

## Business Feasibility Study Introduction

Millions of working-age Americans are limited due to pain on a daily basis. Spinal pain will affect approximately 51-84% of all adults at some point in their lifetime, but each year approximately 6-26% of Americans experience low back pain for the first time.<sup>1</sup> In addition, shoulder pain, knee pain, or other musculoskeletal pain each affect between 13-31% of the US population every month.<sup>1</sup> Not only is this pain common, but the incidence of pain in adults has increased over the past ten years, especially when it comes to chronic pain.<sup>1</sup> Needless to say, pain is a problem that all Americans face at some point, and, in working-age adults, it impacts job responsibilities and performance.

As physical therapists, one of our main duties is to treat pain to get people back to their daily tasks. As part of this Capstone project, I examined the effects of a sample of interventions at the disposal of physical therapists on pain, especially in the immediate and short-term. The reasoning behind this time-frame and evidence table was to learn what tools are effective for treating patients who must return to their work responsibilities right away, which is the case of most working patients. By reducing pain levels in the short-term, we can improve work performance in a time-efficient manner while also working towards long-term goals for patients. The results of this capstone demonstrated that we do have interventions that can accomplish this goal. Despite the limited quality of evidence for some of the interventions, each of dry needling, dry cupping, pain neuroscience education (PNE), low-level laser therapy (LLLT), and transcutaneous electrical neurostimulation (TENS) demonstrate immediate improvements in pain levels. Specifically, dry needling, dry cupping, and LLT demonstrated greater improvements in pain reduction in the immediate time frame and over a period of weeks compared to sham or control interventions, while TENS therapy and PNE reduced pain levels, but not to a greater degree than placebo interventions or lacked comparison interventions.<sup>2-10</sup> For specifics on the pain interventions examined, see the attached evidence table on the Capstone website.

Among working adults, up to almost 25% of Americans cited time off work, transportation or travel time to appointments, or issues with clinic hours as barriers to receiving healthcare.<sup>11</sup> This means that a large number of employees are living with pain that

impacts their work, but are unable to get treatment for this pain. This leads to the rise in absenteeism, which is the productivity cost in workers who continue to come to work with pain rather than miss time. This in turn leads to millions, if not billions, of dollars lost as an economic consequence to the lost productivity caused by pain.<sup>12,13</sup> To combat this, different business concepts are needed to overcome barriers and administer effective interventions for pain. As part of this Capstone project, we examined the feasibility of a mobile physical therapy business that could address these issues. For this study, I explored the market need, mobile health clinic model benefits and barriers, and local competitor analysis. My partner, Chris Adamson, examined user profile, reimbursement models, potential billing options, and initial contact for companies and patients through email and surveys to initiate this potential business. Following this feasibility study, this potential business could utilize the earlier described pain interventions, along with those explored by Chris Adamson, to intervene on workplace pain in a more efficient time manner. This intervention would not only bring pain relief to employees, this would also improve work productivity and provide cost-benefits to employers, making an innovative opportunity for a non-traditional physical therapy business to work directly with businesses, instead of patients, to solve multiple issues.

## References

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