The Laryngoscope

Implementation of a Novel Otolaryngology Clinic for Indigent Patients

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Objectives/Hypothesis: This study was designed to describe the implementation, utilization, and outcomes of an otolaryngology clinic for indigent patients employing a novel design.

Study Design: Pilot study.

Methods: A tertiary-care academic otolaryngology department partnered with a nonprofit outpatient clinic for indigent patients in order to provide free subspecialty consultation services. A novel format was utilized in which the department provided on-site, scheduled outpatient multidisciplinary consultation on weekends, staffed by volunteer health care providers and ancillary staff. A review of the program was conducted using prospectively collected data. Clinic design, staffing, utilization, and feasibility were described, along with demographic and clinical data for all patients participating in the clinic from October 2010 through January 2012.

Results: Five clinics were held over 15 months, totaling 74 patient visits, with positive feedback regarding accessibility and quality of services provided. A total of 60 procedures were performed, including audiograms, endoscopies, otologic procedures, biopsies and/or excisions. The estimated value of medical services that were provided was $37,302. Four potentially life-threatening conditions were newly diagnosed. Twenty patients received conclusive evaluation and treatment at the time of their first visit. Eighteen patients required further subspecialty treatment and/or surgery that could not be provided in the outpatient setting, and were referred appropriately.

Conclusions: The partnership between an academic otolaryngology department and a nonprofit clinic provided free on-site consultation for indigent patients. Such an arrangement is feasible, well utilized, and successful in delivering comprehensive specialized services to indigent patients who lack traditional access to medical care.

Key Words: Free clinic, charity care, subspecialty consultation.

Level of Evidence: 2c.

***Laryngoscope,* 123:2142–2147, 2013**

INTRODUCTION

The U.S. health care system is imperfect; millions are uninsured or underinsured, leading to significant gaps in accessibility to medical care.[1] Many individuals depend upon a safety net of services in order to achieve access to care.[2] Free clinics are an invaluable mechanism whereby patients without the means to procure health care through traditional mechanisms are able to do so.[3] In 2006, nearly two million patients received care from free clinics.[4]

The relationship between primary care providers and specialist consultants is a critical rung in the health care ladder, with significant implications for quality of care delivery as well as cost. Some evidence suggests that mechanisms exist to improve this dynamic, although data are scant regarding the effectiveness and efficiency of interventions designed to optimize outpatient specialist referrals.[5] The establishment of satellite surgical specialty clinics within an existing general practice can succeed in improving access and patient satisfaction, but impact upon longer-term health status is less clear.[6] How these satellite specialty models might translate to care delivery within free clinics remains uncertain.

Disenfranchised patients have a significant need for otolaryngology services. Head and neck cancer disproportionately affects patients of low socioeconomic status, and many cost-effective interventions are available to treat common conditions that adversely affect health and quality of life.[7] There is a significant regional shortage of otolaryngologists in the United States, particularly in rural locales that might benefit from orchestrated efforts to improve care delivery.[8] That said, while the concept of "bringing the clinic to the patient" is intriguing, the otolaryngologist's frequent need for specialized equipment in order to provide a comprehensive evaluation may obviate the benefits of such a program design.[9]

This study was designed to describe the implementation, utilization, and outcomes of an otolaryngology clinic for indigent patients employing a novel design.

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Editor's Note: This Manuscript was accepted for publication October 16, 2012.

Presented at the Triological Society Combined Otolaryngology Spring Meeting, San Diego, California, U.S.A., April 18–22, 2012.

The authors have no funding, financial relationships, or conflicts of interest to disclose.

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DOI: 10.1002/lary.23880

MATERIALS AND METHODS

Creation of Program

The Hope Medical Clinic of Ypsilanti (www.thehopeclinic.org) is an independent, nonprofit medical and social service institution that provides free health care for patients without insurance or the ability to pay for medical services. Its funding sources are diverse, including individuals; foundations; corporations; and to a lesser extent, governmental support. The majority of labor and professional services are donated by volunteers. Eligible patients receive primary medical care, free laboratory and radiology tests, access to free and low cost medications, and access to both onsite and offsite specialty services from a network of volunteer specialists. Nearly 100 volunteer health care providers donate their time at Hope Medical Clinic to staff approximately 7,000 annual visits, including more than 1,500 specialty care visits. The clinic is located in a neighboring city 10 miles from the University of Michigan Health System (UMHS).

