medifab Client Data Assessment Form for Standing Frames User Guide

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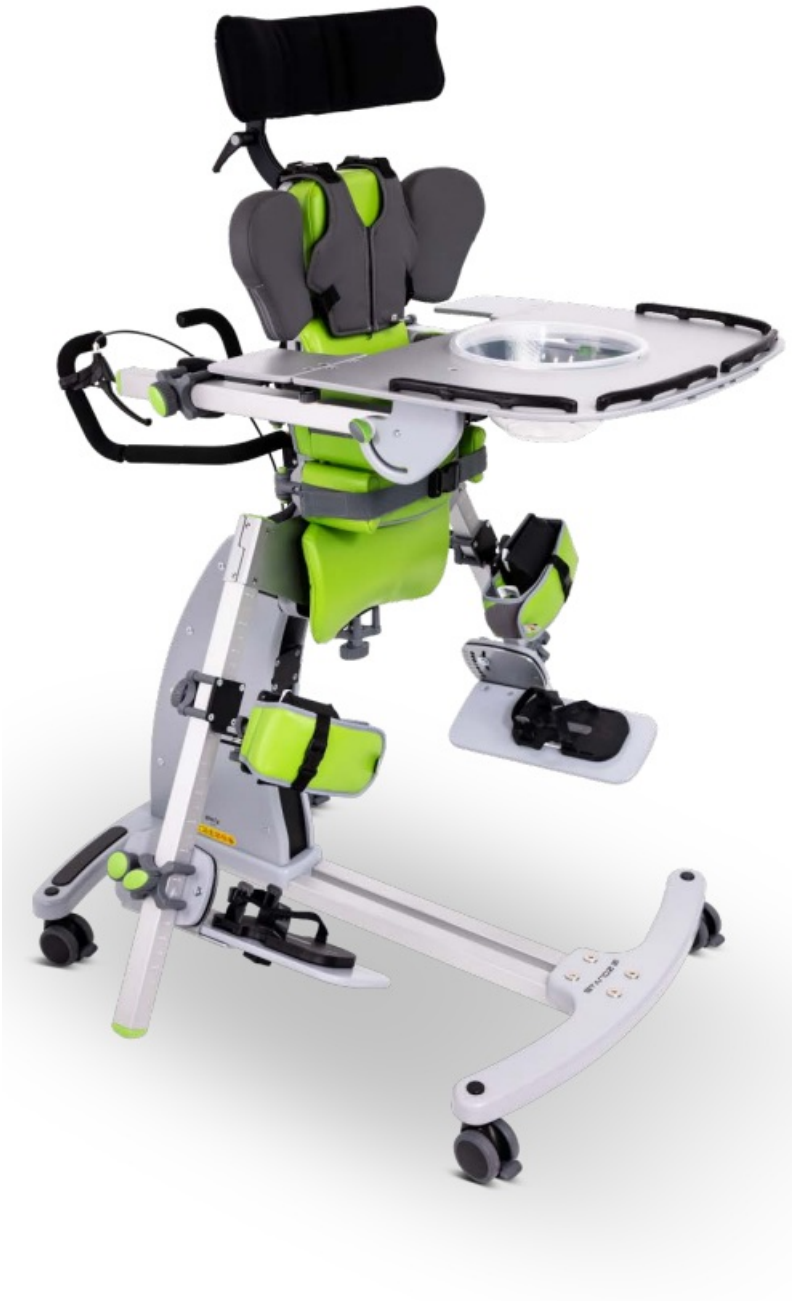

INSTRUCTION

Client Data Assessment Form for Standing Frames

What is the tool
The Medifab ‘Standing Frame Assesment Tool’ is designed to assist clinicians when assessing clients for prescription of a standing frame (SF).
The tool is intended to gather information in a systematic way, supporting clinicians with their own clinical reasoning to achieve the best outcomes for their clients. The structure of the tool is designed to consider the needs of the individual, ultimately using the information to support appropriate product selection for the client. Once completed, this tool compliments the report writing process by summarising necessary clinical data and information gained through its use.

