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PROJECT REPORT

A novel resource model for underprivileged health support: Community

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ABSTRACT

Community Medical Outreach is a student-run organization that provides healthcare access to medically underprivileged farm workers. The program exploits the substantial energy, enthusiasm and organizational capacity of pre-medical students as they prepare to apply for medical school. All of the partners benefit from the interchange. The students gain from a unique first-hand medical experience that demonstrates their leadership, management skills, commitment to a healthcare team, and focus on care at the community level. Those in most need gain healthcare access. Volunteer staff and physicians are inspired by the students and are energized by caring for those most in need of health care. The companies, agencies, and organizations donating supplies, drugs, expertise, and sponsorship benefit from enhanced public relations. The article describes the initiation, the lessons learned, the critical importance of linkages, and the essential components such as individual and institutional liability. Community Medical Outreach is an important vehicle for shaping students in the process of becoming physicians, shaping those involved with the process of admitting students, shaping training experiences, and shaping new models of health care.

Key words: farm workers, undergraduate medical education, underserved communities.

Introduction

It is well recognized that healthcare resources are not available to large segments of the world's population. It is not so commonly recognized that medically underserved communities also exist within economically developed countries such as the USA. Often communities without financial resources suffer most. Although this circumstance manifests directly as a diminished quality of life for the members of these local communities, this circumstance also impacts the financial resources of the larger general community and extends to the administrative or governmental agencies responsible for the area. Neglected primary care results in the use of cost-ineffective treatment strategies such as emergency care, expensive hospitalizations, reduced worker productivity, burdens on social support networks, and cost shifting through insurance and taxes[1-4]. In many communities the availability of simple medical consultation could circumvent a substantial portion of the emergency care demand. Such care can also have a positive effect on lifestyle and can maximize the management of chronic conditions[5,6].

The USA has a growing problem involving healthcare access. Those with no income, no insurance, or limited insurance suffer the most. In some limited circumstances health care can be provided through the altruism of individuals, groups (eg church related) or society (eg governmental programs)[7-10]. Certainly this type of effort makes a meaningful contribution. There are often substantial limitations to the extent, dependability, and longevity of such programs. The loss of key individuals can end an important program abruptly and long before improved health, education or economic development can influence important and permanent changes in underserved communities.

If monetary resources are inadequate and altruism is ultimately limited, is it possible that these communities have something else of value to exchange for at least a basic level of health care? On the surface it would appear not, but this article describes one mechanism through which university students have organized a network of individuals and groups where all involved appear to benefit while ultimately providing basic healthcare resources to largely transient farm-worker communities.

Students have substantially different needs from most other groups in our society. The most elite students that choose medicine must focus on academics in ways that can lead to a near exclusion of interaction with people. Unfortunately medicine is also a career that requires the best 'people skills'. Preparation for a medical career must address both academic preparation and people skills preparation.

Students aiming for a career in medicine may need more than high academic achievement to gain admission. Medical schools in North America require the demonstration of medically related experience and some record of volunteer service[10]. The definition and interpretation of volunteer service can be important. It is relatively easy to describe or discuss service in applications or interviews, but the applicant may not really have service orientation. In contrast, few would doubt the service orientation of a teacher or public servant applying to medical school. Documenting service orientation can be a problem for those without the benefit of prior work experience. Also students can list experiences that may look good on paper, but involve very little effort or true healthcare involvement. International experiences can be life-changing events in the lives of potential medical students or they can be vacations.

Experiences involving service and people and health care are important aspects in the preparation for a medical career. It is not in anyone's best interest to invest training resources in a student who discovers upon graduation that the day-to-day work of a physician is not appealing. All nations must insure that medical professionals are caring individuals concerned with the wellbeing of the individuals they treat. It is also a great asset to have significant contact with a broader range of

peoples in a world growing more and more diverse with each passing month.

Ambitious pre-medical students are in need of meaningful medical experiences prior to their application to medical schools. Students can contribute substantial time, energy and enthusiasm. Since these students are bright, interested, and have strong backgrounds in the areas that underlie medical treatment, they are fully capable of contributing to the care of communities in need, even before they enter professional medical training.

Resource exchange

A student group called Community Medical Outreach (CMO) from Florida State University in Tallahassee, Florida, has developed a unique framework to allow pre-medical students to interface with physicians, groups, and agencies to provide episodic primary medical care to underserved people. The students act as liaisons between participating groups to organize required staff and medical supplies. The system works because each group involved makes an identifiable contribution in exchange for an identifiable reward. It is this resource exchange that distinguishes this care model from other care models and sustains the project (Fig. 1).