The UMHS Department of Otolaryngology–Head and Neck Surgery has had an ongoing relationship with the Hope Medical Clinic over the past decade. In the prior health care model, once per month on a weekday evening UMHS volunteer clinicians provided on-site care at the Hope Clinic to patients referred for consultation with an otolaryngologist. However, Hope Clinic lacks adequate resources to serve the needs of these patients. The absence of specialized equipment, such as an otologic microscope, endoscopy supplies, minor procedural tools, and audiology services, made appropriate diagnosis/triage impossible for a significant subset of individuals.

To address this need, we proposed hosting the otolaryngology subspecialty clinic for Hope Clinic patients at the UMHS outpatient clinic on weekends. The clinic was designed in order to provide high-quality clinical care while acknowledging potential institutional, financial, logistical and legal barriers to success. As such, approval was sought by administrators and consultants from both institutions in order to formalize the collaboration. A written memorandum of understanding was drafted and signed by representatives from the Regents of the University of Michigan and the Hope Clinic; input and written approval was sought from representatives from legal, risk management, senior administration, and real estate/facilities management. Formulating a written agreement that clearly elucidated each organization's role and assumption of liability was crucial in facilitating institutional approval.

Scheduling

The clinics have taken place on Saturday mornings three to four times annually at the UMHS outpatient otolaryngology facility. The Hope Clinic keeps a running list of all otolaryngology referrals, and is responsible for calling, scheduling, and reminding patients of the time and date of the appointment.

Staffing

The clinics are staffed by UMHS employees who have agreed to donate their time on a volunteer basis. As such, volunteers are considered part of the workforce of the Hope Clinic, and subject to Hope Clinic privacy and confidentiality policies and procedures. A minimum of eight volunteers participate in each clinic: front desk staff (1); medical assistant (1), nurses (1); surgical residents (2); nurse practitioners (NPs) and/or physician assistants (PAs) (1); faculty physician (1); and audiologist (1). Trainees provide medical care under the supervision of fully licensed clinicians. Requests for volunteers are sent, and schedules are arranged approximately 1 month in advance of each clinic in order to ensure adequate staffing.

Documentation

All patients participating in the newly designed clinic remain Hope Clinic patients, and all paperwork and medical care is delivered under the auspices of the Hope Clinic. From a practical standpoint, the UMHS role is that of "landlord." Hope Clinic referral forms are filled out by volunteer staff at the time of the encounter, and returned to Hope Clinic to ensure continuity of care with Hope Clinic providers and on-site operations. A confidential "shadow chart" is maintained on-site at UMHS to facilitate quality improvement review, and to ensure continuity during return visits at UMHS (the original paper chart is returned to Hope Clinic). All patients sign a Health Insurance Portability and Accountability Act (HIPAA) disclosure.

Follow-Up

Patients requiring follow-up appointments can be scheduled for future clinics without difficulty. Moreover, primary care appointments, laboratory tests, imaging and other studies, and consultations with specialists in other fields can be arranged through the Hope Clinic's existing infrastructure.

Patients requiring further subspecialty care or procedures outside the purview of this program undergo assessment of their insurance status by both institutions. Follow-up at UMHS is attempted in these situations, often with the same attending physician who staffed the original free clinic appointment to provide subsequent medical or surgical care. In such cases, documents and counseling are provided to obtain a charity care needs assessment for additional free care at UMHS. The UMHS charity care program provides care at no charge or at a significantly reduced charge to individuals in need, although some patients treated at Hope Clinic do not qualify, and the approval process is lengthy. Thus, this resource is reserved for those patients requiring services that exceed the capabilities of the Hope clinic partnership. In cases in which financial or practical considerations prevent this from occurring, attempts are made to refer patients appropriately to other providers.

Prescriptions for medications are provided from a list of available medications through $4 prescription programs at local retail pharmacies or through pharmaceutical firms' Patient Assistance Programs (PAPs), coordinated by Hope Clinic staff. These lists were filtered to create a short list of commonly prescribed medications among otolaryngologists, which was used to guide decision making in the clinic. The Hope Clinic has a preexisting relationship with an unaffiliated community medical center (part of the Trinity Health System) that facilitates free radiologic and laboratory testing, in addition to pathology review of specimens obtained by the Hope Clinic. Forms are provided in order to allow these resources to be utilized by clinic participants as necessary; results are then shared with the volunteer providers by Hope Clinic employees.

Finances

There are no fixed costs to either institution. Neither UMHS nor Hope Clinic bills patients for items, services, or procedures provided during the course of the clinic. UMHS bears the costs of disposable equipment and supplies, as well as for cleaning reusable equipment. Additionally, patients are offered parking vouchers and/or receive assistance with public transportation from UMHS.

