospital Competition	<i>High</i>	<i>Med</i>	<i>Low</i>

Adapted from Bamezai, Zwanziger, Melnick, and Mann, *Health Economics*, 1999