

Manual Therapy for Voice and Swallowing

Manual Therapy for Voice and Swallowing

A Person-Centered Approach

Walt Fritz PT

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PUBLISHING

Compton Publishing

This edition first published 2023 © 2023 by Compton Publishing.

Editorial offices: 35 East Street, Braunton, EX33 2EA, UK

Web: www.comptonpublishing.co.uk

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ISBN 978-1-909082-70-0

A catalogue record for this book is available from the British Library.

Cover design: Matt Oakley, Mojo Design Studio. www.mojostudio.co.uk

Set in Adobe Caslon and Myriad by Regent Typesetting

*To my wife Karen, who continually encourages me
to follow my dreams and helps me live them.
Thank you, my dear.*

Contents

Acknowledgements	vii
List of acronyms used	ix
Introduction	1
Part One: Theoretical Concerns	
1 A purpose for this book	7
2 Crossing a bridge	19
3 Histories, deconstructions and problems	24
4 Inconsistencies in the research	49
5 Building a model	56
6 The patient-centered model	75
Part Two: Practical Applications	
7 Practical applications	103
8 How to begin: Evaluation and documentation	108
9 The process: Verbal communication and dialogue	131
Part Three: Therapeutic Applications	
10 Process application roadmap	141
11 Laryngeal region	147
12 Submental/sublingual region	166
13 Tongue	172

14	Scar and radiation fibrosis	182
15	Buccal and lip region	189
16	The jaw	196
17	The neck	212
18	Anterior cervical and retrolaryngeal region	232
19	Shoulder and upper chest region	246
20	The thorax	259
21	The pelvis	273
22	Self-stretching	280
23	The edge of awareness. Patient-centered exercise	286
24	Epilogue	290
	About the Author	391
	Index	393

Acknowledgements

A few acknowledgements are needed. Jan Potter Reed, SLP, gave me my first opportunity to teach manual therapy (MT) specifically to speech-language pathologists. From that opportunity and her mentorship from that day, I have gratitude. Barbara Wilson Arboleda, SLP, helped to structure my ideas, helping me frame my previous, more general approach to teaching MT that would be acceptable for the interests of SLPs in the United States. Not an easy task, but Barbara helped and continues to do so throughout the process. I wish to thank the thousands of clinicians and professionals who have taken my Foundations in Manual Therapy: Voice and Swallowing Disorders seminar. From each of you, at each seminar presented, I have learned the context from which to apply this work properly. I am but a bridge builder, exposing you to what I have to offer, allowing you to cross that bridge to apply these principles to

your patients and clients from your unique perspective. Although unnamed, my patients have taught me immensely as, through them, I learned a means of expression presented here today.

Regarding the opening lines from Ann Rice, that viewpoint may be cynical and counterintuitive, as aren't we all constantly seeking knowledge? However, Rice's passage represents my evolution in the manual therapy world. Through recounting that journey, and the lessons learned, I plan on taking you down a rabbit hole and out the other side. We all need to err to learn. My errors were egregious, but my learning continues.

The more I learn, the less of which I am sure.

Walt Fritz, PT
October 2022

List of acronyms used

ANS	Autonomic nervous system	MTDg	Muscle tension dysphagia
APTA	American Physical Therapy Association	NDT	Neurodynamic technique
BPS	Biopsychosocial model	OT	Occupational therapy/therapist
CDM	Clinician-as-the-decider model	PMT	Postural manual therapy
CE	Continuing education	PPI	Proton pump inhibitor
CNS	Central nervous system	PT	Physical therapy/therapist
COPD	Chronic obstructive pulmonary disease	RCT	Random controlled test
CST	Craniosacral therapy	RMT	Registered massage therapist
CVA	Cerebrovascular accident/Stroke	ROM	Range of motion
DNM	DermoNeuroModulating	SCM	Sternocleidomastoid muscle
EAT-10	Eating Assessment Tool	SDM	Shared decision-making
EBP	Evidence-based practice	SLP	Speech-language pathologist
fMRI	Functional MRI	SLT	Speech & language therapist
GERD	Gastroesophageal reflux disease	SOP	Scope of practice
HEP	Home exercise program	SS	SomaSimple.com
LESP	Lower esophageal sphincter pressure	STG	Short-term goal
LMT	Laryngeal manual therapy	TMD	Temporomandibular joint disorder
MCT	Manual circumlaryngeal treatment	TMJ	Temporomandibular joint
MFR	Myofascial release	TENS	Transcutaneous electrical nerve stimulation
MRI	Magnetic resonance imaging	TP	Trigger point
MSK	Musculoskeletal	TPt	Trigger point therapy
MT	Manual therapy	UESP	Upper esophageal sphincter pressure
MTD	Muscle tension dysphonia		

“Very few beings really seek knowledge in this world. Mortal or immortal, few really ask. On the contrary, they try to wring from the unknown the answers they have already shaped in their own minds – justifications, confirmations, forms of consolation without which they can’t go on. To really ask is to open the door to the whirlwind. The answer may annihilate the question and the questioner.”

Anne Rice
The Vampire Lestat



Introduction

The blind men and the elephant

In this ancient parable, a group of blind men comes across an elephant, an animal they've never encountered. To understand it better, each explores a different part of the animal, with each man's perspective of that elephant limited to the area he'd investigated. Each came away with widely differing views, as their viewpoint was narrowed to the site each touched. When trying to describe the animal to each other, the group came to blows, each man feeling that the other was being dishonest. Variations on the parable have the men coming together, each understanding that they'd only had access to part of the truth, collaborating to "see the entire animal for what it was." The parable implies that what one perceives is part truth but never entirely true. Truth is relative.

I propose that this parable builds a perspective on the current world of manual therapy, where each of us becomes blinded, based on how we were taught perceptions of truth. For those who see dysfunction as a sole result of muscle tension, little else matters save for this simple concept, and problems and diagnoses become defined by it. They tend to feel, see, and hear concerns from a tension-based perspective. Fascial-trained therapists perceive the body as riddled with fascial (connective tissue) restrictions, all composing the cause for problems. Trigger point therapists' views are constrained by the trigger point concept, as are muscle-based clinicians who see us as a container full of knots. In contrast, those viewing pain and dysfunction as a result of nerve tunnel syndromes have become trapped in their tunnels of narrowed views.

In the original parable, conversation, coupled with comparing each other's perspectives, was given as the solution to the blind men's dilemma. Through it, they understood that there was more to the elephant than that to which they were exposed. The fighting among the men directly parallels the disagreements that arise with regularity when clinicians speak of the problems they see in the manual therapy world. Training and experience often limit our vision to see the world as simply a sum of our perspective, with a narrowing lens of perspective as we train further and become experts. Lessons learned from the parable in modern times might be to understand that while our views hold

singular truth, as the applications we've been taught have value, the greater truth may lie in combining other's stories, each adding perspective. In my professional journey thus far, I've yet to find a single model or approach as being totally accurate, although some seem, at least to me, less wrong. I've become a curator of stories, both my patients' and other clinicians' stories, and through them, I am slowly building a truth. If we stop collecting, observing, and attempting to understand another's perspective, our world narrows and we become caught in a tunnel of darkness.

What follows is an invitation to open our eyes to the vastness of the person in front of us.

Thanks so much for joining me on this journey, one that may be different from what you expect. Manual therapy (MT) has a long history, although its inclusion in the treatment of voice and swallowing disorders is more recent. We will be unpacking and updating this short history to fit into the current climate of evidence-based care. However, as in the parable above, such an approach should be more than just what is wrong with the tissues and what we do to change them. We are interacting not with tissues or pathologies, but with a human being. Somehow, MT, as characterized in various fields, has become misrepresented as solely a tissue-based model of impact. My goal in writing this book is to update those beliefs. This book targets the interests and patient populations of the speech-language pathologist/therapist (SLP/SLT), voice teacher and coach, physical therapists (physiotherapists in most parts of the world beyond the United States), massage therapists, occupational therapists, osteopaths, orofacial myofunctional clinicians, and physicians. It may also interest those with interest in novel ways to remediate voice and swallowing disorders, oral motor issues, tongue, jaw, and mouth problems, breathing difficulties, and a wide range of head, neck, and upper torso-related movement and pain-related disorders. Those with a

broader interest in manual therapy will find utility in the perspectives presented throughout this text. I am not presenting one single style of soft-tissue intervention but rather, broader concepts that can be generalized across the spectrum of manual therapies and non-touch-based interventions, presented as an evolution from traditional paternalistic styles of MT into a near equal sharing of power between the clinician and patient.

By briefly exploring the history of MT and the evidence supporting its traditional usage, we'll discuss possible limitations of such historical understandings and propose changes to how the impacts are explained. In contrast to conventional MT models that premise their explanations on specific, although varying, anatomy, the approach taken throughout this book allows for uncertainty and presents common denominators that occur across the spectrum of intervention styles. Through a comprehensive assessment of these often-conflicting narratives, we will emerge on the other side with an understanding of how anatomy matters from a broader perspective. Replacing the many tissue-specific anatomical models will be a multifactorial one that sees the plausibility of a range of impactors, from peripheral to central, including behavioral and contextual factors. To further distance

itself from current interventions, this model is framed from the perspective of the patient, or at a minimum, one that negotiates a partnership between clinician and patient, rather than relying on the perceived expertise of the clinician.

This book is not intended as a complete how-to guide to understanding the body, including voice, swallowing, breathing, and more. Nor is it an in-depth look at the anatomy of the various regions explored. Instead, my goal is to introduce an updated mechanism of action to explain MT effects and then turn to intervention. If you are currently using MT in your practice, the material presented here may challenge what you've been taught and utilized successfully. I will propose stepping back from your role as the expert and entering each session as an equal to your

patient. Power sharing is the concept behind shared decision-making (SDM), an essential aspect of my work with my patients and how I teach this work to clinicians. For those new to implementing MT, I hope to help you move into this work with little regard for the controversies alluded to above, seeing no other model but one with each person on an equal footing. This text will include evaluation guidelines, conditions that lend themselves to MT, specific and in-depth interventions, and feedback from your peers around the world on how they have applied the work and concepts presented to them through my in-person workshops.

Why is there a need for a book like this? If there are sound underpinnings to the approach I am proposing, why hasn't it been written about before? Some

As a clinician and an educator, I owe honesty and transparency to each person with whom I interact. To provide them the best available evidence, I must also stay updated, building upon the past. In applying this rubric to the use of MT in voice and swallowing, to quote the title of a recent paper, "The evolution of manual therapy education: what are we waiting for?" (Kolb et al., 2020). It is time for an update. Advancing the understanding of a more thorough and complex mechanism of action, which allows multivariant factors and a range of uncertainty, will improve transparency from the clinician and the evidence we use to define our interventions. While an admission of uncertainty might seem to be an admission of a lack of knowledge, to others, it can be seen as having a fuller understanding of the totality of the human condition.

As a massage therapy educator and practitioner, Walt's approach has inspired me to think of us not as body workers, but body linguists. We are not simply chiseling away at a mound of flesh before us, reshaping it into our own singular mind's image of healing and wholeness. We are speaking to our clients using a range of both verbal and sensory language to most efficiently understand what it needs to tell us, perhaps more likely to tell itself. I have experienced the best outcomes

regardless of protocol by using these fundamentals in both practice and education.

When we describe "holistic" practices, the basis of this approach is a true holistic application for both patient AND practitioner. It challenges the patient to participate in a sort of self-actualization in their own improved experience, while challenging the practitioner to shed their biases, even their own coping mechanisms with society, in order to encourage a unique and constantly evolving experience in which change can manifest. It might be experienced as merely an improved perception by the client rather than any observable physical alteration, while still ending in a markedly positive physical outcome.

This isn't magic or even a spiritual accomplishment ... it's intrinsic to each and every one of us. We aren't required to have the answer to a body's mystery ... we only need to be able to translate its message in a shared environment to experience and observe improvement around pain.

Carmel Andrews, LMT
Maui Academy of Healing Arts, Paia, Hawaii,
USA

educators and researchers have done so in smaller pieces and from different perspectives. Many in the continuing education field approach manual therapy as a business, and businesses tend to promote their self-interests. I entered this business young, naïve, and lacking in critical thinking abilities. I am a lot older, a bit wiser, and far more cynical and skeptical of the claims made by peers in my field. There is a need to combine the good that exists in this field, yet also evolve. Although slow to take hold, much is known about multifactorial MT influences and effects in the general MT field that, for the most part, have failed to emerge in the voice and swallowing field.

Learning manual therapy from a book

Is it possible to become an effective MT clinician from what is presented in this book? Had you asked me this question a decade ago, I would have scoffed at such a proposition. I had previously believed that MT must be taught live, in-person, with intensive one-on-one tutelage. Why did I feel this way? This was the way I was taught, and I saw no other path. MT texts have always presented theory and application, but these were seen, at least by me, as supplemental material to in-person training. My mind was closed to alternate learning strategies. But in the early 2010s, I was tasked with creating course content through an online learning massage education platform and saw that distance learning was not only possible but practical. Later I started my online content that is now available through my website and includes some of the content presented here. The feedback from clinicians whose first exposure to MT were through those online courses gave reports of genuine success. I see the same possibilities in this book. Might some

feel more comfortable following up with supplemental online or live training after working through this book? Absolutely, but not all. Following the suggestions for lighter pressures and continual patient feedback as a driver of the intervention, I believe that you can and will find success.

Partnering with a patient is like learning about a person in any new relationship. Don't expect to be an expert immediately, as we know more about the other person over time. This applies not only to personal relationships but to professional ones as well. I'm a strong advocate for beginning all the work presented in this book with a willing partner, personal or professional, who can fully feel and express. Your partner need not be another health or professionally knowledgeable person. Grab anyone willing. One might think that having such a fully sensate partner simplifies the process, but it may not. As discussed throughout the earlier chapters of this book, helping someone to understand that you are not the expert who implicitly knows what must be done makes for a challenge in communication. Practice with willing partners and then expand to willing patients. Over time your confidence will grow enough to expand to your more challenging patients. My online or live classes will always be an option, but don't make the application of this work contingent on either of those future options. Begin now.

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**Part One:
theoretical
concerns**

1



A purpose for this book

Strapped to a chair, head held, restrained in a forward-looking position, facing an inner wall of a cave, you sit and watch. Your world is what you see on that cave wall, and you watch closely for any stimulation to your otherwise dreadful day. Images onto that wall are cast by a fire lit behind you, creating the impression of activity, but the activity is made by the small movements that you and the small group of others seated beside you, all chained in place and in similar straights. Your world view is a small slice of that world, but it is all that you know.

This dismal perspective is provided to us in Plato's *Republic*. In it, Plato describes the Allegory of the Cave. Plato's purpose in drawing this allegory is to

describe what is missing from the lives of these people and how the philosopher, freed from the chains, can see the world in its entirety. It is the philosopher's role to see the world from the larger sense, to see and make sense of higher forms of reality. The chained are unable to see except what is selected for them to view. While the Allegory of the Cave encompasses other concepts, the lack of a full worldview aptly describes much of my career and how manual therapy (MT) was (and still is) traditionally taught.

In that traditional model, clinicians are exposed to a narrow set of perspectives on the cause of problems and how MT remediation affects those causes.

Confounding these narrowed views is that clinicians typically find success with the recipes set out by educators, reinforcing their belief in the accuracy of the claims. Unlike Plato's characters, we, as learners, are typically not chained to beliefs, though many, blinded to other views by the lure of their chosen model, will act like no other intervention style matters. Acting only in accordance with one set of treatment directives causes a narrowing of perspective. Taught in such silo-based ways, all problems are seen only from the perspective of what was taught, with little regard or understanding that others see things differently. We become chained to our training, seeing only what is felt to be important and repeating that information back to others as fact.

Plato's allegory is analogous to my MT beginnings and has relevance to much of what will be presented throughout this book.

I have been a physical therapist (PT) since 1985 and own a physical therapy clinic in Upstate New York (USA), where I implement a manual therapy-based intervention style, one coupled with a strong movement component. My MT journey is a long one and is one that has been filled with wonderful adventures, as well as trials and tribulations, many of which will unfold here. While I treat patients in my clinic with head-to-toe pain disorders and movement dysfunctions, I also teach continuing education to health and performance professionals internationally. This book focuses on my teachings, though deeply informed and influenced by my patient experiences.

I do not consider myself an expert in voice and swallowing disorders, as those diagnoses are not the only issues that I work with. Nor is my education centered on those content areas. I am, however, considered to be a content expert in manual therapy and education, specifically MT, from a patient-centered perspective. Each of us chooses our area of interest and, thereby, expertise. If I have one talent, it is in building bridges. Through my continuing education seminars, I try to pass information across that bridge to others, allowing them to apply the principles that I teach through their own perspective and clinical reasoning. Over the past many years, that education

bridge has targeted the patient needs of the SLP and related professionals. Since I began specializing in providing continuing education training to SLPs in 2013, my direction of interest has changed from educating all types of clinicians and now centers primarily on my role in voice and swallowing disorders. In my physical therapy practice, I see patients with voice, swallowing, and related disorders, though they are only a part of the head-to-toe diagnoses that filter into my small clinic. I am a lifelong learner, and that includes what I am presenting and proposing in this book. A bit of my history might be able to better frame these previous statements.

As an undergrad at the University at Buffalo (NY), I followed a pattern set forth in high school, only doing the minimum coursework work necessary. Since the workload in high school seemed unchallenging, I needed to exert little effort to achieve above-average grades. However, upon entering college, such a work ethic was insufficient, and after one year of abysmal grades resulting from little effort, I was asked to leave. "Underachieving" is how I was categorized. A year off, working in the real world while earning barely over minimum wage, and trying to support myself was a sufficient motivator, and after sufficient pleading and promising, I was allowed to return to school. Due to that wasted first year, plus another to retake all the failed courses, it took me a total of seven years to complete a BS degree in physical therapy, having gathered a second bachelor's degree in Community Mental Health (BA) along the way. In the United States in 1985, physical therapy was a bachelor's degree profession, with no master's degree yet available, and far removed from the now standard Doctor of Physical Therapy degree. That BS program offered much less exposure to research methods and higher standards that tends to build critical thinking, which came to be a serious detriment throughout much of my career.

I've worked in a wide range of settings throughout my life as a PT, beginning in a hospital setting, where we saw both inpatients and outpatients for general PT needs, followed by pediatrics, both early intervention, and school-based. I worked with developmentally and

physically disabled children and adults, a time of my career that I enjoyed immensely. I then spent nearly a decade working in home care, providing PT to patients in and around my rather rural part of Upstate New York. Though I began seeing a few private paying patients out of a home office in the mid-1990s, it was not until 2000 that I opened a small private practice. That practice, coupled with skills gained through continuing education, allowed me to specialize in the use of myofascial release (MFR) for patients dealing with pain and other sorts of movement problems. Any contact with voice and swallowing issues was only tangential, as these were seen as secondary conditions and often mentioned by patients as having little to no connection to their primary problems. I'll be explaining more about MFR and other branded forms of MT interventions (modalities) later.