Liability

All volunteers rendering professional services during these clinics are employed by UMHS, and are eligible for medical malpractice coverage by their employer. Both institutions

TABLE I.
Volunteer Responsibilities.

Volunteer Role	Responsibilities
Resident coordinator	Serve as main liaison with Hope Clinic staff.
	Schedule clinics and organize volunteers.
	Review charts and follow up on studies and pathology reports.
Front desk staff	Check in patients, assemble charts, provide parking passes.
	Initiate charity care application with patients when necessary.
Medical assistants	Regulate clinic flow and seat patients.
	Provide supplies and assist with procedures.
	Clean rooms/equipment between patients and at the end of the clinic.
Nurses	Monitor schedule and assist with clinic flow.
	Ensure that charts are complete after patient encounter.
	Assist with procedures.
Audiologists	Perform audiograms on scheduled and add-on patients.
Residents, NPs, PAs	Perform history and physical examination; formulate plan.
	Discuss each patient with attending physician.
	Document the encounter.
	Order studies, perform procedures and provide prescriptions as indicated.
Attending physicians	Staff all patients with the resident, NP, or PA; formulate plan.
	Perform and/or supervise all procedures.

Abbreviations: NP, nurse practitioner; PA, physician assistant.

acknowledge that litigation may arise in the operation of the clinic; accordingly, they have agreed in writing to cooperate in the investigation and handling of all patient complaints, claims, and litigation related to these clinics, and toward mutually reducing the costs of litigation if the need arises.

Data Analysis

A review of this pilot program was conducted using prospectively collected clinical data. Clinic design, staffing, utilization, and feasibility were described along with demographic and clinical data for all patients participating in the clinic from 2010 through 2011. Demographic and financial information were based upon patient-reported data. Descriptive statistics were calculated and presented. The University of Michigan Medical School Institutional Review Board (IRB) evaluated this research protocol and deemed that the study did not require formal IRB review.

RESULTS

Implementation and Feasibility

The clinic schedule was determined by volunteer availability and adequate referrals to otolaryngology. It was deemed feasible to hold a clinic when there were 10 or more patients scheduled. Clinics were held on Saturday mornings and lasted approximately 4 hours. Requests for volunteers were sent via e-mail to all staff within the Department of Otolaryngology 3 to 4 weeks in advance of the scheduled clinic. While only eight volunteers were required for the clinic to function, an overwhelmingly positive response within the department resulted in an average of 19 volunteers per clinic. Volunteer roles and responsibilities are outlined in Table I.

Patient Characteristics and Services Rendered

Patient characteristics, including demographic information and reasons for referral, are summarized in Table II. Financial information was available for 53 of 54 patients. The majority of patients (88%) fell below 133% of the Federal Poverty Level (FPL), with 25 patients (47%) below 45% FPL. These thresholds represent the proposed Affordable Care Act (ACA) Medicaid eligibility and the current Michigan adult benefit waiver program eligibility for childless adults, respectively. All patients' monthly incomes placed them below 400% FPL, which is the threshold under which the ACA will provide U.S. citizens with insurance assistance.

Of 74 patient encounters, 20 patients received conclusive evaluation and treatment at the time of their first visit and required no further follow-up or referral. A total of 60 procedures were performed. A summary of procedures performed is provided in Table III. The total value of services provided was estimated based upon the clinic's current billing schedule using Current Procedural Terminology (CPT) codes (Table IV). Eighteen patients required further subspecialty treatment and/or surgery that could not be provided in the outpatient setting. These included a newly diagnosed lymphoma; suspicious nasopharyngeal mass; chronic ear disease,

TABLE II.
Patient Characteristics.

	N
Total patient encounters	74
New patient visits	53 (72%)
Return visits	21 (28%)
Patient demographics	
Male	31 (57%)
Female	23 (43%)
Mean age in years (range)	52 (13–76)
Mean monthly household income	$680
Mean % Federal Poverty Level	68%
Chief complaint*	
Sinusitis/rhinitis	18
Hearing loss	15
Suspicious mass/lesion	13
Vertigo	8
Dysphagia	8
Hoarseness	7
Otalgia	7
Chronic ear disease	7
Tinnitus	6
Otitis externa	4

*Total exceeds number of patient encounters due to patients with multiple complaints.

TABLE III.
Procedures Performed.

