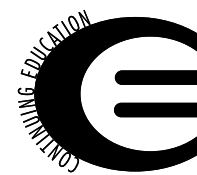


Developing an Outpatient Wound Care Clinic in an Acute Rehabilitation Setting

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KEY WORDS

*business plan
outpatient rehabilitation
wound clinic*

People with disability are at high risk for skin breakdown, which requires ongoing prevention and management. An outpatient rehabilitation wound clinic was developed to handle a variety of acute and chronic wounds for this unique population. This article describes how two advanced practice nurses proposed the idea for the wound care clinic and formulated a business plan, which was critical to successfully administering an outpatient wound care service. Essential components of the business plan included the goals, scope of service, professional practice model, benefits, rationale, marketing analysis, predicted volumes, regulatory imperatives, and financial needs.

Two advanced practice nurses (APNs) with extensive rehabilitation experience had a vision to develop a not-for-profit, hospital-based outpatient wound care clinic (OPWCC) that offered comprehensive, holistic, coordinated, state-of-the-art wound care for people with disability and chronic illness. The APNs' unique skill sets equipped them to perform histories and physical exams, coordinate and interpret appropriate diagnostic work-ups, offer nutritional guidance, implement cost-effective wound care modalities, provide patient education, assist with resources for wound supplies, and manage strategic follow-up. A combined 40 years of experience in rehabilitation, diverse advanced practice roles, and a collaborative blend of expertise were the essential ingredients for managing wound care patients in a specialized outpatient clinic. This article chronicles the APNs' journey, which included a business-planning phase, essential start-up actions, and strategies to improve patient flow into a successful expanded wound care clinic.

Background

A certified wound, ostomy, and continence nurse (CWOCN) had made a positive impact on every inpatient clinical unit in a freestanding 165-bed rehabilitation facility. Certified as a CWOCN in 2002, she quickly established her role as a nurse consultant. In this facility, staff nurses, medical residents, and attending physicians have daily requests for evaluations and recommendations for newly admitted patients with wounds and ostomies. This APN offered her expert opinion on wound prevention and treatment and educated many clinicians along the way. She created evidenced-based wound care protocols that provided structure and consistency for skin and wound management. This

CWOCN implemented weekly wound care rounds as an organized strategy for follow-up that coincides with Joint Commission standards and recommendations. Medical staff and hospital leadership noted the successful wound care management and trends spearheaded by this CWOCN.

A family nurse practitioner (FNP) had experience in both inpatient and outpatient settings, with greater focus on a variety of specialty outpatient clinics serving general pediatric and adult rehabilitation populations. She established adult primary care and intrathecal baclofen pump clinics and served as a resource to an outpatient program addressing multiple disability types and issues. This FNP frequently was challenged to manage pressure ulcers when working with this unique population. Because of the complexities of wound care management and the many needs of disabled and chronically ill patients, these visits often were labor intensive.

Patients diagnosed with spinal cord injury (SCI), brain injury, stroke, spina bifida, and cerebral palsy are commonly seen in outpatient settings. These patients are neurologically compromised and are at an increased risk for pressure ulcers and other wounds. Pressure ulcers and skin and other wound-type issues are the result of immobility, decreased sensation, prolonged pressure, shearing forces and friction, moisture and maceration, and incontinence. Other pathophysiological factors underlying wounds include fever, edema, anemia, infection, ischemia, hypoxemia, hypotension, malnutrition, decreased lean body mass, and increased metabolic demands (Salcido & Popescu, 2009). Patients seen in outpatient rehabilitation settings have significant physical disabilities, multiple medical comorbidities, and extensive needs requiring increased time for

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management. Together, the two APNs hypothesized that outpatients with wounds would fare better in an organized collaborative interdisciplinary venue in which advanced wound modalities and coordinated follow-up would occur.

