Emerging Outpatient Opportunities

2008 Center of Excellence Profiles

Marketing and Planning Leadership Council

Emerging Outpatient Opportunities

Project Director
Michael Koppenheffer, MBA

Managing Consultant
Teresa Breen, MA

Research Staff
Dan Cederberg
Jake Hartman
Steve Mayne
Shay Pratt

Data and Analytics
Shishir Viriyala
Brandon Weaver

Practice Manager
Cynthia Schaal, EdM

Lead Designers
Jaime Buckley
Keith Morgan

Dedicated Designer
Steve Hennessey

Creative Services

Dustin Almond • Sarah Avery • Katherine Baker • Kate Foley • Wilson Fujinaga • Carly Gettler • Blair Hagerty •Docxn Hayes • Katie Hosmer • Karen Hutchinson • Nini Jin Katie Mathy • Catherine Muehleib • Courtney Protter • Lane Robbins • Sharlene Salvatierra • Jesse Schoch • Vanessa Shkuda • Amy Smith • Matthew Starchak • Mysoon Taha Hillary Tisdale • Joy Turner • Lauren Walsh

Advisors to Our Work

Selected 2008 Participants

Tricia Dahl
Albert Lea Clinic
Albert Lea, Minnesota

Chuck Rakcakazky
Allegheny General Hospital
Pittsburg, Pennsylvania

Tom Holets
Allina Hospitals and Clinics
Minneapolis, Minnesota

Mitch Tendrich
Angiocath, LLC
Palm Beach Gardens, Florida

Jim Freymiller
Atlantic Cardiolink
Melbourne, Florida

Kim Hodgkinson
Aurora Health Care
Milwaukee, Wisconsin

Steve Blades
Cardiovascular Outpatient Center Alliance
Brentwood, Tennessee

Brandon Rogers
Community Health Network
Indianapolis, Indiana

Becky Watts
Cox Health
Springfield, Missouri

Susan Walsh
Crieghton University Medical Center
Omaha, Nebraska

John Combs
CSA of Spokane
Spokane, Washington

Mary Cook
Diversified Clinical Services
Jacksonville, Florida

Jody Link
Fairview Health Services
Princeton, Minnesota

Josef Ghosn
Bryan Stiltz
Florida Hospital
Orlando, Florida

Dean Lin
Geisinger Health System
Danville, Pennsylvania

Sharon Duso, RN
Genesys West Flint Campus
Flint, Michigan

Kara Couch
Georgetown Medical Center
Washington, District of Columbia

Jonathan Alexander
HCA Gulf Coast
Houston, Texas

Mark Whitley
HCA North Texas Division
Irving, Texas

Mindy Smith
HealthEast Care System
St. Paul, Minnesota

Gene Gauger
Pamela Yzerman
High Point Regional Health System
High Point, North Carolina

Janet Cipullo
Jefferson Regional Medical Center
Pittsburg, Pennsylvania

Vivian Clare
Jupiter Medical Center
Jupiter, Florida

Geurt Peet
Lee Memorial Health System
Cape Coral, Florida

Valerie Roberts
LifeBridge Health
Baltimore, Maryland

Christine Swearingen
MedStar Health
Washington, District of Columbia

Mike O'Neil
Memorial South Bend
South Bend, Indiana

Tony Benton
Mountain States Health Alliance
Johnson City, Tennessee

Julie Cucco
National Healing
Boca Raton, Florida

Michele Moldin
Piedmont Healthcare
Atlanta, Georgia

Jeff Wiles
Pinnacle Health System
Harrisburg, Pennsylvania

Susan Drago
Putnam Heart Center
Palatka, Florida

Dave Mandelkern
QuickHealth
San Mateo, California

Kristen Becker
Sacred Heart Medical Center
Spokane, Washinton

Christi Chaves, RN
Saint Elizabeth Medical Center
Lincoln, Nebraska

Bernard Salick, MD
Salick Cardiovascular Centers
San Francisco, California

Sherry Shults
South Carolina Heart Hospital
Columbia, South Carolina

Jim O'Malley
St. Anthony's Heart Center
St. Petersburg, Florida

Tom Jankowski
ThedaCare Health System
Appleton, Wisconsin

Sue Mason
Toledo Hospital
Toledo, Ohio

Lulu Lopez, RN
University of Illinois
Chicago, Illinois

Susan Solometo
University of Pennsylvania
Philadelphia, Pennsylvania

Catherine Ratliff, MD
University of Virginia
Charlottesville, Virginia

Neil Sol
ValleyCare Health System
Livermore, California

Rich Lundy
Wake Forest University Baptist Medical Center
Wake Forest, North Carolina

Road Map for Today's Discussion

I Outpatient Imaging Centers of Excellence

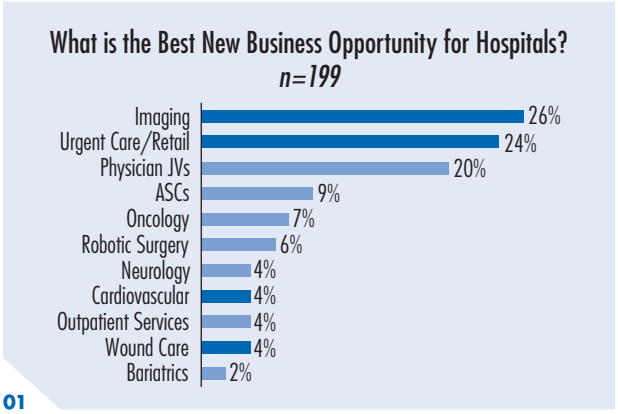
II Outpatient Wound Care Centers of Excellence

III Retail-Based Health Clinics of Excellence

IV Freestanding Cath Lab Centers of Excellence

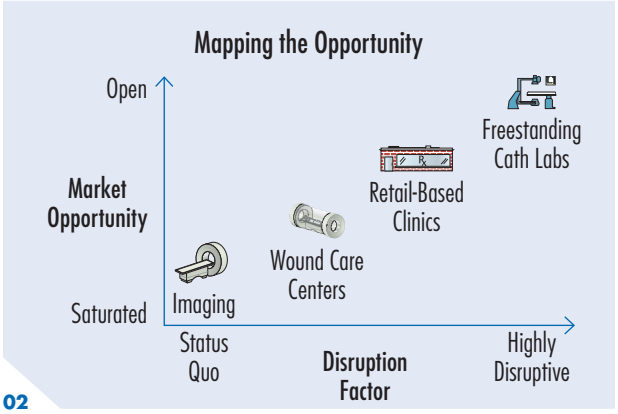
Establishing Investment Priorities

Focusing the Universe of Possibilities



01

2008 Outpatient Centers of Excellence



02

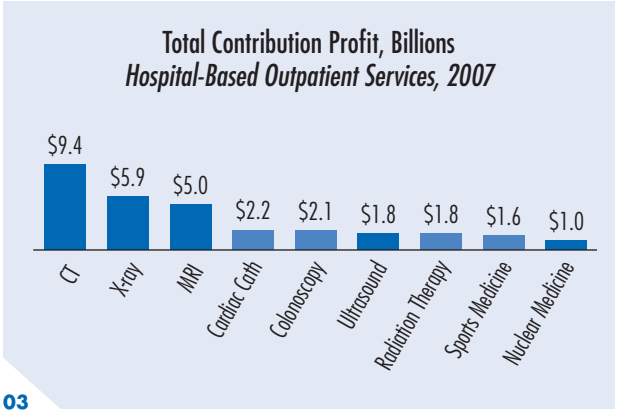
Source: Bank of America, "Health Care Facilities," Equities Research, July 2007; Marketing and Planning Leadership Council interviews and analysis.

I. Outpatient Imaging Centers of Excellence

- *State of the Outpatient Imaging Market*
- *Optimal Facility Strategy*
- *Hallmarks of Excellence*

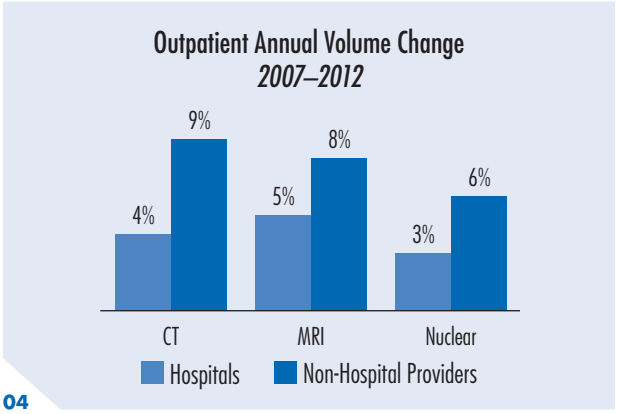
State of the Outpatient Imaging Market

Imaging the Top Outpatient Service

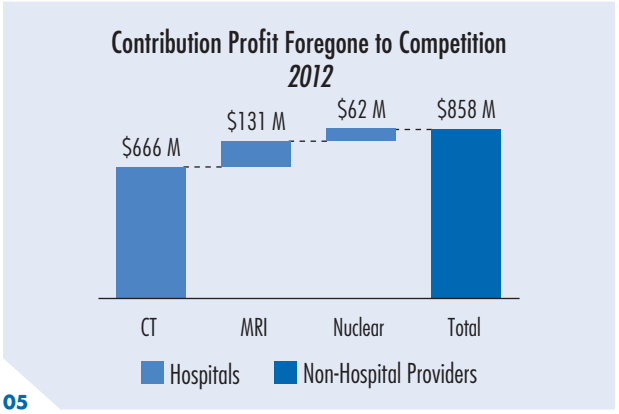


03

Non-Hospital Providers a Perennial Threat



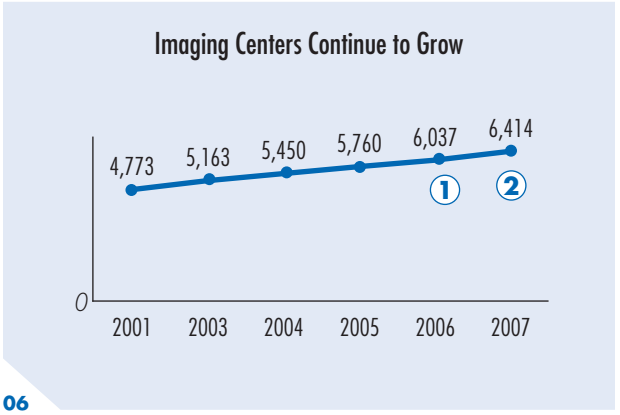
04



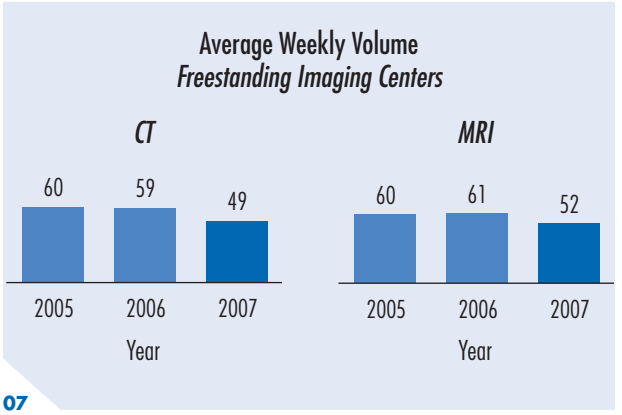
05

Source: Innovations Center Futures Database; IMV Medical Information Division, Inc., *MRI and CT Benchmark Reports*, 2006; Marketing and Planning Leadership Council interviews and analysis.

New Centers Opening Despite Soft Volumes



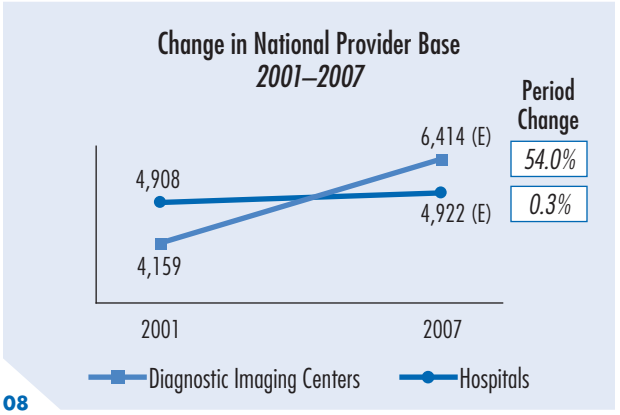
06



07

1. *Deficit Reduction Act (DRA) signed into law February 2006*
2. *DRA effective January 2007*

Hospitals Remaining Solidly Outpaced

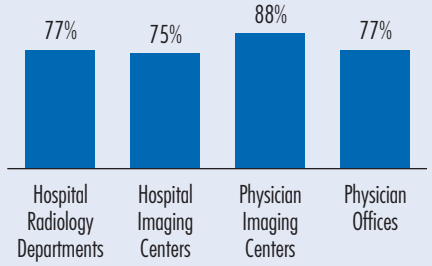


08

Source: Verispan, "2007 Diagnostic Imaging Center Market Report"; Marketing and Planning Leadership Council interviews and analysis.

Pressure Coming From All Sides

Types of Imaging Providers Perceived as a Threat
Percent of Surveyed Hospitals
n=143



09

Good News for Hospitals

Host of Forces Benefiting Hospitals

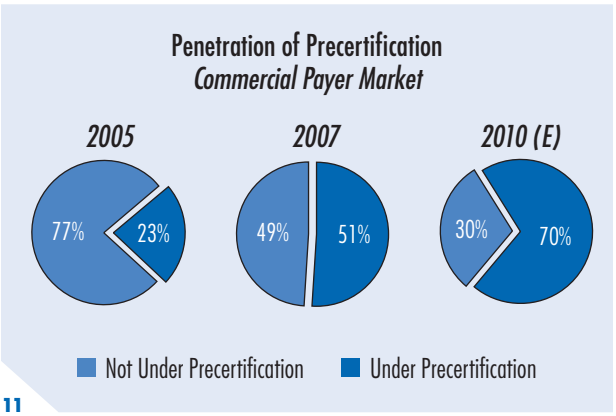
Market Phenomenon	Market Adoption	Impact on Hospitals	Impact on Non-Hospitals	Assessment
Physician Fee Schedule Technical Payment Cap (DRA)	Medicare	↑	↓	• Significant revenue at risk for non-profit hospitals with high Medicare mix • Closure of marginal facilities reduces market competition
Physician Fee Schedule Contiguous Scan Reduction (DRA)	Medicare	↓ ↑	↓	• Reduced technical payment for multiple procedures to impact small percentage of claims • Hospital payment safe for now, but HOPPS adoption could re-emerge
Precertification programs for advanced imaging	55%	↓ ↓	↓ ↓	• Reduction in outpatient scan volumes for all imaging providers • Penetration of precertification programs likely to exceed 70% by 2010
Imaging facility privileging programs	12%	↑	↓	• Although effective in removing marginal players, payer get more "bang for the buck" with precertification • Little momentum at federal level to institute facility standards for imaging services
In-office imaging restrictions	2%	↑ ↑	↓ ↓	• Any movement to control self-referral would be an unquestionable boon for hospital volumes • Few payers enacting policies to crack down on self-referral in meangingful way
Commercial payer "DRA-like" fee schedule revisions	2%	↑ ↑	↓ ↓	• Emerging reports of commercial payers updating imaging fee schedules for non-hospital providers to reflect post-DRA payment rates • Widespread adoption could precipitate significant volume shifts back to hospitals

↑ ↑ Strongly Positive Effect
↑ Moderately Positive Effect
↓ ↑ Mixed Effects
↓ Moderately Negative Effect
↓ ↓ Strongly Negative Effect

10

Source: Imaging Performance Partnership National Marketing Survey, April 2008; Marketing and Planning Leadership Council interviews and analysis.

Precertification Already Entrenched



11

Physician Reimbursement in CMS Crosshairs

Stark Revisions on Hold (For Now)

Proposed Provision	Implemented
1 Anti-Markup	✓
2 Under-Arrangement	X
3 Per-Click Leasing	X
4 Sharing	X
5 Percentage-Based Compensation	X
6 Stand in the Shoes	X

12

PFS Final Rule in Brief

- The one noteworthy provision adopted in the final rule is the anti-markup clause
- It prevents physicians contracting interpretation services from charging CMS a professional component greater than their cost
- Anti-markup also applies to the technical component when the procedure is performed at an offsite location
- This latter provision makes certain ownership arrangements less attractive for physicians with a sizable Medicare population
- Physician cannot "mark up" the technical fee to CMS; they must charge cost

Provision Descriptions

*1. **Anti-Markup**—Imaging services conducted at off-site, physician-owned locations are now considered as services purchased from the site technologists. Physician group cannot bill professional or technical fees greater than cost of interpretation or offsite staff respectively.*

*2. **Under-Arrangement**—Expanded definition of "entity." Referring radiology group included with the hospital as claim-presenting "entity," bringing radiologist financial interest with referring group under scope of Stark.*

*3. **Per-Click Leasing**—Prohibited pre-click leasing and payment to physician for procedures referred by the physician.*

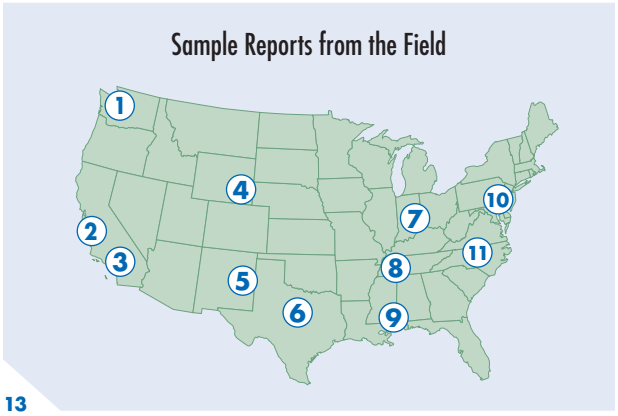
*4. **Sharing**—IDFTs prohibited from subleasing operations or sharing space, equipment, and staff with another individual or organization.*

*5. **Percentage-Based Compensation**—Redefinition of "set in advance" compensation. Percentage-based compensation only allowed for revenue resulting directly from services performed by physician in person.*

*6. **Stand in the Shoes**—Where one entity owns or controls another entity, Stark rules expanded to treat compensation by parent entity. Parent entity "stand in the shoes" of child entity. Indirect financial relationships with physician groups and hospitals, through physicians and clinics respectively, prohibited.*

Source: Marketing and Planning Leadership Council interviews and analysis.

Outpatient Imaging Market in Flux



1. *In early 2008, two leading freestanding imaging center operators, CDI and RCW, merge their Puget Sound operations for a combined eight center operation.*
2. *In mid 2006, Los Angeles-based RadNet acquires Radiologix for $208 million acquirng 106 centers.*
3. *After recovering from chapter 11 bankruptcy, Insight Health sold six southern California centers to RadNet.*
4. *System was approached by physician group looking to sell their imaging business to the system. The system is intentionally delaying the decision.*
5. *Fifteen-hospital system was approached by a multispecialty physician practice looking to sell their imaging business to the system.*
6. *Large system, previously lacking an outpatient imaging presence, recently began acquiring underperforming imaging centers in saturated markets*
7. *Three-hospital academic medical center was approached by two physician groups looking to sell their PET centers to the system.*
8. *HCA, operating 96 freestanding imaging centers across the nation, added 29 outpatient facilities to support their outpatient growth strategy.*
9. *A private equity firm purchases HealthSouth Corporation's 53 freestanding imaging centers to form Diagnostic Health Corporation. The new entity will operate across 20 states.*
10. *Academic medical center was approached by two physician groups looking to sell their PET centers.*
11. *In late 2007, Novant Health, a health system lacking an outpatient imaging presence, acquired MedQuest and its 92 freestanding imaging centers operating in a five-state region*

Source: Marketing and Planning Leadership Council interviews and analysis.

Imaging Centers a Possible Purchase?

Three Strategies to Those Seeking Buyers

Strategy	Description	Key Considerations
Purchase and Re-Open	Hospital purchases freestanding imaging services and re-opens the center under hospital management	• Logical strategy if imaging center is affliated with a large physician practice and steady referral stream • Must ensure likelihood of referral continuance under new management
Purchase and Close	Hospital purchases imaging center and moves services/equipment to a new location; closes imaging center doors to remove market competition	• Strategy best if imaging center not optimally placed for outpatient volume growth and sustained capture • IDTF location may risk reimbursement trade-off compared to hospital placement
Refuse Purchase	Hospital refuses imaging center purchase, decides instead to outcompete until the freestanding facility closes its doors in submission	• Optimal strategy if hospital holds technology advantage over imaging center or referrral sources not affliated with freestanding center • Works best when imaging center already in debt/just opened its doors

14

Imaging Centers Seeking Buyers

- Market saturation and dwindling reimbursement post-DRA forcing many freestanding imaging centers to re-evaluate business prospects and seek potential hospital buyers to minimize losses
- Hospitals may decide to purchase private imaging centers to remove market competition when significant OP volumes are at stake

Source: Marketing and Planning Leadership Council interviews and analysis.

Filtering Through the For Sale Signs

15

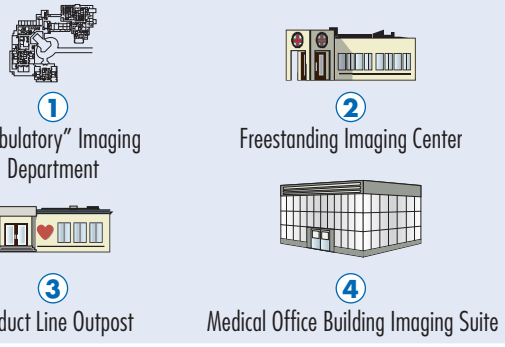
	Key Questions	Valuation Impact
1. Question of Balance	• Does the current mix of modalities offer a comprehensive suite of imaging services? • Are there modalities within the imaging center that might cannibalize the volumes of another?	• Multimodality centers are best suited to manage fluctuating patient demand across several services and avoid operating losses
2. Obsolescence Risk	• Is the current level of technology offered at the imaging center behind the standard of care? • Are any cutting-edge technologies likely to disrupt the current clinical care continuum and replace exiting modalities in the near term?	• Imaging center's ability to adapt to technology change largely based on existing profitability; big ticket modalities typically generate higher revenues but are also a riskier investment • Advanced modalities matter more to niche referrers, as routine exams likely to account for majority of referral volumes at most centers
3. Long-Term Sustainability	• Does the imaging center derive a significant proportion of its referrals from a small nucleus of physicians? • Is the center located in an area likely to see strong patient demand in the future?	• Self-referring physician practices more likely to sustain current business model than IDTFs • Independent facilities at risk of losing volumes if nearby hospitals and other referral sources leave the market
4. Market Competition	• Are there significant barriers to market entry? • Is the local market already saturated with competitors offering similar services? • Is the imaging center and established player?	• Risk of volume decline likely tied to self-sustained referral streams from imaging equipment owning physicians • Broad mix of modalities best suited for long-term competition as one stop imaging shop
5. Legislative Changes	• Are any existing modalities at the imaging center at risk for reimbursement cuts or further utilization regulations? • Is a substantial portion of the business plan (i.e., joint ventures) reliant on existing regulations that are vulnerable to future rule-making?	• Multimodality centers are better equipped to navigate through annual reimbursement changes than are single modality centers that rely solely on the revenue fortunes of one imaging platform • Joint venture models with non-radiologists are likely to come under increased scrutiny in near term
6. Loss of Self-Referral Incentive	• Are referring physicians likely to send patients elsewhere once they no longer own the scanner? • Is there a market trend of in-office referrals among local physicians and what other affiliations exist?	• Patient convenience the only factor potentially keeping referrals in place once physicians no longer own the scanner; physicians affiliation with competing service provider the likely counterweight

Source: Marketing and Planning Leadership Council interviews and analysis.

Outpatient Facility Models

Determining Optimal Facility Strategy

Four Outpatient Facility Models



16

1. "Ambulatory" Imaging Department
Separate ambulatory imaging department exists within hospital as a virtual space separate from other imaging services to maintain benefits of dedicated space, brand

2. Freestanding Imaging Center
Being freestanding allows center to reach new patient populations and relieve inpatient campus; versatile model for moving beyond heavy competition or market saturation

3. Product Line Outpost
Outpost focuses on niche services either within one service line or across service lines with common comorbidities; allows differentiation within saturated markets

4. Medical Office Building Imaging Suite
MOB suite combines lucrative imaging modalities with convenience for physicians, patients; benefits from healthplex principles of collocation

Model #1—"Ambulatory" Imaging Department

Co-Located Center Captures On-Campus Efficiencies

Cedars-Sinai Imaging Center

17

Key Features

- *Separate entrances/hallways for outpatients, inpatients and emergency patients*
- *Four-floor, 121,000 SF facility contiguous with existing hospital space*
- *All modalities in cores or pods, with preferred rooms for inpatients and outpatients, respectively*
- *Worked with architects to separate inpatient and outpatient flow*

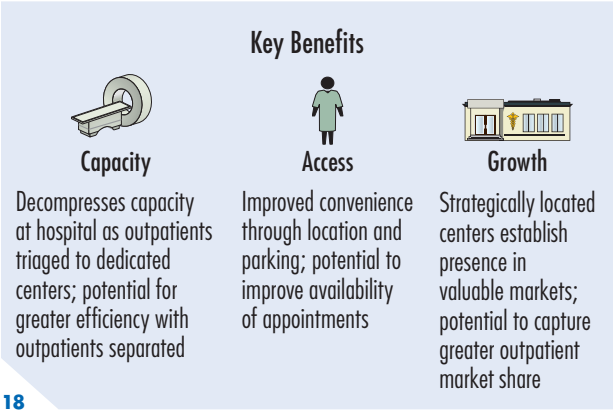
Case in Brief—Cedars-Sinai Medical Center

- 950-bed hospital located in Los Angeles
- Dedicated to consolidate inpatient, outpatient and emergency radiology in facility contiguous to hospital
- Single facility allows Cedars-Sinai to provide an outpatient experience while at the same time fielding all inpatient and emergency orders with the same equipment
- 95 percent of referrals originate with 2,000 person medical staff

Source: Marketing and Planning Leadership Council interviews and analysis.

