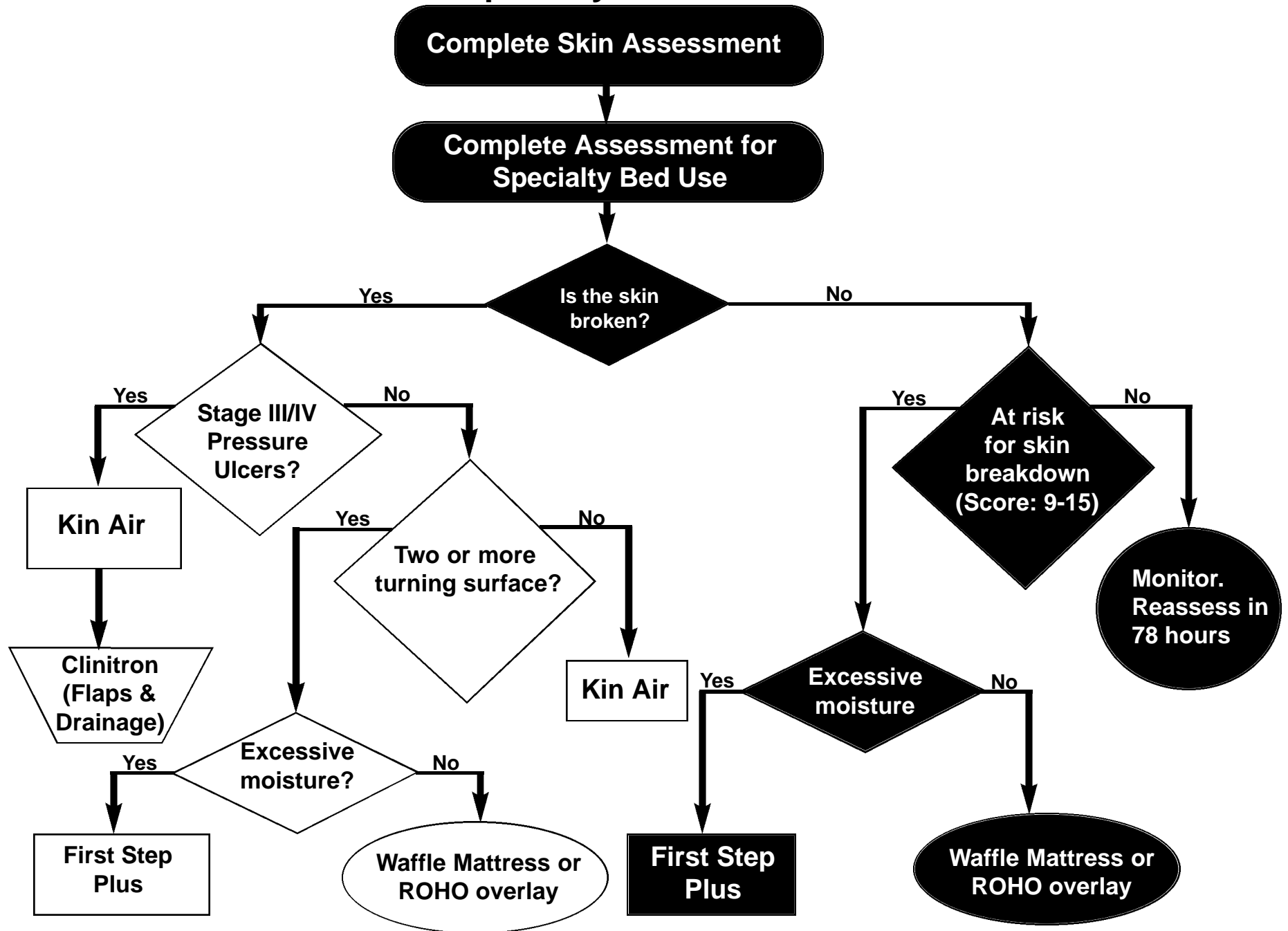


# What Specialty Bed is Needed?



# PRESSURE ULCERS PATIENT OUTCOMES ON A KINAIR BED OR EHOB MATTRESS

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**PURPOSE:** The purpose of this research was to evaluate prevention of pressure ulcers as an outcome among high-risk patients. This study addressed the following research questions: 1. What is the demographic profile of the patient at high risk for pressure ulcer development in a large military hospital? 2. Is there a difference in the number of pressure ulcers or the seriousness of pressure ulcers that develop among high-risk patients when KinAir low air-loss specialty beds are used compared to EHOB Waffle air mattress overlays? 3. Is there a difference in costs related to pressure ulcer development among high-risk patients when placed on KinAir beds compared to EHOB Waffle air mattresses?

**SAMPLE:** Over a 14 month period, 123 adult volunteers without a pre-existing pressure ulcer, assessed as "high risk" (Braden Risk Assessment Score  $\leq$  12), were enrolled in the study. Most patients were: greater than 60 years old, immobile, incontinent, assessed as having fragile skin, and in a critical care unit for part of their hospitalization.

**DATA COLLECTION METHODS:** A quasi-experimental, two group design was used. Eligible patients were randomly assigned to either the EHOB Waffle air mattress or the KinAir bed after informed consent was obtained. Data collected included demographic characteristics, skin assessments every other day, laboratory data, Braden scores, comorbidities, length of stay (LOS), and costs associated with the surface and pressure ulcer treatment. Data were collected until the patient was discharged or was assessed to be no longer "high risk."

**DATA ANALYSIS METHODS:** Data were entered into SPSS and analyzed using survival analysis and measures of central tendency.

**FINDINGS:** Most pressure ulcers developed within the first 14 days of entry into the study. 12(1 Stage I, 11 Stage II) pressure ulcers developed in the EHOB group (n=61) while 8 (3 Stage I, 3 Stage II, 2 eschar) pressure ulcers developed in the KinAir group (n=62). There was no statistically significant difference between the two surfaces in reduction of pressure ulcers. No lengths of stay were increased due to pressure ulcer development. However, costs for pressure ulcer prevention and treatment were statistically different when comparing the surfaces (p=.017).

**IMPLICATIONS:** A Specialty Bed Decision Tree, based on this research, was developed to guide clinicians in the selection of pressure-reducing surfaces. Before this study all 123 high-risk patients would have been placed on KinAir beds. With 61 patients placed on the EHOB overlay, \$59,000 in bed rental fees were saved. **CONCLUSIONS/RECOMMENDATIONS:** Patients on either surface were more likely to develop pressure ulcers if they had hypertension and weighed <160 pounds. For most high-risk patients a low-tech, less expensive mattress overlay is as effective as a high-tech, high-cost specialty bed. Use of a wound care nurse as a gatekeeper for insuring quality care and efficient use of resources is recommended.

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