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Introduction

The field of bone marrow transplantation has recently undergone tremendous changes. For most transplants, hematopoietic stem cells are obtained from the peripheral blood after they have been mobilized with growth factors. A bone marrow transplant no longer requires a surgical procedure. Many centers have changed their name to “bone marrow and blood stem cell transplant” to reflect these changes. Others have kept the original name and added “cell therapy” to accommodate the fact that other stem cell sources, such as cord blood, may also be used. *Cell therapy* also encompasses future developments in this field. Very soon the “transplanter” will infuse manipulated and ex vivo expanded human cells (along with stem cells) that provide the desired antitumor effect. Such rapid transformations in the field require that programs keep apace of, and even anticipate, these changes in order to flourish and thrive. Moreover, a successful transplant program must merge clinical and business aspects as exceptional health and financial outcomes are necessary for growth in this competitive field.

A center's success begins with building and maintaining a sound infrastructure, which is the foundation of every program. Once built, the product portrays a picture to the outside world—a world where patients self-refer, insurance companies choose “centers of excellence,” community physicians make referrals, and Fortune 500 companies grant financial support for clinical and research protocols.

Like a vehicle, a program must also follow a schedule of regular *infrastructure maintenance*. A well-built and well-maintained infrastructure allows a

program to formulate a mission, goals, and strategic plans; it ensures smooth delivery of care and optimal utilization of resources, both people and money. It also allows for education, research, and marketing in a competitive area, all of which are necessary for success.

Components of an Effective Infrastructure

Building a strong infrastructure begins with a visionary leader who is adept at all aspects of the program, clinical, fiscal, and otherwise. Strong *leadership* will attract experienced and *qualified personnel* and will inspire dedication and the expectation of outstanding performance. Additionally, a strong leader recognizes that astuteness and ingenuity of personnel allows a program to be *proactive* to new findings and developments in the field, to keep abreast of new information, and synthesize data and literature for continual process improvement.

The personnel should form an effective team that shares common goals, builds trusting and respectful relationships, plans before acting, and involves all team members in problem-solving and decision-making processes. Essential components of such a team are the physicians, nurses, administrative support personnel, financial and insurance coordinators, researchers and protocol nurses, and a data manager. Due to the need for constant data and statistics, it is important that the center employ a data manager/statistician to assist in retrieval, compilation, and analysis of data. In addition, it is essential to have a database available to all staff who can assist in the input of the necessary components, which the data manager can query

on a regular basis and provide outcome data upon request. Each team member should be consulted in their area of expertise and recognized for valuable contributions.

An effective infrastructure also relies on collaboration and *communication*, where team members practice dialogue instead of debate and conflicts can be easily identified and resolved.

Establishing Key Internal Relationships

A program and its infrastructure cannot stand alone but must build essential relationships both within and outside of the institution. To build a successful stem cell transplant program, it is important to have the support of the institution, which must realize that many people with different tasks have to work closely together and communicate easily.

Contracting Department

A productive relationship with the contracting department is vital, as insurance contracts are a very important component of the infrastructure. Diversified contracts increase the referral base. If the insurance company is not contracted, the financial coordinator can make necessary ad hoc agreements with the insurance company, in accordance with the approval of the institution. These ad hoc agreements should benefit everyone involved, especially the patient. Without a contract, the patient must decide between a financial benefit in choosing a network program and the physician or institution of his or her choice.

Multidisciplinary Approach

Helping the patient through a stem cell transplant involves the collaboration of several different departments. In addition to the transplant team, the patient is seen by the blood bank staff for leukapheresis, the surgeon to place a central venous catheter, and various other consultants during the transplant, including physicians from infectious disease, pulmonology, and gastroenterology. Daily rounds not only involve the medical and nursing staff but also a clinical pharmacist, a nutritionist, and representatives from psychosocial oncology. Hence, besides teamwork, communication and information exchange is of paramount importance to

optimize patient care. Weekly multidisciplinary rounds bring together all health professionals who are directly involved in the care of these stem cell transplant patients.

Establishing Key Relationships External to the Institution

Third-Party Payers

Before the patient comes to transplant, extensive documentation needs to be submitted to the insurance provider to obtain approval for the transplant and to assure that costs will be covered. The triage coordinator, who works closely with the financial coordinator and the initial physician, compiles this information. Frequent patient contact is necessary at this stage; the financial coordinator is also in close communication with the case manager of the insurance company, to ensure the requested documents are sufficient and that the approval process moves ahead smoothly.

Recognition as a "Center of Excellence"

Patients who are members of a certain HMO may not be able to come to a given transplant center even if they have been previously seen by oncologists and surgeons. The insurance provider may not have a contract with that institution for transplant benefits, and the patient has to go elsewhere. Corporate insurance companies tend to contract with only a few centers in a given area. Unfortunately, the criteria for the selection of these centers are often unclear to the medical center. Clearer guidelines and criteria would help to establish true centers of excellence.

As health care costs rise, insurance companies tighten their reins on transplant contracts. Many of the smaller- to medium-sized insurance companies are delegating their transplant responsibilities to larger referral-based companies that specialize in transplant contracts. Larger insurance companies are creating their own centers of excellence and limiting their patients to certain participating programs. The object of these centers is to qualify a select few programs based on their patient volume and statistics. Diverting a higher number of patients into those programs offers a reduced rate for reimbursement in return.

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An open interactive relationship with the insurance company will benefit everyone. To join a center of excellence, your program must provide data that reflect your volume, admission and readmission rates, and survival statistics. In addition, the insurance company will want to see your policies and procedures, protocols, quality improvements, and customer service measures.

Professional/Specialization Accrediting Organizations

Insurance providers are keen to contract with a transplant center that has preferably passed an inspection by the Foundation for the Accreditation of Hematopoietic Cell Therapy. The approval is accepted for 3 years and includes a comprehensive review of all aspects of the clinical and the stem cell laboratory program. It has become important to have standard operating procedures in place for every possible clinical scenario (i.e., management of neutropenic fever, antifungal prophylaxis, etc.). Quality assurance and documentation have a high priority at these inspections.

Referring Physicians

To maintain a close relationship to the referring oncologist, it is important to communicate frequently with the physician either by telephone or through short update notes. This connection will establish a mutually satisfying working relationship, as well as safely aid in the eventual transition of the patient back to his or her oncologist.

Consumers

When it comes to discharge, the patient is set up with a home care company that is experienced in the care of bone marrow transplant patients. An interactive educational process is ongoing to ensure the latest knowledge and understanding of techniques and protocols. Close communication with the transplant program assures that specific complications of transplant patients are recognized early and treated appropriately.

Marketing

The program has to be able to compete with the others in a metropolitan area. This means visibility in the form of presentation to physicians, at hospi-

tals, and to patient support groups. It also includes activities such as sending out a regular newsletter, a Web site, an 800 phone number, and even running a few ads in local newspapers. Still, the best advertising is by word of mouth from patients who are satisfied with the care they have received.

Conclusions

The interests of solid organ transplant and stem and marrow transplant groups are becoming increasingly unified in today's competitive health care environment. Wherever possible, it makes sense to develop joint strategies related to building internal and external relationships.