

Supplementary Table 2: Learning objectives by Learning Domains, Sub-domains and Related AfriMEDS health professional roles

Learning Domain [AMEE]	Learning sub-domains	Learning objectives (AMEE + proposed by panel)	R2 Score	R1 + R2 scores	Role of Health Professional
KNOWLEDGE (K)	K1 Understanding the environmental determinants of health	K1.1 Discuss how local and global ecological crises impact on individual patients and communities	44	84	HEALTHCARE PRACTITIONER
		K1.2 Describe the interaction between local and global ecological crises and the social determinants of health.	40	76	HEALTHCARE PRACTITIONER
		K1.3 Understand the interaction of environmental exposures	34		HEALTHCARE PRACTITIONER
		K1.4 Understand the drivers influencing environment & health relationships - political and economic (mostly), social and behavioral etc.	38		LEADER & MANAGER
		K1.5 Know the global environmental determinants of health	37		LEADER & MANAGER
		K1.6 Understand the environmental determinants of health in Africa	34		LEADER & MANAGER

		K1.7 Evaluate the environmental determinants of health in a community.	35		LEADER & MANAGER
		K1.8 Know the various environmental issues that make up the 'ecological crisis'	36		LEADER & MANAGER
		K1.9 Know what planetary environmental systems support human health	41		LEADER & MANAGER
		K1.10 Understand how dysfunction in planetary systems leads to health consequences	41		LEADER & MANAGER
	K2 Understanding the environmental sustainability of healthcare	K2.1 Discuss how the promotion of environmental sustainability generally and in healthcare can support progress on social determinants of health, health equity and respect for cultural diversity, including Indigenous traditional knowledge.	41	79	LEADER & MANAGER
		K2.2 Know how to integrate principles within their own healthcare practice	32		LEADER & MANAGER
		K2.3 Understand how the health system contributes to the problem	41		LEADER & MANAGER
		K2.4 Know how the health system can mitigate its environmental footprint	42		LEADER & MANAGER

KNOWLEDGE & SKILLS (KS)	KS1 Enhancing the environmental sustainability of healthcare	K2.5 Understand how the health system can prepare to be more resilient in the face of the ecological crisis	43		LEADER & MANAGER
		KS1.1 Evaluate the environmental impacts of a patient pathway to care and identify ways to enhance environmental sustainability.	38	73	HEALTHCARE PRACTITIONER
		KS1.2 Describe how changes in disease burden due to environmental change may be identified, characterised and quantified and how such information can inform planning and practice to address health needs	43	80	LEADER & MANAGER
		KS1.3 Apply critical thinking, problem-solving and systems thinking to sustainable healthcare challenges.	39	75	LEADER & MANAGER
		KS1.4 Plan responses and interventions to these issues	40		LEADER & MANAGER
		KS1.5 Evaluate the preparedness of health services to be resilient	40		LEADER & MANAGER
		KS1.6 Evaluate the environmental footprint of health services	40		LEADER & MANAGER
	KS2 Critiquing environmental	KS2.1 Apply key policies and frameworks related to sustainable development including the SDGs to evaluate a population health challenge.	35	68	SCHOLAR

KS3 Advocating for planetary health and sustainable development	KS2.2 Critique current environmental protections in the SA Constitution and other legislation i.t.o. how they affect other health rights of your patients, families and communities (eg: equity in housing, clean water, food safety, property ownership, etc.)	34		PROFESSIONAL
	KS3.1 Communicate clearly with health professional colleagues when responding to an ecological challenge or opportunity in healthcare.	40	75	COMMUNICATOR
	KS3.2 Demonstrate how to motivate behaviour change to promote environmental sustainability at an individual, professional and community level	39	77	HEALTH ADVOCATE
	KS3.3 Demonstrate the ability to advocate for planetary health and the SDGs.	37	71	HEALTH ADVOCATE
	KS3.4 Identify how Indigenous traditional knowledge and voice can inform healthcare practice and promotion of planetary health and sustainable development in your local context.	37	70	COLLABORATOR
	KS3.5 Be able to speak out and advocate for change as health professionals	41		HEALTH ADVOCATE
	KS3.6 Be able to articulate concerns and advocate to a wider audience for changes to 'save our planet'!	33		HEALTH ADVOCATE
	KS3.7 Identify and map local indigenous and other efforts that are happening in your specific context that are relevant to these themes, and with whom you can build coalitions to support the achievement of SDGs.	35		HEALTH ADVOCATE