Fellowship

The formal proposition to develop a wound care clinic (WCC) was outlined in a fellowship application proposal. The fellowship, funded through an endowment by the Prince Charitable Trust, facilitated program development in the nursing field. An interdisciplinary committee of experienced clinicians and senior reviewers rated the proposal based on its probability of having a significant impact on quality of care at the hospital. The plan had to be clear, realistic, and consistent with hospital and nursing objectives. The plan's goals were to use evidence-based practices in wound care management, demonstrate effectiveness and efficiency of the interdisciplinary outpatient venue, address patient concerns and medical needs to manage wounds and prevent recurrence, and develop educational materials pertinent to wound care management. The granted fellowship allowed for the time, flexibility, and resources to develop and implement a comprehensive OPWCC. The fellowship provided funding for a 0.2 full-time-equivalent salary and benefits for both APNs to develop the conceptual model. Expenses were paid for attendance at a national conference on skin and wound care, a site visit to another WCC, and equipment and supplies (e.g., a digital camera, color printer, photo paper, and additional ancillary costs detailed in the proposal budget).

The fellowship committee assigned a mentor to guide the endeavor. A vice president of patient care services/chief nurse executive, who had extensive business knowledge and skills, facilitated the process and helped with strategic planning and the timeline. An initial step was to determine whether other clinicians agreed a WCC could be beneficial. Physiatrists were queried to ascertain whether such a clinic would be used internally. A survey was conducted of rehabilitation attending physicians to determine if they preferred to manage wounds on their own or refer to a wound clinic. The results were favorable, with a 70% response rate. Thirty-five attending physicians completed the survey, and 89% were interested in sending their patients to the specialty clinic. As predicted, because it is labor intensive to care for rehabilitation patients with wounds, physiatrists preferred patient referral to a WCC, which could allow for increased patient flow through their respective clinics.

Business Planning

An important phase was to develop a written business plan, which is a required blueprint or summary describing the services considered. In today's complex healthcare business environment, organizations need to strategically determine financial viability of any new endeavor. Consequently, the business plan needed to address products and services and provide information about the market, market strategies, competition, and operation and financial information (Bachrodt & Smyth, 2004). The advisor provided a proforma template with the following headings: goals, scope of services, rationale, professional practice model, benefits/risks, market analysis, volume projections, referral development, capital requirements (facility and equipment needs), regulatory imperatives, critical success factors, proposed budget, and recommendations. It took months to research the necessary information to complete each section.

During the business-planning phase, clinic goals were developed with a focus on patient care benefits targeted to specific populations (e.g., SCI, spina bifida, stroke, and brain injury). The scope of services was expanded. Practice issues that took into consideration each of the APNs' distinct functions and abilities and the physician's supervisory role also were identified. In the state of Illinois, the nurse practitioner (NP) role is somewhat restrictive. Illinois was the last state to allow NPs prescriptive authority. During the clinic preparation phase, NPs needed a collaborative agreement with physicians when delivering healthcare services. Currently, hospital bylaws in Illinois mandate that an attending physician of record be present for all patients at their first visit. Subsequent visits may be conducted by an NP as long as the physician is available through telecommunication. The physician should be consulted for medical problems, complications, emergencies, and referrals.

Next, market competition was assessed; this entailed determining how many other WCCs were located within the metropolitan area (few) and if any of them promoted services for people with disabilities (none). When determining outpatient rehabilitation trends, the population at highest risk was identified as SCI patients. Outpatient nurses were asked to provide an estimate of how many quadriplegic and paraplegic patients had pressure ulcers and had been seen at the facility during the past 3 months. This volume was considered a low estimate of the patients who potentially could be referred to the clinic. A projected treatment course multiplied by the estimated number of patients helped predict clinic volume. For example, patients with SCI who have nonhealing pressure ulcers typically are seen monthly for 6 months; when

multiplied by 50 patients, this is equivalent to 300 visits.

The physician practice manager helped to formulate a proposed budget that emphasized marketing and critical success factors. There were no newly created positions, which limited additional salary costs. Planned equipment purchases were included in the proposed budget. The financial risks were considered minimal because wound care was already in practice in the rehabilitation environment. Marketing strategies were formulated to include networking with other healthcare providers via formal presentations, one of which was given at a national conference, and informal communication. The wound care nurse consultant communicated to her colleagues the availability of wound care services per the regional Wound, Ostomy, and Continence Nurses Society directory serving Northern Illinois. A brochure describing the wound care services was distributed as a public relations tool. Critical success also was contingent upon outpatient nursing support. Outpatient staff committed their support with the condition that the wound clinic would be scheduled on a day with a lower total clinic volume.