At university, we were superficially exposed to a range of intervention strategies. As the PT profession evolved from a bachelor's-level education into a doctoral one, the expanded curriculum allowed greater time to train clinicians in all aspects of patient care. However, in the brief time allotted to us at the University of Buffalo PT program, little time was provided to dive deep into the specifics of patient care. Manual therapies of all sorts were part of our curriculum, including massage. After only 2–3 afternoon labs, we were viewed as being sufficiently skilled to use massage techniques with our patients. I fondly remember my professor, a British Ph.D. physiotherapist who enthusiastically educated us in petrissage (superficial warm-up strokes) and effleurage (deeper soft-tissue strokes), which are all voiced from a regal (to me) sounding British accent. Explanations for massage's effects seemed valid and were most probably based on the available evidence of those dark days of the early to mid-1980s. Bluntly, this minimal training left us woefully ill-prepared to use such work on actual patients, but this would also be the case with the various manual therapy interventions taught to us while in school, as well as nearly every other type of care we learned. Also taught was training in soft tissue mobilization, joint mobilization, and joint manipulation (peripheral and

spinal), other forms of MT. These treatments are techniques with varying degrees of aggressiveness, typically directed toward the concepts of restoring normal movement to spinal and extremity joints. Spinal palpation for determining proper alignment and motion faults was taught as an objective assessment, though it is now seen as having poor reliability and validity. Today, such assessment findings are not seen as dependably accurate from clinician to clinician, and those models of assessment and treatment are not as relevant as once practiced. However, in the early to middle 1980s, such evidence had not come to the mainstream, and we thought ourselves ever so clever and precise. We were taught to mobilize or manipulate the spine (cracking the back), though as I think back, I realize that a good sneeze would generate more power than any of us were brave enough to exert on each other's spines. In short, our abbreviated education was intended to be the minimum necessary to enter the workforce. On-the-job mentoring from more seasoned PTs was the model, in much the way an apprenticeship served many skilled trades. Continuing education (CE) existed to assure that learning continued and evidence of completion of a minimum number of hours of CE was required (and still is) for tri-annual professional license renewal.

While in PT school, my fellow students and I received an ever-so-brief exposure to myofascial release (MFR) by an adjunct professor who had prior training in that model. I would not call that exposure sufficient to make any of us confident to try it in our clinical rotations, but that professor planted a small acorn that eventually, at least to me, grew into a mighty oak.

My first job after graduation was at a small general hospital in Upstate New York. PT back then consisted of plenty of hot packs and ice applied for various reasons, along with many interventions based on various forms of electrical and magnetic stimulation. The hot packs were seen as necessary to prepare the muscles for treatments, while the electric and magnetic modalities were used for various effects ranging from pain relief, building muscle strength, and reducing muscle spasm/tension. At that hospital, we also

used manual therapies, primarily massage and spinal manipulation. I still recall the day when I discussed a specific patient with my supervisor. The patient was a high school athlete with some upper back/lower neck-type pain. After reviewing my findings with my supervisor, he taught me how to do a basic standing mobilization/manipulation of the cervical/thoracic junction (where the neck meets the upper back). It entailed having the patient stand with their hands interlocked behind their lower neck. I was to stand behind my patient and wind my hands through their arms and over the top of my patient's hands. I was then instructed to lean back and ever so gently lift the patient to get the spine to "free up" or mobilize. The maneuver is often accompanied by a very satisfying, though potentially scary-sounding, crack. That crack was said to be made by the spine realigning and is a common form of intervention used up and down the spine by PTs, chiropractors, and osteopaths. My supervisor, a man much larger and taller than me, had no problem lifting me nearly off my feet and getting some satisfying cracks out of me. I'd seen this move done before, though mostly at alcohol-fueled college parties, and I survived the ordeal quite well. It was even possible that the crack felt quite good. Properly mentored, my supervisor then tasked me with performing this feat on my teenage patient, which I dutifully did, or at least tried to do. One problem was that this teenager was taller than I was, and this discrepancy made the maneuver awkward. Unweighting him required me to bend myself backward a LOT, and it seemed that I needed to use a great deal of force to get anything to pop. My patient seemed not to respond in an expected manner and seemed in quite a lot of pain from the maneuver. Fumbling to recover my pride, I vaguely remembered telling him that this was a rather common response (it was not) and immediately put some ice on the neck to calm things down (it did not). Being thankful that PTs are required to carry malpractice insurance, I herded him to the door after the ice seemed to slightly take the edge off his pain. It was less than an hour later that his primary care physician came storming into our PT department, wanting to know who was respon-

sible for this egregious act (those were the days when primary care physicians visited their patients in the hospital). Mr. New Therapist (me) raised his hand and got a thorough (and well-deserved) chewing out by the physician. The teenage athlete returned to PT, seen now by my superior, and suffered no long-term ill effects from my clumsy first attempts. It was a long time before I ever tried that maneuver again, though I eventually did so, and, over time, I got more skilled and comfortable using that intervention. My patients often found it helpful, though I now have a completely different viewpoint on what was accomplished via that maneuver, one beyond "re-aligning the spine."

On-the-job training is just that; learning new skills by those who have more experience applying them. The middle 1980s were before the time when evidence-based practice (EBP) became the norm in physical therapy and other fields, and much of the "art" of physical therapy, what works, was passed down from one generation to the next. "What works" is now looked at from a different perspective. Today, an intervention *working*, or having an effect, is not enough. Most professions require research in the form of well-done studies to prove that the intervention is effective in most cases with little chance of harm. While there are many different types of studies, many of the ones done on MT would be considered *outcome-based* studies, which are one necessary aspect of EBP. But also necessary are accepted *mechanism of action* studies. A study may show that an intervention was helpful, but how and why did that happen? From what mechanisms? Are the stated or historically repeated statements regarding causation accurate? Such answers are often not found at the surface and require much more in-depth research and reflection. We will speak later in the book about outcome-based studies vs. mechanism of action studies.

As I wrote the previous passage, I reflected on the many years (decades?) that have passed since I found it necessary to even think about using the mobilization/manipulation maneuver described above. Today, I seldom use that sort of force in my work, though it would be improper to say that any forceful maneuver is wrong or not necessary. Many patients find great

relief from manipulations, be they joint or soft tissue, performed at the hands of a chiropractor, osteopath, PT, or massage therapist, and many of those clinicians see that level of force necessary to create change. My work has taken me in different directions, one where such moves are not part of the language. If I was locked into a belief system and model that taught that aggressive pressures were needed to create change and that by applying that narrative, I met with success, I'd be hesitant to change no matter how compelling the evidence to the contrary. But when one broadens their perspective and learns different information, it becomes apparent that nearly all sorts of interventions style have success. Fortunately, I did not injure that teen, but that early example was one of many drivers that propelled me into the model presented here.

Over the first few years of practice, I sampled a variety of continuing education (CE) courses, mainly to maintain the credentials necessary to retain my professional licensure. I'd yet to develop a passion for my profession; it was simply a job. While working at an early intervention center in the early 1990s, a PT by the name of Thomas was hired. Thomas had done extensive training in MFR and craniosacral therapy (CST) in the late 1980s. He had a therapeutic presence that sticks with me to this day. He used his hands with those children in ways that impressed me, so much so that I decided to attend some CE classes in MFR and CST as he had suggested. Watching him work with a colicky baby, "releasing" their diaphragm, and watching the baby immediately calm was strong medicine to my eyes. Having one of those colicky babies as my youngest daughter, who was a chronically cranky baby until a short session with Thomas, was also powerful. On examination of her, Thomas felt that my daughter had tightness in her diaphragm region that was causing her gastric distress. Such tissue-based beliefs were the norm in many schools of manual therapy (and still are, to some extent). From the one short session Thomas spent with my then infant daughter, her change was obvious, having less apparent colic and being able to sleep more soundly. In hindsight, I now recognize

that there could have been many factors taking place in that interaction, though the problem and impact were said to be tissue-based. However, though I now look at such claims with a skeptical eye, those early experiences were what drove me to learn more about these models.

In today's physical therapy environment, manual therapy is currently viewed by many as a low-value intervention, with exercise and patient education seen as the preferred, higher-value interventions for impacting pain and dysfunction. Manual therapy is frequently stated to be less efficacious for building self-efficacy and self-management, while exercise and education are said to build on both of those qualities. MT is seen as an expensive pampering, doing little to create true change. While there are other considerations that go into MT's low esteem, any intervention has the potential to strip away self-reliance and foster dependency if it is presented in a manner that makes the clinician seem indispensable. While such biases do not seem to transfer over to the SLP world and other health professions to the degree it does in physical therapy, it is worth a brief look at this bias, as it puts into context much of what is to come.

Lin *et al.* (2020), in a systematic review of best practice care for musculoskeletal pain, recommend the use of manual therapy only as an adjunct to other evidence-based treatment. This aligns with other more recent papers, with some vocal critics on social media even suggesting that MT has no place in an EBP world. It is seen as a passive intervention that places the patient in a position of dependency, dependency as they become reliant on the clinician for improvement. Though hotly debated, many studies conclude that MT provides only short-term pain relief, at least when it is properly isolated. If short-term pain relief is the only benefit, as critics claim, then why bother with it at all? Exercise, it is stated, as well as education, have at least the same if not greater effect, but there are additional benefits to be had from exercising. Exercise is viewed as empowering, as once a patient learns an exercise that helps with pain or dysfunction, they can dust it off and perform it again on their own if the issue returns. These views have been passed along now

to a generation of new physical therapists so that the view has become seen as fact. This, despite no published study showing that MT fosters dependency and exercise alone fosters self-reliance. In my practice, as well as in the courses I teach, I see the work done via MT as a means to help the patient regain function. Short-term pain relief can be coupled with functional movement and education-based modeling to promote lasting effects. MT should always be linked with other interventions and should not be seen as a standalone intervention. If MT helps a patient swallow with less difficulty, this new freedom allows them to move on with other interventions supplied by the clinician, blending well into Lin's suggestions. If they can now swallow with less of a problem after having had MT, this has the potential to alter their own body map and see themselves as having less need to fear swallowing. Such multiple-level impacts are how all interventions work, not just MT. We will be discussing these concepts in greater detail throughout the book. I see any intervention as potentially dependency-building if the clinician is not acting ethically. Building fear (pathologizing) is all too easy for clinicians. I also see any intervention as having the potential to build self-efficacy. These arguments will, no doubt, continue in the PT profession, but with due caution, they can be worked through. As MT has also entered into the SLP field, such controversies need to be made apparent.

Prior to the integration of EBP into the physical therapy profession, critical oversight over the exact types of interventions that should be applied in specific conditions was less rigorous, giving clinicians freer rein in treatment choices. Popular interventions, such as many forms of electrical therapies, hot/cold application, lasers, TENS (transcutaneous electrical nerve stimulation), and other modalities (many of which I was taught to use in PT school) have all but disappeared from the PT's treatment repertoire as they failed to pass the test of EBP. Interestingly, dry needling is surging, though the evidence is mixed. Exercise, education, and, to a lesser extent, the various forms of manual therapy are the commonly used tools for remediating pain and improving movement

and function. Prior to EBP, the choice of modality tended to be made by the clinician, based on their own beliefs, education, experiences, clinic trends, etc., with no overseeing body making recommendations as to what qualifies as best practice. By the late 1980s and early 1990s, most health professions were transitioning into EBP standards, with more stringent guidelines on allowable interventions for specific conditions. Such standards exist across the spectrum of health professionals, including the speech-language pathology community.

Having witnessed its apparent influence and, at the urging of Thomas, the PT from my early intervention days, in 1992, I undertook a weekend MFR training with John Barnes, PT, a US-based educator. Having been at that time a well-publicized educator in the CE field for many years, Barnes told the story that during the later 1980s and early 1990s, he was targeted by the American Physical Therapy Association (APTA) for extinction through a series of monthly articles in trade publications. The APTA saw Barnes as peddling pseudoscience and making unsubstantiated claims as to the efficacy of MFR. Barnes marketed heavily to PTs in those days, and, despite reading many of those negative articles from the APTA, I succumbed to Barnes' advertisements, as well as a bit of arm twisting from my PT colleague and took one of Barnes' workshops. My decision was aided by my employer, who paid for the seminar, so it seemed that I had little to lose. After the conclusion of that 3-day class, I wanted more. Barnes was a charismatic teacher and knew a thing or two about how to draw in his audience. Full of bluster and hyperbole, Barnes presented his MFR seminars in a manner that made it hard to look away. His claims throughout the course (and subsequent others) sounded legitimate, but little opportunity was offered for critical questioning. I recall that a few therapists attending my early seminars challenged his statements, but such behaviors were not seen in a kind light. These are hindsight observations; I was blind to them at the time, and I own that gullibility. Over the next five years, I took nearly every seminar Barnes had to offer and began working for him on a very part-time basis,

traveling around the country as a teaching assistant at some of his seminars. Through those seminars, first as a student and then as an instructor, I became able to help people with their pain and movement problems in ways I had not learned at university or in my few years as a practicing PT. The work I learned tended toward the gentle side, with little fear of repeating my hospital fiasco on that teenage athlete. Most patients really enjoyed the work, as well as the story that accompanied the work. It was not until many years later that I came to realize that that story was a key factor in drawing them in and, possibly, the source of some of its efficacy. To have spoken these views out loud at an MFR seminar would be akin to blasphemy. The approach I learned in those MFR seminars targeted the importance of restrictions on what was said to be an underappreciated and forgotten tissue; the fascia (connective tissue). In the MFR world, the word *restriction* is, at best, a metaphoric representation of a limitation in movement. It was allowed to exist as a reality, an anatomical and physiological process that just so happened to be undiscovered by modern medicine. "Fascial restrictions are undetectable by blood tests and imaging studies. It is only the skilled MFR therapist who can detect and treat myofascial restrictions." Close approximations of this statement were repeated frequently at every seminar. Those lacking critical thinking skills (me) nodded their heads in agreement and awe, wondering how medicine could have missed such important stuff. Those who repeatedly questioned authority in those seminars were seldom allowed to take another seminar. There was a decent amount of supposed scientific evidence presented in those seminars, and given the success I was having using the techniques, as well as the way the work was presented, I had little reason to question these references. My naïveté dissuaded me from digging into a better understanding of the presented research. Even if I did find evidence that conflicted with those fascia theories, I truly did not have the evidence-based chops to argue them properly.

Though certainly not spoken of in these terms, in MFR seminars, and other similar seminars that I attended during the 1990s (CST and Zero Balancing,

another form of light touch manual therapy), a repeating theme was used throughout was the *post hoc* fallacy, or *post hoc ergo propter hoc*: *Since one event followed another, that first event must have caused the second.* One oft-described example of the *post hoc* fallacy is that since the rooster crows each morning and the sun comes up each morning, the rooster must cause the sun to come up. In MT terms, since the problem was explained in fascial terms, and the problem was helped when we applied MFR treatment, the conclusion was drawn that MFR helped fascial problems. My inability to see the problematic reasoning in that reasoning was my undoing. Of note is that the *post hoc* fallacy applies in the voice and swallowing world when it comes to manipulating the neck to reduce high levels of muscle tension. Voice problems are often said to be influenced by high muscle tension. Manual circumlaryngeal treatment (MCT) is said to directly target those muscles in tension, and when it is performed, the voice improves. Therefore, since MCT helped the voice, then excess muscle tension must have been the cause. While some authors are moving on from those simplistic concepts, research is currently being published that falls back on these *post hoc* fallacy-laden concepts. Disorders, such as muscle tension dysphonia or muscle tension dysphagia, are multifactorial, and while they may include local tissue-based (biological) factors, neurological involvement, as well as psychosocial factors, are now seen as common contributors to causation. Simplifying a problem and its solution as being due to a single cause, be it fascial restrictions or muscle tension, dumbs down the complexities of human conditions.

Admittedly, I fell deep into the MFR rabbit hole for many years. I rode my own wave of new-age enlightenment, eschewing cynics and skeptics who viewed me as uninformed, seeing surgery and medication as poor substitutes for those who lack access to true causation (fascial problems). In general, I was annoying. Helpful to my patients but annoying. Every problem that a patient came into my clinic with got explained in fascial terms. Most patients just nodded when I went into my MFR explanations, not quite understanding what I was saying but willing to put up

with my blathering in hopes that I would help with their pain and movement problems and, later, voice, swallowing, and related issues.

While it is not the purpose of this book to prove or disprove MFR, nor any other intervention, sufficient evidence does not currently exist to prove that a) fascia can be damaged or altered in a manner described by MFR proponents to create functional problems, b) we can selectively impact fascia for treatment, to the exclusion of other tissue, as described in MFR models, or c) that fascia changes (releases) under the applied pressures therapists use. Problems seldom exist in the vacuum of a single tissue-based condition. What is said to be a muscle-based or scar tissue-based problem has many confounders, including behavioral perceptions, contextual factors, and neurological influences. Despite commonly held beliefs and claims, one cannot touch or directly and singularly impact a muscle, fascia, or the larynx from outside the body. You can only touch the skin.

To draw a parallel, manual therapy styles are quite like religions. Without diminishing the greater role religion plays, one goal of religion seems to be crafting a way to control and influence human behavior. Each of the major religions does so, as do all the sub-branches of each religion. No matter the title, religion serves to guide us along the path. But non-believers ascribe to paths to good behavior without the need for the rituals and oversight of religion. Individual MT schools and styles are little different. Each uses

a different vernacular to describe problems and solutions, but in the end, their goals align. Members of each individual religion or sub-religion would defend the uniqueness of their brand, as would members of individual MT groups who would see themselves as unique among a sea of lesser-than models. However, when viewed from the perspective of touch and desired outcome, little differentiates one from another.

My above-stated views regarding tissue-based perspectives place me in the minority, both in the voice and swallowing field as well as in the general manual therapy field. Questioning such views has made me a pariah in my field, but I am now comfortable in that role. While when it comes to MFR, I can attest to the

value of the manual input (stretching) that is called MFR (the outcome), it is the underlying explanation to which I take issue (the mechanism of action).

It might be universally accepted that muscles create human movement. When a functional activity is impaired, and palpation reveals clinician-perceived tightness, or an EMG indicates the sub-optimal function, it is simple logic to blame the local muscles for the dysfunction. When we apply the manual intervention to what we believe to be the muscles in distress and the person improves, the muscle-based views seem justified. While there are aspects of this narrative that are true, much follows along the previously described post hoc fallacy. Barring a pure muscular lesion, there will always be multiple aspects of motor dysfunction, primarily from the nervous system. Motor nerves feed muscle action, and sensory nerves provide all the necessary proprioceptive and other qualities needed to allow the muscle to exhibit precision. To see our intervention as a singular and selective impact on a muscle is hindered by our need to treat through the nerve-rich environment of the skin and the complexity of how the nervous system influences the muscles. *When we treat, we treat a person, not a tissue.*

Fascia, also known as connective tissue, surrounds and invests structures. It is said to give us our shape and serves a protective function. New evidence shows that in certain areas of the body, fascia has contractile properties and is invested with mechanoreceptors and nerve endings (Schleip, 2003). While interesting, most new evidence pertains to the anatomy and function of fascia, but very little shows evidence of our ability to alter it with the sort of hands-on stretching used in the clinic. In the MFR model, a plausible and accepted mechanism of action explanation is lacking; though, in fairness, most manual therapies lack such evidence. It is this evidence that I will be discussing later. In terms of required pressures applied, the amount of force needed to deform or change fascia is markedly higher than the force that is generated in even the most aggressive forms of MFR (Katake, 1961). How then can my gentle, sustained pressures alter fascia? That's where things get murky. I was

taught that our energy (a very ill-defined concept), combined with the energy field of our patient, is part of what causes the fascia to modify, stretch, or release. Myofascial release refers to the combination of muscle (myo) and fascial (connective tissue). The term *release* is a figure of speech or a metaphor that has been taken as fact by many in the manual therapy community. Be it in the general therapeutic community or the niche of the SLP domain, MFR is an ill-explained intervention, one that fits poorly in current EBP expectations.

