

Family Medicine Practice as Learning Environment: a Medical Student Evaluation in Switzerland

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Table S1. Students' evaluation results (2019-2022) on additional questions overall and by quality groups.

		Student level 713	FMP ^a level 249	Benchmark group 224(90%) 600 students	Need to improve group 25(10%) 113 students	p
1. Organization		N(%)	Median[IQR]	Median[IQR]	Median[IQR]	
The information on the course schedule on the Virtual Training Platform Medicine was sufficient	Q6.1		5.00[4.83, 5.50]	5.00[5.00, 5.50]	4.67[4.12, 5.00]	<0.001
Disagree		N=710 19(2.7)		N=598 13(2.2)	N=112 6(5.4)	0.003
Neutral		128(18.0)		98(16.4)	30(26.8)	
Agree		563(79.3)		487(81.4)	76(67.9)	
The information on the course schedule on the Virtual Training Platform Medicine was easy to understand	Q6.2		5.00[4.82, 5.50] N=247	5.17[5.00, 5.65] N=222	4.67[4.00, 5.00]	<0.001
Disagree		N=696 18(2.6)		N=585 12(2.1)	N=111 6(5.4)	0.005
Neutral		116(16.7)		89(15.2)	27(24.3)	
Agree		562(80.7)		484(82.7)	78(70.3)	
The enrolment modalities for the course at the Virtual Training Platform Medicine were easy	Q7.1		5.00[4.50, 5.50] N=246	5.00[4.50, 5.50] N=221	4.73[4.17, 5.00]	0.025
Disagree		N=697 44(6.3)		N=587 31(5.3)	N=110 13(11.8)	0.035
Neutral		155(22.2)		132(22.5)	23(20.9)	
Agree		498(71.4)		424(72.2)	74(67.3)	
The enrolment modalities for the course at the Virtual Training Platform Medicine were clear	Q7.2		5.00[4.67, 5.50]	5.00[4.69, 5.62]	4.80[4.33, 5.00]	0.009
Disagree		N=711 38(5.3)		N=598 27(4.5)	11(9.7)	0.072
Neutral		142(20.0)		119(19.9)	23(20.4)	
Agree		531(74.7)		452(75.6)	79(69.9)	
The individual and direct bilateral appointment with the teaching practice was uncomplicated	Q8		6.00[5.50, 6.00]	6.00[5.67, 6.00]	5.00[4.75, 5.50]	<0.001
Disagree		11(1.5)		6(1.0)	5(4.4)	<0.001
Neutral		36(5.0)		22(3.7)	14(12.4)	
Agree		666(93.4)		572(95.3)	94(83.2)	
2. Content						
I got experience with medical triages of urgencies	Q13		4.50[4.00, 5.00]	4.50[4.00, 5.00]	3.67[3.25, 4.00]	<0.001
Disagree		73(10.2)		44(7.3)	29(25.7)	<0.001
Neutral		284(39.8)		238(39.7)	46(40.7)	
Agree		356(49.9)		318(53.0)	38(33.6)	
4. Patient						
I feel more confident in patient communication than before the training	Q20		5.00[4.33, 5.40]	5.00[4.50, 5.50]	4.00[3.25, 4.22]	<0.001
Disagree		N=712 43(6.0)		23(3.8)	N=112 20(17.9)	<0.001
Neutral		194(27.2)		149(24.8)	45(40.2)	
Agree		475(66.7)		428(71.3)	47(42.0)	