There are two main objectives in the CMO organization: (i) to provide free medical clinics to needy communities; and (ii) to provide a meaningful medical experience for students interested in pursuing a medical career. The benefit to these needy communities is obvious. Many fail to see what resource poor populations can provide. The benefit of emotional gratification for those working with such populations is great, but does not seem to sustain overall effort. Learning about culture, community, and a variety of individuals is also stimulating, but there is more. Underserved populations are in a position to provide a unique resource to another unique group – students with the ambition for a career in medicine.

Communities can provide an opportunity for such students to gain critical experience within the field of medicine, to prove their abilities far beyond straightforward academics, to develop important skills not commonly addressed in medical school, and to gain a competitive advantage over other medical school applicants vying for entrance to medical school. At a time when more and more limitations are placed on those attempting to learn about medicine before, during, and after medical school, community experiences are ever more important.

The potential improvement in the probability of admission to medical school is a powerful force in today's society. Individuals, private schools, colleges, advisors, programs, standardized test preparation, and other efforts worth billions of dollars a year succeed because they convince students and their parents that they can 'make a difference' between admission and not. Sometimes the primary physician focus to 'make a difference' in the lives of patients can be lost by the current focus on improving the probability of admissions.

An organization like CMO can harness this potential energy to offer a different alternative, one that may well be more compatible with selecting physicians who are likely to be committed to medicine and to careers of service in 5, 25, or 50 years. Significant student involvement is a tangible demonstration of the student's enthusiasm and aptitude for a career in medicine. In this ever-competitive world it is important for medical schools to select those individuals that will do the most with the training they receive. Serving with an organization like CMO can provide a much better gauge of aptitude for a lifelong career in medicine than can standard academic achievement or single session aptitude tests.

Medical care is one of the most closely regulated of human activities. In the USA, all medical care must be provided by trained physicians/health professionals licensed in that jurisdiction (ie, the state). Volunteer physicians are the critical resource for the operation of the free CMO clinics. Although finding local physicians and other health professionals willing to volunteer their time for such

purposes may seem like a bottleneck in the resource exchange, there are a remarkable number of physicians willing to participate in this system. Physicians are often willing to volunteer a day of practice in a well-managed clinic where the issues of 'cost effectiveness' and 'billing source' are not factors in their treatment decisions[11,12]. Medical schools have had a long tradition of seeking out those students who demonstrate an interest in helping others. It may also be the nature of the profession itself; the process of helping others is the foundation of services provided by medicine. One factor that appears to contribute to the willingness for physicians to volunteer their time to participate in the CMO clinics is the inspiration the physicians gain from working with the students of CMO. Without exception, the physicians who have worked with CMO report a remarkable positive experience from working with the students. The physicians draw from the enthusiasm and energy of these young people who have as their main ambition in life to follow in the footsteps of the clinician. The physicians draw inspiration from the group and this tends to help in their dealings with the complexities of modern medical practice well beyond the CMO clinics.

Regardless of the goodwill and effort put forth by the students and the physicians, the patients are in need of regular supplies of medicines that are often very expensive. A wide range of samples can maintain medical choice, provide benefits to the pharmaceutical companies, and prevent waste. Samples, especially those nearing expiration dates, are a benefit to patients and to the companies, particularly in times of public concern regarding the cost of medication. As always, samples are a means of influencing physicians and those who will become physicians. Dispensing of any regulated medication is dependent on a licensed physician. The patient's condition will determine the appropriate course of treatment, but in most cases the physician has a range of appropriate medications to manage the condition.

There are numerous other minor aspects to the exchange of resources within this system. Other groups such as the local arm of the State Health Department and community assistance organizations play important roles in the successful implementation of the clinics. The number of different individuals, groups, agencies, associations, and schools presents a daunting challenge. Such a group would not hold together without some strong glue.

The key feature of the organizational plan is its dependence on a true *exchange* of resources.

The student group: organizational plan

Many student groups are designed to attract as many participating members as possible. The number of individuals attracted to the organization does add some status. Small monetary or 'in-kind' contributions from many members can result in the group as a whole accomplishing a great deal. Although this model works well for many student organizations, it is not appropriate for an organization like CMO. The group dynamic of CMO depends of each member being a key contributor who is personally and ultimately responsible for the success of the group. The standard student group model can dilute the individual responsibility and the quality of the individual experience.

The design model for CMO is simple and self-maintaining. The CMO has had a maximum of 12 members, each year providing opportunity for 10 new members and two returning members. Each member has a specific executive role within the organization. Returning members are selected for their leadership qualities and they assume the official role of student directors of the clinics, working alongside professional advisors. These individuals serve to organize the efforts of the new members and coordinate with the health professionals that operate the clinics.