Although its creation was an arduous task, the business plan helped to cultivate ideas and purposes and target needs. Several things were learned as this plan was created.

- For millions of Americans, the aging process, immobility, disability, diabetes, and other conditions may result in acute and chronic wounds that negatively impact a patient's quality of life (Baranoski & Ayello, 2003; Pittman, 2007).
- Chronic wounds frequently occur in patients with complex medical conditions such as disability. Many of these patients have comorbidities such as diabetes, heart disease, cancer, and obesity, which may further compromise a patient's healing ability.
- The adjacent acute care hospital did not have a WCC. There were few WCCs within the immediate metropolitan area. None promoted their services for people with disabilities.
- In one fiscal quarter, the hospital's outpatient clinic had seen an estimated 65 patients with wounds. Some patients had acute wounds; many had chronic wounds in multiple sites. Of the wounds seen, approximately 90% were pressure ulcers and the remaining 10% were venous ulcers and other types of lower extremity (LE) ulcers or burns.
- Extrapolating from the current outpatient trends, the gender distribution was 45% male and 55% female. The payer sources were

Key Practice Points

1. A comprehensive outpatient rehabilitation wound care clinic (OPWCC) offers a continuum of services that emphasizes the interdisciplinary team model directed toward the unique needs of people with disabilities.
2. Patients who are neurologically compromised are at an increased risk of pressure ulcers and other wounds because of immobility, decreased sensation, prolonged pressure, shearing force and friction, moisture and maceration, and incontinence.
3. Pathological factors contributing to the development of wounds can include fever, edema, anemia, infection, ischemia, impaired circulation, hypoxemia, hypotension, malnutrition, decreased lean body mass, increased metabolic demands, and impaired glucose levels.
4. A healthcare business plan needs to include the product and services, projected market, marketing strategies, competition, and financial analysis.

29% Medicare, 16% Medicaid, and 55% other insurance. It was predicted, however, that the WCC payer sources more closely would resemble the scenario at the primary care specialty clinic, with 40% Medicare and 45% Medicaid distributions.

The outlined business plan for an OPWCC in a rehabilitation setting included

1. Clinic goals

- Improve patient outcomes by wound healing and prevention
- Enhance quality of life demonstrated by patient satisfaction survey
- Decrease wound recurrence by examining trends (use of Pressure Ulcer Scale for Healing [PUSH] tool in the future)
- Expand education for patients, families, and clinicians
- Increase hospital revenue with WCC expansion
- Incorporate research ideas and options for future participation

2. Scope of services

- Patient focused and team oriented
- Wound-type treatment to include nonhealing wounds, pressure ulcers, LE venous ulcers, LE arterial ulcers, LE neuropathic ulcers, traumatic wounds, surgical wounds, and posttraumatic burns