Who is the tool for
Any therapist with knowledge and understanding of SF’s can use the tool to support assessments of their clients for a SF.
When combined with this intructional booklet, therapists less confident or familiar with SF prescription can be guided through the asessment process to achieve the best outcomes for their clients.

How was the tool developed?
The tool was developed based on clinical understanding and reasoning of therapists that work closely with SF products.
Whilst the tool is intended for information gathering only, inspiration has been taken from some validated outcome measures in some sections. Although different wording and structure has been used for the purpose of the tool, Medifab would like to acknowledge specifically:

- Posture and Postural Ability Scale (PPAS)
- Chailey Levels of Ability

The tool, along with this supporting document, have been developed to provide points for consideration based on clinical opinion and experience. The tool is designed to assist with assesment of the individual and formulation of a hypothesis based on their own unique circumstances. Any product selection should take into account all information relevant to the individual, including social and environmental circumstances.

Glossary of Abbreviations

- **AAC=** Augmentative and Alternative Communication
- **APT=** Anterior Pelvic Tilt
- **D/F=** Dorsiflexion
- **P/F=** Plantarflexion
- **PPT=** Posterior Pelvic Tilt
- **ROM=** Range of Movement
- **SF= S**tanding Frame

Medical History

Diagnosis & Condition

- Consider the client's diagnosis or diagnoses, are there diagnosis specific considerations or patterns of presentation that would be expected? E.g., CP GMFCS level 4 will likely have some head control when compared to GMFCS level 5.
- With understanding of the client's diagnosis, is there expected progression or regression in skills?
- In cases where future functional ability may not be known, does a multipositional SF need to be considered for future proofing of the SF? e.g., a young client who is still changing quickly with therapy input may need a SF that can be switched from supine to prone as they attain new skills.

Hearing, Vision and Communication
When using a SF with any client, especially for the first time, the experience can be scary and unfamiliar which can impact on standing success. Consider the communication needs of the client here to understand how they communicate best.

- How does the client communicate?
- Is there an impairment of hearing or sight that will impact on communication or awareness of what is happening during a trial?
- Are communication aids required to support communication with the client during the trial?

Respiration
Standing increases the cardiorespiratory demand on the body. Some clients may have reduced cardiorespiratory function or require monitoring at baseline. It is important to consider what monitoring/support may be required and the implications for standing activity.

- Is there any risk associated with increasing the demand on the respiratory or cardiovascular system?
- Does work of breathing need to be monitored during the trial?
- Does SpO2 need to be monitored during trial?

Sensation
Is there impairment to the client's sensation? If so, or if the client is unable to communicate pain/discomfort, care must be taken to monitor lower limb position and pressure during trial.

History of PI
Are there any active pressure injuries? If so, where are they? If there is an active pressure injury located around weightbearing structures (knees, ankles) consider postponing standing or trial until injury has healed.

History of Pain
Some clients experience recurrent episodes of pain or have a baselines level of pain which has already been investigated. This may be managed with certain strategies or medication. It is important to understand what is normal for the client, in order to monitor how standing impacts pain levels from their baseline.

- Are communication strategies required to monitor the client's levels of pain during a trial?
- Does the client use regular medication for the management of pain? Is it appropriate for this to be optimised for trial and SF use purposes?

  Pain of unknown cause, especially in the spine, hips, knees, and ankles, is cause for further investigation to rule out serious pathology and limit risk of injury.
- Is the client currently experiencing pain above what is considered normal for them?
- Are there any incidences of pain currently under investigation that will require postponement of SF use?

Hip Health
Clients, especially children, with certain diagnoses are at risk of increasing hip displacement, instability and eventually hip dislocation if not managed properly. The risk of hip displacement is related directly to the level of gross motor function the client has. In CP and CP like conditions, the most common group of clients who experience hip displacement, the incidence increases with GMFCS level from II to V.