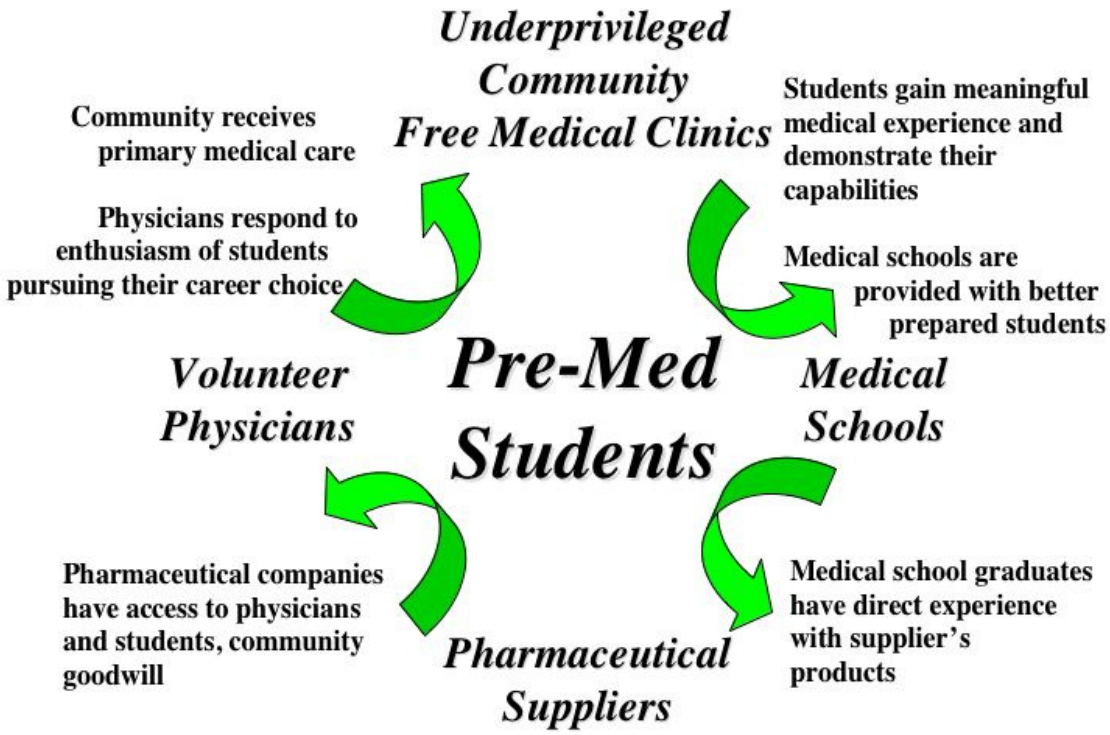

Figure 1: The Community Medical Outreach resource exchange model. Underprivileged communities are unable to pay for medical services, but can provide a unique opportunity for pre-medical students to gain medically-relevant experience and demonstrate their abilities to medical school admission committees. For such a meaningful experience and competitive advantage, students are willing to invest the effort to organize community groups, volunteer healthcare workers and pharmaceutical suppliers to staff and support the clinics. The model works because each group makes a meaningful contribution and receives an identifiable gain.

All members participate fully in the set-up and operation of the clinics provided by the organization, an effort involving 5-11 weekends per year. The members of the CMO Florida State University group have designated positions of treasurer, secretary, historian, press secretary, information technology specialist, board relations, logistics chairs (2) and special projects coordinators (2). The treasurer, secretary and historian have traditional organizational roles, being responsible for the fiscal management, operation and documentation of the group. The press secretary and IT specialists place much of their emphasis on maintaining the profile of the group within both the overall community and the university. The former is instrumental in promoting credibility of the group for the donated resources it requires and the latter is important for maintaining awareness of the group, its activities, and opportunities with potential

members. Both of these positions have made substantial contributions in the process of establishing the newly formed group. The logistics chairs are responsible for working with the clinic directors to organize the collection and management of resources needed to operate the clinics (donated pharmaceuticals, volunteer professional staff and loaned equipment). The board relations officer is responsible for coordinating donor relations and events that promote the organization. The board relations officer monitors the satisfaction levels for those receiving services. The CMO uses the special projects coordinators because the group continues to expand its involvement within the community. These individuals are responsible for developing several initiatives specific to the growth of the group and its services to the community and the members. An example is the development of education resources that are being incorporated into the services supplied by the group during the weekend clinics. The objective of this initiative is to train the students to help educate the clinic attendees on relevant health-related matters.

The responsibilities of the student directors are far more extensive than the general members. In many ways the success of the organization depends on the dedication of the directors. The student directors are instrumental in the planning of the organization's activities: training workshops for safe and effective function in the clinics, fundraising to sponsor organizational activities, volunteering within other clinics to gain experience within the medical setting and other settings as determined by the needs of the organization, developing protocols to assist the new members in their duties, organizing supplies and equipment, and maintaining the level of quality of the services.