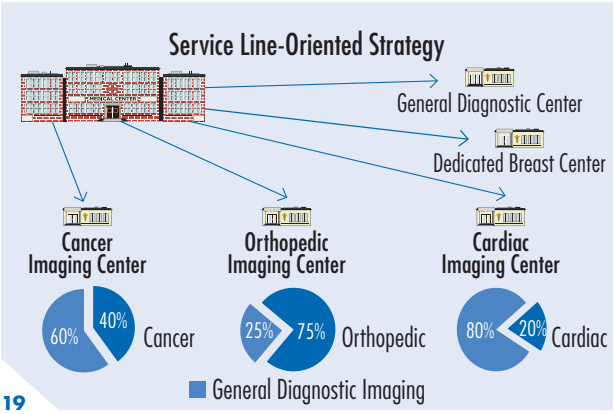
Model #2—Freestanding Imaging Center

Advantages of Freestanding Centers



Model #3—Product Line Outpost

Freestanding Specialized Imaging Centers



Case in Brief—Chase Northern[1]

- 600-bed tertiary care center in the South with 12 total imaging sites, including 5 major outpatient imaging centers
- Outpatient imaging strategy is to open service line-oriented centers adjacent to potential referring physician offices

Cancer Imaging Center
- *CT, MRI, PET/CT, SPECT, US*
- *Cancer imaging center part of larger ambulatory care pavillion that also services general diagonostic exams*

Orthopedic imaging Center
- *MRI, US, X-Ray, CT, SPECT*
- *Full service orthopedic imaging center that has a steady stream of dedicated volumes and backfills general diagnostic exams*

Cardiac Imaging Center
- *CT, MRI, PET, SPECT*
- *Opened as cardiac dedicated facility, but didn't have the volumes to support scanner; now majority are general diagnostic*

Dedicated Breast Center
- *Screening and dignostic mammography, breast ultrasound*

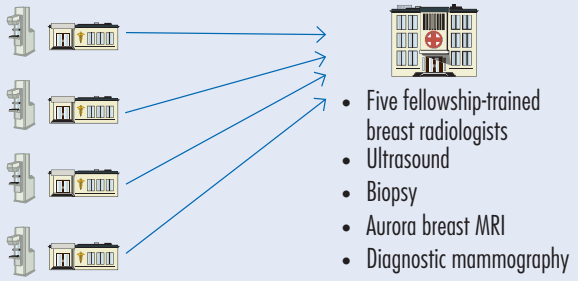
General Diagnostic Center
- *Full service imaging suite offering all major modalities and routine exams*

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

Hub and Spoke Specialized Imaging Centers

Breast Imaging Services at Gamaliel Regional[1]



20

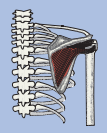
- *Digital screening mammography distributed in 11 community sites*
- *More advanced breast imaging procedures funneled to centralized breast imaging program*

Case in Brief—Gamaliel Regional[1]

- 600-bed medical center in the Midwest
- To provide environment in which Gamaliel's few, mammography-subspecialized radiologists could be more efficient, medical center moved all diagnostic breast procedures to the main campus, concentrating radiologists' responsibilities in one location
- Centralization of diagnostic procedures was complemented with decentralization of screening procedures across several locations, including several imaging centers which improved access, convenience for routine mammograms
- Given the deployment of digital mammography, mammography-subspecialized radiologists can read screening exams at main campus, allowing them to remain available for advanced, diagnostic procedures

Specialized Products Forging Center Identity

Lessons in Branding Ingenuity

Service Line	Strategies	Considerations
Pediatrics 	• Locate close to family outpatient clinics/facilities • Open facilities with few market competitors offering non-radiating modalities like MRI, US • Best for facilities with large local pediatric population without access to dedicated pediatric care facilities in close proximity	• Pediatric imaging centers likely to require a dedicated anesthesiology team for MRI and possibly CT • Medicaid reimbursement for children often underwhelming • Radiation a primary concern for pediatric populations with heightened risk of induced cancer
Musculoskeletal 	• Locate close to sports medicine clinic or urgent care center to capture outpatient referrals • Partner with orthopedic group to open dedicated outpatient imaging center • Strategy best for facilities with comprehensive orthopedic surgery program to offer follow-up care	• Monitor ongoing reimbursement climate for common referral modalities like MRI; already negatively impacted by the DRA • MRI the most common single-modality freestanding center type; market saturation likely and necessitates service differentiator
Interventional Radiology 	• Lease clinic space for routine screening or cosmetic interventional radiology services • Open a multi-specialty practice facility for heart/vascular or interventional oncology services • Best bet for health systems with physician champions invested in driving utilization and preventing potential physician turf battles	• Investment not likely to be as capital intensive compared to other niche strategic options • Most feasibility considerations include volume of expectations, type of tables • Robust credentialing program needed for multi-specialty nature of interventional radiology

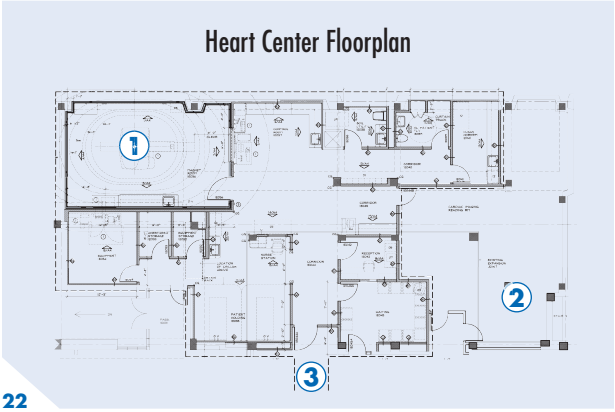
21

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

A Single Modality Cornerstone

MR-Centric Cardiovascular Imaging Center at Portsmouth[1]



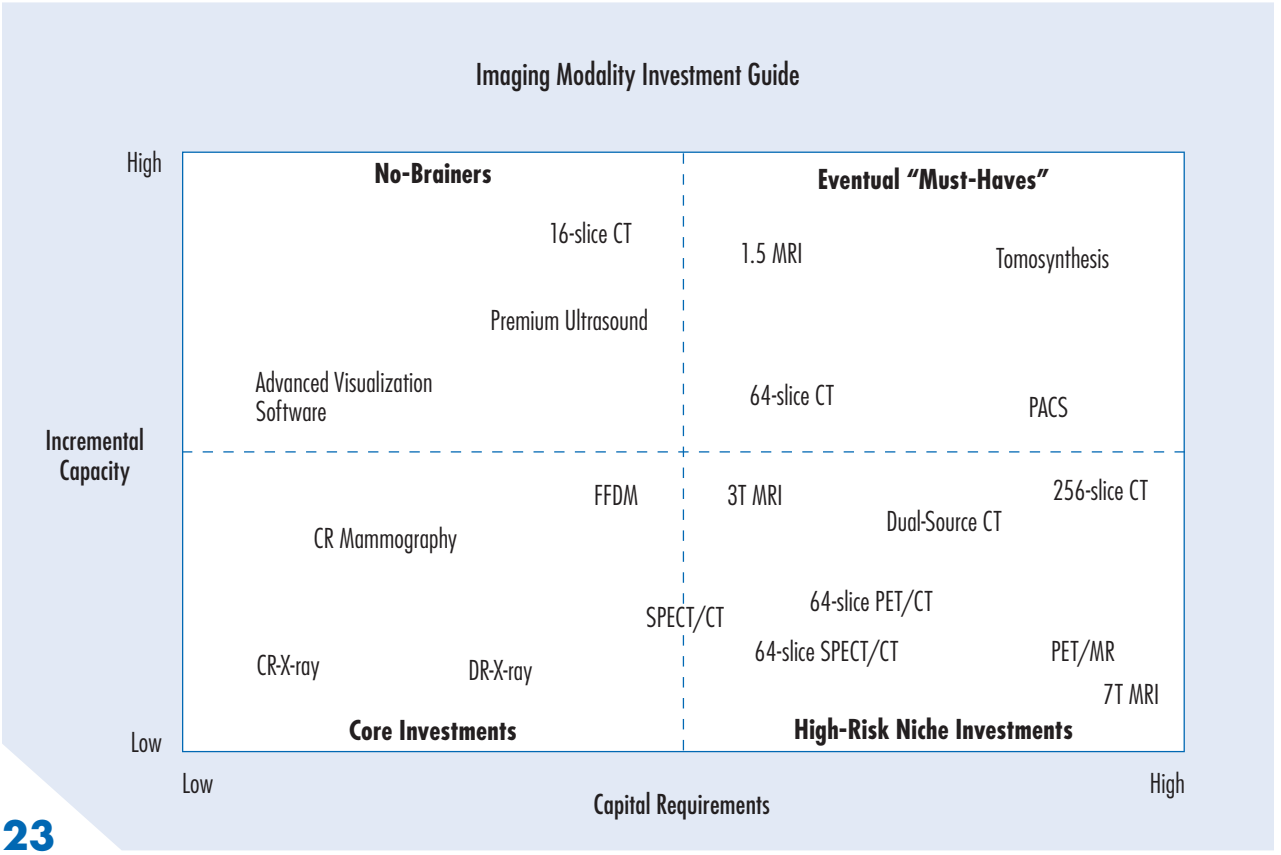
22

1. *Dedicated MR scanner*
2. *Joint Reading room*
3. *Corridor to CT scanner in radiology department*

Case in Brief—Portsmouth[1]

- 750-bed, not-for-profit academic medical center, located in the Southeast
- Cardiovascular Imaging Center opened in May 2006 with dedicated 1.5 T MR scanner; shared 64-slice CT scanner is located in main radiology department
- Program staff typically provide seven to eight cardiac MR scans and two to four CCTA scans per day
- Time to complete MR scans decreased by 35 percent after transition to the dedicated facility because of operational efficiencies
- Facility includes joint reading room for collaborative reading process that includes both radiologists and cardiologists

Niche Investments Increasingly Strategic



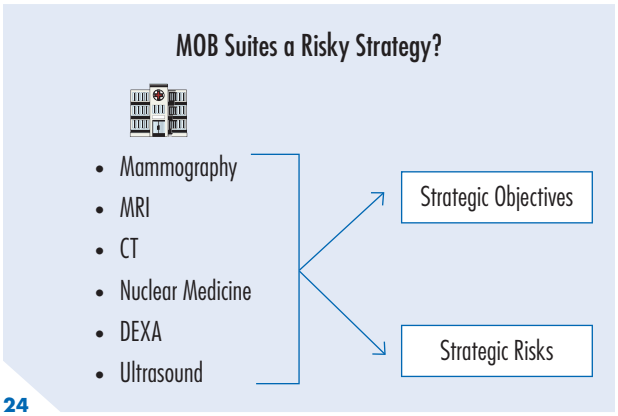
23

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

Model #4—Medical Office Building Imaging Suite

Hoping to Stem Self-Referral



24

Strategic Objectives

- *Programs in competitive markets seeking to lock in imaging referrals from high-volume specialists or large groups of general practitioners*
- *Preemptive move to prevent physicians from purchasing own equipment*

Strategic Risks

- *DRA set to expire in 2012*
- *Modest volumes for high-end equipment*
- *Physician groups may still include ownership of imaging in long-term strategic plans*

Evaluating Strategic Fit

Outpatient Facility Models

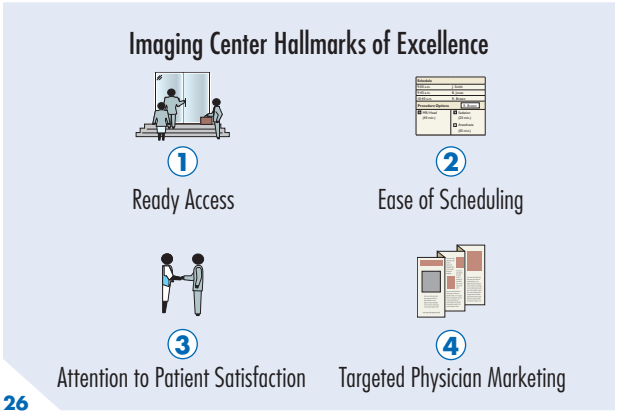
Model	Applicability	Caveats
"Ambulatory" Imaging Department	• Improves on convenience of centralized department while limiting redundancy • Potential strategy for high-volume, landlocked institutions in saturated outpatient markets	• Persistent disadvantages to hospital-based imaging services such as lack of parking, convenience • Requires significant square footage to offset from main hospital, segment inpatient and outpatient groups
Freestanding Imaging Center	• Still the most convenient model for providing outpatient imaging • Financial outlook for imaging centers typically positive on balance	• Increasingly risky proposition for saturated markets with entrenched outpatient providers • Increased scrutiny of structural quality for standalone imaging centers
Product Line Outpost	• Specialized centers a potential strategy for capturing large percentage of key patient groups • Allows institutions to target potentially underserved populations	• Risk of center being too specialized, resulting in limited attractiveness to other demographics, patient segments • Some models such as cardiac imaging centers have high bar for achieving sufficient ROI
Medical Office Building Imaging Suite	• Programs in competitive markets seeking to lock in imaging referrals from high-volume specialists or large general practitioner groups • Preemptive move to prevent specialists from purchasing own equipement	• Requires critical mass of referring physicians in order to achieve reasonable ROI • No guarantee physicians will not pursue own scanners in the long term

25

Source: Marketing and Planning Leadership Council interviews and analysis.

Hallmarks of Excellence

Key Optimization Strategies



26

1. Ready Access
Ensuring sufficient capacity to see patients in timely fashion critical to center success

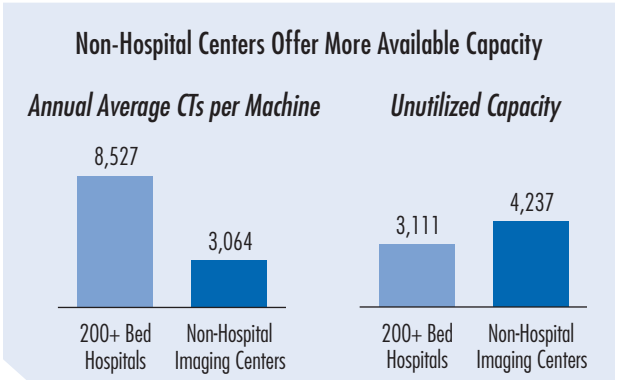
2. Ease of Scheduling
Streamlining scheduling procedures frees operational capacity, allows steady flow of patients to center

3. Attention to Patient Satisfaction
Role of service coordinator, reducing patient wait time, and improving amenities all aid in improving patient experience

4. Targeted Physician Marketing
Focusing on priority physicians with quick report turnaround and dedicated liaisons help lock in referral streams

Hallmark #1—Ready Access

Trading Efficiency for Access



27

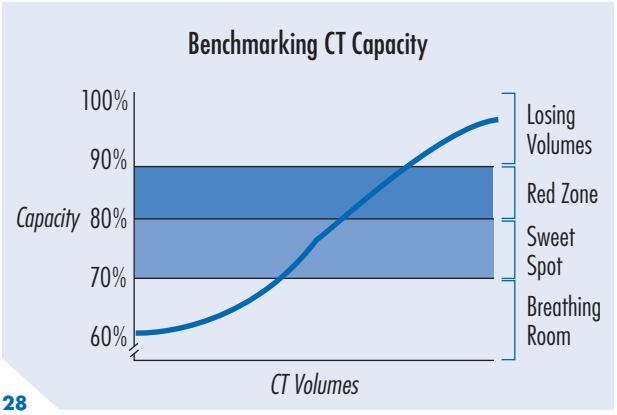
Assumptions

Hospitals
- 200-bed hospitals or greater
- 24,600 scans per site per year
- 2 CTs per site
- Operates 12.2. hours per weekday, 10.1 hours per weekend
- 3 scans per hour
- Operates 52 weeks per year
- Numbers include inpatient, outpatient, and ED patients

Non-Hospital Freestanding Imaging Centers
- 3,370 scans per site per year
- 1.1 CTs per site
- Operates 9.1 hours per weekday, 1.3 hours per weekend
- 3 scans per hour
- Operates 52 weeks per year

Source: Verispan, "Diagnostic Imaging Center Market Report," 2006; Marketing and Planning Leadership Council interviews and analysis.

Thin Line Between Productivity and Loss



28

Avoid Compression on Each Modality

Imaging Modality Utilization Worksheet

			CT	MR	Radiography	Ultrasound	Mammography
Step 1: Determine Patient Volume	**Number of Procedures**		*30,000*	*8,000*	*46,800*	*33,000*	*20,000*
	Procedures per Patient	÷	*1.49*	*1.17*	*1.25*	*1.08*	*1.05*
	1 **Current Volume**	=	*20,134*	*6,383*	*37,440*	*30,555*	*19,048*
Step 2: Determine Capacity	**Hours of Operation**		*2,600*	*2,600*	*2,600*	*2,600*	*2,600*
	Hours per Patient	÷	*0.33*	*0.75*	*0.25*	*0.25*	*0.25*
	Number of Machines	x	*3*	*2*	*4*	*4*	*4*
	2 **Estimated Capacity**	=	*23,400*	*6,933*	*41,600*	*41,600*	*41,600*
Step 3: Determine Utilization	**Utilization** 1 ÷ 2		*86%*	*90%*	*90%*	*73%*	*48%*

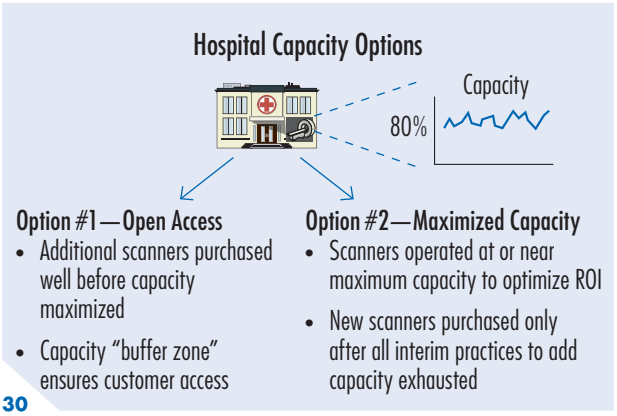
29

Greater than 80% utilization suggests compression

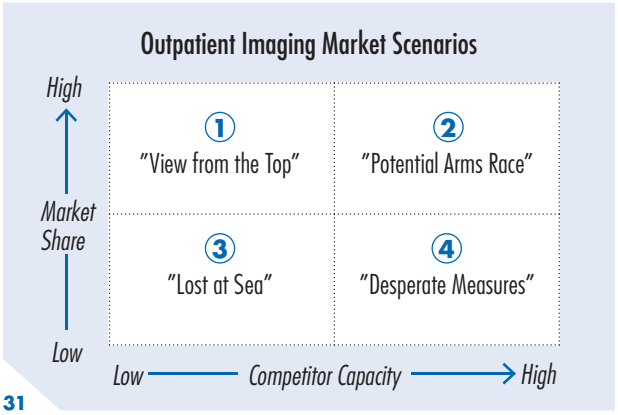
Source: Marketing and Planning Leadership Council interviews and analysis.

Two Paths to Capacity Optimization

Open access model superior in competitive markets



Map Capacity Goals to Market Reality

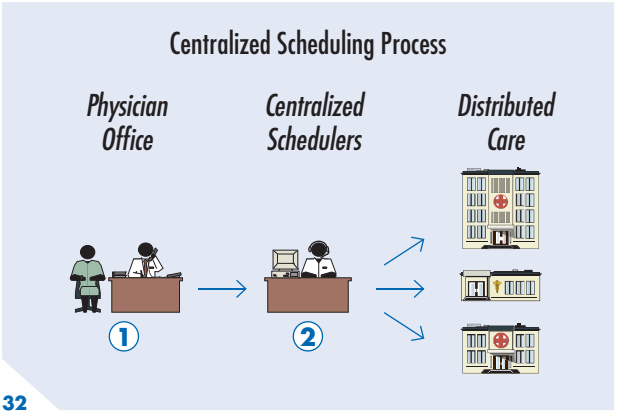


Scenario	Description	Capacity Strategy
1. "View from the Top"	• Best scenario for hospitals, as it likely means they've already fought off (successfully) several competitive threats • May be vulnerable to competitors entering areas where current customers travel greater distances to hospital's imaging facilities	Risk complacency; best tactic to manage capacity aggressively and ensure short backlogs, keeping vulnerability at bay
2."Potential Arms Race"	• Difficult to determine what percentage of hospital imaging growth due to overall market increases versus successfully outdueling competitors • At a minimum, hospitals should focus on capturing "fair share" of incremental market growth	Increasingly vigilant regarding competitor activity, matching them one for one on workhorse technologies
3."Lost at Sea"	• Low competitors' capacity likely means hospital surrounded by imaging centers, with not enough volume to go around • Increasing hospital market share likely to come at the expense of competitors; gains may prove limited	Hold the line on purchasing, instead direct attention to service and improved access to existing capacity
4."Desperate Measures"	• Arguably worst scenario for hospitals, as any volume gains to come at expense of competitors, most likely through wild strategems and acrimonious struggles • Hospitals "standing down" to competition potentially leaving much on the table; competing for volume a risky (and costly) move	No choice but go above and beyond on service; should volumes and share grow, add machines well before typical benchmarks to keep momentum

Source: Marketing and Planning Leadership Council interviews and analysis.

Hallmark #2—Ease of Scheduling

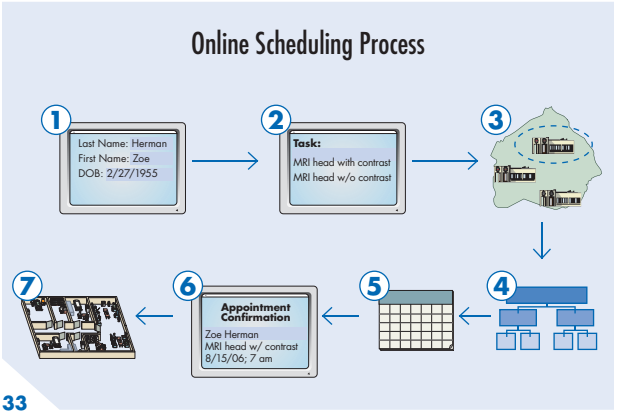
Distributing Patient Volumes



32

1. *Physician office calls to schedule patient appointment*
2. *Schedulers book appointments for all modalities, facilities*

Online Scheduling Maximizes Efficiencies



33

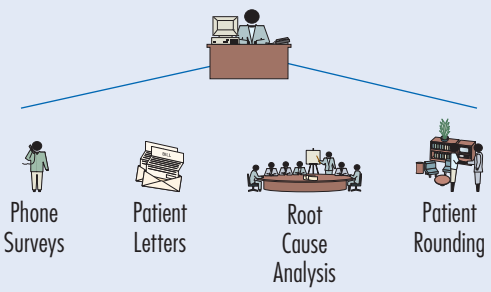
1. *Patient name, DOB, insurance plan identified in database*
2. *Requested tests, ordering physician name selected*
3. *Preferred location specified*
4. *Rules engine prompts series of questions to ensure proper exam selection*
5. *Preferred time, day selected*
6. *Final selection made, free text comments added*
7. *Itinerary handed to patient with directions, exam prep*

Source: Marketing and Planning Leadership Council interviews and analysis.

Hallmark #3—Attention to Patient Satisfaction

Appointing a Service Quality Representative

Representative Job Functions



34

Phone Surveys
- *Calls percentage of patients to evaluate service experience*

Patient Letters
- *Responds to patient letter, thanks patient feedback, explains course of corrective action if appropriate*

Root Cause Analysis
- *Facilitates meetings to understand cause of recurring service problems*

Patient Rounding
- *Visits waiting room in morning, proactively speaks with patients to field questions*

Center Environment an Important Consideration

Examples of Environmental Improvements

Reception and Waiting Areas

Scanning Areas

35

Reception and Waiting Areas	Scanning Areas
• Calculate average wait time and clearly communicate to patient • Keep patients informed of any delays; if patients wait for over 15 minutes, receptionists should check with technologists about delay • Provide refreshments, such as coffee and cookies to patients, family in waiting room; consider providing health-conscious foods • Escort patients from the waiting room to the appropriate room for their procedure or scan • Place an internet kiosk in waiting room	• Improve patient gowns, especially women's services • Warm tones, floral photography help create calming environment • Natural light filtered into exam room can reduce feelings of claustrophobia • Visual artwork incorporated into ceiling tiles above technology • Color-coded modality-specific wrist bands provided for patients scheduled for multiple exams provide visual cue for techs to ensure patients do not miss a test • Ensure patient privacy using sound proof doors and walls

Source: Marketing and Planning Leadership Council interviews and analysis.

