



Charles Sturt
University

School of Nursing, Paramedicine and Healthcare Sciences

Faculty of Science and Health



Recommendations for simulation-based assessment in
undergraduate courses in the School of Nursing,
Paramedicine and Healthcare Sciences

Contents

Executive Summary.....	3
Glossary.....	4
Background	6
Method of Simulation-Based Assessment Review	6
Objective of the Simulation-Based Assessment Review.....	7
Literature Review.....	8
Method of literature review	8
Summary of the literature	8
Key findings from literature	10
Assessment principles.....	11
Clinical Skills Assessment (CSA).....	11
Objective Structured Clinical Examination (OSCE).....	13
Key Considerations for SNPHS	16
Conclusion and Recommendations	17
References	18
Key Charles Sturt University documents.....	22
Key Registration Standards documents	22
Appendix 1- Staff Feedback	23
Appendix 2 - Australian course providers.....	27
Appendix 3 – Example NRS163 Clinical Skills Assessment.....	28
Appendix 4 – Example CLS105 Objective Structured Clinical Examination	30
Appendix 5 – Example NRS174 Objective Structured Clinical Examination	38
Appendix 6- SNPHS Undergraduate Simulation-Based Assessment Guide	44
Appendix 7 - Standardised global rating scale.....	49
Appendix 8 - Standardised satisfactory/unsatisfactory grading scale	50

Executive Summary

In 2021, as part of the Charles Sturt University Sustainable Futures initiative, the School of Nursing, Paramedicine and Healthcare Sciences was formed. This change brought together two of the biggest courses in the university, Nursing and Paramedicine. Both courses are designed to lead to registration as a health professional and both use simulation in their degrees. The School's Learning and Teaching team identified inconsistency in the language and design of simulation-based assessment in the school's undergraduate subjects.

A review was undertaken from October-December 2021 in order to bring consistency to the courses and to inform undergraduate simulation-based assessment design recommendations. In consultation with members of the leadership team, each course's Simulation Model for Practice or equivalent was reviewed, where applicable. Then simulation-based assessments in individual subjects were reviewed, along with the evidence that supported their design, where applicable. Following this, course and subject CASIMS profiles were reviewed, along with the Bachelor of Nursing and Bachelor of Paramedicine curriculum documents. Charles Sturt University Assessment Policies and Procedures were also reviewed, along with the SNPHS Workload Allocation Policy.

A brief review of the literature was undertaken, finding that there is a paucity of research that evaluates individual assessment instruments for Objective Structured Clinical Examinations (OSCEs), particularly in undergraduate nursing and paramedicine education. When determining choice of assessment instrument, critical review of the literature has highlighted that the School needs to carefully reflect on validity, reliability, subjectivity, and potential bias. The assessment instrument alone is insufficient, and processes around standardisation are paramount. The brief literature review along with some initial recommendations were disseminated to all academic staff across all courses and subjects in the SNPHS for feedback. All feedback (provided as an appendix) was considered, and further review of the literature was undertaken. A comparison was undertaken of simulation-based assessment within other Bachelor of Paramedicine and Bachelor of Nursing programs offered by other leading education providers. Recommendations were refined and then modelled on a number of subjects in both the Bachelor of Paramedicine and Bachelor of Nursing.

A total of eleven recommendations are put forward in this report (at page 17). An assessment guide, definitions and exemplars are provided as Appendices.

Glossary

Clinical Skills Assessment (CSA)- The CSA is used to assess student safety and competence when undertaking a range of physical, affective and/or cognitive skills in the simulation-based learning environment. CSAs are less formal than OSCEs. The CSA usually occurs prior to the student undertaking a workplace learning experience. The CSA is undertaken either during on campus simulation time or during intensives. The CSA can be undertaken as a small group activity.

Student performance is differentiated using the standardised global rating scale (Appendix 2). A final determination of safety and competence is made using a standardised satisfactory/unsatisfactory grading scale (Appendix 3). Opportunities for formative peer-based assessment should be integrated into simulation-based learning activities. The final determination of the grade is to be made by an academic staff member who is currently registered in the relevant profession (Registered Paramedic for undergraduate Paramedicine subjects and Registered Nurse for undergraduate Nursing subjects).

Objective Structured Clinical Examinations (OSCEs)- The OSCE is used to provide a formal and comprehensive assessment of student safety and competence when undertaking a range of physical, affective and cognitive skills. During an OSCE, students rotate through a number of stations in order to demonstrate competency in a simulation-based learning environment (Hastie et al., 2014). The stations can include a variety of different assessment types, including standardised patient scenarios, task focussed activities and oral questions (Harden, 2015). An OSCE may also include stations that are not directly assessed, such as a station for collecting patient data that informs assessment at a future station. For this reason, some stations are called 'Marker' stations, where an assessment occurs and some are called 'Observer' stations, where an assessment does not occur. A Marker or Observer must be present at each station (Harden, 2015).

Objective - Each OSCE station is standardised and designed to focus on an area/s of clinical competence.

Structured - Every student experiences the same patient and patient scenario and is asked to perform the same task within the same timeframe.

Clinical - The student is assessed on their ability to apply clinical knowledge and skills required in their profession.

Examination - The OSCE can form both a formative and summative assessment of safety and competence.

Summative OSCEs should be scheduled as late in the session as possible (Bevan & Russell, 2019). Once the summative OSCE has occurred, the same learning outcomes should not be assessed again. OSCEs may be scheduled during on campus simulation time or intensives. OSCEs may also be scheduled during the end of session examination period; the Associate Head of School and Head of Discipline- Nursing or Associate Head of School and Head of Discipline- Paramedicine determines if an OSCE is to be scheduled during the examination period.

Student performance is differentiated using the global rating scale (Appendix 2). A final determination of safety and competence is made using a standardised satisfactory/unsatisfactory grading scale (Appendix 3). Opportunities for peer-based assessment should be integrated into simulation-based learning activities (Bevan & Russell, 2019; Kellet et al, 2014). The final determination of the grade is to be made by an academic staff member who is currently registered in the relevant profession (Registered Paramedic for undergraduate Paramedicine subjects and Registered Nurse for undergraduate Nursing subjects).

Simulation-based assessment - An assessment of a range skill/s including physical, cognitive and affective, that is undertaken in a simulation-based learning environment.

Simulation-based learning environment - Any space that has been designed with the purpose of providing profession-specific situational context for teaching and learning purposes. This may be any space that utilises mannequins, part-task trainers, simulated patients, computer-generated simulations, clinical laboratories or ambulances set up for training purposes.

Background

In 2021, as part of the Charles Sturt University Sustainable Futures initiative, the School of Nursing, Paramedicine and Healthcare Sciences was formed. Two of the largest courses in the University were affected by this change, Nursing and Paramedicine. Both these courses use simulation as part of the course and do so in different ways. The School's Learning and Teaching team identified inconsistency in the language and design of simulation-based assessment in the school's undergraduate subjects.

A review was undertaken from October-December 2021 to bring consistency to the courses, where appropriate, and to inform undergraduate simulation-based assessment design recommendations. After meeting with all undergraduate courses in the school, the following undergraduate courses in the school were found to integrate simulation-based assessment:

Bachelor of Paramedicine

Bachelor of Nursing

The two courses were found to use the following terms for simulation-based assessment:

- Skills Passport
- Clinical Skills Assessment
- OSCE
- Clinical Scenario
- Clinical Skills Portfolio
- Clinical based assessment
- Labs assessment
- Clinical Simulation
- Skill Assessment

Method of Simulation-Based Assessment Review

In consultation with members of the leadership team, each course's Simulation Model for Practice or equivalent was reviewed, where applicable. Then simulation-based assessments in individual subjects were reviewed, along with the evidence that supported their design, where applicable. Following this, course and subject CASIMS profiles were reviewed, along with the Bachelor of Nursing and Bachelor of Paramedicine curriculum documents. Charles Sturt University Assessment Policies and Procedures were also reviewed, along with the SNPHS Workload Allocation Policy.

A brief review of the literature was undertaken, and initial recommendations proposed. The literature review and initial recommendations were disseminated to all academic staff across all courses and subjects in the SNPHS for feedback (Appendix 1).

All feedback was considered, and further review of the literature was undertaken. A comparison was undertaken of simulation-based assessment within a range of other Bachelor of Paramedicine and Bachelor of Nursing programs offered by leading Australian tertiary education providers (Appendix 2). Recommendations were refined and then modelled on a number of subjects in both the Bachelor of Paramedicine and Bachelor of Nursing, including NRS163 (Appendix 3), CLS105 (Appendix 4) and NRS174 (Appendix 5).

The purpose of this report is to present a summary of the literature review, key findings and considerations for the SNPHS along with the recommendations for simulation-based assessment design in undergraduate subjects in the SNPHS for application in 202260.

Objective of the Simulation-Based Assessment Review

To provide evidence-based recommendations to the Head of School regarding simulation-based assessment design, specifically OSCEs, for undergraduate courses in the SNPHS.

Literature Review

The literature was reviewed to answer the question: 'What are the current best practice recommendations for assessment instruments used in OSCEs?'. This question emerged when reviewing inconsistencies in scoring between nursing and paramedicine simulation-based assessments in the SNPHS, where nursing primarily uses a basic competent/not competent graded criteria, and paramedicine utilises a criterion referenced graded rubric.

Method of literature review

A literature search was conducted in October 2021. CINAHL, Cochrane Library, Medline Complete, Scopus, Academic Search Complete and ProQuest Central databases were searched. A preliminary search was conducted in order to test and identify search terms. Search terms included Objective Structured Clinical Examination, OSCE, marking, criteria, instrument, rubric, tool, grading, graded, scale, criterion referenced, global rating scale and satisfactory. As the OSCE is a specific assessment design, articles which explored assessment instruments not specific to an OSCE were excluded. A limitation to publication date was not applied. A total of 28 full text articles were reviewed. Of these, only a few focussed on OSCEs in the undergraduate paramedicine (n=3) or nursing (n=2) disciplines. The remainder focussed on allied health (n=3) and medicine (n=20).

Summary of the literature

Only a minority of articles (n=7) provided insight into the assessment instrument used for the OSCE, and of these, none were specifically evaluating the type of assessment instrument, nor provided evidence to support the use of the specific assessment instrument used as part of the research.

