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**Introduction:** The docimology or "science of examinations" is a scientific discipline devoted to the study of the examination in all its dimensions. The main objective is the development of standards guaranteeing valid, reliable and objective tests. It was adopted within a Medical School in 2007.

Our aim was to analyze results of docimological survey results of written acute medicine examinations through a global approach, by discipline and by item.

**Method:** This was a retrospective study analyzing the notes of acute medicine examinations (January and May sessions) of Second Cycle Medical Studies 3). We have calculated docimological parameters allowing three levels of assessment: global, by discipline, and items analysis.

**Results:** We analyzed 407 scripts, 99 questions and 6,919 pieces of data. The overall success rate was 97.6%. Highest success rates were found in Medical resuscitation (87%). The lowest rate was found in emergency medicine (53%). The difficulty index for the January session was 0.53 and 0.61 for the May session. For the January session: 24% of questions were easy, 14% of questions were difficult and 61% were of acceptable difficulty. For the May session: 40% of questions were easy, 6% of questions were difficult and 54% were of acceptable difficulty. The discrimination index was 0.27 for the January session and 0.24 for the May session. Discrimination was very good in 18% of items and good in 25%. Useless and bad discrimination items were about 35% for both sessions. Average Cronbach's Alpha was 0.84, showing good internal-consistency.

**Conclusion:** Overall, acute medical examinations have joined docimological recommendations and had an acceptable internal consistency and a good level of difficulty and discrimination. However, some weaknesses had been revealed specially for the discipline with low weighting. A reflection on the integration of questions would make up for these weaknesses. This would ensure better assessment and training.

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### A Delphi Consensus Study to Define Non-Consultant Hospital Doctor Competencies Essential for a Focused Curriculum in Major Emergency Management

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**Introduction:** In this era of increasingly fragile hospital systems, major emergency preparation is firmly being placed under the spotlight. The response to major emergencies requires the mobilization of numerous resources to ensure an effective, coordinated response. Yet, studies confirm a global deficit in the knowledge and skills of staff responding to these events in Ireland. Non-consultant hospital doctors (NCHDs) provide a useful and necessary surge response during these events, but

currently there are no training programs specifically focused on their major emergency training requirements. The aim of this research was to define the essential elements of a focused curriculum for non-consultant hospital doctors responding to a major emergency (ME).

**Method:** A two-step process was employed. Initially, a comprehensive ME competency set was compiled from relevant literature, consulting field-specific experts and from current ME training programs. A sample of experts was paneled from several acute hospitals in Ireland using purposive and snowball recruitment. A modified Delphi process, using on-line surveys, was utilized to identify the competencies deemed essential for NCHDs responding to an ME event.

**Results:** Three Delphi rounds were required to complete this study. Of the 116 initial survey items, 68 competencies were confirmed as essential NCHD competencies, a total reduction of 40%. A 70% consensus rate was applied to 71 survey items in the final round, resulting in an agreement in 68 competencies (96%). A preponderance of the rejected competencies were specific to managerial and administrative tasks, whilst many retained competencies related to direct clinical care.

**Conclusion:** This study has defined the essential elements of a curriculum for NCHD doctors responding to a major emergency in Ireland, using the Delphi methodology. This derived competency set should be useful to national bodies, regional organizations, and hospital stakeholders to allow the creation of bespoke NCHD major emergency training programs.

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### Use of Bedside Ultrasound at Wexford General Hospital Emergency Department: Compliance to NICE Guidelines [NG158] for Venous Thromboembolic Disease

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**Introduction:** Ultrasound is the standard imaging technique for diagnosing lower limb deep venous thrombosis (DVT). The National Institute for Health and Care Excellence (NICE) guidance 158 recommendation 1.1.3 states that all patients with sufficient pretest probability for DVT should be offered a proximal leg vein ultrasound within four hours. However, due to high patient volumes, formal radiology department ultrasound wait times often exceed one week. Point-of-care ultrasound (POCUS) is used to bridge diagnostic delay in our emergency department (ED).

This study aimed to quantify numbers offered POCUS for suspected proximal lower DVT in our ED and accuracy of such studies.

**Method:** A retrospective review of electronic records was conducted for patients who underwent formal lower-limb ultrasound for suspected DVT at our hospital over a three-month period (August 1, 2022–October 12, 2022). Patient charts for all ED presentations were assessed to determine whether POCUS was offered and whether DVT was diagnosed.