Improving the Patient Experience

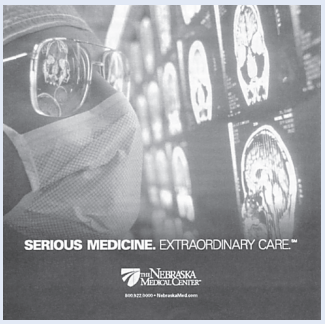
36

Implementation Steps		Success Tips	Common Missteps
1. Appoint service quality representatives	• Select existing staff members for role • Assign responsibility for tracking, resolving all patient issues	• Carve out role as partial FTE from marketing or nursing to minimize cost • Ensure representative demonstrates proactive, compassionate nature • Require quarterly reports, dashboard on patient service data	• Minimizing importance, scope of positions • Failure to gain staff buy-in to support representative's efforts
2. Develop imaging-specific patient survey	• Collect survey examples from various sources, including internal departments • Modify questions to reflect outpatient imaging priorities, local markets	• Increase sample size with point-of-exit administration • Collect modality, location information • Use both objective and subjective metrics • Include question on likelihood to refer family/friends • Test survey internally and in pilot group before formal administration	• Failure to balance brevity and specificity • Patients not encouraged to complete survey
3. Uncover "hidden" service lapses	• Determine whether to outsource mystery shop • Develop comprehensive list of metrics	• Conduct shopping exercise quarterly • Select a competitive shop to benchmark against local market	• Lack of objective, quantitative metrics • Failure to recognize potentially biased view of internal mystery shopper
4. Hardwire service ethic with scorecard	• Select key service metrics as indicators of overall performance • Set goals for performance on each metric • Institute staff incentives for achieving goals	• Align scorecard metrics, weights with strategic service objectives • Review, reset goals for each metric quarterly	• Metrics do not reflect continuum of service experience • Inadequate emphasis on patient-related service metrics
5. Prepare for price inquiries	• Set up centralized phone number for all price requests • Develop pricing flyer for distribution to referring physician offices, patients • Train hospital staff to collect appropriate information and explain quote	• Prioritize quality of customer service as well as accuracy of price quote	• Failure to communicate existence of centralized pricing resource to physicians, patients • Decreased quote accuracy due to limited list of required data

Source: Marketing and Planning Leadership Council interviews and analysis.

Assess Consumer Advertising Opportunities

Message of Technological Sophistication



37

Ad in Brief—Nebraska Medical Center

- 735-bed academic medical center in Omaha, Nebraska
- Launches campaign in both Spanish and English to promote hospital brand, position itself as the regional referral center
- Uses radiology image to convey technological advancement of hospital

1. *Excellence of radiology department is an implicit message of ad*
2. *Image communicates high degree of technological sophistication at hospital*

Message of "Best in Class"

38

Ad in Brief—Prince William Hospital

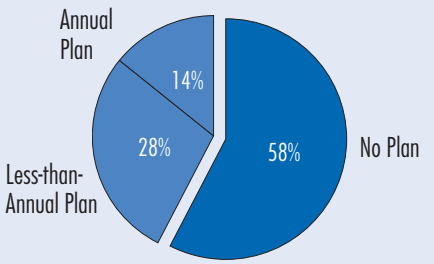
- 210-bed hospital in Manassas, Virginia
- Brands radiology department and other integrated services as best-in-class
- The competitor, a nearby diagnostic lab, exited market within one year of initiation of marketing campaign

1. *Two thumbs up reinforces theme*
2. *Full chest x-ray grabs viewer's attention*
3. *Creative slogan boasts the best "film" in town*
4. *Emphasizes that hospital is the only facility in market with fully integrated equipment, services on-site*

Hallmark #4—Targeted Physician Marketing

Minority of Hospitals Have Imaging Marketing Plan

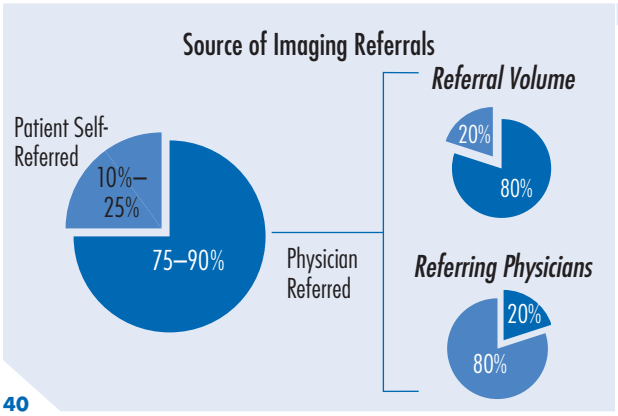
Hospitals with Radiology Marketing Plan
n=145



39

Source: Nebraska Medical Center, Omaha, NE; *Healthcare Advertising Review,* January/February 2004: 7; Prince William Hospital, Manassas, VA; *HealthCare Advertising Review,* March/April 2001: 13; Imaging Performance Partnership Marketing Survey 2008; Marketing and Planning Leadership Council interviews and analysis.

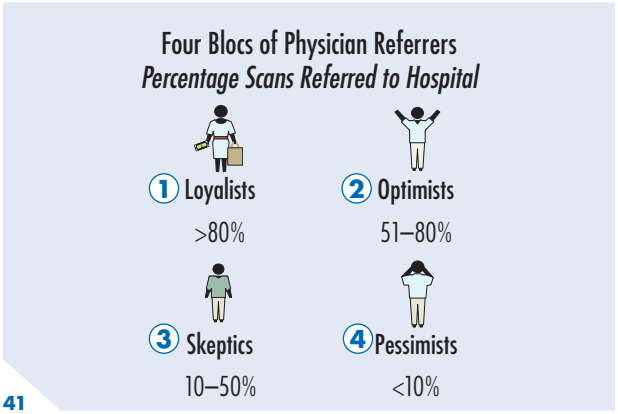
Target Top Referring Physicians



40

Outreach focused on physicians accounting for 80% of imaging referral volumes

Adopt Strategic Physician Outreach Approach



41

Outreach Strategy

1. Loyalists
- *Visit twice monthly*
- *Focus on problem resolution, education of new services, catering to special needs*
- *Risky to rely too heavily on small group of loyalists' volumes*
- *Strength of relationship enables capture of candid feedback*

2. Optimists
- *Visit monthly*
- *Quality of service typical tipping point to increase referrals*
- *Inconsistencies in service can cause care migration*
- *Significant opportunity to garner intelligence from physician surveys*

3. Skeptics
- *Visit quarterly*
- *Vital to differentiate services from competition to garner greater market share*
- *May divide referrals based on inflexible conditions (i.e. patients' insurance); market cautiously*

4. Pessimists
- *Contact twice per year*
- *Focus on education of offerings (subspecialty expertise, patient amenities)*
- *Little volume to lose, however poor experiences may taint other relationships*

Source: Imaging Performance Partnership Marketing Survey, 2008; Marketing and Planning Leadership Council interviews and analysis.

Make Physician Service Excellence Top Priority

Physician Service Promise

SERVICE PROMISE

Milhous Health promises to provide the following level of service for outpatients scheduled for CT, PET-CT and non-sedation MRI:

SERVICE	PROMISE
Report Delivery	Reports will be available online or faxed within the next business day (Monday-Friday) of completion of the exam. (Exclusions: Breast MRI, 3D Post Procedures, Virtual CT Colonography)
Outpatient Care Coordinator	A single point of contact is available at each Milhous Health campus to handle physician requests and their patient needs and will work with the Imaging Services team on all patient needs including scheduling, registration and pre-certification.
Call Results	Milhous Health will call results when requested by the ordering physician or when deemed appropriate based on interpretive findings within one hour of the dictated results during normal business hours.
Appointment Availability	Patients will be offered same day or next day appointments. Best efforts will be made to accommodate the location and time requested by the patient. (Exclusions: Milhous and providers using MedSolutions—Cigna and Great West will require pre-certification prior to the exam)
On Time Appointments	Patients will be seen within 15 minutes of their appointment time.
Access	Convenient parking and complementary valet services (where available) during peak hours for all outpatient imaging services.

42

- *Designated liaison provides single point of contact for all requests*
- *Patient outcomes reported to referring physicians within one hour*
- *Guarantees 15 minutes or less waiting time for any patient*

Case in Brief—Milhous Health System[1]

- Seven-hospital system in the Northeast
- Sent service promise letter to highest volume referring physicians
- Promise involves restrictions on patient wait time, pledge to deliver results within an hour of a procedure
- 15%–17% referral volume growth from targeted physicians attributed to service promise
- Track how often they meet or fail to meet service promise and report to physicians monthly

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

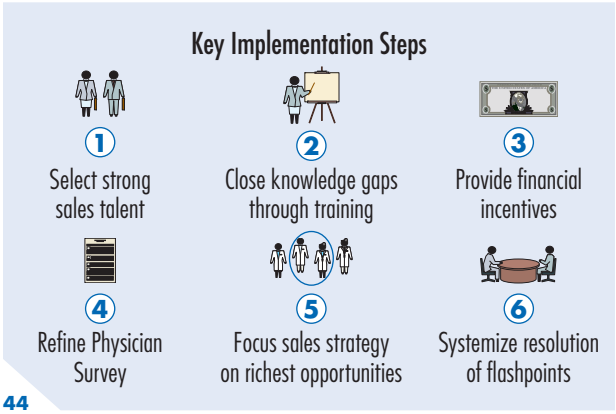
Defining the Ideal Physician Marketer

	Key Job Duties
Relationship Building	• Initiate and maintain communication between medical center's staff and physicians, radiologists and others • Develop and implement planned sales strategies designed to build referrals from providers in assigned territories
Quality Control	• Channel physician complaints to appropriate administrators, including non-imaging related issues • Ensure hospital, radiologist service standards are met within and outside hospital
Physician Education	• Assist with coordination of physician activities and services, such as information system interfaces, management services, organization efforts, and educational meetings • Aid referring physicians in understanding and facilitating diagnostic exam ordering and scheduling
Administrative Duties	• Collect and analyze referral and exam data to identify opportunities for volume growth, market expansion • Brief radiology director on outreach efforts, including logging of physician-office visits and service issues
Community Involvement	• Provide support for community outreach events, such as lectures or screenings • Promote department's brand and vision at conferences, other external seminars • Oversee planning and implementation of events to reward physicians and celebrate their achievements
Skills Development	• Maintain in-depth knowledge of customer needs and radiology technologies, market trends, new services • Understand evolving compliance, regulatory, and technical issues
Business Development	• Assist with department's professional staff recruitment, retention and orientation efforts • Collaborate on marketing plan's vision, strategic goals and action steps • Monitor competitor activity, reporting threats to business to imaging leadership

43

Source: Marketing and Planning Leadership Council interviews and analysis.

Maximizing Physician Liaison Effectiveness



44

Implementation Steps	Success Tips	Common Missteps
1. Select strong sales talent • Alter job description language, keywords to increase attractiveness of position to sales-oriented candidate • Craft interview questions that extract evidence of sales skills, personality	• Ideal candidate possesses both sales orientation and aptitude for understanding, communicating clinical information	• Assumption that clinical experience trumps sales background • Failure to include results-focused questions, probe for detail interviews
2. Close knowledge gaps through training • Diagnose development areas • Determine feasibility of outsourcing • Develop course materials or select vendor	• Select vendor offering modules on tangible skills and measuring progress • Monitor staff progress in development areas to ensure training effectiveness • Ensure compatibility with vendor through staff "sniff test"	• Understanding internal capabilities to execute own training program • Unrealistic expectation of time commitment for training preparation, class attendance
3. Provide financial incentives • Determine appropriate growth metrics • Match bonus structure to liaison model, level of staff "salesiness"	• Tie incentives to strategic goals; adjust quarterly • Measure pre/post-incentive referral volume to assess effectiveness of bonus structure	• Failure to align bonus structure with staff motivational factors
4. Refine Physician Survey • Develop imaging-specific questions • Include metrics on referral streams, service performance relative to competition	• Pressure-test success of recent initiatives (e.g. PACS implementation) through inclusion of targeted questions • Capture data by specialty	• Lack of specific metrics needed to isolate causes of dissatisfaction
5. Focus sales strategy on richest opportunities • Gather physician referral volume, revenues intelligence • Segment physicians by opportunity potential • Craft individualized communication strategy	• Focus primarily on "at risk" physicians with volume loss greater than 50% • Look at contribution profit, not just volumes, by physician • Conduct data analysis on monthly basis	• Executing boilerplate strategy across all physicians • Focusing efforts too heavily on recovering "goners" rather than preventing them
6. Systemize resolution of flashpoints • Devise documentation protocols • Triage problems to appropriate staff • Commit to timeframe for complaint resolution • Loop back with physician upon resolution	• Provide mid-course status update to physician • Involve senior leadership to ensure adequate attention to problem resolution • Analyze flashpoint trends	• Failure to isolate, address true root cause of complaint • Failure to communicate resolution to physician

Source: Marketing and Planning Leadership Council interviews and analysis.

Outpatient Imaging Center Evaluation

Ten Diagnostic Questions

		Yes	No
Market Considerations	• Are there under-represented imaging modalities within our market?	____	____
	• Have we reached capacity on our existing imaging modalities?	____	____
	• Are we losing imaging patient volumes to competing hospitals, freestanding centers, and/or physician groups?	____	____
	• Are there acquisition opportunities for existing competitor imaging facilities?	____	____
Physician Considerations	• Are there physicians we can attract through niche imaging services in freestanding centers?	____	____
	• Are legal changes requiring us to find new alignment models with our physicians?	____	____
Operational Considerations	• Do we have a centralized scheduling process?	____	____
	• Do we believe certain patient amenities are worth additional capital investment?	____	____
	• Do we know our top referring physicians and prioritize our marketing efforts to this group?	____	____
	• Do we have a dedicated physician liaison to ensure we are meeting the needs of referring physicians?	____	____

45

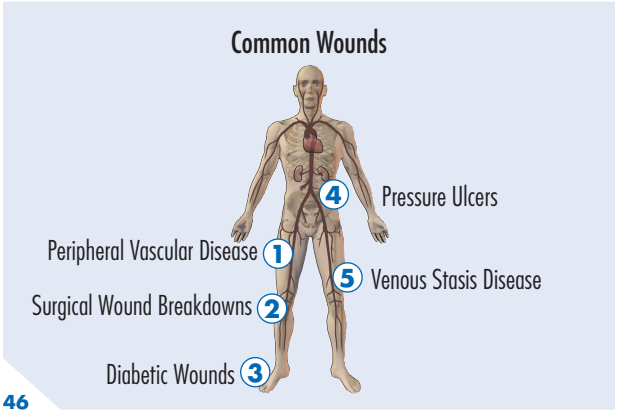
Source: Marketing and Planning Leadership Council interviews and analysis.

II. Outpatient Wound Care Centers of Excellence

- *Clinical Overview*
- *Expanding Market Opportunity*
- *Financial Outlook*
- *Opportunities for Excellence*

Clinical Overview

The World of Chronic Non-Healing Wounds



46

1. Peripheral Vascular Disease
Obstruction of the peripheral arteries leads to decreased blood flow, tissue breakdown and insufficient circulation

2. Surgical Wound Breakdowns
Incisions from major surgery fail to heal due to various possible complications from other chronic underlying etiologies

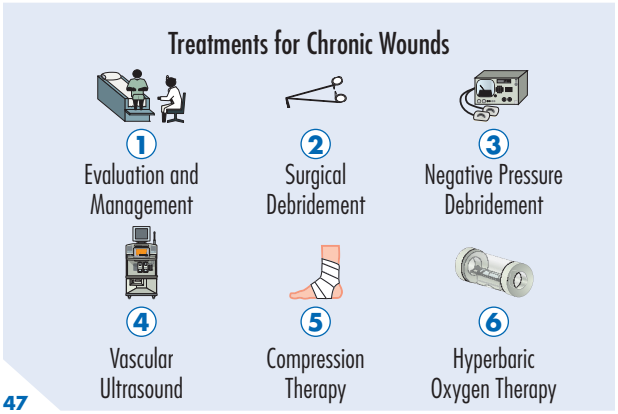
3. Diabetic Wounds
Decreased flood flow, neuropathy of lower limbs leads to unnoticed wounds with insufficient blood supply to facilitate healing

4. Pressure Ulcers
Consistent pressure on area of skin leads to reduced blood supply, causing breakdown; most common in patients confined to wheelchairs, beds for prolonged periods

5. Venous Stasis Disease
Results from failure of venous valves, leading to backed up blood, seepage into tissues, tissue breakdown

Other Types of Wounds
- *Chemical wounds*
- *Spinal injury wounds*
- *Brown recluse spider bites*
- *Necrotizing infections*

Wound Care's Procedural Playbook



47

1. Evaluation and Management
Determine wound etiology, establish treatment protocol, follow up care with patient

2. Surgical Debridement
Remove dead tissue to induce blood flow, promote healing

3. Negative Pressure Debridement
Remove dead tissue using negative pressure to promote healing performed with a wound VAC[1]

4. Vascular Ultrasound
Establish vascular etiology to appropriately address underlying causes

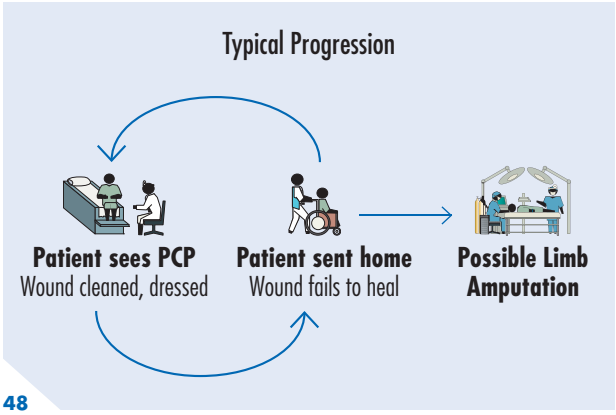
5. Compression Therapy
Multi-layer wrap/Unna Boot gives consistent, graduated pressure to limbs

6. Hyperbaric Oxygen Therapy
Pure oxygen at high pressure fights infection, induces wound healing

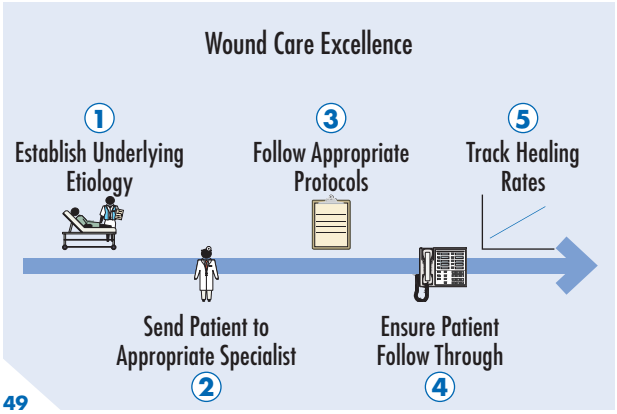
Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Vacuum Assisted Closure

Defining Excellence in Wound Care



48



49

1. Establish Underlying Etiology
- *Diabetic wounds*
- *Pressure ulcers*
- *Venous stasis disease*
- *Peripheral vascular disease*

2. Send Patient to Appropriate Specialist
- *General surgery*
- *Vascular surgery*
- *Podiatry*
- *Infectious disease*

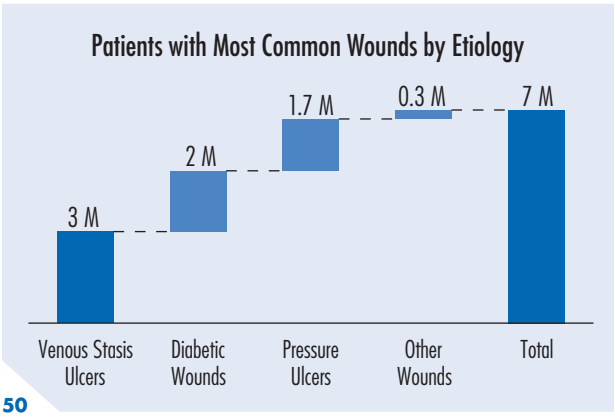
3. Follow Appropriate Protocols
- *Pressure off-loading*
- *Timely, frequent debridement*
- *Wound VAC[1] Treatment*

4. Ensure Patient Follow Through
- *Next visit scheduled*
- *Follow-up reminders*

5. Track Healing Rates
- *Establish protocol efficacy*
- *Improve methods to maximize healing*

Expanding Market Opportunity

Patient Population with Chronic Wounds



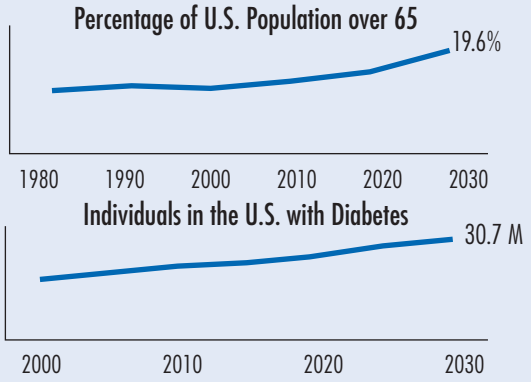
50

Approximately 11.2% of diabetic wounds lead to amputations at cost of around $45,000 per patient

Source: Wu SC, "Foot Ulcers in the Diabetic Patient, Prevention and Treatment," *Vascular Health Risk Management*, 2007, 3:65–76; *National Healing*, "Wound Care Services, an Opportunity for Hospitals," available at: http://jobfunctions.bnet.com/abstract.aspx?docid=122322, accessed May 7, 2008; Marketing and Planning Leadership Council interviews and analysis.

[1] Vacuum Assisted Closure

Wound Care Patient Demographic Growing



51

In 2007 12.6% of population over age 65 and 21.6 million individuals had diabetes.

Evaluating the Dedicated Wound Center Decision

Sample Wound Care Volume Calculator

	Quantity	Multiplier	Total
Population within 20 miles of medical center	425,000		
Percentage diabetics in local market		7%	
Percentage of diabetic patients with ulcers		12%	
Number of diabetic patients with ulcers			**3,570**
Population within 20 miles of medical center	425,000		
Percentage of population pressure ulcers		0.7%	
Number of patients with pressure ulcers			**2,975**
Percentage of population with venous stasis ulcers		0.28%	
Number of patients with venous statis ulcers			**1,190**
Total number of patients with chronic wounds in market			**7,735**
Estimated first year market penetration		5%	
Total number of wound care patients at wound center			**387**
Estimated percentage of patients receiving HBOT[1]		12.5%	
Total number of HBOT[1] patients			**48**

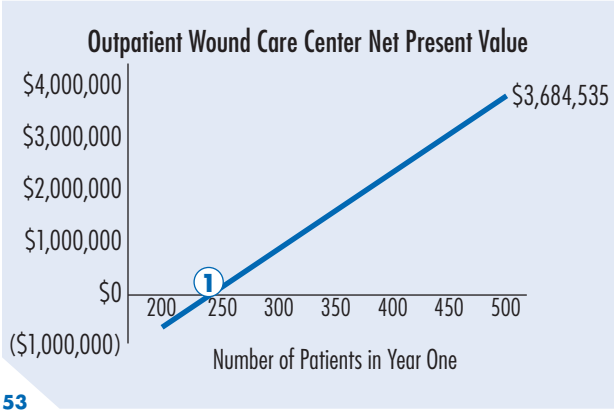
52

Source: US Census Data; WHO Diabetes Programme; Marketing and Planning Leadership Council interviews and analysis.