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- Comprehensive patient evaluation to include wound history, previous wound modalities, nutritional assessment, diagnosis, comorbidities, past medical history, social history, review of systems, physical examination, assessment, and treatment plan
 - Comprehensive wound assessment to include type, tissue percent (viable, necrotic, etc.), dimensions, shape, base, exudate, wound edges, dead space, surrounding tissue, and absence/presence of infection with digital photograph
 - Appropriate diagnostic examination to include (but not limited to) ankle brachial index, laboratory tests, nutritional parameters, hydration status, diabetes screen/control, anemia evaluation, infection/osteomyelitis work-up, radiology body imaging, computer tomography, and magnetic resonance imaging
 - Evidence-based treatments using pressure-ulcer protocols, vascular and LE ulcer protocols, and pain-management algorithms
 - Patient education materials that describe wound causes, relieving factors, treatment options, skin and wound care instructions, proper nutrition, and pressure-relieving measures
 - Selection of appropriate pressure-relief seating and resting-support surfaces
 - Appropriate referral to other specialties as necessary such as dermatology, dietary, endocrinology, infectious disease, occupational therapy (OT), orthopedics, orthotics, physical therapy (PT), plastics, podiatry, prosthetics, rheumatology, or vascular surgery
 - Ongoing reassessment at strategic intervals
- 3. Professional practice model**
- Physiatrist performs the comprehensive evaluation at the first visit for outside referrals
 - Physiatrist/NP performs first comprehensive wound evaluation for established patients and subsequent visits
 - CWOCN evaluates wound status and progress using wound indices and digital photography
 - An interdisciplinary team including the patient and family determines patient-centered wound care management
 - Subsequent WCC visits with at least two professionals to determine progress
 - Physiatrist/NP (once privileged) performs conservative sharp debridement procedure
 - Physiatrist/NP documents the patient visit and bills for the appropriate level of care
- Outpatient nurse coordinates supplies and follows through with home-health orders
- 4. Benefits**
- Enhanced quality of life of disabled patients who have acute and chronic wounds by providing an expert team that uses evidence-based, state-of-the-art wound care treatments
 - Patients are provided wound care regardless of their financial status.
 - Consolidated patient services are located in one location (e.g., lab and radiology in the outpatient clinic; PT, OT, orthotics and prosthetics, wheelchair seating, and positioning located within the hospital).
 - The clinic environment is conducive to meeting the needs of those who are disabled or have a chronic illness (e.g., special equipment such as exam tables and lift systems).
 - A blend of rehabilitation medicine and nursing expertise is combined with best wound care specialty practice.
 - Increased revenue
 - Enhanced reputation
- 5. Rationale**
- The rehabilitation patient population is at high risk for wounds
 - Coordinated wound care and the dissemination of state-of-the-art protocols and technologies would have tremendous patient benefit
 - A hospital physician survey demonstrated an 89% preference for patient referral to the specialty clinic
 - Dedicated clinic staff, space, and time should contribute to enhanced coordination of services
- 6. Market analysis/volume projections**
- In a half-day clinic, an estimated two to three evaluations/new patients and 8–10 rechecks/follow-ups
 - Projected typical treatment course for future patient volume
 - Nonhealing pressure ulcers—patients seen every 2–4 weeks for 2–6 months
 - Acute wounds—patients seen every 2 weeks for 4–12 weeks or longer if necessary
 - LE wounds—patients seen at least weekly for 12 weeks (possibly more often for those needing compression therapy)
 - Chronic wounds—patients seen at least monthly for 6–12 months
 - Estimated volume trends for the year with a once-every-other-week clinic = 260 patients and a total of 1,857 visits

7. Referral development

- Formal presentation to medical staff regarding pilot-phase outcome and specific clinic plans
- Pamphlet describing range of services
- Direct mailings to local physician groups (primarily internists, endocrinologists, and dermatologists) as a marketing strategy

8. Capital requirements

- Use of existing facility space, accommodations, current equipment, and supplies; no new staff or salary adjustments are necessary
- Equipment (ankle brachial index equipment, specialized chair, digital camera, and color printer)

9. Regulatory imperatives

- NP has advanced practice state licensure and prescriptive authority
- CWOCN obtained advanced practice nurse state licensure
- Conservative sharp debridement is permitted by APNs in the state of Illinois. A hospital policy, practitioner certification, and physician-supervised competency determination are required for privileges.

10. Critical success factors

- During pilot phase: physician oversight, supervision, and availability when needed
- Physician referrals
- Outpatient nursing staff cooperation (home supply vendor set-up, wound dressing changes, assistance with patient physical needs, etc.)
- Environment with proper equipment available (exam tables as low as 22 inches in height that can be raised for the comfort of the clinician)
- Future procurement of a bariatric chair to facilitate LE assessment and treatment
- Administrative support (staffing appropriate to accommodate registration of patients, billing and coding, and scheduling future visits)
- Physician-practice support (future marketing, etc.)

11. Proposed budget/projected expenses

- Initial budget costs (minimal)

12. Recommendations

- Pilot an OPWCC beginning March 2004 with half-day clinics twice monthly

Pilot Phase and Tools

Before the implementation of the pilot clinic, the APNs met with the outpatient clinic manager to discuss schedules, determine staffing needs, and secure clinic space to maximize efficient patient flow. A physician with an interest in wound care was

recruited to join the endeavor. During the pilot phase, the FNP and the CWOCN only treated preestablished patients. Initially, the physician was consulted only as needed to address significantly deteriorated wounds or for sharp debridement. After the OPWCC was permanently established, new referral patients were recruited and the initial evaluation was performed by the physician. The FNP conducted most re-evaluations, and the CWOCN continued to offer her expertise to all wound care patients.

