

# Why Water Worx for Affordable Care Organizations



## Making Aquatic Therapy Profitable for the Accountable Care Organization

As an Accountable Care Organization your mission is to deliver the right service to the patient, at the right time and at the right cost. When you span the continuum of care, this can be a difficult challenge. When you are searching for solutions, it's important that any new technology that is introduced to the organization delivers proven results and can successfully progress patients through the entire spectrum of care—from prehab, through rehabilitation and transitioning into wellness.

Aquatic therapy, can do just that. By integrating water therapy into your Accountable Care Organization, you can help you achieve quality outcomes and decrease readmissions. Clinicians who have used advanced aquatic technology, like underwater treadmills and resistance therapy jets as part of their rehabilitation services have found that their patients have better rehab outcomes. These patients also experience less pain related to rehabilitation and are happier to comply with their rehabilitation protocols.

Robert P. Cusick, MD of Kansas Joint & Spine Institute in Wichita, KS utilizes aquatic therapy with almost all of his total joint replacements because of the great results their practice has seen. He states, "On a whole, the two main benefits I see with aquatic therapy from our practice are number one, patients get moving quicker and they become functional much more quickly than they do dry-land training and number two, the patients enjoy going to therapy. They don't dread that, they don't cancel, they don't skip appointments. In fact, the opposite is true they want to go more than they are allowed to. In fact they dislike it when they have graduated from therapy. They dislike it because it's so enjoyable for them. So, they become functional faster and they enjoy [rehab] much more with aquatic therapy."

### America: An Aging Population

Exercise and therapy are far less painful in warm water than on land. Water's natural properties eliminate the amount of stress a person is bearing on their joints. It also reduces joint inflammation and improves circulation.

### Who can benefit from Warm Water Exercise?

the 10,000 who turn 65 everyday

the 1 million who have a knee or hip replaced annually

the 25.8 million who have Diabetes

the 27 million with Osteoarthritis

the 72 million who are obese

the 97 million who are overweight

the 100 million who suffer from chronic pain

### Why Water Worx:

Exercise and therapy are far less painful in warm water than on land. When standing chest deep in water, the body is 80% weightless, bearing only 20% of its body weight. This weightlessness significantly reduces the stress on joints and muscles. The hydrostatic pressure of the water also reduces joint inflammation and improves circulation. Exercise and rehabilitation in warm water therapy pools is beneficial for almost anyone, especially those suffering from chronic pain and arthritis, obesity or even those rehabilitating total joint replacements

## How HydroWorx Aquatic Therapy Produces Results for the Entire Spectrum of Care:

### Water Therapy for Prehab Enhances Rehabilitation Outcomes:

When patients are preparing for a total joint replacement or other surgeries, doing exercises to strengthen the muscles around the joint is one of the best ways to ensure successful rehabilitation after surgery. Often times, patients preparing for a total knee or total hip replacement are overweight and in severe pain from the stress on the joint and are unable to walk, let alone exercise. When standing chest deep in water, the body is 80% weightless,

bearing only 20% of its weight. This weightlessness helps with exercises and movements that could otherwise be too difficult. Light exercise or walking on an underwater treadmill before surgery has proven to be a great way to enhance rehabilitation outcomes. In some cases, it has even prevented or postponed total joint replacement surgery.

Ryan Furman, Physical Therapist and Certified Athletic Trainer from Hand & Orthopedic Rehabilitation Specialists shared a story of a patient named Garry who came to their facility in need of

therapy because he was in severe pain and struggling with obesity. Garry's doctor wanted to see if he could lose weight to become a better candidate for knee replacement surgery. Garry was also suffering from a foot problem and severe osteoarthritis in both of his knees. HydroWorx aquatic therapy and underwater treadmill walking was Garry's primary form of exercise. At the end of his treatment timeframe, Garry became much more mobile on the land, his back pain was significantly reduced and he lost 25 pounds.

### Benefits of Aquatic Therapy for Weight Loss During Prehab:

- Can burn more calories per minute than land exercise
- Decreased pain
- Increased strength and mobility
- Helps to regain range of motion and endurance
- Improved balance
- Reduce swelling

## Accelerate Rehabilitation Outcomes with Water Therapy

As an Accountable Care Organization, you are focused on ensuring your patients receive quality rehabilitation outcomes. With the forgiving and reduced pain environment of warm water, you can help your patients progress through the rehabilitation process quickly and smoothly. For total joint replacement or other post-surgical patients, the best time for pool therapy is immediately after surgery, when the effects of immersion on pain, gait, ROM, confidence, and swelling are the most powerful.

In addition to studying water's effectiveness, there is a concern of water's safety. Many physicians resist post-operative aquatic therapy because of the fear of infection. A study published in the Archives of Physical Medicine and Rehabilitation 2013;94:138-48 titled Early Aquatic Physical Therapy Improves Function and Does Not Increase Risk of Wound-Related Adverse Events for Adults after Orthopedic Surgery: A Systematic Review and Meta-Analysis found that there is no increased risk of infection after surgery. The results from this systematic review provide evidence from 8 controlled trials, with 287 participants, that there was no increased risk of wound-related adverse events for subjects undertaking aquatic physical therapy in the early postoperative period after orthopedic surgery compared with land-based therapy.