Procedure	Number Performed
Audiogram	22
Flexible laryngoscopy	17
Rigid nasal endoscopy	6
Cerumen removal	6
Myringotomy/PE tube placement	2
Oral cavity lesion biopsy	2
Fine needle aspiration	1
Nasal polypectomy	1
Uvulectomy	1
Particle repositioning maneuver	1
UPSIT	1
Total	60

PE = pressure equalization; UPSIT = University of Pennsylvania Smell Identification Test.

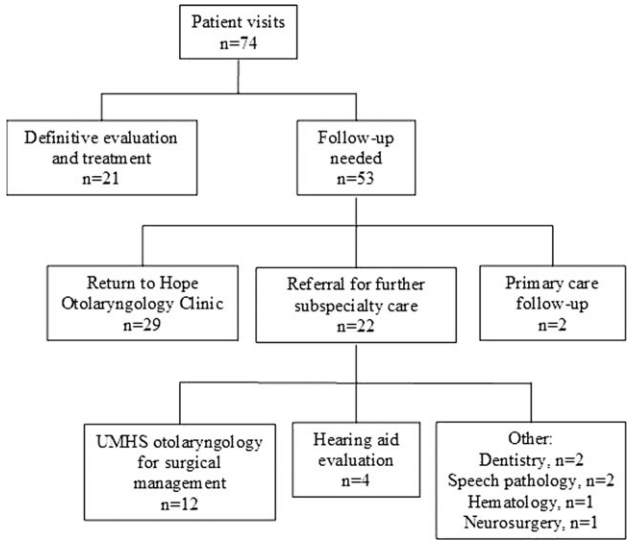

Fig. 1. Patient outcomes and follow-up requirements.

requiring surgery; and severe nasal obstruction, requiring septorhinoplasty. These patients were referred accordingly to charity care at UMHS or to the Trinity Health System. Patient outcomes, and follow-up requirements are summarized in Figure 1.

DISCUSSION

Benefits of Participation

Our effort to provide care to the economically disadvantaged is by no means unique. Rather, the remarkable component of this effort has been the collaboration between very different organizations to overcome institutional barriers and find a way to allow a groundswell of professional volunteers to aid patients in need. We believe that this novel clinical-care delivery paradigm benefits all involved parties. Underserved patients receive point-of-care services from highly trained personnel within a facility with advanced specialized equipment at its disposal. Participating clinical trainees benefit from additional clinical encounters and educational opportunities involving a different patient demographic than is typically seen at the institution. UMHS can provide volunteer services to the community at virtually no opportunity cost, providing a beneficial public service that might be a source of positive publicity, and even a potential funding source from interested donors/philanthropists. The Hope Clinic relieves its own highly over-utilized clinical facility, thereby enabling additional care to be provided at that site, and also ensures that its patients are receiving quality consultation services.

By seeing patients through volunteerism and partnering with community health systems, our paradigm knits together institutional resources and clinical volunteers to serve many more people than could reasonably be enrolled in formal charity care programs, and thereby significantly expands the care available to uninsured patients. One additional advantage of these clinics is that a large volume of patients can be seen in a short period of time, and many do not require follow-up or further care. In our judgment, this is a model of good resource stewardship, reserving formal charity care enrollments for patients with conditions requiring complex, recurring, and/or expensive services.

This program also serves as a bridge to institutional resources that many of these patients may not be able to access on their own, even via charity care, perhaps due to a lack of motivation, transportation, English literacy, and familiarity navigating the system. This program thus serves as an enabler, preventing delays in seeking care that might have dire and much more expensive ramifications of the overall cost of health care services delivery.

Moreover, access to specialized otolaryngology equipment and support staff facilitates comprehensive point-of-service evaluations. In a prior off-site outreach program, the lack of specialized supplies made complete assessment impossible in three out of four ENT consultations conducted.[10] The close relationship between UMHS and the Hope Clinic is also promising, as data suggest that specialist outreach programs that are well integrated with primary care collaborators are more likely to demonstrate improvement in care delivery and medical outcomes.[11] That said, there is a delicate balance between the mission to provide for those in need and the practical reality of ensuring that such efforts are both respected and sustainable.

TABLE IV.
Estimated Value of Services Provided.

	Billing ($)*
Office visits	11,442
Diagnostic procedures	20,123
Therapeutic procedures	5,737
Total	$37,302

*No patients were charged for any medical care provided by this clinic. The total value of services provided was estimated based upon the clinic's current billing schedule using Current Procedural Terminology (CPT) codes. Private and public insurance plans reimburse at significantly lower rates than indicated.