When an input is provided to a patient, be it through the slow, static, dry stretching characteristic of MFR or through soft tissue manipulation, massage, trigger point work, or a range of other modalities, our patients typically relax. This relaxation is felt, or palpated, through the lens of the practitioner in a manner that aligns with how and what they were taught. MFR therapists feel the fascia release. Massage therapists feel muscle knots let go or melt. SLPs trained in manual circumlaryngeal treatment (MCT) feel muscle tension reduced. Despite our beliefs, we must never lose sight of the post hoc fallacy. Are educators who teach these metaphoric, post hoc fallacy-driven concepts completely wrong? Are clinicians who retell these stories to their patients committing professional malpractice? I do not believe so, at least not completely, but such tales certainly do not represent the best available evidence. Truthfully, there is no complete and totally correct explanation for what happens when we touch, engage, stretch, and manipulate, but there are many that are less wrong than others. If the evidence isn't there to support it, why keep retelling the story?

Most of us face a moment (or moments?) of reckoning in our lives, and those moments can propel us to change or crush us into defeat. In late 2005, while still deeply immersed in the MFR community, I took on the task of defending the reputation of my community through an online discussion on a forum website, SomaSimple.com (SS). SS was and still is a community of clinicians who take the long view that most therapeutic effects are neurologically driven, no matter what the perspective. Contrast these views

with the traditional biomechanical or tissue-based narratives of many groups, especially at that time. I had heard of a discussion SS was having, working to *deconstruct* the principles underpinning MFR, and I decided to join the forum to defend my chosen intervention. What followed were many months of back-and-forth discussions and arguments between the main protagonists and me. Information was presented and examined by both sides in support of their respective views. In hindsight, I did very little listening and reading of the many citations and references others supplied that were said to show how the principles of MFR were implausible. I supplied facts as I saw them or as originally presented to me, including the many outcome-based studies supporting the value of MFR. I was trapped, not seeing the difference between what I did with my hands (MFR) and the mechanism of action stated to explain MFR. This was long before I truly understood the meaning of a valid mechanism of action of a therapeutic intervention. When one of my presented "facts" was disputed by a SS member, I simply restated what I had been taught as if it were fact to defend fascial principles and MFR. The discussion dragged on for months and finally died out, with no one having changed the other's mind. I had not altered my views and had serious doubts that nervous system impacts played a role in my MFR outcomes. Such non-fascial views conflicted with what I was taught, and I held those teachings as fact. I remained certain that I was selecting and treating faulty fascia at the periphery, with no need to include the nervous system in the explanation. My limited critical thinking abilities caused me to be closed-minded, and I made a good number of foes from my tone and demeanor on that SS thread.

It was shortly after this debacle that a disagreement occurred with Barnes over what he viewed as allowable content on my relatively new website, which propelled me to part ways with him and his MFR community. I have gratitude to Barnes and others who introduced me to this line of work. From all of them, I learned much about how to use my hands, as well as how to teach others to do the same. However,

to learn how to better use my brain, I needed to move on and learn to think critically and independently. Many of my followers on social media believe that I left Barnes' group due to my beliefs drifting from Barnes', with the SS debate being the catalyst. As tempting a story as this is to tell, having lived the experience, I can say that this evolution did not occur until well after I left the MFR family. I left because I would not let another control my life and choices.

Soon thereafter, I began experimenting with the early stages of my own continuing education seminar brand, and I strongly featured the original MFR concepts I'd learned. Rather quickly, I began to explore the boundaries of my own understandings of fascia-related interventions, though I still lacked the understanding of the nuances between what people considered *fascial work* and singularly impacting fascia in treatment. But I wasn't alone. To this day, as I explore social media and interact with therapists at my live seminars, I hear references to what a fascial stretch feels like in the body (or is supposed to feel like), which leaves me confused. Described by some as a burning feeling, the origin of this interpretation is difficult to trace. I've asked people where that concept originated or where they came across that description and heard a varied range of responses. Essentially, the concepts were based on what was felt while receiving fascial work, which seems quite the vortex of confusion. My quest to quantify this feeling is akin to a dog chasing its tail. Humans are funny like that.

My early seminars were sporadic and small affairs, though I thoroughly enjoyed each opportunity. Finding one's voice takes time, and through these early classes, my voice began to emerge. Though I retained much of the fascia-first narrative in my early classes, there were aspects of the explanation that troubled me. Much of this doubt revolved around concepts relating to the pervasive emphasis on the necessity of emotional responses and recollections on the part of the patient. Though not worth elaborating on in any detail, the apparent contingency of "healing" on coming to grips with emotional pasts stored in fascial restrictions was, to me, a troubling perspective. It took longer for me to begin facing the problem of

the existence of such a range of interventions, each with its own explanatory narrative and the question, "could they all be correct?" After a bit of time, I began to look back at that SS conversation with a sense of curiosity. What if they were right? Enter gut-churning uncertainty.

Having ignored the evidence presented to me on SS as irrelevant, I now spent considerable time reading much of what had been presented to me during that earlier discussion, including the writings of Diane Jacobs, a physiotherapist from Saskatchewan, Canada. Jacobs is a proponent of a rather simple but elegant explanation for how manual therapy impacts function and pain. Her concept, called DermoNeuro-Modulating, or DNM for short, sees the potential for explaining manual therapy impacts through the basic neurology of the skin. When we engage in a method of manual therapy, we typically explain the problem and solution from the perspective of tissue or pathology deep within the body. Whether it is a fascial restriction, muscle spasm or knot, muscle weakness, joint subluxation, muscle tension, elevated larynx, and others, the tissue or pathology described is related in such a manner that the processes seem realistic. With such apparently credible presentations, clinicians can easily envision their ability to impact that structure or pathology from outside the body. But can we really select and impact that tissue or structure with no inclusion from other tissues? Possibly, but in my view, it is rather implausible. No model has all the answers, but are there models that are less wrong? Are there explanations that rely less on the blurring of medical realities or scientific facts? Given what is known about a person's ability to impact their own changes in behavior and action from within, might some of those factors come into play when MT is undertaken? While we will dive deeper into these concepts later, I ask you to consider this point:

When we touch, be it an MT session or any sort of touch-based cueing, even if we allow for the uncertain ability to selectively impact one structure or tissue, if our patient senses our touch, we've complicated things considerably. Simple perceptual

awareness of touch input blurs any claims of single tissue models by the need to include our patient's own ability to create change.

Unlike much of what occurs in the rather competitive manual therapy world, which is based on selling the superiority or exclusivity of their individual concepts (and the products and seminars that go along with those concepts), DNM is presented as an open-source way to explain MT engagement and its effects. DNM views our ability to closely contact skin-based cutaneous nerves for interaction as well as skin-based mechanoreceptors as a plausible basis for explaining MT's effects. It took me a while to wrap my head around the skin as the target and agent of my treatment, as when I placed my hands on my patient and engaged in a stretch, I was certain that I was engaging their fascia. Jacobs' view was that when we place our hands on a patient and stretch, we are stretching their skin. It would be difficult to argue that point. While we *may* be directly impacting the fascia, muscle tension, laryngeal elevation, scar tissue from surgery or radiation, etc., we *know* that we are engaging the skin in a stretch. In the one workshop that I took from Jacobs, my eyes opened to possibilities. It is difficult to let go of something that has given success for so many years but given the credibility issues MFR suffered from in the general medical community, as well as the confusing array of claims made by other models, it seemed a worthwhile journey. What I did not wish to replicate was simply jumping from one limited viewpoint into another.

A refreshing aspect of Jacobs' approach is that she was not dictating a narrow range of methods or allegiance to a brand, as she does not consider DNM a modality. Instead, she feels it is simply a means to explain our work from plausible perspectives. By understanding the richness of the basic neurocentric principles, one could apply the manner of engagement across a spectrum of different therapy styles. While Jacobs follows a similar hands-on style as me, at least when viewed from a distance, the technique mattered less than other models. Contrast this with laryngeal treatments, where specificity and technique are seen

as key. For instance, knowledge of a muscle orientation (origin to insertion) was necessary to properly manipulate the structure. While the language I used in explaining my work to a patient in the past differed dramatically from Diane's, over time, our language has become more closely aligned. There are deviations and differences, as I see our impacts being strongly influenced by patient perspectives in a way Jacobs' approach does not seem to rely upon. But the general neurological principles can easily be applied to a broad range of manual therapy styles and methods, with the common ground being our direct communication to our patient's nervous system, rather than the silo-based tissues and pathologies on which most modalities rely.

When I attended one of Jacobs' DNM seminars, I was exposed to a room of like-minded clinicians who all were trained from wide-ranging perspectives, including exercise-based therapists. I had a difficult time at that course, though not so much of what Jacobs was teaching, intervention-wise, as there were striking similarities to how I practiced. Difficulties centered on moving past the fascial narratives I was accustomed to, as what came out of Jacobs' mouth was a completely different language from one that I knew. As I watched her work, I kept internally berating myself for spinning back to the fascial narrative as she presented a neurologic one. Later, reflecting on the experience, it became obvious that one can spin nearly any explanation to rationalize what is occurring, but do they all make sense? In the moment of a fresh learning experience, as is presented in most continuing education seminars, they might appear to be so. However, with the benefit of time, accompanied by critical thought and reflection, many fail. I began to feel like I was making progress. DNM didn't fill in all the pieces, but it was a start. It was time for an update.

For several years after taking Jacobs' workshop, I lived a double life. Though my inquiry into more complete, accurate narratives to explain MT, and the conditions I treated, was sharpening, I continued to teach MFR to other therapists. Though as time passed, I began to allow the term "MFR" to describe

the recognizable style of treatment rather than the fascia-specific views. However, in continuing to use that term, I did feel like a bit of a hypocrite. As a result of this evolution, I began to publicly state my views, describing separate ways to use the MFR concept. I was growing, though many of my past peers grew restless at my radical commentaries on their cherished model. “Crossing the chasm” is what they called this on SomaSimple, which in this case is moving from a tissue-based viewpoint into one that was neurocentrically-inclined.

As my understanding of broader explanations for both pain/movement dysfunction grew, so did the manner I described my work to patients and at my seminars. It took me some time, but I eventually recognized that I was trying to have it both ways. I was promoting the neurocentrically-explained narratives in the work that I taught while continuing to call my work MFR. I was pandering to those with interest in that specific work (MFR) while trying to attract science-informed clinicians at the same time. Bad form, indeed. MFR, and fascial approaches in general, are still quite popular with many clinicians, though the physical therapy field had seemed to move on from seeing its utility, primarily due to its dubious narratives and lack of EBP credentials. As I entered the world of the SLP, I had no awareness of their interest but was about to find out.

But ...

Though I now consider myself an evidence-based practitioner, there are aspects to my works that belie logic and reason, as I’m unable to quantify every experience. Many manual therapy styles cater to the interests of alternative medicine believers, some more than others. Recognizing now how I previously allowed myself to ascribe spiritual meaning to events that may have been coincidences, there are incidents that I cannot forget and that leave me with a sense of wonder. Experiences in shared consciousness with another person happened on more than one occa-

sion, and I have no rational explanation for those occurrences. Witnessing occurrences at which a skeptic would probably howl with laughter were not uncommon in my past, though I would appreciate the opportunity to reexperience each of those events now that I am older and wiser. I believe that there is the potential for art and magic in all that we do, and I see those qualities emerging daily in the lives that we touch. It is possible to see all sides.

While your expectation for this book may be steeped in expectations of learning manual therapy background, philosophy, and techniques, it also represents a work about human relationships. In my live seminars, I tell learners that though they thought they would be learning a skillset to allow them to use manual therapy with their patients for the remediation of various issues, what I hope that they leave with is a new way of engaging their patients. By letting go of old ways, in a historical, hierarchical-type manner of seeing dysfunction, and learning to elevate the opinions of their patients to a level where their input has value, we can forge a new model for patient care. Although I believe I am seen by some peers in quixotic ways, tilting at windmills, I do see the possibility for true change in the way manual therapy is applied.

Note: Throughout this text, I will refer to the people we serve primarily as “patients,” though the words “clients,” “customers,” or others may be freely substituted.

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2



Crossing a bridge

Until 2013, teaching formed only a fraction of my workload. As previously mentioned, I was trying to please too many people with my far-reaching narrative of MFR, and the dilution of the message was evident. During the early 2010s, I was active on social media, as it had been my primary means of promoting myself and my seminars. It was through this network of connections that my fate shifted.

My journey into the world of voice and swallowing began in 2013 when Jan Potter Reed, SLP, reached out to me to ask if I would be interested in teaching a workshop on myofascial release (MFR) to speech-language pathologists and others in Chicago, Illinois. Joining me was Benjamin Asher, MD, who

was a well-regarded resource for using MFR with his voice patients. I'd had an occasional SLP attend one of my previous seminars due to MFR's name recognition. However, I had never taught content specifically applicable to the needs of the SLP. While I knew a small portion of the responsibilities and training of the SLP, having worked side-by-side with a few in previous job settings, I had little understanding of how my work should be translated to that profession. However, since I've always been someone who did a decent job of improvising (except for that first year at university) and taking risks, I agreed to co-teach the class. Dr. Asher and I communicated a bit via email in advance of the class date, but it wasn't until the

night before that we spoke over dinner. Only then did I realize that the form of MFR Dr. Asher used in his muscle tension dysphonia (MTD) treatment was markedly different from the narrative I had learned and used. There was a huge “oh crap” moment, but we worked things out so that the disparities in our work were less apparent to our audience.

Dr. Asher’s specialty was using trigger point therapy (TPt) to remediate issues of MTD. TPt is considered by many to be a version of MFR. It involves sustained, focal pressure, often with the tip of the finger or a unique tool made to reduce the strain on the fingertip, to what is said to be a trigger point within a muscle. The pressure is held until the clinician feels that the trigger point has diminished or resolved, and they then move on to the next point. TPt is a model first introduced by Travell and Simons (1983). Many in the MT field see TPt, and its underlying explanatory narrative, as a valid means of performing MFR for various disorders, including MTD. However, others in the field of voice and swallowing disorders use other narratives to explain the dysfunction and utilize manual circumlaryngeal treatment (MCT) for intervention. While there are a few different names for that MCT, most have very similar characteristics; first, work on structure re-posturing, attempting to bring the larynx and hyoid back into what are seen as desired postures. The rationale for this re-posturing is to determine if voice improves when done. If so, then through palpation, the clinician finds the high muscle tone or tension and manipulates the offending muscle until the tone/tension diminishes and function improves and is retained. The type of input is frequently a more aggressive and deep *manipulation* of the area and was previously thought to have its effect locally in providing change. To some, such soft tissue manipulation is also called MFR, although some in the field will strongly object to such classifications. There are a lot of turf wars in the MT field, both inside and outside the voice and swallowing areas. Compared to MCT and TPt, my form of MFR was a slower and less aggressive static (lingering) stretch applied to the fascia (or so I thought) and held until the fascia was felt to soften and stretch. This soften-

ing and lengthening was referred to as the *release* of the fascia. Further confusing matters, TPt, MCT, and other models are referred to by some as MFR, even though there is very little that is similar about the manner of application of each one in relation to the others. Can you see a problem there?

The 2013 Chicago workshop received positive reviews from attendees. Over the next 18 months, with the help of a few SLPs who acted as mentors, namely Jan Potter Reed and Barbara Wilson Arboleda, I began teaching a hybrid MFR seminar to SLPs in the United States. I was on my way, although with little understanding of the nuances and depth of the role of the SLP, not to mention the work of other professionals who work in voice and swallowing, as well as breathing, posture, and other domains. My lack of knowledge showed through in those early seminars, but I learned something in every class I offered. Early on, because of this first class, I was invited to give a short presentation on MFR and its value in post-head and neck cancer rehabilitation at a Baltimore, Maryland, head and neck cancer conference. Many may be aware that presenting at a professional medical conference is far different from presenting at a private workshop. This presentation was the first and only time I’ve used a PowerPoint presentation. Ironically, the presenter directly before my scheduled 15-minute talk apologized at the start of her talk for her lame PowerPoint slides. I watched as she had chattering teeth, and other special effects, moving across the screen, and knew immediately that she had woefully underestimated the next presenter! In preparing for that presentation, I began to experience frustration with the broad range of MT intervention brands and labels in the SLP/ENT field. My days at university had not prepared me for the rigors of an academic presentation such as the one forthcoming. As I searched for references to support my talk, I ran headlong into a fundamental problem. The overlapping nature of MT styles made looking for specific research citations for using MFR with post-head neck dysphagia difficult. I was ready just to cherry-pick some papers that mentioned the use of MFR with swallowing conditions but found very few. I

anticipated that the Baltimore presentation would be an opportunity to reach a larger audience, although my limited ability to converse at an academic level limited any potential benefit.

In hindsight, up until that Baltimore presentation, I used research as a tool to manipulate my audience, although I didn't see it that way at the time. Beginning in the early 2000s, I started a research page on my website. Looking back, its creation may have been an early effort to find credibility in a method that I knew to be lacking, or possibly just to gather as much supposed proof as possible. Having set up alerts on Google Scholar for 'MFR,' I received daily email briefings on any published scientific literature that mentioned the use of MFR. With my biases worn proudly, I picked only the positive studies to populate that page on my website. I passed over any studies that called into question MFR's shaky mechanism of action or showed a less than promising result from its use. I was also notorious for only reading a study's abstract, rarely reading (or trying to understand) the entire paper.

As you can see, my research page was nothing but a fan page, with citations cherry-picked to show the glowing results from using MFR. Since its inception, the page had grown to include hundreds of references, and in preparation for my talk in Baltimore, I was able to locate a few references that either directly applied to MFR's utility in post-head and neck cancer rehabilitation or, if the reader did not read the full article, appeared to cast a positive light on it. The talk went, well, not well, although I got through it. I was unprepared for discourse at this level, which was transparent to the audience. Live and learn; and learn, I did.

