

Table 5.2: Selected tools for needs assessment

Method	Description	Strengths	Weaknesses
External environmental scan	Examination of data generated outside the organization (e.g., recommendations from accreditation surveys, publications and web-based information about similar curricula)	<ul style="list-style-type: none"> • Provides a starting point for subsequent approaches to data collection • May identify areas not suggested by people in the organization because they lack knowledge of options or perceive that they cannot address difficult issues 	<ul style="list-style-type: none"> • May not be applicable to small or local curricula • Time and resource intensive
Internal environmental scan	Examination of data generated within the organization (e.g., faculty assessments, performance data from previous student cohorts, committee minutes, leadership reports, patient care data)	<ul style="list-style-type: none"> • Data collection not required • Low cost 	<ul style="list-style-type: none"> • Data of variable quality and utility • Data must be interpreted and repurposed • Privacy issues, if individuals are identifiable
Epidemiologic analysis	Review of epidemiologic reports relevant to the training program	<ul style="list-style-type: none"> • Provides objective data to guide selection of abilities that graduates will require • An understanding of the burden of illness(es) to be treated by graduates helps to set priorities for learning 	<ul style="list-style-type: none"> • Can sometimes be difficult to translate data into an educational gap to be addressed by teaching • Can be time consuming • Sometimes difficult to find and access the most useful data
Strategic planning session for curriculum development		<ul style="list-style-type: none"> • May involve a range of learners, teachers, educators and administrators • May involve brainstorming of learner needs as well as curriculum strengths and weaknesses • Allows leaders to generate and prioritize needs (e.g., nominal group approach) • May facilitate a commitment to changes in curriculum 	<ul style="list-style-type: none"> • Requires skilled facilitation • Time intensive
Focus group	A trained facilitator poses a set of questions to a group of 4–7 participants	<ul style="list-style-type: none"> • Efficient way to interview several people simultaneously • Group interaction may provide insights not suggested in one-on-one interviews • Qualitative data 	<ul style="list-style-type: none"> • Resource intensive to collect and analyze data • Requires trained facilitator • Requires expertise in data analysis • Data may be skewed by the discussion and the people present • Participants may be reluctant to disclose critical information if anonymity cannot be guaranteed
Standardized, scripted interview (by phone or in person)		<ul style="list-style-type: none"> • Particularly suited to collecting qualitative, in-depth data • Responses can be clarified • Standardized approach to data collection • Methodological rigour 	<ul style="list-style-type: none"> • Resource intensive to collect and analyze data • Requires trained interviewers • Requires expertise in data analysis • Self-reported data

Table 5.2 continued: Selected tools for needs assessment

Method	Description	Strengths	Weaknesses
Questionnaire or survey		<ul style="list-style-type: none"> • Captures knowledge, attitudes, behaviours • Can be designed to have methodological rigour • Quantitative and qualitative data can be collected • Easy to disseminate the questionnaire or survey and send reminders through a variety of methods (e.g., email, fax, paper) • Low cost 	<ul style="list-style-type: none"> • Skill needed to write items • Data quality is dependent on getting an adequate response rate • Self-reported data
Knowledge test	Knowledge tests can be in multiple-choice, short-answer or essay-answer form	<ul style="list-style-type: none"> • Efficient means to assess cognitive (i.e., knowledge) domains • Often possible to obtain questions from national and international databanks or access practice examinations 	<ul style="list-style-type: none"> • Time, effort and expertise are required to construct valid tests of skills and higher order cognitive abilities • These tests assess knowledge, not application of the knowledge in real settings • Difficult to make questions clinically applicable
Direct observation	Learners are observed using a checklist, global rating scale or other systematic approach to data collection	<ul style="list-style-type: none"> • Optimal method of assessing performance • Can be rigorous 	<ul style="list-style-type: none"> • Time and resource intensive to develop guidelines and checklists • Observer must be knowledgeable about behaviour or skill being assessed • Observer bias
Audit of patient records		<ul style="list-style-type: none"> • Can be methodologically rigorous • Assesses real-life performance 	<ul style="list-style-type: none"> • Requires development of standardized reporting of outputs • Resource and time intensive • Privacy issues, if individuals are identifiable • Only recorded elements are evaluated (e.g., actual performance, if not recorded, is not included)
Multi-source feedback	Involves focused surveys of patients, peers and other health care professionals	<ul style="list-style-type: none"> • Data are collected as part of other assessment processes • Assesses real-life performance • Identifies needs related to the Collaborator, Communicator, Health Advocate and Professional Roles 	<ul style="list-style-type: none"> • Resource intensive (large amount of data required to generate reliable reports) • Data may be skewed by reporting biases
Analysis of data from reflective tools (e.g., portfolios, web- or paper-based learning diaries)		<ul style="list-style-type: none"> • Data are collected as part of other educational processes • Can identify needs not identified through course evaluations or testing procedures 	<ul style="list-style-type: none"> • Data are of variable quality and quantity, making analysis difficult • Requires expertise to review and analyze data in a meaningful and consistent way • Requires development of standardized reporting of outputs

Adapted from: Kern et al. (2009),⁷ Wass and Archer (2011),¹⁵ Bandiera et al. (2006),¹² Downing and Yudkowsky (2009)¹¹ and Holmboe and Hawkins (2008).¹³