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Post-Polio Clinics: Philosophy and Design

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Each person who attends a clinic for polio survivors has a different set of needs and expectations. Some have braces and just need new ones, or information about the latest in assistive devices. Some have not seen a physician for years and need a complete history and physical examination, with referral to other sources for medical care of problems that can be treated. Most need information about their condition and what can be done to help; some are not ready to make changes to accommodate altered ability; some are ready and can be helped with finding resources or applying for assistance. The clinic to serve this varied group of people needs a flexible approach and multiple resources.

Clinic models often depend on the personnel available in a community. A single physician may be interested in post-polio problems, seeing survivors on a "triage" basis, referring them to a physical therapist, occupational therapist, nutritionist, psychologist, social worker, or orthotist, and following them along as the need arises.

A multidisciplinary clinic can save people time and travel by having the various therapists present to examine and recommend on the same day. Some survivors do not have the endurance to do this and may need to be seen over several days or be admitted to a residential-type facility (hospital or rehab unit) for a more leisurely, in-depth assessment and trial of equipment and new ways of doing things.

One essential for all models is the provision of information about post-polio problems and their effects for family members as well as the survivors. Videotapes, audiotapes, and written material should be distributed, and loaner material should be taken home to educate family and friends, away from the intimidating atmosphere of the clinic or doctor's office.

Follow-up is essential. The recommendations made at the first visit need to be checked for effectiveness and compliance. New equipment should be evaluated for effectiveness, forms for employers, insurance companies, and government bodies should be completed, and the staff and patients must be encouraged to go on. Over time, needs may change and new approaches may be required.

Sioux Falls Experience

Beginning in 1987, McKennan Hospital sponsored a multidisciplinary clinic for post-polio survivors, staffed by a physiatrist, physical therapist, occupational therapist, and social worker, with referrals to a nutritionist, psychologist, orthotist, or to other medical specialists as needed. Over the years, some 170 patients had been seen in a monthly clinic. A few more had been seen individually by the physiatrist, for a total of 184. Two-thirds were women. Ages ranged from thirty to eighty. Most had a clear history of polio and were complaining of new pain, weakness, and fatigue. A few had other causes of their symptoms (stroke, suspect muscle disease) and were referred for investigation. Some had medical problems that could be referred to their primary physician or specialist for management.

Braces were recommended for some, and most actually got them and benefited from wearing them. They found the newer models less objectionable than those they had discarded as teenagers. Fitting was sometimes a problem, as the orthotists wanted to correct everything at once. So did we, but soon found that it takes time to adapt to lifestyle changes and different ways of moving about. Most survivors were able to walk and wanted to continue doing so. We did recommend wheels, either manual or powered, for distances when fatigue was a problem.

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The local support group functioned as an adjunct to the clinic for those living in the area. Contact with other polio survivors and exchange of information helped with adjustment to changing abilities.

Financial concerns needed to be addressed, such as changing or stopping work, or applying for pensions (and the label of "disabled"), or for payment for equipment or home adaptations. A few referrals were made to Vocational Rehabilitation Services, but most were able to obtain Social Security benefits or to change their work on their own.

Continuity was important, and the person who functioned as coordinator of the clinic (in our case, the social worker) had to be knowledgeable about post-polio problems, the patients – keeping track of who, what, and where, as well as making appointments and soothing agitated people who felt they needed to be seen immediately.

The most important lesson we learned was the need for polio survivors to do things when they were ready, not necessarily when we thought they should. Sometimes there was a delay in solving problems, but overall we attained a better success rate and more satisfied patients.

West Park Experience

Wendy Malisani

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The West Park Health Care Centre Post-Polio Clinic assesses over 300 patients per year. The clinic provides comprehensive assessments for poliomyelitis survivors that aid in maximizing independence, quality of life, and health status. The patient, in conjunction with the transdisciplinary team, identifies the goals and objectives of the assessment. The team then works with the patient and referring physician to provide individualized coping strategies and treatment recommendations.

The transdisciplinary team consists of the patient, a physiatrist, social worker, physiotherapist, chiropodist, psychologist, coordinator, and secretary. The occupational therapy assessment is completed in the patient's home by a Community Care Access Centre occupational therapist. This innovative service provides individualized assessment of activities of daily living, mobility, accessibility, and safety.