Three instruments for OSCE assessment emerged:

1. Individual activity scores
2. Global Rating Scale
3. Criterion referenced

It is important to note that there is no evidence of evaluation of these instruments in the research.

Some key themes emerged and included:

- The ability to provide further feedback through the use of criterion referenced instruments (Donohoe, Reilly, Donnelly & Cahill, 2020; Wan, Canalese, Lam, Petersen, Quinlivan & Frost, 2011).
- The importance of supporting student development through identification of where improvement is needed, and how to undertake skills to a higher standard (Donohoe, Reilly, Donnelly & Cahill, 2020).
- Restriction imposed by a simple competent/not competent scoring system, or yes/no type checklist, where the technical and non-technical elements of the task are unable to be incorporated (Donohoe, Reilly, Donnelly & Cahill, 2020) and does not allow for variations in processes that can occur in nursing and paramedicine practice that would still be deemed

appropriate and safe (Donohoe, Reilly, Donnelly & Cahill, 2020; Kelly, Mitchell & Henderson, 2016).

- An instrument that enables assessors to differentiate levels of competence among students and can guide student development and progress in their practice is more beneficial than a simple checklist that includes competent/not competent or yes/no (Donohoe, Reilly, Donnelly & Cahill, 2020; Kelly, Mitchell & Henderson, 2016).
- It is essential for students to undertake self-assessment of an OSCE prior to undertaking the assessment with staff, and that peer assessment is highly beneficial as part of a formative assessment and can assist in reducing student anxiety (Bevan, Russell & Marshall, 2019; Kelly, Mitchell & Henderson, 2016; Mitchell, Cotton, Leedham-Green, Elias & Bartholomew, 2021; Schwill, Fahrback-Veeser, Moeltner, Eicher, Kurczyk, Pfisterer, Szecsenyi & Loukanova, 2020).

There is a paucity of research that evaluates individual assessment instruments for OSCE's, particularly in undergraduate nursing and paramedicine education. Competence is a complex concept that is difficult to define and measure (Tavares, Boet, Theriault, Mallette & Eva, 2013; Tavares & Boet, 2016; Tavares, LeBlanc, Mausz, Sun & Eva 2014; Tavares, Brydges, Myre, Prpic, Turner, Yelle & Huiskamp, 2018). When determining choice of assessment instrument, the School needs to reflect on validity, reliability, subjectivity and potential bias (Tavares, Boet, Theriault, Mallette & Eva, 2013; Tavares & Boet, 2016; Tavares & Boet, 2016; Tavares, LeBlanc, Mausz, Sun & Eva 2014; Tavares, Brydges, Myre, Prpic, Turner, Yelle & Huiskamp, 2018; Zayyan, 2011). It is important to understand that the instrument alone is insufficient, and processes around standardisation are paramount (Tavares & Boet, 2016; Tavares, LeBlanc, Mausz, Sun & Eva 2014; Tavares, Brydges, Myre, Prpic, Turner, Yelle & Huiskamp, 2018; Zayyan, 2011). In particular, a focus on standardisation or 'calibration' of markers is essential (Moreno-López & Sinclair, 2020).

There is insufficient evidence to favour one OSCE assessment instrument over another. The instrument should instead utilise the evidence that is available (AHPRA, 2021), as well as the requirements and resources within the school.

Key findings from literature

1. There is a paucity of research that evaluates individual assessment instruments for OSCE's in undergraduate nursing and paramedicine education.
2. When determining choice of assessment instrument, there needs to be consideration of validity, reliability, subjectivity and reducing potential bias.
3. The instrument alone is insufficient and processes around standardisation are paramount. In particular, a focus on standardisation or 'calibration' of markers is essential.

Assessment principles

The following assessment principles have been developed to guide simulation-based assessment design. These principles are also outlined in the attached SNPHS Undergraduate Simulation-Based Assessment Guide (Appendix 6).

Clinical Skills Assessment (CSA)

The CSA is used to assess student safety and competence when undertaking a range of physical, affective and/or cognitive skills in the simulation-based learning environment. CSAs are less formal than OSCEs. The CSA usually occurs prior to the student undertaking a workplace learning experience. The CSA is undertaken either during on campus simulation time or during intensives. The CSA can be undertaken as a small group activity.

Student performance is differentiated using the standardised global rating scale (Appendix 2). A final determination of safety and competence is made using a standardised satisfactory/unsatisfactory grading scale (Appendix 3). Opportunities for formative peer-based assessment should be integrated into simulation-based learning activities. The final determination of the grade is to be made by an academic staff member who is currently registered in the relevant profession (Registered Paramedic for undergraduate Paramedicine subjects and Registered Nurse for undergraduate Nursing subjects).

Planning for assessment

- The planned CSA, including marking instrument should be submitted to the Simulation Lead for QA at the same time the Subject Outline is submitted for QA.
- The CSA is incorporated into undergraduate subjects as a hurdle assessment. The assessment item must be graded as satisfactory in order for the student to be able to pass the subject.
- In the first session of enrolment in the undergraduate Bachelor of Nursing, the CSA is used **prior** to the student undertaking the first workplace learning experience in order to demonstrate that the student has the requisite skills to:
 - introduce themselves;
 - wash their hands correctly; and
 - undertake basic observations.
- Clinical Skills Assessments are used in the Bachelor of Nursing curriculum for Clinical Reasoning subjects NRS163, NRS283 and NRS399.
- The CSA can occur as part of a small group activity.
- The patient scenario and assessment instrument used should remain the same for all students, for each attempt. The patient observations may differ without increasing the level of complexity (Brown et al., 2020) (eg. changing the mannequin's blood pressure but keeping all readings between the flags).
- Opportunities for formative, peer-based assessment should be integrated into simulation-based learning activities and utilise the same marking instrument used for the summative assessment (Bevan & Russell, 2019; Kelly et al., 2014).
- The marking instruments should be made available to students from the commencement of session.
- The assessment should be appropriately time limited. The CSA does not utilise subject marking time as it is assessed within simulation-based teaching time.

During assessment

- The assessment is undertaken during teaching time.
- Examiners should keep rigorous records of students who have been assessed and the number of attempts undertaken.
- Students should not undertake clinical assessments and observations on each other during the assessment. Simulation equipment should be used wherever possible.
- One examiner should not assess more than two students at any one time.
- During summative assessment, the marker should not provide any direct instruction. Communication should be limited to clarifying what the student has been asked to do in the assessment.
- Individual student performance is differentiated using the standardised global rating scale.
- A final determination of student safety and competence must be made using a standardised satisfactory/unsatisfactory grading scale.
- A maximum of two attempts for each student is permitted, with feedback provided after the first unsatisfactory attempt in the form of:
 - Verbal feedback
 - Physical instruction, where indicated
 - A marked assessment instrument
- There is no specific time period between the first attempt and the subsequent attempt, however, there should be sufficient time for the student to receive and consider the feedback and practice the skill again. Access to the simulation space and required consumables should be facilitated.

Marking

- Marking standardisation should be carefully considered, and occur in the form of an exemplar video, where possible, and marking meeting. The marking meeting should use the global rating scale to clearly articulate what each level of competence would look like, and what constitutes a satisfactory and an unsatisfactory grade. Guidance for how grades are communicated to students should also be considered and discussed due to the synchronous and group work nature of the assessment.
- There is insufficient evidence to support a different marker undertaking the second assessment attempt.
- Where there are two unsatisfactory attempts, the marked rating scales should be provided to the Subject Convenor for review. The Subject Convenor makes the final determination of the student's grade. Processes for Review of Mark and Review of Grade apply and are available to the student.
- The summative assessment is to be undertaken by an academic staff member who is currently registered in the relevant profession.
- As CSAs occur during usual teaching hours, additional time is not allocated for CSA marking. For sessional staff members, time is allocated for the teaching hours for the lesson the CSA is incorporated into.
- A record of the summative assessment should be kept. This can be done in a number of ways including student upload through EASTS, or the academic collecting and scanning the documents to file.

Objective Structured Clinical Examination (OSCE)

The OSCE is used to provide a formal and comprehensive assessment of student safety and competence when undertaking a range of physical, affective and cognitive skills. During an OSCE, students rotate through a number of stations in order to demonstrate competency in a simulation-based learning environment (Hastie et al., 2014). The stations can include a variety of different assessment types, including standardised patient scenarios, task focussed activities and oral questions (Harden, 2015). An OSCE may also include stations that are not directly assessed, such as a station for collecting patient data that informs assessment at a future station. For this reason, some stations are called 'Marker' stations, where an assessment occurs and some are called 'Observer' stations, where an assessment does not occur. A Marker or Observer must be present at each station (Harden, 2015).

Objective - Each OSCE station is standardised and designed to focus on an area/s of clinical competence.

Structured - Every student experiences the same patient and patient scenario and is asked to perform the same task within the same timeframe.

Clinical - The student is assessed on their ability to apply clinical knowledge and skills required in their profession.

Examination - The OSCE can form both a formative and summative assessment of safety and competence.

Summative OSCEs should be scheduled as late in the session as possible (Bevan & Russell, 2019). Once the summative OSCE has occurred, the same learning outcomes should not be assessed again. OSCEs may be scheduled during on campus simulation time or intensives. OSCEs may also be scheduled during the end of session examination period; the Associate Head of School and Head of Discipline- Nursing or Associate Head of School and Head of Discipline- Paramedicine determines if an OSCE is to be scheduled during the examination period.

Student performance is differentiated using the global rating scale (Appendix 2). A final determination of safety and competence is made using a standardised satisfactory/unsatisfactory grading scale (Appendix 3). Opportunities for peer-based assessment should be integrated into simulation-based learning activities (Bevan & Russell, 2019; Kellet et al, 2014). The final determination of the grade is to be made by an academic staff member who is currently registered in the relevant profession (Registered Paramedic for undergraduate Paramedicine subjects and Registered Nurse for undergraduate Nursing subjects).

