

CASE STUDY:
AMBULATORY
PLANNING

*A Major Academic Health System
in the Southeast*

Case Study: Ambulatory Planning

Project Overview

A major academic health system in the Southeast engaged Soyering Consulting to provide initial planning, operational, and design assistance for the construction of a new large-scale ambulatory facility.

Services at the facility included the following:

- + Outpatient Surgery Center
- + Free-standing Emergency Department
- + Imaging
- + Diagnostic Cardiology
- + Laboratory
- + Retail Pharmacy
- + MOB

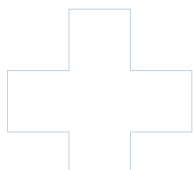
In addition to the services above, Soyering provided expertise in operational areas such as staffing, regulatory compliance, and process efficiency. This case study summarizes the various elements of the project.

Project Objective and Approach

The primary focus of the project for the Soyering Team was to provide the facility with recommendations regarding the following:

- + Determination of Service Offerings
- + Design
- + Project Management
- + Regulatory Assistance
- + Best Practice and Specialty-specific Input
- + Staffing
- + Capital Cost Review

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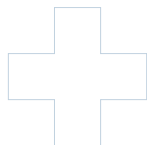
Determination of Service Offerings

- ✦ Worked with Surgery, Cardiology and Radiology to determine operational workflow and work design
 - Determined optimal service lines and regulatory compliance in respect to the current operational model
 - Provided optimal CPT build and reimbursement forecasting information
- ✦ Worked with leadership and provided input on additional service offerings and feasibility studies for sleep lab, birthing center, wellness, etc.

Example:

2018 Population by Age Cohort (Both Sexes)								
	0-14	15-44	45-64	65-74	75-84	85+	Total Population	Females 15-44
Location 1	2,547	5,294	4,024	1,438	652	225	14,180	2,652
Location 2	4,533	9,394	9,965	5,540	2,347	865	32,644	4,669
Location 3	3,574	6,970	4,954	1,750	717	216	18,181	3,411
Location 4	6,336	11,181	8,197	3,538	1,512	503	31,267	5,780
Location 5	12,934	23,101	15,311	4,732	1,995	660	58,733	11,919

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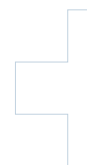
Design

- Reviewed and contributed to design elements, including:
 - Workflow efficiency
 - Clinical practice needs
 - Optimization for community hospital

Example:

Design Impacts on FTEs	Department Impact Level										
	Emergency Department	Imaging	Laboratory	Surgery	Supply Chain	Registration	Administration	Pharmacy	Housekeeping	Auxiliary & Other Areas	
Interventional Platform	0	1	0	4	2	1	2	2	0	1	
Shared Triage Space	1	0	1	2	0	1	1	1	0	0	
Centralized Registration	2	2	1	1	0	4	1	0	0	1	
Holding Areas	3	3	1	0	0	1	0	0	0	1	
Multi-use Observation Space	3	1	0	0	1	1	0	1	0	1	
Multi-use Pre-/Post Space	0	1	0	3	1	0	0	1	1	1	
Central Supply Storage and Support Space	2	2	0	2	4	0	0	4	0	2	
Staffing Travel Distances	2	3	1	2	3	2	1	3	0	3	
Departmental Adjacencies	3	3	0	1	3	3	0	3	1	3	
Total Score	16	16	4	15	14	13	5	15	2	13	
Design Impact on each area											
Score Range:	High - 15 or greater										
	Moderate - 11 to 14										
	Low - 10 or less										

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Project Management

- + Worked with facility to establish project management elements and functional teams for implementation and opening the facility
- + Reviewed organizational structure and strategy
- + Developed operational timeline of all activities that needed to be completed before opening
- + Troubleshoot project management hurdles with the project management team

Example:

ID	Task Name	Start	Finish	Duration	May 2013				Jun 2013				Jul 2013				Aug 2013				Sep 2013											
					5/5	5/12	5/19	5/26	6/2	6/9	6/16	6/23	6/30	7/7	7/14	7/21	7/28	8/4	8/11	8/18	8/25	9/1	9/8	9/15	9/22							
1	Organizational Structure	5/1/2013	12/13/2013	32.6w																												
2	Determine organizational structure and leadership lines of accountability	5/1/2013	7/9/2013	10w																												
3	Determine structure for physician operational management Identify and appoint Medical Department Chairs	6/3/2013	7/12/2013	6w																												
4	Medical staff approvals	7/15/2013	9/6/2013	8w																												
5	Physician privileging	9/9/2013	11/1/2013	8w																												
6	Physician Orientation	11/4/2013	12/13/2013	6w																												
7	Human Resources	5/1/2013	5/30/2014	56.6w																												
8	Recruit and hire administrative leaders (executive team and department leaders)	6/3/2013	3/7/2014	40w																												
9	Develop job descriptions for each administrative position	7/9/2013	7/22/2013	2w																												
10	Define scope of responsibilities for each leader	7/23/2013	8/19/2013	4w																												
11	Develop job descriptions for each staff position	7/10/2013	10/15/2013	14w																												
12	Finalize FTEs for each department	10/15/2013	12/9/2013	8w																												
13	Advertise and recruit for all staff	12/9/2013	5/30/2014	25w																												
14	Complete interviews for all staff positions	12/9/2013	5/30/2014	25w																												
15	Complete background checks and reference checks	12/9/2013	5/30/2014	25w																												

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Regulatory Assistance

- ✚ Provided input and assistance with outpatient regulatory requirements
 - State, CMS, Joint Commission, CLIA, etc.
- ✚ Reached out to agencies for clarification through company contacts

Example:

Allowable Cardiac and Endovascular Procedures by CPT for Financial Analysis

CPT Code	Procedure	Specialty	Level I	Level II
33210	Temporary Pacemaker Lead Single Chamber Insertion or Replacement (emergency)	Cardiology	Y	Y
33211	Temporary Pacemaker Lead Dual Chamber Insertion or Replacement (emergency)	Cardiology	Y	Y
93451	Right Heart Catheterization with Cardiac Output	Cardiology	Y	Y
93452	Left Heart Catheterization Including Left Ventriculography	Cardiology	Y	Y
93453	Combined Right and Left Heart Catheterization Including Left Ventriculography	Cardiology	Y	Y
93454	Coronary Angiography	Cardiology	Y	Y
93455	Coronary Angiography of Coronary Bypass Graft	Cardiology	Y	Y
93456	Coronary Angiography with Right Heart Catheterization	Cardiology	Y	Y
93457	Coronary Angiography of Coronary Bypass Graft and Right Heart Catheterization	Cardiology	Y	Y
93458	Coronary Angiography with Left Heart Catheterization	Cardiology	Y	Y
93459	Coronary Angiography of Coronary Bypass Graft and Left Heart Catheterization and Ventriculography	Cardiology	Y	Y

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Best Practice and Specialty-specific Input

- ✦ Provided best-practice examples for operational efficiency and optimal patient satisfaction based on standards and experience
- ✦ Worked with various specialties to determine specific needs and considerations
 - Services offered
 - Integration with main campus

Example:

Urology and Cysto Case Analysis

- ✦ The facility would likely be able to capture approximately 50 percent of the current hospital's outpatient urology case volume (equivalent of two urologists given current practice patterns), but with the same types of cases for approximately 300 cases per year. Based on demographic variables, that volume could double within five years.
- ✦ ESWL cases would be done in an open room with rented equipment and technology
- ✦ Only 25 percent of Urology cases would need a "Cysto" setup and imaging, or 75 cases per year, fewer than 2 per week.
- ✦ Only 30 percent of Urology cases, or 90 cases per year would need a "Cysto" setup without imaging; or a table with lithotomy positioning capabilities, a drainage setup, and foot pedal controls.
- ✦ The remainder of cases: 45 percent, or 135 per year, would be performed in a regular OR, with or without a C-arm.