[1] Hyperbaric Oxygen Therapy

Financial Outlook

Wound Offers Significant Financial Contribution



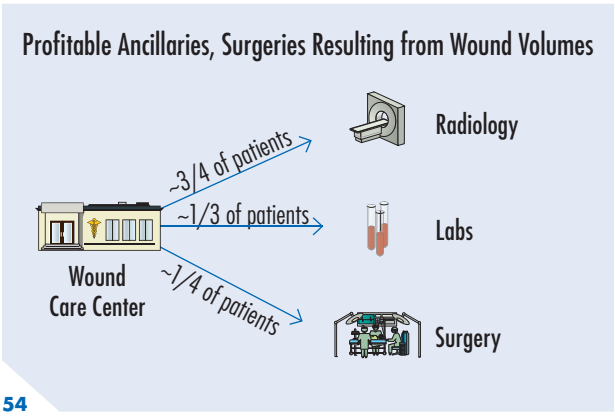
53

1. Breakeven reached at 239 patients in first year

Key Assumptions

- 9% discount rate, five-year time horizon
- 16 billable encounters per patient
- 12.5% of patients receiving 80 HBOT[1] sessions
- Staffing costs include 35% benefits, 3% annual raise
- $25,000 per year, maintenance costs
- Construction, $305 per SF, 2,800 SF total
- HBOT $300,000 for two monoplace chambers
- Extra equipment $78,000
- Annual marketing budget $15,000
- Payer mix 67% Medicare
- Includes inpatient and ancillary downstream revenue

Lucrative Downstream Referrals Add Value



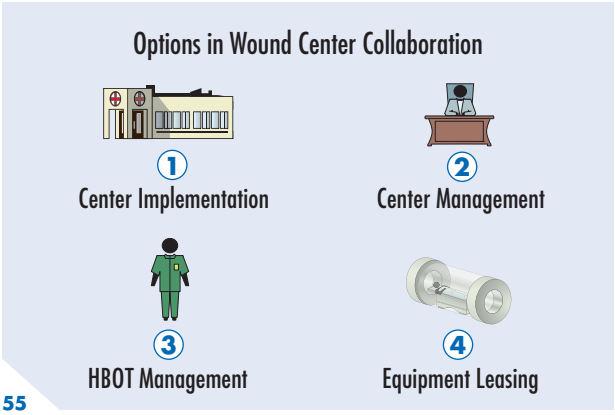
54

Radiology	Labs	Surgery
• X-ray • CT • MRI • Ultrasound • Bone scan • Nuclear medicine	• Full metabolic panel • CBC[2] • Hemoglobin A1C • Wound culture	• Level 4, 5 debridement • Vascular surgery • Skin graft • Amputations

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Hyperbaric Oxygen Therapy
[2] Complete Blood Count

Considering Third Party Assistance



55

Key Third Party Players

Diversified Clinical Services
- Based in Jacksonville, Florida
- Currently manages almost 300 wound care programs nationwide
- Merged with Wound Care Centers Inc. (formerly Curative) in 2006

National Healing
- Based in Boca Raton, Florida
- Currently manages 119 wound management programs nationwide
- Received JCAHO disease-specific certification in 2006

1. Center Implementation
- *For one time fee, consultants aid hospital administrators with center implementation*
- *Assist in all elements of planning, with or without HBOT*
- *Ideal for hospitals lacking administrative support but with strong physician support*

2. Center Management
- *Hospital either pays simple annual fee, or annual fee plus additional per-patient fee*
- *Company manages entire wound center, HBOT program if applicable including billing, management, data tracking*
- *Viable option for hospitals without internal leadership needed to operate center*

3. HBOT Management
- *Hospital pays either annual fee or per-patient fee for management of HBOT[1] program*
- *Company responsible for all elements of HBOT including staffing, management*
- *Good for hospitals with strong clinical support but without HBOT enthusiasm*

4. Equipment Leasing
- *Hospital uses HBOT equipment under lease-to-own arrangement, paying third party per-patient fee*
- *Generally unfavorable, but potentially valuable for risk-averse hospitals without adequate capital to purchase HBOT alone*
- *Hospital left in long-term arrangement without ownership of equipment, decreased reimbursement*

Opportunities for Excellence

Key Areas For Improvement

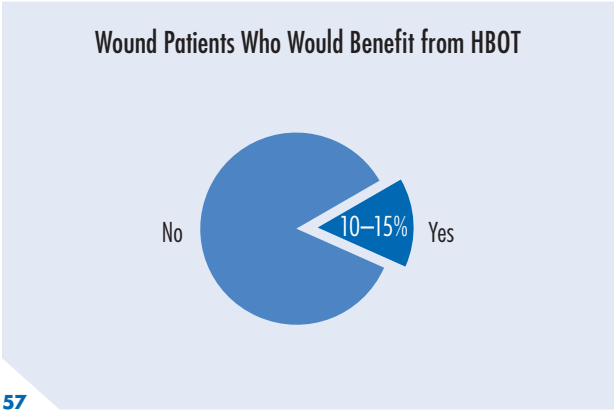
56

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Hyperbaric Oxygen Therapy

Opportunity #1—Offer Hyperbaric Oxygen Therapy

HBOT[1] as an Ancillary Wound Treatment



Technology in Brief—Hyperbaric Oxygen Therapy

- Patient placed in pressurized chamber that compresses air at level of 2.5 times greater than normal atmospheric pressure
- Increased air pressure delivers greater amount of oxygen to all body fluids
- Increased oxygen at damaged tissue sites yields increase in number of white blood cells
- White blood cells help kill bacteria, reduce swelling, and promote formation of new blood cells
- Chronic, infected wounds heal more readily due to greater number of white blood cells

Wound Etiologies Approved for HBOT	Other Ailments Treated with HBOT	
	Common	Experimental
• Some lower extremity diabetic wounds • Acute peripheral arterial insufficiency • Necrotizing fasciitis • Chronic refractory osteomyelitis	• Acute carbon monoxide poisoning • Decompression illness • Gas embolism • Osteoradionecrosis • Soft tissue radionecrosis • Acute traumatic peripheral ischemia • Crush injuries • Actinomycosis	• Lupus • Stroke • Alzheimer's disease • Cerebral palsy • Lyme disease • Chrohn's disease • Traumatic brain injury • Sickle cell anemia • Autism • Snake bite

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Hyperbaric Oxygen Therapy

Size Hyperbarics to Hospital Volumes

Comparing HBOT[1] Options

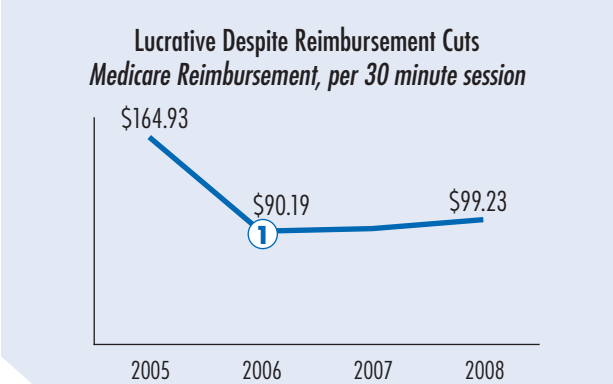
	Monoplace	Multiplace
Patients Treated	1	2 to 10 depending on model
Dimensions	Large acrylic tube, 25–40 inches in diameter, 7 feet long	Dimensions vary; typically configured as small room, 9 feet by 20–30 feet
Space Requirements	400–500 SF	4,000–10,000 SF
Cost	$115,000–$250,000	$600,000–$1.2 million
Advantages	• Lower initial investment • Ability to customize patient protocols • No risk of staff decompression sickness • No continuous mask or hood required	• Constant patient attendance, evaluation by technician • Multiple patients treated per session • Greater working oxygen pressure • Ability to manage patient complications more actively
Disadvantages	• Patient isolation • Increased fire hazard • Higher oxygen cost • Limited pressure capability	• Higher capital outlay, staffing requirements • Larger space requirements • Risk of staff decompression sickness • Less customization in treatment protocols

58

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Hyperbaric Oxygen Therapy

HBOT[1] Economics Still Strong



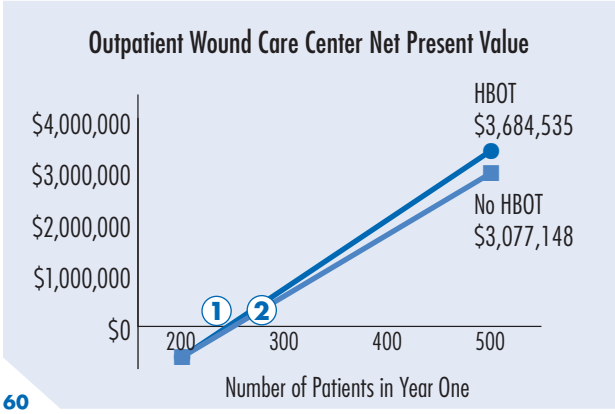
59

1. CMS cuts reimbursement by 45%

Reimbursement per Average HBOT Patient

$99.23	per sessions	
X	3	sessions
$297.69	per visit	
X	25	visits
$7,442.25		

Measuring HBOT's Impact on the Bottom Line



60

1. *Breakeven with HBOT at 239 patients in year one*
2. *Breakeven without HBOT reached at 242 patients in year one*

Key Assumptions

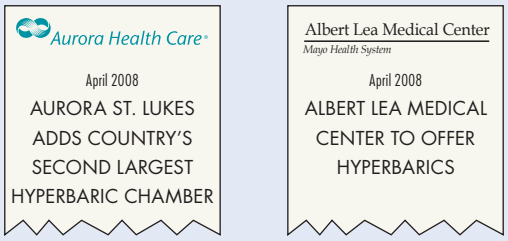
- 9% discount rate, five-year time horizon
- 16 billable encounters per patient
- 12.5% of patients receiving 80 HBOT sessions
- Commercial, adjusted Medicare rates based on national averages
- Staffing costs include 35% benefits, 3% annual raise
- $25,000 per year, maintenance costs
- Construction, $305 per SF, 2,800 SF total
- HBOT $300,000 for two monoplace chambers
- Extra equipment $78,000
- Annual marketing budget $15,000
- Payer mix 67% Medicare
- Includes inpatient and ancillary downstream revenue

Source: Center for Medicare and Medicaid Services; Marketing and Planning Leadership Council interviews and analysis.

[1] Hyperbaric Oxygen Therapy

HBOT[1] Yields Marketing Cachet

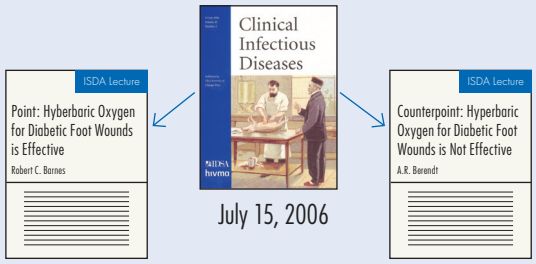
Hyberbarics Adding Prestige to Hospital Wound Program



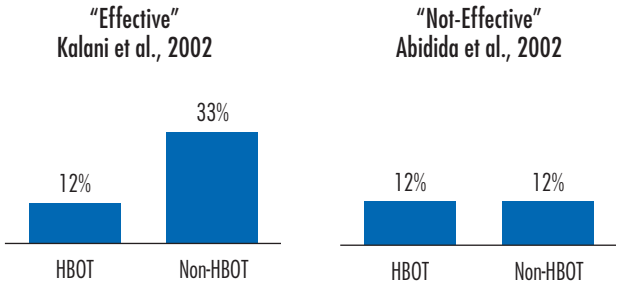
61

HBOT Clinical Value Still in Question

Clinical Literature Inconclusive



Amputation Rates for Patients with Diabetic Lower Extremity Wounds



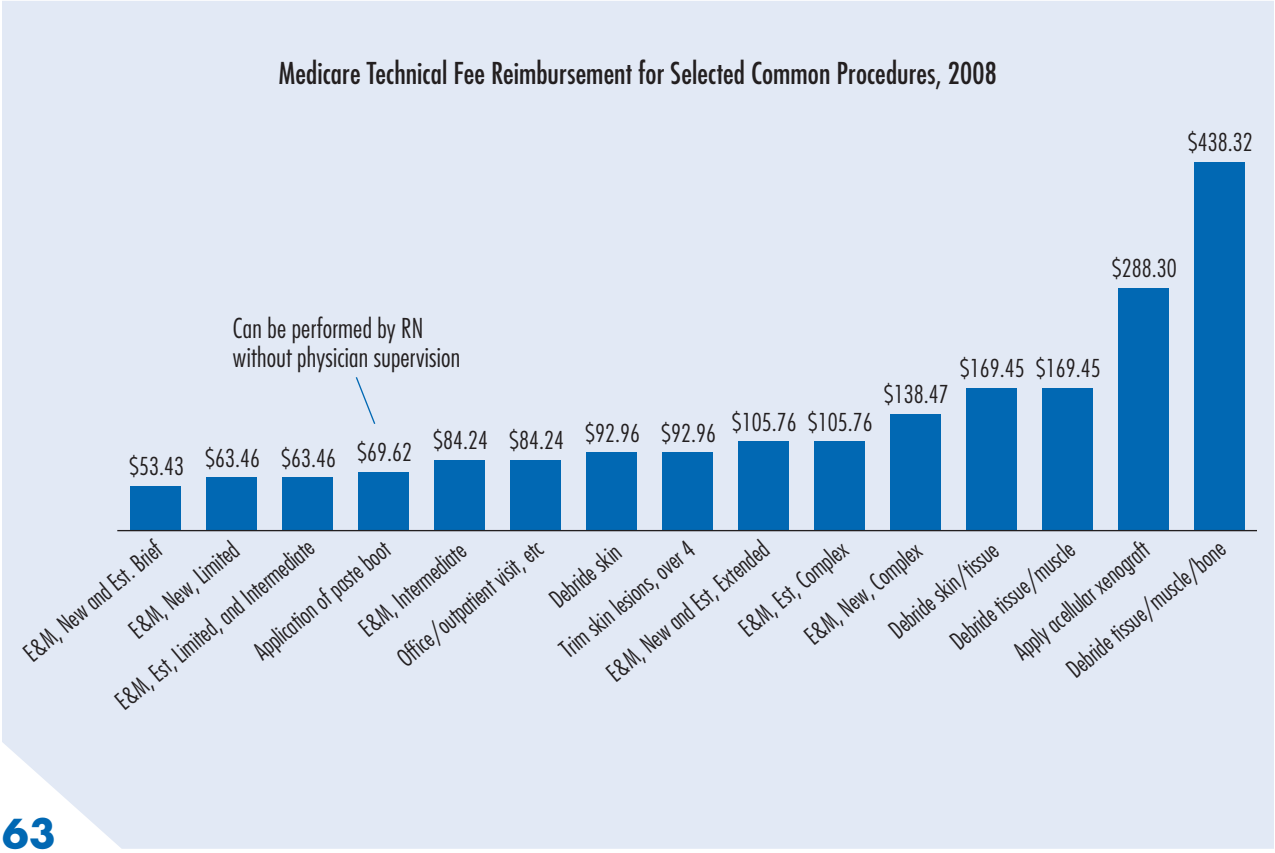
62

Source: "Aurora St. Luke's Medical Center Installs the Country's Second-largest Hyperbaric Chamber," available at: http://www.aurorahealthcare.org/aboutus/media/news/index.asp?AutoNumber=351, accessed May 15, 2008; "ALMC Now Offers Hyperbaric Medicine," available at: http://www.mayohealthsystem.org/mhs/live/page.cfm?pp=locations/news.cfm&orgid=AL&nav=New&sub=ALMC%20Now%20Offers%20Hyperbaric%20Medicine, accessed May 15, 2008; Barnes R C "Point: Hyperbaric Oxygen for Diabetic Foot Wounds is Effective," *Clinical Infectious Diseases*, 2006, 42: 188–192; Berendt AR "Counterpoint: Hyperbaric Oxygen for Diabetic Foot Wounds is Not Effective," *Clinical Infectious Diseases*, 2006, 42: 193–198; Marketing and Planning Leadership Council interviews and analysis.

[1] Hyperbaric Oxygen Therapy

Opportunity #2—Optimize Procedure Mix

Physicians, Procedures Must Drive Center



63

Source: CMS, "FY2008 Hospital Outpatient PPS Final Rule," available at: http://www.hhs.cms.gov, accessed May 12, 2008; Marketing and Planning Leadership Council interviews and analysis.

Opportunity #3—Recruit Diverse Staff

The Wound Care Team

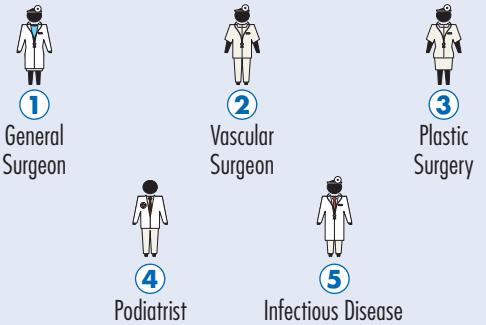
Typical Full-time Employees for Outpatient Wound Center

Employee	Responsibilities	Annual Salary[1]
Program Manager	• Manages functioning of entire wound care program • Establishes and oversees marketing strategy • Makes sure physicians are properly installed at clinic	$80,000
Hyperbaric Technician	• Performas regular check-ups of hyperbaric equipment, makes sure technology is in compliance with all safety codes • Can observe patients receiving HBOT therapy, makes sure oxygen supply is adequate for clinical benefit	$45,000
RN Manager/ RN	• Administers standard patient care in wound care clinic • Able to assist with hyperbaric technology	$70,000/ $50,000
Licensed Practical Nurse	• Cares for patients under direction of physicians and RNs	$40,000
Administrative Assistant	• Schedules patient visits, handles patient financial records • Records data of wound care and HBOT utilization for data analyses by hospital analysts	$35,000

64

Staff a Diversity of Physicians

Multidisciplinary Expertise Bolsters Outpatient Wound Care Center



65

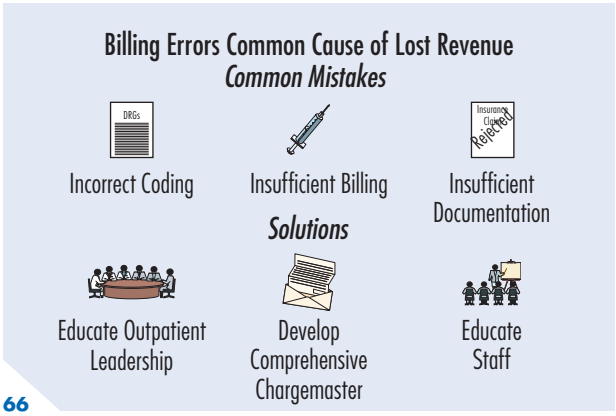
1. ***General Surgeon***—*Broad experience; familiar with co-morbidities*
2. ***Vascular Surgeon***—*Expertise in wound etiologies based on vascular deficiency*
3. ***Plastic Surgery***—*Grafting experience critical for highest level wounds*
4. ***Podiatrist***—*Familiarity with foot ulcers, diabetic foot wounds*
5. ***Infectious Disease***—*Expertise in infection based wounds (necrotizing wounds)*

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Estimated; does not include benefits

Opportunity #4—Cultivate Billing Expertise

Critical for Ensuring Financial Success



Common Mistakes

Incorrect Coding
- Billing under DRG system
- Using incorrect CPTs

Insufficient Billing
- One charge for multiple debridements
- No charge for reimbursed supplies

Insufficient Documentation
- Level of procedure
- Number of wounds
- Quantity of tissue removed
- Level of tissue removed

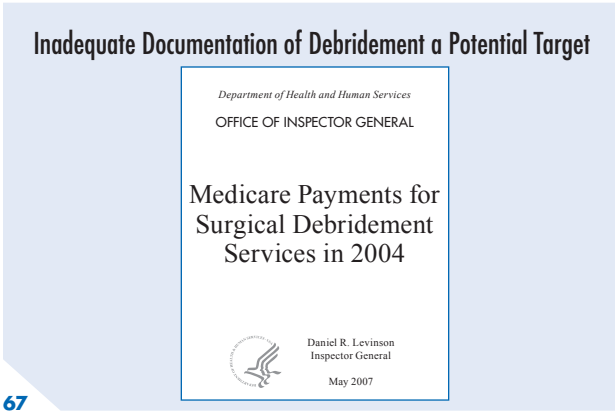
Solutions

Educate Outpatient Leadership
- Meet with hospital leadership to establish outpatient billing, procedure codes

Develop Comprehensive Chargemaster
- Train billing staffing on use, documentation

Educate Staff
- Educate wound care staff on billing process

OIG[1] Report Prompts Whispers of CMS Crackdown



Key Findings:

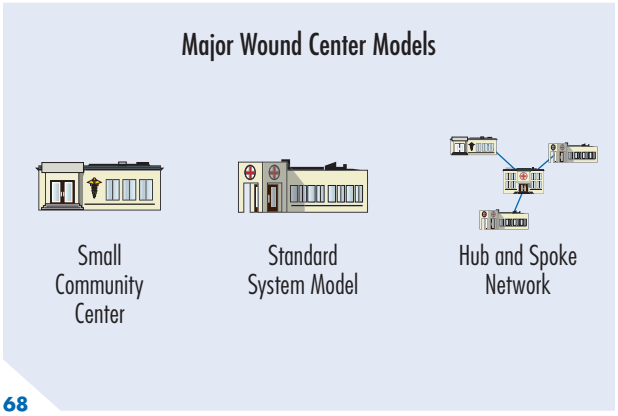
- *64% of surgical debridements did not meet Medicare program requirements, resulting in $64M in improper payments*
- *39% were billed with a code or modifier that did not reflect procedure performed*
- *29% of services had insufficient or no documentation to determine medical necessity or coding accuracy*

Source: Office of the Inspector General, "Medicare Payments for Surgical Debridement Services in 2004," May, 2007; Marketing and Planning Leadership Council interviews and analysis.

[1] Office of the Inspector General

Opportunity #5—Size and Locate Appropriately

Scale According to Patient Population



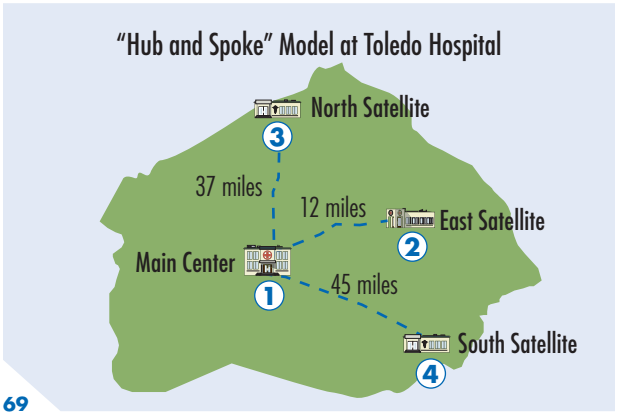
68

Small Community Center
- Four procedure rooms staffed by one RN, plus program and clinical managers, administrator
- Ideal for smaller community hospitals with small market population, larger hospitals with relatively young or healthy populations

Standard System Model
- Eight procedure rooms staffed by two or more RNs, plus program and clinical managers, administrator
- Ideal for larger hospitals or systems, smaller hospitals with older, diabetic population

Hub and Spoke Network
- Multiple outpatient wound care centers of varying sizes, spread geographically around service area and beyond
- Ideal for larger hospitals or systems with highly decentralized patient populations

Expansion Fills Community Need, Builds Volumes



69

Case In Brief—Toledo Hospital

- 700-bed facility located in Toledo, Ohio
- Opened the Center for Wound Care of Northwest Ohio in 1990
- Most complex procedures funneled into main center
- Opened three satellites since 2003

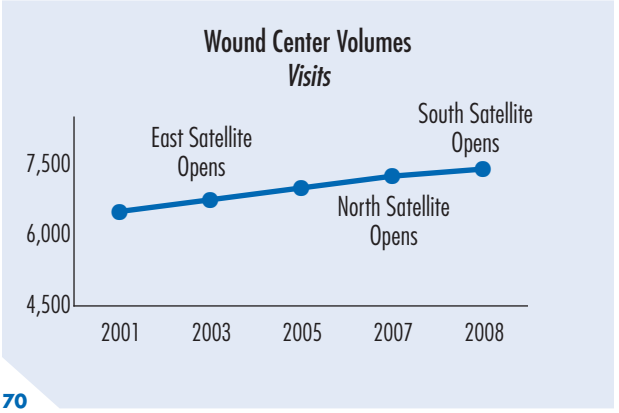
1 Main Center
- *Located 1.5 mi from campus*
- *Staffed by ten physicians*
- *Open 40 hours per week*
- *Performs all key wound services*

2 East Satellite
- *Staffed by four physicians*
- *Open 20 hours per week*
- *Most services provided*

3 North Satellite
- *Staffed by two physicians*
- *Open four hours per week*
- *Limited services offered*

4 South Satellite
- *Staffed by two physicians*
- *Open four hours per week*
- *Limited services offered*

Source: Marketing and Planning Leadership Council interviews and analysis.



70

Between 2001 and 2007, six competitors entered market

Locate Center for Physician, Patient Convenience

On-Campus Freestanding Center Yields Maximum Advantage

	In-Hospital	On-Campus Freestanding	Off-Campus
Benefits	• Location convenient for physicians • Direct access to ancillary services • Required physicians on hand • Convenient inpatient synergy	• Nearby access to ancillary services • Required physicians in vicinity • Potential increase in patient convenience (parking, etc) • Convenient inpatient synergy	• Convenient parking, entry for patients • No need to build hospital grade
Drawbacks	• Inconvenient access for patients • Hospital grade more costly to build out • With HBOT[1], must be located on ground level or reinforced floor	• Less immediate access to ancillaries • Potential difficulty finding space on campus	• Lack of direct access to ancillary services • Physicians not on hand in case of scheduling issues • Inpatient integration difficult

71

Source: Marketing and Planning Leadership Council interviews and analysis.

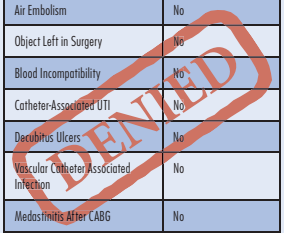
[1] Hyperbaric Oxygen Therapy

Opportunity #6—Leverage Outpatient Expertise

New CMS Rule on Ulcers Puts Reimbursement at Risk

Conditions Under Provision, FY 2008 Final Rule

Procedure	Present on Admission
Air Embolism	No
Object Left in Surgery	No
Blood Incompatibility	No
Catheter-Associated UTI	No
Decubitus Ulcers	No
Vascular Catheter Associated Infection	No
Medastinitis After CABG	No
Falls	No



72

National Estimate of Revenue Impact of "Present on Admission"

Category	Admissions (Medicare Only)	Lowerbound Projected Financial Impact (10%)	Upperbound Projected Financial Impact (100%)
Air embolism	46	($10,968)	($109,681)
Object left in during surgery	805	($45,469)	($454,690)
Blood incompatibility	35	($518)	($5,180)
Catheter-associated UTI	8,832	($16,093)	($160,926)
Decubitus ulcers	259,356	($28,343,225)	($283,432,250)
Vascular catheter-associated infections	4,220	($17,738)	($177,378)
Mediastinitis after CABG	111	($25,368)	($253,680)
Falls and fractures, injury	22,297	($971,513)	($9,715,127)
Total	**295,702**	**(29,430,791)**	**($294,307,912)**

- Worst case assumes 100% of cases were not present on admission.

Source: CMS, "FY 2008 IPPS Final Rule," available at: http://www.hhs.cms.gov, accessed March 31, 2008; Marketing and Planning Leadership Council interviews and analysis.

