Advocating in Physical Therapy
"Physical Therapy for Underserved Populations"

Introduction

The fight to increase health care services in underserved areas has been a long standing battle across the world. While some areas may receive more attention due to political alliance, media exposure, or severity of the problems, others may go unseen. In addition, services may be restricted only to rehabilitation, when a problem has already arisen and a solution must be found. Instead, health care services may not readily be available through "prehabilitation," or as prophylactic measures.[1]

Physical therapy (PT) services are often considered a luxury service in many underserved areas, with classical medicine such as pharmaceutical treatment and surgical treatments rising higher in priority. While PT may not always find a cure for life-threatening situations, it can arguably be the most important factor in improving everyday function and quality of life.

Physical therapists (PTs) are master clinicians at identifying and treating movement dysfunction. As movement experts, PTs strive to improve participation restrictions as defined by the International Classification of Functioning, Disability, and Health (ICF) model. PTs incorporate the patient's personal and environmental factors in the plan of care to help the patient achieve maximum functioning. By understanding aspects of the patient's life that are hindered due to injury or illness, chronic or acute, PTs are able to target the problems patients face fulfilling their roles in society (participation restrictions). PTs then understand the activities that would allow the person to achieve this goal (activity limitations), and the physical factors that prevent this from happening (body functions and structure). For example, if a patient would like to participate in her daughter's wedding celebrations, this would involve the activity of dancing. This activity could be limited by lack of muscle strength or balance. This could also be hindered by personal factors such as fear of poor performance and environmental factors such as an uneven dance floor. PTs take all of these aspects into consideration to allow the patient to ultimately reach their desired goals.[2]

International relief efforts for underserved populations have been key to improving mortality. They are catered to emergency medical aid and life threatening situations such as Ebola, HIV/AIDS, or Tuberculosis. However, once patients reach medical recovery, they may not always receive the additional support through PT that allows them to maximize their *functional* recovery.

Underserved populations need PT

To understand how PT can serve underserved populations, it is worth taking a look at who these people are. Often, the "underserved" or the "disadvantaged" are those who lack financial resources. They are often also seen as the elderly, women, children, minorities, and people with

disabilities.[3,4] Without financial resources to seek medical attention, underserved populations can experience more injury and illness. In addition, lower socioeconomic classes often work manual labor jobs which are more likely to end in traumatic and overuse injuries or even death.[5]

Another reason for the higher morbidity and mortality could be the lack of physical care through exercise, healthy diet, hygiene, and routine medical check ups. This may be a result of poor education and the lack of health care knowledge.[6] Without this knowledge, lower socioeconomic groups are subject to more serious health conditions.[7]

On the medical side of things, a great example is the prevalence and treatment of hypertension (HTN) within the minority group of African American men. Despite the early onset and high prevalence, rates of treatment and control are lower and rates of early target organ damage are higher than those of whites.[8] HTN treatment lowers blood pressure (BP) and decreases target organ damage. A 5-year randomized clinical trial compared the effect of a more intensive to a less intensive intervention for HTN control. The conclusion of the trial is not surprising. Regardless of the treatment, more intensive or less intensive treatment as a whole reduced the risk of organ damage and therefore reduced deaths due to poor HTN control. This trial proves that a little can go a long way in order to improve a person's quality of life.

Basics like educating individuals on how to treat disease can save lives. It is imperative to pay attention to those who are in need in order to make changes, improve quality of life, and reduce the risk of death. This can be done by multiple health care professionals such as nurse practitioners and physicians. These individuals can provide routine medical check ups that are commonly missed and educate underserved groups on when, what, and how to improve their overall health and wellness.

While medication is crucial to reducing hypertension-related morbidity and mortality, it is equally important to understand that there are several modifiable risk factors for HTN that could reduce the prevalence of the disease as well as lifestyle changes that need to accompany those that already live with HTN. PTs can intervene in both the preventative and maintenance side of things to ultimately improve patients' quality of life. PTs can educate on the topic of exercise and how physical activity can help improve cardiovascular health to maximize their *function* and physical well being, thus controlling HTN. A collective group of health care professionals is essential for making a difference amongst the underserved, thus reiterating the need for PTs in underprivileged areas in order to physically heal and prevent further damage to a person.

