Supplementary Material

Table S1: General knowledge about AI terminology

	Strongly disagree	**Disagree**	**Agree**	**Strongly agree**	**Unsure**
Artificial Intelligence (AI)	5.2% (32/168)	7.1% (44/618)	56.5% (349/618)	21.8% (135/618)	9.4% (58/618)
Machine Learning (ML)	7.4% (46/618)	23.8% (147/618)	40.1% (248/618)	11.3% (70/216)	17.3% (107/618)
Neural Network (NN)	18.8% (116/618)	38.8% (240/618)	19.3% (119/618)	4.2% (26/618)	18.9% (117/618)
Deep Learning (DL)	13.3% (82/618)	29.1% (180/618)	34% (210/618)	5.8% (36/618)	17.8% (110/618)
Algorithm (in computer science context)	19.4% (120/618)	28.4% (174/618)	27.4% (169/618)	8.7% (54/618)	16.3% (101/618)

Table S2: Expected time students perceived AI to eventually perform specific tasks at individual health level

	N	0 4 yrs	5-10 yrs	11-25 yrs	26-50 yrs	≥ 50 yrs
				%		
Provide patients with preventative health recommendations (e.g. exercise, diet, wellness).	518	7.5	31.1	29.9	20.1	11.4
Analyse patient information to reach a diagnosis.	497	9.7	27.2	30.4	22.7	10.1
Analyse patient information to establish possible prognosis.	497	9.9	29.4	29.6	20.9	10.3
Read and interpret diagnostic imaging (such as X rays).	549	14.6	29.7	26.1	19.1	10.6
Evaluate when to refer patients to other health professionals.	448	11.4	28.1	32.1	17.6	10.7
Formulate personalised treatment plans for patients	446	11.2	26	33.2	20	9.6
Formulate personalised medication prescriptions for patients.	438	10.3	27.2	29.7	19.6	13.2
Provide empathetic care to patients.	173	12.1	26	30.1	24.9	6.9
Monitor patient compliance to prescribed medications, exercise and dietary recommendations.	406	12.8	25.1	25.4	23.2	13.6
Provide psychiatric/personal counselling.	166	11.5	18.1	31.3	27.7	11.5
Perform surgery (e.g. robotic surgery).	399	17.5	22.1	29.1	19.8	11.5

N- the total number of students that selected “likely” or “Extremely likely”, %- percentage of students from N

Table S3: Expected time students perceived AI to eventually perform a specific task at health systems, and population health levels

	N	0-4 yrs	5-10 yrs	11-25yrs	26-50yrs	≥50yrs
				%		
Health Systems						
Provide documentation (e.g., update medical records) about patients	537	21.2	25.9	26.1	17.3	9.5
Assist hospitals in capacity planning and human resource management	429	18.7	29.4	26.6	17.5	7.9
Provide recommendations for quality improvement in practices/hospitals	426	18.1	29.1	26.3	18.5	8
Population health						
Conduct population health surveillance and outbreak prevention.	379	15.6	27.7	28.8	18.7	9.2
Select the best population health interventions.	370	11.6	29.7	32.2	18.1	8.4

N- the total number of students that selected “likely” or “Extremely likely”, %- percentage of students from N

Table S4: Perceived impact of AI on public health careers

	Strongly agree	**Agree**	**Disagree**	**Strongly disagree**	**Unsure**
Artificial Intelligence will reduce the number of jobs available to me.	*39.5% (244/618)*	*37.5% (232/618)*	*14.7% (91/618)*	*4.4% (27/168)*	*3.9% (24/618)*
Artificial Intelligence will reduce the number of jobs in certain public health	*30.1% (186/216)*	*39.3% (243/618)*	*20.4% (126/618)*	*4.2% (26/618)*	*6% (37/618)*
Artificial Intelligence will/already did impact my choice of public health specialty selection.	*12% (74/618)*	*28.2% (174/618)*	*34.6% (214/618)*	*11.7% (72/618)*	*13.6% (84/618)*

Table S5: Integration of AI into public health education

	Strongly agree	**Agree**	**Disagree**	**Strongly disagree**	**Unsure**
My public health education is adequately preparing me for working alongside AI tools	13.6% (84/618)	39.3% (243/618)	22.8% (141/618)	6.5% (40/618)	17.8% (110/618)
My public health training should include training on AI competencies (e.g. what is AI, how will it impact us, what are the challenges it raises).	41.9% (259/618)	49.5% (306/618)	3.2% (20/618)	1.6% (10/216)	3.7% (23/618)
Every public health student should be required to receive training in AI competencies.	39.2% (242/618)	47.4% (293/618)	6.5% (40/618)	2.1% (13/618)	4.9% (30/618)
	Under-graduate	Post-graduate	Not needed	Unsure	
Training in AI competencies should begin as a:	76.5% (473/618)	15.1% (93/618)	1.8% (11/618)	6.6% (41/618)	

Table S6: Themes of reflection on what AI will look like in 5 years within their department

Theme	N (%)	Example
Beneficial impact	192, (45.9)	"In 5yrs from now it means clients will be able to just get their parcels without coming to the clinic, getting their prescriptions and repeated medications at pickup points." "In my field we already have automated systems, with their further development the pathologist will be able to run tests, resulting in low numbers of medical technologists employed"
Detrimental impact	58, (13.9)	"It will take away a lot of jobs" "AI will be a disaster in public health sector as we have observed during covid-19 pandemic in South Africa. Our system is way far behind in preparing for AI."
No change	76 (18.2)	"It will be nowhere in the periphery where I work" "I'm still not sure if they'll be able to develop anything close enough to bedside patient care. So it will be far in development"
Change not possible	56 (13.4)	"I do not think it will have been introduced in the healthcare industry in this country" "I do not see it happening due to money constraints, equipment's to run AI needs money that our government don't have now and its becoming worse every year"
Neutral	36 (8.6)	"I am uncertain of what anything will look like in 5 years including AI. Technology is being created to make life easier for us as human beings. But everything comes at a price at a cost. Nothing is ever neutral, each gift brings pros and cons. So will see what AI will bring." "It is complicated to comprehend"