Much like the talk mentioned above, as I began teaching my course to SLPs, I relied on very few references to support the work. My early classes were loose affairs, trying to convey the nature of the hands-on work to an audience that demanded a more structured, protocol-driven evidence-based approach. I resisted allowing protocols and worked hard to present them as inappropriate for this work style. I attempted to convey the uniqueness of the individual encounter as

more important than following pre-described protocols but did not fully understand my audience. As an essential aspect of continuing education seminars, post-seminar anonymous reviews showed a range of satisfaction and dissatisfaction, with a lack of evidence and protocols the most common demerits. With these problems identified, I began to look more closely at how to incorporate the needs of the individual with the methods implicit in evidence-based practice. I also needed to address the evidence I was citing and the schism between that evidence which specifically referred to MFR, and a much larger number referring to various other manual interventions. I put aside the first concern and focused on the second. How was I to teach an evidence-based MFR-based approach when so much of the evidence doesn't specify MFR as the treatment tool? Over time, as I began to evolve beyond the strict definitions of MFR, I learned more about the nature of MT's impacts from broader perspectives. Although each paper claimed to define the utility of a specific intervention, when one observed the actions of therapists performing the work specified in each of those papers, those supposed disparate intervention styles had a large degree in common.

Whether in the voice/swallowing field or the more general MT field, outcome-based research is typically pigeon-holed into brands and styles of MT. Reading many studies describing the utilization of a specific kind of MT, that brand of MT is made to seem unique, distinct from others in both the targeted problem and the physiological way it addresses it. Or, other styles are not even mentioned, as if differing views do not exist. Most manual therapy studies are outcome-based. The intervention is compared to a sham intervention or combined with a different intervention style, seldom comparing one MT intervention directly with another. Few MT studies deconstruct mechanisms of action. If you read through a few dozen such studies on manual therapy, you'll often find comments on mechanisms of action for causation and MT impact. But a critical eye and tracing back through the references will show little proof of those mechanisms of action ever being verified. Current papers refer to historically published

articles that postulate mechanisms, none of which were ever confirmed. Indeed, the intervention helped, possibly in remarkable ways. But serious issues exist with a lack of questioning of current tissue-based models of action. When you read a few dozen more MT articles, seeing similar methods used with widely varying modality styles and stated mechanisms of action, it becomes apparent to all but the most modality walled-off clinician that there must be common denominators that explain the impact of MT, ones that transcend individual modality narratives. Touch is helpful, no matter how it is applied. A colleague of mine frequently states, “touch is touch, no matter how we try to dress it up.” With this eye for blending intervention styles, I got to work.

Tribalism and brand protectionism are intense in any community, including within the voice and swallowing disorder intervention niche. Spend time reading through the conversations of the many disparate SLP-related groups on Facebook to witness this phenomenon. Much of this tribalism is basic social grooming. Take a course from an educator, and you have an investment of time and money. Most of us like to feel that we made good choices in taking that training or buying into a narrative. Next, begin applying the intervention to your patients. Most will find success, which adds credence to the intervention and the narratives taught in training. I indeed found that MFR, applied in the way I was taught, was helpful for pain and functional movement disorders. These successes falsely reinforced that what I was taught must have been correct (post hoc fallacy). However, when one takes enough of such trainings in various brands of MT, you’ll find that they all are helpful. While an unpopular opinion in the manual therapy community at large, I do not believe considerable differences exist between modalities and styles.

By comparing the many overlapping explanatory narratives of the various MT styles, I broadened my understanding of the mechanisms at play when MT is applied. I began to realize that the methodology, be it named style or described version, was not as important as creating a connection to a patient’s perception of the problem with the use of hands-on work. These

are what I refer to as common denominators in all MT options. We will speak to this concept at length later, but for now, I want to share a passage from a paper by Mara Behlau from the *Journal of Voice*. She was referring to the lack of a need for specificity of technique when it came to manual therapy interventions in the voice field:

“Even if applied with different characteristics of manipulation (one or two hands, soft or deep handling, with or without vocalization), results presented are remarkable and happen shortly after the beginning of the therapy.” (Behlau, 2018, p.674)

While more contemporary to the process I had been undertaking in seeking an understanding of the various styles of MT, Behlau’s article succinctly sums up what could be seen as a contentious problem. Is there a fundamental difference between the multiple forms of MT used in the voice/swallowing field, not to mention the hundreds of branded and named modality styles and brands in the more general MT community? While brand bias, tribalism, and individual preferences will always be in play by individual proponents, touch is touch, and the impact often follows, no matter the work style used.

With the mindset of the overlap between all forms of MT, the task of moving into an approach better defined as an EBP approach was an easier task. Manual touch (stretching, poking, prodding, rubbing, and otherwise manipulating the person) is helpful, but possibly not due to the stated reason. We need a better explanation, one that apportions impact from peripheral touch at the skin level to the perceived problem area (laryngeal tension, a radiation-impaired tongue, etc.), proximally through the central and autonomic nervous system, and finally to the brain. The explanation might well need to include patient perceptions and values as potential drivers or hinderers and account for contextual factors. Single-tissue or single-pathology models lack such multifactorial and multi-centered views, but the model I am proposing here will address these potential impactors and more.

There are multiple bridges that I wish to build in this book.

1. Outline a model that explains the complexity and uncertainty of a multifactorial mechanism of action for manual therapy effects in the intervention of voice, swallowing, and related disorders.
2. Propose a method of evaluation and intervention that better shares power between the clinician and patient.
3. Empower the reader to use and modify these principles taught to best serve their specific patient populations while respecting the clinician's past training and experience.
4. Rather than a cookbook filled with specific recipes, each applicable to only one condition or diagnosis, I prefer to use touch and communication (verbal and non-verbal) in a broader sense to allow my patient to help me help them via shared decision-

making. We will explore specific applications, but all can be broadened for use throughout the body.

5. To aid the reader in finding a community, throughout this book, I'll be inserting vignettes shared by experts in their respective fields who I have trained and are now applying the concepts presented here.

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A number of years ago, I was introduced to Walt via a colleague. At that time, his work was still heavily influenced by a prominent practitioner in myofascial release. As a specialist speech-language pathologist (SLP) in voice disorders, I saw some immediate applications for patients with muscle tension dysphonia (MTD). This is a disorder where extrinsic laryngeal and neck muscles are recruited to assist in producing voice. MTD can lead to vocal fatigue and, in some cases, disrupted vocal quality.

I was fortunate to be approved to offer continuing education credits (CEUs) through the American Speech-Language-Hearing Association (ASHA) and we planned an inaugural course for SLPs in Chicago. Approximately 30 prominent SLPs attended, and they embraced what Walt presented enthusiastically. At that time, he was utilizing release of fascial tightness as well as postural irregularities as the source of many difficulties.

Walt is a man of immense curiosity and willingness to change perspective. In the ensuing years, he dove deeply into not only the anatomy and physiology of voice and swallowing but began crafting thoughtful approaches to disorders in that area. At the same time, he obtained his own credentialing from ASHA to offer CEUs and began a series of courses designed for SLPs.

Since that initial course in Chicago, Walt's perspective has changed a bit. Rather than treat an immediate complaint from a patient, his approach has become more exploratory in nature. Critically, his approach incorporates two aspects of evidence-based practice (EBP) that are often neglected: clinician instinct and patient feedback. At the same time, he continues to follow research into a variety of manual therapy techniques that inform the basis of his work.

Many clinicians who attend his courses are frustrated by the lack of guidance for a specific disorder. However, exploration informed by the clinician's hands and the patient's communication of their sensation to the explorations are presented as key elements to success in treatment. Dialogue with the patient and willingness to modify approaches as needed are critical. Clinical ego does not exist in Walt's world.

It is worth noting that occasional review of Walt's manual therapy approaches is worthwhile by attending a review course. Seemingly small tweaks to various maneuvers can result in improved outcomes.

Jan Potter Reed, SLP
Chicago, IL, USA

3



Histories, deconstructions, and problems

Context matters

In my physical therapy (PT) practice, referrals come from various sources, including physician-based referrals, word-of-mouth from past and present patients, and Internet-driven direct access. My website also draws some people to my practice, as it covers the range of conditions I treat. While my practice encompasses all aspects of PT and patient pain and movement complaints, I especially enjoy those with problems from within the scope of this book. How-

ever, in full disclosure, voice, swallowing, oral-motor, and breathing complaints are only a part of my total caseload.

A neck surgeon with neck pain and referral into their arm (radiculopathy) was once referred to see me by a clinician who had taken one of my workshops. After completing my intake, which consisted of discussing the history of the problem, the steps taken thus far to remediate the issue, and diagnostic testing and imaging that had taken place, we got down to the evaluation. Although manual therapy is one of

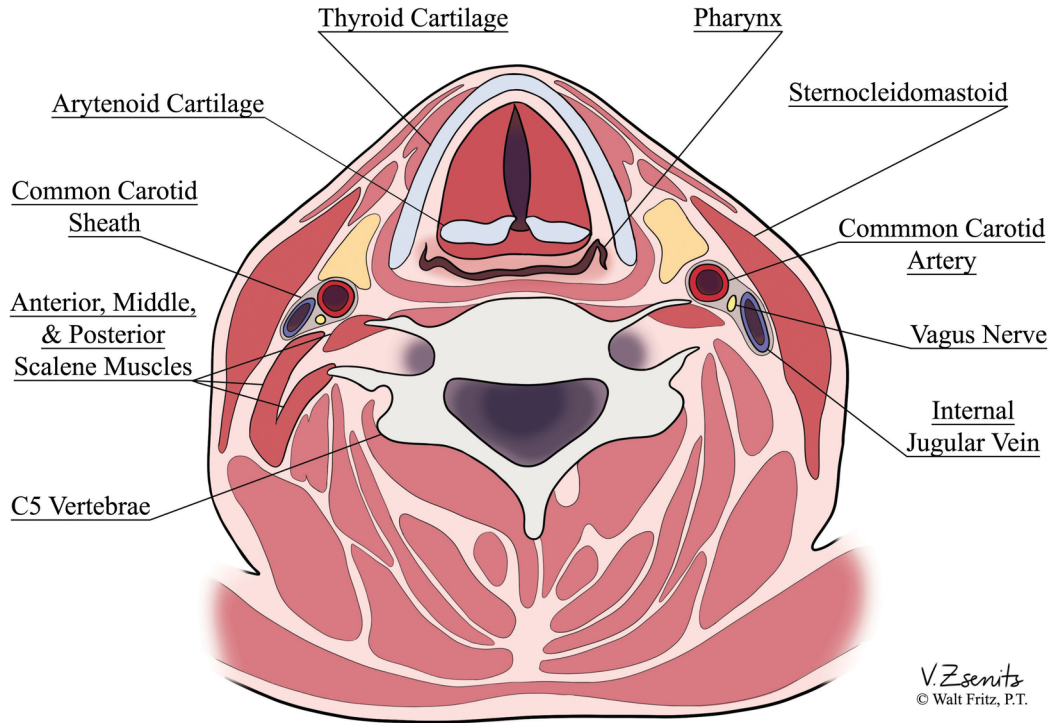


Figure 3.1 Cross section of the neck at level C5.

my preferred methods, I always perform a thorough examination that includes movement, functional strength, neurological checks, and other standard tests. Given my immersion in the field of voice and swallowing, I always inquire if any issues exist in those domains, as co-morbidities are common, and overlap is frequent between traditional neck pain issues and voice/swallowing concerns. I was assured that the problem was localized to a nerve root in the mid-neck region with no other notable complaints, as the surgeon based this belief on the known distribution of the cervical nerve roots as they pass into the shoulder and arm. They had also seen their physician about the problem.

My manual therapy evaluation is often a blended approach of transitional evaluation (What happens when I do this? What do you feel?) with lingering stretching and subtle exploration. To many people, neck pain is a problem in the posterior (the back of the) neck. However, as good practice dictates, I had learned to assess the entire region, including the front, back, and sides. Included in every such evalua-

tion is exploring the area along the front of the neck, along the anterior (front side) of the spine. The region of the anterior transverse processes of the spine is a typical target for my palpation and exploration, especially from the context of the work presented here (Figure 3.1).



Figure 3.2 Level of Figure 3.1 (C5)

part one: theoretical concerns

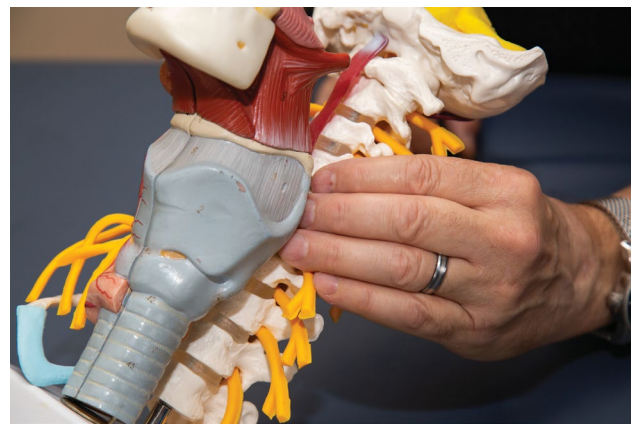
The rationale for my early exploration into this area was the location's proximity to cervical nerve roots as they pass out of the spinal cord and out to the periphery. Traditional thought for such an approach involved the spinal discs, muscle tension, or other dysfunctions that might be impinging on these nerves in the anterior transverse processes. Traditional manual therapy perspectives were that stretching to this region can reduce these disturbances to eliminate the nerve impingement, thereby reducing neck and arm region pain. Care should be taken on the part of the clinician in all aspects of the body, and this anterior cervical region is no different. Nerves can be damaged if excess pressure or tension is exerted, and the carotid arteries pass through this region.



With my patient, I spent a bit of time exploring this area and quickly located a site that completely replicated their local and referred pain. As is my method, I asked if their sensation was familiar, and they answered in the affirmative. I next asked if the feeling felt too much or wrong, to which the response was "no." I then asked if anything about the stretching that I was doing seemed like it might be helpful. To this, my surgeon patient paused to think a bit. After a bit, they replied, "you know, while it hurts a bit, it feels like you've found a spot that needs to be worked out." Lastly, I asked, "would you like me to stay here to see if this pressure helps to resolve the problem?" and they responded in the affirmative. My process involves and requires much feedback from my patient, which is far more significant than typical. While they might expect me to know how to figure out what is wrong

with them and understand what should be done to help that problem, I've learned to push back from that traditional paternalistic role. I need them to help me help them. You'll read about this process throughout the book.

I stuck around that area for several minutes, checking in frequently with my patient about the pressure's relevance and safety. Through their verbal and non-verbal feedback, I felt we were on a good trajectory. At one point, many minutes into the session, I witnessed my patient's non-verbal reactions change; their brow furrowed, and their eyes narrowed. I asked if anything was wrong, to which they replied, "stop what you're doing for a minute." "That's strange. You replicated an issue with swallowing certain foods and pills with the pressure you gave me. How can that be?" When filling out their history forms before their visit and throughout the intake, the surgeon had not disclosed that they had a swallowing issue. I suspect this omission was not purposeful but a result of it being out of the context of why they were seeing a PT. While their area of specialization was laryngeal region surgery, they saw little overlap with the neck and arm pain they were dealing with. Why would they mention a swallowing issue to a PT, who typically doesn't work with such conditions?



Using a spine model, I demonstrated where my fingers had been and how the proximity of the cervical nerve roots to the posterior laryngeal region made possible overlapping conditions. Presented in this way, the surgeon verbally concurred with my reasoning, although whether they believed me or not is uncer-

tain. Still, when I resumed treatment, I showed that slightly shifting pressures from a posterior direction to the medial (toward the center) moved the sensation from neck/arm pain into swallowing difficulty. Feeling was believing. We continued working in both planes, essentially impacting both problems at once. We resolved the neck and arm pain during a few sessions and lessened the swallowing difficulties.

This patient spent their day operating in this space, performing surgery on the laryngeal region, and deeply understood the anatomy. However, although nearly continuous, the larynx and cervical spine must have seemed far-removed when viewed as diagnoses. The two problems never met until we connected them through a felt sense.

Practical experience

I will invite you to try hands-on work with yourself in earlier parts of this book. Before attempting the first exercise, try speaking or singing. How do you sound? Probably like you always sound. What do you feel when you talk or sing? That might be a difficult question to answer, but one that becomes important in this approach. Now swallow. How does your swallowing feel? Unimpeded? If there is any hindrance, where is that feeling coming from? Is it a specific location or a more general area? Is that feeling familiar? Do you feel that feeling regularly or only on occasion? Now concentrate a bit on your breathing. As you breathe through your nose, note the sensation as your chest expands and air moves in and out. How does it feel? Does it feel easy or difficult?

Being asked to reflect on everyday actions is often difficult. Automatic functions, such as breathing, come with little effort or awareness, at least while at rest. Even the feeling of our voice or swallowing typically has little sense of awareness. One might be perplexed as to what is being asked. “What do you mean by asking me what I’m feeling?” is a common question I receive from my patients. Being asked to become aware takes effort. Is an everyday feeling even noticeable? Such is my task with this work. Leading your patient into the felt sense of everyday activities,

both regular and dysfunctional patterns, is an integral aspect of the process presented here, one that we will work through.

So, what does it feel like to breathe, speak, sing, or swallow? What does it feel like when you stick out your tongue or open and close your jaw? Is there a negative quality to any of these actions? Is that negative feeling relatable? Remember those feelings.



In the photo (above), note where my model has her hands. Place your hands in the same region as her. Initially, do not do anything; just allow your hands to fully contact your skin. What cannot be shown in the photo is how lightly she is holding the lateral laryngeal and cervical area. I tend to teach that when you first touch someone before *doing* something, *do nothing*. Just lightly rest your hands on your neck’s sides (skin). If you need some anatomical guidance, the heels of your hands will be along the oblique line along the posterior aspect of the thyroid cartilage, with the ulnar borders (pinkie finger side) of each palm at or above the lateral hyoid region (Figure 3.3, below). We will use the thyroid cartilage oblique line (highlighted in Figure 3.3) as a theoretical target for contact. For reference, the carotids typically lie deep and slightly posterior from where you will be applying light pressures through the heels of your hands. However, anatomical variation is always a factor, so your forces should remain light throughout this exercise.