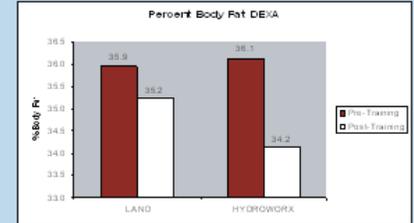
Dr. Cusick agrees *"After five years of therapy we've found that we've had no infections to date that we can contribute to pool use. We monitor the wounds very closely, that was a big concern, but the methods that we use to control the exposure of the wounds has been very effective in terms of preventing infection and*

### Water Therapy for Weight Loss:

A number of clinical studies have shown that obese patients undergoing regular pool workouts for weight loss, like Garry, experience a lower perception of pain compared to land exercise.

Furthermore, Texas A&M University completed a weight loss study comparing the effectiveness of land-based treadmill running to underwater treadmill running.

The study found that utilizing the HydroWorx underwater treadmill and resistance jets at the same speeds as a land based treadmill yielded the same cardiovascular benefits as running on land. Subjects that ran on the underwater treadmill also gained leaner muscle mass than their peers running on land. The study also found that, four out of five subjects preferred to exercise in the HydroWorx fitness pool than on the land based treadmill. When their therapy or exercise is more enjoyable, patients are more likely to comply with the protocols and less likely to cancel scheduled appointments.



*keeping our clean wounds clean. In reviewing our numbers, we've had approximately 9,500 patient visits per year to the pool. We haven't had any infections to this date."*

In addition to showing that aquatic therapy is safe as early as 4 days post-op, the study shows that aquatic therapy does a superior job to traditional land-based treatments on improving function. A patient's function is one of the most important results to payers. Utilizing land based functional measurement tests like the Berg Balance Scale or the Lower Extremity Functional Scale, before, during and after aquatic therapy can help track your patient's improvements over time. With CMS now requesting Claims Based Outcomes Reporting (CBOR) with Medicare Part B claims submissions, tracking progression is extremely important. Medware has created a G-code "functional modifier" conversion

calculator that takes functional measurement tests and converts them to the appropriate modifier code published by CMS to help you score patients appropriately. This free online resource can be found at <http://www.mediware.com/rehabilitation/tools/item/g-code-conversion-calculator>.

**Increasing Your Patient Volume:** HydroWorx products can help you handle the volume of post-surgical patients rotating through your therapy services department. Multiple patients can fit in the pool at once. This allows your Rehabilitation Department to bundle treatment by having multiple patients in the pool at once. A larger volume of individuals can progress through rehabilitation protocols at the same time with better results and land based therapy. At Kansas Joint & Spine Institute, Dr. Cusick adds that “patients enjoy the sense of community with others that are going through the same experiences they are”.

### **Benefits of Aquatic Therapy for Joint Replacement or Post Surgical Patients**

- Relaxation
- Increased joint movement
- Pain relief
- Enhanced mobility
- Improve flexibility
- Mobility and strength
- Removes weight from joints and bones
- Strengthens muscles and joints after surgery

### **How Water Therapy & Fitness Enhances the Transition of Care and Wellness:**

With these significant healthcare changes, the role of Long-Term Care facilities has become even more important within the ACO network. Some of the critical components under the new system are resident health and wellness, discharge performance and hospital readmissions. As hospitals, outpatient rehabilitation clinics and long term care facilities become more closely integrated, long term care facilities have the opportunity to become a preferred provider by closely monitoring and helping to improve the clinical outcomes of your residents and the referrals received from hospitals.



Offering HydroWorx aquatic therapy is a way to set you facility apart from others like you in the community. The HydroWorx pool offers both rehabilitation advantages for post-surgical patients transitioning from outpatient care as well as wellness benefits for your other residents looking to maintain activity levels or prevent injuries.

According to the US Centers for Disease Control and Prevention, one-third of Americans 65 and older fall each year with up to 30% experiencing fall related injuries that negatively impact functioning and independence. Muscle weakness and gait impairments are the



most common causes of falls in all older adults. Falls are also the leading cause of fatal injury and the most common cause of non-fatal trauma-related hospital admissions among adults.

Research conducted at Texas A&M University found that exercise on a HydroWorx underwater treadmill builds lean muscle mass faster, resulting in higher leg strength, than exercise on a land-based treadmill. Falling is not an inevitable result of aging. Through evidence-based interventions, such as FallProof H2O developed at California State University Fullerton, comprehensive wellness programs combined with simple lifestyle adjustments can substantially reduce the number of falls (and hospital admissions) among older adults.

In the water, the fear of falling or injury is eliminated by giving residents a safe environment to exercise in. The warmth of the water also loosens arthritic joints and muscles reducing the individual's level of pain. Offering a “lower pain and less feared method” of exercise, like the HydroWorx, can greatly enhance your residents' quality of life. It can also allow your residents to remain independent longer, thus increasing your RUG scores.

Additionally, in the research published in the Archives of Physical Medicine and Rehabilitation 2013;94:138-48 showed that when compared with standard land-based physical therapy, aquatic therapy resulted in a significant improvement on measures of ADL. Improvement in ADL has also been documented after participation in older adults with arthritis following an aquatic therapy program. This is a clinically significant finding because the ability to perform ADL with less pain and difficulty is a major priority for the older population with arthritis.

#### **ABOUT HYDROWORX:**

HydroWorx, based in Middletown, Pennsylvania, offers a wide range of underwater treadmill therapy pools, and peripheral products and services. Every day, more than 23,000 athletes and patients use HydroWorx technology to recover from injuries and health conditions. Learn more at [www.hydroworx.com](http://www.hydroworx.com).