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| **Supplementary file 1.** The Taiwan Geriatric Emergency Department Guide (2nd edition)**Table 1.** Seven domains of Taiwan Geriatric Emergency Department Guide\* |
| 1. Interdisciplinary team
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| 1. Education
 |
| 1. Equipment and supplies
 |
| 1. Environment
 |
| 1. Care protocol
 |
| 1. Quality indicator
 |
| 1. Monitor indicator
 |

\*Refer to the American College of Emergency Physicians Geriatric Emergency Department Accreditation [https://www.acep.org/globalassets/sites/geda/documnets/geda-criteria.pdf](https://translate.google.com/translate?hl=zh-TW&prev=_t&sl=zh-CN&tl=en&u=https://www.acep.org/globalassets/sites/geda/documnets/geda-criteria.pdf)

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| **Table 2.** Interdisciplinary team\* |
| **Grade** | **Level 1****(Elementary)** | **Level 2****(Advanced)** | **Level 3****(High-level)** |
| 1. At least one physician who has received the training specialized in geriatric emergency medicine†‡
 | 🗹 | 🗹 | 🗹 |
| 1. At least one nurse who has received the training specialized in geriatric emergency medicine†
 | 🗹 | 🗹 | 🗹 |
| 1. Physician champion/medical director
 |  | 🗹 | 🗹 |
| 1. Case manager (or transitional care nurse) appear ≥ 40 hours a week
 |  | 🗹 | 🗹 |
| 1. Interdisciplinary team members ≥ 2 types§
 |  | 🗹 |  |
| 1. Interdisciplinary team members ≥ 4 types§
 |  |  | 🗹 |
| 1. Team meeting once every 3 months at least
 | 🗹 |  |  |
| 1. Team meeting once every 1 month at least
 |  | 🗹 | 🗹 |
| 1. At least one hospital chief (above the deputy superintendent level) supervises the geriatric emergency department
 |  | 🗹 | 🗹 |
| 1. Participation of patients or their family members in quality improvement meetings
 |  |  | 🗹 |

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†See Table 3 for the requirements for the 8 training aspects of geriatric emergency medicine.

‡Those who have been board certified as geriatricians by Taiwan Association of Gerontology and Geriatrics meet the criteria of training of geriatric emergency medicine because their training course includes all the contents.

§Interdisciplinary team members include geriatrician, geriatric psychiatrist, pharmacist, social worker, physical therapist, occupational therapist, dietitian, palliative hospice specialist, and volunteer.

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| **Table 3.** Education\* |
| **Grade** | **Level 1****(Elementary)** | **Level 2****(Advanced)** | **Level 3****(High-level)** |
| Physician, nurse, and case manager (or transitional care nurse) must have 8 aspects of training† |  |  |  |
| 　At least one physician, one nurse, and one case manager meet the training requirements | 🗹 | 🗹 | 🗹 |
| 　50% of team members meet the training requirements |  | 🗹 |  |
| 　75% of team members meet the training requirements |  |  | 🗹 |

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†The 8 aspects of training include: (1) screening and evaluation methods in geriatric emergency care (for example: 4Ms model‡); (2) atypical presentations and multi-comorbidities; (3) acute functional decline; (4)) geriatric trauma (including falls and fractures); (5) cognitive and behavioral problems (including delirium, depression, and dementia); (6) medication management (including polypharmacy and potentially inappropriate medications); (7) transition of care (including inpatient transfer, discharge transfer, health education, and follow-up); (8) hospice and palliative care.