During the training, I was able to improve my medical competence in dealing with patients	Q21		5.00[4.50, 5.50]	5.00[4.68, 5.50]	4.00[3.33, 4.25]	<0.001
Disagree		N=712 43(6.0)		19(3.2)	N=112 24(21.4)	<0.001
Neutral		165(23.2)		124(20.7)	41(36.6)	
Agree		504(70.8)		457(76.2)	47(42.0)	
5. Skills						
I could practice drawing blood ^b	Q24.1		4.33[2.80, 5.50] N=229	4.50[3.00, 5.50] N=205	3.00[2.00, 4.18] N=24	0.003
Disagree		N=645 189(29.3)		N=535 144(26.9)	N=110 45(40.9)	0.003
Neutral		106(16.4)		85(15.9)	21(19.1)	
Agree		350(54.3)		306(57.2)	44(40.0)	
I could practice vaccination	Q24.2		3.60[2.00, 5.00] N=248	3.80[2.00, 5.33] N=223	2.67[1.67, 4.00]	0.052
Disagree		N=710 307(43.2)		N=598 242(40.5)	N=112 65(58.0)	0.001
Neutral		104(14.6)		87(14.5)	17(15.2)	
Agree		299(42.1)		269(45.0)	30(26.8)	
I could practice ^b other activities ^c	Q24.3		3.00[2.00, 4.12] N=227	3.00[2.00, 4.50] N=203	2.19[1.25, 3.00] N=24	0.010
Disagree		N=643 293(45.6)		N=533 228(42.8)	N=110 65(59.1)	0.007
Neutral		180(28.0)		158(29.6)	22(20.0)	
Agree		170(26.4)		147(27.6)	23(20.9)	
I had the opportunity to perform electrocardiograms on my own ^b	Q25		2.20[1.00, 3.85] N=220	2.25[1.00, 4.00] N=197	1.91[1.00, 2.71] N=23	0.121
Disagree		N=617 361(58.5)		N=509 294(57.8)	N=108 67(62.0)	0.665
Neutral		107(17.3)		91(17.9)	16(14.8)	
Agree		149(24.1)		124(24.4)	25(23.1)	
I feel safer than before the training in performing auscultation of heart/lung	Q26.1		4.50[4.00, 5.00]	4.60[4.00, 5.00]	3.00[2.50, 3.67]	<0.001
Disagree		N=710 92(13.0)		N=598 48(8.0)	N=112 44(39.3)	<0.001
Neutral		246(34.6)		207(34.6)	39(34.8)	
Agree		372(52.4)		343(57.4)	29(25.9)	
I feel safer than before the training in performing palpation of the abdomen	Q26.2		4.25[3.50, 5.00]	4.50[3.88, 5.00]	2.88[2.00, 3.50]	<0.001
Disagree		N=711 125(17.6)		N=599 74(12.4)	N=112 51(45.5)	<0.001
Neutral		240(33.8)		205(34.2)	35(31.2)	
Agree		346(48.7)		320(53.4)	26(23.2)	
I feel safer than before the training in performing ascertainment of the joint status ^b	Q26.3		4.00[3.00, 4.85] N=228	4.00[3.00, 5.00] N=204	2.75[2.00, 3.41] N=24	<0.001
Disagree		N=643 149(23.2)		N=533 95(17.8)	N=110 54(49.1)	<0.001
Neutral		271(42.1)		233(43.7)	38(34.5)	
Agree		223(34.7)		205(38.5)	18(16.4)	

I feel safer than before the training in performing ascertainment of the neuro status	Q26.4		3.67[2.67, 4.40] N=229	3.80[3.00, 4.50] N=205	2.39[1.82, 2.81] N=24	<0.001
Disagree		N=643 198(30.8)		N=533 137(25.7)	N=110 61(55.5)	<0.001
Neutral		254(39.5)		225(42.2)	29(26.4)	
Agree		191(29.7)		171(32.1)	20(18.2)	
I feel safer than before the training in performing age-appropriate preventive check-up	Q26.5		3.50[2.00, 5.00] N=204	3.50[2.00, 5.00] N=182	2.61[2.00, 3.00] N=22	0.010
Disagree		N=451 174(38.6)		N=370 129(34.9)	N=81 45(55.6)	0.001
Neutral		112(24.8)		92(24.9)	20(24.7)	
Agree		165(36.6)		149(40.3)	16(19.8)	
I feel more confident than before the training in assessing labor analysis ^b	Q27.1		4.60[4.00, 5.00] N=229	4.75[4.00, 5.00] N=205	3.57[3.00, 4.00] N=24	<0.001
Disagree		N=645 64(9.9)		N=535 38(7.1)	N=110 26(23.6)	<0.001
Neutral		219(34.0)		175(32.7)	44(40.0)	
Agree		362(56.1)		322(60.2)	40(36.4)	
I feel more confident than before the training in assessing X-ray images ^b	Q27.2		3.75[2.75, 4.50] N=229	4.00[3.00, 4.75] N=205	3.00[2.08, 3.50] N=24	0.001
Not satisfied		N=643 180(28.0)		N=533 127(23.8)	N=110 53(48.2)	<0.001
Neutral		253(39.3)		219(41.1)	34(30.9)	
Satisfied		210(32.7)		187(35.1)	23(20.9)	
I feel more confident than before the training in assessing electrocardiograms ^b	Q27.3		3.25[2.25, 4.00] N=228	3.41[2.50, 4.20] N=205	2.12[1.75, 3.00] N=24	<0.001
Not satisfied		N=641 211(32.9)		N=531 154(29.0)	N=110 57(51.8)	<0.001
Neutral		280(43.7)		243(45.8)	37(33.6)	
Satisfied		150(23.4)		134(25.2)	16(14.5)	
I feel more confident than before the training in assessing vaccination status	Q27.4		3.67[2.58, 4.75] N=223	4.00[3.00, 5.00] N=199	2.65[2.00, 3.27] N=24	<0.001
Disagree		N=564 170(30.1)		N=471 125(26.5)	N=93 45(48.4)	<0.001
Neutral		203(36.0)		172(36.5)	31(33.3)	
Agree		191(33.9)		174(36.9)	17(18.3)	
The training has increased my motivation to work as a family doctor/physician later on	Q30	N(%)	4.50[3.94, 5.00]	4.50[4.00, 5.00]	3.00[2.62, 3.88]	<0.001
Disagree		N=710 99(13.9)		61(10.2)	38(33.9)	<0.001
Neutral		274(38.6)		233(39.0)	41(36.6)	
Agree		337(47.5)		304(50.8)	33(29.5)	

Family medicine practices in *benchmark* and *need to improve* groups were identified through k-means algorithm based on the screening questions and the number of students followed. At student level, scores were categorised as disagree (Likert scale 1-2); neutral (Likert scale 3-4); agree (Likert scale 5-6) and reported as number(percentage), N(%), with p-value(p) from chi-square test. At family practice level, median and interquartile range[IQR] of item average scores in Likert scale 1-6, were reported with p-value from Wilcoxon-Mann-Whitney-test.