Planning for assessment

- The planned OSCE, including marking instrument should be submitted to the Simulation Lead for QA at the same time the Subject Outline is submitted for QA.
- The OSCE is incorporated into undergraduate subjects as a hurdle assessment. The assessment item must be graded as satisfactory for the student to be able to pass the subject.
- The patient scenario/s and assessment instrument used should remain the same for all students, for each attempt. The patient details may differ without increasing the level of complexity (eg. changing the mannequin's blood pressure but keeping all readings between the flags) (Brown et al., 2020).
- Opportunities for formative, peer-based assessment should be integrated into simulation-based learning activities and utilise the same marking instrument used for the summative assessment (Bevan & Russell, 2019; Kelly et al, 2014).
- The marking instruments should be made available to students from the commencement of session.

- Usually, a total of 5-8 minutes should be allocated for each station, depending on the type of activity being assessed and the available marking time (Hastie et al., 2014).
- During an OSCE, students rotate through a number of stations in order to demonstrate competency in undertaking clinical skills in a simulated learning environment (Harden, 2015; Hastie et al., 2014).
- The OSCE assessment can range from a single station to up to six different stations (Hastie et al., 2014).
- The stations can include a variety of different assessment types, including standardised patient scenarios, task focussed activities and oral questions (Harden, 2015).
- The OSCE may include stations that are not directly assessed, such as a station for collecting patient assessment data that informs assessment at a future station. For this reason, some stations are called 'Marker' stations, where an assessment occurs and some are called 'Observer' stations, where an assessment does not occur. A Marker or Observer must be present at each station.
- Online tests can form one of the OSCE stations, where at least one other station assesses practical skills (Harden, 2015).
- Opportunities for formative peer-based assessment should be integrated into simulation-based learning activities (Bevan & Russell, 2019; Kelly et al., 2014).
- The stations, activities and scenarios should remain the same for all students, for each attempt.
- OSCEs may occur outside normal teaching hours, during the end of session examination period. The HOS will determine if the OSCE is to occur in the examination period.

During assessment

- Examiners should keep rigorous records of students who have been assessed and the number of attempts undertaken.
- Unless formal preparation occurs, students should not form part of the OSCE station scenarios.
- Students should not undertake clinical assessments and observations on each other during the assessment. Simulation equipment should be used wherever possible.
- One examiner should not assess more than two students at any one time. Where possible, the student should be assessed individually.
- During summative assessment, the marker should not provide any direct instruction. Communication should be limited to clarifying what the student has been asked to do at that station.
- Examiners undertake assessments using the standardised assessment instrument at each station.
- A final determination of student safety and competence must be made using a standardised satisfactory/unsatisfactory grading scale.
- A maximum of two attempts for each student is permitted, with feedback provided after the first unsatisfactory attempt in the form of:
 - Verbal feedback
 - Physical instruction, where indicated
 - A marked assessment instrument
- There is no specific time period between the first attempt and the subsequent attempt, however, there should be sufficient time for the student to receive and consider the feedback and practice the skill again. Student access to the simulation space and required consumables should be facilitated.

Marking

- Marking standardisation should be carefully considered, and occur in the form of an exemplar video, where possible, and marking meeting. The marking meeting should use the global rating scale to clearly articulate what each level of competence would look like, and what constitutes a satisfactory and an unsatisfactory grade. Guidance for how grades are communicated to students should also be considered and discussed due to the synchronous nature of the assessment.
- There is insufficient evidence to support a different marker undertaking the second assessment attempt.
- Where there are two unsatisfactory attempts, the marked rating scales should be provided to the Subject Convenor for review. The Subject Convenor makes the final determination of the student's grade. Processes for Review of Mark and Review of Grade apply and are available to the student for the OSCE. The summative assessment is to be undertaken by an academic staff member who is registered in the relevant profession.
- Where OSCEs occur during usual teaching time, additional time is not allocated for marking.
- Where OSCEs occur during the end of session examination period, time is allocated in accordance with the SNPHS Workload Allocation Policy.
- A record of the summative assessment should be kept. This can be done in a number of ways including student upload through EASTS, or the academic collecting and scanning the documents to file.

Key Considerations for SNPHS

The following were carefully considered whilst forming the recommendations in this report:

- Inconsistency in language used for simulation-based assessments within the School
- Best practice guidelines for simulation-based assessment design
- Findings of over assessment in Subject Outline Quality Assurance procedures
- Findings of over assessment in external auditor reports
- The need to undertake rigorous assessment of clinical skills in both courses
- The need to provide simulation-based assessments that are consistently objective, reliable, fair, replicable and valid
- Evidence used to support current assessment design
- How leading Bachelor of Paramedicine and Bachelor of Nursing course providers in Australia are assessing simulation-based learning
- Differences in grading systems and scales used across courses and subjects
- Structure of Bachelor of Paramedicine and Bachelor of Nursing courses
- Staff feedback
- Operational requirements within the School
- Workload allocation for undertaking marking of simulation-based assessments
- Individual subject and course requirements, based on external accreditation
- Industry expectations
- The need to clearly demonstrate students meet learning outcomes related to safe and competent practice
- University assessment policy and procedures
- Absence of supporting resources to guide and structure simulation-based assessment design in the School
- The support that can be provided for staff when assessment design is standardised, where appropriate

Conclusion and Recommendations

A comprehensive review has been undertaken in order to inform the following recommendations.

Based on this report the following recommendations for simulation-based assessment design in undergraduate subjects are being made:

- 1- The following 'SNPHS Undergraduate Simulation-based Assessment Guide' (Appendix 6) guide undergraduate assessment design in the simulation-based learning environment from 202260.
- 2- All assessments undertaken in the simulation-based learning environment in undergraduate paramedicine and nursing be called and follow the structure of either a Clinical Skills Assessment (CSA) or an Objective Structured Clinical Examination (OSCE).
- 3- CSAs and OSCEs be scored using the proposed standardised global rating scale in order to differentiate student performance levels (Appendix 7).
- 4- A clear determination of student safety and competence be made for both CSAs and OSCEs using a standardised SY/US grading scale (Appendix 8).
- 5- CSAs and OSCEs be incorporated into subjects as hurdle assessments; where a satisfactory grade is not awarded, the student is not able to pass the subject.
- 6- The Simulation Lead undertake Quality Assurance of all undergraduate simulation-based assessments as part of the Subject Outline QA procedures.
- 7- The Simulation Lead undertake QA of all CSA/OSCE marking instruments prior to the commencement of session.
- 8- Clinical Skills Assessment and OSCE marking instruments remain unchanged for each offering of a subject, apart from where changes that align with QUASAR feedback are implemented in consultation with the Simulation Lead.
- 9- Opportunities for formative peer-based assessment be integrated into subject learning activities prior to students undergoing summative assessment.
- 10- Led by the Simulation Lead, a SNPHS Simulation Working Group be formed, as a sub-group of the CLTC. The purpose of the committee would include overseeing the integration and evaluation of simulation-based assessment best practice guidelines in the School, support the Subject Convenor to develop and implement standardisation practices around assessment and marking processes and undertake quality assurance of simulation-based learning activities and resources.
- 11- These recommendations be evaluated at the end of the 202260 session and include a review of quantitative assessment result data and qualitative staff and student experience data.

References

- Ali, M., Pawluk, S. A., Rainkie, D. C., & Wilby, K. J. (2019). Pass-Fail Decisions for Borderline Performers After a Summative Objective Structured Clinical Examination. *American Journal of Pharmaceutical Education*, 83(2), 142–147. <https://doi.org/10.5688/ajpe6849>
- Alves Costa, R., de Medeiros Araújo, J. N., de Lima Fernandes, A. P. N., da Silva Soares, R. P., Ferreira Júnior, M. A., & Fortes Vitor, A. (2016). Objective Structured Clinical Examination in the teaching and apprenticeship of clinical nursing: An experience report. *Journal of Nursing UFPE / Revista de Enfermagem UFPE*, 10(6), 2273–2278. <https://doi.org/10.5205/reuol.9199-80250-1-SM1006201645>
- Arrogante, O., González-Romero, G. M., López-Torre, E. M., Carrión-García, L., & Polo, A. (2021). Comparing formative and summative simulation-based assessment in undergraduate nursing students: nursing competency acquisition and clinical simulation satisfaction. *BMC Nursing*, 20(1), 1–11. <https://doi.org/10.1186/s12912-021-00614-2>
- Bani-issa, W., Al Tamimi, M., Fakhry, R., & Tawil, H. Al. (2019). Experiences of nursing students and examiners with the Objective Structured Clinical Examination method in physical assessment education: A mixed methods study. *Nurse Education in Practice*, 35, 83–89. <https://doi.org/10.1016/j.nepr.2019.01.006>
- Barry, M., Bradshaw, C., & Noonan, M. (2013). Improving the content and face validity of OSCE assessment marking criteria on an undergraduate midwifery programme: A quality initiative. *Nurse Education in Practice*, 13(5), 477–480. <https://doi.org/10.1016/j.nepr.2012.11.006>
- Bevan, J., Russell, B., & Marshall, B. (2019). A new approach to OSCE preparation - ProSCEs. *BMC Med Educ* 19, 126. <https://doi.org/10.1186/s12909-019-1571-5>
- Brown, C., Morse, J., Nesvadba, D., & Meldrum, A. (2021). Twelve tips for introducing simulation based assessment in the objective structured clinical examination. *Medical Teacher*, 43(4), 380–383. <https://doi.org/10.1080/0142159X.2020.1789084>
- Chahine, S., Holmes, B., & Kowalewski, Z. (2016). In the minds of OSCE examiners: uncovering hidden assumptions. *Advances in Health Sciences Education*, 21(3), 609–625. <https://doi.org/10.1007/s10459-015-9655-4>
- Champlin, A. M., Roberts, L. R., Puschel, R. D., Saunders, J. S. D., Huerta, G. M., & Yang, J. (2021). Using Objective Structured Clinical Examination as a Teaching Tool in a Hybrid Advanced Health Assessment Course. *Nurse Educator*, 46(2), 101–105. <https://doi.org/10.1097/NNE.0000000000000849>
- Chen, S., Lai, Y., Chen, P., & Yeh, K. (2021). The objective structured clinical examination as an assessment strategy for clinical competence in novice nursing practitioners in Taiwan. *BMC Nursing*. 20. [10.1186/s12912-021-00608-0](https://doi.org/10.1186/s12912-021-00608-0)
- Daniels, V. J., Ortiz, S., Sandhu, G., Lai, H., Yoon, M. N., Bulut, O., & Hillier, T. (2021). Effect of Detailed OSCE Score Reporting on Learning and Anxiety in Medical School. *Journal of Medical Education and Curricular Development*, 8, 238212052199232. <https://doi.org/10.1177/2382120521992323>