KNOWLEDGE, VALUES, ATTITUDES & AGENCY (KVA)	KVA1 Eco-ethical leadership in healthcare	KVA1.1 Discuss examples of eco-ethical leadership.	36	69	HEALTH ADVOCATE
		KVA.1.2 Understand what is expected of health professionals in their personal and professional behaviour	41		LEADER & MANAGER
		KVA1.3 Discuss the role of health professionals in mitigation, adaptation, advocacy and activism in terms of sustainable development, planetary health and environmental stewardship.	42	81	PROFESSIONAL

Supplementary Table 1 (continued): ESH Learning objectives by Learning Domains and Core Graduate Competencies

Learning objectives	Role of Health Professional	Key undergraduate competency	Enabling competency
K1.1	HEALTHCARE PRACTITIONER	Acquire and maintain knowledge, skills, attitudes and character appropriate to their practice.	1.2.1 a) Reflect on, integrate, apply and evaluate core knowledge, skills, attitudes and character acquired during undergraduate training in the holistic management of functional and structural impairment, activity limitations and participation restrictions, all with reference to personal and environmental
K1.2	HEALTHCARE PRACTITIONER	Perform comprehensive assessments of patients/clients.	1.3.1 b) Elicit a history of the patient/client that is relevant, concise and accurate to context, for the purposes of disease prevention, health promotion, diagnosis and/or management.
K1.3	HEALTHCARE PRACTITIONER	Acquire and maintain knowledge, skills, attitudes and character appropriate to their practice.	1.2.1 a) Reflect on, integrate, apply and evaluate core knowledge, skills, attitudes and character acquired during undergraduate training in the holistic management of functional and structural impairment, activity limitations and participation restrictions, all with reference to personal and environmental
K1.4	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.c) Identify the health determinants of the population, such as genetic, demographic, environmental, socio-economic, psychological, cultural and lifestyle-related determinants.
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K1.6	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.c) Identify the health determinants of the population, such as genetic, demographic, environmental, socio-economic, psychological, cultural and lifestyle-related determinants.
K1.7	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.c) Identify the health determinants of the population, such as genetic, demographic, environmental, socio-economic, psychological, cultural and lifestyle-related determinants.