^a FMP: family medicine practice

^b Pediatric practices were excluded.

^c Apply or change bandages, etc.

Table S2. Students' evaluation results (2019-2022) on screening questions stratified by adult/pediatric family medicine practice (FMP) and by FMP urbanization area.

		Adult	Pediatric	p	Urban	Suburban	Rural	p
	FMP	229(92%)	20(8%)		136(55%)	103(41%)	10(4%)	
	Students	647(91%)	66(9%)		469(66%)	227(32%)	15(2%)	
1. Organisation								
Communication with the teaching practice was easy	Q9	6.00[5.70, 6.00]	6.00[5.65, 6.00]	0.668	6.00[5.67, 6.00]	6.00[6.00, 6.00]	6.00[5.62, 6.00]	0.066
2. Content								
The course gave me a realistic insight of the work in the FMP	Q10	6.00[5.50, 6.00]	6.00[5.66, 6.00]	0.955	6.00[5.49, 6.00]	6.00[5.67, 6.00]	6.00[5.81, 6.00]	0.034
I was introduced to the organization, set-up, workflows of a FMP	Q11	5.75[5.25, 6.00]	5.71[5.50, 6.00]	0.965	5.67[5.25, 6.00]	6.00[5.50, 6.00]	6.00[5.19, 6.00]	0.027
I experienced the core competencies ^a of family medicine	Q12	5.80[5.33, 6.00]	5.90[5.45, 6.00]	0.673	5.67[5.24, 6.00]	6.00[5.42, 6.00]	6.00[5.62, 6.00]	0.022
3. Teacher								
My teaching physicians showed me many examinations	Q14	5.50[5.00, 6.00]	5.90[5.50, 6.00]	0.023	5.50[5.00, 6.00]	5.50[5.00, 6.00]	5.38[5.00, 6.00]	0.038
My teaching physician checked and corrected my examination methods on the patient	Q15	5.50[4.83, 6.00]	5.88[5.19, 6.00]	0.054	5.31[4.50, 6.00]	5.50[5.00, 6.00]	5.00[5.00, 5.69]	0.009
My teaching physician gave me the opportunity to examine patients on my own	Q16	5.50[4.75, 6.00]	5.88[5.00, 6.00]	0.145	5.50[4.73, 6.00]	5.67[5.00, 6.00]	5.00[4.81, 5.88]	0.220
My teaching physician gave me regularly feedback	Q17	5.00[4.25, 5.60]	5.00[4.94, 5.62]	0.671	5.00[4.25, 5.50]	5.00[4.50, 6.00]	5.00[4.25, 5.44]	0.263
My teaching physician became a role model for me through his way of dealing with patients	Q18	5.50[5.00, 6.00]	5.88[5.38, 6.00]	0.186	5.50[5.00, 6.00]	5.67[5.00, 6.00]	6.00[5.62, 6.00]	0.034
I have learned a lot in dealing with patients through my teaching physician	Q19	5.67[5.00, 6.00]	5.90[5.38, 6.00]	0.243	5.50[5.00, 6.00]	5.75[5.00, 6.00]	6.00[5.62, 6.00]	0.052
4. Patient								
I was made aware of social problems in the context of the patient visit	Q22	5.25[5.00, 6.00]	5.03[4.94, 5.70]	0.835	5.33[4.85, 5.62]	5.00[5.00, 6.00]	5.00[5.00, 5.50]	0.636
5. Skills								
I could practice how to take a medical history	Q23	5.00[4.00, 5.60]	5.00[4.60, 5.75]	0.494	5.00[4.00, 5.38]	5.00[4.00, 6.00]	4.75[4.06, 5.00]	0.102
How satisfied are you with the course in the teaching practice?	Q28	5.80[5.25, 6.00]	6.00[5.69, 6.00]	0.212	5.75[5.00, 6.00]	6.00[5.37, 6.00]	6.00[6.00, 6.00]	0.019
How satisfied are you with your teaching physician?	Q29	6.00[5.50, 6.00]	6.00[5.79, 6.00]	0.292	6.00[5.33, 6.00]	6.00[5.75, 6.00]	6.00[6.00, 6.00]	0.014
Number of student followed (2019-2022)		2.00[1.00, 4.00]	2.00[1.00, 4.00]	0.894	3.00[2.00, 4.00]	2.00[1.00, 3.00]	1.00[1.00, 1.75]	<0.001

Groups were defined by FMP area of residence, with the degree of urbanization for Switzerland defined according to the 2011 Eurostat classification of degree of urbanization. Median and interquartile range[IQR] were reported for each question. P-value (p) from Wilcoxon-Mann-Whitney-test / Kruskal-Wallis-test of median comparison between the groups was reported for each question.

