

<b>Medical Devices Practice Guidance Note</b>		
<b>Weighted Equipment – Blankets/Vests/Backpacks/Belts/Chairs (e.g. SenSit) – V02</b>		
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## 1 INTRODUCTION

- 1.1 Sensory processing is a neurological process that organises sensations from our body and environment within our central nervous system (CNS). Normal sensory processing provides the foundation that enables us to engage meaningfully and purposefully in a range of daily activities and it is a dynamic process between our abilities/disabilities and our environment. As we perceive, interpret, analyse and integrate sensory information, we gain knowledge about our body and environment, which forms an important basis for our learning, development, behaviour and emotional responses. Our ability to process sensory information is influenced by our environment, experiences, care giving and social support (Ayres 2005, Ayres 1974, Bundy, Lane et al 2002, Roley 2006, Spitzer and Roley 2001).

- 1.2 Some individuals can have difficulty processing sensory information and can benefit from the use of weighted equipment such as weighted blankets/vests to provide additional sensory feedback (Mullen and Champagne et al (2008), Walker and McCormack, 2002). The tactile and proprioceptive system provides an unconscious awareness of sensations from our skin, joints, muscles, tendons and ligaments and it provides a “map” of our body and environment and information relating to the position, direction and force of our movement. Proprioception is achieved through exerted pressure and resistance to movement and deep pressure touch can be used to alter arousal levels due to its calming and organising effect on the central nervous system. The therapeutic use of weighted equipment can be one method of providing deep pressure, tactile, proprioceptive input within the individual’s day as part of their total sensory programme (Murray-Slutsky and Paris 2005).
- 1.3 Occupational Therapists using the Ayres’ Sensory Integrative approach (Ayres 1974) first used weighted vests and weighted blankets with children and adolescents with learning disabilities, autism and pervasive developmental disorders. More recently, within mental healthcare settings, there has been a significant shift toward initiating the use of sensory modulation approaches (Champagne 2011) to increase the client’s ability to self-organise.
- 1.4 Allied Health Professionals (AHP’s) within Cumbria Northumberland, Tyne and Wear NHS Foundation Trust (the Trust/CNTW), use a ‘Sensory Strategies’ (Mullen & Champagne 2008) and do not practice as pure SI (Sensory Integration) therapists. Within CNTW the majority of Sensory Strategies are delivered by OT’s trained by the SI Network for UK & Ireland. Therapists do not meet the Fidelity Tool requirements of both structure and process as described by Ayres (Parham et al 2007). Sensory Strategies support the use of weighted equipment as an organising and calming strategy for the presenting situation.

## **2 AIM**

- 2.1 This protocol is set out to guide staff in the safe and therapeutic use of weighted equipment throughout the Trust. Firstly for Allied Health Professions (AHP’s), predominantly OT’s who provide a specialist assessment for the weighted equipment and for subsequent training for CNTW staff and carers on a case by case basis. Secondly for CNTW staff and carers who will be supporting the service user in the use of weighted equipment. It is based on the principles of sensory processing theory (Ayres 2005) and must be used in conjunction with the Royal College of Occupational Therapists (RCOT) Briefing papers on Sensory Integration (RCOT2013) and Weighted Blankets (RCOT2011).

## **3 OBJECTIVES**

### **SPECIALIST AHP ASSESSMENT**

- 3.1 An assessment for any manufactured weighted equipment must be undertaken by an Occupational Therapist (OT), Speech and Language Therapist (SALT) or Physiotherapist who:

- Has attended and completed the Sensory Integration Module 1 through the Sensory Integration Network UK and Ireland **and/or**
- Can demonstrate an equivalent level of specialist knowledge of Sensory Processing Theory **and**
- Is a Therapist who meets the minimum requirements above and receives professional supervision and specialist support via CNTW SI Clinical Interest Group.
- A Sensory framework has been developed providing evidence based intervention, sharing experience and knowledge. This conforms to the Royal College of Occupational Therapists assertion that OT's practicing in an area such as Sensory Integration must ensure that they are competent to do so (RCOT 2013). Three groups support CNTW AHP's Sensory Practice.  
Regional North East SI Special Interest Group  
Sensory Reference Group  
CNTW AHP Sensory Clinical Interest Group

3.2 Weighted equipment is one therapeutic tool which should be used within a wider sensory programme (Roley 2006); a programme which may also include other tactile and proprioceptive techniques to be used. The therapist must use their clinical judgement in relation to assessment, prescription and monitoring, however the following standards must be achieved.