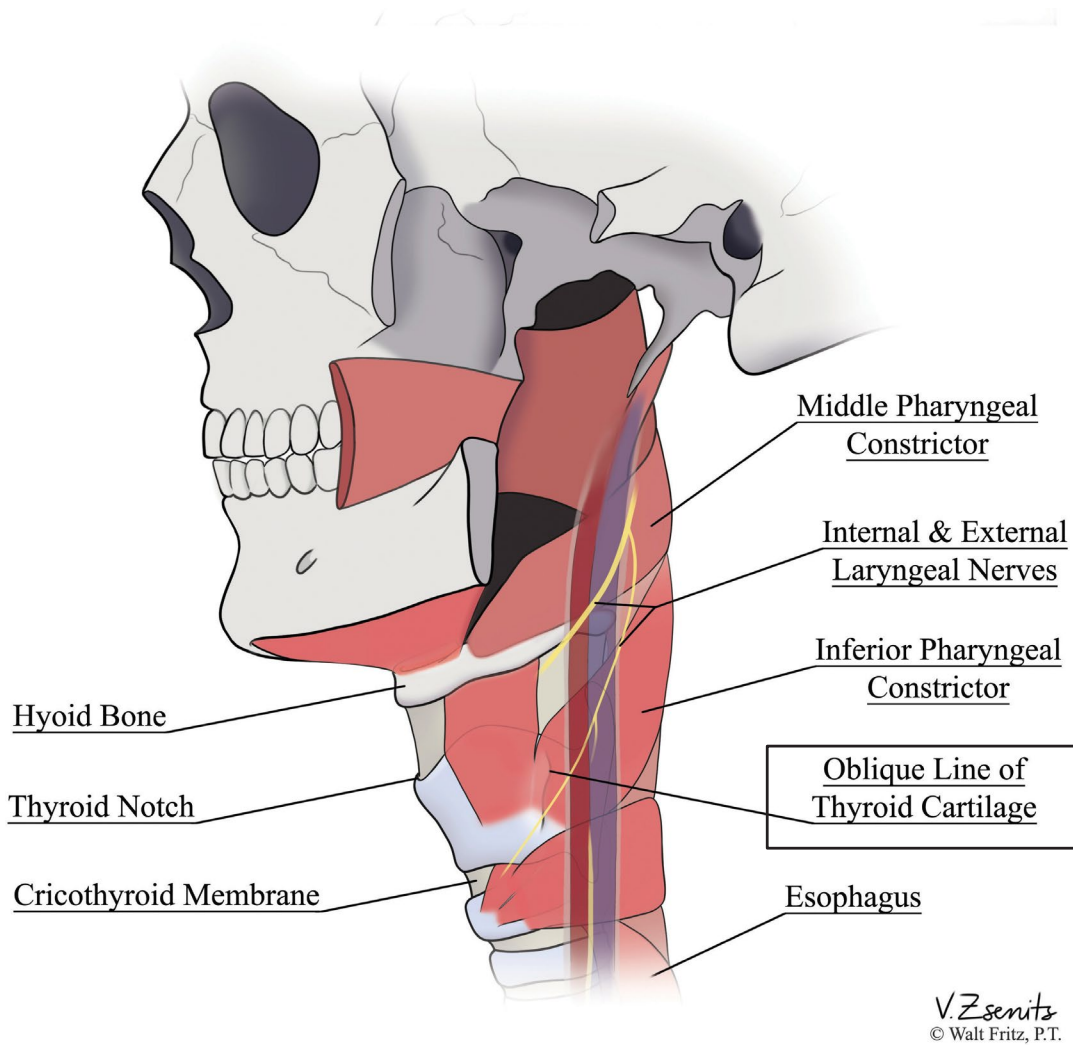


Figure 3.3 Locating the thyroid cartilage oblique line

If you feel your heartbeat directly under the fingers of either hand, reorient your pressures. Due to the possibility of arterial flow reduction, direct pressure over the artery is ill-advised. What should you do with the rest of your hand(s)? Just lightly engage the skin over the sides of the neck, from fingertips to the heels of your hands.

From this starting point, try to remain relaxed throughout your hands, arms, and shoulders, and ever so lightly, give a bit of inward pressure through the heels of your hands. You may end up pinching together the skin in the midline of the front of the neck. You are now encompassing the entire hyolaryngeal complex. Holding the light inward pressure, slowly drag

everything forward and slightly down toward your feet. You are pulling the skin over the entire lateral neck region and, by degrees, bringing along the deeper structures as well. Depending on your training, experience, and beliefs, your mind might target specific muscles that you believe are being stretched, structures being re-arranged, or any other thoughts regarding tissues and structures. For now, try to forget what tissues or structures are being engaged and just hold that light stretch. How hard? About that hard! There is no correct response to such questions, but we will investigate these concepts later. Once you feel like you've sufficiently engaged the area in a stretch, I want you to try speaking again. Try taking a few more

swallows. Repeat breathing for a few breath cycles. Move your tongue or jaw. What did you feel? Was there a change?

If you maintain the stretch for a few minutes, what happens when you let go? To some people, everything reverts to normal, or the experiences you had before you stretched. But to others, you might still feel some changes, from subtle to more pronounced. You may or may not have felt a shift from performing the stretching. How might you explain those changes if you did feel a difference while stretching? If the changes linger, what is it that creates lasting changes? There are no entirely correct answers, although I think some are less wrong than others. We will explore many of these concepts in the coming chapters.

What you just experienced was simple manual therapy with few narratives attached. We were simply stretching. We incited no beliefs that we were addressing a specific tissue or a specific pathology, nor did I insist on a certain level of pressure or duration of the stretch. I left those variables up to you. The insistence that we can never stretch more than skin may seem absurd to some, but can we have any level of certainty that we can consistently engage a deeper tissue or structure? The plausibility of an explanation is essential to me, as you will see shortly.

History, overlap, and deconstructions

Historical explorations are worthy, as learning from the past may allow us to understand the present context better. While I use existing *quantitative* evidence to underscore the relevance of MT, this book also explores MT from *qualitative* perspectives, hopefully establishing a credible multifactorial explanation for how MT impacts disorders and how patient perspectives and roles can influence outcomes. The current literature, which will be deconstructed here, is primarily quantitative, as are most randomized controlled trials. Qualitative research in the MT domain is rare but exists (Petty *et al.*, 2012). It is helpful first to deconstruct and examine existing explanations to understand their strengths and limitations better to build a new explanatory narrative. If I had no dis-

satisfaction with current models, there would be no need to add a new one, nor a reason for this book. To some, deconstructing a currently held belief system is seen as dismissive of the past (and present), and those who object will often become defensive of their current model. However, deconstructing a belief does not attack that person; it only questions their views and what underpins them. Deconstruction is a way of deepening understanding, allowing us the ability to build for the future.

Borrowing a concept from philosophy, how we go about knowing things (epistemology) requires one to step back and analyze all perspectives. There are always conflicting opinions and viewpoints within the research realm that transfers into the clinical realm, and these issues are acknowledged. Tribalism runs deep. The comments and critiques below are not intended to diminish the work of those doing the research. Standing on the shoulders of giants, I hope to expand on the excellent work already done.

Manual therapy (MT) is old, although just how old depends on how you define it. If spoken of in terms of using the hands to heal, MT is represented in the Bible, where healing by the *laying of hands* is well-represented. Smith (2007) speaks of Hippocrates' use of manual therapy in the 5th century for specific manipulation of the spine and traces MT's usage into more modern times through the burgeoning fields of osteopathy, founded in 1874, and chiropractic, founded in 1895. Massage is firmly rooted in touch and originates back thousands of years. Physical therapy (PT) was formally established in 1899 in England and 1921 in the United States (Smith, 2007), with manual therapy an early and essential aspect of that profession. Occupational therapy (OT), founded in 1895, and speech-language pathology (SLP), based in the 1920s, are less thought of in terms of utilizing MT. Still, current practice standards allow each to use hands-on work within the scope of practice of their profession. As each of these professions grew and matured, specialization occurred. When I began my PT career working with small children, I worked side-by-side with OTs and SLPs, although few of them used MT.

Early in my career, myofascial release (MFR) training attracted many professions, including an occasional SLP, and many applied the treatment to their patients. Think of the confusion set up by that scenario: A patient has a problem and works their way through a range of professionals as mentioned here, including a chiropractor, osteopath, massage therapist, OT, PT, and SLP, with each of those professionals using the same intervention! While this is unlikely, the possibility existed. How can such seemingly distinct professions perform essentially the same service or intervention? Is one person or profession typically more proficient than another? Some might feel (wrongly) that occupations with higher levels of mandatory education must be providing superior care. However, I can attest to receiving very high-quality MT treatment from massage therapists with a 500-hour certificate vs. another profession with a doctoral-level education who uses the same intervention model. All these professions mentioned have the legal ability to use MT in their treatment, although some might be less likely than others. As SLPs are one of the target audiences for this book, given the lack of inclusion of this work in their university curriculum, they may feel less qualified to use touch-based intervention. However, at least in the United States, MT is within the scope of practice for an SLP, and I hope this book contributes to comfort with its use. Krisciunas *et al.* (2019) mention that 45.5% of SLPs responding to a survey use MT with their head and neck cancer patients. This statistic would make MT more commonplace than many envision. The specifics of that MT intervention are not discussed in the study.

What about the vocal coach or voice teacher? Are they allowed to use MT in your practice? Given the broad reach of this book, this is a difficult question to answer with exactness. In the highly regulated United States, voice coaches are not seen to be licensed to touch or licensed at all. This creates a bit of a puzzle, as some would say that since they are not legally permitted to touch, they shouldn't be doing so. However, others feel that since there is no licensing surrounding vocal coaching, there is no reason why they can't

use MT. In other countries, where regulations differ, one must look at the prevailing laws and practices.

To add another layer of uncertainty, touch-based cueing is commonplace in pedagogy settings, so long as it is within the framework of appropriate behavior. Participants in my seminars working in academic settings have told me that they have been warned away from touch-based cueing for posture, head and torso carriage, and other usages in vocal training due to concerns over sexually inappropriate behaviors. However, given the contextual richness often conveyed by touch, it seems a shame that such methods be prohibited. How is touch-based cueing different from MT?

If one believes that MT changes the tissues based on the specificity of that touch, then touch-based cueing seems quite different, as it would act only on a person's need for redirection. Cueing would work within a more behaviorally explained framework, as contrasted to MT's perceived tissue-based framework. But what if MT interventions have efficacy by activating higher-level changes in our patient's brain, rather than simply acting locally at the tissues? Mightn't touch-based cueing and MT have more in common than typically thought? Welcome to ambiguity. While traditional MT is seen to involve some sort of sustained pressure or mechanical stretch to elicit tissue-based changes, using current multifactorial views on the impacts created by MT, as elucidated later in this text, simple touch may be sufficient to start the cascade of effects that allow us to see a change from our intervention. The totality of impacts from touch-based postural cues which a vocal coach may utilize may differ little from the impacts of MT interventions. I am confident some would strongly disagree with this concept, but touch is touch, no matter how it is dressed up or disguised.

Back to history. As with most of medicine, over time, professions split off into specialized sub-factions. My profession (PT) originated in hospital settings, working in more traditional rehabilitative roles. They were generalists using MT, exercise, gait training/retraining, and more. But over time, subgroups formed, with specializations in pediatrics, sports medicine, hand

therapy, women's health, orthopedics, and many more. Each developed its jargon and narrow ways of viewing dysfunction and the effects of the intervention. The public may view a massage therapist as having a limited range of perceived roles in the massage therapy field. However, the scope of practice for most massage therapists allows for great diversity. The same applies to the other professions mentioned above that, at least in the United States, are legally licensed to touch, which allows them to use MT-type treatments within their defined scopes of practice. While traditionally, SLPs do little MT, in the United States, their license to practice allows them this liberty, so long as they use it for diagnoses and conditions within their range of expertise. Few would expect an SLP to treat their foot pain.

In the clinical setting, SLPs often refer to PT for manual therapy treatment, as stereotypical roles often supersede specialized knowledge of a specific disorder. I encounter this mindset in my seminars, with SLPs feeling less prepared academically with the necessary anatomy and physiology training required of the PT to adequately feel safe and prepared to use MT with patients. While respecting these reservations, I work hard to get SLPs over the hump of feeling inadequate. Without oversimplifying the process, MT is not all that difficult. Historical models of MT bring their perceptions of hyper-skilled understandings of joint mechanics, postural influences, and many other knowledge bases. Still, as we unpack MT, there should be less concern over anyone lacking the knowledge to incorporate MT into their practice. Due to changes in perspectives of MT's value and relevance, PTs utilize less MT than in the past, so why shouldn't SLPs learn the model?

Defining the practice

Within the professions of PT, massage, osteopathy, and chiropractic, and others, MT can include a range of interventions from aggressive joint manipulation and mobilization, soft tissue manipulation with forces that vary from very gentle to aggressive and forceful, massage at all levels of pressure and intensity, and

dozens of other styles and brands, each with supposed unique characteristics. Claimed therapeutic targets include faulty/injured tissues (muscle, fascia, lymph, nerves, joints, and cartilaginous structure) and real and metaphoric pathologies (high muscle tension, myofascial restrictions, trigger points, abnormal positioning of bones and cartilage, subluxed joints, aberrant neurological patterning, poor posture, and atypical breathing patterns). Although the evidence has yet to confirm many of these conditions or problems, many professions and clinicians within those professions cling to outdated models of both explaining the issues as well as intervention methods that claim impact specificity to a problem that has never been shown to exist. At best, myofascial restrictions are metaphoric, at least from the perspective of accepted science."

However, clinicians across the spectrum continue to state that they are releasing those restrictions. Muscle tension can be seen as a reality but defining the cause and what happens to lessen tension are complex. One of the goals of this book is to present plausible perspectives on the impacts of MT beyond the simple, peripherally-based stories.

In my introductory voice/swallowing disorders seminar, I frequently begin a class by having learners place their hands on their faces and lightly stretch themselves. If they start to note a sensation, local or distant, I ask them to try to visualize how they might go about explaining those sensations. What we feel and how we present those feelings is seldom based solely on fact. Instead, the richness of our lived experience defines those sensations. I make it clear that while I do not feel that locally, selective manipulation can skip over the skin and sensory awareness to target a muscle, I also cannot prove that it isn't occurring. Perspectives of plausibility are tricky.

The use of manual therapy (MT) has been documented as a voice disorder intervention strategy in the related literature sources for at least the past 30 years (Aronson, 1990), although it is a newer addition to the treatment of swallowing disorders. To keep from overloading the reader and for brevity in what could constitute an entire volume, I'll be addressing the

progression of MT in treating voice as the primary focus. However, crossover exists, as we are seeing an overlap of etiology and treatment of muscle tension dysphonia (MTD) and muscle tension dysphagia (MTDg) (Kang *et al.*, 2020). Viewing conditions from a broader lens can allow a similar overlapping of intervention strategies instead feeling the need to narrowly define an intervention based solely on a diagnosis. The focus here is to review the history of MT applications within voice and swallowing and to discuss the strengths and limitations I see within the narratives used to explain the various models.

The incorporation of MT in the swallowing field is newer, with fewer citations to support its use. Additionally, MT has a rich history in aiding with other issues facing the speech-language pathologist and related professions, including problems relating to breathing, limited jaw opening (trismus), tongue dysfunction, postural asymmetry and control, and diaphragm and pelvic floor dysfunction, and will be mentioned throughout this text.

Beyond voice and swallowing, some secondary regions and conditions may initially seem out of scope to some clinicians. The SLP's scope of practice (SOP) is broad in the United States. It does not limit the clinician to specific body regions, so long as the intervention relates to a primary diagnosis or problem treatable under the SLP SOP. As frequently happens in my in-person seminars, it is common for there to be disagreement as to just what conditions are within the SOP of the SLP. There will be some who, for instance, feel that working the temporomandibular joint (TMJ) is the exclusive domain of the PT while dealing with issues of trismus is the primary responsibility of the SLP. I see both conditions in my private practice and let my students know that I use identical MT intervention strategies for both disorders. As a trans-disciplinary educator, I try to draw meaning and relevance from the techniques I teach and the areas of the body covered to show their applicability to the SOP of the SLP, PT, OT, MT, and other professionals attending. For SLPs working with head neck cancer patients, understanding how common temporomandibular joint disorder (TMD) is in their patient populations may make the

seemingly distinct diagnoses of trismus and TMD less walled off (Pauli *et al.*, 2019).

The following review is a purposeful sampling (Etikan *et al.*, 2016) of the history and a hindsight deconstruction of MT narratives as they evolved. Care is taken not to diminish these works, as, within the context of what was known, they were cutting edge for their time. The direction taken is based on my view: *simplistic singular tissue-based impacts of MT are outdated*. When many papers discussed in this section were published, tissue-based impacts represented the current best practice viewpoints. Unfortunately, many of the newer articles discussed here mention little, if any, about updated perspectives on more precise mechanisms of action for MT and voice in place at the time of the publication. I contend that current MT models in voice need updating regarding the multifactorial mechanism of action taking hold in the general MT community. That model will be discussed in Chapter 4 with a proposed benefit to clinicians and academic professionals, with a trickle-down impact on the patients they serve.

When the past and current MT literature for voice disorders are viewed in isolation, the papers confirm their basic premises; that the intervention diminishes MTD or related conditions. Morrison *et al.* (1983) first coined the term MTD to describe voice dysfunction caused by excessive tension in the perilaryngeal and suprahyoid region musculature. Subsequent papers work from that definition, allowing that if the muscle tension can be reduced, then the voice will improve. Given little mention of the contrary in the literature in this section, there is an unstated implication that single-source tissue-based or pathology-based disorders are remediated at the peripheral level. The introduction of MT as a means of treating MTD was initially presented as a working theory by Aronson (1990), and subsequent papers reinforced MT intervention's utility through various research designs. With few exceptions, none overtly set out to build a more robust mechanism of action for MT; instead, they relied on early theories of both causation and intervention effects as being peripherally based.

Various MT tissue and pathology-specific narratives have been included in the scientific literature relating to voice since 1990, with variation in the specific titles given to the named MT interventions. While some authors feel an affinity toward one style over the next (Mathieson, 2011), others stated that little seems to separate the various styles regarding efficacy (Behlau, 2018). Aronson (1990) first published literature claiming, in effect, local impact through manual circumlaryngeal treatment (MCT) to manage laryngeal muscle tension. In his comprehensive book on voice disorders, Aronson described massage and soft tissue manipulative techniques to reduce local cramping, increase relaxation of the intrinsic and extrinsic laryngeal musculature, and lower the larynx into a position that fosters more normal phonation (p.314). Though also mentioning remaining gentle, he *seemed to be* an advocate of more aggressive techniques, stating that “less aggressive techniques often fail” (p.315). However, he does not detail such failings nor discuss studies that looked at variations in aggressiveness. Given the lack of prior scientific writings on the topic, I can only assume that Aronson’s claims were based on his own experiences. From a timeline perspective, it appears that Aronson used these techniques or knew of others who were using them before the book was published in 1990, although no mention was made of its origins. Surprisingly, several more recent papers cite Aronson’s statement on the need for aggression for changes to last without questioning that statement. Laudably, although Aronson recommended manual examination and treatment as an essential intervention to be performed on all patients experiencing voice disorders, he in no way was advocating MT to be used as a standalone treatment. Instead, he saw the need to utilize a wide range of interventions.

Though not an exhaustive list, subsequent publications of MT intervention studies were published (Roy and Leeper, 1993 and Roy and Bless, 1997), with the 1993 paper appearing to be the first study that tested Aronson’s earlier methods in that 1993 paper, Roy and Leeper found that the MT methods provided significant improvement in voice after one session.

Also, in that 1993 paper, Roy and Leeper began to question if the results were solely due to actual muscle tension reduction from other factors (p.247), marking what might be considered the first questioning of the mechanism of action of the applied techniques. That line of inquiry was not factored into studies by other authors throughout the next few decades, although Roy returned to better question this issue in 2017 (Roy *et al.*, 2017). Roy and Leeper (1993) acknowledged the subjectivity of laryngeal height assessment (p.247), although no mention was made of possible psychosocial influences of and from the intervention. Roy *et al.* (1997) introduce another variable, trigger points (TPs), as an additional concern (p.852), although Aronson’s protocol is again used to reduce muscle tension and TPs to improve voice locally.