Program Reception and Growth

While not formally measured, volunteers and participants alike have provided uniformly positive feedback regarding their satisfaction with this program. Concern during the initial development for a potential dearth of willing staff has now been replaced with difficulty accommodating the inundation of volunteers, and the need to maintain a waiting list for those wanting to participate.

The program has received both internal and external accolades. The faculty facilitator of the program (ELM) received a prestigious UMHS campus-wide recognition of public service, and the program received a statewide community benefit award. While this informal feedback is encouraging, we hope to more formally assess the program, utilizing validated measures of patient and staff satisfaction as well as the educational experience among trainee participants.

The success of this pilot program is leading to its expansion throughout the medical campus. The Hope Clinic and UMHS are currently extending their collaboration and are utilizing this archetype to open on-site clinics in plastic surgery, dermatology, and ophthalmology at UMHS. Our ultimate goal is for UMHS to be able to ensure volunteer-provided point-of-care delivery for all specialty consultations requested by the Hope Clinic that cannot be otherwise accommodated. We are also exploring the possibility of extending the reach of the program to include radiologic and laboratory testing. While still in preliminary phases of development, a program to provide free ambulatory surgery for Hope Clinic patients on weekends may be in the foreseeable future.

Lessons for Other Institutions

The involvement, commitment, and relationship of a dedicated, free primary care clinic are crucial for the success of a free subspecialty clinic using this model. Many clinics that operate similarly to the Hope Clinic exist across the country in both rural and urban areas. Interested otolaryngologists need only reach out to these worthy organizations in order to align interests in a manner that facilitates a fruitful partnership. Geographic proximity and accessible public transportation are other important factors to consider for poor people for whom logistics may pose a significant barrier.

The legal liability inherent to a collaborative, multi-institutional clinic is also of concern; it is a testament to both institutions that they have been willing to participate and to commit to sharing the risk inherent to this endeavor. When initiating such a program within a large institution, it is of crucial importance to ensure buy-in from legal, risk management, senior administration, and real estate/facilities management.

Limitations

As a pilot program, we must be careful not to overstate our preliminary successes. The program's sustainability remains to be seen; the dependence upon volunteerism has been successful to date, but by no means is it guaranteed indefinitely. We do not address management guidelines for primary care providers seeking otolaryngology consultation, which may improve patient access to services.[5] Also, we cannot comment directly upon the quality of care delivered or our clinical outcomes, nor did we formally measure patient satisfaction.

With clinics occurring every 3 months, we are not able to accommodate urgent consultations within this model. Hope Clinic medical directors perform real-time reviews of all specialty referral requests, and when issues are urgent they pursue the most timely available resource. This triage process is an important feature of the system. That said, the frequency of clinics was driven largely by referral demand, and their scheduling remained flexible in order to be able to accommodate semi-urgent consultations within weeks (such as concern for malignancy). Despite such safeguards, the current model admittedly risks longer wait times for subspecialist consultation, and the consequences of this deserve further attention. As the program grows and expands, we expect the clinics to be held on a more regular basis, hopefully obviating this concern.

We also anticipate that additional barriers and potential issues will require further attention. Currently, the relatively small numbers of patients seen facilitates the current delivery model. However, if demand increases, the need to host clinics more frequently may place a large onus of responsibility and time commitment on volunteers who lack sufficient resources. Improved access to services potentially risks an increase in unnecessary referrals and/or demands for inpatient services. However, in a study of a surgical outreach program that included otolaryngology, access improved without increasing the burden of elective consultations or hospital admissions.[12]

The coordination between facilities is considerable, especially when radiologic or laboratory testing is performed at the community hospital, thereby involving three separate centers. We rationalize the current system based upon logistic and financial realities, but recognize the value inherent in being able to offer all necessary services in one place. A more streamlined process would be ideal, and we are pursuing the integration of radiologic and laboratory testing at UMHS. In addition, although the program is currently available only to established Hope Clinic patients, we anticipate expansion to other underserved populations with related institutional initiatives.

CONCLUSION

The partnership between an academic otolaryngology department and a nonprofit clinic provided free on-site consultation for indigent patients. Such an arrangement is feasible, well utilized, and successful in delivering quality care to indigent patients who lack traditional access to medical care. We plan to continue and expand upon this endeavor throughout our institution.

Acknowledgment

The authors thank the individuals (doctors, nurses, audiologists, and ancillary staff) from UMHS, the Hope Clinic, and the Trinity Health System who have

generously donated their time and expertise to participate in this multi-institutional collaboration providing compassionate care to our underserved population. We also thank the attorneys and administrators who were responsible for drafting a memorandum of understanding from which phrasing within this manuscript text has been adapted.

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