Appendix 1. Towards an IPV curriculum framework

What learning aims are put forward in view of an IPV curriculum?

Based on an unpublished literature review of available IPV medical curricula conducted by the authors of this study, and taking into account the "Recommended Components of Health Care Provider Training Programs on Intimate Partner Violence",[17] key curriculum aims can be identified when developing IPV competencies. This framework helps to screen available medical curricula and points at three key areas (see Table 1):

(1) **Knowledge**: to understand and incorporate a core body of concepts, principles, theories, regulations regarding IPV;

(2) **Skills**: to master specific clinical skills for violence prevention, identification, intervention, and follow-up; and

(3) **Attitudes**: to adopt a sense of responsibility, acceptance, openness, being non-judgmental, openness to support, appreciation for to victims, attitudes related to perpetrators, and their families.".[17]

What are the teaching and learning strategies to pursue the development of IPV learning aims?

Authors[18–20] emphasize active participation and experiential learning approaches, interactive learning methods and Internet-based (online) Continuing Medical Education (CME) (Table 1). They often emphasize an *incremental learning style*, following a learning process that allows students' "revision of a single knowledge structure followed by applications and experience." [21] (p.251). To support this idea, researchers often refer to Bloom's taxonomy: "a scheme used to classify the cognitive level an instructor expects a student to use when learning or answering a question". Bloom distinguishes six hierarchical behavioural levels: *remember, understand, apply, analyze, create, and evaluate.* [21-24] Lower behavioural levels – e.g., remembering concepts, legal regulations, names of institutions involved in IPV, etc. - can be pursued through independent reading or lectures or, asynchronously, through involvement in online modules. To attain higher behavioural levels the literature refers to innovative teaching and learning methods [16,24] expected to enhance incremental learning.

Table 1 – Recommended teaching and learning strategies, modules/disciples, and teacher expertise in IPV curricula

Teaching/learning strategies	Module/discipline	Teacher
Flipped classroom: also known as flip teaching or blended teaching: • less interactive lecture-style portions of the curriculum performed individually (e.g., an online video), • group sessions in which application of the concepts and problem-solving can be performed with the instructor's help. • Classroom lectures to ask for clarification or pursue more advanced topics. **Simulation:** may increase knowledge retention and lead to improved patient outcomes by: • supporting the transmission of tacit knowledge, translation of explicit knowledge, and teaching of non-technical skills such as teamwork, communication, and leadership; and assess learners. **Personal portable electronic devices:** E.g., "smartphones" or electronic tablets, with associated software applications: • handheld encyclopaedic reference and drug dosing, decision support, differential diagnosis, and online calculators. • to create an interactive environment at the bedside, for quizzes, videos, drawings, and so on, through an interactive presentation created and controlled by the teacher during the learning experience.	• Family medicine, • Family and community medicine, • Internal medicine, Gynaecology and Obstetrics, • Paediatrics, • Psychiatry and behavioural science, Surgery, • Forensic medicine	• Psychologists, • General practitioners, • Teachers belonging to the modules/ disciplines already mentioned, • Other academics with interest in IPV

Lenahan and Shapiro[25] stated that "standard methods for IPV education generally include a combination of large-group and small-group didactic sessions, in which students learn about definitions of IPV, incidence, and prevalence, the cycle of violence, co-morbidities, batterer typologies and characteristics, screening tools, detection and management, legal issues, and community resources" (p. 543). The same authors also stated that IPV education "may include experiential components such as role-plays or communication training to improve skills in IPV detection and management" (p. 543). Furthermore, they stated that "informational material alone" does not help medical students to "integrate cultural differences into situations involving suspected IPV" and medical students may feel "uncomfortable in a situation such as IPV that lacks certainty and definitiveness" (p. 543).

What assessment approaches are stressed?

Assessment should search for and map competencies that are generalizable across different environments.[26] When discussing performance in practice settings, the same authors suggest MiniCEX or multisource feedback as a way to assess performance of a (student) clinician, while improving the validity of the task. The authors additionally stress the importance of frequent formative assessments in order to prepare the students and clinicians for summative assessments. Teachers should include interventions aimed at individual learners or possible weaknesses and performance in summative assessments as reflected in these formative assessments.[26] Short, Johnson and Osattin,[17] recommend review of patient charts and a focus on individual assessments - through questionnaires or interviews - prior to training, instantly after training and six months after training to identify changes in actual behavior . They further suggested using assessment data to determine competence areas that need further training. The authors add that objectives should be stated in an operational way – i.e., in observable behavioural terms – to be able to check their performance after training. Standardized patients should be included to raise perceived readiness and competencies in IPV "during a follow-up period of six months".[27] (p. 137)

In what phase of the medical curriculum is IPV addressed?

Developing IPV competencies can be introduced at an early stage in a medical curriculum. Training "should start early, beginning in undergraduate training and continuing during post graduate training and continuing medical education".[28] For instance, at the University of California, Irvine, School of Medicine, "first-year students attend a lecture panel involving police officers and victims of IPV and also interview a standardized patient in a case that requires them to address the issue of mandated reporting"; and "a family violence "selective," a 15-hour course, which includes "a ride along with the Santa Ana Police Department's family violence emergency response team and a half-day of medical care at a women's shelter".[25] The same authors report that "in the second year, medical students have a problem-based learning assignment related to screening for IPV" and "a 2-hour lecture/discussion for third-year medical students" using "film clips, role-plays, and poetry" to "facilitate the emotional education of learners, enabling them to recognize and resolve complex personal reactions that might otherwise impede the clinical encounter."

However, in an unpublished literature review carried out by the authors of this study, it was found that IPV components were introduced mainly during clinical years and that most medical schools only spend 1 to 4 hours on IPV content during undergraduate curricula; with a median of 2 hours.

In the context of what modules or disciplines is IPV tackled?
As mentioned in Table 2, IPV is tackled in a large range of medical subjects. IPV can be linked to a variety of medical disciplines and as such be addressed in a variety of modules and also at an interdisciplinary level.[18,29–31] Regarding the modules/disciplines, IPV contents can be introduced as part of the family medicine, family and community medicine, internal medicine, obstetrics and gynaecology, paediatrics, psychiatry and behavioural science, surgery, and medico-legal rotations (see Table 2).

Who are the teachers taking responsibility for the IPV content?

In the literature, psychologists/psychiatrists, general practitioners, family physicians, obstetricians/gynaecologists, emergency physicians, internal medicine specialists and other specialists with interest in IPV, are usually mentioned as the teachers of IPV contents.[17,30-32] We also found that mainly specialists in family and

community medicine, internal medicine, obstetrics and gynaecology, paediatrics, psychiatry and behavioural science, surgery, and medico-legal disciplines act as instructors of IPV contents. Table 4 also displays the typical backgrounds of teachers involved in IPV-related training.

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