

Specification of Competency Standards
for the Elderly Care Service Industry
Unit of Competency

Functional Area - Clinical Care

Title	Design Mobility Devices
Code	110799L5
Range	This Unit of Competency is applicable to practitioners who provide assistive mobility devices for the elderly persons in the elderly care service industry. The application requires the demonstration of in-depth expertise or theoretical knowledge in a range of technical, professional or managerial working environments, and its execution requires careful thinking, critical analysis and decision-making skills. Practitioners should be able to assess the elderly's travel needs and design suitable and feasible mobility devices.
Level	5
Credit	6 (For Reference Only)
Competency	<p>Performance Requirements</p> <p>1. Relevant knowledge on designing mobility devices</p> <ul style="list-style-type: none"> • Understand the definition, philosophy and purpose of travel, such as: <ul style="list-style-type: none"> ○ Indoor activities ○ Outdoor (in-community) activities ○ Outdoor (outside community) activities, etc. • Understand the purpose of designing mobility devices, such as: <ul style="list-style-type: none"> ○ Strengthening indoor self-care ability ○ Strengthening community participation and integration ○ Strengthening interaction with people, etc. • Maintain good sitting or walking postures • Understand the types of mobility aids, such as: <ul style="list-style-type: none"> ○ Taxi ○ Three/four-legged crutches ○ Walking frame ○ Walker with reel ○ Auxiliary shopping cart ○ Wheelchair ○ Other special equipment or modified equipment that help with travel, etc. • Understand the evaluation items needed to design mobility devices, such as: <ul style="list-style-type: none"> ○ For the elderly: measure muscle strength, joint mobility, endurance, skin condition, pressure distribution, biomechanical evaluation, cognitive ability when using the equipment, daily living self-care ability ○ Environmental Factors: specify the size of living space and room distribution, outdoor environment, community environment, etc. ○ Other factors: family support, financial ability, the elderly's willingness to use the aid • Understand the factors that need to be considered when designing mobility devices, such as: <ul style="list-style-type: none"> ○ Structural complexity ○ Appearance ○ Comfort ○ Affordability ○ Whether the elderly can use the aid under instruction ○ Whether the related aid is easily obtainable, etc. • Understand the normal body structure of a human, such as: <ul style="list-style-type: none"> ○ Anatomy and physiology ○ Human body kinesiology

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	<ul style="list-style-type: none"> ○ Human body ergonomics, etc. ● Understand the skills of designing mobility devices, such as: <ul style="list-style-type: none"> ○ Drawing designs ○ Choosing suitable production materials ○ How to make modifications to the aid, etc. <p>2. Design mobility devices</p> <ul style="list-style-type: none"> ● Assess and measure the basic physical abilities and self-care abilities of the elderly ● Analyze the abilities of the elderly and the reasons for their difficulties, such as: <ul style="list-style-type: none"> ○ Insufficient joint mobility ○ Muscle weakness ○ Motivation for travel ○ Incompatibility of environment and travel equipment, etc. ● Suggest and design suitable mobility devices for the elderly based on the relevant assessment results ● Design and produce related mobility devices for the elderly, and test their safety ● Continue to monitor the elderly's use of mobility devices and identify areas for improvement, such as: <ul style="list-style-type: none"> ○ Direct observation ○ Family's report ○ Staff's report, etc. ● Regularly review the use of mobility devices to find areas for improvement to suit the abilities and living environment of the elderly <p>3. Exhibit professionalism</p> <ul style="list-style-type: none"> ● Ensure that mobility devices can be designed based on assessment results, measurement data and data integration ● Ensure that the appliance is used by the elderly only after testing ● Establish a regular inspection period to ensure that the designed travel aid can be used in response to changes in the conditions of the elderly and their environment
Assessment Criteria	<p>The integrated outcome requirements of this Unit of Competency are:</p> <ul style="list-style-type: none"> ● Able to design suitable mobility devices for the elderly according to the collected the assessment data, and the consideration elements of the design of the mobility devices; ● Able to correctly design, purchase, and test mobility devices for the use of elderly and their caregivers; and ● Able to set standards for the use on mobility devices based on the integrated conditions of use by the elderly, and the combined opinions of caregivers.
Remark	