3.3 The use of weighted equipment must never be individualised to meet the needs of the individual, considering the environment in which the equipment will be used and the competency of those who will be using it.

#### 3.4 **The Therapist must:**

- Complete a written risk assessment as per care plan in consideration of 4.3.
- All Specialist AHP assessments must read and refer to the RCOT/BAOT Briefing for Safe use of Weighted Blankets regarding timings.(RCOT 2011)
- Complete a sensory processing assessment deemed appropriate to the needs of the individual.
- Provide a written sensory programme of which the therapeutic use of weighted equipment is one tool
- Identify the clinical reasoning for the use of a weighted equipment
- Provide an appropriate type of weighted equipment to suit the needs of the young/person adult eg purpose of use, size, fabric, weight ratio
- Provide written guidelines regarding the therapeutic use of the weighted equipment
- Provide training to appropriate staff/family/carers regarding the safe and therapeutic use of the weighted equipment across all environments as appropriate

- Monitor and adapt the written sensory programme and weighted equipment guidelines as appropriate
- All CNTW staff and carers are expected to monitor the safe use of the weighted equipment on the wards/community settings
- Follow manufacturers' guidelines on cleaning of equipment, in conjunction with the Trust's policy, CNTW(C)23 – Infection, Prevention and Control
- Prescribed equipment must not be used with another client unless authorised by a therapist
- Weighted equipment is to be used with monitoring guidelines as per individual careplans.
- A copy of the weighted equipment PGN must be given out to carers/families and nursing staff

### **3.5 Therapists Guidelines: Percent Body Weight**

- Research on the safe use of backpacks has been applied to the use of weighted vests/blankets.(Olson and Moulton, 2004a, 2004b)
- Weight of the equipment should not exceed 10% of a child's body weight (Champagne 2011)
- Weight should not exceed 15% of an adult's body weight. 10% of an adult's body weight is the optimal safe weight suggested (Champagne 2011)
- Weights should be evenly distributed to ensure that no orthopaedic deformity, stress or misalignment occurs
- Therapists may choose to start off with a smaller weight percentage and increase to achieve the desired therapeutic outcomes
- Therapists must monitor change in a clients' body weight and adjust the weight accordingly

## **4 SUMMARY**

### **4.1 Weighted equipment is to be used for the following therapeutic purposes:**

- To support self-regulation
- To lower heightened state of arousal
- To reduce anxious or agitated behaviour
- To support attention and function during daily activities
- To support ability in initial settling phase of sleep only

### **4.2 The following observations should be made when using weighted equipment:**

- Over heating/susceptible to temperature changes

- Pallor changes e.g. flushing, paleness
- Changes in respiration
- Changes in behaviour that are deemed to be unusual
- Epileptic activity

#### 4.3 **Weighted Equipment must not be used:**

- Over the head or in any other manner that could lead to suffocation
- Without a full individualised assessment by a suitably qualified therapist
- As a method of restraint
- To restrict movement
- If there are respiratory, cardiac or circulatory concerns
- If the individual has a fracture or broken bone
- If the individual has broken skin or open wounds
- If the individual gains or loses significant weight
- To cover the individual's head when sleeping
- To cover an individual who may engage in risky behaviours that cannot be observed under the blanket

#### 4.4 **Other Deep-pressure Alternatives (not considered as weighted equipment)**

- Body suits/ Body Sok
- Vest wraps
- Tight undergarments
- Inflation devices e.g. squeeze vest

## 5 **MAINTENANCE CHECKLIST**

### 5.1 Weighted Equipment:

- Must be maintained in accordance with the Manufacturers' Guidelines
- Fabric may not be certified fire retardant therefore it should be kept away from naked flames, cigarettes and should not be placed on heaters or radiators.
- Should not be used if the material is ripped or if any weighted material comes out of the weights
- Should be checked every time before it is used to ensure its integrity
- Should be stored out of direct sunlight and when not in use it should not be accessible by the young person/adult
- Should be washed according to the manufacturer's instructions

## 6 ACKNOWLEDGEMENTS

- 6.1 This protocol has been compiled by Occupational Therapist Belinda Allman (trained in Sensory Integration Module 1 and 2) in consultation with the North East Sensory Integration Specialist Interest Group, the Sensory Integration Network UK and Ireland and CNTW Sensory Integration Reference Group. Current guidelines provided by weighted blanket manufacturers have also been considered.

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#### **Useful Websites:**

[www.ot-innovations.com](http://www.ot-innovations.com)  
[www.sensoryintegration.org.uk](http://www.sensoryintegration.org.uk)  
[www.spdfoundation.net](http://www.spdfoundation.net)