To add to the SLP as interventionalist, Rubin and Lieberman’s frequently cited paper (2000), with an MT protocol set down by Jacob Lieberman, DO, positions the osteopath or physical therapist as essential members of the voice rehabilitation team. The authors viewed voice dysfunction as being due to musculoskeletal (MSK) problems within the laryngeal musculature and related regions. The authors saw laryngeal manipulation as indicated in the patient whose voice disorder was MSK in origin, and their study successfully utilized techniques like Aronson’s. The applied methods were reported to have the local effect of reducing laryngeal tension and improving regional joint mobility. The explanations for causation and intervention presented in that paper remains strictly in the MSK realm, with no mention of neurological or psychosocial factors of causation or as a part of the intervention outcomes. As an aside, I had the privilege of studying under Jacob Lieberman in 2019. Though far from what I had used for most of my MT career, I found his approach interesting. Though I am not a proponent of his more aggressive styles of soft tissue manipulation, one cannot argue with positive outcomes, both in the research and clinic. I applauded Lieberman’s observations of psychological factors that often contribute to issues of MTD and related voice disorders. However, I would have appreciated it if psychosocial factors, in the form of shared

decision-making and more input from the patient throughout the intervention process, had been better represented in the treatment setting.

The MSK viewpoints presented in Rubin and Lieberman (2000) were in keeping with some, although not all, of the prevailing views on pain and movement problems in the general manual therapy communities at that time. Competing nerve-based models (discussed below) had emerged before the paper by Rubin was published (Butler, 1989; Shacklock, 1995), but no mention had been made by Rubin or any contemporaries in the voice field of possible nerve-based dysfunction and MSK dysfunction. Such omissions may have been impacted by seemingly distinct and separate disorders or diagnoses, at least in their described way. The MSK-influenced work by Rubin and Lieberman (2000) was said to be impacting excessive muscle tension responsible for MTD. Simultaneously, as defined by Butler (1989) and Shacklock (1995), neurodynamic technique was represented to be influencing pain. While hindsight reflections are easy, it is worth noting that nearly all the MT papers in the voice field referenced in this section mention pain or discomfort as a critical component of MTD, indicating some crossover between the two viewpoints. It was not until Ateras and von Piekartz (2017) that a link was made between neurodynamic assessment/technique and the remediation of an SLP-related disorder (Parkinsonian's dysarthria). Walls between professions and perceptions of the mechanisms that underlie various diagnoses limit the cross-exposure of shared ideas. Lieberman's chapter in *Treatment of Voice Disorders* (Lieberman, 2005) details in-depth evaluation and intervention methods based upon biomechanics of the laryngeal region and accessory musculature and regions related to voice, breathing, and posture. There was no specific discussion of how MT impacts the person beyond mention of local muscles and joints, with no discussion of nervous system influences, behavioral factors, or contextual factors playing a role of any kind. Ross (1999), also an osteopath, gives the reader more of a how-to guide to a broad framework on evaluation and treatment through laryngeal manipulation and methods of addressing posture throughout

the upper body. Ross mentioned possible contributors to voice disorders, including anxiety, GI, cardiovascular, and respiratory issues, and MSK and neurological problems as causative influences. Still, no mention is made of the specific effects or broader mechanisms of action of the applied manual interventions. Ross's paper does not appear in Dunphy's review (2013) or any of the other articles cited here. Perhaps this omission was due to the paper having been published in the *Journal of Bodywork and Movement Therapies*, a journal not generally viewed as relevant to voice or the SLP domain. Still, such an omission only serves to limit exposure to broader viewpoints.

Mathieson *et al.* (2009) and Mathieson (2011) both expand upon Aronson's original ideas for laryngeal region manipulation in two studies looking at its use with MTD, introducing differences in the techniques. The methods used by Mathieson were called laryngeal manual therapy (LMT), as contrasted with Aronson's (and others') manual circumlaryngeal treatment (MCT). While not relating to defining a mechanism of action, of personal interest is the author's distinction between more aggressive MT techniques, as was said to be typically applied by physical therapists and osteopaths, and the gentler techniques used in the study. The 2009 study explains outcomes as local responses to manual manipulation, although there is a tangential mention of more affective impacts. "Clinical experience suggests that massage of these muscles lateral to the larynx reduces this tension, thereby reducing the patient's discomfort, and consequently their distress and anxiety, at an early stage of the intervention" (Mathieson *et al.*, 2009, p.354). However, nothing of this possible affective influence via a mechanism of action was discussed. In the 2011 paper, Mathieson describes a literature review of the available evidence and describes the permutations in the various MT techniques applied throughout the published literature (p.172), including a direct comparison of two relatively similar styles of technique. Again, no mention is made to how MT input is received and processed on the part of the patient, with positive results attributed to local manipulation causing alteration in muscle tension and structure position.

Dunphy (2013) critically examined the evidence for MT as an intervention for MTD, finding suggestive results for its usage with existing MTD and as a preventative intervention for those at risk. There was no mention of mechanisms of action in that paper. Kennard *et al.* (2015), Dehqan and Scherer (2018), DePietro *et al.* (2018), and Rad *et al.* (2018) all discuss the positive efficacy of MT for MDT strictly from a similar MSK perspective as discussed above, all without questioning the status quo on how MT goes about creating change.

Given that none of the studies mentioned above had its goal of establishing a comprehensive mechanism of action for MT's effects, it is not surprising that there was little exploration beyond the historical narrative as to what facilitated changes in function. The stated intent of those outcome-based papers focused on examining the efficacy of manual therapy interventions on MTD based upon pre-existing understandings of MT impacts. However, both Dromey *et al.* (2008) and Roy (2008) and Roy *et al.* (2009) began to probe, with Dromey *et al.* inserting uncertainty as to the mechanism at play; "when skillfully applied, systematic kneading and re-posturing of the extralaryngeal region *ostensibly* stretches muscle tissue and fascia, promotes local circulation with removal of metabolic wastes, and can relax tense muscles" (my italics) (Dromey *et al.*, 2008, p.204). Roy wrote "little is known regarding the proximal and distal origins of the muscle tension" (Roy, 2008, p.206), and appeared to question causation of the muscle tension, although not explicitly challenge the mechanism of action of the therapeutic intervention. Roy later wrote "if excessive neural drive to both laryngeal and articulatory muscles is responsible for tension in the articulators in MTD, then treatment would appear to have impacted activity in both subsystems" (Roy *et al.*, 2009, p.131). It appears that these authors were questioning the localization of MT impacts as being solely located at the peripheral level. In the voice and SLP-related literature it was not until 2017 that MT impacts were shown

to have central (brain-based) impacts, where Roy noted changes in functional MRI (fMRI) findings in the brain following manual circumlaryngeal treatment, with implications of impact from peripheral manipulation (Roy *et al.*, 2017). Spengler *et al.* noted emotional distress as an underlying factor in MTD and included top-down observations via fMRI (Spengler *et al.*, 2017).

To summarize the findings and conclusions of these papers as superficial or incomplete would be a disservice to their historical standing in establishing the utility of MT as applied to various issues of voice. From the context of their stated purpose, the authors successfully presented the multiple ways MT was effective for voice disorders as an outcome of the applied intervention. However, with MT's impact now firmly established, the search for a well-defined mechanism of action should follow. While some may feel that current explanations are adequate (that local MT input creates local changes that reflect directly on improvements in voice), looking to the general literature on MT, outside the voice field, from physical therapy, osteopathic, and other sources will show that the narrative has been advanced beyond such perspectives.

The goal of the above literature review was to establish the need for what follows: to provide a more comprehensive explanation for MT's mechanism of impact. From an academic perspective, a thorough explanation is paramount, even if the complete answer is not yet known. Through the scientific process, the unknown becomes better known. From an occupational perspective, having best-practice guidelines that reflect the most current understandings allows clinicians to practice with greater transparency and a deeper understanding of the impacts that will grow the interventions' credibility. While explanations that use simpler tissue or pathology-based models may seem logical to our patients and, therefore, easier to use by the clinician, there are ways to work through complex explanations. These factors will be explored in the following chapters.

As a physical therapist, it is a near-daily occurrence to hear from patients who claim that another physical therapist told them that weakness was the cause of their lower back pain. Parallels exist, from claims of tongue weakness being the cause of articulation disorders, vocal fatigue, or tongue tension. In the case of back pain, patients report being told that by getting stronger, they would be better able to support themselves and, in turn, have less pain. While it is hoped that the original physical therapist's explanation was more up-to-date than what was just stated, such stories are simple for the public to assimilate. They will often motivate them to do their exercises. But what stories like this amount to is lying to the public. We know so much more about the effects exercise has on pain and the implication that gaining strength to better support oneself is simply incorrect or, at a minimum, grossly incomplete (Abrahamsson, 2017; Naugle *et al.*, 2012). No matter our profession, explaining complex processes in understandable terms is our job, not to misrepresent a process just to make it simple. Overcoming such hurdles requires an acceptance of the complexity and uncertainty inherent in multifactorial and multivariant explanations. Allowing uncertainty is an asset, so long as the patient is informed of the rationale behind the uncertainty. I frequently use a statement with my patients when explaining the impacts of the work: "the more I learn, the less of which I'm certain." Building a multifactorial narrative that describes how MT impacts the patient and their issues of voice and swallowing dysfunction will bolster the profession's credibility and, quite possibly, build on efficacy. If explanations are more transparent, the clinician may be seen more as an equal, allowing a shared decision-making (SDM) model to emerge and improve the possibility of a positive outcome (Bainbridge and Harris, 2006).

Manual therapy consists of many more models than those traditionally represented in the voice literature. The role of massage in treating voice issues is present in early literature, with Ross (1887) speaking of a preference for laryngeal massage with laryngeal cramping for musicians and singers. Hubbard (1915) described laryngeal and neck massage being used

post-surgically in the case of laryngeal papilloma. Perkowski (1935) described massage techniques to the soft palate for "the problem of nasality in speech defect cases associate with palatal abnormality," while Loebell (1944) described laryngeal massage in cases of "rebuilding" voice. Unfortunately, none of the papers describes the specifics or protocol of the technique, leaving much to interpretation. Leppänen *et al.* (2009) described a study on non-pathological teachers in Finland using Voice Massage™, which is said to massage and manipulate the muscles of voice production in the neck and upper chest. While the techniques appear like those discussed throughout this paper, little information describes the work's specifics. The lack of description may be due, in part, to the trademarked status of this intervention style. Massage is also frequently used throughout the literature on laryngeal manipulation (Roy *et al.*, 1996; Mathieson *et al.*, 2009; Rad *et al.*, 2018). This blending of terms is also typical in the more general research on MT (Bialosky *et al.*, 2018). One might argue that such a lack of distinction between styles of MT creates a lack of clarity regarding the approaches having distinctive properties and effects. Individual users of a particular style will insist on their unique manner in reaching inside the body based on how the intervention was taught to them. I see these loose boundaries between intervention styles as the possible proof of more uniform effects from all styles of MT. I also see how stated distinctions, being artificial, gives me latitude for broader inclusion of research beyond the typical inclusions in the SLP research base. Such topics will also be explored in the following chapter.

Historically, physical therapy/physiotherapy served more of an ancillary rehabilitative role, offering general conditioning, strengthening, and postural correction with the broader issues in voice patient populations. Dworkin reported on a study on MTD, where physical therapy was used as a part of a multidisciplinary team approach, providing "ultrasound, massage, stretching, general relaxation, and postural adjustment exercises" to provide more of a direct impact on MTD (Dworkin *et al.*, 2000, p.172). A more contemporary study by Tomlinson (2015) places physical therapy in a primary

intervention role, providing manual therapy, exercise, and stress management training in an MTD population. While the physical therapist's role in the treatment of MTD is still limited (Craig *et al.*, 2015; Tomlinson and Archer, 2014), this trend may continue with further studies. Given a stereotypical view of MTD being at least, in part, an MSK disorder, there is logic in the inclusion of physical therapists, who are often seen as the MSK experts on rehab teams. Anecdotally, through information gained through personal conversations, some in the SLP profession view papers such as Tomlinson and Archer (2014) as a threat, leaving the SLP out of what is seen to be their domain. Ideally, input from multiple domains may foster further understanding of effective multidisciplinary treatment interventions rather than further any discord between the professions. Even if both disciplines use MT in their intervention, the context differs, and the patient will only benefit from the overlap.

Dharmananda (2002) introduces MT treatment of voice from the perspective of Chinese Medicine, citing an earlier paper (Gu and Fan, 1981), and discusses a laryngeal massage/treatment routine, which includes specific technique descriptions. Despite describing the traditional Chinese medicine points addressed, the paper allows the reader to view the work through photographs and written routines, which closely resemble work discussed from Western sources. This overlap is a further impetus for the allowance of broader evidence to build a comprehensive mechanism of action model. Gu and Fan were one of the few who gave specific recommendations on the maximum number of treatment sessions and how to proceed if MT fails to impact. Again, the variations in diagnostic procedures, clinician reasoning, and treatment methodology call into question the diagnostic criteria in place across the spectrum of interventions. Early references in the osteopathic literature on the efficacy of osteopathic techniques restate claims attributed to an osteopath named Deason: "Of 256 cases of impaired voice, 80 percent were restored to normal" (Webster, 1919, p.46). Subsequent historical references to specific osteopathic interventions for voice issues were noted, but it wasn't until the late

20th century that Ross (1999) cited specific interventions for remedying dysphonia with osteopathic techniques. This paper was followed by, or one might argue, preceded by Rubin and Lieberman's 2000 (initially presented in 1998) article on laryngeal manipulation, which contained a protocol established by Jacob Lieberman, DO. This paper outlines an oft-referenced general rationale and protocol for laryngeal manipulation. Papers published by Rubin, Lieberman, and Harris, published both singularly and combined, provide context for their approach to laryngeal manipulation and can be found in the reference section of Rubin and Lieberman (2000). When making an overview of other protocols for MTD (Roy, 2008; Mathieson *et al.*, 2009; Marszałek *et al.*, 2012), little distinction is noted by this writer between the various stated protocols. While details for both evaluation and intervention are presented, few are specific enough to allow the reader to utilize the principles without large amounts of individual variation and interpretation.

Why do MT studies, both from within the voice and swallowing field and in the general MT papers, omit the specifics of assessment and treatment? Given the complexities and variabilities of MT intervention and the typical learning curve, such a study may not be the proper place for such specificity. However, through the dozens of papers reviewed for this book, I've yet to read recommendations for further study to learn such strategies. Authors and publishers may see such recommendations as promoting commercial ventures and present a conflict of interest. Still, only the savviest clinician can take the protocols and conclusions presented in MT papers and apply them in clinical practice. Or, perhaps only the more curious clinician will take what is presented in a study and attempt to use it in the clinical setting. Short of a well-defined protocol, many clinicians are reluctant to institute study findings. Personally, although the omission of technique specifics is personally frustrating, I see such vagueness as tacit permission to interpret, with the lack of specificity as a tacit admission that the details don't matter. However, I would imagine the original authors would disagree.

Establishing specific protocols is the norm in quantitative studies, with many of the above papers adhering to this norm. Such protocols will often mandate what muscles are tested and treated, what laryngeal posture/positioning is ideal and how to achieve that, etc., and possibly how long the stretch (input) be applied and general comments on the pressure level. While the goal of objectivity in research requires the establishment of such protocols, strict adherence to such protocols seldom occurs in day-to-day practice.

When attempting to follow the narrow confines outlined in a protocol-based study, are you strictly following all criteria? Is your patient a smoker or non-smoker? Male or female? Experienced singer or newcomer? Athlete or a person who is sedentary? If the study protocol was not done with the exact demographics and characteristics of the person sitting in front of you, are you faithful to the evidence and protocol? Are you following the mandates of evidence-based practice (EBP)? Who are your patients? Do they reflect the narrowed characteristics of any one study? Most certainly no, as most have multiple overlapping and unique characteristics not reflected in the limited results of any one study. So how can we apply specific evidence to such a diverse group? Do quantitative studies, presented from such narrow frameworks, allow us to claim adherence to the principles of the EBP model if we diverge from their strict protocols? Or are we failing to adhere to what are seen as our professional obligations?

There is ample evidence to show that flexibility in applying evidence is crucial to meeting the patient's individual needs (Cohen *et al.*, 2008; Kendall and Frank, 2018). Through the CauseHealth Project (Anjum *et al.*, 2020), a multidisciplinary team tasked with evolving the evidence-based model in ways that reflect the unique properties of the complex individual, progress is being made to allow more significant individual variation while remaining faithful to the intent of EBP. Much of how I see my model fitting into current understandings of the evidence while simultaneously allowing flexibility based on each patient's individual needs are framed from the

CauseHealth material. These allowances in protocol application and interpretation, flexibility for patient uniqueness based on interactor models (Jacobs and Silvernail, 2011), and understanding that RCTs and similar quantitative studies all cannot be applied to broader patient populations without flexibility.

Back to exploring current models. Describing another osteopathic intervention, Marszałek *et al.* (2012) branched off from the more commonly followed explanation for voice disorders, which he described as *occupational dysphonia*. He attributed changes in laryngeal position to increased muscle tension by broadening into descriptions that included the fascial (connective tissue) system. Common in physical therapy and massage frameworks, fascial or myofascial (muscular-fascial) narratives appear to have a unique science to explain both the problem and solution, as described here and by Barnes (1997). Causation of dysfunction is narrowed to tightness or injury to the fascia, and change is accomplished through techniques said to impact those fascial problems specifically. However, there is little external validation for most of those claims (Remvig *et al.*, 2008). Much like fascial techniques in the general physical therapy/massage world, the specific maneuvers involved in Marszałek's procedures seem to differ little from those demonstrated in the protocols within other studies mentioned here. While using near-identical techniques, one author states that it is shortened fascia being impacted, while another author says excess muscle tension is being affected. That is problematic.

Manual therapy and swallowing

Documented use of MT for issues explicitly relating to swallowing is newer and less represented in the literature, with a paper by Kang *et al.* (2016) appearing to break that barrier. Linking links between MTD and muscle tension dysphagia (MTDg), Kang utilized manual circumlaryngeal techniques for intervention. Along with chronic cough, MT intervention for dysphagia is frequently mentioned as a secondary benefit of treatment directed toward MTD, although little

research has been published specifically addressing this topic.

As a sidebar discussion, several salient points were revealed in a 2019 paper by Krisciunas *et al.* It was reported that 2% of SLPs who responded to a survey stated that SLPs should not be performing MT, although no reasons were given for these opinions. In that same paper, it was found that 45% of respondents perform MT on head neck (HN) cancer patients. Additionally, 79% received their training through continuing education, with only 10.4% receiving training through formal certification. I find this interesting, as although evidence for MT's utility in dysphagia and related is only now emerging, nearly half of respondents (44.5%) include MT in their treatment, as mentioned above. What drives these clinicians who are expected to perform from an EBP perspective? Is the available evidence sufficient to meet their criteria for inclusion? A higher percentage of SLPs use MT for dysphagia in a reactive manner, only after dysphagia complaints were stated or after tissue sensitivity from radiation had subsided, rather than in a preventative form. While not explicitly looking at dysphagia, Krisciunas *et al.* (2016) presented a novel case study, introducing manual therapy and myofascial release to the muscles of mastication, tongue, and entire perilyngeal region with patients undergoing radiation treatment. The treatments were found to lessen the patient's throat pain, contrary to its feared exacerbation. Awareness of such studies is crucial to maximize benefits and educate clinicians on the safety of MT applied during radiation and the possible benefits.