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K1.8	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.c) Identify the health determinants of the population, such as genetic, demographic, environmental, socio-economic, psychological, cultural and lifestyle-related determinants.
K1.9	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.c) Identify the health determinants of the population, such as genetic, demographic, environmental, socio-economic, psychological, cultural and lifestyle-related determinants.
K1.10	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.c) Identify the health determinants of the population, such as genetic, demographic, environmental, socio-economic, psychological, cultural and lifestyle-related determinants.
K2.1	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.e) Evaluate the elements of the local health system, taking into consideration the economic and practical constraints within which the service is delivered and the audit process to monitor its delivery.
K2.2	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.e) Evaluate the elements of the local health system, taking into consideration the economic and practical constraints within which the service is delivered and the audit process to monitor its delivery.
K2.3	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.e) Evaluate the elements of the local health system, taking into consideration the economic and practical constraints within which the service is delivered and the audit process to monitor its delivery.
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KS1.1	HEALTHCARE PRACTITIONER	Use preventative, promotive, therapeutic & rehabilitative interventions effectively	1.4.1 d) Formulate and implement appropriate holistic, cost-appropriate and effective management plans in collaboration with patients/clients and their families, emphasising the importance of healthy behaviour and the patient/client's right to choice.
KS1.2	LEADER & MANAGER	Participate in activities that contribute to the effectiveness of the healthcare organisations and systems in which they work	4.1.1 c) Participate in the quality process evaluation and improvement of systems, such as practice audits, mortality and morbidity meetings and patient/client safety initiatives, integrating the available best evidence and practice..
KS1.3	LEADER & MANAGER	Participate in activities that contribute to the effectiveness of the healthcare organisations and systems in which they work.	4.1.1 d) Demonstrate problem-solving enterprise and creativity in improving and managing a healthcare system, and by providing advice to relevant authorities, with support from superiors.
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KS2.1	SCHOLAR	Maintain and enhance professional competence through ongoing learning, both as healthcare professionals and as responsible citizens, locally and globally.	6.1.1 e) Reflect on, and learn from, challenges that are experienced in practice by posing appropriate questions, accessing and interpreting relevant evidence, integrating new learning with practice, evaluating the impact of change in practice, and documenting the learning process.
KS2.2	PROFESSIONAL	Demonstrate a commitment to their patients/clients, healthcare professionals and society through participation in profession-led self-regulation.	7.2.1 b) Recognise and interrogate public health policy in terms of ethics and human rights.
KS3.1	COMMUNICATOR	Convey relevant information and explanations accurately and effectively to patients/clients, families, communities, colleagues and other professionals as well as statutory and professional	2.3.1 c) Present well-documented assessments and recommendations effectively in written and/or verbal form in response to a request from another healthcare professional.
KS3.2	HEALTH ADVOCATE	Respond to the health needs of the communities that they serve	5.2.1 c) Identify opportunities for health promotion and disease prevention within the context of promoting a healthy environment and lifestyle.
KS3.3	HEALTH ADVOCATE	Respond to the health needs of the communities that they serve	5.2.1 a) Familiarise themselves with the communities they serve by obtaining insight into the functioning of the local health system, barriers to access care and resources, and other factors not directly part of healthcare.,
KS3.4	COLLABORATOR	Participate effectively and appropriately in multicultural, interprofessional and trans-professional teams, as well as teams in other contexts (the community included).	3.1.1. b) Recognise and respect – irrespective of profession, status, age, gender, race, class or beliefs – the diversity of roles, responsibilities and competencies of other healthcare team members. Appreciate diversity, and demonstrate the ability to adapt.
KS3.5	HEALTH ADVOCATE	Respond to the health needs of the communities that they serve	5.2.1 b) Identify vulnerable or marginalised populations and respond appropriately, with a commitment to equity through access to care and equal opportunities

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KS3.6	HEALTH ADVOCATE	Respond to the health needs of the communities that they serve	5.2.1 b) Identify vulnerable or marginalised populations and respond appropriately, with a commitment to equity through access to care and equal opportunities
KS3.7	HEALTH ADVOCATE	Respond to the health needs of the communities that they serve	5.2.1 a) Familiarise themselves with the communities they serve by obtaining insight into the functioning of the local health system, barriers to access care and resources, and other factors not directly part of healthcare.,
KVA1.1	HEALTH ADVOCATE	Respond to the health needs of the communities that they serve	5.2.1 b) Identify vulnerable or marginalised populations and respond appropriately, with a commitment to equity through access to care and equal opportunities
KVA1.2	LEADER & MANAGER	Provide effective healthcare to geographically defined communities.	4.5.1.e) Evaluate the elements of the local health system, taking into consideration the economic and practical constraints within which the service is delivered and the audit process to monitor its delivery.
KVA1.3	PROFESSIONAL	Demonstrate a commitment to their patients/clients, healthcare professionals and society through participation in profession-led self-regulation.	7.2.1 b) Recognise and interrogate public health policy in terms of ethics and human rights.