The directors are also responsible for the operational administration of their teams. They are responsible for working in concert with the other director(s) to make the organization function effectively and maintain itself through the following year. The responsibilities associated with maintenance of the organization include:

1. arranging for application process, interview, selection, induction, and training of team members
2. scheduling and directing organizational activities throughout the term
3. promoting the integrity of the organization, the betterment of the student body, and the health of the community at large
4. overseeing annual ceremonies for the recognition and appreciation of the members and supporters of the organization
5. supporting and assisting prospective trainees for the subsequent directorship positions.

With such a high level of expectation in terms of effort and responsibility from both the directors and general members, the question often arises of how the organization can attract new members willing to commit to such a burden. Attracting interested students has not proven to be difficult. The organization is designed to provide a *meaningful* experience to a select group of energetic students with ambitions of a career in medicine. The students recognize that participation in the organization provides extraordinary value to its members. Although it is common for university teachers to witness students using a variety of strategies to minimize their required efforts, it has been our experience that students are more than willing to work remarkably hard if they can see that those efforts result in a quality medical experience and provide quantifiable progress in their goal of attaining medical school and eventually becoming superior medical practitioners.

Activities in the organization are designed to promote both the clinics and the experience of the student participants. Several activities are geared toward preparing the students for service in the clinic. Evening and weekend mini-courses are organized for cardiopulmonary resuscitation, first aid, blood pathogen training, diabetes management training, knowledge and practice of legal and administrative rules and regulations such as patient privacy rights and legal regulations relevant to the clinics. All these activities help in ensuring a safe working environment in the clinic. Members of the organization are also required to spend at least 3 hours

(one session) a week volunteering in an established community clinic within the city. This introduces them to the operation of a medical facility, and provides a sensitivity to the concerns and rights of the patients treated in such a facility. Tasks such as canvassing medical clinics for available pharmaceutical donations bring the students into contact with the broader medical community and provide opportunities to recruit physician volunteers.

The members of the organization all have a common goal of achieving entrance into medical school. To assist the members in this goal the organization also provides workshops on the medical school application process and arranges for recently accepted medical school students to speak to the group and provide their perspective on the process.

Key factors that make the model work for the students

A highly selective organization: The admission program of CMO is not designed to prevent any individuals or groups from participating. However, the organization is extremely selective. The selectivity of CMO is formulated to:

1. ensure only the most eager, responsible, enthusiastic and competitive students are inducted into the program
2. demonstrate the quality of those who go through the program to support their later application to medical school
3. limit enrolment in the organization to allow manageability and encourage a strong sense of responsibility and cohesiveness among the members.

Application process: The application and selection process for medical schools can seem intimidating to a student. As an organization that deals with students preparing to begin the medical school application process, CMO can provide some practical experience by patterning the selection process for the organization after the application for medical school. The beginning of each annual term coincides with the beginning of the fall semester. At this time prospective members are offered the chance to apply to the organization. An information forum is organized in which the organization, the responsibilities of members, commitments, and benefits are fully described. The organization also benefits from past members that can give the broad perspective to prospective students in need of an authentic idea of what membership entails. For those students interested after this initial introduction, applicants are asked to complete a formal application.

As in the documentation required for medical school application, the CMO application requires general academic information, past experience, awards, accomplishments, skills etc. The applicants are also required to submit a personal statement and a relevant letter of recommendation. A substantial number of students applying to medical school do not appreciate either how important the personal statement is to the application, or how difficult it is to compose one that truly reflects their ambitions and interest in medicine. This initial experience provided by this requirement of the CMO application has proven beneficial even to those students who are not selected by CMO. This is also true of the letters of recommendation. Students rarely consider where they are going to get letters of recommendation prior to starting the application process. In contrast, however, it is important to begin this process early in order to establish the type of relationship with someone relevant to the medical profession, so that a letter of value to the medical school selection committee can be generated.

If the committee finds the application package to be complete, the applicant is screened relative to the other applicants. The applicants who demonstrate the maturity and dedication appropriate for the organization are invited to an initial interview. The interview is conducted by a panel of four, consisting of the organization's faculty advisor, another respected faculty member, and two previous CMO members. Applicants next face a second interview designed to further evaluate each member's ability to function within the group. It is important in a small and demanding group like CMO

that the members have a natural ability to work as part of a team. The applicants that are selected for the organization are contacted to attend their first meeting and to review and discuss the CMO constitution, rules and regulations. The new members are also required to sign a memorandum of responsibility that outlines an agreement between the members and the executive officers of the organization.

Faculty role: The sensitivity and potential liability of the medically related endeavors of the organization require that the student group be given adequate guidance and oversight. The oversight positions are divided into three specific faculty advising roles. These are:

1. The faculty advisor functions as a liaison with the university and home department, provides oversight for the new member application process, and interacts with student directors to solve problems with organizational functions or with individual members as these arise.
2. The medical director is a licensed practitioner who reviews the training procedures, monitors the members' readiness for their role in each clinic or volunteer mission, and participates in establishing the guidelines and practices of the clinics.
3. The governance advisor oversees the organizational functions of the group, the documentation of meetings and assignments, and the maintenance of verifiable records of operations and procedures.

