

## Appendix Q: Support Surface Selection Tool

The following is one method of how to select the appropriate support surface for people with pressure injuries. This is not an exhaustive list but rather an example of a tool for support surface selection identified within the systematic review, AGREE II appraised guidelines, by the expert panel or external stakeholder feedback.

The term “pressure ulcer” used in this appendix, refers to “pressure injury.”

### Support Surface Selection Tool

Adapted from: Norton, L., Coutts, P., Sibbald, R. G. (2011). Beds: Practical Pressure Management for Surfaces/Mattresses. *Advances in Skin & Wound Care*, 24(7), 324-332.

With an evidence-based practice background (scientific evidence, expert knowledge and patient preference), clinicians still require a user-friendly guide to translate this information into practice to potentially improve patient care outcomes. The Support Surface Selection Tool was first developed in 2008 to respond to this need. This tool stratified the types of support surfaces (active support surfaces and reactive support surfaces) based on the risk of the client developing pressure ulcers or the number of ulcers the client has and their mobility status. Feedback from clinicians indicated that while the tool was helpful, further assistance was required to select the additional features. As a result, two decision trees were created to help with the selection of specific features of active and reactive support surfaces.

As illustrated in Figure 1, a validated risk assessment tool should be utilized to determine the type of support surface required for an individual client (i.e. the columns across the top of the chart in Figure 1). If the client currently has pressure ulcers, choose the description in the first row which best fits the client’s clinical status. Note that the heels are excluded from this clinical description as heels are best managed independently from the bed surface (RNAO, 2007; NPUAP & EPUAP, 2009).

Next determine the client’s usual degree of mobility in bed by selecting the appropriate row listed down the side of the chart. Where the column of “risk” intersects with the row of “mobility”, a specific type of support surface is recommended; either a reactive support surface or an active support surface. If a reactive support surface is recommended, go to the reactive support surface decision tree (Figure 2). If an active support surface is recommended, go to the active support surface decision tree (Figure 3). Follow the decision tree to identify other specific features that may benefit the specific client. Recognize that this algorithm is not designed to replace clinical judgment, but is designed to assist the clinician to choose features for their client based on a comprehensive assessment of each individual client. Specific examples of support surfaces can be added in to the last box of the decision tree based on the surfaces available in your setting.

**Figure 1**

© Norton, Coutts, Sibbald		Validated Risk Assessment Score or Pressure Ulcer Description			
Ability to change position in bed (i.e. bed mobility)		<b>At risk</b> Or Redness present which fades quickly when pressure removed	<b>Moderate risk</b> Or Pressure ulcer (excluding the heels) where the client can be positioned off the ulcer	<b>High Risk</b> Or Pressure ulcer (excluding the heels) and redness over another area	<b>Very High Risk</b> Or Multiple pressure ulcers (excluding the heels) or the client can not be positioned off of an ulcerated area
	Total assist to change position in bed	Reactive Support Surface (non powered) (e.g. air/gel/foam overlay)	Reactive Support Surface (e.g. air/gel/foam overlay)	Active Support Surface Multi-Zoned Surface (e.g. alternating pressure mattress, rotational surface) or a powered reactive support surface (e.g. low air loss)	Active Support Surface Multi-Zoned Surface (e.g. alternating pressure mattress, rotational surface)
	Moderate assistance with bed mobility required.	Reactive Support Surface (non powered e.g. air/gel/foam overlay or high density foam mattress)	Reactive Support Surface (e.g. foam overlay with air section insert in the area of the wound)	Reactive Support Surface (non powered e.g. foam overlay with air section insert in the area of the wound)	Active Support Surface Multi-Zoned Surface (e.g. alternating pressure mattress, rotational surface)
	Client independent with or without a device with bed positioning (light assist may be required)	Reactive Support Surface (eg High density foam mattress)	Reactive Support Surface (e.g. foam overlay with air section insert)	Reactive Support Surface (non powered) (e.g. air/gel/foam overlay)	Active Support Surface (if the controls can be placed within the client's reach)