Burks *et al.* (2014) and Gugliotti (2011) both point to positive effects of the utilization of manual therapy with post-head neck cancer dysphagia, range of motion, and pain. Ateras and von Piekartz (2017) discuss changes in dysarthria, dysphagia, and dysphonia using neurodynamic technique (to be addressed in a future chapter), and DePietro *et al.* (2018) found improvement in dysphagia with the inclusion of laryngeal manipulation treatment. The papers mentioned above follow the path of most voice papers in that simplistic perspective regarding the mechanism of action is either repeated or not discussed.

In an upcoming chapter, I will discuss additional relevant points that implicate MT's utility in head neck cancer patients, including MT's influence on post-radiation inflammation.

Manual therapy and GERD

Using MT in treating gastroesophageal reflux disease (GERD) and reflux-related issues is contentious, at least when discussed one-on-one in my seminars. Studies and protocols show MT's efficacy in reducing GERD symptoms and reliance on proton pump inhibitor (PPI) medications (Baisakhiya *et al.*, 2017; Martínez-Hurtado *et al.*, 2017). The latter uses MFR as the intervention in the treatment of non-erosive GERD under the premise that "MFR treatments require the application of three-dimensional low-load pressures to the fascial tissue over extended periods to manipulate the myofascial complex and restore its optimal length" (p.1). The authors used techniques centered on the diaphragm region and more distant techniques and found that GERD symptoms reduced, quality of life scales improved, and there was a reduced PPI dosage for up to 4 weeks beyond the end of treatment, which was when final reporting was made. The authors then succumbed to the fatal flaw. "MFR techniques manipulate myofascial tissues—which form a network throughout every bodily tissue; thus, these protocols consider the human body a holistic and continuous whole. MFR, therefore, involves every muscular, osseous, and visceral tissue and helps to create space in which nerves, blood, and lymphatic vessels have improved maneuverability" (p.5). They went from showing positive outcomes when a specific intervention protocol was applied and conflated these findings with a speculative mechanism for change. Another limitation of this study is the all-or-none relationship with the protocol. No rationale was given for the inclusion of the seven techniques applied, nor was mention made if trials were presented with fewer of those sequences. When faced with such a study, the clinician may feel forced to use all seven or risk veering away from evidence-based practice (EBP).

Another study uses techniques identical to those presented in later chapters to cause an increase in lower esophageal sphincter pressure and a decrease in upper esophageal sphincter pressures, the opposite of which is seen as causative in GERD. Bitnar *et al.* (2021) define a simple protocol from which treatment can be based.

Manual therapy and posture

Posture is a common factor addressed in rehabilitative settings (voice and swallowing) and performance. Ross (1999) describes poor outcomes from local treatment to the tissues of the larynx if postural (cervical hyper-lordosis) issues are not addressed. Such postural views are scattered throughout many voice studies (Nacci *et al.*, 2012; Craig *et al.*, 2015; Cardoso *et al.*, 2017) and swallowing studies (Pauloski *et al.*, 1997; Alghadir *et al.*, 2017; Lumbau *et al.*, 2011; and Mathur *et al.*, 2019), with conclusions stated as validation of the belief that postural reorganization is effective, and in some cases, essential for resolution of voice disorders. Postural neutrality and the interventions needed to get there are considered necessary aspects of voice and vocal performance. However, such intervention is nuanced and multifactorial in terms of what goes into creating postural change and is more of a top-down (brain-based) process than a bottom-up (tissue-based).

The concept of “correct” posture is rife with bias, stereotypes, and overstated claims. Not everyone with less than ideal posture has poor swallowing, altered voice, pain, or diminished breathing capacity; many with close to perfect posture suffer from one or more of these conditions. To confuse the matter, when someone with a condition (voice, swallowing, breathing, pain) sees a health or fitness professional who identifies the problem as being due to poor posture, there are times when the interventions help. However, although the intervention was stated to address the postural deficit, any treatment is multifactorial and consists of various interventions and interactions, from exercise (strengthening) to stretching (lengthening) to behavioral strategies, all mixed in with a strong

dose of contextual factors. How the clinician changes posture does not follow a strict protocol as, much like the above dilemmas facing the various forms of MT for MTD, there are dozens of ways professionals address postural concerns with an equal number of thoughts on causation and therapeutic effect.

As a clinician working with patients representing a wide range of social, ethnic, and educational conditions, attempting to refute a patient’s firmly held beliefs on posture’s influence on their situation is complicated. Earlier in my transition from depending on tissue-based (fascial) narratives into broader perspectives of causation and impact, I struggled to “convert” posture-fearing patients. While I may have succeeded with a few, most were probably placating me, as deep-seated beliefs are difficult to change. Now I allow them their views. For one thing, I have not lived their life and do not know what went into their story. Their posture may play a role. Even if it does not, nearly any intervention, be it exercise-based, MT-based, or pure education, may be able to introduce postural changes.

Confounding posture fears are simplistic beliefs that there exists a posture (seated, standing, singing, swallowing, walking, running, etc.) that is optimal and that better vocal performance, ease in swallowing, and relief of pain can only be achieved if that posture is attained and maintained. But no one can assume and maintain a static posture indefinitely. In static standing, postural sway is normal. In sitting, shifting weight is a normal adaptation to stressors and discomfort. There is a saying in social media groups to which I belong, “the best posture is the next one you’ll assume.” The implications of this saying are that discomfort, and the need to move will supply you with endless opportunities to alter your body position as a reaction to the demands of the situation. Rigidly attempting to force your patient to achieve and hold your idea of ideal posture is bound to fail. Instead, allow them to see the benefit of assuming many different postures.

A good number of papers speak to postural influences on swallowing and voice (Cardoso *et al.*, 2020; Howard, 2011; Wilson Arboleda and Frederick,

2008), where alterations in postural alignment produce improvements in voice and swallowing. So, if posture can be relevant, can posture change with MT? A quick search on Google Scholar will reveal hundreds of citations showing the possibility through outcome-based studies. For instance, I routinely work with patients who find their head position altered, ribcage alignment improved, and stance changed from the interventions I provide. But even what seems like a singular MT intervention calls in other factors of effect. Consider that statement. Someone comes to me with a swallowing problem. They've been sent to me, a PT, by their SLP, based upon my available skill set. The SLP felt that the patient's forward head was implicated in their swallowing problem, and the patient came to me with an expectation that I could help. The clinician established placebo effects and contextual factors by telling the patient that their forward head is a problem and that I'm the right person to help them with the issue. Research on placebo shows that such an endorsement impacts outcomes (Fulton, 2015). I then do my work, using MT to change head alignment, and, afterward, my patient stands up. They feel a change. Possibly I stretched the tightness, altering tissue length (low on the plausibility scale), or relieving tension in nerve tunnels that were keeping the head in a forward state (possibly higher on the plausibility scale), or we provided an alteration from the sympathetic state (fight or flight) to a parasympathetic state (rest and relax), giving this person the option to choose a different head alignment (again, a plausible argument), or, with the combination of gentle manual handling, the patient was given the ability for their brain and nervous system to select a range of options to alter their swallowing through head position variability. No intervention is single-source.

Before moving on from posture, I want to broaden concepts of posture to include skeletal asymmetry. Poor posture, or deviation from what is viewed as ideal, can consist of asymmetry, typically in the sagittal plane (viewing from the front or back of the body). When viewed from the side (coronal or frontal plane), standing posture is said to be ideal when

an imaginary line strung from the ceiling will pass through the center of the ear canal, bisect the shoulder and torso, pass through the hips and pelvis, and fall finally just forward of the ankle bones. When viewed from the front or back, the ideal posture would have that imaginary line running head to toe, with equal representation on either side of the line. This large poster-sized image of perfect posture is displayed in every anatomy lab or health profession lecture hall, presenting professionals with ideals that will fail most people. To counter these perspectives, a researcher by the name of Bunnell tells my favorite story.

Scoliosis affects 2–3% of the population, with scoliosis defined as having a lateral curve of 10 degrees or more (Asher and Burton, 2006). Although there are wide-ranging views on corrective measures for scoliosis, ranging from bracing to surgery, exercises, and MT, none addresses the underlying structural bony changes that accompany scoliosis. Although measured via spinal x-rays in the frontal plane, scoliosis is a rotational spine deformity from various etiologies. With rotational changes to the spine, the skeleton reacts to these imbalances, as does the soft tissue, cartilaginous structures, and nervous system. When the spine twists, there is a range of adaptive responses that result, although not always in a predictable manner. The ribs attach (articulate) along the lateral edge of the thoracic spine, forward of the transverse processes, via facet joints (Figure 3.4). You can notice that in this image, there is asymmetry apparent throughout. The vertebra is rotated, and the ribcage and sternum turn as well. This image was drawn from a vintage anatomy photograph of a human cross section, which was stated to be representative of an “average” person. Notice the asymmetry from side-to-side. With scoliosis (or sub-scoliosis), rotation of the spine alters the rib position, causing one side of the back of the ribcage to distort outward. In contrast, the opposite side of the posterior rib cage will distort into a flattened state. Figure 3.5 shows the level in the body from which the cross-section was taken.

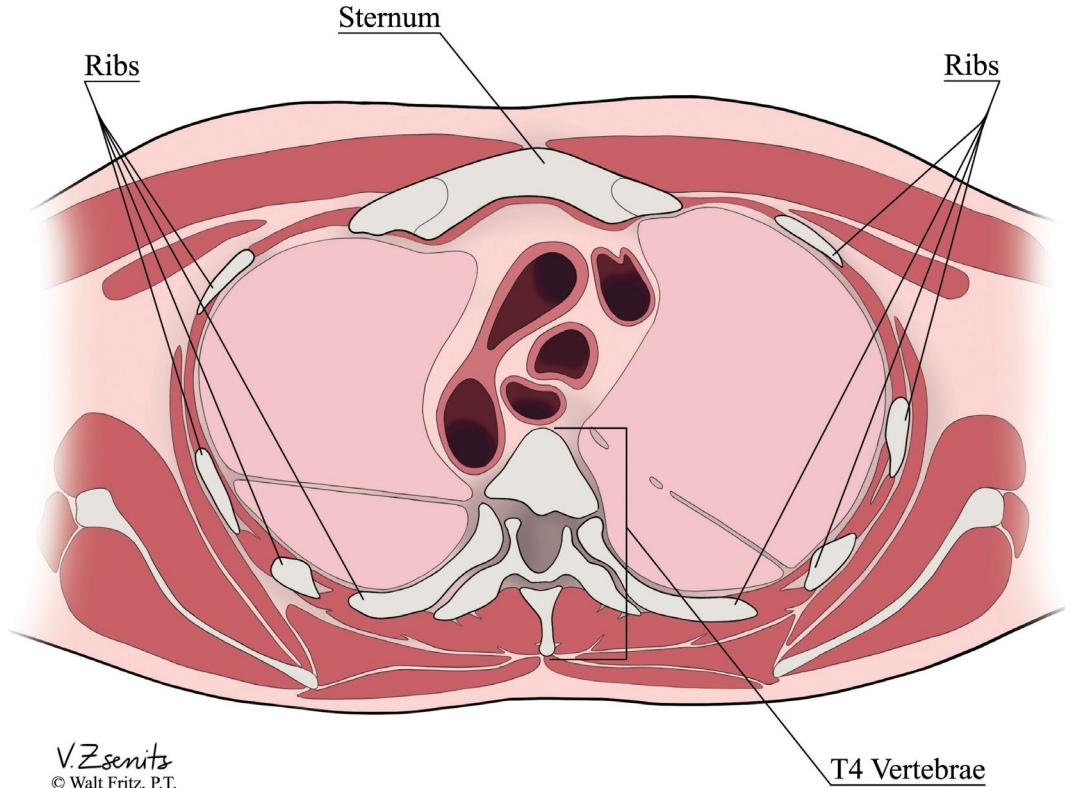


Figure 3.4 Cross-section at the T4 vertebra, showing adaptive responses that result from twisting of the spine.

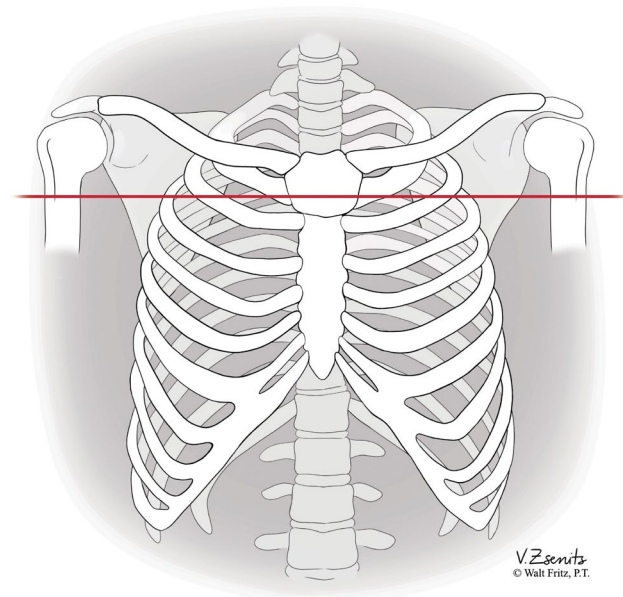


Figure 3.5 Level of Figure 3.4

Figure 3.6 (below), depicts a cross-section of the esophagus (bottom of the image) and trachea (upper part of the image). Though not showing the laryngeal region, the asymmetry is readily apparent. When

viewing actual images (x-ray, MRI, or drawings made to scale), asymmetry becomes quite plain. Idealized illustrations tend to be made from idealized anatomy, with symmetry more the norm.



Figure 3.6 Very low magnification micrograph showing the neck organs in cross-section, i.e., trachea, esophagus, thyroid gland, muscle, and adipose tissue. Image courtesy of Jose Luis Calvo

Such changes also reflect in the rest of the thorax, distorting the ribs and sternum. Severe scoliosis can significantly impair breathing, but even mild scoliosis alters the normally expected symmetry. As the rib cage distorts, shoulder position can be changed (high/low, forward/backward), as can tension patterns on the soft tissues. The cervical spine reacts to rotations forces from below, rotating away from its expected neutral alignment. As the neck rotates, tensional changes may be created through the hyolaryngeal complex, altering expected resting positions and soft tissue tension and possibly contributing to variations in muscle tension. All of these and other changes are common effects of scoliosis. Will these changes always impact function? Back to Bunnell.

In 1993, Bunnell conducted a study to determine the normalcy of spinal curves. Accepting that 2–3% of the population have a spinal curve of 10 degrees or greater, Bunnell sought to determine what degree of curvature prevailed among the remainder of the population (Bunnell, 1993 and Bunnell, N.D.). Using a large sample, he found that 98.4% had a spinal

curve, with only 2–3% reaching the defined scoliosis threshold of 10 degrees or greater. In essence, 98.4% of that sample had scoliosis or sub-scoliosis. Only 1.4% showed no lateral deviation. From Bunnell’s results, those with scoliosis will display the wide range of possible skeletal and soft tissue deformities listed above. Still, those with sub-scoliosis would show similar asymmetries to a lesser degree. Theoretically, 1.4% of the general population with straight spines would offer little to any postural asymmetries, while most people have mild to moderate to marked asymmetries. If the study indeed represented the general population well, as a good study should, then 98.4% of us have relatively fixed asymmetries. However, do we all suffer from problems from these postural deformities and asymmetries? Many will, but many more will not. Attempting to simplify any problem by pointing to a single variable, such as asymmetry or asymmetrical posture, as causative will doubtless fall short.

Bunnell’s findings become important as we move into the cervical and laryngeal regions (Figure 3.7).

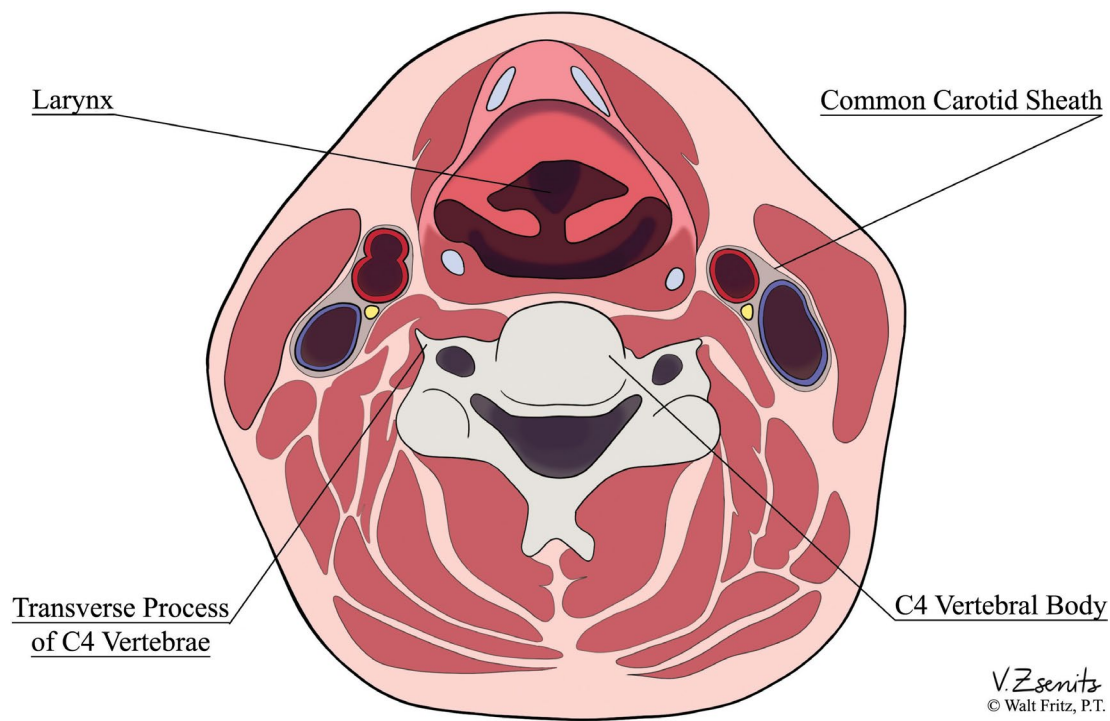


Figure 3.7 C4 spinal level. Note the asymmetry throughout the cervical region, including the larynx, vertebral body of C4, and bilateral transverse processes of C4.

This image quite easily shows asymmetry through the area. Even if you can't identify structures, one can see how the two sides of the body are not the same. When we palpate bilaterally for laryngeal tension, are we feeling true causation for voice or swallowing problems, normal asymmetrical tension due to normal underlying skeletal and muscular asymmetry, or might it be a combination? When working with a person with difficulty accessing breath and finding one side of their lower thorax seemingly tighter than the other, can this finding be known to be causative, or mightn't it be a factor? Many of us will make assumptions about such results, or our patients will do this for us, and we'll pursue treatment based partially on those findings. We often improve a situation, seemingly validating our hypothesis that asymmetry was implicated. But given that any intervention is never singular in impact, it is essential to remember the post hoc fallacy. As a point of reflection, early in my practice, I used postural assessment to help determine causation and treated along those lines, working to alter posture. I saw positive outcomes with this perspective. But over time, as my understanding of pain and movement dysfunction evolved, I paid much less attention to posture and continued to experience positive outcomes with those same dysfunctions. Such a statement is filled with potential bias, but functional improvement can come from and with a vast range of intervention styles.