Additionally, the lack of access to healthcare is one of the largest barriers to underserved populations. Although PTs have improved direct access laws globally, there is still difficulty in actually receiving services.[9,10] Awareness of PT is low and physicians do not always act as the gateway to identify those who need PT and connect them to an appropriate provider.[11,12] In Brazil, although poor people require the most PT, they are the most likely to not receive PT services.[7] In South Africa, there are not enough PTs to even serve the vast population of poor and disadvantaged individuals.[13] In addition, the World Disability Report surveyed a low-income

area in South Africa and found that unemployed men were more likely to have disabilities. Within this group, those over age 65 and those with sensory and language disorders were the least likely to receive necessary rehabilitation. The report found that financial and transportation issues were each over 70% of the reason why these people did not receive care.[14] This inequality is evident across the globe.

Furthermore, if we specifically talk about the disabled youth, research indicates that there is limited access to reduce health complications and disease later in adulthood due to poor equipment and environmental accommodations for these individuals. Children and adolescents with disabilities who participate in very little school-based physical activity are much less likely to participate in healthy physical activity after school and are far more likely to be sedentary on the weekends. While youth without disabilities have almost endless opportunities to obtain regular bouts of physical activity during informal play, transportation (e.g. riding a bike to school), and recreational programs, youth with disabilities have substantially less access to these same opportunities. Aside from an occasional special recreation program offered in a small number of communities, most youth with disabilities do not have the same opportunities to participate in sports or recreational activities as their non-disabled peers.[15]

It is found that physical inactivity among the disabled youth is often related to physical, programmatic and attitudinal barriers. These barriers limit sport and recreation opportunities within their communities. Examples include playgrounds and ball fields that are inaccessible to youth who use wheelchairs (e.g. grass surfaces, climbing apparatus with no ramps). Some programmatic barriers include not having the necessary staffing or support to accommodate the child during the activity or not having knowledgeable staff who understand how to adapt the game for these individuals. Furthermore, the school environment is not much better. For example, physical education teachers limit opportunities for youth with disabilities, who are mainstreamed into their classes. This occurs because competition often dominates the class time and non-disabled youth are not often encouraged to include youth with disabilities on their teams. Likewise, these youth often engage in very little physical activity during the school day because of various barriers. This include inaccessible facilities, lack of staff knowledge on ways to adapt programs for the individual and lack of interest among the administration in addressing access issues associated with sport and physical activity for youth with disabilities.[15]

There is segregation between the advantaged and disadvantaged communities in receiving PT. PTs have the ability to address many of these barriers. It is within their realm of rehabilitation to provide effective strategies and resources to increase physical activity among the underserved. Increased participation in physical activity and improved fitness levels could have substantial health benefits by reducing the incidence of chronic diseases (i.e. type 2 diabetes, heart disease), minimizing or eliminating secondary conditions (e.g. obesity, weakness, fatigue, mobility, social isolation) and reducing the need for personal assistance in performing activities of daily living (ADL) and instrumental activities of daily living (IADL). This research continues to prove that PTs are essential to helping those who are in need, thus emphasizing the fight to bring PTs to the underserved.

Physical Therapy Can Solve Problems

PT can often be seen as a luxury service in third world countries. However, receiving PT may be key to unlocking maximal function in underserved populations. In addition, human movement is a key element to life. Not only does it improve cardiovascular health, but it is essential to carrying out ADLs and IADLs and participating in the community. Exercise is defined as “activity requiring physical effort, carried out to sustain or improve health and fitness”. Many activities could be classified as exercise, especially in the manual labor field. However, exercise should be carried out with balance. If underdone or overdone, serious consequences could arise. For example, areas that are considered underserved have higher mortality rates because of the lack of physical care through exercise.[5] This could be because of poor knowledge of physical care. PTs are able to educate people on the importance of participating in physical movement for health and wellbeing. On the contrary, individuals whose occupations are based on physical capacity and output have higher chances of acquiring a repetitive or overuse orthopedic injury for being too physically active.[16] These individuals are often not educated enough on preventing overuse injuries. It is within a PT’s realm of expertise to provide a solution for excessive physical activity or lack thereof.

It is important to bring PT to underserved populations that have a high percentage of manual labor workers. However, PTs can further educate these individuals on how to treat these injuries as well as the preventative strategies to avoid these injuries. Exercise is defined by producing physical effort; however, exercise such as stretching, that requires little effort, is just as important and sometimes more important to help treat and prevent the same injuries from happening again. Decreasing the occurrence of injuries within these populations and workforce allows these individuals to continue to make income for themselves and for their families.[9,16] Overall, we can classify health as wealth. Movement, recovery, and functional training is key in order to service a good state of well being.