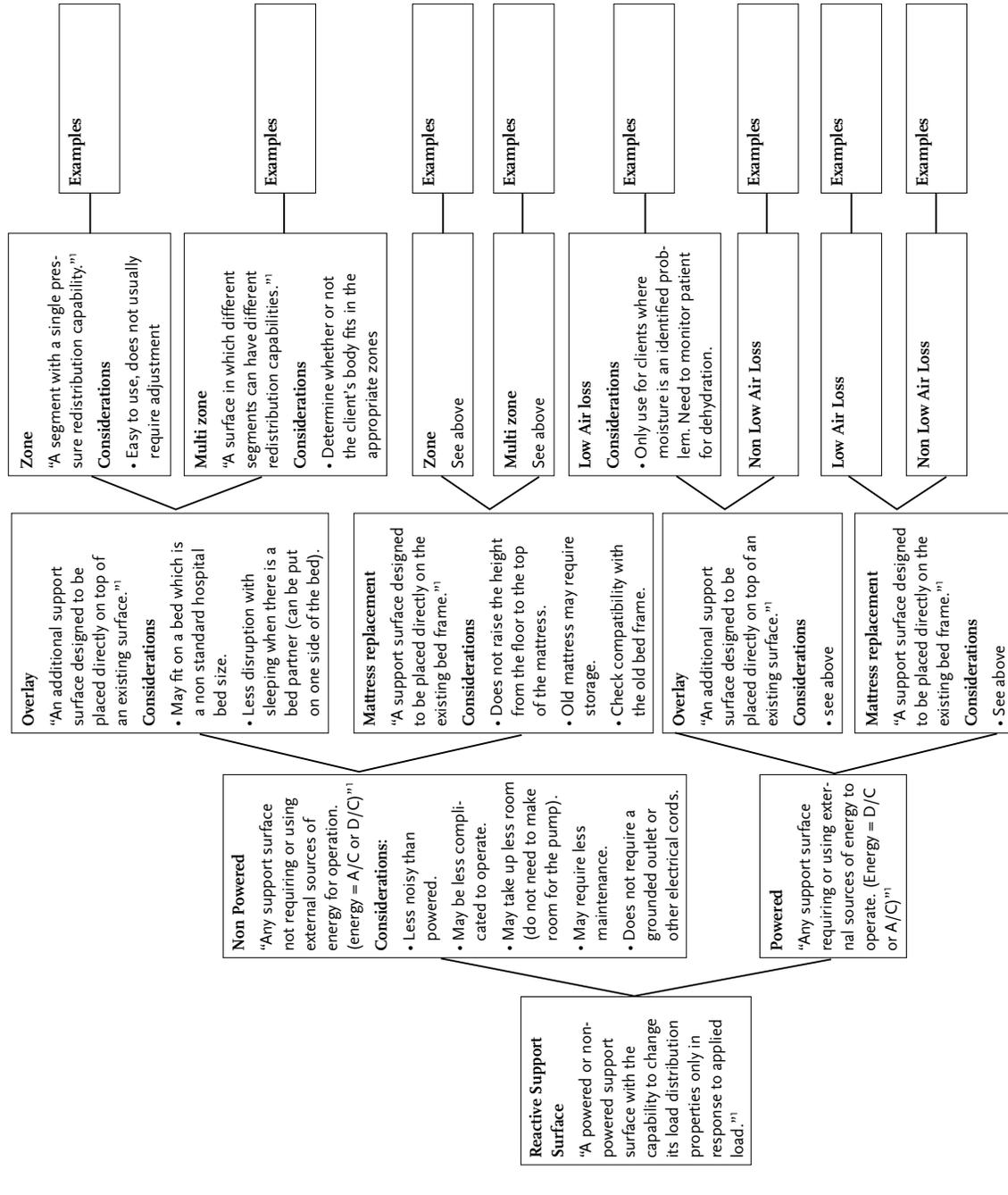
**Users guide:**

1. With a validated risk assessment tool, determine the patient level of risk OR grade the patients with ulcers based on the clinical descriptors
2. Assess the level of mobility in bed and follow the column and row intersection to determine the appropriate reactive or active support system
3. For more information on reactive surfaces see figure 2 and for more information on active surfaces see figure 3

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Figure 2 Reactive Support Surface