West Park Health Care Centre provides internal support to the Post-Polio Clinic from such departments as Orthotics, Sleep Laboratory, Respirology, Diagnostic Imaging, Laboratory, and Seating Clinic. We have formed external partnerships with hospitals that provide MRI, CAT scans, speech and language services, and orthopaedics. Julian Lo, MD, the Post-Polio Clinic physiatrist, performs EMG testing in the clinic. We also link with The Arthritis Society, The Fibromyalgia Association, The Heart and Stroke Foundation, and other self-help groups, such as cessation of smoking.

A written referral from the family physician is required. Dependant upon patient wishes and needs, initial assessments are completed over a one- or two-day period. A comprehensive, pre-appointment questionnaire is sent to each and is reviewed by each team member. By using the questionnaire, the patient tells his or her basic story only once. This practice also allows time for a discussion of topics identified as important by the team and patient. The completed questionnaire aids in anticipating the needs of the patient. For example, if someone now reports falling due to foot drop, we can anticipate that the services of an orthotist may be needed. In this case, we would have an orthotist on standby, so the clinic visit is as succinct as possible.

Because we have a significant immigrant patient population in Canada, our clinic provides translation services for all languages and American Sign Language.

Each polio survivor meets with a social worker and physiotherapist at the start of the actual assessment appointment. The social worker facilitates the meeting in which the patient sets his or her goals. Many times, what we as medical professionals think are the important goals for the patient, may not be identified as a priority by the patient. Our task is to listen to the patient and to assist them in setting and prioritizing attainable goals.

Every patient and referring physician receives a copy of the physiatric assessment letter as well as a copy of the team letter. Six weeks post-assessment our patients are sent a satisfaction questionnaire. Postage is provided for the anonymous reply. The information gained from the satisfaction questionnaire is used in strategic plan-

ning for the clinic. It is in the clinic mandate to educate the public and health care professionals, and the staff participates actively in conferences, research, and continuing staff education.

We invite patients to return to our clinic every year, sooner if new health concerns arise. At reassessment we review the original goals and measure compliance, outcome, and success. Although we are an assessment clinic, we do provide emergency crisis intervention and management when required.

To help educate our patients, we give each polio survivor an energy conservation workbook and other written materials. We have a clinic library with audio and visual tapes and books from which patients may borrow. We also refer all of our patients to the Ontario March of Dimes so they can sign the provincial registry, join a local support group, and receive local and provincial newsletters.

The Post-Polio Clinic staff has developed an Educational Outreach Kit that provides written and video education for health care workers and poliomyelitis survivors. The comprehensive video is 2 hours and 20 minutes in length in which a physiatrist, physiotherapist, social worker, and occupational therapist outline diagnosis, management, and treatment recommendations. For further information contact Wendy Malisani, Post Polio Clinic, West Park Health Care Centre, 82 Buttonwood Avenue, Toronto, Ontario, Canada. M6M 2J5 (416-243-3600, ext. 2157, wmalisani@westpark.org).

Warm Springs Experience

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Assessment of polio survivors presents a dilemma because of the diversity and the persistent nature of their complaints. Appropriate treatment is a challenge due to the lack of curative therapeutic interventions. Therefore, a comprehensive, coordinated assessment and treatment is required. A typical evaluation in a multidisciplinary post-polio clinic includes assessments by a nurse, physician, physical therapist, occupational therapist, and frequently an orthotist and social worker. When necessary, referrals are made to other health care providers including a psychologist, dietitian, or respiratory therapist.

The rehabilitation nurse initially assesses the patient's health status including medical history, medications, functional status, and then coordinates evaluations and tests. The physician obtains a comprehensive history and performs a physical exam with attention to present complaints, polio history, and musculoskeletal and neurological examinations. The physician determines the need for diagnostic tests including laboratory tests, X-rays, pulmonary function tests, and electrodiagnostic studies (EMG/NCS). Routine baseline labs should include thyroid tests, and screening tests for anemia and diabetes in order to rule out medical causes of fatigue.