Ross (1999), writing from the perspective of an osteopath, stated the necessity to evaluate and potentially treat the entire body to balance the laryngeal position (p.136). Given this perspective, any clinician who fails to examine and balance the whole body would fail to achieve correct laryngeal alignment. With that would be a failure to maximize function, which is, of course, incorrect. We find success with a nearly infinite number of hands-on and hands-off interventions. Corrective interventions for posture and symmetry, be it MT, exercise-based, or behaviorally-based, can be helpful, but other methods exist that are equally helpful. We come into these shared fields with underlying interests and biases. MT is simply one of many useful intervention strategies.

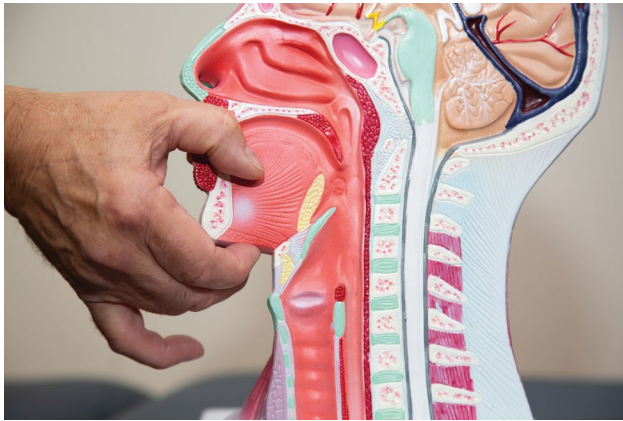
Social media is the current generation's version of the Roman Colosseum, where gladiators fought each other or wild beasts. Though I try to avoid such interactions, I often succumb to a good fight. I recently commented on a colleague's post regarding the manual therapist's role in improving mobility. I took issue with another person's comment. This person stated that until the soft tissue problem was "fixed," exercise was pointless. Instead of simply scrolling past, as any sane person would, I commented that manual therapists see the world from their biases and often feel that our work is the only work that works. But as a PT, I witness the positive results that my exercise-based colleagues have with people through exercise-only interventions. Pointing this out on that social media thread enflamed my colosseum opponent, who then proceeded to call me ill-informed and questioned my abilities as both a clinician and educator as, in his view, anyone who advocates for such nonsense was ill-equipped to treat patients or educate others. At that point, I had the good sense to scroll on, allowing my opponent the last word (a tactic I seldom follow). There will always be differing opinions on every problem. MT is one tool of many.

Manual therapy and breathing

Various models have been used for decades to support MT's use with breathing issues. Research from osteopathic and physical therapy literature outlines protocols for improvement in breathing capacity and performance in the face of a disease or disorder (Bennett *et al.*, 2021; Ciuryk *et al.*, 2020; Dutta, 2020; López-de-Uralde-Villanueva *et al.*, 2018; Marizeiro *et al.*, 2017; McLaughlin, 2009; Nair *et al.*, 2019). A review of these papers displays a range of explanatory narratives for causation and remediation. Still, there is little straying from those mentioned above, traditional tissue-based mechanisms of action. Methods range from lighter work styles to more aggressive soft tissue manipulation techniques.

In viewing Figure 3.3 (above), might it be possible to see how and why symmetry of breathing may be an impossible task to coach, train, or stretch?

7



Practical applications

What are we doing, and how to explain this work?

This sort of manual therapy (MT) approach may seem awkward to traditionalists. To newcomers, it may be confusing. What are we doing if we are not locally reducing muscle tension, stretching scar tissue, releasing fascia, ameliorating trigger points, or any of the other commonly held beliefs of what manual therapy does to the human? Why do changes occur?

Knowing how to answer such questions is an important asset, as you will get asked frequently. Such responses were simple to my older models, and

when I began transitioning to a blended, multifactorial model of impact, I noticed how much I struggled to answer coherently. Some of that difficulty was not having a depth of understanding of myself. However, as I learn about the various ways impacts are explained (as explained in previous chapters), it becomes an easier task.

In simplest terms, we are stretching our patients to see if that will reduce the symptoms or disorder or improve their function. It would also not be entirely inaccurate to state that inherent tightness *seems* to correlate with the conditions remediated with this sort of work. So, we are stretching tightness. But this

is where the tissue-based stories diverge, and many patients will come into our clinics, bringing along one or more of those stories. I seldom, if ever, try to pry their own beliefs from them, but I always try to insert another story. Such an insertion lets them know that there is uncertainty. Many will never change their views. I can attest to the difficulty of those changes.

A few possible simple scenarios might make your task simpler. Think of it as the classic elevator speech; you have 30-seconds to tell the story, so keep it short and straightforward.

Patient with a muscle tension dysphonia diagnosis: “My doctor said that there is too much muscle tension, and she wants me to see you for you to assess and treat it. How does that work?”

Me: “Well, some believe that the excess tension is altered directly in your neck, where I apply the manual therapy intervention. Others believe that my stretching at the neck is processed by your brain, which could be responsible for changes in tension.”

Patient: “You mean my doctor was wrong?”

Me: “No, there simply is not a consensus among professionals on how manual therapy impacts the tension. High muscle tension is sort of a symptom, one that is easy to classify and blame. There are many other explanations, all of which seem to have merit to varying degrees. Ultimately, even if I help you with this work, I may never know how we brought about those changes. Are you ready to give it a try?”

I am always cautious about making someone’s knowledge source sound incorrect. I will speak up only in the case of blatant factual errors. After all, everything

I’ve proposed earlier in the book is based on the best available information as of today. That could change tomorrow, making the explanations I find less palatable more feasible. No matter the reason given for the problem, I will try to insert a second possibility. Allow uncertainty to reign.

Patient with radiation-induced dysphagia: “My doctor said that the fibrosis is creating my swallowing problems, and it needs to be stretched. Can you do that? Can you stretch the fibrosis so that it stays that way?”

Me: Well, we certainly can try. Stretching takes on a lot of different meanings. Some believe that local stretching causes the fibrotic tissue itself to expand and change its impact on your swallowing. Others see the local stretching as input to your nervous system, which through some complex processes, may allow you to swallow easier without feeling like the local tissues are changing. There is evidence that local manual therapy stretching helps with the inflammatory process that may lead to a worsening of fibrosis. Often, people in your situation find that this intervention helps in various ways. Would you like to give it a try?”

I’m artful at evading answering certain questions, especially when we are trying to convey a point and lengthy discussions are not needed. I am typically okay with informing them that we are providing a stretch to what is tight, hoping that that stretching changes the problem in a lasting way. Using two possible explanations often is sufficient for many patients. I go into more depth if they are truly curious or skeptical of my “it could be more than one thing” statements. Practice how you might explain the uncertainty model to a patient.

I can vividly recall utilizing manual therapy for the first time with a patient who had minimal intelligibility, significantly reduced range of motion in his jaw, and who was dependent on a feeding tube due to dysphagia secondary to treatment for head and neck cancer. I had exhausted all of the traditional interventions often learned by speech pathologists for addressing these impairments with only minimal success. My patient had become isolated with limited social interactions due to both dysphagia and communication difficulties. He expressed his deep desire to improve his speech and return to an oral diet as he had been recommended to refrain from eating or drinking orally due to the risk of aspiration. I began to investigate other modalities I could utilize to help my patient, and patients with similar presentations of chronic dysphagia and communication deficits secondary to intervention for head and neck cancer. My search led me to the discovery of manual therapy – a modality I had only briefly heard of. In order to learn how manual therapy might be able to improve the lives of my patients, I sought instruction from Walt Fritz.

Learning how to utilize manual intervention in my work as a speech pathologist has been monumental in my career. Through Walt's mentorship, I realized that the patient-clinician dynamic has the potential to be an effective and powerful collaboration. Walt's instruction helped me assist my patients in dispelling false

narratives. In addition, it challenged my practices and helped me identify ways to reduce the risk of providing false narratives and the nocebo effect myself within my clinical practice. Incorporating manual intervention into individualized care plans allowed my patients to successfully improve their swallow function and communication abilities.

Hearing the success of my patients solidified my belief in the power of manual therapy and the benefits of patient-clinician collaboration. Some of the most memorable moments of my career are hearing success stories from my patients. I'll never forget receiving a phone call from a patient in tears because he had just finished eating a steak dinner with his family after a year of a diet of pureed consistencies. Another patient brought photos from his daughter's wedding into therapy for me to see. Not only was he able to drink during the toast, but he was also able to eat almost all consistencies during the reception.

Manual therapy was the vehicle by which these individuals were able to return to their lives. My clinical experiences and the success my patients have had utilizing manual therapy validate my belief in the value that is provided by this work.

Brooke Beilman, MS, CCC-SLP
Licensed clinician in both Kansas and Missouri

How and why to choose to use manual therapy as an intervention

(MT) is claimed by its most ardent supporters as suitable for all disorders, no matter the diagnosis. In the past, my claims would have been quite similar as well. Now, with the passing of time to better put into proper perspective all the material mentioned here, I would narrow that range a bit. As I teach this work to SLPs, voice clinicians, and other health professionals, I read how they share enthusiasm for a new work style. Such enthusiasm invariably calls on them to put it to use with nearly all their patients and often with

success. A critic of (MT) once wrote on social media that if you've already figured out what you will be doing with a new patient before you get a chance to meet them, your lens is so closed, your bias so strong, that you've already limited their potential. These comments were written as a criticism of those who utilize MT for all their interventions. The critic was a physical therapist who believes only in exercise-based interventions over MT ones. It was evident that this person was *calling the kettle black* or accusing others of what they do, although I let that potential argument slip past. For that therapist, the choice for exercise is always the one they will make, but claiming moral

superiority over an MT intervention, which was predetermined before another therapist sees the patient, is no different.

Given the variable nature of human responses to touch, designing a high-quality randomized controlled study is challenging. However, such studies can and have been done. In any study such as this, there should be a recognition that the bell curve of response to varying levels of pressure or styles of MT input may skew outcomes. These issues are difficult to factor into a quantitative study. For instance, if we were trying to determine if there is a difference in outcome after applying traditional manual circumlaryngeal treatment (MCT) vs. this slow, lingering style of MT with muscle tension dysphonia (MTD), the patient groups would need to be similar, through randomization. But can we adequately randomize and account for individual preferences and values sufficient to assure a study is accurate? Suppose a person was assigned to the MCT group but personally felt that aggressive pressures felt harmful. Might their response differ from someone in the same group who felt that quicker, aggressive force must be used with any sort of MT or massage intervention to make a change? Alternately, if the group receiving my kind of intervention again felt that quicker, aggressive pressures were necessary to remediate any problem, would they think that the treatment would be ineffective? Their input into the intervention negated any potential benefits compared to someone who preferred a light, more gradual stretching. Given this, the necessity of group selection can never account for every variable.

From this problem, might we expand the potential issues to a study that compares exercise to MT? Suppose a patient included in such a study has a

strong bias to negate or lessen the overall effects of an outcome based solely on their inherent preferences. Might this skew the results of this (or any) study? Factoring in human bias, values, and preferences is not well documented in MT research, but I suspect this will be the next wall to fall.

As I've mentioned previously, while my primary outlet for treatment is MT, movement-related activities are a substantial part of my work. While it may only take up a small amount of a typical session, I make it plain to every patient who sees me that the goal is not to loosen things (or whatever MT explanation one might be fond of) but to get them moving again. Their goals become mine, although I will ask them to narrow such goals to ones that are functionally based. I expect the same from every clinician who chooses to study with me, and I ask the same of you. The goal of this work is to help restore maximum function, no matter what is viewed as the problem. As such, we should be using every treatment strategy at our disposal to accomplish that goal. As I frequently repeat at every live seminar I teach, I see manual therapy only as one aspect of the work that we all perform. MT should not be seen as a standalone treatment. Much as manual circumlaryngeal treatment is used to allow the patient to gain access to a more normal voice, with tapering strategies combined with other approaches to enable the patient to gain hold of retaining those gains, this version of manual therapy is no different.

The balance of this book is devoted to exposing you to evaluation and treatment strategies for the remediation of voice, swallowing, and related disorders. While I do hope that you become an enthusiastic user of this work, I ask that you keep in mind the value of all our interventions at our disposal.

As I reflect on my experiences providing manual therapy for patients with oral-motor, swallowing, and/or voice disorders, the only thing I can say for certain is that I have never provided manual therapy the same way twice. Each patient has her/his own unique set of diagnoses, co-morbidities, personal history, and perception of physical touch as it applies to therapy. My outpatient voice patient with Muscle Tension Dysphonia is quite different than my inpatient with dysphagia post-extubation. Furthermore, two patients with the same diagnosis and similar experiences may have a completely different responses to the idea of a Speech-Language Pathologist providing manual therapy. Even with a specific patient, my hand placement, pressure, length of time holding a stretch, etc., will all vary between sessions and even within the session itself. What I have appreciated most about Walt's approach to manual therapy is the central focus of partnering with the patient to find what is beneficial. While I have the education and background to formulate a treatment plan, I cannot know what my patient is experiencing without honest feedback. I believe this is key to treatment progress.

Patients often surprise us with their feedback. For example, an individual with Muscle Tension Dysphonia reported the greatest sensation of discomfort in her hyoid region; however, she also reported adamantly not wanting her anterior neck/"throat" to be touched. This put me in a predicament in finding a starting point as to where to place my hands. Boundaries and permission preclude touch, so determining a location to begin manual therapy required a lot of listening on my part. Together, we found a place of relevance to address her symptoms. At the close of our session, she left with a homework plan, which included self-facilitated massage and stretching based on what was identified to be helpful to her during our time together. Although this individual's set of medical and personal circumstances would likely present ongoing challenges, she expressed feeling empowered and hopeful in addressing factors that impact her voice use and overall quality of life.

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8



How to begin: Evaluation and documentation

Evaluation

It should be noted that you will find concepts repeated in subsequent chapters. As the processes, and their explanations, deepen, the context in which certain aspects pertain is reiterated to better understand the process.

In various fields, evaluation/assessment is a prerequisite to treatment and becomes a necessary first step before any intervention can be done. We view the evaluation as essential to determine the current level of function, what deficits exist, establish objec-

tive determinants, and create a treatment plan. Patient input varies widely, as much of the evaluation might be seen as the domain of the clinician, needing to gather data without interference from subjective sources. Quite often, the entire first session is consumed by such data collection, with little intervention taking place until the second visit.

As I talk with clinicians who attend my seminars, I note a level of anxiety over the approaches described thus far, as they do not see a place for including

As a craniomandibular physiotherapist for more than 30 years, I tend to be referred the most challenging of complex craniomandibular cases. Many of these poor people have spent years, and in some cases decades, doing the rounds of specialists. Often, they have been assured that each specialist's pills/surgery/splint/electrical stimulation ..., the list goes on, will be their cure. Their hopes and expectations are often as low as their bank balance by the time they knock on my door. Apart from a long history and a weighty file full of reports, many of these patients share a common trait. They can point exactly to an area where they feel their problem lies. Often this area has been dismissed as: it 'isn't really where it could be coming from' or 'that's just referred pain, not the source,' or 'we need to address your blood results/scan report/psychological evaluation.' Walt Fritz's patient-centred approach provides us with an

excellent solution for these patients, which is as reasoned, evidence-based and appropriate as it is effective. It puts the patient firmly into the driving seat, which is a novel experience on the chronic pain merry-go-round. This is highly empowering for the patient who feels not only listened to but heard. The patient with heightened somatic awareness is able to precisely dictate the level and direction of manual pressure which feels beneficial to them. This level of control naturally leads to developing a safe and effective self-treatment protocol for them to continue with at home, thereby reducing reliance on external intervention, encouraging beneficial movement and a positive outlook.

Kerry Read APAM
Craniomandibular Physiotherapist, Brisbane,
Australia

objective testing, a necessary aspect of their current routine. In the United States, references are typically made to an insurance company's (payors) demands for rigorous data to support a treatment plan and daily notes. While we have an ethical mandate to objectivity, in my experience, few insurers read clinical notes. The clinician's supervisor typically dictates these demands for endless documentation of objective data. We all have our masters.

I've been an outlier for the past 20 years, working for myself in a solo private physical therapy clinic. I accepted only private pay patients in the earlier stages of that time frame. However, more recently, I have expanded my reach to see patients through third-party payors, including Medicare. My charted notes and evaluations are made by computer via an electronic medical record program, and I've had no problems receiving payment for my manual therapy services in the way I will describe. If you are working for an organization, your charting will look different, as the need to comply with the organization's norm will supersede any desire on your part to streamline the process.

My evaluation has always been a blended affair, where a considerable amount of treatment is mixed in on that first session. There was a time early in my private practice days when my evaluation would consist of carefully attending to biomechanical markers and postural landmarks to fulfill the mandate of the myofascial release perspective. I would even take photographs, ostensibly "before and after" treatment, to show the patient how much they'd progressed. I now see those photos as part of the sales pitch, although many patients required little selling. If they noticed improved function or less pain, I tried hard to correlate those improvements with the changes in their postural photos. Today, my approach is different. Given the evidence on the consistent inaccuracy of bony landmarks in the pelvis, one of the primary considerations of a myofascial release-style of evaluation and conceptual framework (Alexander *et al.*, 2020), or the questionable validity of manual laryngeal palpation as a means to objectively determine muscle tension (Khoddami *et al.*, 2014), I no longer have such trust in my previously revered evaluation tools. I also have drifted from the individual dictates of individual models. One model might insist that the pelvis must be balanced before any other work is performed, as, without that balanced pelvis, no lasting changes will

About the Author



Since beginning as a manual therapy educator in the mid-1990s, US-based physical therapist Walt Fritz has more recently evolved into teaching a unique interpretation of manual therapy for speech-language pathologists, registered dental hygienists, voice professionals, massage, physio- and occupational therapists, osteopaths, and related communities. His gentle, non-manipulative, and interactive approach advances views of causation and impact from historical tissue-specific models into a multifactorial narrative, leaning heavily on biopsychosocial influences. His principles apply to a broad spectrum of intervention models using a model of evaluation and intervention that encourages equality between patient and clinician, utilizing shared decision-making rather than the biomedical *clinician-as-expert* approach. Unlike traditional laryngeal and soft tissue manipulation, Walt offers the clinician and patient a more subtle approach that gives the receiver more time to assess its influence and relevance. This approach is often better tolerated than aggressive, manipulative forms of treatment and

aligns well with newer research findings, allowing the patient to frame the intervention from their preferences and values. Seeing the utility of manual therapy not as a standalone treatment but as an integral part of clinicians' more extensive work, Walt assimilates his approach into a wide range of treatment protocols. Walt presents his in-person workshops internationally through his Foundations in Manual Therapy Seminars. His website, www.WaltFritz.com, offers a range of online learning opportunities, and sees patients at his Upstate New York, USA clinic.