Putting Lost Revenue in Perspective

Case Example: Coding for Pressure Ulcer

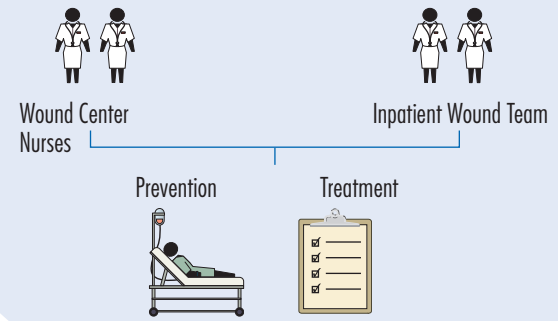
	MS-DRG	Present on Admission?	MS-DRG	Present on Admission?
Primary Dx	Cholelithiasis (57400)	Yes	Cholelithiasis (57400)	Yes
Secondary Dxl	Essential Hypertension (4019)	Unknown	Essential Hypertension (4019)	Unknown
Secondary Dx2	Hypokalemia (2768)	Yes	Hypokalemia (2768)	Yes
Secondary Dx3	Decubitus Ulcer, Hip (70704)	Yes	~~Decubitus Ulcer, Hip (70704)~~	No
Primary Px	Laparoscopic Cholecystectomy (5123)	N/A	Laparoscopic Cholecystectomy (5123)	N/A
DGR Assignment	417 Lap Cholecystectomy w/ MCC		417 Lap Cholecystectomy w/o CC/MC	
DRG Relative Weight	2.1361		1.2400	
Basic Payment	$11,571		$6,717	

73

Failure to code for "present on admission" results in loss of $4,854

Establish Inpatient Wound Care Protocols

Leverage Outpatient Experience to Perfect Inpatient Care



74

Prevention

- Establish inpatient skin assessment team
- Conduct skin assessment on high risk patients every eight hours
- Consider use of specialty beds, mattresses or repositioning devices
- Turn patients regularly—every two hours if bed-bound, every one hour if chair-bound
- Provide nutritional support based on individual needs
- Keep patient as active as possible

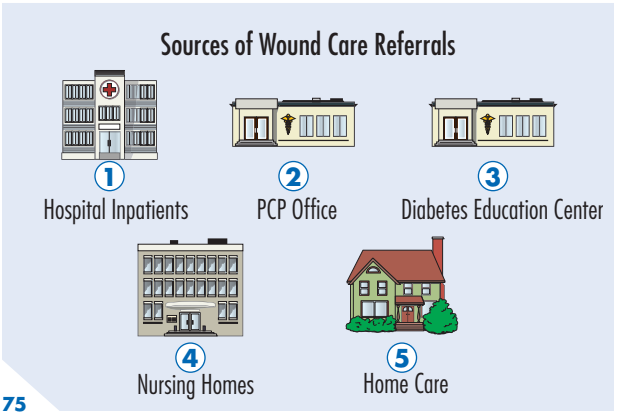
Treatment

- Establish wound etiology, implement appropriate treatment protocol
- Prior to discharge, establish first appointment at dedicated outpatient wound center
- Follow up with patient to ensure compliance, healing

Source: CMS, "FY 2008 IPPS Final Rule," available at: http://www.hhs.cms.gov, accessed March 21, 2008; Marketing and Planning Leadership Council interviews and analysis.

Opportunity #7—Maximize Referrals

Wound Referral Sources Plentiful, Diverse



75

1. Hospital Inpatients
- Pressure ulcers developed during long stays
- Wounds from major surgeries fail to heal

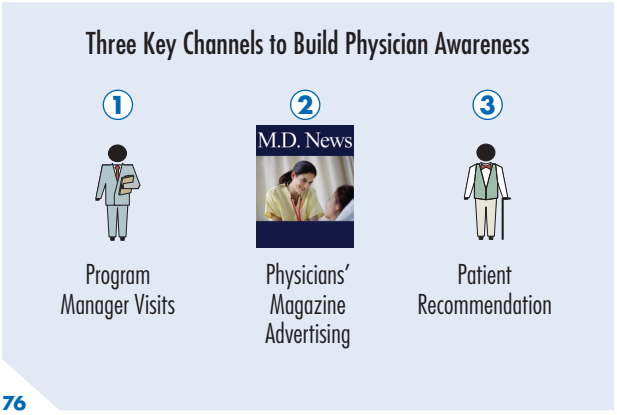
2. PCP Office
- Many patients with wounds seek PCP care first

3. Diabetes Education Center
- Diabetic patients likely to develop lower extremity wounds
- Diabetic co-morbidities increase likelihood of wound issues

4. Nursing Homes
- Long-term care patients vulnerable to pressure ulcers

5. Home Care
- Elderly patients with pressure ulcers who cannot leave home
- Low mobility, morbidly obese patients at risk for pressure ulcers, diabetic wounds

Focus Marketing Efforts on Referral Sources



76

1. Program Manager Visits
- Program manager should spend roughly 60% of time marketing program to physicians
- Frequent visits cement physician awareness, providing interim, discharge reports
- Program manager should leave brochures, flyers for physician to give patients in need of wound care

2. Physicians' Magazine Advertising
- Relatively inexpensive advertising
- Focus on publications directed to local physicians
- Emphasize patient satisfaction, clinical success

3. Patient Recommendation
- Driven by strong overall healing rates, positive patient experience
- Critical form of advertising for center

Source: Marketing and Planning Leadership Council interviews and analysis.

Build Confidence to Ensure Repeat Referrals

Reassure Physicians Regarding Wound Treatment

Setting the Stage	Following Through
Program manager visits referring physicians, explains limited role of wound center	Treating wound center physician stays in contact by updating referring physician
Medical director assures referring physicians that their patients will be returned, not poached	Patients needing follow up care referred back to initial physician

77

Target Key Demographic in Advertising

Woodrow Hospital Center for Wound Healing[1] Ad

78

1. *Establish connection with chronic care*
2. *Emphasize connection to trusted brand*
3. *Focus on common demographic*

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

Outpatient Wound Care Center Evaluation

Ten Diagnostic Questions

		Yes	No
Market Considerations	• Is a high percentage of our patient population over 65?	_____	_____
	• Is there a high rate of heart disease and diabetes in our patient population?	_____	_____
	• Are we losing wound patient volumes to competing hospitals due to lack of a wound center?	_____	_____
Clinical Considerations	• Do we have physicians, especially surgeons, with experience and interest in wound care?	_____	_____
	• Do we have nurses on staff with substantial experience treating wound patients?	_____	_____
	• Does our clinical staff believe hyperbaric oxygen therapy to be clinically effective for treating wound patients?	_____	_____
Operational Considerations	• Do we have sufficient capital for building and/or outfitting a wound care center, with or without HBOT?	_____	_____
	• Are specialists willing to rotate through and staff a wound care center?	_____	_____
	• Do we have strong relations with physicians in the market who would be wound center referrers?	_____	_____
	• Do we have a dedicated program director who is primarily focused on physician staffing, referrals, and marketing?	_____	_____

79

Source: Marketing and Planning Leadership Council interviews and analysis.

III. Retail-Based Health Clinics of Excellence

- *Defining the Enterprise*
- *Evaluating the Ambition*
- *Achieving Excellence in Retail-Based Clinics*

Defining the Enterprise

Health Clinics in the Least Likely Places

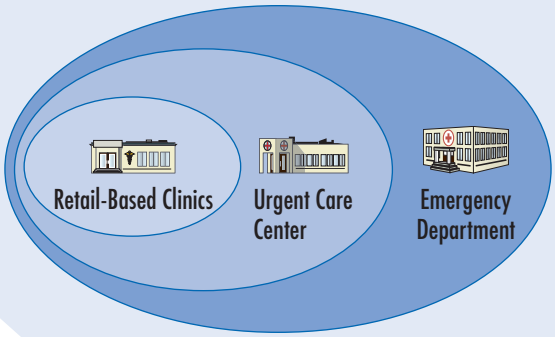
Harmony Pharmacy, Newark Airport

IMAGE COURTESY OF SARAH TEBBE

80

Retail Clinics' Place in the Spectrum of Care

A New Player in the Urgent-Emergent Care Market



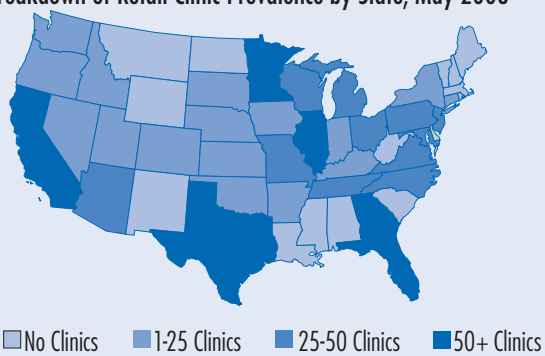
81

Select Treatments

Retail-Based Clinics	Urgent Care Center	Emergency Department
• Minor ailments • Vaccines • Physicals • Some lab services • Minor skin conditions	• Foreign object removal • X-Rays • Sutures • Casting • Full complement of lab services	• Traumatic brain injury • Stroke • Heart attack • Other trauma • Aneurysm

A (Nearly) Nationwide Phenomenon

Breakdown of Retail Clinic Prevalence by State, May 2008



82

States with 50+ Clinics

- *Florida: 103 Clinics*
- *Texas: 81 Clinics*
- *California: 80 Clinics*
- *Minnesota: 64 Clinics*
- *Georgia: 58 Clinics*
- *Illinois: 56 Clinics*

Source: YU R, "Healthcare Taking Off at Airports," USA Today, April 9,2008; www.merchantmachine.com/home.cfm, accessed May 6th, 2008; Marketing and Planning Leadership Council interviews and analysis.

Commercial Players Leading the Way

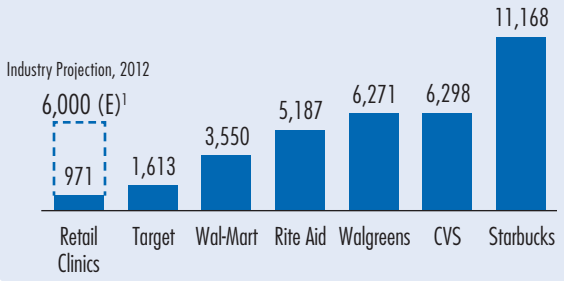
Largest Retail Clinic Companies, May 2008

Company	Number of Clinics	Locations	Ownership
MinuteClinic	519	25 States	Purchased by CVS/ Caremark Corp
Take Care Health Systems	147	12 States	Purchased by Walgreens
The Little Clinic	52	FL, KY, GA, OH, AZ, TN, MI	Operated by Solera Capital, backed by Kroger
RediClinic	34	AR, OK, TX, VA	Independent, backed by Revolution Health Group

83

Scaling Retail Clinic Growth Projections

Number of Retail Clinics and Comparable Retailers, April 2008



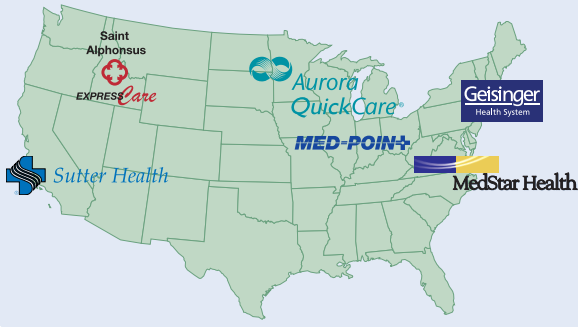
84

Factors Impacting Potential Growth

Factors	Growth Impact
Nurse Practitioner Shortage	↓
Legislative Action	↓
Business Model Fails	↓
Primary Care Physician Shortage	↑
Universal Healthcare	↑

Hospitals Getting Involved in the Game

Select Hospital-Owned Clinics, April 2008



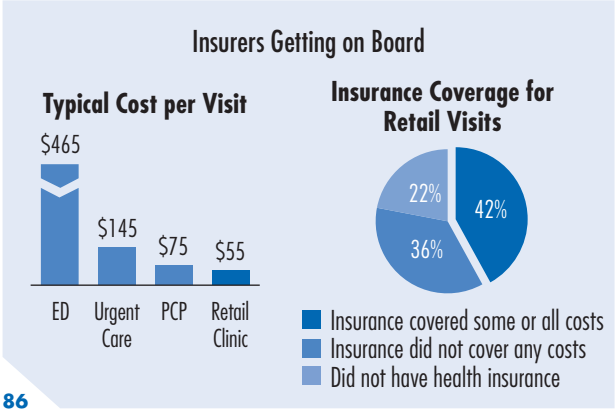
85

- *Memorial Health South Bend.....8 Clinics*
- *Aurora Health System.....19 Clinics*
- *MedStar Health (Partnership) .....4 Clinics*[2]
- *Sutter Health Care.....6 Clinics*
- *Geisinger Health System.....5 Clinics*
- *Saint Alphonsus Regional Medical Center.5 Clinics*

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Scott and Company, 2008
[2] Opening Summer 2008

Payers See Financial Incentives in Retail Clinics



Evaluating the Ambition

Hospitals Expressing Interest

1. Financial Return
If properly managed, clinics can generate modest profit over time given strong patient volume

2. Downstream Referrals
Most referrals directed to primary care physicians, especially beneficial for hospitals with employed PCPs

3. Strengthen Care Continuum
Clinics offer additional primary care access points, but do little for emergency department decompression

4. Marketing Opportunity
Convenience aspect a strong driver of patient satisfaction; positive brand association may increase brand awareness

Source: CDC, National Hospital Ambulatory Medical Care Survey; 2004 Emergency Department Survey, May 2006; Harris Interactive, "Most Adults Satisfied with Care at Retail Based Health Clinics," April, 2007, available at: http://www.harrisinteractive.com/news/allnewsbydate.asp?NewsID=1201, accessed: May 15, 2008; Marketing and Planning Leadership Council interviews and analysis.

Reason #1—Financial Return

Clinics' (Limited) Book of Business

Typical Consumer Prices, Retail-Based Health Clinics

Universally Available	Extended Offerings
Basic Diagnosis—$39–$69	Wellness Screenings—$29–$150
Basic Skin Conditions—$49–$69	Multi-visit Services—$29–$69
Physicals—$59–$69	Physician Offerings—$169–$179
Vaccines—$29–$129	
Additional Services—$49–$99	

88

Clinic Services

Universally Available

Basic Diagnosis
- *Sore Throat*
- *Bladder Infection*
- *Sinus Infection*
- *Allergies*
- *Ear Infection*

Basic Skin Conditions
- *Athletes Foot*
- *Minor Burns*
- *Ringworm*

Physicals
- *Camp Physicals*
- *Insurance Physicals*

Vaccines
- *Flu Vaccine*
- *Measles, Mumps and Rubella*

Additional Services
- *Suture Removal*
- *Earwax Removal*
- *Pregnancy Testing*

Extended Offerings

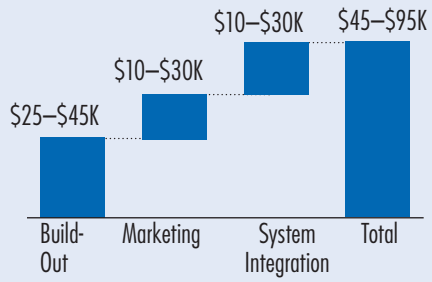
Wellness Screenings
- *Obesity Screening*
- *Prostate Screening*
- *Cholesterol Screening*
- *Liver and Kidney Function*
- *Thyroid Screening*
- *Complete Blood Count*
- *C Reactive Protein Screen*
- *Diabetes Screening*

Multi-visit Services
- *Weight Loss Programs*
- *Smoking Cessations*
- *"Get Healthy" Programs*

Physician Offerings
- *Sutures*
- *X-rays*
- *Foreign Object Removal*
- *Fracture Setting*

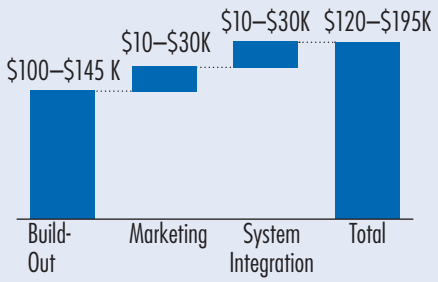
(Comparatively) Minimal Capital Outlay Needed

Estimated Initial Capital Outlay
Grocery Store/Drugstore [1]



89

Estimated Initial Capital Outlay
Wal-Mart [2]



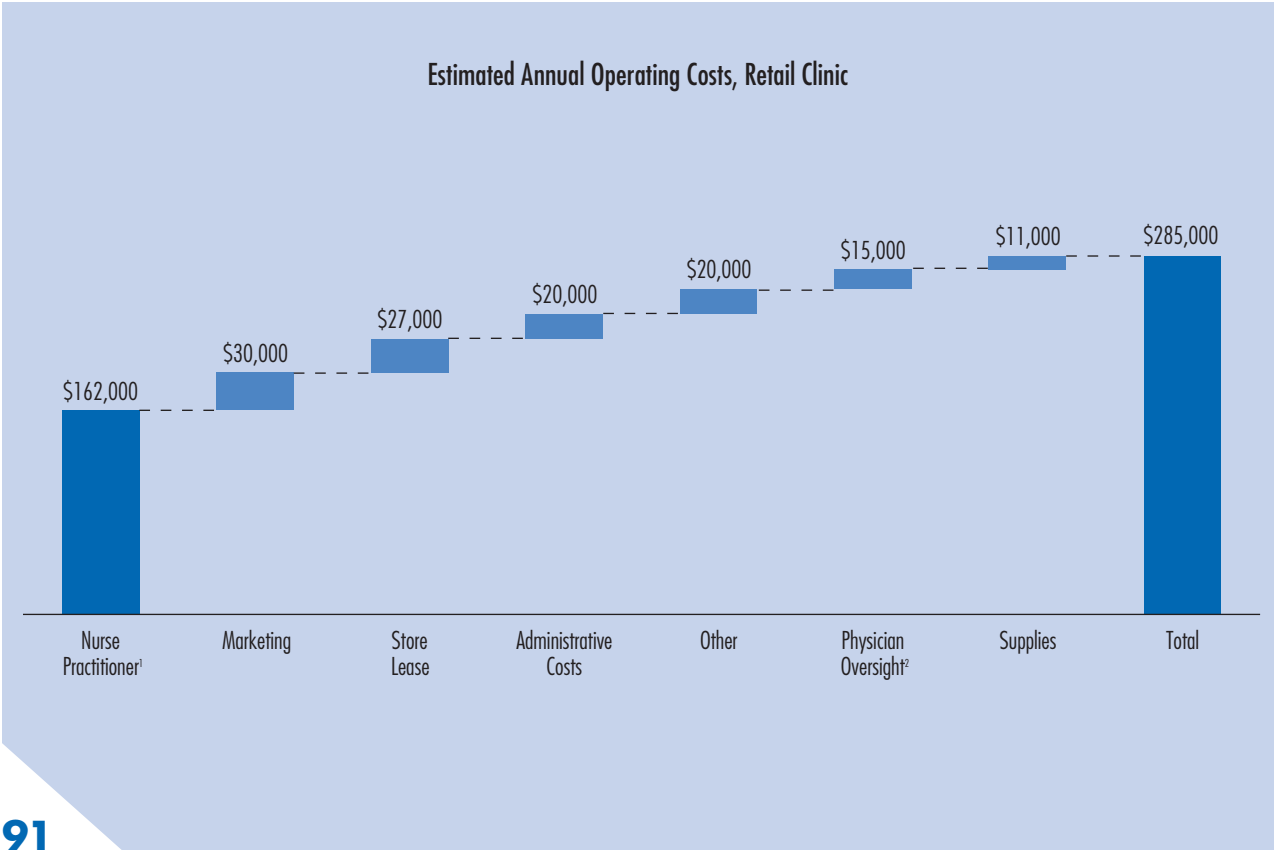
90

Build-out requires additional space, bathroom in clinic, driving up capital expenditure

Source: Marketing and Planning Leadership Council interviews and analysis.

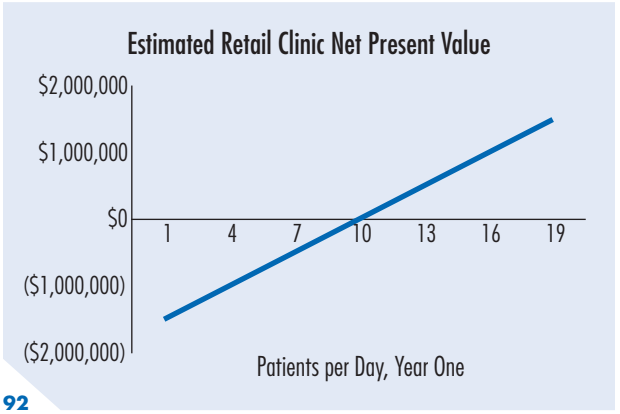
[1] Assumes 250 SF Clinic
[2] Assumes 600 SF Clinic

Staffing Dominates Operating Costs



91

Profitability Requires Strong Volumes, Time



92

Breakeven at 10.2 patients per day in year one

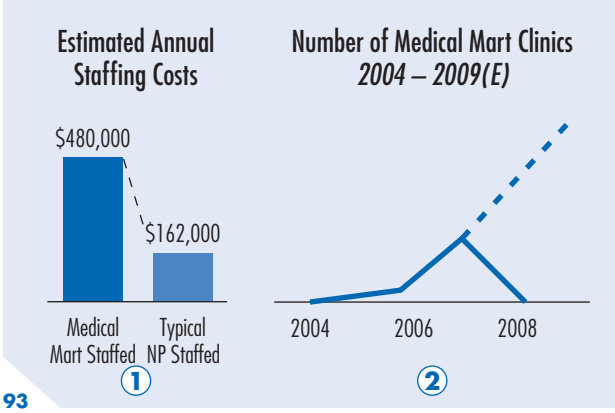
Key Assumptions

- Clinic size of 250 SF, staffed by single nurse practitioner (NP) at any given time unless volumes greater than 21 patients per day, at which time additional part-time NP added
- Average price per visit $65
- Patient volume growth of 15% per year
- Clinic staffed with 1.8 NPs per year, with annual salary and benefits of $100,000
- 9% discount rate, seven-year time horizon

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Salary plus benefits for 1.8 nurse practioners
[2] Excludes Texas, where on-site requirement increase physician oversight costs substantially

Caution Warranted for Physician-Staffed Model

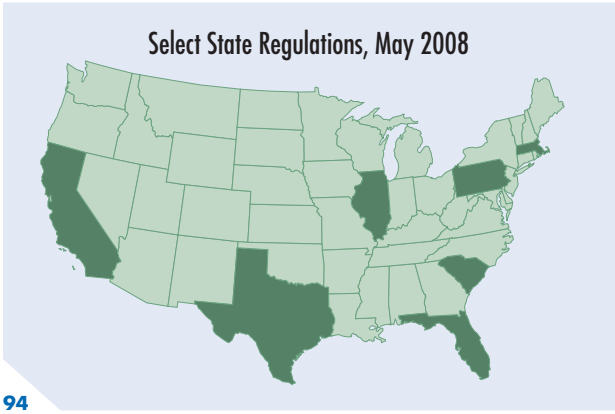


1. *Medical Mart staffing costs nearly triple typical retail clinic*
2. *Medical Mart peaked with over a dozen clinics before closing in early 2008; had projected 400 clinics by end of 2009*

Case in Brief—Medical Mart

- Las Vegas-based chain, opened several clinics beginning in 2004 in Illinois, Missouri, Virginia and Utah
- Each clinic staffed by two full-time physicians, two full-time physician assistants
- Clinics all closed in early 2008 due to withdraw of funding by supporting venture capitalists

Evolving State Regulations Impact Clinics



- *California Corporate Practice of Medicine prevents outright ownership by commercial entities*
- *Pennsylvania law requires all clinics to employ lab director, regardless of lab capability*
- *Proposed Illinois law would, among other things, bar retail clinics from opening in establishments that sell alcohol or tobacco*
- *South Carolina necessitates one overseeing physician per three nurse practitioners*
- *Texas law necessitates clinics have physician onsite 20% of time*
- *Florida law requires clinics to post a sign indicating if physician present or not*

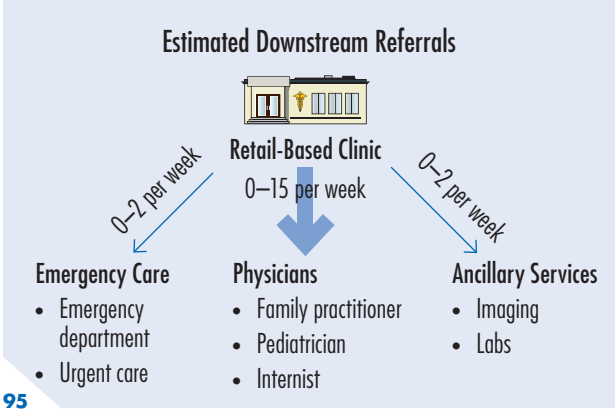
New Massachusetts Regulations for Limited Service Clinics

- Clinics must be licensed by Massachusetts Department of Health before opening
- Application for license must list all procedures that will be performed in "limited service clinics," which cannot be exceeded in practice
- Clinics must develop policies to identify and limit, if necessary, number of encounters with a patient
- Treatment limited to individuals over 24 months of age
- Clinics must develop policies for referral of patients exceeding clinic's approved capabilities

Source: Marketing and Planning Leadership Council interviews and analysis.