^a Prevention and counseling, acute treatments, chronic illness care, guide function / coordination with the health care system.

Table S3. Students' evaluation results (2019-2022) on additional questions stratified by adult/pediatric family medicine practice (FMP) and by urbanization area of FMP residence.

		Adult	Pediatric	p	Urban	Suburban	Rural	p
	FMP	229(92%)	20(8%)		136(55%)	103(41%)	10(4%)	
	Students	647(91%)	66(9%)		469(66%)	227(32%)	15(2%)	
1. Organization								
The information on the course schedule on the Virtual Training Platform Medicine was sufficient	Q6.1	5.00[4.83, 5.50]	5.18[4.88, 5.58]	0.789	5.03[4.60, 5.50]	5.00[5.00, 5.67]	5.00[5.00, 5.00]	0.378
The information on the course schedule on the Virtual Training Platform Medicine was easy to understand	Q6.2	5.00[4.83, 5.50]	5.29[4.69, 5.53]	0.951	5.21[4.74, 5.50]	5.00[5.00, 5.67] N=102	5.00[4.75, 5.00] N=9	0.136
The enrolment modalities for the course at the Virtual Training Platform Medicine were easy	Q7.1	5.00[4.50, 5.50]	5.12[4.91, 5.62]	0.265	5.00[4.50, 5.50]	5.00[4.50, 5.50] N=101	5.00[4.50, 5.00] N=9	0.479
The enrolment modalities for the course at the Virtual Training Platform Medicine were clear	Q7.2	5.00[4.67, 5.50]	5.00[4.87, 5.50]	0.931	5.00[4.57, 5.50]	5.00[5.00, 5.67]	5.00[4.50, 5.00]	0.117
The individual and direct bilateral appointment with the teaching practice was uncomplicated	Q8	6.00[5.50, 6.00]	6.00[5.59, 6.00]	0.974	6.00[5.50, 6.00]	6.00[5.60, 6.00]	6.00[5.50, 6.00]	0.345
2. Content								
I got experience with medical triages of urgencies	Q13	4.50[3.86, 5.00]	5.00[4.36, 5.28]	0.018	4.37[3.86, 5.00]	4.50[4.00, 5.00]	5.00[4.81, 5.00]	0.126
4. Patient								
I feel more confident in patient communication than before the training	Q20	5.00[4.22, 5.33]	5.21[4.92, 5.69]	0.098	5.00[4.11, 5.25]	5.00[4.50, 5.88]	5.00[4.25, 5.00]	0.007
During the training, I was able to improve my medical competence in dealing with patients	Q21	5.00[4.50, 5.50]	5.08[4.92, 5.50]	0.341	5.00[4.33, 5.50]	5.00[4.62, 5.67]	5.00[4.81, 5.75]	0.102
5. Skills								
I could practice drawing blood	Q24.1	4.33[2.80, 5.50]	1.79[1.00, 3.62]	0.001	4.33[3.00, 5.50] ^a N=124	4.50[2.58, 6.00] ^a N=95	4.00[1.00, 4.44] ^a	0.285
I could practice vaccination	Q24.2	3.50[2.00, 5.00] N=228	4.25[1.00, 5.62]	0.632	3.65[2.19, 5.33]	3.70[2.00, 5.00] N=102	1.75[1.00, 3.75]	0.118