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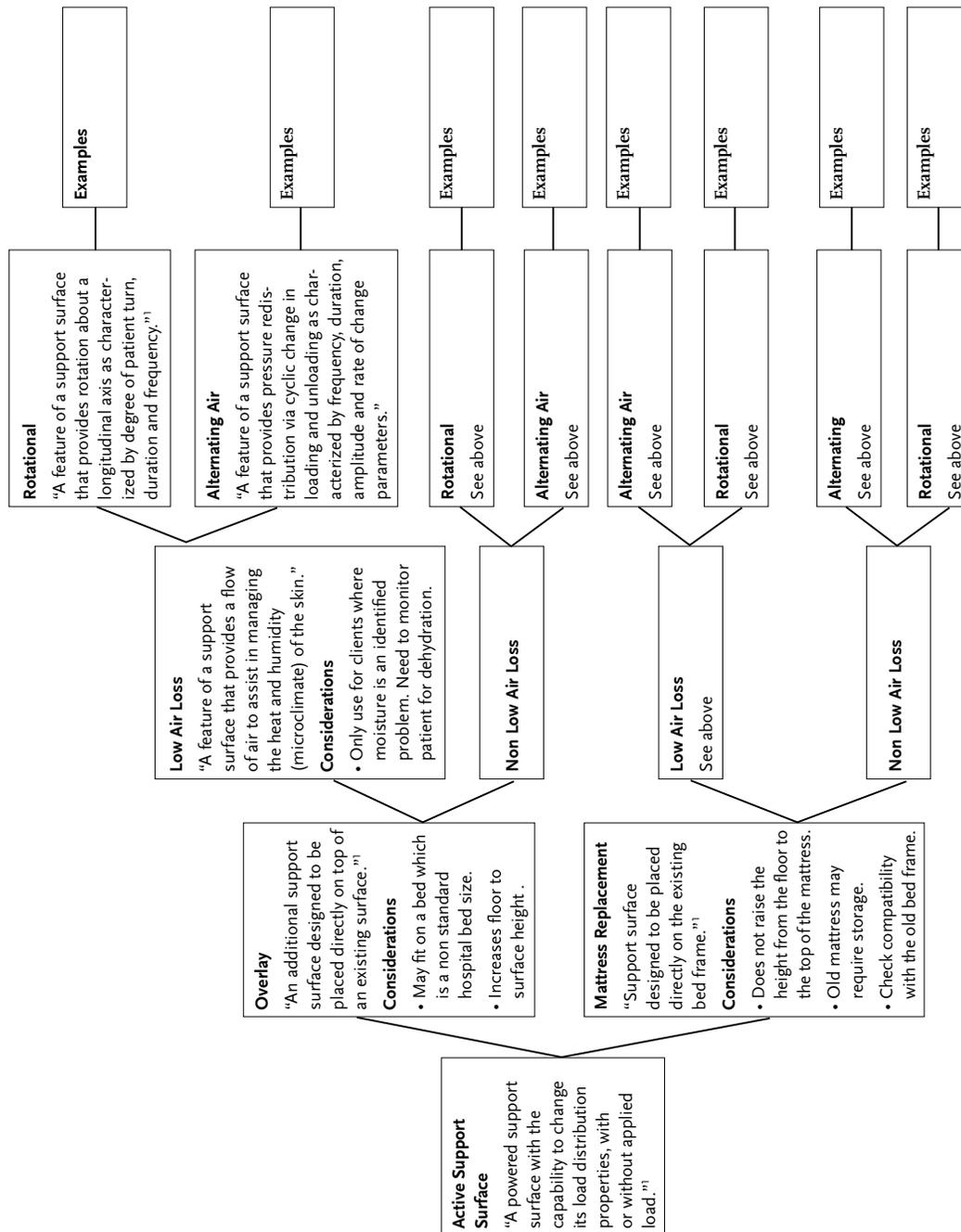


<sup>1</sup> National Pressure Ulcer Advisory Panel, Support Surface Standards Initiative: Terms and Definitions version 01/29/2007 [http://www.npuap.org/NPUAP\\_S3I\\_TD.pdf](http://www.npuap.org/NPUAP_S3I_TD.pdf). Accessed 03/21/ 2007.

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Figure 3 Active Support Surface

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<sup>1</sup> National Pressure Ulcer Advisory Panel, Support Surface Standards Initiative: Terms and Definitions version 01/29/2007 [http://www.npuap.org/NPUAP\\_S3I\\_TD.pdf](http://www.npuap.org/NPUAP_S3I_TD.pdf). Accessed 03/21/ 2007.

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