A patient questionnaire tool was created to collect patient data, facilitate wound treatment, improve patient care, and ease patient flow. Patients were handed the 10-minute questionnaire at the time of registration, and the form was completed while in the waiting room. The tool focused on patient diagnosis, comorbidities, wound history, duration, and cause of the wound. Questions were asked about associated factors regarding patients' healing ability and limiting factors affecting non-healing wounds in addition to previously attempted remedies and treatments. The valuable information described in patients' own words provides insight into their knowledge base and understanding of their own health condition (**Figure 1**).

The NP then developed another tool to help focus on the comprehensive wound evaluation—an evaluation form that captures the most pertinent health information as it relates to a wound. The form outlines questions that should be raised during patient interviews. The review of systems is not all inclusive, but the typical issues that can influence healing are listed. The exam portion highlights information necessary to complete a comprehensive wound evaluation. This template history and physical form has proved useful for training resident physicians in the OPWCC.

The pilot phase occurred during the last 3 months of the fellowship. Only 12 patients were referred due to very short implementation notification of the pilot wound clinic. The breakdown of diagnostic groups included 1 patient with rheumatoid arthritis, 1 with multiple sclerosis, 1 with cerebral palsy, 2 with anoxic brain injury, and 7 with SCI (2 patients had quadriplegia and 5 had paraplegia). Eleven patients had pressure ulcers, many with several skin areas, for a total of 37 wounds. One patient had an atypical LE wound. These patients were seen several times for a total of 21 outpatient visits.

Pilot-Phase Evaluation

After the pilot program was implemented, feedback was requested from a random sample of 25% of patients seen in the OPWCC. The patients were

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Figure 1. Sample Patient Questionnaire

REHABILITATION INSTITUTE OF CHICAGO WOUND CARE CLINIC PATIENT QUESTIONNAIRE		
Name _____	Age/Sex _____	Height/Weight _____
Date _____	Referral Source _____	
Primary & Secondary Insurance _____		
What is your diagnosis?		
What other health problems do you have?		
Please check any that apply		
<input type="checkbox"/> Anemia		
<input type="checkbox"/> Cardiovascular/respiratory		
<input type="checkbox"/> Diabetes		
<input type="checkbox"/> High blood pressure		
<input type="checkbox"/> Infections		
<input type="checkbox"/> Nutritional problems/weight loss		
What is your diet?		
Do you take any vitamins?		
Do you smoke? <input type="checkbox"/> no <input type="checkbox"/> yes, how much?		
<input type="checkbox"/> What, if any, nonprescribed drugs?		
Do you drink alcohol? <input type="checkbox"/> no <input type="checkbox"/> yes, how much?		
What type of wound do you have?		
Where is the wound located?		
What was the cause?		
What treatments have been tried?		
Are you satisfied with the wound healing? <input type="checkbox"/> yes <input type="checkbox"/> no comments:		
Who provided wound care prior to your visit?		
How were you referred to the clinic?		

asked to answer four questions: (1) How satisfied were you with your overall wound care treatment today? (2) Did your wound care clinicians appear knowledgeable regarding your wound care management? (3) How well prepared do you feel regarding your wound care follow-up at home? (4) Did the care received at the clinic appear efficient and timely? Patients used a Likert-type scale of 1–4, with 1 = *poor*, 2 = *fair*, 3 = *good*, 4 = *excellent*. The results revealed outstanding patient satisfaction. According to the surveys, 100% of the patients rated the services as *good* or *excellent*, with the majority of ratings as *excellent*. The immediate feedback and initial positive experiences confirmed that the clinic was valuable.

Marketing the Established Clinic

The development of the OPWCC was a first-time initiative for the hospital and, uniquely, was run by APNs. Because of the novelty of such an event, the APNs felt it prudent to put together a presentation to highlight the pilot-phase outcomes and promote an established outpatient wound care program, which was disseminated at a medical staff meeting during which the mission, goals, scope of service, initial pilot data, and outcomes were articulated. Despite limited data, the physicians were impressed with the ideals, encouraged by the initial patient feedback, and optimistic about potential clinic growth. Several physicians reiterated their opinions of the clinic's value to customers or patients. The majority of clinicians voted in favor of permanently establishing the specialty clinic with the APNs' continued involvement. Since then, stronger support has been received. To increase patient volume, a physiatrist—who was interested in wound care management—joined the practice full time, which allowed for outside referrals and first-time evaluations.