I could practice other skills ^b	Q24.3	3.00[2.00, 4.12] N=227	2.17[1.50, 2.70]	0.039	2.69[2.00, 3.95] ^a N=122	3.40[2.00, 5.00] ^a N=95	1.75[1.00, 3.88] ^a	0.031
I had the opportunity to perform electrocardiograms on my own	Q25	2.20[1.00, 3.85] N=220	1.00[1.00, 1.21] N=15	0.001	2.00[1.00, 3.50] ^a N=122	2.50[1.00, 4.00] ^a N=89	1.25[1.00, 4.50] ^a N=9	0.365
I feel safer than before the training in performing auscultation of heart/lung	Q26.1	4.50[4.00, 5.00]	5.00[4.40, 5.10]	0.075	4.33[3.50, 5.00]	4.75[4.00, 5.00]	4.38[3.62, 5.00]	0.003
I feel safer than before the training in performing palpation of the abdomen	Q26.2	4.25[3.50, 5.00]	5.00[3.71, 5.31]	0.299	4.00[3.38, 5.00]	4.50[4.00, 5.00]	4.38[4.00, 5.00]	0.158
I feel safer than before the training in performing ascertainment of the joint status	Q26.3	4.00[3.00, 4.85] N=228	2.57[2.00, 3.08]	<0.001	3.50[3.00, 4.50] ^a N=123	4.00[3.42, 5.00] ^a N=95	4.00[3.62, 4.75] ^a	0.012
I feel safer than before the training in performing ascertainment of the neuro status	Q26.4	3.67[2.67, 4.40]	2.50[2.00, 3.20]	0.015	3.50[2.64, 4.00] N=124	4.00[3.00, 4.50] N=95	3.62[3.12, 4.00]	0.025
I feel safer than before the training in performing age-appropriate preventive check-up	Q26.5	3.00[2.00, 4.67] N=185	5.67[5.00, 6.00] N=19	<0.001	3.00[2.00, 4.00] N=114	4.00[2.71, 5.00] N=83	3.50[2.38, 5.00] N=7	0.008
I feel more confident than before the training in assessing labor analysis	Q27.1	4.60[4.00, 5.00]	3.50[3.00, 4.00]	<0.001	4.40[4.00, 5.00] ^a N=124	5.00[4.00, 5.00] ^a N=95	4.50[4.00, 5.00] ^a	0.033
I feel more confident than before the training in assessing X-ray images	Q27.2	3.75[2.75, 4.50]	2.00[1.88, 3.00]	<0.001	3.50[2.50, 4.22] ^a N=124	4.00[3.00, 5.00] ^a N=95	4.38[3.62, 5.00] ^a	0.021
I feel more confident than before the training in assessing electrocardiograms	Q27.3	3.25[2.25, 4.00] N=228	1.75[1.15, 2.25]	<0.001	3.08[2.38, 4.00] ^a N=124	3.45[2.00, 4.33] ^a N=94	3.75[3.06, 4.00] ^a	0.422
I feel more confident than before the training in assessing vaccination status	Q27.4	3.50[2.50, 4.54] N=204	5.00[4.17, 5.88] N=19	<0.001	3.50[2.51, 4.50] N=126	4.00[2.71, 5.00] N=90	3.25[2.00, 4.50] N=7	0.097
The training has increased my motivation to work as a family doctor/physician later on	Q30	4.50[3.88, 5.00]	4.45[4.00, 5.06]	0.445	4.04[3.65, 4.67]	4.80[4.00, 5.00]	5.12[5.00, 5.88]	<0.001

Groups were defined according to the degree of urbanization for Switzerland, Eurostat degree of urbanization classification 2011. Median and interquartile range[IQR] were reported for each question. P-value(p) from Wilcoxon-Mann-Whitney-test / Kruskal-Wallis-test of median comparison between the groups was reported for each question.

^a Pediatric practices were excluded.

^b Apply or change bandages, etc.

Figure S1. Copy of the original survey, mandatory for students, translated into English.



Universität
Zürich^{UZH}

Placement in Primary Care Academic year 20__ / 20__

Teaching Evaluation - Institute of Primary Care Zürich

Dear students

This survey is for the evaluation of the One-to-One Training in Family Medicine. The aim of this evaluation is to show the quality and effectiveness of the course and to obtain direct feedback on the practices involved. The data is not collected anonymously to enable a follow-up quality improvement process but it is confidential: only selected members in the institute could access to your personal data. In case of future studies, the information will only be used in ways that will not reveal who you are and any personal information that could reasonably identify you will be removed or changed before files are shared with other researchers or results are made public. We kindly ask you to fill the questionnaire as honestly and openly as possible.

Thank you very much for your collaboration!

* 1. Personal data

Surname
Name

* 2. Academic year

Autumn semester until/with the following spring semester

Year

* 3. Data protection: I agree that my teaching doctor may receive a copy of the evaluation (upon request).

Yes

No

* 4. Data of the Family Medicine Teaching Practice

Surname
Name
Address



Placement in Primary Care Academic year 20__ / 20__

Organisation

* 5. The commute to the practice was reasonable

Yes

No

Please specify

* 6. The information on the course schedule on the Virtual Training Platform Medicine was

1 = Strongly disagree 2 3 4 5 6 = Strongly agree

Sufficient

Easy to understand

Please specify

* 7. The enrolment modalities for the course at the Virtual Training Platform Medicine were

1 = Strongly disagree 2 3 4 5 6 = Strongly agree

Easy

Clear

Please specify

* 8. The individual and direct bilateral appointment with the teaching practice was

1 = Strongly disagree 2 3 4 5 6 = Strongly agree

Uncomplicated

Please specify

* 9. Communication with the teaching practice was

1 = Strongly disagree 2 3 4 5 6 = Strongly agree

Easy

Please specify



Placement in Primary Care Academic year 20__ / 20__

Student / Patient - Interaction

* 20. I feel more confident in patient communication than before the training

1 = Strongly disagree

2

3

4

5

6 = Strongly agree

* 21. During the training, I was able to improve my medical competence in dealing with patients

1 = Strongly disagree

2

3

4

5

6 = Strongly agree

* 22. I was made aware of social problems in the context of the patient visit

1 = Strongly disagree

2

3

4

5

6 = Strongly agree



Placement in Primary Care Academic year 20__ / 20__

Overall assessment

* 28. How satisfied are you with the course in the teaching practice?

1 = Not at all satisfied 2 3 4 5 6 = Very satisfied

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Comments

* 29. How satisfied are you with your teaching physician?