Setting up a clinic

Each new outreach effort involves different opportunities and problems. A key factor is identifying a local community group to work with. It is common for in-need communities to have organizations working to improve their circumstances. These may be church-related groups, governmental agencies, or community self-help organizations. Community Medical Outreach at Florida State University has worked primarily with two community groups: Farmworkers Self Help (FSH) of Dade City, Florida, and Panhandle Area Education Consortium (PAEC) Migrant Education of Gretna, Florida. Both Dade City in Pasco County and Gretna in Gadsden County are largely rural agriculture dependent locations with extensive migrant farm-worker communities.

Each of these groups is interested in assisting migrant farmworkers in their area. The FSH is a well-established group with a history of providing health care. To this end, they had previously established a clinic facility and had entered into an agreement with the county Health Department regarding liability protection for healthcare personnel providing no-cost health care within the community. Although previously well organized on the medical front, this group lacked sufficient medical supplies. Volunteer physicians generally worked alone and did not have support to operate the clinic.

The FSH clinic provided an excellent opportunity for the fledgling CMO group to become established. The CMO brought substantial stores of medical supplies, multiple volunteer physicians, and regular clinic 'events' that drew many more of the community members than had the previous small clinics. Community trust in CMO was gained from its association with FSH, an established community group with a record of understanding, commitment, and service. It is likely that the community would have been suspicious of the clinic if it had been provided solely by an outside group not previously established in the community.

With the initial experience provided by an association with FSH, CMO was able to expand to an area where such clinics were not being offered. Once again, however, it was imperative that CMO enter the community through an association with an established and trusted community organization. In its second year, CMO established a relationship with PAEC Migrant Education in Gadsden County, Florida. Gadsden County is one of the poorest counties in Florida and has a long history of having substantial portions of the community without available medical care. Because of the need in a variety of communities within the county, the CMO initiative grew into

an alliance with the more comprehensive Gretna Wellness Center Project, where the weekend CMO clinics were coordinated with efforts by the Florida State University School of Medicine, Florida Agricultural and Mechanical University School of Nursing, Big Bend Area Health Education Center, and Gadsden County Health Department. Through the cooperation of the Health Department, CMO was given weekend clinic space and worked with PAEC Migrant Education to operate several weekend clinics. The success of the initial clinics provided the foundation for steady expansion to a greater number of clinics in following years, each providing more health care to the community and more experience for CMO student members (Table 1).

If a community organization and clinic site has been identified, there are a number of important factors that must be considered for establishing and operating clinics. Of critical importance are the:

1. safety of all involved from patients, volunteer licensed professionals, student members, and local volunteers, to others involved in any way with each clinic event
2. education of all members and volunteers regarding sensitivity to social and cultural factors for the involved patients, the responsibility for privacy protection, and the regulations regarding allowable duties
3. coordination of the scheduling of all participants for the dates selected for each event from outreach clinics to fundraising, training, meetings, and other programs.

Operation of a clinic

Once a clinic site has been located, it is important to familiarize the students with the operation of the clinic and with the limits and responsibilities of each station prior to opening the doors to patients. The initiation of a new clinic is a huge responsibility for the medical director who must determine the extent of involvement of the students and define their role as members in the operation of the clinic.

The key is to develop a system in which the role of each individual is highly defined.

Also, in order to provide a thorough experience for each of the members, it is important to rotate members through each of these defined clinic roles (stations) over the course of the clinic.

One of the most unique features of the CMO plan is the design of all projects to be student/member oriented.

The most meaningful learning experiences are fully experiential. The student members are given the responsibility to coordinate activities of the clinics and perform all required tasks excluding the procedures requiring professional licensed medical personnel (physicians, physician assistances, nurse practitioners, registered nurses etc). The limit of the student involvement for each station is determined prior to the clinic by the volunteer physician in charge. This is an important factor for the appropriate operation of the clinic. Once initially established each subsequent clinic will operate under the same guidelines. Although this appears to preclude the students from direct medically-related experience, one of the stations in the clinic is a standard 'shadowing' of the physician. With the patient's consent, these students can observe the physician's interaction with the patient, procedures can be explained in context, and treatment strategies are discussed.

Success in the clinic project and the safety of all those involved depends on proper preparation of the students.

The key component is careful outlining of the duties involved with each station (member role) within the clinic.