As the hip is one of the biggest weightbearing joints engaged for standing, it is important to gain an understanding of a client's hip health. Clients may have their hips monitored as part of an ongoing review process, a specific example of this is CP surveillance which includes radiological monitoring of hip position.

Hip migration greater than 30% typically triggers referral to an Orthopaedic team for assessment and monitoring. A higher level of hip displacement (measured as migration percentage), or a high rate of migration percentage increase, can be cause for concern. Where this is the case, or where the current status of the child's hips are unknown or unclear, clearance from the Orthopaedic team or Paediatrician involved should be sought before SF use.

Previous Orthopaedic Surgery/Planned surgery
Surgery can affect the weightbearing status and weightbearing position a client is allowed to adopt by their Orthopaedic surgeon. In cases where surgery is planned for a client it is also important to understand why the surgery is being done as well as future implications for the client.

- Has the weightbearing status of the client changed due to recent Orthopaedic surgery?
- Planned future surgery which would impact on frame selection? Would there be a need for abducted standing in the future?

Fracture History & Known Osteoporosis
Incidence of non-traumatic fractures and osteoporosis is higher in clients who do not mobilise or weight bear regularly. Having a good understanding of a client's fracture history is important for appropriately risk assessing SF use.

- Are there any recent/healing fractures in any weight bearing bones?
- Is there significant history of non-traumatic fractures?
- Is there a history of osteoporosis?

  If yes to any of the above, seek Orthopaedic or Paediatrician clearance before standing

Subjective Assessment

Previous Standing Frame Use
Previous SF use and experience is useful in determining past success and challenges a client and family have encountered. In turn this can be used to inform future frame selection.
Understanding what was previously prescribed and what worked well for the client or family will build a list of criteria that may be important for future SF selection. Likewise understanding challenges or difficulties that were experienced will be important for selecting features of a SF that avoid barriers to successful standing intervention. Decisions on future equipment provision should never be based purely on what a client is currently using, however current equipment may be used to inform future selection. When taking this approach, it is important to know:

- Do caregivers feel the needs of the client have changed significantly since their current frame was prescribed? And if so, how?

Where is the new frame to be used?
Gaining an understanding of where a client will be using the SF will provide insight to environmental specific considerations, such as space or availability of hoist equipment. Understanding this will also impact on the training that may be required, e.g., if the client is planning to use their SF at school, training will be needed to support school staff with use of this new piece of equipment.
Transfers
How a client transfers normally at home or at school, and what assistance they require from their caregivers, is important to understand practicalities of using different types of SF.
e.g., A client who is fully dependant on others for transfers will likely need a supine SF or a frame that is configured to supine.

Current Orthotic Use
Orthotics are commonly used by clients when standing or weightbearing to provide stability & support. It is important to understand what orthotics a client currently has prescribed to them and when they are intended to be used.

Whilst knowledge of what a client has been prescribed is important, it is also necessary to understand the client's actual use of their orthotics, what barriers to use are, any upcoming/ ongoing review of their orthotics, and outcomes of any recent orthotist visits. This will inform feasibility of use of current orthotics as well as any anticipated changes for the future. e.g., a client may have bilateral AFO's which cause some marking when worn for a prolonged time meaning they have not been using them. Providing this support may be necessary for standing and so the client should be encouraged to use their current orthotics when standing whilst monitoring for redness and marking.

If there is a barrier to the client using their orthotics as prescribed, it is important to explore how this is being addressed for the future. Does the client have an appointment booked with their Orthotist? Are there already strategies in place to overcome identified barriers?

Client/Family Concerns
A thorough subjective assessment will reveal concerns a client or family have about use of a new SF. These concerns may arise during discussion of any of the above or below sections. It is important to make a note of these concerns to ensure they are addressed when appropriate. If not addressed or discussed, these concerns have the potential to become barriers to successful standing intervention for the client in the short &/or long term.