1 = Not at all satisfied 2 3 4 5 6 = Very satisfied

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Comments

* 30. The training has increased my motivation to work as a family doctor/physician later on

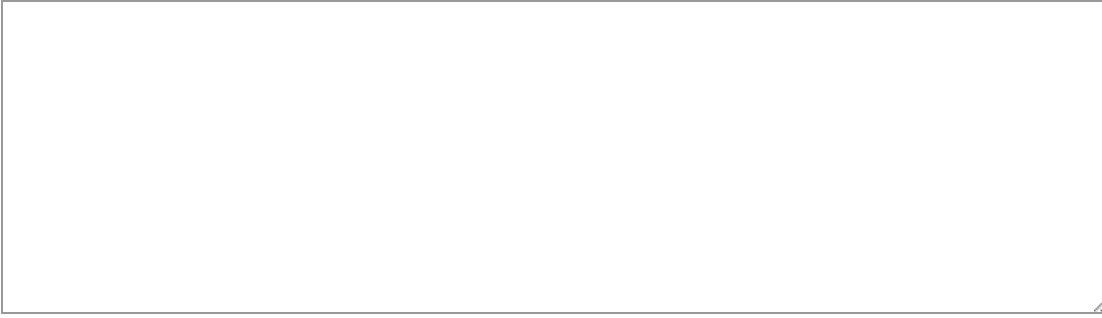
1 = Strongly disagree 2 3 4 5 6 = Strongly agree

<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
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Comments

31. What did you like most about the training?

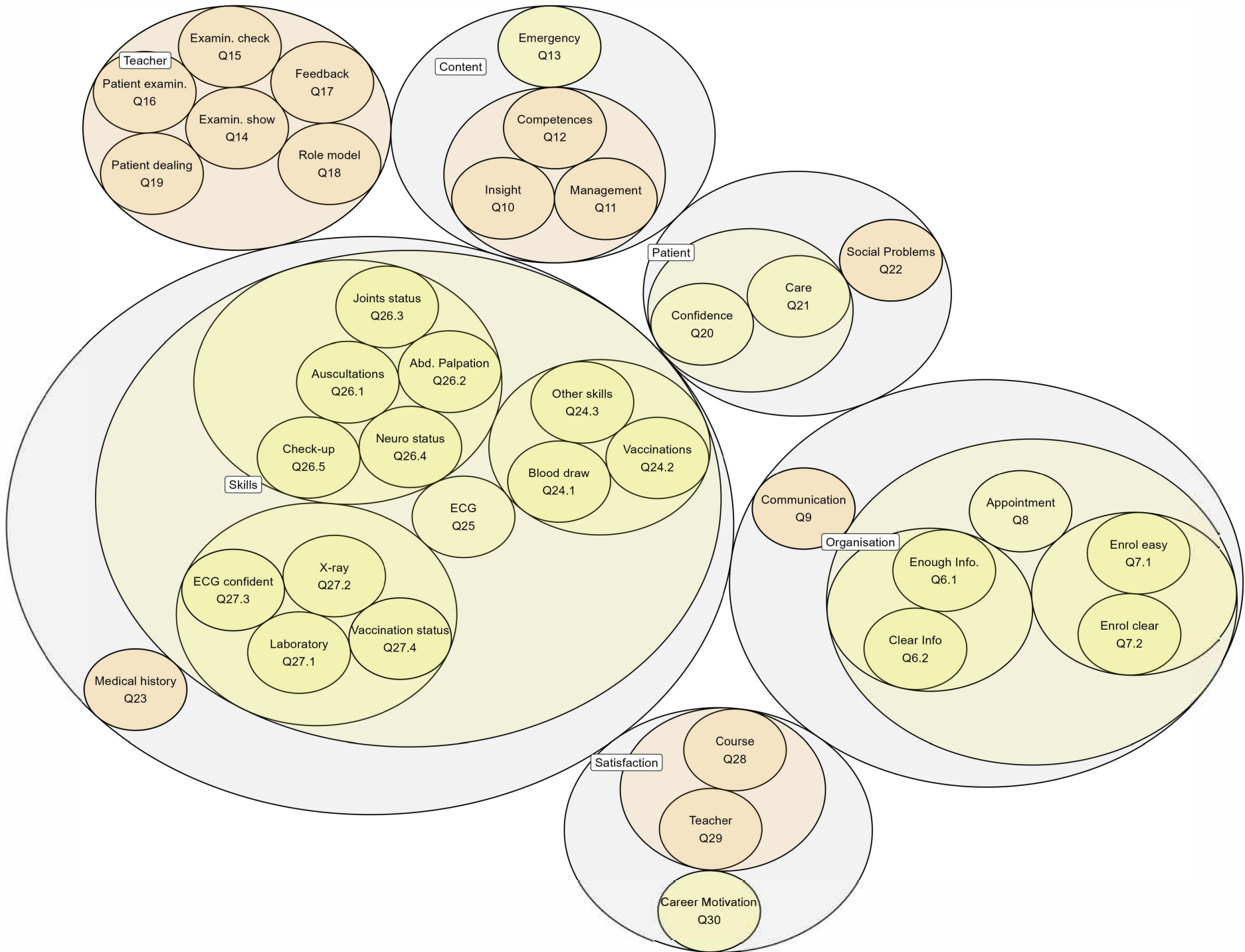
32. What did you benefit the most from placement?