- Daniels, V. J., Strand, A. C., Lai, H., & Hillier, T. (2019). Impact of tablet-scoring and immediate score sheet review on validity and educational impact in an internal medicine residency Objective Structured Clinical Exam (OSCE). *Medical Teacher*, 41(9), 1039–1044. <https://doi.org/10.1080/0142159X.2019.1615609>
- Daniels, V. J., & Pugh, D. (2018). Twelve tips for developing an OSCE that measures what you want. *Medical Teacher*, 40(12), 1208–1213. <https://doi.org/10.1080/0142159X.2017.1390214>
- Donohoe, CL., Reilly, F., Donnelly, S., & Cahill, RA. (2020). Is There Variability in Scoring of Student Surgical OSCE Performance Based on Examiner Experience and Expertise? *Journal of Surgical Education*, 77(5), 1202-1210. <https://doi.org/10.1016/j.jsurg.2020.03.009>
- Gormley, G. J., Hodges, B. D., McNaughton, N., & Johnston, J. L. (2016). The show must go on? Patients, props and pedagogy in the theatre of the OSCE. *Medical Education*, 50(12), 1237–1240. <https://doi.org/10.1111/medu.13016>
- Halman, S., Fu, A. Y. N., & Pugh, D. (2020). Entrustment within an objective structured clinical examination (OSCE) progress test: Bridging the gap towards competency-based medical education. *Medical Teacher*, 42(11), 1283–1288. <https://doi.org/10.1080/0142159X.2020.1803251>
- Heal, C., D'Souza, K., Banks, J., Malau-Aduli, B. S., Turner, R., Smith, J., Bray, E., Shires, L., & Wilson, I. (2019). A snapshot of current Objective Structured Clinical Examination (OSCE) practice at Australian medical schools. *Medical Teacher*, 41(4), 441–447. <https://doi.org/10.1080/0142159X.2018.1487547>
- Hogley, R., Thampy, H., & Fisher, P. (2020). Should we video OSCEs for student appeals? *Clin Teach*, 17: 171-176. <https://doi-org.ezproxy.csu.edu.au/10.1111/tct.13062>
- Hopwood, J., Myers, G., & Sturrock, A. (2021). Twelve tips for conducting a virtual OSCE. *Medical Teacher*, 43(6), 633–636. <https://doi.org/10.1080/0142159X.2020.1830961>
- Hui Min, LM., Phua, DH., & Wei Jian, HK. (2021). The use of a formative OSCE to prepare emergency medicine residents for summative OSCEs: a mixed-methods cohort study. *International Journal of Emergency Medicine (Online)*, 14(1) <http://dx.doi.org/10.1186/s12245-021-00383-4>
- Kelly, M.A., Mitchell, M.L., Henderson, A. et al. (2016). OSCE best practice guidelines—applicability for nursing simulations. *Adv Simul* 1, 10 <https://doi.org/10.1186/s41077-016-0014-1>
- Malau-Aduli, B. S., Hays, R. B., D'Souza, K., Smith, A. M., Jones, K., Turner, R., Shires, L., Smith, J., Saad, S., Richmond, C., Celenza, A., & Sen Gupta, T. (2021). Examiners' decision-making processes in observation-based clinical examinations. *Medical Education*, 55(3), 344–353. <https://doi.org/10.1111/medu.14357>
- Mitchell, ML., Henderson A., Groves M., Dalton M., & Nulty D. (2009). The objective structured clinical examination (OSCE): optimising its value in the undergraduate nursing curriculum. *Nurse Educ Today*. 29(4):398-404. doi: 10.1016/j.nedt.2008.10.007

- Mitchell, O., Cotton, N., Leedham-Green, K., Elias, S., & Bartholomew, B. (2021). Video-assisted reflection: improving OSCE feedback. *Clin Teach*, 18, 409–416. <https://doi.org.ezproxy.csu.edu.au/10.1111/tct.13354>
- Montgomery, A., Chang, R., Ho, M., Smerdely, P., & Traynor, V. (2021). The use and effect of OSCEs in post-registration nurses: An integrative review. *Nurse Education Today*, 100, 104845, ISSN 0260-6917, <https://doi.org/10.1016/j.nedt.2021.104845>
- Moreno-López R., & Sinclair S. (2020). Evaluation of a new e-learning resource for calibrating OSCE examiners on the use of rating scales. *Eur J Dent Educ*, 24:276–281. <https://doi.org/10.1111/eje.12495>
- Ossenberg C., Henderson A. & Mitchell M. (2020) Adoption of new practice standards in nursing: Revalidation of a tool to measure performance using the Australian registered nurse standards for practice. *Collegian*, 27, 352-360.
- Pell, G., Homer, M., & Fuller, R. (2015). Investigating disparity between global grades and checklist scores in OSCEs. *Medical Teacher*, 37(12), 1106–1113. <https://doi.org/10.3109/0142159X.2015.1009425>
- Roduta Roberts, M., Brito Alves, C., & Werther, K. (2019). Examining the Associations Between Objective Structured Clinical Examination (OSCE) Scores and Fieldwork Performance: Results from an Occupational Therapy Program. *Journal of Allied Health*, 48(3), 194–200. <https://search.ebscohost.com/login.aspx?direct=true&db=rzh&AN=138924508&site=ehost-live>
- Saunders, A., Say, R., Visentin, D., & McCann, D. (2019). Evaluation of a collaborative testing approach to objective structured clinical examination (OSCE) in undergraduate nurse education: A survey study. *Nurse Education in Practice*, 35, 111–116. <https://doi.org/10.1016/j.nepr.2019.01.009>
- Schwill, S., Fahrback-Veeser, J., Moeltner, A., Eicher, C., Kurczyk, S., Pfisterer, D., Szecsenyi, J., & Loukanova, S. (2020). Peers as OSCE assessors for junior medical students – a review of routine use: a mixed methods study. *BMC Medical Education*, 20, 1-12. <http://dx.doi.org/10.1186/s12909-019-1898-y>
- Setyonugroho, W., Kropmans, T., Kennedy, K. M., Stewart, B., Dalen, J. van, & van Dalen, J. (2016). Calibration of communication skills items in OSCE checklists according to the MAAS-Global. *Patient Education & Counseling*, 99(1), 139–146. <https://doi.org/10.1016/j.pec.2015.08.001>
- Sterz, J., Linßen, S., Stefanescu, M. C., Schreckenbach, T., Seifert, L. B., & Ruessler, M. (2021). Implementation of written structured feedback into a surgical OSCE. *BMC Medical Education*, 21(1), 1–9. <https://doi.org/10.1186/s12909-021-02581-3>
- Talwalkar, J. S., Murtha, T. D., Prozora, S., Fortin VI, A. H., Morrison, L. J., & Ellman, M. S. (2020). Assessing Advanced Communication Skills via Objective Structured Clinical Examination: A Comparison of Faculty Versus Self, Peer, and Standardized Patient Assessors. *Teaching & Learning in Medicine*, 32(3), 294–307. <https://doi.org/10.1080/10401334.2019.1704763>

- Tavares, W., & Boet S. (2016). On the Assessment of Paramedic Competence: A Narrative Review with Practice Implications. *Prehosp Disaster Med.* 2016 Feb;31(1):64-73. doi: 10.1017/S1049023X15005166. Epub 2015 Nov 30. PMID: 26618748
- Tavares, W., LeBlanc, VR., Mausz, J., Sun, V., & Eva, KW. (2014). Simulation-based Assessment of Paramedics and Performance in Real Clinical Contexts, *Prehospital Emergency Care*, 18:1, 116-122, DOI: 10.3109/10903127.2013.818178
- Tavares, W., Brydges, R., Myre, P., Prpic, J., Turner, L., Yelle, R., & Huiskamp, M. (2018). Applying Kane's validity framework to a simulation based assessment of clinical competence. *Adv Health Sci Educ Theory Pract* 23(2):323-338. doi:10.1007/s10459-017-9800-3
- Tavares, W., Boet, S., Theriault, R., Mallette, T., & Eva, KW. (2013). Global Rating Scale for the Assessment of Paramedic Clinical Competence, *Prehospital Emergency Care*, 17:1, 57-67, DOI: 10.3109/10903127.2012.702194
- Tweed, M. (2021). Station Score Aggregation and Pass/Fail Decisions for an OSCE: A Problem, a Solution and Implementation. *Focus on Health Professional Education*. <https://doi.org/10.3316/informit.311276138862520>
- Quick, K. K. (2016). The Role of Self- and Peer Assessment in Dental Students' Reflective Practice Using Standardized Patient Encounters. *Journal of Dental Education*, 80(8), 924–929. <https://doi.org/10.1002/j.0022-0337.2016.80.8.tb06172.x>
- University of Edinburgh. A short guide to the OSCE and creating the station mark sheet. <https://dokumen.tips/documents/160811-short-guide-to-the-osce-and-creating-the-station-mark-sheet-notes-mark-sheets.html>
- Wan, S., Canalese, R., Lam, L., Petersen, R., Quinlivan, J., & Frost, G. (2011). Comparison of criterion-based checklist scoring and global rating scales for the Objective Structured Clinical Examination (OSCE) in pre-clinical year medical students. *Medical Education*, 45(Supp 3:1). doi:10.1111/j.1365-2923.2011.04089.x
- Wong, W. Y. A., Roberts, C., & Thistlethwaite, J. (2020). Impact of Structured Feedback on Examiner Judgements in Objective Structured Clinical Examinations (OSCEs) Using Generalisability Theory. *Health Professions Education*, 6(2), 271–281. <https://doi.org/10.1016/j.hpe.2020.02.005>
- Zayyan, M. (2011). Objective structured clinical examination: the assessment of choice. *Oman Medical Journal*, 26(4), 219–222. <https://doi.org/10.5001/omj.2011.55>

Key Charles Sturt University documents

The following documents have been considered when forming the recommendations:

CASIMS course profiles:

- Bachelor of Paramedicine
- Bachelor of Nursing

CASIMS subject profiles:

- Bachelor of Paramedicine
- BMS317 Integrating Paramedic Medical Science
- BMS327 Integrating Paramedic Trauma Science
- CLS105 Foundations of Clinical Practice
- CLS106 Foundations of Trauma Practice
- CLS201 Introduction to Medical Emergencies
- CLS 202 Life Span Health Issues and Paramedic Care
- CLS205 Clinical Simulation
- CLS300 Advanced Cardiology and Paramedic Practice
- CLS307 Transition to Paramedic Practice
- Bachelor of Nursing
- NRS163 Clinical Reasoning in Nursing 1
- NRS174 Clinical Reasoning in Nursing 2
- NRS277 Clinical Reasoning in Nursing 3
- NRS283 Clinical Reasoning in Nursing 4
- NRS387 Clinical Reasoning in Nursing 5
- NRS399 Clinical Reasoning in Nursing 6

Bachelor of Nursing Curriculum Document 2021

Council of Ambulance Authorities Professional Competency Standards: Assessment Mapping Matrix

Bachelor of Nursing Simulation Model for Practice

Charles Sturt University Course and Subject Design (Coursework) Procedure

Charles Sturt University Assessment- Conduct of coursework assessment and examinations procedure

Charles Sturt University Assessment Policy

Academic Workload Allocation Policy 2021- School of Nursing, Paramedicine and Healthcare Sciences

Key Registration Standards documents

Nursing and Midwifery Board of Australia Registered Nurse Standards for Practice

Paramedicine Board of Australia Registration Standards

Appendix 1- Staff Feedback

As part of the process of forming recommendations, a brief literature review was undertaken. The literature review was then disseminated, and feedback was sought from all SNPHS staff across all disciplines. The following feedback was received and considered when making the recommendations:

Feedback	How it has been integrated into the recommendations
Can we have a definition of OSCE	A definition of OSCE and CSA as it is used in the SNPHS has been provided in this document
<p>The creation of the sub committee is a great idea to get everyone on board with potentially new ideas.</p> <p>The development of a SNPHS Simulation Committee with an OSCE Sub Committee. The purpose of the sub committee would be to oversee the integration and evaluation of OSCE best practice guidelines in the school. The sub committee would also support the Subject Convenor develop and implement standardisation practices around OSCE assessment processes and marking.</p> <p>Great idea and warranted as there needs to be a consolidation and appreciation of the role of OSCES in our teaching as much as in framing the learning and assessment of students, that is why are we doing this and what does it tell me about our learning/ technique.</p>	The creation of a Simulation Committee has been included in the recommendations to cover what is outlined here.
Led by the Simulation Lead, the development of a SNPHS Simulation Committee with an OSCE Sub Committee. The purpose of the sub committee would be to oversee the integration and evaluation of OSCE best practice guidelines in the school. The sub committee would also support the Subject Convenor develop and implement standardisation practices around OSCE assessment processes and marking. - Great.	
Components of an OSCE	Components of an OSCE have been included in this document including framework for planning, during and marking the assessment
Tertiary education providers offering Paramedicine have moved to Integrated Clinical Examinations, we have termed ours Clinical Scenarios/Assessments, where a student works through a clinical scenario from start to finish, managing a particular presentation of a condition from initial entry to a 'house' to diagnosis and treatment plan, and is assessed on tasks/objectives specific to subjects integrated throughout including	The attached literature has been used to support assessment design and this would allow for the type of integrated assessment discussed here. Other providers of Bachelor of Paramedicine



decision making and understanding of the decision. I see the one mentioned in the article does lend itself more to that and I would like to see if we can perhaps work from this as a starting point.	assessment design have been reviewed as part of this process.
Marking	Marking guidance and standardisation has been included as part of this document.
Marking criteria should be provided in the subject outline or be available on the I2 site from the commencement of session, or 2 weeks before an early residential school.	This has been included in the recommendations. The marking instrument be available from the start of session. SY/US grading scale included in marking criteria.
Opportunities for peer or self based, formative assessment should be integrated prior to undertaking final assessment	This aligns with the literature and has been included in the recommendations
Interruption- amount of guidance that should be provided	This has been included in the document.
The other thought is around talking by the person watching/marking the OSCE Needs to be clearly stated that either no talking occurs / or what the student can ask / or if the marker has to respond then the same communication is used	The marker should only clarify what the student has been asked to do and not provide any direct instruction.
Number of attempts. Time between attempts	This has been outlined in the document. 2 attempts. Principles for time between have been provided regarding time for feedback and practice, specific time will be dependent on when the assessment is undertaken
Opportunities for students to excel theoretically but not practically. Greater student satisfaction from being able to excel in a number of areas WPL SY/US already, why are all practical components sy/us with no opportunity for student growth.	This has been carefully considered with regard to the literature, other providers, the need to clearly demonstrate competence and operational requirements. For this reason, the global rating scale has been included for students to differentiate between performance levels.
Planned OSCE assessment processes and marking instruments to be submitted to the Simulation Lead for QA at the time of SO submission <i>Also a relevant consideration, however should this not be a standard pre-set?</i>	Included as a recommendation. It will be good to see QA of simulation manuals and assessments undertaken by the

	Simulation Committee rather than a single Lead.
<p>Standardising OSCE marking practices. A proposed method is through the use of individual activity scores with a final determination of SY/US, based on either achievement of a percentage of the available points, or the sub committee could apply Agnoff's method (Wan, Canalese, Lam, Petersen, Quinlivan & Frost, 2011). This would align with the allocation of workload hours, type of assessment and contribution to final score, where it is preferred the final determination is SY/US. This is also an established reliable and valid method that supports student development. An example has been attached as appendix 2.</p> <p>___ I was initially concerned that I had used the form incorrectly this yr, however helps when you read everything again.</p> <p>The number system is more reliable I feel than a tick next to a criteria. The student should also get a copy of the marking sheet for their reflection on. I have been doing some reading on feedback in assessments and one of the themes is the value of submitting/doing a task , receiving feedback and then repeating the same task, using the feedback to improve. Doing the OSCE first as a peer review, receiving feedback and completing OSCE being assessed by academic may assist in developing not only skills but the processes involved in assessment, feedback and reflection in actual practice. This is one of the standards of practice of RN's and one too often forgotten or too hard because no one wants to give bad feedback.</p> <p>Is the plan to keep the OSCE assessment in lab time?</p>	<p>Marking standardisation included in recommendations</p> <p>Provision of written feedback in form of completed assessment marking sheet included in document</p> <p>Peer review included in recommendations OSCE scheduling time included in document</p>
<p>The OSCE assessment process and marking instrument should be available from the start of session and opportunities for formative peer based and self assessment integrated into simulation learning activities.</p> <p>Totally agree, this could be used during labs or if students have " finished" activities. Also useful for those students who have study groups where practice their skills and assessment.</p>	Included in recommendations
<p>Another theme that emerged was the restriction a competent/not competent scoring system brings, where the technical and non technical elements of the task are unable to be incorporated (Donohoe, Reilly, Donnelly & Cahill, 2020).- Agreed and I believe that is where we are all finding it challenging.</p>	The global rating scale has been implemented to ensure a more authentic and comprehensive assessment of competence is undertaken and where students can see areas for further development
<p>A key point identified was that it is essential for students to undertake self assessment of the OSCE prior to undertaking the assessment with staff, and that peer assessment is highly beneficial as part of a formative assessment and assists to reduce student anxiety (Bevan, Russell & Marshall, 2019; Kelly, Mitchell & Henderson, 2016; Mitchell, Cotton, Leedham-Green, Elias & Bartholomew, 2021; Schwill, Fahrback-Veeser, Moeltner, Eicher, Kurczyk, Pfisterer, Szecsenyi & Loukanova, 2020).- This is conducted in all paramedicine</p>	Fantastic! Opportunities for formative peer-based assessment implanted into recommendations



<p>clinical subjects through our ‘practical’ classes. Students once reaching a certain skill set repeat ‘scenarios’ using the assessment marking tool and supporting evidence. This is facilitated by peer tutors and/or other staff. Students come into their assessment very familiar with the marking criteria if they have engaged in class.</p>	
<p>It is important to understand that the instrument alone is insufficient, and processes around standardisation are paramount (Tavares & Boet, 2016 Tavares, LeBlanc, Mausz, Sun & Eva 2014; Tavares, Brydges, Myre, Prpic, Turner, Yelle & Huiskamp, 2018; Zayyan, 2011). In particular, a focus on standardisation or ‘callibration’ of markers is essential (Moreno-López & Sinclair, 2020).- Yes absolutely. The committees will be able to assist with this?</p>	<p>Included in recommendations</p>
<p>Standardising OSCE marking practices across undergraduate nursing and paramedicine, with the use of individual activity scores with a final determination of SY/US, based on either achievement of a percentage of the available points, or the sub committee could apply Agnoff’s method (Wan, Canalese, Lam, Petersen, Quinlivan & Frost, 2011). This would align with the allocation of workload hours, type of assessment and contribution to final score, where it is preferred the final determination remains SY/US. This is also an established reliable and valid method that supports student development. An example has been attached as appendix 2.- How would this look or feel to students who reach ‘full marks’ in the individual activity scores (HD) but equate to the same mark as someone who just scrapes through? Is there a way we support those students in their marks/assessment items who struggle with academic writing but excel in practical applications of the theory and will make excellent clinicians?</p>	<p>This point has been carefully considered. The literature has not supported that this is a known issue. Student feedback around this has been integrated into the recommendations and will continue to be considered in assessment design.</p>
<p>In Paramedicine and most of the Academics in the discipline completed OSCEs in the form of a step by step skill assessment SY/US for IV cannulation for example as part of the vocational route in to the role of a Paramedic.</p>	<p>OSCE’s have evolved from a step by step physical only skill assessment. The literature has been integrated to provide framework for OSCE’s that assess physical, cognitive and affective skills, including problem solving and critical thinking</p>
<p>I agree with your research findings around peer assessment – I feel we need to put more planning around incorporating this into the residential schools prior to the OSCE being completed</p>	<p>Has been provided as a recommendation</p>
<p>Proposed points scoring too complicated</p>	<p>A more simplified and evidence based version that includes ANSAT has been recommended</p>
<p>Tips to avoid stress- formative assessment and feedback</p>	<p>Opportunities for formative peer-based assessment have been incorporated</p>