Table 1: Services and activities of Florida State University Community Medical Outreach undergraduate student group for the first 3 years of operation – brief report

First term (2002–2003)		Second term (2003–2004)		Third term (2004–2005)	
Gretna Saturday clinics	0	Gretna Saturday clinics	2	Gretna Saturday clinics	8
Dade City Outreach Mission	1	Dade City Outreach Mission	1	Dade City Outreach Mission	2
Dade City weekend clinic	2	Dade City weekend clinic	2	Dade City weekend clinic	2
Number of patients/farm workers	280	Number of patients/farm workers	380	Number of patents/farm workers	960
A. Funds raised (costs and expenses)	$5000	**A.** Funds raised (costs and expenses)	$8000	**A.** Funds raised (costs and expenses)	$12,000
B. Estimated value of supplies and equipment donated by CMO	$20,000	**B.** Estimated value of supplies and equipment donated by CMO	$15,000	**B.** Estimated value of Supplies and equipment donated by CMO	$18,000
C. Estimated value for medical services	280 x $65 = $18,000	**C.** Estimated value for medical services	380 x $65 = $25,000	**C.** Estimated value for medical services	960 x $65 = $62,400

A, Resource utilized; B & C, goods and services provided.
CMO, Community medical outreach.
$ = US$.

For example, in the establishment of the CMO clinic associated with the Gretna Wellness project a pre-clinic training session was provided for the student members. In this session pictures from each room of the clinic were used to familiarize the students with every station. The students were also introduced to the formal documentation procedures, and all regulations regarding clinic activity were thoroughly explained. The organization of such training sessions are determined by the student directors working with the medical director (a licensed physician) to ensure that appropriate procedures are implemented at all times. This is reinforced in preparation of the clinic itself, when the stations, their responsibilities and procedural constraints are discussed with each of the members on the day of the clinic. The clinic briefing is particularly important for coordinating with other healthcare professionals that might be in attendance for the clinic. Efforts of volunteer nursing staff, technicians performing lab tests or extra volunteer physicians who may be new to the volunteer clinics must be discussed and coordinated so that the clinic runs smoothly. This preparation and coordination is implemented by the student directors of the clinic under the supervision of the medical director.

The rotation of members through each of the clinic stations is an essential feature of clinic organization. This provides the students with an overview of how each portion of the clinic is inter-related and gives each member a variety of experiences within the setting. With the clinics operated by CMO in both Dade City and Gretna, outreach trips into the community were also organized. In these a group of students went out into the community accompanied by members of the associated sponsoring community group to perform simple assessments such as blood pressure and blood sugar testing. Bringing the students into the neighborhoods, the working environments, and homes introduces the member

into all facets of the community and cultural context. These important visits also promote the clinic within the community and help shape future efforts.

Due to the unique circumstances of working with students in the clinic, it is also necessary to prepare volunteer physicians and other staff who work within the clinic. This responsibility falls largely to the medical director, who has the authority to organize professional staff. Once standard procedures have been developed for the clinics most of this preparation is routine with the exception of familiarizing new volunteer staff and the inevitable small adjustments required in an ever changing medical environment.

Educational role of students in clinics

One useful role that may be overlooked is student ability to act as health educators. At one of the stations within the clinic, the students provide health-related information as directed by the attending physician, and answer questions posed by the patient. In this role they do not dispense medical advice, but inform clinic attendees of health-related information that is publicly available. Even without medical training the pre-medical students have substantial background in the areas relating to medicine. As such, they are very capable of explaining basic health-related concepts to the clinic patients. This has been particularly effective to assist in managing a number of chronic conditions such as obesity, nutritional deficits, diabetes etc. Following workshops operated by the group's medical advisor, the students are able to distribute and discuss literature prepared and provided by the health department. This has several advantages. Student education frees the physician from performing this primary education role so that their professional abilities can be concentrated on roles that cannot be performed by the students. Student education gets the students directly involved in the health concerns of the patients and gives them direct contact with the issues impacting the health of the community. The educational role also promotes the mandate of the health department and extends the services of the clinic beyond the acute episodic care provided by the clinics themselves.

Community Medical Outreach overview

Accomplishments

The CMO was registered in the summer of 2002 as a non-profit student organization at Florida State University. During its first active term (2002/2003) the organization had a total budget of US$5,000. This money was raised by individual members (eight members committed to raising $500 each) and from student support funds available through Florida State University. This budget supported two outreach missions (providing medical supplies and equipment to an established free clinic) and two clinics in Dade City, Florida. The group was able to acquire medication, supplies and equipment donated from physicians, hospitals, the university student health center and pharmaceutical companies. In total, these supplies had an estimated value of $20,000. The two weekend clinics organized by CMO that initial year supplied primary medical care to 280 farmworkers. Without the CMO sponsored clinics these individuals and their families would not have had medical care available. Some would have been forced to seek emergency care. Given an estimated real-dollar value for each physician visit of $65, the medical care provided through the CMO clinics in the initial year of operation was valued at $18,000. This brings the total contribution (in medical care and supplies) of CMO in its initial year of nearly $40,000. This is a substantial return on the $5000 investment, even without considering the value of the experience to the students.