33. What can be improved in the course?



Figure S2. Survey structure (Likert scale questions). Dimensions were the six themes investigated. Screening referred to the key questions for identifying practitioners by teaching quality and additional denoted the other questions. Each item was labeled as Q followed by the number in the original item list. A short item description was provided. Abbreviations: ECG, electrocardiogram; info, information, examin., examinations, abd., abdominal. Emergency meant medical urgencies. See Figure S1.



Dimension
 Additional
 Screening

Figure S3. Main tags used to describe students' perceptions and experiences.

Each tag, first column, was used when the student, evaluating the experience with each subject, second column, acknowledged at least one of the characteristics reported in the third column.

Tag	Subject evaluated	Characteristics reported / Applicability
Good Teacher	Teaching doctor	<ul style="list-style-type: none"> enthusiasm/commitment to teaching; ability to give constructive feedback; ability to ensure protected time for teaching; awareness of ethical standards relating to teaching; methods of assessment made clear to students; willing to reflect/act on student feedback; evidence of competent communication skills; willing to take responsibility for teaching schedule; aware of curriculum/objectives of teaching.
No good teaching	Teaching doctor	<ul style="list-style-type: none"> evidence of serious lack or no satisfaction in one of the characteristics for a good teacher; evidence of lack or problems in more than one characteristics for a good teacher.
Good insight	Family Medicine Practice	<ul style="list-style-type: none"> making learners feel welcomed by the practice; demonstrating effective team working; demonstrating adequate standard of record keeping; taking into account learning objectives; enthusiasm to teach within the practice as a whole.
Skills Gained	Learning content	<ul style="list-style-type: none"> wide range of clinical experience, including work of non-doctor team members.
Good Patient Mix	Patient	<ul style="list-style-type: none"> encountering of different type of patients; encountering of patients with chronic or multi-morbid conditions.
Good patient relationship	Patient – Teaching doctor	<ul style="list-style-type: none"> good and safe interaction with patients, direct or indirect through the family medicine doctor.

Figure S4. Location of medical student placements in family medicine practice, years 2019-2022. For each practice municipality, the number of student was reported. The 26 Swiss regions (cantons) were delimited with borders.

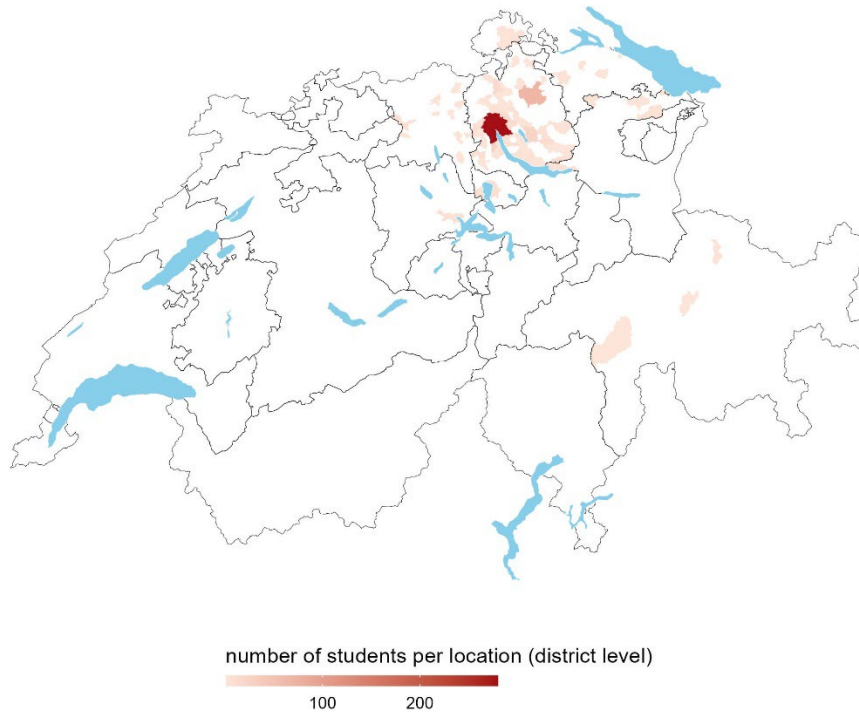


Figure S5. Cluster analysis of *benchmark* and *need to improve* groups. The number of cluster was $k=3$, and then the two close clusters were put together in the benchmark group. The screening questions and the number of student per general practice defined a 15-dimensional dataset that was represented through the first two principal components (Dim1, Dim2) using Principal Component Analysis (PCA) methods.