Reason #2 Downstream Referrals

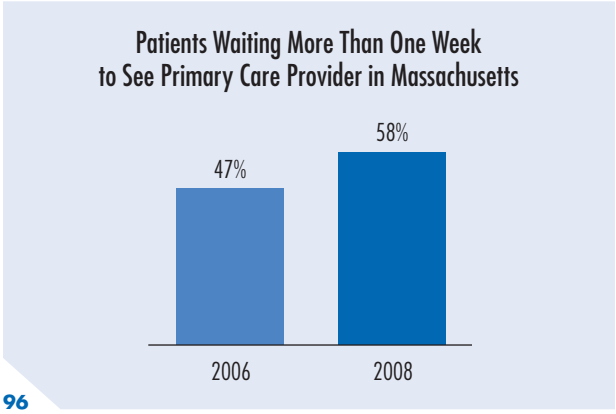
Downstream Impact Overestimated, Highly Variable



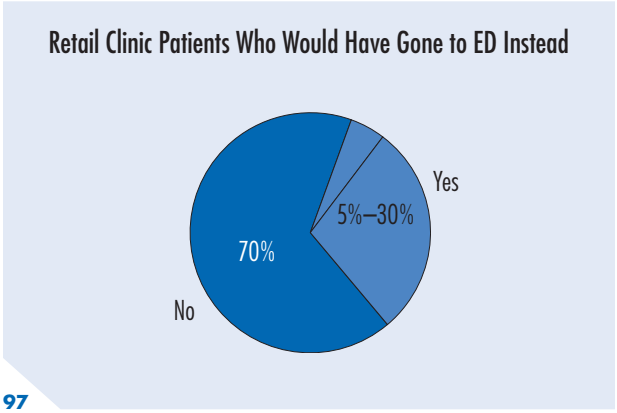
95

Reason #3 Strengthen Care Continuum

Retail Clinics Alleviating PCP, Not ED, Constraints



96

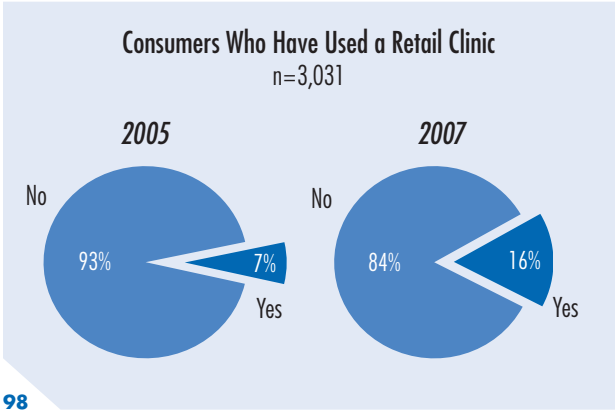


97

Source: Todorova A, "Walk In Clinics: Cheap, Convenient, but Not a Cure All," Smart Money, January 17, 2008, available at: http://www.smartmoney.com/consumer/index.cfm?story=20080117-walk-in-clinics, accessed April 25 2008; "Retail Clinics Are Coming," Medical Economics, October 6, 2007, available at: http://medicaleconomics.modernmedicine.com/memag/aafp07/AAFP-Update-Retail-clinics-are-coming/ArticleStandard/Article/detail/463488; Marketing and Planning Leadership Council interviews and analysis.

Reason #4—Marketing Opportunity

Growing Consumer Awareness of Retail Clinics



98

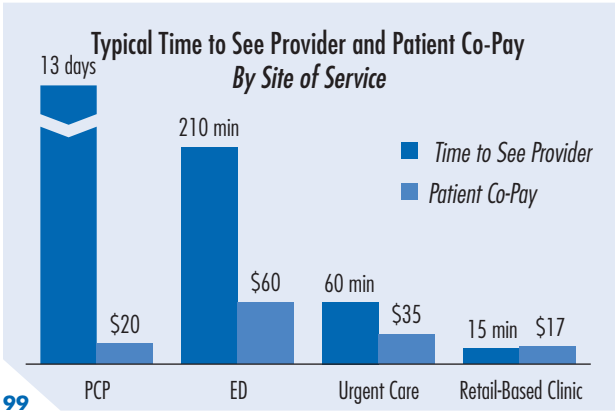
According to 2008 Deloitte survey, 34 percent of consumers receptive to idea of using retail clinic

2008 Deloitte Survey of Health Care Consumers

Selected Results

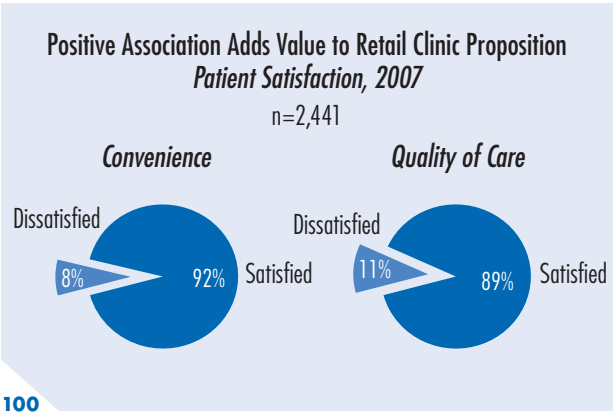
- Common retail clinic patients often in better than average health
- 38 percent of baby boomers interested in retail clinics
- Consumer confidence grows with affiliation with a health care system or local physician
- Uninsured more likely than insured to utilize clinics
- Generation Y most likely to use retail clinics

Convenience, Economy Consumer Drivers



99

Clinics Boost Patient Satisfaction Levels



100

Source: California Healthcare Foundation, "The Minute Clinic Movement: Model for the Future or 60 Seconds of Fame?" available at http://www.chcf.org/press/view.cfm?itemID=123240, accessed April 25, 2008; Deloitte Survey of Healthcare Consumers, 2008, available at http://www.deloitte.com/dtt/article/0,1002,sid%253D127087%2526cid%253D192717,00.html, accessed May 1, 2008; CDC, National Hospital Ambulatory Medical Care Survey: 2004 Emergency Department Survey, May 2006; Harris Interactive, "Most Adults Satisfied with Care at Retail Based Health Clinics," April 2007, available at http://www.harrisinteractive.com/news/allnewsbydate.asp?NewsID=1201, accessed May 15, 2008; Marketing and Planning Leadership Council interviews and analysis.

Comparing Hospital Investment Options

Common Retail Clinic Models

Increasing Hospital Involvement

Models	Details	Benefits	Drawbacks
Clinical Support	• Hospital provides no financial backing, holds no equity in the venture • Contributes via co-branding (for a fee), helps negotiate physician oversight	• Limited risk exposure for hospital • Possibility of some increased loyalty to hospital for referrals	• Limited benefits from clinic success, growth • Limited to no financial value to hospital • Referral loyalty questionable at
Joint Venture	• Hospital joins with commercial entity to co-own and operate clinics • Often secures clinical support, physician oversight • Varying levels of capital investment	• Capital outlay is likely split between parties, limiting financial risk • Hospital benefits from name recognition, branding value of national level partner	• Any capital gains shared with partner • Referral loyalty contingent on terms of agreement, particularly on who provides nurse practitioners
Sole Owner	• Hospital acts as sole owner, operator of clinic, usually integrating it as another care delivery outlet in continuum	• Standalone branding establishes clear connections with hospital • Referral loyalty strong	• Hospital shoulders entire financial risk • May require independent hospital staff member(s) to manage operations
Network	• Rarest model, hospital with established clinic expertise, develops clinics in other hospitals' markets • Co-brands with affiliate hospital, but solely owns and operates clinic(s)	• If model succeeds, hospital will benefit from significant financial gains	• Necessitates enormous capital outlay • Branding opportunities extremely limited

101

Achieving Excellence in Retail-Based Clinics

Key Optimization Strategies

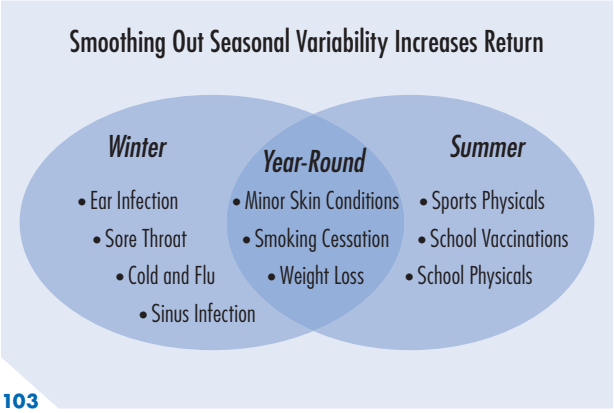
102

1. ***Varied Product Portfolio***
   Offer wide variety of services to mitigate seasonality
2. ***Staff for Service***
   Maintain sufficient staffing to ensure convenience
3. ***Targeted Marketing***
   Direct marketing efforts at working parents
4. ***Timed Marketing***
   Schedule seasonal marketing
5. ***Physician Support***
   Work with physicians to minimize pushback, expedite acceptance

Source: Marketing and Planning Leadership Council interviews and analysis.

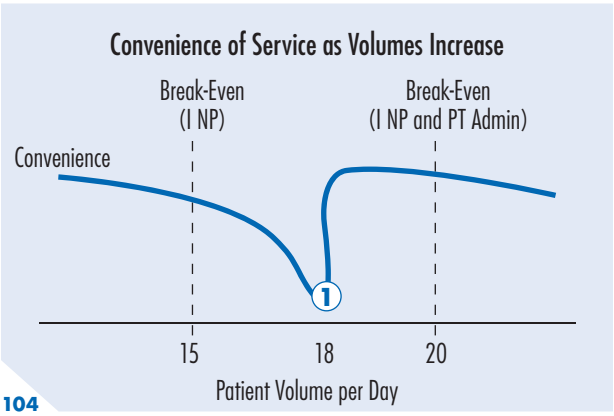
Hallmark #1—Varied Product Portfolio

Establish Balanced, Varied Service Offerings



Hallmark #2—Staff for Service

Maintain Convenience When Volume Grows



1. *Add a part-time (PT) administrative assistant to ease burden on NP during peak hours*

Source: Marketing and Planning Leadership Council interviews and analysis.

Hallmark #3—Targeted Marketing

Focus Marketing on Key Demographic

Targeting Women of Childbearing Age

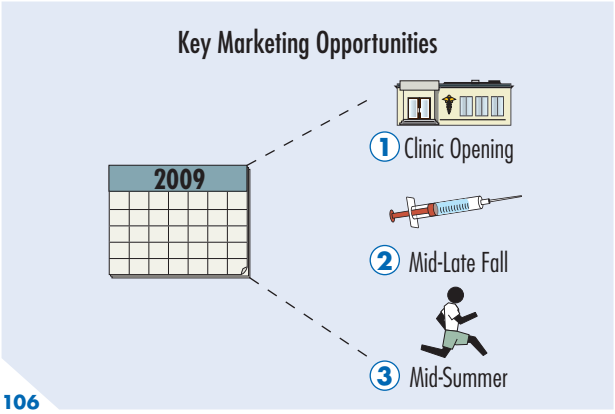
105

1. *Emphasize connection to trusted brand*
2. *Clearly delineate services offered*
3. *Highlight treatment of children*
4. *Focus on convenience, low cost*

Source: Marketing and Planning Leadership Council interviews and analysis.

Hallmark #4—Timed Marketing

Schedule Marketing Blitzes to Cement Awareness



106

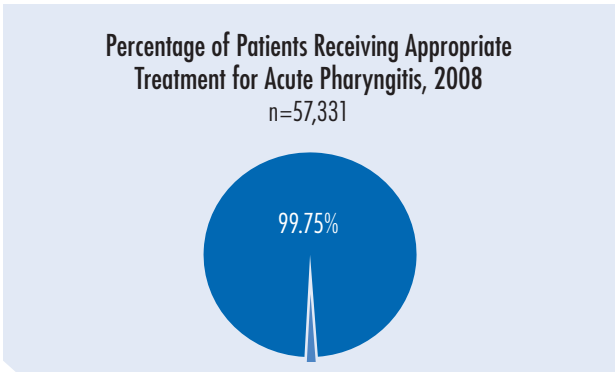
1. ***Clinic Opening***
   Execute full marketing blitz to build consumer awareness of center, focusing on location as well as what center can and cannot treat
2. ***Mid-Late Fall***
   Emphasize clinic as flu shot locale, site for treatment of cold and flu throughout the winter season
3. ***Mid-Summer***
   Focus advertising on availability of sports camp physicals, back to school physicals, vaccinations for school age children

Hallmark #5—Physician Support

Physicians Often Hesitant to Get on Board

107

Claims of Overprescribing Exaggerated?



108

Source: Dean BD, "Unregulated Growth of Retail Clinics Undermines Primary Care Medicine," amnews.com, available at: http://www.ama-assn.org/amednews/2007/10/08/edlt1008.htm, accessed May 5, 2008; Retail-Based Clinic Work Group, "AAP Principles Concerning Retail Health Clinics," *Pediatrics*, 2006, 118: 2561–2562; Woodburn JD, "Quality of Care in the Retail Health Care Setting Using National Clinical Guidelines for Acute Pharyngitis," *American Journal of Medical Quality*, 2008, 22: 457–462; Marketing and Planning Leadership Council interviews and analysis.

Mitigate Physician Pushback

Tactics to Gain Physician Acceptance

Education
Explain how center helps provide patient access

Participation
Enlist skeptical physicians to work as clinic overseers

Integration
Coordinate scheduling for all target physicians

109

Commitment to Quality, Physician Support

Software Provides Green Light to Enter Retail Care

NP Unsure of Diagnosis

Typical Response
- Nurse calls physician
- Diagnosis limited by nurses ability to describe patient's condition

Digital Union Response
- Nurse contacts physician via computer
- Physician sees and can diagnose patient in real time over computer

110

Case in Brief– ValleyCare Health System

- 167-bed hospital in Pleasanton, California
- Board at ValleyCare charged hospital to expand in retail space, yet maintain clinical quality and keep physicians involved
- Currently operating three retail clinics, with plans to open a fourth
- Adopted Digital Union collaborative informatics software; allows real time video conferencing for physician oversight and education
- Experience positive responses from physicians, nurses and patients to the system

Retail Clinic Digital Technologies

Technology	Description	Cost	Impact on Retail Crisis
Digital Otoscopes	Handheld digital microscope with USB connectivity enables quick upload of otoscopic images	Approximately $250 each	Allows image transmission over internet to physicians for diagnosis confirmation
Digital Stethoscopes	Captures transferable, hi-fidelity recording of heart function, lung field	Approximately $400 each	Enables physician oversight, collaboration of heart and lung evaluation

Source: Marketing and Planning Leadership Council interviews and analysis.

Retail-Based Health Clinics Evaluation

Ten Diagnostic Questions

		Yes	No
Market Considerations	• Is there a population of over 50,000 within five miles of potential clinic site?	____	____
	• Is a large portion of our market comprised of working parents?	____	____
	• Is there a large uninsured population in our market?	____	____
Regulatory Considerations	• Does our state have no limit on the number of nurse practitioners that can be overseen by one physician?	____	____
	• Does our state have no laws specifically mandating on-site physician oversight at clinics?	____	____
Operational Considerations	• Are competitor hospitals developing retail-based clinics or forming partnerships with commercially owned clinics in the area?	____	____
	• Are established commercially-owned clinics looking for partnerships in our area?	____	____
	• Does our hospital employ primary care physicians?	____	____
	• Would the primary care physicians in our market be supportive?	____	____
	• Do we have enough nurse practitioners in our market to provide adequate staffing?	____	____

111

Source: Marketing and Planning Leadership Council interviews and analysis.

IV. Freestanding Cath Lab Centers of Excellence

- *Outmigration of Interventional Cardiac Care*
- *Rationale for Investment*
- *Key Considerations for Adoption*

Outmigration of Interventional Cardiac Care

Cardiac Care Where You Least Expect it

The New Face of Heart Care?

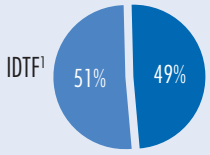
IMAGE COURTESY OF ABC

112

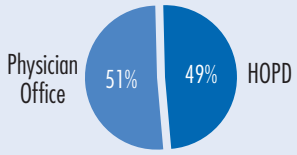
Low-End Cardiac Outmigration Nothing New

Services Beyond Our Doors

Nuclear Cardiology All-Payer Test Volume by Site of Service, 2005



Vascular Ultrasound All-Payer Volume by Site of Service, 2005



113

Cath Lab Leading the New Shift

Common Outpatient Services in Cath Labs

IMAGE COURTESY OF SHUTTERSTOCK

114

Diagnostic Imaging

- *Diagnostic cardiac cath*
- *Vascular imaging*
- *Angiography*
- *Venography*

Electrophysiology

- *EP studies*
- *EP ablation*
- *Pacemaker implant*
- *ICD implant*
- *Holter monitor implant*

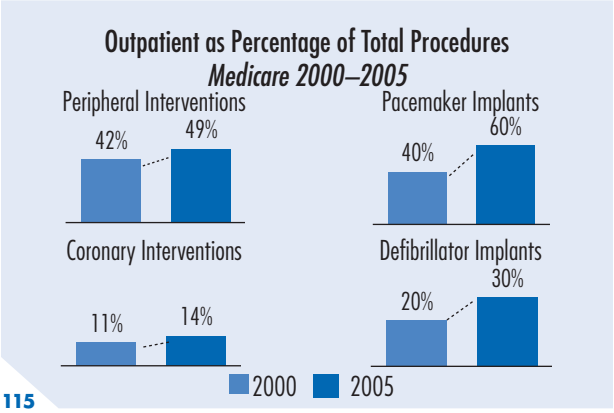
Interventional

- *PCI*[3]
- *Valvuloplasty*
- *Thrombectomy*
- *Atherectomy*
- *Vascular reconstruction*

Source: Innovations Center Futures Database; Marketing and Planning Leadership Council interviews and analysis.

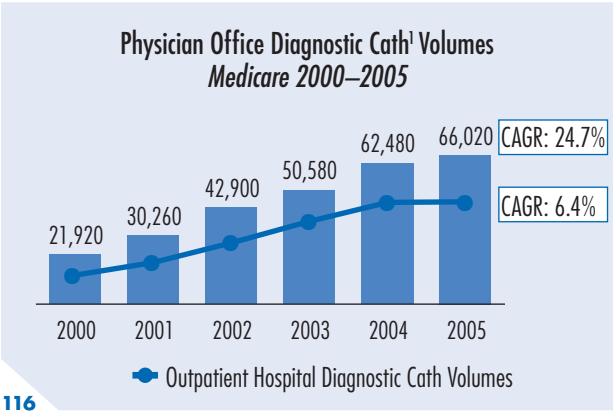
[1] Independent Diagnostic Testing Facility
[2] Hospital Outpatient Department
[3] Percutaneous Coronary Intervention

Interventions Marching to Outpatient Setting



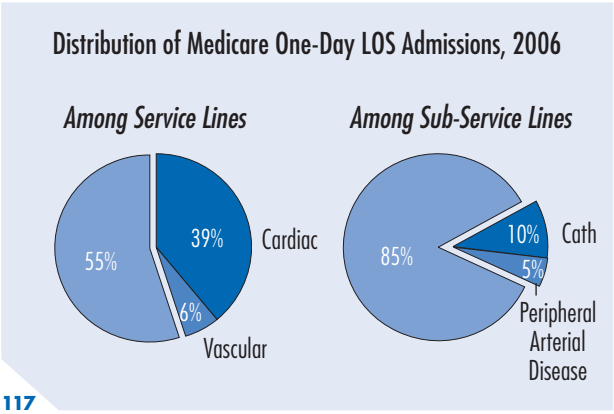
115

Leaving the Hospital's Doors



116

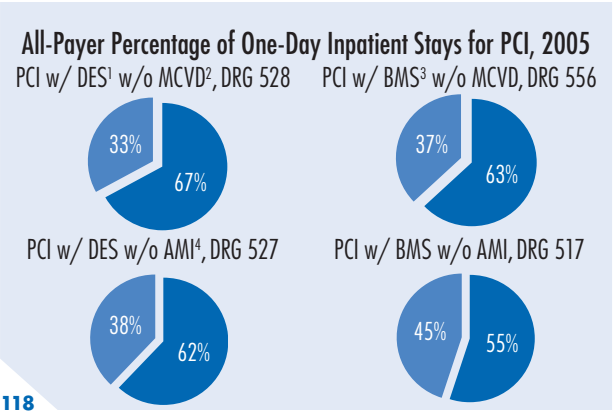
Continued Cardiac Movement Likely



117

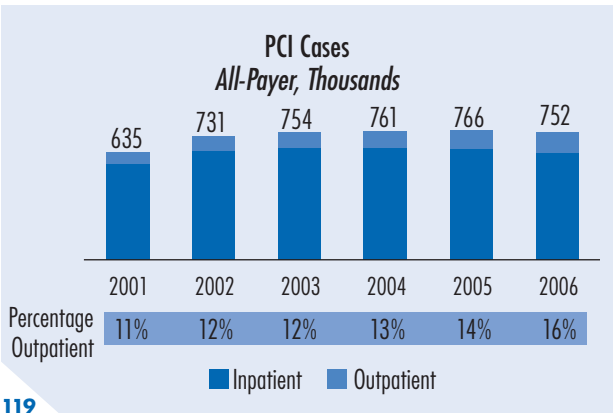
Source: Medpar files, CMS; Marketing and Planning Leadership Council interviews and analysis.

[1] CPT 93510



118

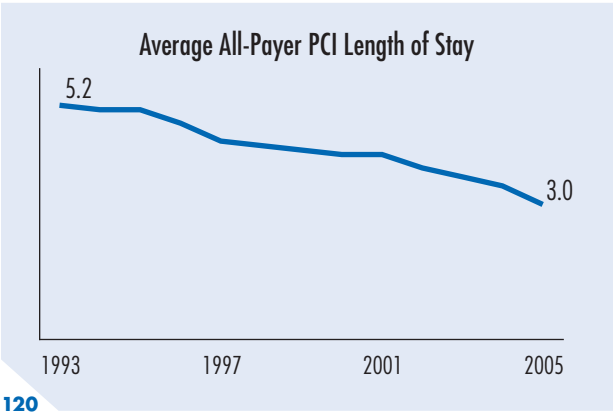
Backfilling the Inpatient Decline?



119

2001–2006 Changes
Inpatient: 12%
Outpatient: 73%
Total: 18%

2005–2006 Changes
Inpatient: (4.0)
Outpatient: 11.2%
Total: (1.8%)



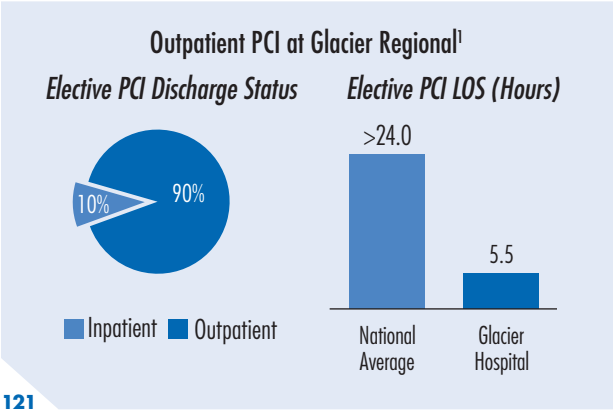
120

42 percent decline from 1993 to 2005

Source: Medpar files, CMS; Innovation Center Futures Database; Marketing and Planning Leadership Council interviews and analysis.