New weakness is one of the most common complaints of many patients when they come to the clinic for the first time. Therefore, the workup for new neurogenic weakness should include an EMG/NCS. This test can detect the presence of other conditions such as carpal tunnel syndrome and rule out other causes of weakness such as a radiculopathy.

Pain is the most prevalent complaint observed in many clinics, and there are many possible causes. The three types of pain seen in post-polio patients are post-polio muscle pain, overuse pain, and biomechanical pain. Fibromyalgia can also cause pain in many patients. Proper treatment of these pain problems leads to improved comfort as well as functional gains. The treatment includes not only medication, but also assistive devices, bracing, and recommendations for energy conservation. The physician then makes referrals to appropriate team members for further evaluation and treatment.

The physical therapist's (PT) role in the evaluation includes a baseline manual muscle test, joint range of motion, and evaluation of posture, gait, and mobility, as well as the patient's knowledge of post-polio. A baseline manual muscle test is performed of major muscle groups, noting any history of muscle transfers, stabilization, or surgical interventions. Range of motion and leg length discrepancy measurements are made. The PT evaluates the patient's posture in sitting and standing, if appropriate. Gait patterns are evaluated, making modifications as needed with appropriate assistive devices.

The PT may address mobility issues in the Seating and

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Wheeled Mobility Clinic. There, patients have the opportunity to try manual wheelchairs, power operated vehicles (scooters), and power wheelchairs. Seating systems are also used to provide pelvic and trunk support in order to decrease pain and prevent deformity. Finally, the PT provides patient education that includes information on appropriate exercise protocols, the importance of utilizing available technology to lessen fatigue, and assists in accepting/coping with the late effects of polio.

The occupational therapist (OT) assesses a person's independence with activities of daily living such as dressing, bathing, cooking, and driving. The OT analyzes daily activities to determine the amount of energy required and the amount of stress placed on each specific muscle group. Different people value different activities; therefore, the total amount of energy required for each person is unique. The focus of the OT treatment is energy conservation. Treatment can also include upper extremity stretching, providing adaptive equipment to compensate for weak or atrophied muscles, and providing hand splints to improve hand function or protect weak muscles.

The orthotist evaluates the gait and bracing needs. Necessary adjustments and repairs to existing braces and crutches are made. The orthotist determines the needs for those who may need braces for the first time or for putting a brace back on again after years without one. For those who gave up their braces years ago, resorting to wearing a brace again may be a difficult experience. However, many times the brace may be necessary to improve gait, decrease pain, or prevent further joint deformity such as knock-knee or back-knee. The materials used and the type of brace required depend on the patient's strength, lifestyle, and what he/she has worn in the past.

A social worker or psychologist evaluates the impact of new health problems and functional loss on the patient, the family, significant others, and colleagues at work or elsewhere outside the home. There is also an effort to identify coping strategies used by, and available to, the individual and to assess the emotional impact of the original polio experience and how it relates to current feelings of having a second disability. In addition, the social worker facilitates referrals and access to community resources and services, including the local post-polio support group and other polio resources. The psychologist can provide individual counseling and assist the physician with suggestions regarding medication management in cases of depression or anxiety.

Other health professionals available in a multidisciplinary clinic include a respiratory therapist and dietitian. The respiratory therapist performs pulmonary function tests, measures the arterial blood gas (ABG), and provides patients with advice on respiratory exercises. The dietitian can advise patients on low cholesterol or weight loss diets, or diets high in minerals such as calcium or iron.

After the patient has been seen by each of these individual health care providers, and all tests have been completed, it is imperative that the team meet and discuss their findings with each other and the patient. This is best done by conducting a team conference with the patient and his/her family on the second day of the evaluation. This conference is used to review the results of diagnostic tests and discuss impressions and recommendations for interventions. At that time, prescriptions for medication and equipment are written and a follow-up appointment may be scheduled.

In summary, a multidisciplinary clinic provides a thorough evaluation for all patients who first present to a post-polio clinic. Because the polio survivor's needs are so diverse, just one team member alone cannot meet them all. Team members need to be close together, both in space and in time, to communicate ideas, and deliver a common message.

When services are provided over a two-day period, the polio survivor is given a more energy efficient evaluation, yet there is adequate time for questions to be answered, education to be done, brace work to be completed, and lab work to be received while they are still in the clinic.

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