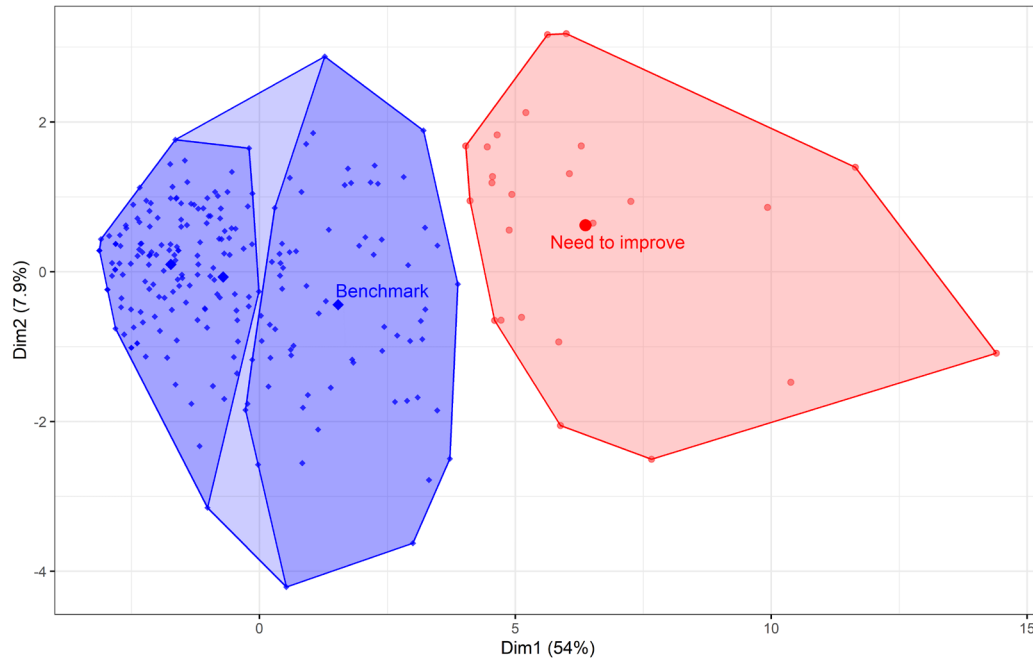


Figure S6. Violin plot of the total score (average by family medicine practice) by groups. The total score was calculated as the sum score of the screening questions and reported by *benchmark* and *need to improve* groups. Horizontal lines within the two “violins” represented the 75%, 50% and 25% quantiles of each group distribution. Horizontal dashed line represented the overall 20% quantile (all the distribution).

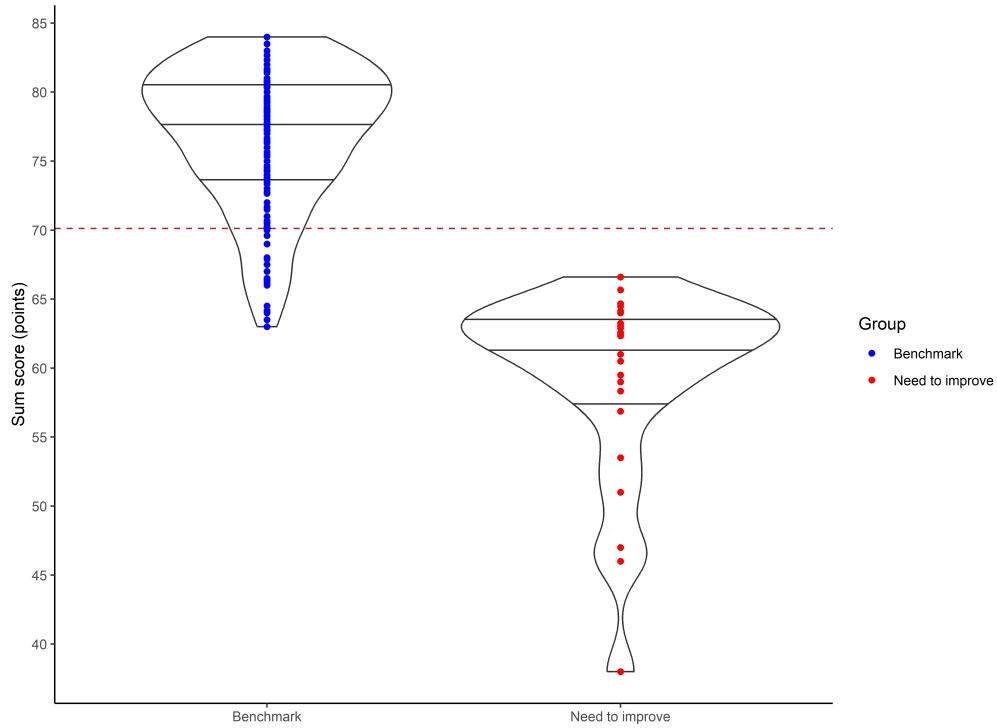


Figure S7. Tag cloud of what could be improved about the placement. Tags assigned from the answers to the question Q33: “What can be improved in the course?” For each tag, the percentage of all 713 students, was reported, though only 281 students answered the open-ended question.