Conclusion

A dedicated Cysto room with a fixed table and fixed imaging equipment would only be used for approximately 165 to 330 cases during the first five years, leaving the room unused 70 to 85 percent of the time.

The Alternative

A portable Cysto table with a C-arm for imaging. Following is a comparison of Fixed vs. Portable Cystoscopy Equipment.

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Staffing

- ✦ Created staffing matrices for each department using projected volumes and standards
- ✦ Provided feasibility study with minimum staffing, mid-point and high-point staffing levels, cost and workflow design and output models by cost center, 5-years after opening and 10-years after opening

Example:

Year 1 Freestanding ED Staffing Model

Staff Position	Days/Hours Worked	Total Hours/ Week	FTEs Required
1.0 ED Manager	M-F/Days	40	1.0
1.0 Reception/Quick Reg	24/7	168	4.2
1.0 Triage	24/7	168	4.2
1.0 Health Unit Secretary	Mon-Sun/0800-2400	112	4.2
2.0 RNs	24/7	336	8.4
1.0 ED Tech	24/7	168	4.2
1.0 Peds RN	Mon-Sun/1000-2200	84	2.1
ED Staff Budget Total			28.3 FTEs (2.599 WH/PV)
1.0 MD/D.O.	24/7	168	4.2
1.0 PA/NP	Mon-Sun/1000-2200	84	2.1
Provider Budget Total			6.3 FTEs
1.0 Registrar	24/7	168	4.2
1.0 Cashier	Mon-Sun/1000-2200	84	2.1
Revenue Cycle ED Budget Total			6.3 FTEs

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Capital Cost Review

- ✚ Reviewed plans for operational capital expenditures including equipment and instrumentation
 - Identified optimal equipment levels by phase
 - Consulted client on equipment utilization and costs associated with underutilized equipment
 - Provided alternatives/recommendations for equipment type based on clinical and service line specifications
- ✚ Worked with interventional service lines to review equipment keeping physician preference in mind

Example:

Laboratory Equipment Evaluation

Manufacturer	Model	Soyring Feedback
Iris (Beckman Coulter)	IQSelect Iriscell1500	This analyzer is typical only if you perform 300-400 urines per day (or more). It has high maintenance requirements and operating costs if below these volume numbers.
Iris (Beckman Coulter)	ICHEM100	This should meet the needs of the facility as an alternative to the above equipment. A manual process would be adequate for backup.
Sysmex (backup included)	XN-2000	These instruments need to be used frequently enough to maintain valve and tubing integrity. A single 2000 or two 1000s should be adequate for volumes.
Roche Diagnostics	6000	This analyzer is more typical in a medium to large sized hospital laboratory, and based on volumes, this facility would be utilizing the machine at a much smaller percentage of its rated capacity. We would recommend an Integra 400 plus instead.
Roche Diagnostics	e411	This analyzer is better suited as a referral lab instrument. Test menu consists of non-emergency diagnostic tests and is usually prohibitively expensive to operate at smaller facilities.
Diagnostica Stago	Compact II	This instrument is usually seen at much larger laboratories. We would recommend a Sysmex 500 or equivalent instead.
Hematechnologies Inc.	ESR Stat Plus	Manual methods should meet the needs of the facility.

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About Soyring Consulting

Soyring Consulting provides clinical and managerial consulting services to healthcare facilities of all sizes, including For-profit, Not-for-profit, Community, University, and Faith-based facilities and systems. Our team has worked in more than 35 states across the United States in all departments, including emergency, critical care, surgical services, sterile processing, nursing/clinical units, diagnostic, and support areas. Our hospital-wide projects focus on strategy, productivity, and facility design. By combining our experience, proven knowledge, and time-tested skills, we work with your team to create targeted opportunities, along with the plan and achievable goals to reach them. For more information, visit www.soyringconsulting.com or call our corporate office at (727) 822-8774 to speak with a representative of our leadership team.



880 21st Ave. N. / St. Petersburg, FL 33704

Website / www.soyringconsulting.com *Phone* / 727.822.8774

