

This Appendix outlines the use of “High Fidelity Simulation” (HFS) to supplement evaluation of Specific Competencies in the Clinical (C) or Preceptorship (P) performance environments as defined by the *National Occupational Competency Profile for Paramedics in Canada*. This policy recognizes that it is increasingly difficult for many educational programs to meet all C and P requirements due to limited access to the clinical and practicum environment and varying operational and regulatory practices in different jurisdictions.

Policy

Paramedic education programs may use an effective simulation environment (as defined below) to support learners in meeting:

- “missing” C and P requirements after a reasonable placement in the clinical or field environment; and
- C and P requirements that are not otherwise attainable due to factors such as lack of access to venues (e.g. difficulty in obtaining access to ORs or other clinical sites) or constraints such as regional/provincial legislative, regulatory, licensing, and/or operational barriers.

Use of HFS to supplement evaluation of competencies in the Clinical and Preceptorship performance environment

HFS may be used to sign off a student on C or P competencies in the following instances:

1. HFS may only be used to supplement evaluation of C or P competencies once the student has completed the standard placement as outlined in a currently accredited program’s documentation.
2. HFS may be used to supplement a maximum of 10% of the required C competencies and a maximum of 10% of P competencies.
3. For sign off of P competencies, students must complete a substantial portion of a complete patient encounter, sufficient to demonstrate the specific competency and relevant sub-competencies in a meaningful and appropriate context. The scenario may be ended once the student has completed all activities required to demonstrate attainment of the specific competency and relevant sub-competencies.
4. The following C and P competencies are eligible for sign off in the HFS environment:
 - Area 1, 2, 3, 7, and 8: Note that most competencies in these areas are **NOT** suitable for evaluation in HFS. These competencies require situations and interactions with field personnel and bystanders that may be difficult to effectively recreate. The exception, which may be evaluated by HFS include:
 - SPECIFIC Competency 2.1.a Deliver an organized, accurate and relevant report utilizing telecommunication devices.
 - Area 4. All C and P competencies in Area 4 may be signed off by HFS **except**:

- GENERAL COMPETENCY 4.2 Obtain patient history.
- GENERAL COMPETENCY 4.4 Assess vital signs.
- Area 5. All C and P competencies in Area 5 may be signed off by HFS *except*:
 - ACP: Competency 5.1.h Utilize airway devices requiring visualization of vocal cords and introduced endotracheally (C environment).
- Area 6. All C and P competencies in Area 6 may be signed off by HFS *except*:
 - GENERAL COMPETENCY 6.2. Provide care to meet the needs of unique patient groups.
 - GENERAL COMPETENCY 6.3 Conduct ongoing assessments and provide care.
- 5. Programs must document the use of HFS.
 - The program's master tracking document must clearly indicate any competencies evaluated by HFS
 - The evaluation tool/documentation for each instance of HFS must clearly indicate:
 - That the competency was performed in HFS
 - Specific competencies that were evaluated by the HF simulation
 - Reason that competencies could not be obtained in the C or P environment
 - Statement that student has completed a full practicum as specified by the program
 - Documentation that demonstrates that the HF simulation met the criteria required by this policy to be considered high fidelity

Discussion on use of HFS to supplement evaluation of competencies in the Clinical and Preceptorship environment

- HFS cannot be used to shorten the clinical or field placement. The intent is to use HFS to supplement evaluation of difficult-to-achieve competencies **after** completion of scheduled placements, not to take the place of evaluation in these environments.
- Students cannot use HFS to meet 10% of the **combined** C and P requirements. HFS can only be used for a maximum of 10% in **each** environment. Students cannot, for example, use HFS for 15% of the P competencies and 2% of C requirements.
- Individual competencies cannot be signed off by performing a procedure as a skill station on a high fidelity mannequin. The intent of the preceptorship is to perform competencies in the context of an ambulance call in a field setting. Thus, the HFS must be of sufficient realism and duration to ensure that the competency is integrated into overall performance of a patient interaction in a field environment. For example, competency 5.7.b Immobilize suspected fractures involving axial skeleton, includes sub-competencies that require the student to identify signs and symptoms of possible fracture injury to the axial skeleton AND perform treatment of suspected fractures involving the axial skeleton. In this instance, the HFS must include at

least the Primary Survey and Secondary Survey (the student must perform assessment functions to identify the possible fracture) AND complete immobilization and packaging of the patient. However, the scenario would not need to include transport and handover.

- It should be evident from the case script / description, that these elements above be present.

Definition: High fidelity simulation environment

A high fidelity simulation environment must have the following characteristics.

Physical (Environmental) fidelity:

- The setting for the simulation must be authentic to the location of the case. The setting must include, when relevant, the location of the patient and, when relevant to meeting the Specific Competency, physical movement of the patient from the scene to an ambulance (or mock ambulance) and to a mock hospital setting. The setting must include effective physical cues (e.g., moulage, prosthetic, make up, etc.) and props (e.g., furniture, weapons, etc.) to adequately portray the physical requirements of the case.
- Actual equipment (e.g., stretchers, dressings and bandages, resuscitation equipment, etc.) must be used in the HFS environment. Simulated equipment and devices must allow for authentic use and feedback (e.g. AED simulators).

Social and interpersonal fidelity:

- Scenarios situated in the preceptorship setting **must** include the presence of at least the following personnel:
 - Patient, attendant (student), preceptor (who is evaluating the student), and paramedic partner
- Scenarios situated in a clinical setting **must** include the presence of at least the following personnel:
 - patient, attendant (student), clinician (who is evaluating the student)
- When appropriate the scenario **may** include:
 - Family or bystanders
 - First responders
 - Other EMS responders (if layered response)
 - Other medical personnel (e.g. triage nurse, physician)
- Personnel filling these roles must be of appropriate gender, apparent age, physical characteristics, and background to meet the requirements of the scenario.

Physiological and procedural fidelity:

- In cases involving a decreased LOC or requiring invasive procedures, the patient may be represented by a mannequin with the following features:
 - Can accurately portray vital signs and physical findings. Vital signs and physical findings respond dynamically during the scenario (e.g. remotely by an operator or by prior programming).
 - Allows authentic performance of relevant procedures (e.g., obtaining vital signs) or performing treatments (e.g., IV and/or medication access, etc.).
- In cases involving conscious patients, the patient may be role-played by a person of appropriate gender, apparent age, and physical presentation as required by the scenario may be used, provided appropriate task trainers are available to allow the following:
 - Accurately portray diagnostic features (e.g., moulage or prosthetic of injuries or use of an ECG simulator, if required by scenario, etc.).
 - Allow authentic performance of relevant procedures (such as an IV arm).

Conceptual (Cognitive) fidelity:

- The simulation must create an overall experience of sufficient context and realism to create a sense of functioning in an actual clinical or field environment. The simulation must be of sufficient quality as to allow the student the opportunity to be cognitively immersed or engaged in the scenario in order to perform as if she or he was functioning in the required C or P environment.