Statistical analysis was conducted using PRISM v9.

**Results:** 80 formal ultrasound scans were performed at our hospital for lower limb DVT. 58 were requested for patients presenting to ED, of which 42 had complete records available meeting selection criteria.

POCUS was offered to 24 patients in ED (57.1%). Sensitivity was 66% (95% CI 12%–98%), and specificity was 94.1% (95% CI 75%–99%). Overall accuracy was 90%, with only one false negative study identified at formal follow-up ultrasound.

**Conclusion:** Although sample size was small, our results suggest that POCUS is an accurate but underused tool to diagnose lower limb DVT. Developing a standardized protocol for performing and reporting POCUS DVT scans in ED should allow for earlier diagnosis and initiation of appropriate treatment where necessary.

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### A Comparative Study of Business Continuity Planning in Long-Term care Settings in the U.S. and Japan Based on Literature Review

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**Introduction:** Business continuity planning (BCP) ensures that critical healthcare operations are not interrupted and are recovered quickly, in the event of a disaster. BCP has an important role in avoiding adverse health impacts, particularly in long-term care settings. The purpose of this study is to conduct a literature review and comparison of the U.S. and Japanese BCP in long-term care to identify and compare challenges and desirable approaches in each country to support older adults.

**Method:** We systematically searched PubMed, CINAHL, Japan Medical Abstracts Society and EMBASE databases, gray literature, and conducted a hand search of high-impact journals for studies published between 2000 and 2022 that assessed BCP in the United States and Japan.

**Results:** From the literature, a challenge identified in the U.S. is the limited coordination within and across regions and between healthcare institutions and long-term care settings. The advantages are that an established structure of planning, training and evaluation is in place, with evidence from recent disasters showing net positive effects. In Japan, a significant challenge is that, despite an emphasis on continuity in the provision of medical care and welfare to individuals, cooperation between BCP at healthcare institutions and BCP at long-term care facilities is underdeveloped. The advantage is that BCP at medical institutions is incorporated into the national healthcare plan in Japan,

making it easy to design BCP protocols and plans according to local needs.

**Conclusion:** Future research should focus on two points. 1) In the U.S., there is a need for evaluation of BCP cooperation and coordination among healthcare networks, especially in long-term care settings. 2) In Japan, it is necessary to promote BCP in healthcare sectors and accumulate training and evaluation across the fields of medical institutions and long-term care facilities.

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### Appropriate Imaging Modalities in the Emergency Department for Assessment of Renal Stones

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**Introduction:** Urolithiasis prevalence is approximately 15–20%, the third most common urological presentation to emergency departments (ED). In the ED, renal stones are usually diagnosed by clinical presentation, but imaging modalities play a role in confirmation and exclusion of hydronephrosis. 85% of stones are calcium oxalate/calcium phosphate, which are radio opaque, and 15% are radiolucent uric acid or cysteine stones. Non-contrast CT scans have 95% and 97% sensitivity and specificity rates, while x-rays have 57% and 76% respectively. In Wexford General Hospital, radiology prefers plain film x-rays prior to CT scans in assessing kidney stones.

**Method:** The aim of this study was to assess the sensitivity of x-rays in patients undergoing low dose non-contrast CT for kidney stones and to apply this information to clinical practice. A retrospective audit was conducted using NIMIS/PACS from December 1, 2021–March 31, 2022. All patients who underwent CT KUBS for evaluation of renal stones were included, and CT KUB findings were compared with initial x-ray findings.

**Results:** A CT KUB was performed on 56 patients to assess renal stones, and 29 patients had renal stones. Among 29 patients, 21 had x-rays and CT scans performed, and 12 had x-ray findings that indicated renal stones, indicating 57% sensitivity. The study found 36 patients had x-rays for renal stones, but no CT scan was scheduled for 15 patients who might have undiagnosed radiolucent stones.

**Conclusion:** Radiological imaging plays a central role in the management of suspected renal stones. CT KUB is a useful tool for evaluating patients with radio-opaque kidney stones as well as detecting radiolucent stones and renal pathologies that can be missed with plain radiographs. Low-dose CT KUB is recommended as a first-line investigation for renal stone patients to reduce radiation risks and unnecessary abdominal x-rays while