1 Drug Eluting Stents
2 Major Cardiovascular Disease
3 Bare Metal Stents
4 Acute Myocardial Infarction

Taking Cardiac Outmigration by the Reins

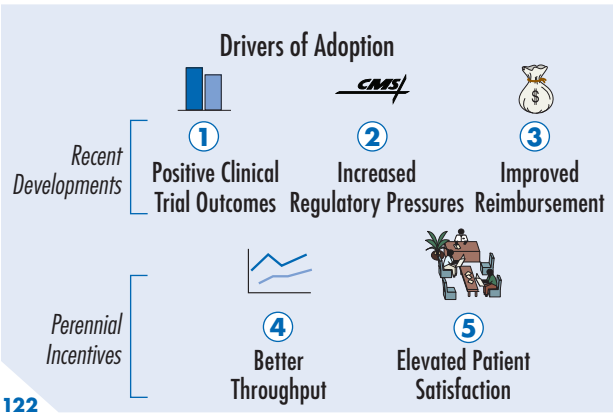


Case in Brief— Glacier Regional[1]

- 250-bed hospital in the Southeast seeing 2,200 patients per year in on-campus, freestanding lab
- Hospital worked with physicians to improve capacity through process redesign, standardized workflow
- Physician, patient preference as well as expectations for greater pressure to reduce one-day stay inpatients resulted in ambulatory care focus for PCI
- Cath lab open from 5:00 a.m.–6:30 p.m.; last elective PCI scheduled at 12:30 p.m. to optimize ability to discharge same day
- Timing, effectiveness of renal protection, optimization of anticoagulation safety key to ambulatory approach

Rationale for Investment

Behind the Cath Exodus



1 ***Positive Clinical Trial Outcomes***
Outpatient PCI demonstrated safe in select patient populations; closure devices facilitating outmigration

2. ***Increased Regulatory Pressures***
CMS providing higher reimbursement for outpatient services, penalties for improper upcoding

3. ***Improved Reimbursement***
CMS paying better rates than ever before; payment per procedure higher than like services with similar initial capital outlay

4. ***Better Throughput***
Specialized staff, protocols improve speed, efficiency, lower patient wait, turn-around times and boost volumes, satisfaction

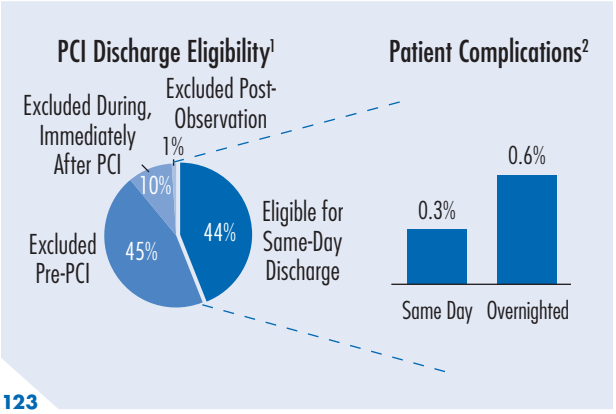
5. ***Elevated Patient Satisfaction***
Lower wait times, no risk of being "bumped" lead to more pleasant patient experience

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

Driver #1—Positive Clinical Trial Outcomes

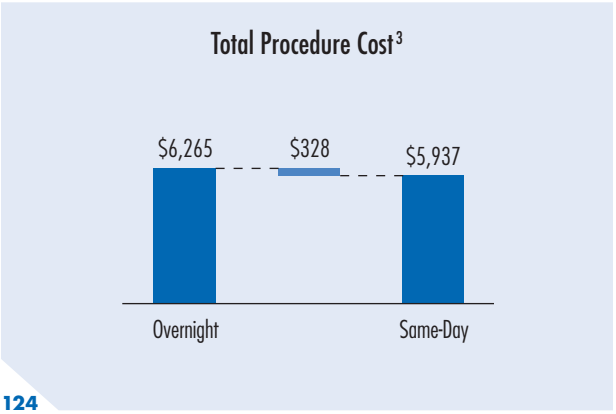
EPOS Establishes Outpatient PCI Clinical Safety, Viability



123

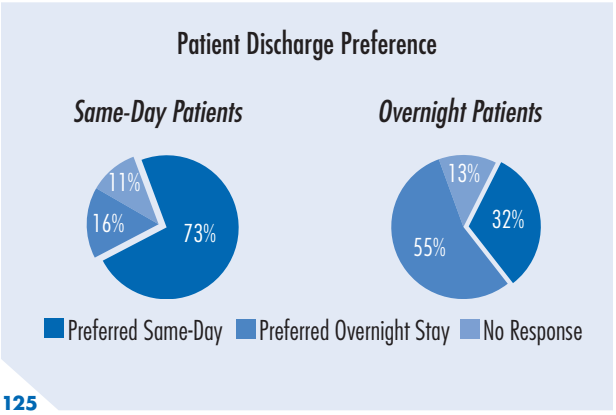
Study in Brief—Elective PCI in Outpatient Study (EPOS)

- Involved 800 patients in the Netherlands randomly assigned to same-day discharge or overnight stay after PCI in 2007
- Evaluated safety, feasibility of same-day discharge after PCI, ability to stratify patients requiring extended observation
- Among patients deemed suitable for early discharge, 0.3 percent of same-day discharge patients, 0.6 percent of overnight-stay patients experienced complications
- Used by InterQual to justify change in setting for elective PCI



124

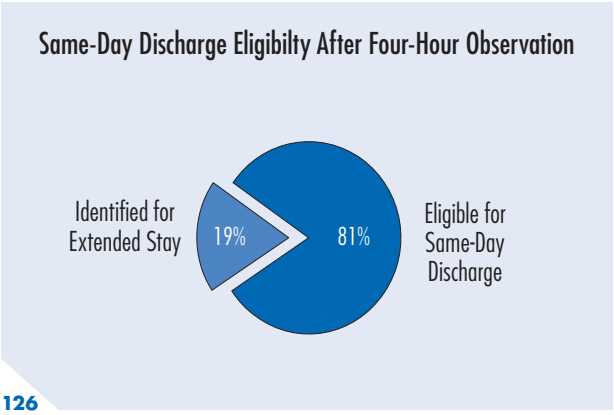
Due mainly to cost of overnight stay



125

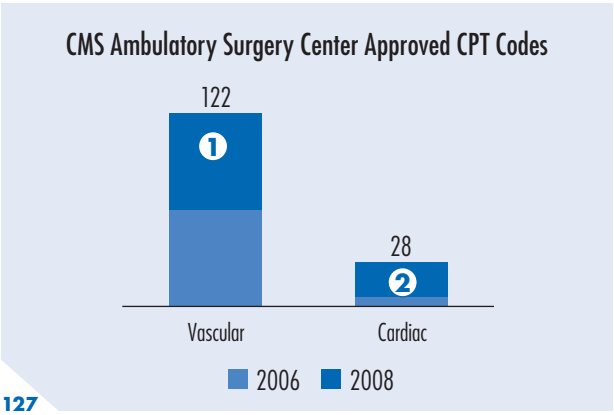
Source: Heyde G S, et al., *Circulation*, 2007, 115: 2299-2306; Marketing and Planning Leadership Council interviews and analysis.

[1] Acute coronary syndrome patients excluded at outset of trial.
[2] Primary endpoint was composite of major adverse cardiac and cerebral events (MACCE) and severe complications of the arterial puncture with the need of blood transfusion or repeat compression from randomization until 24 hours post-PCI. Major adverse cardiac and cerebral events were defined as cardiac death, myocardial infarction, stroke, coronary artery bypass grafting, and repeat PCI.
[3] Using daily average euro to dollar conversion rate for July 16, 2006.



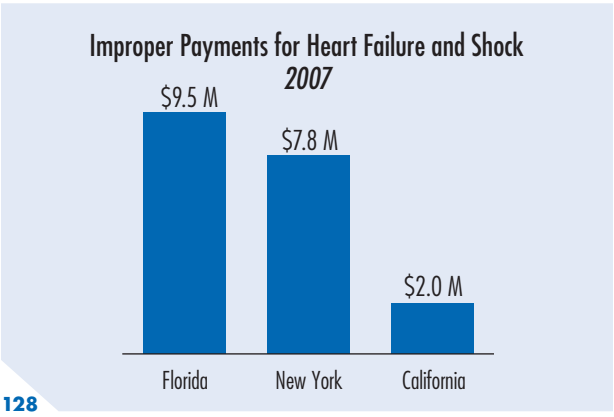
Driver #2—Increased Regulatory Pressures

More Procedures Approved For Outpatient Setting



1. *New procedures include peripheral arterial and venous angioplasty, transcatheterbiopsy*
2. *Majority of added codes EP-related*

RACs[1] Forcing Re-Examination of IP Status



Biggest source of overpayment related to "improper coding."

Recovery Audit Contractors in Brief

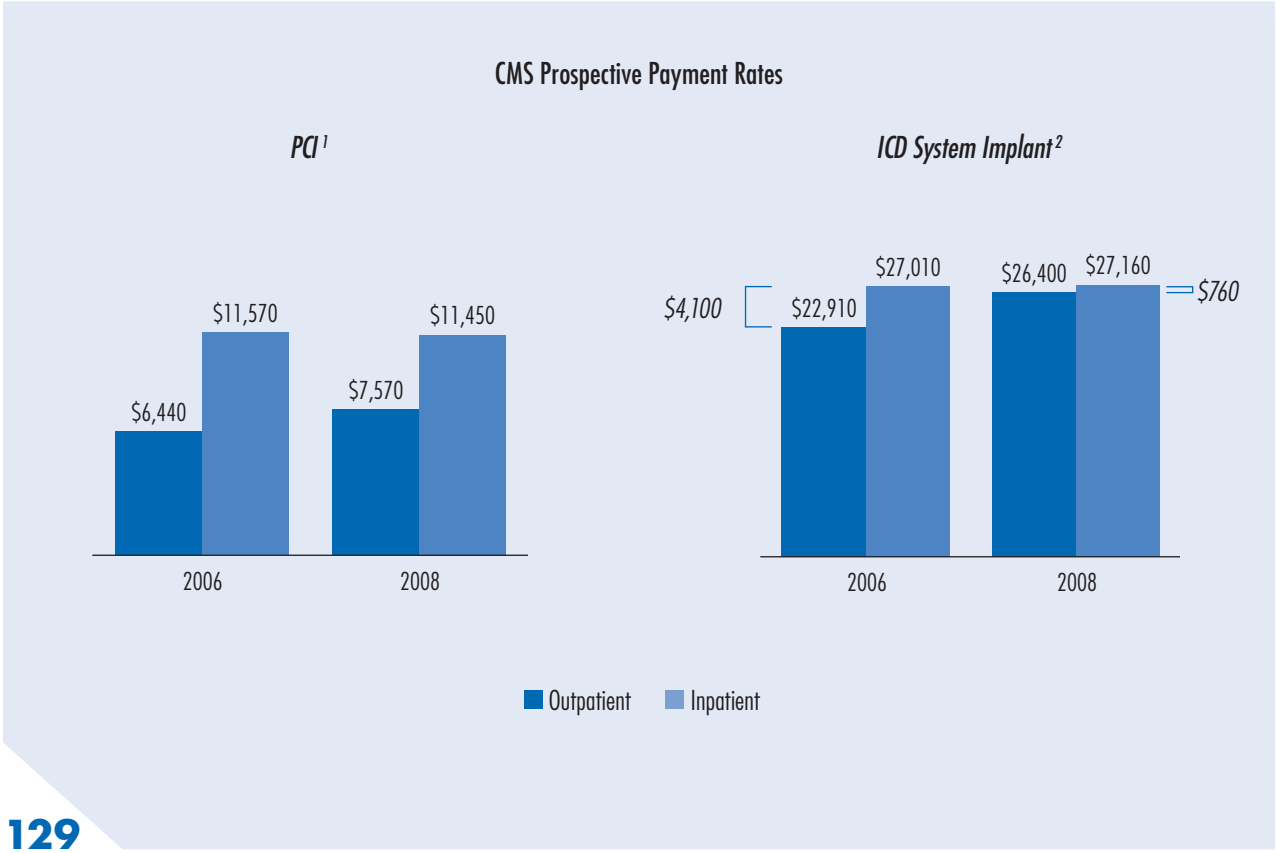
- ***Authority***
  Authorized to audit claims between one and four years from date of review
- ***Incentive***
  Paid contingency fee (approximately 20 percent) on value of identified errors
- ***Appeals***
  Appeals process similar to hospital claims, except first level appeals go to fiscal intermediary not Quality Improvement Organization
- ***Expansion***
  Currently in CA, FL, NY; nationwide expansion to be completed by 2010 beginning with AZ, MA, SC

Source: Heyde G S, et al., *Circulation*, 2007, 115: 2299-2306; Outpatient Prospective Payment System Proposed Ruling for 2008, CMS; CMS RAC Status Document FY 2007, CMS; Marketing and Planning Leadership Council interviews and analysis.

[1] Recovery Audit Contractor

Driver #3—Improved Reimbursement

Medicare (Finally) Rationalizing OP Payment



129

Source: Medpar files, CMS; Marketing and Planning Leadership Council interviews and analysis.

[1] DRG 527, MS-DRG 247, APC 656
[2] DRG 515, MS-DRG 227, APC 108, 84

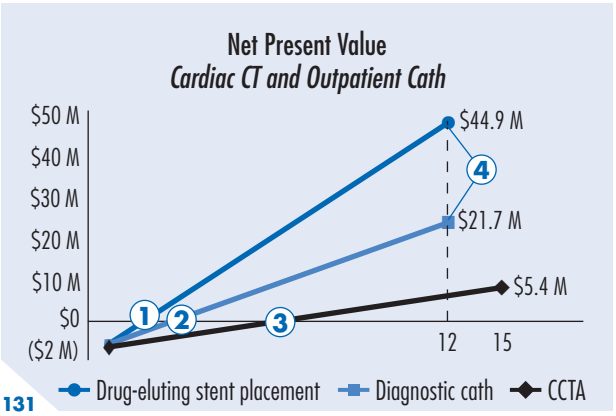
A Profitable Procedure Mix

CMS Final Payment Rates, 2006–2008

APC	Description	2006 Payment	2007 Payment	2008 Payment	2007–2008 Change
80	Diagnostic Cardiac Catherization	$2,163	$2,278	$2,479	9%
82	Coronary or Non-Coronary Atherectomy	$5,438	$4,438	$5,574	26%
83	Coronary or Non-Coronary Atherectomy and Percutaneous Valvuloplasty	$3,289	$3,614	$2,891	(20%)
88	Thrombectomy	$2,173	$2,320	$2,469	6%
89	Insertion/Replacement of Permanent Pacemaker and Electordes	$6,966	$7,602	$7,748	2%
90	Insertion/Replacement of Permanent Pacemaker Pulse Generator	$5,368	$6,042	$6,423	6%
104	Transcatheter Placement of Intracoronary Stents	$4,808	$5,392	$5,670	5%
105	Repair/Revision/Removal of Pacemakers, AICDS, or Vascular Devices	$1,308	$1,574	$1,527	(3%)
106	Insertion/Replacement of Pacemaker Leads and/or Electordes	$3,329	$3,618	$4,428	22%
107	Insertion of Cardioverter-Defibrillator	$16,632	$18,716	$21,262	14%
108	Insertion/Replacement/Repair of Cardioverter-Defibrillator Leads	$22,334	$23,341	$25,787	10%
109	Removal/Repair of Implanted Devices	$665	$676	$361	(47%)
229	Transcatheter Placement of Intravascular Shunts	$3,948	$4,209	$5,639	34%
418	Insertion of Left Ventricular Pacing Electrode	$10,078	$18,888	$16,544	(12%)
434	Cardiac Defect Repair	$5,147	$5,414	$8,434	56%
654	Insertion/Replacement/Repair of a Permanent Dual Chamber Pacemaker	$6,667	$6,932	$6,961	0%
655	Insertion/Replacement/Conversion of a Permanent Dual Chamber Pacemaker	$8,144	$9,382	$8,919	(5%)
656	Transcatheter Placement of Intracoronary Drug-Eluting Stents	$6,436	$6,657	$7,543	13%

130

OP Cath Investment Not Out of Reach



131

1. *Breakeven at 0.69 drug-eluting stents per day*
2. *Breakeven at 1.3 diagnostic caths per day*
3. *Breakeven at 4 scans per day*
4. *Cath lab limited to 12 procedures per day*

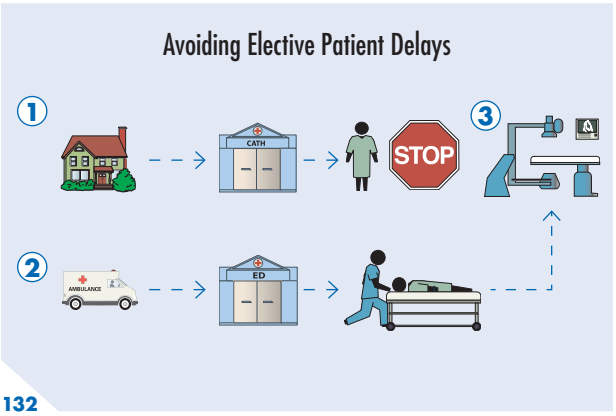
Key Assumptions

- CT initial capital outlay $1.2 M
- Cath lab initial capital outlay $1.5 M
- Scanner, lab open 250 days per year
- Cardiac CT Medicare reimbursement per scan $500
- Diagnostic cath Medicare reimbursement per procedure $2,500
- Drug-eluting stent placement Medicare reimbursement per procedure $7,500
- Private payers reimburse 120 percent of Medicare rate
- Medicare patients account for 60 percent of CT, cath patients
- CCTA uses $70 of contrast, $15 of incidental costs
- Cath procedures use $300 of contrast, $75 for catheter; additional $500 in pre, post procedure care
- 1.5 stents placed per PCI procedure for $3,100; additional $800 for pharmacology
- CCTA lab staffed by one RN FTE at $60 K, one tech at $45K
- Cath lab staffed by two RN FTE at $60 K, one tech at 45K
- Benefits 25 percent of salary

Source: Innovations Center Futures Database; Marketing and Planning Leadership Council interviews and analysis.

Driver #4—Better Throughput

Freestanding Labs Allow Emergent, Elective Separation



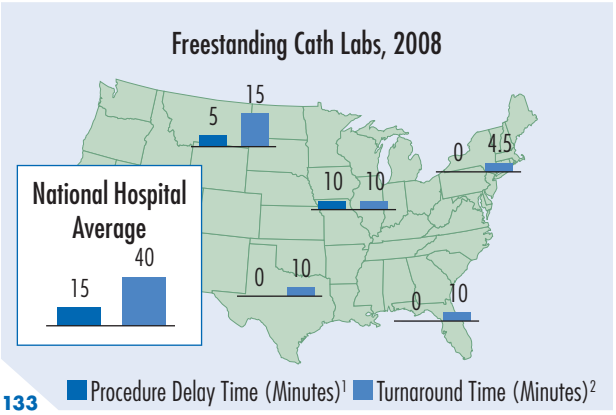
132

1. Elective Patient
- *Elective patient schedules cath lab procedure on set date*
- *Travels to waiting room in hospital after procedure workup*

2. Emergent Patient
- *Patient suffers emergent myocardial infarction*
- *Taken to ED, triaged to cath lab for emergency PCI*

3. Hospital Cath Lab
- *Emergent patient takes precedence over elective cath procedure*
- *Elective patient delayed hours from receiving procedure*

Consistent Cases, Dedicated Staff Boost Efficiency



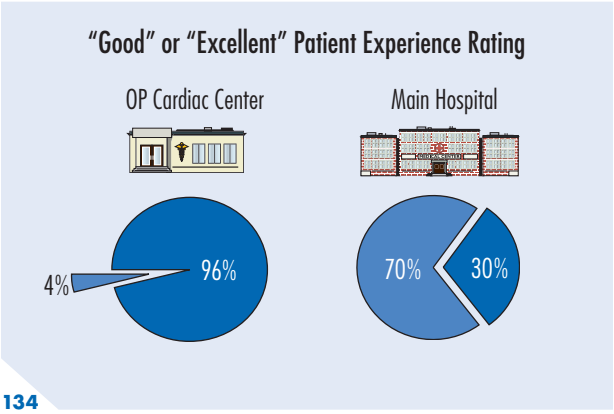
133

Source: Goodrow Healthcare Solutions, LLC, Tucker, GA; Marketing and Planning Leadership Council interviews and analysis.

[1] Defined as time elapsed from procedure finish to next patient ready for procedure start
[2] Defined as time elapsed from patient prep to procedure start

Driver #5—Elevated Patient Satisfaction

Predictable Flow Improving Patient Experience



134

Case in Brief—Knox Medical Center[1]

- 400-bed hospital in the Northeast
- Built freestanding outpatient cardiac center with cath lab on main hospital campus
- Due to high level of convenience and care, cardiac center ranked by PressGaney in top 75 facilities in the nation

Key Drivers for Adoption

Weighing Impact on Feasibility

Driver	Impact on FS Cath Lab Feasibility	Comments
Clinical feasibility	↓↑	• At minimum, several-hour recovery period required • Significant anti-coagulation in subset of patients • Multi-site/vessel PCI less likely amenable to outpatient • PCI safe without surgical backup in high volume locations • Increasing number of EP generator replacements ideal for outpatient setting
Regulatory changes	↑↑	• Regulatory changes facilitating transition of greater number of procedures into outpatient setting • Penalties for improper inpatient stays
Reimbursement	↑	• Changes to reimbursement making outpatient procedures more viable than ever before • Outpatient reimbursement still remains lower than inpatient
Improved throughput	↑	• Gains to efficiency, throughput, and turnaround time • Decompression of inpatient hospital space
Patient Satisfaction	↑	• Lower wait times, faster time to ambulation means less time in hospital for patients • Shorter time in hospital somewhat offset by potential anxiety over complex outpatient procedures

↑↑ Strongly Positive Effect ↑ Moderately Positive Effect ↓↑ Mixed Effects ↓ Moderately Negative Effect ↓↓ Strongly Negative Effect

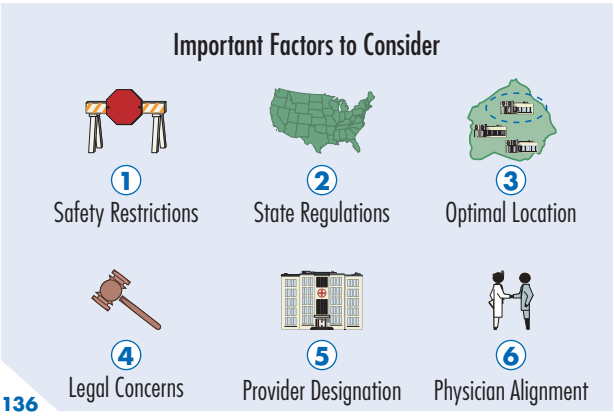
135

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

Key Considerations for Adoption

Weighing Freestanding Cath Lab Investment



1. Safety Restrictions
Efficacy among eligible population questioned; high volume physicians needed to meet quality thresholds

2. State Regulations
Majority of states allowing freestanding cath labs, PCI without surgical backup

3. Optimal Location
Placement of freestanding lab can have a major impact on physician alignment models, reimbursement, and patient safety

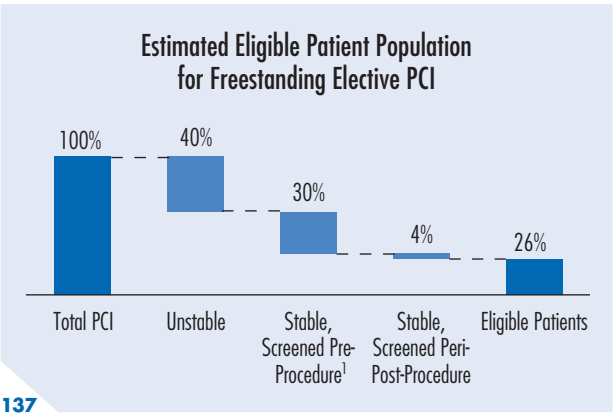
4. Legal Concerns
Select physician alignment models under increased CMS scrutiny; concerns should complications occur next day

5. Provider Designation
HOPPS designation essential for higher reimbursement, ability to preform more complex procedures; acquiring designation limits partnership models

6. ***Physician Alignment***
Changes to physician fee schedule providing hospitals new leverage in developing physician partnerships, both joint ventured and employed

Consideration #1: Safety Restrictions

Guidelines Reduce Risk, Outpatient Population Size

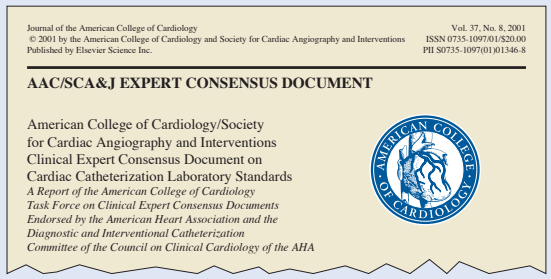


Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Patients deemed ineligible based on age, severity of case, comorbidities or past history of stroke, MI, contrast reaction, clotting deficiencies, bleeding complications, renal failure, complicated diabetes, stage III heart failure, valvular dysfunction, known left main coronary artery disease, morbid obesity

Case Load Threshold Limits Viable Programs

Select ACC Guidelines


Journal of the American College of Cardiology
© 2001 by the American College of Cardiology and Society for Cardiac Angiography and Interventions
Published by Elsevier Science Inc.
Vol. 37, No. 8, 2001
ISSN 0735-1097/01/$20.00
PII S0735-1097(01)01346-8

AAC/SCA&J EXPERT CONSENSUS DOCUMENT

American College of Cardiology/Society for Cardiac Angiography and Interventions Clinical Expert Consensus Document on Cardiac Catheterization Laboratory Standards
A Report of the American College of Cardiology Task Force on Clinical Expert Consensus Documents Endorsed by the American Heart Association and the Diagnostic and Interventional Catheterization Committee of the Council on Clinical Cardiology of the AHA

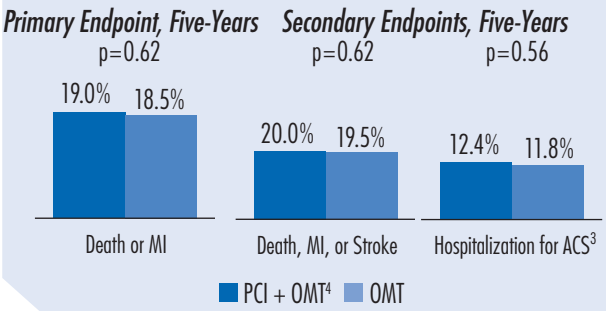
138

Select ACC Guidelines for PCI Without On-Site Surgical Backup

- *Operators must be experienced interventionalists who regularly perform elective PCI at a surgical center (greater than or equal to 75 cases per year)*
- *Catheterization laboratory must perform a minimum of 36 primary PCI procedures per year*
- *There must be formalized written protocols in place for immediate and efficient transfer of patients to the nearest cardiac surgical facility that are reviewed/tested on a regular (quarterly) basis*

Efficacy of PCI for Eligible[1] Population Debated

COURAGE[2] Trial Results



139

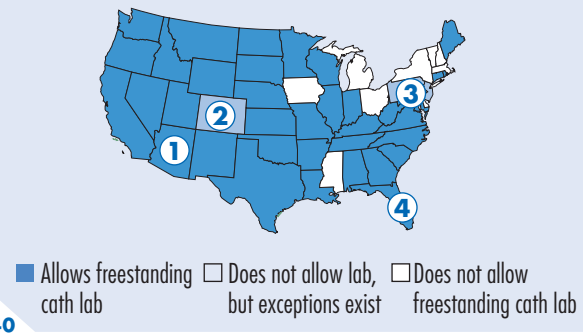
Study in Brief—COURAGE[2] Trial

- Qualitative study with three focus groups of interventional, non-interventional cardiologists in California
- Discussed issues surrounding decision to perform PCI using hypothetical scenarios
- Non-clinical factors cited for use of PCI: firm belief in merits beyond evidence-based medicine, fear of regret, alleviation of patient anxiety, inevitability of PCI upon catheterization, medicolegal concerns

Consideration #2: State Regulations

Freestanding Cath Labs Generally Allowed

Freestanding Cath Lab Regulations



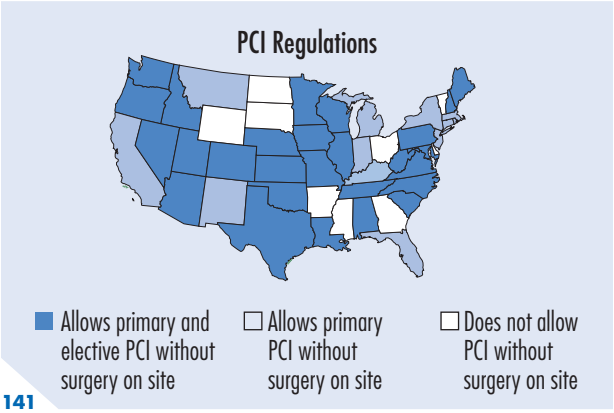
140

1. *Procedures allowed in "outpatient treatment centers"; no overnight stays permitted*
2. *Loophole allows freestanding cath labs if performed in hospital-owned ASC*
3. *Demonstration lab currently functioning in Philadelphia*
4. *No regulating body for freestanding cath labs; CON restrictions for inpatient labs only*

Source: Smith SC Jr., Feldman TE, et al., ACC/AHA/SCAI 2005, Writing Committee to Update the 2001 Guidelines for Percutaneous Coronary Intervention, *Journal of American College of Cardiology*, 47:216–235; Boden W, et al., *New England Journal of Medicine*, 2007, 356: 1; Lin G, et al., *Archives of Internal Medicine*, 2007, 167: 1604; CMS "Cardiac Catheterization in Freestanding Clinics", 2005; Marketing and Planning Leadership Council interviews and analysis.