During the 2 years following its inception (2003/2004 and 2004/2005), the CMO has continually expanded its activities to include a second clinic (Table 1). In 2005, CMO clinics and outreach missions served nearly 1000 patients with more than $62,000 worth of medical services provided. This comes through an organization whose annual budget is less than 20% of this value. Of course, such cost-benefit analyses do not measure the value provided to individuals within either the community or the student organization; ultimately

with an organization like this the human benefits far outweigh the financial.

Benefits

It is not difficult to see that a student group like CMO can have a substantial impact on underprivileged communities. In addition there are a number of associated benefits that justify the effort placed in developing the organization. These include:

- University
  - improved educational quality consisting of (i) practical opportunity outside the classroom; and (ii) opportunity to apply academic knowledge
  - increase in the prominence of students applying to medical schools
- Community
  - increase in quality of living for the community at large
- County/state
  - saving of tax-payer dollars that would subsidize unrecoverable costs for service at hospital emergency departments.

Liability

Of natural concern to anyone considering participating in or operating an organization involved with medical care is the issue of legal liability. Even within a standard medical practice, liability and insurance to protect against it is a major concern. In the context of an organization like CMO there are a number of individuals or groups who need to be conscious of their responsibilities and vulnerabilities. This list includes the institution sponsoring the organization (the university), the volunteer physicians, the students, and the community groups working with the organization.

The members of CMO at Florida State University operate clinics as a volunteer extension of the Department of Health of the State of Florida. As such, those working within the *defined* volunteer roles of the clinics are protected by sovereign immunity. Because the volunteers are essentially operating as an 'arm of the state', the participants are generally immune from lawsuits if they are sued in their official capacities.

The 'official capacity' is the key to the protection here.

Each individual working within the clinic must enter into an official volunteer agreement with the Department of Health. This agreement stipulates the official role of the individual and, as long as the individual functions within the limits of that role, then they are protected as a state agency.

All medical care provided within the USA must be performed by trained professionals licensed by the state. Any clinics organized by a student organization like CMO and any student volunteer efforts must be staffed by licensed professionals. Setting up and running the clinics in a manner safe for everyone concerned is not a trivial matter, but the barriers are not insurmountable. Organization of the clinics can be effectively accomplished with the cooperation of the university, physicians and the health department.

The affiliated institution: Each university will have a legal office that can advise on issues of legal liability. Student sponsored clinics are generally not the concern of such offices, but they do have the legal professional staff that can assist in the interpretation of the appropriate legal codes. It is advisable to discuss the intention to form a CMO group with the university's legal advisors at the initial stages well in advance of putting the group together. The descriptions of legal responsibilities offered below are our personal (not legal professionals') interpretations of how the legal arrangements were managed for the two clinics operated by CMO of Florida State University. It is prudent for any groups intending to take similar initiatives to have intended activities evaluated by legal counsel in light of the specific circumstances of the particular jurisdiction in which the group will be functioning.

The student organization and its advisors: are generally exempt from vulnerability with regard to the clinics because clinic operation is a specific agreement between the individuals involved and the Health Department. That is, ultimately clinic operation is the responsibility of the Health Department and does not lie with the organization, even if it is the organization that provides much of the resources that allow the Health Department to effectively operate the clinic. The organization does handle the donated pharmaceutical supplies and does have substantial legal responsibility for these. As such, it is necessary for such supplies to be handled according to regulation by appropriately trained staff, that is licensed pharmacists. This was solved at Florida State University by an arrangement with the on-campus medical clinic which has a licensed pharmacist on staff. The student group brings any donated medications directly to the pharmacist who oversees the record keeping and security of these materials. They are then released to the care of the clinic medical director (a physician) when the clinics are scheduled.

The volunteer physicians and any professional assistants (nurses, nurse practitioners, physicians assistants etc): These individuals have well-defined roles within the clinics and it is straightforward to enter into an immunity agreement with the Health Department. Such agreements are not uncommon and it is likely that substantial precedent for such exists between the Health Department and local medical professionals, particularly in those areas where there is an urgent need for clinic care of underserved communities. Understanding legal vulnerabilities is also a part of modern medical training, so these individuals are well versed in their rights and responsibilities.

The students: As with the professionals involved with the clinics, the students enter into an agreement directly with the County Health Department. Ultimately the operation of the clinic resides with the professional staff and the Health Department, so it is necessary for the students to be trustworthy and responsible. It has been our experience that there is no difficulty working with the highly motivated and responsible individuals who have undergone the thorough screening procedures and training described above.