Appendix 2 - Australian course providers

	Assessment type	Grading scale
Bachelor of Nursing		
University of Wollongong	OSCE	PASS/FAIL
University of Adelaide	OSCE	Criterion referenced then PASS/FAIL (hurdle)
University of Technology Sydney	OSCE	PASS/FAIL (hurdle)
University of Melbourne	OSCE	PASS/FAIL (hurdle)
Monash	OSCE	PASS/FAIL (hurdle)
Deakin	Not OSCE	PASS/FAIL (hurdle)
Bachelor of Paramedicine		
University of Sydney	Not OSCE	PASS/Not PASS (hurdle)
Queensland University of Technology	OSCE	Satisfactory/Unsatisfactory (hurdle)
Edith Cowan University	OSCE	PASS/FAIL (hurdle)
Flinders University	Moving to OSCE	PASS/FAIL (hurdle)
Western Sydney University	Not OSCE	PASS/FAIL (hurdle)
Monash	OSCE	20% and PASS/FAIL (hurdle)



Appendix 3 – Example NRS163 Clinical Skills Assessment

Attempt	1	2
Subject Code: NRS163	Date:	
Student Name:	Student Number:	

Standardised Global Rating Scale

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

Clinical Skills Assessment						
Preparation and planning						
Undertakes hand hygiene	1	2	3	4	5	NA
Gathers required equipment	1	2	3	4	5	NA
Performing the procedure						
Introduces self, explains the procedure and gains consent	1	2	3	4	5	NA
Undertakes hand hygiene	1	2	3	4	5	NA
Uses correct technique to undertake temperature reading*	1	2	3	4	5	NA
Undertakes hand hygiene	1	2	3	4	5	NA
Uses correct technique to palpate peripheral pulse rate noting rate and rhythm	1	2	3	4	5	NA
Undertakes hand hygiene	1	2	3	4	5	NA
Uses correct technique to attach pulse oximetry and obtain reading	1	2	3	4	5	NA
Undertakes hand hygiene	1	2	3	4	5	NA
Uses correct technique to assess respiratory rate and rhythm	1	2	3	4	5	NA



Undertakes hand hygiene	1	2	3	4	5	NA
Uses correct technique to ascertain blood pressure	1	2	3	4	5	NA
Performs hand hygiene	1	2	3	4	5	NA
After the procedure						
Documents findings accurately	1	2	3	4	5	NA
Identifies any aberrant findings	1	2	3	4	5	NA

*The observations do not need to be undertaken in any specific order.

	Satisfactory	Unsatisfactory
Performs clinical skills safely and competently in the simulated learning environment	The student has demonstrated safe and competent practice in the simulated learning environment by achieving a score of at least 3 in each area of the Clinical Skills Assessment.	The student has not demonstrated safe and competent practice in the simulated learning environment by achieving less than 3 in one or more areas of the Clinical Skills Assessment.

Comments:

Student name:	Student number:
Assessed by:	Signature:

Appendix 4 – Example CLS105 Objective Structured Clinical Examination

Objective Structured Clinical Examination (OSCE)

Subject Code: CLS105

Insert into Subject Outline:

This subject requires you to undertake an Objective Structured Clinical Examination (OSCE) in order to demonstrate safety and competence when undertaking a number of skills learnt as part of this subject.

During residential school/session, you will have the opportunity to learn and practise new skills required in the profession. You will also have the opportunity to undertake formative, peer-based assessments prior to undertaking the OSCE.

On the last days of the residential school/weeks of session, you will rotate through a number of stations that focus on specific skills you have learnt. You will undertake an assessment at each station. There is no specific order you need to complete the stations in, however station 5 must be completed last.

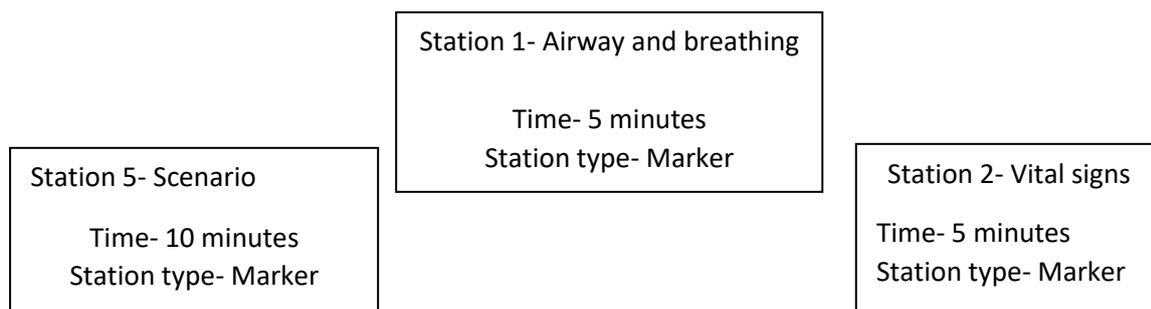
You will have 5 minutes at stations 1-4 and 10 minutes at station 5. The marker located at the station will detail what you are required to do. If you do not achieve the required standard, you will be provided with feedback in three ways:

- Marked rating scale
- Direct instruction/demonstration
- Verbal feedback

You will then have the opportunity to practise before undertaking assessment for that station again. If you do not meet the required standard for the second time, you will receive an unsatisfactory grade for this assessment task.

The assessor is not able to communicate with you during the OSCE, only to clarify what you are being asked to do at that station.

The academic who assesses your performance at station 5 will review your OSCE scores for each station and make a determination of a final satisfactory or unsatisfactory grade. It is essential that you keep a copy of your documentation in both paper and electronic form. You will need to upload a PDF version of the documentation into EASTS once all OSCE stations are completed.





Station 4- Manual handling

Time- 5 minutes

Station type- Marker

Station 3- Cardiac assessment

Time- 5 minutes

Station type- Marker



Marking instrument:

Station: Airway and Breathing	Attempt: 1 2
Subject Code:	Date:
Student Name:	Student Number:

Standardised Global Rating Scale for all OSCE stations

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

Manual Airway Management						
Demonstrates safe head tilt chin lift technique	1	2	3	4	5	NA
Airway Adjunct: Oropharyngeal airway (OPA)						
OPA is measured and inserted correctly	1	2	3	4	5	NA
Airway Adjunct: Nasopharyngeal airway (NPA)						
NPA is measured and inserted correctly	1	2	3	4	5	NA
Suction						
Demonstrates safe oral suctioning technique	1	2	3	4	5	NA
Bag Valve Mask (BVM)						
Demonstrates safe use of the BVM, including oxygen flow selection	1	2	3	4	5	NA
Oxygen administration						
Selects appropriate mask	1	2	3	4	5	NA
Selects appropriate oxygen flow rate	1	2	3	4	5	NA

Comments:

Assessed by:	Signature:



Station: Vital signs	Attempt: 1 2
Subject Code:	Date:
Student Name:	Student Number:

Standardised Global Rating Scale for all OSCE stations

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

Blood pressure						
Undertakes safe and accurate manual blood pressure reading	1	2	3	4	5	NA
Blood Glucose Level (BGL)						
Considers appropriate PPE	1	2	3	4	5	NA
Undertakes safe and accurate BGL	1	2	3	4	5	NA

Comments:

Assessed by:	Signature:



Station: Cardiac assessment	Attempt: 1 2
Subject Code:	Date:
Student Name:	Student Number:

Standardised Rating Scale for all OSCE stations

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

Four lead rhythm strip acquisition						
Identifies correct landmarks for 4 lead placement	1	2	3	4	5	NA
Obtains rhythm strip	1	2	3	4	5	NA
Rhythm recognition						
Identifies cardiac rhythm at level	1	2	3	4	5	NA

Comments:

Assessed by:	Signature:



Station: Manual Handling	Attempt: 1 2
Subject Code:	Date:
Student Name:	Student Number:

Standardised Rating Scale for all OSCE stations

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

Stryker carry chair						
Demonstrates safe use of Stryker carry chair	1	2	3	4	5	NA
Stryker Stretcher						
Demonstrates safe use of Stryker carry stretcher	1	2	3	4	5	NA

Comments:

Assessed by:	Signature



Station: Scenario	Attempt: 1 2
Subject Code: CLS105	Date:
Student Name:	Student Number:

Standardised Rating Scale for all OSCE stations

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

Preparing for Respiratory Assessment						
Scene safety is considered	1	2	3	4	5	NA
Utilises 'Standard Precautions' and applies PPE appropriate to situation	1	2	3	4	5	NA
Explains procedure and gains consent	1	2	3	4	5	NA
Ensures patient is sitting in high fowlers and in a position of comfort	1	2	3	4	5	NA
General Appearance						
Determines quality (deep, shallow) and rhythm (ie. regular, irregular, Kussmauls, Cheyne-Stokes) *	1	2	3	4	5	NA
Assesses ability to speak (i.e. full or part sentences) and presence of cough	1	2	3	4	5	NA
Assesses skin colour, temp, condition (i.e. nicotine staining)	1	2	3	4	5	NA
Considers use of home oxygen and respiratory history/medications	1	2	3	4	5	NA
Inspection						
Exposes chest (considers modesty), counts respiratory rate	1	2	3	4	5	NA
Analyses scars, wounds, bruising, pacemaker, etc	1	2	3	4	5	NA



Looks for symmetrical rise and fall, chest shape, accessory muscle use	1	2	3	4	5	NA
Palpation						
Palpates chest for pain and tenderness	1	2	3	4	5	NA
Palpates for symmetrical breathing & tactile fremitus	1	2	3	4	5	NA
Percussion						
Considers indications for percussion (i.e. suspected pneumothorax)	1	2	3	4	5	NA
Demonstrates safe percussion technique	1	2	3	4	5	NA
Auscultation						
Auscultates lung fields (minimum of 3 sites per side - anterior & posterior chest)	1	2	3	4	5	NA
Comments on symmetry and noisy breath sounds (i.e. crackles, wheezes, rhonchi)	1	2	3	4	5	NA
For absent breath sounds, considers 'silent chest in asthma', apnoea, tension pneumothorax	1	2	3	4	5	NA
Decision making						
Explains findings to patient	1	2	3	4	5	NA
Outlines next steps in context of scenario and respiratory assessment findings	1	2	3	4	5	NA

*The student should be asked to verbalise their assessment and decision-making processes throughout. The assessor may ask questions regarding assessment findings where the student does not verbalise these.