Examples of common concerns are:

- Lack of knowledge and training in how to use the frame
- Lack of understanding of the intended benefits from SF use
- Issues with previous SF or routine
- Concerns of a client's tolerance of standing

Client/Family Expectations
Understanding the goals a client and their caregivers have for SF use is vital to achieving the best possible outcome. Through this discussion, clients or their caregivers may highlight their expectations of using a SF or of the frame itself.

It is important to make a note of these expectations as these can inform product selection in the future. At times, expectations may also need to be addressed or managed where the expectations are unrealistic or not aligned between clinician and child/caregivers:

- Unrealistic expectations for a product
- priorities in selecting a product
- Understanding of the benefits SF use will give a client

Pelvis
If a client demonstrates an asymmetrical pelvic position, it is important to understand whether this position is reducible or non-reducible, in other words whether the position is flexible.
If the position is flexible or reducible to neutral the SF and the accessories selected should be able to achieve this correction. e.g., a client presenting with flexible pelvic rotation may benefit from a SF which offers de-rotational straps to correct the rotation. If the position is fixed or non-reducible then the SF and accessories selected should offer ability to accommodate this position.
It is important to consider pelvic tilt in relation to ROM findings of the hips and knees

- APT with loss of hip extension ROM can be indicative of hip flexor tightness/contracture. This is also indicated by a positive Thomas' test.
- For clients with hip flexion contractures a prone SF in prone tilt may assist in the reduction of the contractures by providing a passive stretch to the hip flexors
- PPT with loss of knee extension range/reduced popliteal angle is indicative of hamstring tightness and potential knee flexion contracture
- Presence of a knee flexion contracture may indicate the need for a SF with relevant accessories to accommodate the contracture

Hips
Understanding the available ROM a client has at their hips is crucial in establishing whether contractures are

present in particular muscle groups:

- Loss of range into hip extension, or inability to achieve a neutral hip position in the sagittal plane, can be indicative of hip flexion contractures
- A prone SF may be appropriate in cases of hip flexion contracture to promote stretch to the hip flexors
- Loss of range into abduction, or asymmetrical range into hip abduction, can be indicative of adductor muscles tightness/contracture.
- A SF that offers an abducted hip position may be beneficial with an aim to improve the abduction ROM.

Knees
Understanding the available ROM a client has at their knees is crucial in establishing whether knee flexion contractures are present. Presence of knee flexion contractures will require specific considerations for their management in a SF, typically with a supine configuration and using appropriate accessories to support the contracture.

Ankle
Assessment of ankle ROM is particularly pertinent when AFO's or similar orthotics are not being worn for standing. The available ROM a client has must be respected when considering the set-up of footplates or footboards on the SF, especially when a neutral ankle position isn't available.

Shoulder
Shoulder flexion ROM should be cleared when considering a prone SF with considerable prone tilt. Appropriate range must be available to achieve the prone tilted position.

Tone
Muscle tone, specifically spasticity and rigidity, will play a role in influencing SF prescription and use. Further understanding of spasms that a client may experience, as well as strategies to manage these spasms and patterns of tone will also be important to understand. Spasms that are brought on by certain triggers can be managed by efforts to reduce these triggers.
Things to consider during assessment of muscle tone:

- Is there any spasticity noted in muscles during examination? How will this impact on SF use and set up?
- What management strategies are in place currently to manage spasticity? (Botulinum, ITB, Serial casting, Stretching etc….) Is there potential to optimise outcomes of any interventions through SF use and set up?
- Is there associated loss of range with any spasticity noted?
- Spasticity present in hip adductors with associated loss of range may indicate need for abduction in standing
- How will overall tone influence weightbearing through standing frame set up?
- Some early research suggests weightbearing is optimised for clients with low muscles tone in supine, and minimally increased for clients with high muscle tone in prone.

Observation
This section provides opportunity for clinicians to record any observations they make during their assessment. These observations may be important to note as they will have implications on SF selection or set up. Common observations could be:

- Apparent leg length discrepancy which requires further measurement
- Asymmetrical trunk position (flexion and/or rotation) which may require accommodation or correction depending on whether the position is reducible or non-reducible
- Is the client able to achieve a neutral head position? If not consideration for appropriate head supports may be

required.