The hospital marketing department was excited about the new enterprise and sought involvement by helping to develop a brochure to showcase the clinic's philosophy and services. The clinicians met with the marketers several times to determine and agree on content for the brochure. The advertising team stressed that consumer-driven marketing is believed to be better received when highlighting and showcasing a physician working within an interdisciplinary model. Marketing data have demonstrated that consumers (patients and families) choose services based on hospital reputation and physician skill and expertise. To this end, administration and marketing personnel advised that the advertising be physiatrist driven, which meant the APNs were not prominently featured. It was felt that this marketing

strategy most likely would benefit the reputation of the organization and the OPWCC with higher referrals. The first targeted groups were affiliated hospitals, nearby primary care physicians, and endocrinologists. The brochures were sent in the mail with a cover letter introducing the physician's expertise with the collaborative team.

Further Challenges

Personnel responsibility within the outpatient setting provided challenges. Several training sessions were directed at improving patient flow; nurses and patient care technician staff were required to attend. Efficiency finally was achieved by establishing the following process: (1) patient transfer to the exam chair or onto the exam table would occur before the clinician's initial contact with the patient, (2) wound dressings would be removed and there would be visual placement for wound-drainage analysis, (3) wound cleansing, (4) assessment of equipment readiness (e.g., disposable measuring guide, gauze, cotton-tipped applicator). Re-education, mentorship, and staff recognition have helped ensure continued participation. The fast-paced, large-volume clinic requires special team members who are energetic and hard working for success to occur.

The APNs also had to meet with the outpatient manager to re-examine space prioritization and clinical nursing support for the OPWCC. It is a constant challenge to secure staffing for a labor-intensive specialty and large patient volume. The clinic's success is due to the staff's ongoing support. Patient outcomes and improved status reflect overall happy clientele. A primary referral source has been word of mouth from colleagues sharing the same space. The success of the wound outpatient program is evidenced by increased referrals and further expansion of the clinic. There are now six clinics monthly, and hundreds of patients have been cared for in the past 5 years.

Top 10 Lessons Learned

Reflecting on the past, it has been an incredible journey. What started as a shared vision by two APNs who received hospital and administrative support has flourished into a wound care team that provides comprehensive, state-of-the-art care for patients with disability and chronic illness. The clinicians have summarized their top 10 lessons learned to assist future APNs.

1. Propose an idea. Succinctly describe your idea, goals, and objectives in a format that is implicit.
2. Seek funding. Find a source of funding to pay for your salary, time, energy, necessary equipment, and tools. Consider fellowships or

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- search for grant opportunities offered through your hospital, academic affiliate, and private or government organizations.
3. Consult experts. Enlist expert advice and assistance when necessary. Seeking counsel from someone with a business degree or marketing or billing and coding experience might prove most useful.
 4. Investigate the need. Determine whether your idea has any value to your organization. Survey colleagues and solicit their input. In the scenario described in this article, nurses provided early informal feedback and reinforcement. However, formal physician survey results sanctioned the clinic idea.
 5. Complete a business proforma. Although it is time consuming, this experience challenged ideas, forced tough business issues, and was key to the business venture's success. The proposal was enhanced with better articulated goals and a more specific scope of service. Budget considerations and cost factors also were important for the initiative.
 6. Exercise patience and persistence. A lot of time and energy are necessary throughout the process. Don't be discouraged if your idea takes a year or longer to implement.
 7. Ensure team collaboration. By working together, you can accomplish much more. Teamwork and ongoing support from managers, schedulers, nursing personnel, and suppliers brings continued success.
 8. Use organizational tools. The patient questionnaire and evaluation form helped improve patient flow and time efficiency. The patient questionnaire can become part of the medical record because the questions detail the chief concerns and contributing factors for nonhealing wounds. Valuable clinician time can be saved.
 9. Evaluate outcomes. Evaluate for effectiveness and measure patient satisfaction. A system to measure clinic effectiveness, patient satisfaction, and patient outcomes endorses continuation of the clinic.
 10. Market the program. Promote the program and describe the benefits of your idea consistently to colleagues through a variety of venues (e.g., presentations, marketing materials).

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