The affiliated community group: The role of the affiliated community groups is as a liaison with the community. As such, they generally have no direct affiliation with the clinic. It has been our experience that such groups may be involved with advertising the clinic availability, a community service that does not involve responsibility for the clinics themselves. Community groups may also provide transportation for patients during clinics. Here legal responsibilities lie with such things as motor vehicle operation and transport services but do not involve the clinics themselves. Some community groups may have their own clinics established. An example is Farmworkers Self Help, discussed above. In this case the organization has entered into a specific agreement with the County Health Department. Specific agreements are reached between the clinic volunteers (physicians and students) and the Health Department within the oversight of the community organization.

Conclusion

Establishment of a group similar to Florida State University's CMO requires a great deal of effort on the part of the students, the institution, and the faculty advisors. As a result, initiation of the organization should not be taken lightly. The remarkable achievements of the Florida State student group attest to what can be accomplished with this plan of action and its tremendous potential for benefits to the community, the educational institution and the students. Over their initial 3 years of operation, this group was able to provide medical care to hundreds of individuals who would otherwise not have had such care. This came at the investment of only hundreds of dollars of operational funding, but this small investment was magnified by the efforts of the students and the associations they worked with to produce the equivalent of nearly $100,000 worth of care for the community. In return, each of the participating students received a pivotal experience working closely with

individuals most in need of health care and they were able to add a unique achievement to their resume that addresses areas of key importance to medical school admissions committees.

The difficulties associated with establishing a CMO group may appear insurmountable. It is natural for faculty and administrators confronted with such a proposal to focus on the impediments, potential liability, lack of an established infrastructure or personnel comfortable with managing such a novel group. The Florida State University group has shown that any of these perceived impediments can be overcome with focused effort. Although many approaches to solving the problem of medical availability for underprivileged communities have been tried, this particular group of students conceived a unique idea and developed a novel organizational plan that allowed that idea to be effectively implemented.

As we have witnessed with our students, it is remarkable what efforts individuals are willing to make if they can see that those efforts lead directly to realizable benefits. The documented accomplishments of CMO attest to these benefits. Students not only get to experience how medical practice operates from a patient/physician perspective, but they gain experience as leaders given major responsibilities of an organization. They learn to work as a cohesive team and reap the satisfaction of providing a positive medical experience for an underprivileged community.

The face of the world is largely determined by the balance between initiative and complacency. The students that founded the CMO have clearly demonstrated that taking the initiative can have substantial influence on many features of society. The students developed a unique resource exchange system that not only provided medical care for underprivileged communities, but also provided benefits to all parties involved. Providing opportunities for such experiences should be a key priority for educational institutions involved with training new medical leaders.

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References

1. Goetzel RZ, Hawkins K, Ozminkowski RJ, Wang S. The health and productivity cost burden of the 'top 10' physical and mental health conditions affecting six large US employers in 1999. *Journal of Occupational and Environmental Medicine* 2003; **45:** 5-14.

2. Hadley J, Holahan J. How much medical care do the uninsured use, and who pays for it? *Health Affairs* 2003; **Jan-Jun** (Suppl)**:** W3-W250.

3. Billings J, Parikh N, Mijanovich, T. Emergency department use in New York City: a substitute for primary care? *Issue Brief (CommonW Fund)* 2000; **433:** 1-5.

4. Burt CW, Arispe IE. Characteristics of emergency departments serving high volumes of safety-net patients: United States, 2000. *Vital Health Statistics* 2004; **155:** 1-16.

5. Nykamp D, Ruggles D. Impact of an indigent care program on use of resources: experiences at one hospital. *Pharmacotherapy* 2000; **20:** 217-220.

6. Suruda A, Burns TJ, Knight S, Dean JM. Health insurance, neighborhood income, and emergency department usage by Utah children 1996-1998. *BMC Health Services Research* 2005; **5:** 29.

7. Eng E. The Save Our Sisters Project: A social network strategy for reaching rural black women. *Cancer* 1993; **72**(Suppl.3)**:** 1071-1077.

8. Reid LV, Hatch J, Parrish T. The role of a historically black university and the black church in community-based health initiatives: the project DIRECT experience. *Journal of Public Health and Management Practices* 2003; **9**(Suppl.6)**:** S70-S73.

9. Demark-Wahnefried W, McClelland JW, Jackson B, Campbell MK, Cowan A, Hoben K et al. Partnering with African American churches to achieve better health: lessons learned during the Black Churches United for Better Health 5 a day project. *Journal of Cancer Education* 2000; **15**(3)**:** 164-167.

10. Castro FG, Elder J, Coe K, Tafoya-Barraza HM, Moratto S, Campbell N et al. Mobilizing churches for health promotion in Latino communities: Companeros en la Salud J. Natl. *Cancer Institute Monograph* 1995; **18:** 127-135.

11. Dunstone DC, Reames HR Jr. Physician satisfaction revisited. *Social Science and Medicine* 2001; **52:** 825-837.

12. Zuger A. Dissatisfaction with medical practice. *New England Journal of Medicine* 2004; **350:** 69-75.