‡Age-Friendly Health Systems: Guide to Using the 4Ms in the Care of Older Adults [http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Documents/IHIAgeFriendlyHealthSystems\_GuidetoUsing4MsCare.pdf](https://translate.google.com/translate?hl=zh-TW&prev=_t&sl=zh-CN&tl=en&u=http://www.ihi.org/Engage/Initiatives/Age-Friendly-Health-Systems/Documents/IHIAgeFriendlyHealthSystems_GuidetoUsing4MsCare.pdf)

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| **Table 4.** Equipment and supplies\* |
| **Grade** | **Level 1****(Elementary)** | **Level 2****(Advanced)** | **Level 3****(High-level)** |
| Courtesy glasses | 🗹 | 🗹 | 🗹 |
| Hearing assist devices | 🗹 | 🗹 | 🗹 |
| Mobility aids (crutches, wheelchair) | 🗹 | 🗹 | 🗹 |
| The following equipment and supplies ≥ 3 types |  | 🗹 |  |
| The following equipment and supplies ≥ 6 types |  |  | 🗹 |
| 1. Seated or recumbent weight scale
 |  |  |  |
| 1. Pressure-ulcer reducing mattresses and pillows
 |  |  |  |
| 1. Bedside commodes
 |  |  |  |
| 1. Disposable or condom catheters
 |  |  |  |
| 1. Low bed
 |  |  |  |
| 1. Reclining arm chair
 |  |  |  |
| 1. Others (i.e., the geriatric emergency department may provide equipment and supplies not list above as needed)
 |  |  |  |

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| **Table 5.** Environment\* |
| **Grade** | **Level 1****(Elementary)** | **Level 2****(Advanced)** | **Level 3****(High-level)** |
| Available food and drink  | 🗹 | 🗹 | 🗹 |
| Large analog clock | 🗹 | 🗹 | 🗹 |
| Wheelchair accessible toilet | 🗹 | 🗹 | 🗹 |
| The following aspects of environment ≥ 3 types |  | 🗹 |  |
| The following aspects of environment ≥ 7 types |  |  | 🗹 |
| 1. Adequate handrails (e.g., double handrails)
 |  |  |  |
| 1. High quality signage and way-finding
 |  |  |  |
| 1. Availability of raised toilet seats
 |  |  |  |
| 1. Proper lighting
 |  |  |  |
| 1. Efforts at noise reduction
 |  |  |  |
| 1. Non-slip floors
 |  |  |  |
| 1. Each bed can provide 2 chairs
 |  |  |  |
| 1. Others (i.e., the geriatric emergency department may provide the aspect of environment does not list above as needed)
 |  |  |  |

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| **Table 6.** Care protocol\*† |
| **Grade** | **Level 1****(Elementary)** | **Level 2****(Advanced)** | **Level 3****(High-level)** |
| At least 1 care protocol  | 🗹 | 🗹 | 🗹 |
| The following care protocols ≥ 10 types |  | 🗹 |  |
| The following care protocols ≥ 20 types |  |  | 🗹 |
| 1. Evaluation, referral, and follow-up of delirium (e.g., DTS, bCAM, and 4AT)
 |  |  |  |
| 1. Evaluation, referral, and follow-up of dementia (e.g., Ottawa 3DY, Mini Cog, SIS, and Short Blessed Test)
 |  |  |  |
| 1. Evaluation, referral, and follow-up of functional decline (e.g., ISAR, AUA, interRAI Screener, and EGA‡)
 |  |  |  |
| 1. Evaluation, referral, and follow-up of fall (including activity assessment, such as Timed Up and Go Test)
 |  |  |  |
| 1. Collaboration with pharmacist for medication reconciliation
 |  |  |  |
| 1. Minimizing potentially inappropriate medications (using Beers' criteria or a plan based on hospital characteristics)
 |  |  |  |
| 1. Hospice and palliative care
 |  |  |  |
| 1. Discharge follow-up solutions (e.g., telephone follow-up and video follow-up)
 |  |  |  |
| 1. Service of assisted medical care and follow-up in the community
 |  |  |  |
| 1. Referral for geriatric clinic (e.g., comprehensive geriatric assessment clinics, fall clinics, and memory clinics)
 |  |  |  |
| 1. Referral for follow-up of elderly abuse, neglect, and abandonment
 |  |  |  |
| 1. Pain control
 |  |  |  |
| 1. Geriatric psychiatric consultation
 |  |  |  |
| 1. At least three order sets for common geriatric emergency department presentations developed with particular attention to geriatric-appropriate medications and dosing and management plans (e.g., delirium, hip fracture, sepsis, stroke, and acute coronary heart disease)
 |  |  |  |
| 1. Standardization and minimizing use of urinary catheter
 |  |  |  |
| 1. Minimizing fasting time and enhancing food and water supply
 |  |  |  |
| 1. Enhancing early mobilization
 |  |  |  |
| 1. Enhancing volunteer for caring older emergency department patient
 |  |  |  |
| 1. Age-friendly discharge protocol (e.g., discharge information should be enlarged in fonts, language version of the caregiver should be available, and a clear tracking plan)
 |  |  |  |
| 1. Communication protocol with original care giver
 |  |  |  |
| 1. Emergency department transferal for long-term care facility
 |  |  |  |
| 1. Minimizing physical restraints
 |  |  |  |
| 1. Access of transportation services for returning residence
 |  |  |  |
| 1. Available protocol for rehabilitation (including hospitalization)
 |  |  |  |
| 1. Evaluation of function and safety at home
 |  |  |  |
| 1. A plan to improve the quality of care in a residential long-term care institution
 |  |  |  |
| 1. Others (i.e., the geriatric emergency department may provide the care protocol does not list above as needed)
 |  |  |  |