- Observation and pattern of spasms
- Observation of dystonia

Functional Assessment

This functional assessment section is designed to gather information only. This is not a repeatable tool to monitor change or progress and as such there is no standardised procedure for completing the functional assessment below. Clinicians should use the best/most comfortable practice available to them to assess the below 3 areas. Appropriate risk assessment is required before attempting to place a client into a seated or standing position. Clinicians must ensure the appropriate assistance is available to support the client if these positions are being assessed.

Head Control Ability

- **No Head Control:** Consider Supine/Multipositional SF
- **Controls head upright for 3 seconds:** Consider Prone/Multipositional SF
- **Controls head upright for 10 seconds or more:** Consider Prone/Multipositional SF

Sitting Ability

- **Dependant on external support from therapist or caregiver:** Consider Supine/Multipositional SF
- **Can sit with support of arms/propped only:** Consider Prone/Multipositional SF
- **Can sit independently without support of hands:** Consider Prone/Upright SF
- **Can sit independently and transfer weight:** Consider Prone/Upright SF
- **Able to sit independently and transfer to standing:** Consider Alternative WB (Walker or Gait Trainer)

Functional Assessment

Standing Ability

- Unable to stand with support: Consider Supine/Multipositional SF
- Can stand with support: Consider Prone/Upright SF
- Can stand independently without support: Consider alternate WB device/method
- Can stand independently & transfer weight/reach out of BOS: Consider alternate WB device/method

Key Measurements

Measurements required to select the most appropriate size SF for the client. Special consideration should be made for clients in periods of high growth such as under the age of 5 or around puberty/menarche.

Summary of Findings	

Priorities to be addressed with the product	What are the identified priorities from the assessment? These may be reported by the client, caregiver or be identified by the clinician. These priorities can also be broken down into functional (for the client) and environmental. Examples of some priorities are:
	• Functional
	  • Need for head support?
	  • Need for supine SF for transfers?
	  • Need for knee flexion contracture accommodation?
	  • Need for tray accessories to support upper limb function?
	• Environmental
	  • Need to be mobile (wheels)?
	  • Low level to floor?
	  • Height when horizontal for transfers?
	  • Any space restrictions to consider?
	  • Does the SF need to be used by multiple clients?

Benefits Intended	This section can be used to identify which benefits a client is expected to receive by their SF use. This can also be informed by the expectations of the clinician, client, and caregivers. Some benefits may be acknowledged due to current issues e.g., a client has lost hip range of movement and therefore a benefit of using a SF is to improve this range. In the same example, if there is no loss of range identified but the client is at risk of this being a problem in the future, this can be seen as an intended benefit by maintaining what the client already has. Clear understanding of the intended benefits is also crucial to inform report writing.
Possible barriers that may impact the success of the intervention	Acknowledging potential barriers early allows for them to be addressed and planned for effectively. By doing so these barriers can be overcome or accounted for which will limit their impact on SF success. Some common barriers are: • Previous poor tolerance of standing (need for correct dosing) • Considerations that require monitoring/ potential future contraindications such as hip health • Parents or caregivers lack of confidence in using a SF.

Requests for Trial

Opportunity to summarise what type of SF, brand, features, and accessories are wanted for a trial. Synthesis of all information within the assessment tool will provide systematic consideration of options available, narrowing down what is appropriate for trial.

Specific points of consideration for the frame/s required:

- Need for abduction if indicated as a priority, especially when asymmetrical hip ROM is present
- If multipositional, also confirm set up needed for trial (prone/supine)
- Opportunity to request particular model/brand
  - This can be beneficial where families have had previous positive experiences or negative experiences with particular brands of SF
  - **NOTE:** despite previous experience, the SF requested MUST meet the needs of the client first and foremost and never be based purely on brand.

Documents / Resources

	**medifab Client Data Assessment Form for Standing Frames** [pdf] User Guide Client Data Assessment Form for Standing Frames, Client Data Assessment Form