Comments:

Assessed by:	Signature:

Overall determination of SY or US grade:

	Satisfactory	Unsatisfactory
Performs clinical skills safely and competently in the simulated learning environment	The student has demonstrated safe and competent practice in the simulated learning environment by achieving a score of at least 3 in each area of the Objective Structured Clinical Examination.	The student has not demonstrated safe and competent practice in the simulated learning environment by achieving less than 3 in one or more areas of the Objective Structured Clinical Examination.

Student name:	Student number:
Assessed by:	Signature:

Appendix 5 – Example NRS174 Objective Structured Clinical Examination

Objective Structured Clinical Examination (OSCE)

Subject Code: NRS174

Insert into Subject Outline:

This subject requires you to undertake an OSCE in order to demonstrate safety and competence when undertaking skills learnt as part of this subject.

During residential school/session, you will have the opportunity to learn and practise new skills required in the profession. You will also have the opportunity to undertake formative, peer-based assessments prior to undertaking the OSCE.

Station 1 of the OSCE is completed during the session, you will need to achieve 100% in the online medication calculation assessment. You will need to bring your certificate of completion to the face to face OSCE with you.

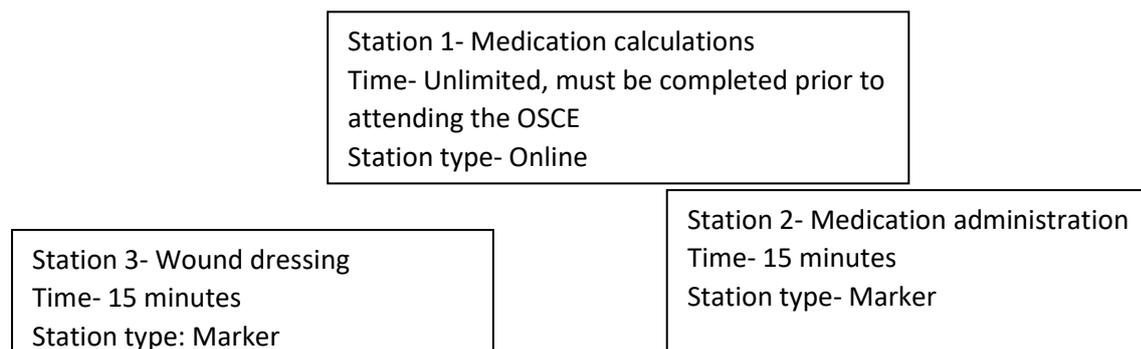
During the end of session examination period, you will register a time to undertake your OSCE. During this examination, you will rotate through two stations that focus on specific skills you have learnt. You will undertake an assessment at each station.

You will have 15 minutes at each station. The marker located at the station will detail what you are required to do. If you do not achieve the required standard, you will be provided with feedback in three ways:

- Marked rating scale
- Direct instruction/demonstration
- Verbal feedback

You will then have the opportunity to practice before undertaking the assessment again. If you do not meet the required standard for the second time, you will receive an unsatisfactory grade for this assessment task. As the minimum pass requirements for this subject require you to achieve a satisfactory grade in all assessment tasks graded SY/US, you will be referred to the Subject Convenor. You may also consider the Review of Grade procedures.

The academic who assesses your performance at station 2 will also mark station 1. The academic who assesses station 3 will review your OSCE scores for each station and make a determination of a final satisfactory or unsatisfactory grade. It is essential that you keep a copy of your documentation in both paper and electronic form. You will need to upload a PDF version of the documentation into EASTS once all OSCE stations are completed.





Marking instrument:

Attempt	1	2
Subject Code:	Date:	
Student Name:	Student Number:	

Standardised Rating Scale for all OSCE stations

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

STATION 1- Online Medication Calculations Assessment				
Achieves 100% on the online medication calculation assessment	1	2	3	
Brings certificate of completion for presentation on the day of the face-to-face OSCE assessment	1	2	3	

Comments:

Assessed by:	Signature:



Attempt	1	2
Subject Code:	Date:	
Student Name:	Student Number:	

Standardised Rating Scale for all OSCE stations

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

STATION 2- Medication Administration						
Planning for the procedure						
Checks order is valid	1	2	3	4	5	NA
Reviews medication in MIMS/Australian Medicines Handbook or can verbalise indication, contraindications and side effects independently when asked	1	2	3	4	5	NA
Reports and clarifies any omissions, inconsistencies, inaccuracies or incomplete prescription orders to the supervising RN or MO	1	2	3	4	5	NA
Performs hand hygiene appropriately	1	2	3	4	5	NA
Performing the procedure						
Performs hand hygiene appropriately	1	2	3	4	5	NA
Conducts appropriate assessments of the person and reviews related pathology results (if appropriate)	1	2	3	4	5	NA
Determines if a new medication. Explains medication to patient including possible side effects.	1	2	3	4	5	NA
First Check- Compares the label on the medication container or package against the order on the medication chart <i>to ensure that the right medication is given</i>	1	2	3	4	5	NA
Checks the expiry date of the medication	1	2	3	4	5	NA
Calculates the correct dosage of the medication	1	2	3	4	5	NA
Checks time for administration	1	2	3	4	5	NA



Checks route for administration	1	2	3	4	5	NA
Undertakes second check of 5 R's	1	2	3	4	5	NA
Undertakes third check of R's	1	2	3	4	5	NA
Asks patient for their full name and date of birth and checks this detail against the medication order	1	2	3	4	5	NA
Asks the patient if they have any allergies, checks allergies in record	1	2	3	4	5	NA
Administers medication and ensures medication is taken prior to leaving bedside	1	2	3	4	5	NA
Student and supervising RN complete and sign the medication chart correctly	1	2	3	4	5	NA
Post procedure						
Ensures patient is left with access to call bell	1	2	3	4	5	NA

Comments:

Assessed by:	Signature:



Subject Code:	Date:
Student Name:	Student Number:

Standardised Rating Scale for all OSCE stations

Code:

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the STANDARD has NOT been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)

STATION 3- Wound Dressing						
Explains procedure to the person and gains consent	1	2	3	4	5	NA
Performs hand hygiene, applies face mask and clean gloves	1	2	3	4	5	NA
Removes outer dressing	1	2	3	4	5	NA
Sets up sterile field	1	2	3	4	5	NA
Removes inner dressing	1	2	3	4	5	NA
Assesses wound	1	2	3	4	5	NA
Cleanses surrounding site if required	1	2	3	4	5	NA
Cleanses wound	1	2	3	4	5	NA
Applies transparent wound barrier, hydrocolloid dressing or sterile dressing	1	2	3	4	5	NA
Disposes of used equipment appropriately	1	2	3	4	5	NA
Performs hand hygiene	1	2	3	4	5	NA
Maintains aseptic/sterile field throughout procedure	1	2	3	4	5	NA
Documents procedure and assessment data	1	2	3	4	5	NA

Comments:

Assessed by:	Signature:



Overall determination of grade:

	Satisfactory	Unsatisfactory
Performs clinical skills safely and competently in the simulated learning environment	The student has demonstrated safe and competent practice in the simulated learning environment by achieving a score of at least 3 in each area of the Objective Structured Clinical Examination.	The student has not demonstrated safe and competent practice in the simulated learning environment by achieving less than 3 in one or more areas of the Objective Structured Clinical Examination.

Comments:

Student name:	Student number:
Assessed by:	Signature:



Appendix 6- SNPHS Undergraduate Simulation-Based Assessment Guide

SNPHS Undergraduate Simulation-Based Assessment Guide
(to be added as an appendix to the SNPHS Simulation Model for Practice)

Terminology

Clinical Skills Assessment (CSA)- CSA's are less formal than OSCE's and used to assess student safety and competence when undertaking a range of physical, affective and/or cognitive skills in the simulation-based learning environment. The CSA usually occurs prior to the student undertaking a workplace learning experience. The CSA occurs during session time, either during on campus simulation time or during intensives. The CSA can be undertaken as a small group activity.

Student performance is differentiated using the standardised global rating scale (appendix 1). A final determination of safety and competence is made using a standardised satisfactory/unsatisfactory grading scale (appendix 2). Opportunities for formative peer-based assessment should be integrated into simulation-based learning activities. The final determination of the grade is to be made by an academic staff member who is currently registered in the relevant profession (Registered Paramedic for undergraduate Paramedicine subjects and Registered Nurse for undergraduate Nursing subjects).

Objective Structured Clinical Examinations (OSCE's)- OSCE's are used to provide a formal and comprehensive assessment of student safety and competence when undertaking a range of physical, affective and cognitive skills. During an OSCE, students rotate through a number of stations in order to demonstrate competency in a simulation-based learning environment (Hastie et al., 2014). The stations can include a variety of different assessment types, including standardised patient scenarios, task focussed activities and oral questions (Harden, 2015). An OSCE may also include stations that are not directly assessed, such as a station for collecting patient data that informs assessment at a future station. For this reason, some stations are called 'Marker' stations, where an assessment occurs and some are called 'Observer' stations, where an assessment does not occur. A Marker or Observer must be present at each station (Harden, 2015).

Objective- Each OSCE station is standardised and designed to focus on an area/s of clinical competence.

Structured- Every student experiences the same patient and patient scenario and is asked to perform the same task within the same timeframe.

Clinical- The student is assessed on their ability to apply clinical knowledge and skills required in their profession.

Examination- The OSCE can form both a formative and summative assessment of safety and competence.

Summative OSCE's should be scheduled as late in the session as possible (Bevan & Russell, 2019). OSCE's may be scheduled during the session either during on campus simulation time or during intensives. OSCE's may also be scheduled during the end of session examination period; the Associate Head of School and Head of Discipline- Nursing or Associate Head of School and Head of Discipline- Paramedicine determines if an OSCE is to be scheduled during the examination period.