[1] Eligible refers to low acuity patients eligible to receive outpatient treatment in freestanding facility
[2] Clinical Outcomes Utilizing Revascubrization and Aggressive Drug Evaluation
[3] Acute Coronary Syndrome
[4] Optimal Medical Therapy

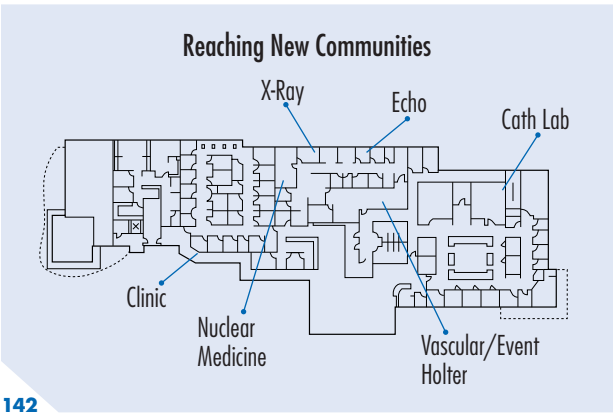
PCI Limitations Vary by Type and Region



141

Consideration #3—Optimal Location

Satellite Center Attracts New Patients



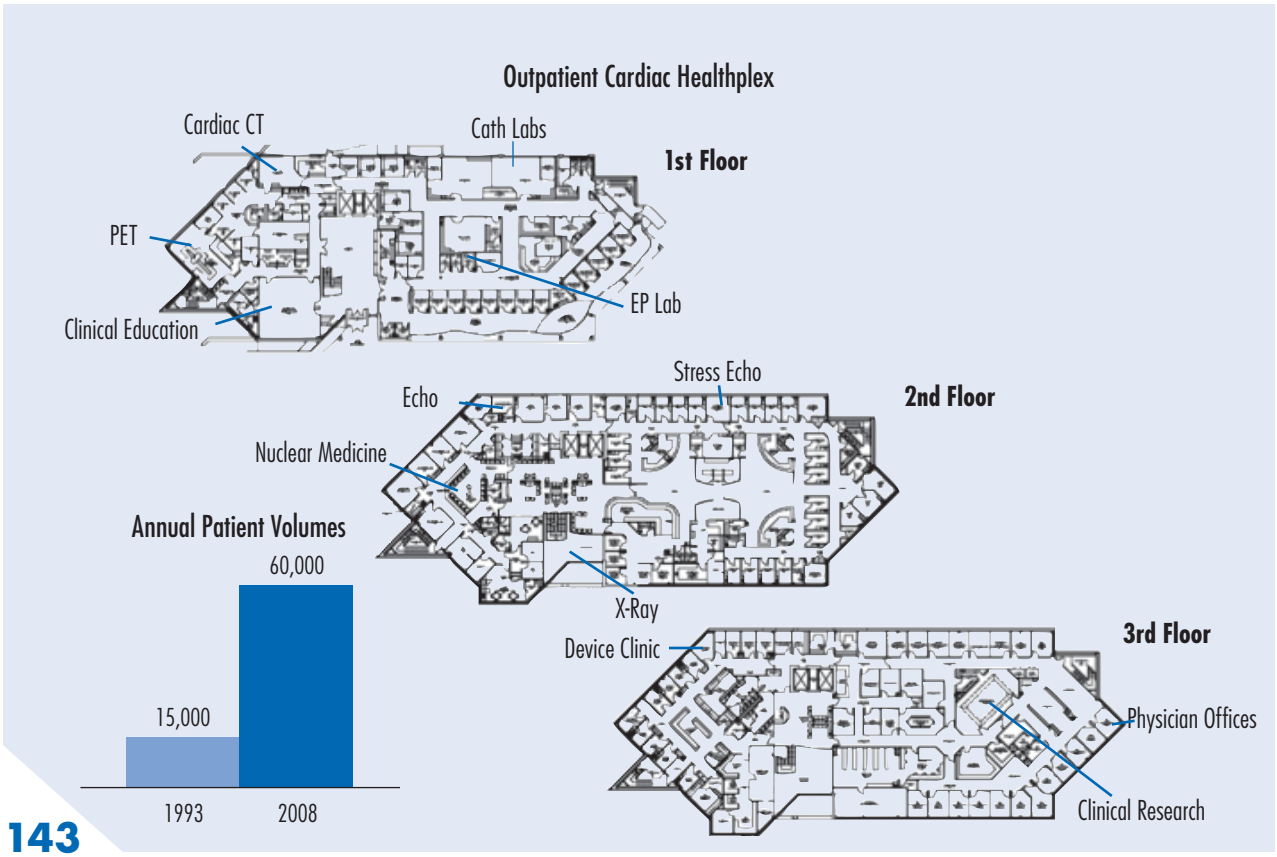
142

Case in Brief—Piedmont HealthCare

- Four-hospital system located in Atlanta, Georgia
- Expanded an existing physician MOB near competitor hospital by adding cardiac imaging and cath lab services
- Built with ability to expand space for possible addition of CT, other services in near future

Source: Zoler, Michael, "PCI Without On-site Cardiac Surgery Shown Safe, but Issues Linger," *MD Consult*, 2008; Marketing and Planning Leadership Council interviews and analysis.

One-Stop Shop Consolidates Volumes



143

Case in Brief— Delano Heart Center[1]

- 24-physician cardiac group located in the West
- Constructed 65,000 SF facility with physician offices, two cath labs, one EP lab adjacent to community hospital
- Facility treats 60,000 patients per year, up from 15,000 when first opened in 1993; including 5,000 peripheral interventions

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

Choosing "Best" Cath Lab Location a Close Call

Strategic Cath Lab Location Evaluation Matrix

Benefits	In the Hospital	Freestanding, On-Campus	Satellite Facility
Patient Convenience		✓✓	✓✓✓
Improved process flow	✓	✓✓	✓✓
Capture of inpatient referrals	✓✓✓	✓✓	✓
Branding		✓	✓✓✓
Continuity of care, team rapport, multidisciplinary care	✓✓	✓	✓✓
Staff flexing ability	✓	✓	
Ability to attract physicians; offices on site		✓✓	✓
State-of-the-art facility		✓	✓✓
Access to new markets			✓✓✓
Enhanced partnering (JV, affiliations)		✓✓	✓
HOPPS billing	✓✓✓	✓✓	✓

Limitations	In the Hospital	Freestanding, On-Campus	Satellite Facility
Campus footprint restrictions	x	xx	
Relocation		x	xx
Legal complexities, CON		x	xx
Removal of major services at main hospital			x
Physician travel time			x
Flow interference (during construction)	xx	x	
Spur defensive responses from competitors			x
Limited service offerings		x	xx
Limited access to ED		x	xx
Requires strong PCP feeder network			x
Duplication of services		x	x

✓ = Modestly demonstrates benefit ✓✓ = Demonstrates benefit ✓✓✓ = Strongly demonstrates benefit

x = Modestly suffers limitation xx = Suffers Limitation xxx = Strongly suffers limitation

144

Source: Palazzolo J, et al., "Choosing the Right Cardiovascular Care Delivery Model," *Journal of Invasive Cardiology*, 2004, 16: 207–212; Marketing and Planning Leadership Council interviews and analysis.

Consideration # 4—Legal Concerns

Physician Fee Schedule Threatens Old Practices

New Stark Laws Could Dramatically Change Alignment Models

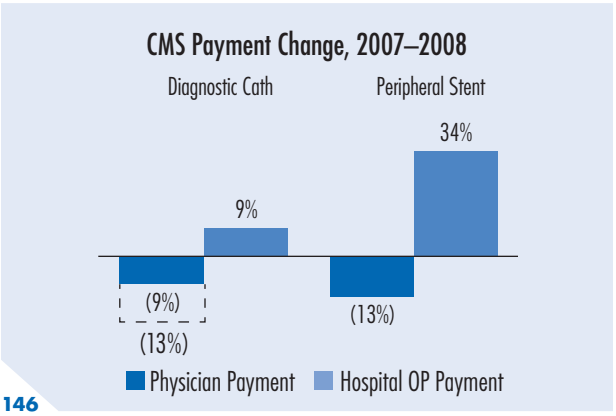
Arrangement	CMS Actions	Implications
In-Office Ancillary Services	• Soliciting comments on whether and how to alter the in office ancillary services exception • May exclude certain services from the purview of the exception • May disallow non-specialists physicians from using the exception for patients who require specialty care	• Some existing arrangements, including "turn-key" lab and imaging arrangements could be outlawed • Physician ability to supplement waning professional fees with technical revenue could be significantly hindered
"Per-Click" Space and Equipment Leases	• Seeking to prohibit "per-click" and time-based space and equipment leases where physicians lease equipment to the hospital and refer patients to the hospital • Seeking comments on whether to ban other "per-click" arrangements	• "Per-click" leases would essentially be outlawed • Less lucrative time-based arrangements may remain legal, but are unlikely to be as attractive an investment option for physicians
"Under Arrangement" Models	• Proposing to revise the definition of an "entity" that furnishes "designated health services" (DHS) • New definition would include both the entity that submits a claim for DHS and the entity that actually performs the services leading to the claim	• "Under arrangements" partnerships between hospitals and physicians would not be allowed • CMS now believes "such arrangements to be contrary to the plain intent of the physician self-referral law"

145

Consideration # 5—Provider Designation

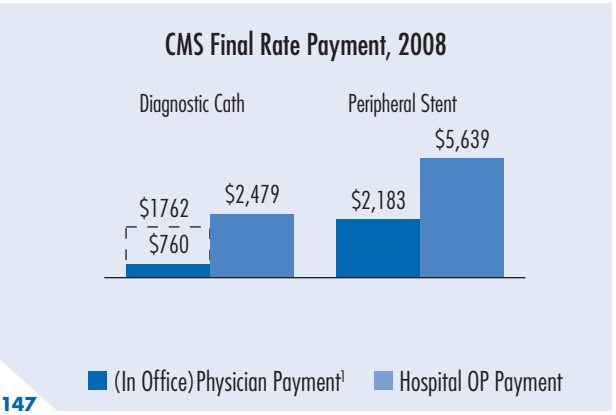
Reimbursement Changes Presenting New Leverage

Physician Office, IDTF Set To Fall, HOPPS Rise



146

Range of possible "in facility" physician payments



147

Range of possible global physician payments

Source: 72 Federal Register 52567, September 14, 2007; "Medicare Announces Final CY2008 Payment Rates for Physicians, Outpatient Hospitals and Ambulatory Surgery Centers (ASCs), *Boston Scientific*, 2008, available at: http://www.bostonscientific.com/templatedata/imports/collateral/Reimbursement/Interventional_Cardiology/rmbgde_ExternalSummittPFS_OPPS_ASC_01.us.pdf, accessed May 15, 2008; Marketing and Planning Leadership Council interviews and analysis.

[1] Global fee

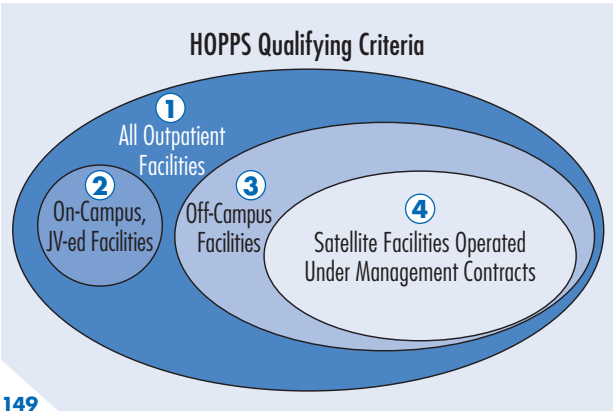
Provider Destination Determining Service Mix

Medicare-Reimbursed Procedures by Provider Type

Procedure	IDTF	ASC	HOPPS
PCI			✓
Atherectomy			✓
Diagnostic Cath	✓		✓
CCTA	✓		✓
Pacemaker/ICD Implant		✓	✓
EP Ablations		✓	✓

148

Qualifying for HOPPS a Complex Process



149

PCI in a freestanding center currently only reimbursed under a hospital provider license

1. All Outpatient Facilities

- *Licensed under the main hospital*
- *Clinical services must be integrated*
- *Financial services must be integrated*
- *Clear to the public that facility is part of the main provider*
- *Not all services may be furnished "under arrangement"*

2. On-Campus, JV-ed Facilities

- *Apply for provider-based status for the provider on whose campus they are located*
- *Must be at least partially owned by the main provider (no explicit restrictions on this)*

3. Off-Campus Facilities

- *Operate under the sole ownership of the main provider (no JVs)*
- *Identical oversight and accountability of services as would be provided at the main provider*
- *The following must be integrated with the main provider:*
  - *Billing services, records, human resources, payroll, employee benefit package, salary structure, purchasing services*
- *Either:*
  - *(A) be located within 35 miles of the hospital*
  - *(B) receive a disproportionate share adjustment greater than 11.75%*
  - *(C) at least 75% of patients who go to facility would go to main provider for inpatient services or live in the same zip codes as 75% of those who do*
  - *(D) the outpatient facility is a Rural Health Clinic*

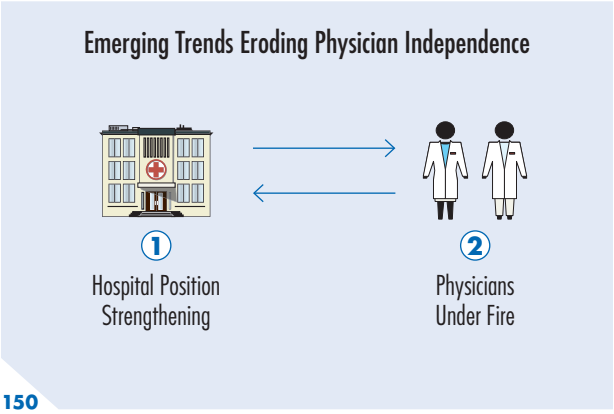
4. Satellite Facilities Operated Under Management Contracts

- *The organization which employs staff at the main provider must employ the staff in the off-campus facility who are directly involved in patient care (no "leased" employees may furnish care)*
- *The management contract must held by the provider themselves, not a parent company which owns both the provider and the facility*

Source: CMS, 2002 CFR Title 42, Volume 2, Part 413.65 available at http://edocket.access.gpo.go/cfr_2002/octqtr/pdf/42cfr413.65.pdf; Marketing and Planning Leadership Council interviews and analysis.

Consideration # 6: Physician Alignment

Hospital-Physician Leverage Improving



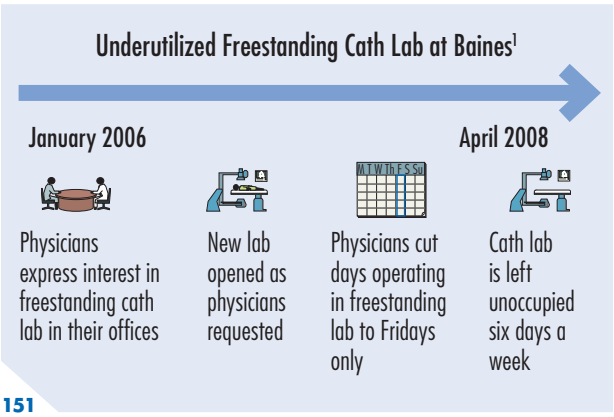
1. Hospital Position Strengthening

- *Improving outpatient reimbursement under HOPPS*
- *Increasing number of viable service offerings*
- *Multi-specialty collaboration uncovers untapped patients*
- *Greater referral base*
- *Higher commercial payer contracts*
- *Lower cost supply contracts*
- *Greater legal protection*

2. Physicians Under Fire

- *Require strong feeder network*
- *Less ability to identify patients from non-cardiac populations*
- *Fear of physician liability in event of complication*
- *Still unable to perform many high-end services in offices*
- *Lower commercial payer contracts*
- *Higher cost supply contracts*
- *Falling physician fee reimbursement*

Physician Interest Alone Insufficient



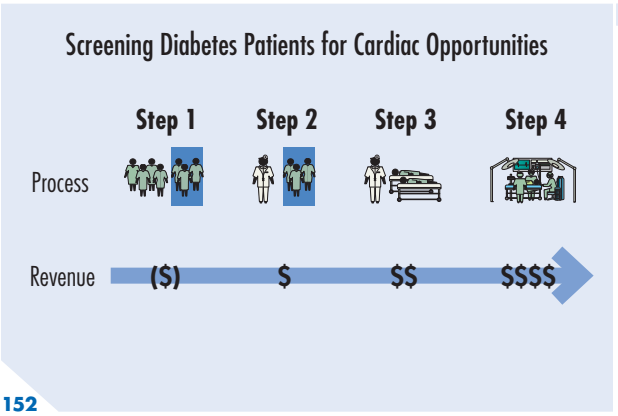
Case in brief—Baines Medical Center[1]

- 450-bed medical center in the Northeast
- Physicians requested creation of freestanding cath lab in MOB adjacent to hospital
- Two years after lab completion, physicians curtail active days in the lab to just Fridays, averaging only three procedures per week

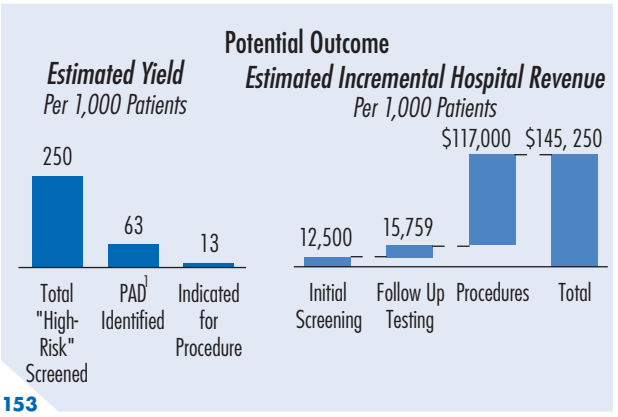
Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Pseudonym

Looking Beyond Cardiac Boosts Volume, Revenue



1. *Endocrinologist identifies patients most at risk of developing complications from diabetes*
2. *Cardiologist examines high risk patients for peripheral arterial disease using ankle-brachial index test*
3. *Patients with ABI tests indicating PAD further tested for other peripheral vascular, coronary artery diseases*
4. *Appropriate care provided for patients in need of surgical or percutaneous procedures*



20% to 29% of diabetics diagnosed with peripheral arterial disease

Key Definitions and Assumptions

- Based on data from American Diabetes Association
- Assumes 25% of outpatient diabetic population identified as "high-risk" and screened
- Assumes 20% of those diagnosed with PAD require intervention
- Average $50 revenue per test from ABI screening[1]
- Average $250 revenue for follow-up testing (which may include echocardiograms, stress tests, pulse volume recordings, duplex ultrasounds, magnetic resonance angiograms, etc.)
- Average $9,000 revenue per revascularization (assuming typical ration between CABG and PCI)

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Self-pay or commercial contract; currently not reimbursed by most Medicare intermediaries

Key Considerations for Implementation

Weighing Impact on Feasibility

Consideration	Impact on FS[1] Cath Lab Feasibility	Comments
Safety Restrictions	↓ ↓	• Though new outpatient procedures allowing larger patient population to be treated in outpatient setting, safety guidelines restrict population • Insufficient outpatient volumes makes PCI risky procedure to perform without surgical backup • Clinical efficacy of PCI for elective patients questioned by COURAGE trial • Diagnostic cath volumes continue to fall as CCTA procedures rise
State Regulations	↓	• State regulations may limit building of freestanding cath labs, ability to perform PCI without on site surgery • Majority of states not restrictive • CON requirements may prevent select hospitals from opening freestanding outpatient labs
Legal Concerns	↓	• New Stark revisions, both implemented and proposed, limit past physician alignment models
Provider Designation	↓ ↑	• Hospitals must follow strict guidelines to obtain HOPPS billing privileges, limiting the number of programs that may participate • Hospitals that successfully obtain HOPPS have strong leverage over physicians
Physician Alignment	↑ ↑	• Placement of new outpatient cath lab in physician offices may prove strong method of alignment, increasing utilization, downstream referrals • Lab offers new opportunity for subspecialist cross-referrals • Physicians potentially seeking closer hospital ties due to declining reimbursement, rise in HOPPS reimbursement

↑ ↑ Strongly Positive Effect ↑ Moderately Positive Effect ↓ ↑ Mixed Effects ↓ Moderately Negative Effect ↓ ↓ Strongly Negative Effect

154

Source: Marketing and Planning Leadership Council interviews and analysis.

[1] Freestanding

Freestanding Cath Lab Evaluation

Ten Diagnostic Questions		Yes	No
Regulatory Considerations	• Are we located in a state that allows freestanding cath labs?	___	___
	• Are we located in a state that allows elective PCI without surgery on site?	___	___
	• Can we secure a HOPPS provider designation for the lab?	___	___
Clinical Considerations	• Do our physicians believe freestanding cath lab procedures are clinically safe and justified?	___	___
	• Do we have established transfer protocols and safety guidelines for emergent cases?	___	___
Operational Considerations	• Are our physicians and patients dissatisfied with our current outpatient cath lab operations?	___	___
	• Do our physicians perform sufficient volumes to justify the new expense and ensure patient safety?	___	___
	• Do we have sufficient specialist diversity to bring in new referrals to the lab?	___	___
	• Do our physicians have a stake in the success of the freestanding cath lab?	___	___
	• If we do not build a freestanding lab with our physicians, might one of our competitor hospitals?	___	___

155

Source: Marketing and Planning Leadership Council interviews and analysis.

Optimal Outpatient Center Execution

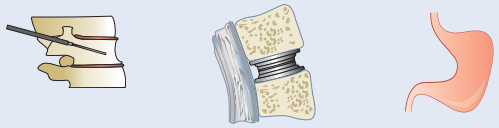
2008 Centers of Excellence

	Imaging Center	Wound Care Center	Retail-Based Health Clinic	Freestanding Cath Lab
Description	Multiple modality diagnostic facility	Dedicated center for treatment of non-healing wounds	Convenience care clinic	Outpatient cath lab outside hospital
Type	Ubiquitous	Emerging	Novel	Transforming
Urgency	Window of Opportunity?	Perennial	Immediate	Emerging
Center Profitability	$$$	$$	$	$$
Critical Success Factors	• Ready access • Ease of scheduling • Promotion and differentiation	• Hyperbaric oxygen therapy • Procedure mix • Physician involvement	• Varied product portfolio • Efficient staffing levels • Physician support	• Optimal siting • Breadth of services • Physician alignment

156

Planning for Markets On the Cusp

Future Outpatient Opportunities



① Spine Surgery

② Joint Replacement

③ Bariatrics

157

1. Spine Surgery
- *Volumes increasingly moving to outpatient surgery centers*
- *Outmigration expected to continue in forseeable future*
- *Numerous procedures approved under 2008 ASC payment rates*

2. Joint Replacement
- *Continuous decreasing length of stay*
- *Improvements in anesthesia cut recovery time dramatically*
- *Several facilities have already successfully completed outpatient joint replacement*

3. Bariatrics
- *LAP-BAND procedure successfully completed in outpatient setting*
- *Procedure less complex than gastric bypass surgery with similar outcomes at three-year mark*
- *Should band slip, reorientation can also be performed outpatient in ASCs*

Source: Marketing and Planning Leadership Council interviews and analysis.

The Advisory Board Company
2445 M Street, NW
Washington, DC 20037

17353D