Current Efforts & Future Goals

At this time within the United States’ healthcare community, the “Personal Health Information Systems” (PHIS) is a new way to provide individuals, especially migrants, a continuous record of their health history and status as well as the affordance to access healthcare providers. PHIS is classified as a place where patient’s demographic information, medical histories, test and laboratory results, mental health conditions, insurance information, and other data is entered and collected by a healthcare professional. The implementation of this system has created a program called the MiVIA program where it provides a web-based application that can be used as the vehicle to provide outreach care coordination, and a specific PHIS for the migrant farm worker community in California. MiVIA provides the ability to create a continuous record of health services and needs for migrants as well as providing access to healthcare providers (determined by patient permissions).[17] This program is new and further research has to be conducted to review the successful rates and use of this system. However, international

underserved populations could adapt this system, if research supports its beneficial use in regards, to obtain more healthcare to these specific populations. This could help bring PT services to these individuals and help prevent, as well as restore, physical injuries that could be detrimental to a person's quality of life. This is just one new way that individuals are trying to explore new options to help address the need of healthcare in underserved populations.

Furthermore, other methods are being implemented to help serve people who are in need. The Association of Professors Medicine (APM) conducted research on how healthcare treatment internationally from the U.S. medical personnel can truly make a long lasting effect on the temporary medical services provided when visiting third world countries. The APM states that, many medical programs generate unique personal experience for volunteer healthcare providers as well as bring treatment to those who are in need. However, they continue to wonder whether any of their efforts have meaningful and lasting benefit. They state that they work under the pretense of promoting community autonomy and health sustainability in rural communities without access to healthcare, but can any positive difference in community health through the efforts of the volunteer medical teams be noticed? This very question helps individuals think of improved ways to substantially make an impact on health problems internationally. Rather than placing a bandage on the problem, the APM investigates and encourages providers to find a *solution* to the problem. They concluded that the best way to continuously treat these issues versus implementing a temporary fix is to educate the local health providers ("train the trainer") as the key element to ensure a lasting benefit. APM concludes that, "Enhancing autonomy through training local providers and expanding medication and equipment supply chains will require time and patience. The establishment of open, trusting, and long-term relationships with the community and its local providers is essential to ensure the appropriateness of underserved health activities and optimize outcomes."[18]

This type of practice is exactly what a non-profit 501(c)(3) called *Physical Therapy International Service Foundation* (PTIS) does. PTIS brings free PT services to the underserved and are in the works to implement this method on their healthcare service trips. PTIS is a relatively new organization that has devised a plan for their service trips in multiple underserved countries to involve private and group treatment sessions, home visits, educational workshops and more.

In their first trip, they treated 85 patients including pediatric patients from nearby schools, expatriates from neighboring towns, local villagers and manual laborers, geriatric patients from the old age facility, and new mothers. The trip also included an educational workshop on ergonomics, health and wellness, back pain, and upper extremity pain to over 20 townspeople including school children and patients from previous treatment sessions. The organization's main goal in the future is not only to help those who are in need, but to also carry out an everlasting benefit. PTIS hopes to travel to many countries to implement the methodology of "train the trainer" in PT and or health care practice in hospitals, homeless shelters, domestic abuse centers, and more. PTIS is not alone; organizations like *Global Alliance for Improved Nutrition (GAIN)*, *D-Tree International,* and *African Medical and Research (AMR)* all strive and

fight to create a sense of well being for underserved countries.[19]

Conclusion

PT needs to be more accessible to underserved populations, both from a financial and availability standpoint. Everyone deserves to have access to PT despite their socioeconomic status. Improved health education would need to begin as a grassroots effort in underserved communities. To create massive change in the most sustainable way possible, PTs would need to create efforts on a much deeper level in society. Policy shifts and government funding should be explored. Ideally, we should focus on capacity building by helping the people help themselves.[20] This would require training and education, more than just treatment.

Through gradual efforts to build awareness, PTs are beginning to make their mark in the global community by shifting the way the world sees PT. As movement experts, we optimize function and improve quality of life. This should also be achieved from a “prehabilitation” stand point instead of only intervening as an afterthought. We must partner with organizations that provide life-saving services to people. Once lives are saved, quality of that life must be saved too. People need to have a second chance to get back to the things they love to do. Improving access to PT in global underserved populations can move us one step closer to this goal. In this chapter, we have established the importance of bringing PT services to the underserved. PTs should carry out the methodology of “train the trainer” internationally in order to really solve this everlasting health problem.

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