Student performance is differentiated using the global rating scale (appendix 1). A final determination of safety and competence is made using a standardised satisfactory/unsatisfactory grading scale (appendix 2). Opportunities for peer-based assessment should be integrated into simulation-based learning activities (Bevan & Russell, 2019 & Kellet et al, 2014). The final

determination of the grade is to be made by an academic staff member who is currently registered in the relevant profession (Registered Paramedic for undergraduate Paramedicine subjects and Registered Nurse for undergraduate Nursing subjects).

Key assessment principles

Clinical Skills Assessment (CSA)

Planning for assessment

- The planned CSA, including marking instrument should be submitted to the Simulation Lead for QA at the same time the Subject Outline is submitted for QA.
- The CSA is incorporated into undergraduate subjects as a hurdle assessment. The assessment item must be graded as satisfactory in order for the student to be able to pass the subject.
- In the first session of enrolment in the undergraduate Bachelor of Nursing, the CSA is used **prior** to the student undertaking the first workplace learning experience in order to demonstrate that the student has the requisite skills to:
 - introduce themselves;
 - wash their hands correctly; and
 - undertake basic observations.
- Clinical Skills Assessments are used in the Bachelor of Nursing curriculum for Clinical Reasoning subjects NRS163, NRS283 and NRS399.
- The CSA can occur as part of a small group activity.
- The patient scenario and assessment instrument used should remain the same for all students, for each attempt. The patient observations may differ without increasing the level of complexity (Brown et al., 2020) (eg changing the mannequin's blood pressure but keeping all readings between the flags).
- Opportunities for formative, peer-based assessment should be integrated into simulation based learning activities and utilise the same marking instrument used for the summative assessment (Bevan & Russell, 2019; Kelly et al., 2014).
- The marking instruments should be made available to students from the commencement of session.
- The assessment should be appropriately time limited. The CSA does not utilise subject marking time as it is assessed within simulation-based teaching time.

During assessment

- The assessment is undertaken during teaching time.
- Examiners should keep rigorous records of students who have been assessed and the number of attempts undertaken.
- Students should not undertake clinical assessments and observations on each other during the assessment. Simulation equipment should be used wherever possible.
- One examiner should not assess more than two students at any one time.
- During summative assessment, the marker should not provide any direct instruction. Communication should be limited to clarifying what the student has been asked to do in the assessment.
- Individual student performance is differentiated using the standardised global rating scale.
- A final determination of student safety and competence must be made using a standardised satisfactory/unsatisfactory grading scale.

- A maximum of two attempts for each student is permitted, with feedback provided after the first unsatisfactory attempt in the form of:
 - Verbal feedback
 - Physical instruction, where indicated
 - A marked assessment instrument
- There is no specific time period between the first attempt and the subsequent attempt, however, there should be sufficient time for the student to receive and consider the feedback and practice the skill again. Access to the simulation space and required consumables should be facilitated.

Marking

- Marking standardisation should be carefully considered, and occur in the form of an exemplar video, where possible, and marking meeting. The marking meeting should use the global rating scale to clearly articulate what each level of competence would look like, and what constitutes a satisfactory and unsatisfactory grade. Guidance for how grades should be communicated to students should also be considered and discussed due to the synchronous and group work nature of the assessment.
- There is insufficient evidence to support a different marker undertaking the second assessment attempt.
- Where there are two unsatisfactory attempts, the marked rating scales should be provided to the Subject Convenor for review. The Subject Convenor makes the final determination of the student's grade. Processes for ROM and ROG apply and are available to the student for the CSA.
- The summative assessment is to be undertaken by an academic staff member who is currently registered in the relevant profession.
- As CSA's occur during usual teaching hours, additional time is not allocated for CSA marking. For sessional staff members, time is allocated for the teaching hours for the lesson the CSA is incorporated into.
- A record of the summative assessment should be kept. This can be done in a number of ways including student upload through EASTS, or the academic collecting and scanning the documents to file.

Objective Structured Clinical Examination (OSCE)

Planning for assessment

- The planned OSCE, including marking instrument should be submitted to the Simulation Lead for QA at the same time the Subject Outline is submitted for QA.
- The OSCE is incorporated into undergraduate subjects as a hurdle assessment. The assessment item must be graded as satisfactory in order for the student to be able to pass the subject.
- The patient scenario/s and assessment instrument used should remain the same for all students, for each attempt. The patient details may differ without increasing the level of complexity (eg changing the mannequin's blood pressure but keeping all readings between the flags) (Brown et al., 2020).
- Opportunities for formative, peer-based assessment should be integrated into simulation based learning activities and utilise the same marking instrument used for the summative assessment (Bevan & Russell, 2019; Kelly et al, 2014).
- The marking instruments should be made available to students from the commencement of session.

- Usually, a total of 5-8 minutes should be allocated for each station, depending on the type of activity being assessed and the available marking time (Hastie et al., 2014).
- OSCE's may occur outside normal teaching hours, during the end of session examination period. The HOS- Nursing and HOS- Paramedicine determine if the OSCE is to occur in the examination period.
- During an OSCE, students rotate through a number of stations in order to demonstrate competency in undertaking clinical skills in a simulated learning environment (Harden, 2015; Hastie et al., 2014).
- The OSCE assessment can range from a single station to up to six different stations (Hastie et al., 2014).
- The stations can include a variety of different assessment types, including standardised patient scenarios, task focussed activities and oral questions (Harden, 2015).
- The OSCE may also include stations that are not directly assessed, such as a station for collecting patient assessment data that informs assessment at a future station. For this reason, some stations are called 'Marker' stations, where an assessment occurs and some are called 'Observer' stations, where an assessment does not occur. A Marker or Observer must be present at each station.
- Online tests can form one of the OSCE stations, where at least one other station assesses practical skills (Harden, 2015).
- Opportunities for peer-based assessment should be integrated into simulation-based learning activities (Bevan & Russell, 2019; Kelly et al., 2014).
- The stations, activities and scenarios should remain the same for all students, for each attempt.

During assessment

- Examiners should keep rigorous records of students who have been assessed and the number of attempts undertaken.
- Unless formal preparation occurs, students should not form part of the OSCE station scenarios.
- Students should not undertake clinical assessments and observations on each other during the assessment. Simulation equipment should be used wherever possible.
- One examiner should not assess more than two students at any one time. Where possible, the student should be assessed individually.
- During summative assessment, the marker should not provide any direct instruction. Communication should be limited to clarifying what the student has been asked to do at that station.
- Examiners undertake assessments using the standardised assessment instrument at each station.
- A final determination of student safety and competence must be made using a standardised satisfactory/unsatisfactory grading scale.
- A maximum of two attempts for each student is permitted, with feedback provided after the first unsatisfactory attempt in the form of:
 - Verbal feedback
 - Physical instruction, where indicated
 - A marked assessment instrument
- There is no specific time period between the first attempt and the subsequent attempt, however, there should be sufficient time for the student to receive and consider the feedback and practice the skill again. Student access to the simulation space and required consumables should be facilitated.

Marking

- Marking standardisation should be carefully considered, and occur in the form of an exemplar video, where possible, and marking meeting. The marking meeting should use the global rating scale to clearly articulate what each level of competence would look like, and what constitutes a satisfactory and unsatisfactory grade. Guidance for how grades should be communicated to students should also be considered and discussed due to the synchronous nature of the assessment.
- There is insufficient evidence to support a different marker undertaking the second assessment attempt.
- Where there are two unsatisfactory attempts, the marked rating scales should be provided to the Subject Convenor for review. The Subject Convenor makes the final determination of the student's grade. Processes for ROM and ROG apply and are available to the student for the OSCE.
- The summative assessment is to be undertaken by an academic staff member who is registered in the relevant profession.
- Where there are two unsatisfactory attempts, the marked rating scales should be provided to the Subject Convenor for review. The Subject Convenor makes the final determination of the student's grade. Processes for ROM and ROG apply and are available to the student for the CSA.
- Where OSCE's occur during usual teaching time, additional time is not allocated for marking.
- Where OSCE's occur during the end of session examination period, time is allocated in accordance with the SNPHS Workload Allocation Policy.
- A record of the summative assessment should be kept. This can be done in a number of ways including student upload through EASTS, or the academic collecting and scanning the documents to file.

Key differences in assessment design		
	CSA	OSCE
Scheduling	During usual teaching time	During usual teaching time or the end of session examination period
Number of scenarios	Usually limited to one scenario and/or skill	Up to six separate scenarios
Use of stations	No use of stations	Up to 6 stations
Assessment of physical, cognitive or affective skills	Usually limited to assessment of physical skills	Assesses a range of physical, cognitive and/or affective skills
Group assessment	Yes	Individual assessment

Appendix 7 - Standardised global rating scale

Standardised Global Rating Scale for **all** CSA and OSCE assessments

1 = Expected behaviours and practices not performed

2 = Expected behaviours and practices performed below the acceptable/satisfactory standard

3 = Expected behaviours and practices performed at a satisfactory/pass standard

4 = Expected behaviours and practices performed at a proficient standard

5 = Expected behaviours and practices performed at an excellent standard

N/A = not assessed - Circle N/A ONLY if the student has not had an opportunity to demonstrate the behaviour

Note: a rating 1 or 2 indicates that the standard has not been achieved and a SATISFACTORY grade cannot be awarded

(Ossenberg, Henderson & Mitchell, 2020)



Appendix 8 - Standardised satisfactory/unsatisfactory grading scale

For **all** CSA and OSCE assessments

CSA

	Satisfactory	Unsatisfactory
Performs clinical skills safely and competently in the simulation-based learning environment	The student has demonstrated safe and competent practice in the simulation-based learning environment by achieving a score of at least 3 in each area of the Clinical Skills Assessment.	The student has not demonstrated safe and competent practice in the simulation-based learning environment by achieving less than 3 in one or more areas of the Clinical Skills Assessment.

OSCE

	Satisfactory	Unsatisfactory
Performs clinical skills safely and competently in the simulation-based learning environment	The student has demonstrated safe and competent practice in the simulation-based learning environment by achieving a score of at least 3 in each area of the Objective Structured Clinical Examination.	The student has not demonstrated safe and competent practice in the simulation-based learning environment by achieving less than 3 in one or more areas of the Objective Structured Clinical Examination.