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†Refer to the Chinese version of American Geriatric Emergency Department Guideline of the [Taiwan Society of Emergency Medicine](https://www.sem.org.tw/) [https://www.sem.org.tw/News/11/Details/432](https://translate.google.com/translate?hl=zh-TW&prev=_t&sl=zh-CN&tl=en&u=https://www.sem.org.tw/News/11/Details/432) and the original version by the American College of Emergency Physicians [https://www.acep.org/globalassets /sites/geda/documnets/geda-guidelines.pdf](https://translate.google.com/translate?hl=zh-TW&prev=_t&sl=zh-CN&tl=en&u=https://www.acep.org/globalassets/sites/geda/documnets/geda-guidelines.pdf)

‡Ke YT, Peng AC, Shu YM, Chung MH, Tsai KT, Chen PJ, Weng TC, Hsu CC, Lin HJ, Huang CC. Emergency geriatric assessment: A novel comprehensive screen tool for geriatric patients in the emergency department. Am J Emerg Med. 2018 Jan;36(1):143-146.

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| **Table 7.** Quality indicator\* |
| **Grade** | **Level 1****(Elementary)** | **Level 2****(Advanced)** | **Level 3****(High-level)** |
| Content of the above 1 care protocol (screening rate, referral rate, and success rate) reached 75% | 🗹 |  |  |
| Achievement rate of the above 10 care protocols >75% |  | 🗹 |  |
| Achievement rate of the above 20 care protocols >75% |  |  | 🗹 |

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| **Table 8.** Monitoring indicator\* |
| **Grade** | **Level 1****(Elementary)** | **Level 2****(Advanced)** | **Level 3****(High-level)** |
| Monitoring ≥1 process or outcome indicator | 🗹 |  |  |
| Monitoring the following ≥ 5 process or outcome indicators |  | 🗹 |  |
| Monitoring the following ≥ 10 process or outcome indicators |  |  | 🗹 |
| 1. Number and rate of evaluation
 |  |  |  |
| 1. Number and rate of eligible referrals for evaluation
 |  |  |  |
| 1. Number and rate of successful referrals
 |  |  |  |
| 1. Outcome of eligible successful referrals
 |  |  |  |
| 1. Number and rate of hospitalizations of older patients (including analysis of their main complaints and diagnosis)
 |  |  |  |
| 1. Number and rate of discharged older patients (including analysis of their dispositions for home or long-term care institution, chief complaint, and diagnosis)
 |  |  |  |
| 1. Number and rate of older patients revisiting emergency department
 |  |  |  |
| 1. Number and rate of rehospitalization of older patients
 |  |  |  |
| 1. Number and rate of older patients staying in emergency department for more than 8 hours
 |  |  |  |
| 1. Others (i.e., the geriatric emergency department may provide the monitor indicator does not list above as needed)
 |  |  |  |

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