

Swiss Medical Students' Career Plan, Specialty, and Residency Location Choices

2009 Survey

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University of Geneva Faculty of Medicine

Unit of Development and Research in Medical Education (UDREM)

With the participation of

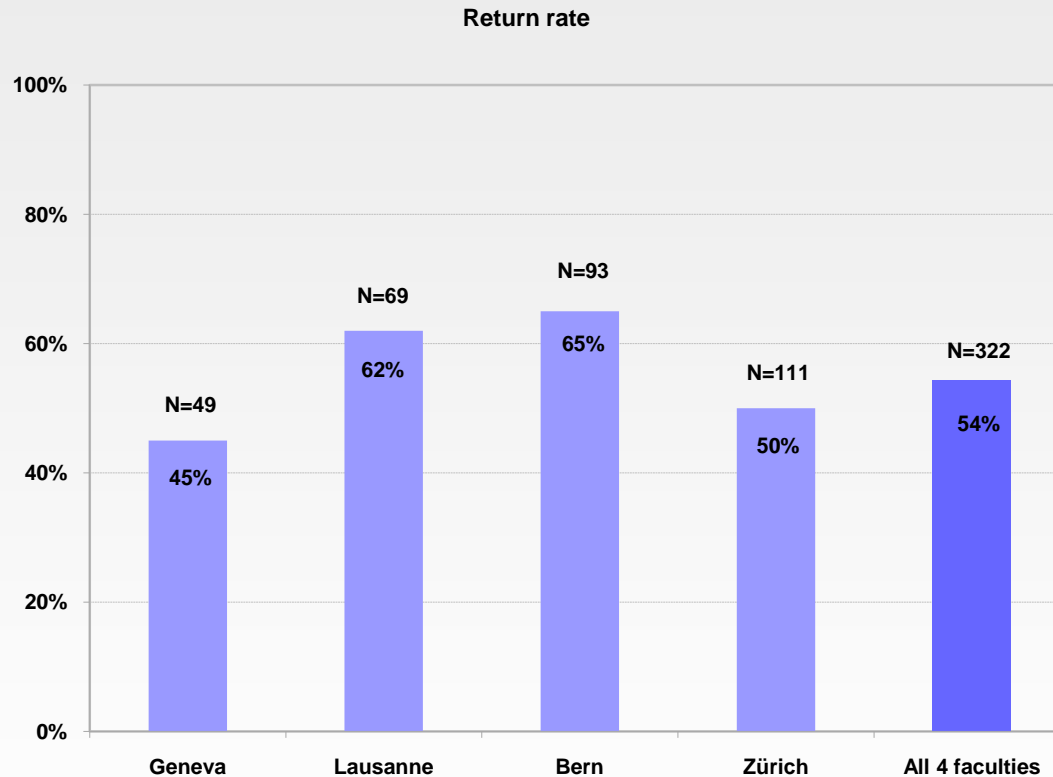
Raphael Bonvin, MD, MME – University of Lausanne Faculty of Medicine

Christian Schirlo, MD, MME – University of Zurich Faculty of Medicine

Barbara Stadelmann, PhD, MME – University of Bern Faculty of Medicine

This study is part of the University of Geneva Faculty of Medicine Follow-up project. The project has received support and funding from the Faculty of Medicine, the Foundation De Reuter, Louis Jeantet, and Schmidheiny and the Academic Society of Geneva. The opinions expressed here are those of the authors and should not be attributed to the institutions and funding agencies.

2009 survey conducted with students from the Faculty of Medicine of Lausanne, Bern, Zurich and Geneva*

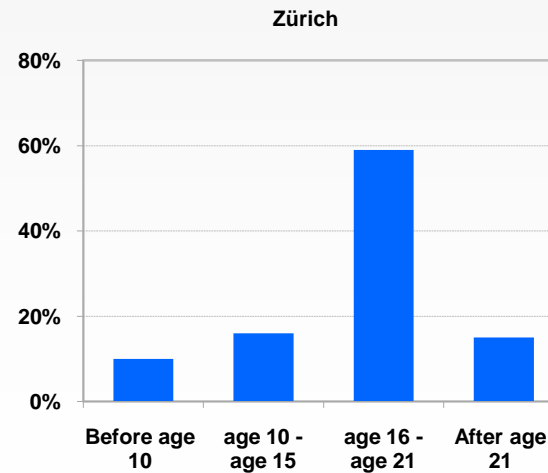
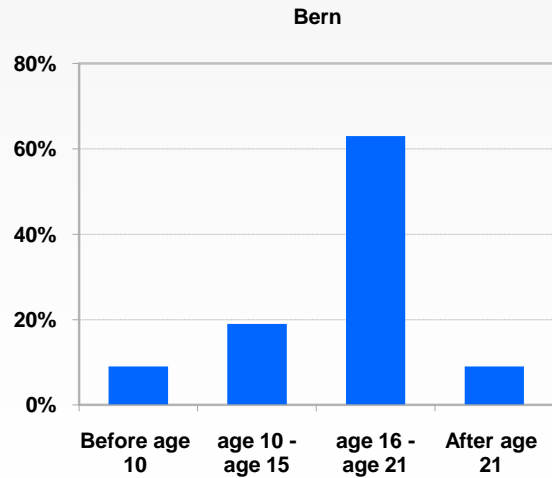
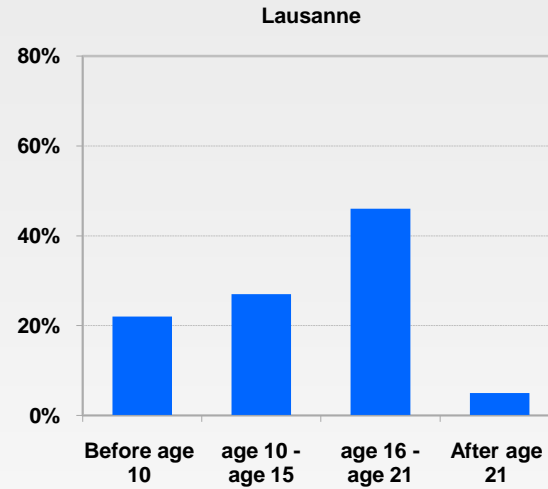
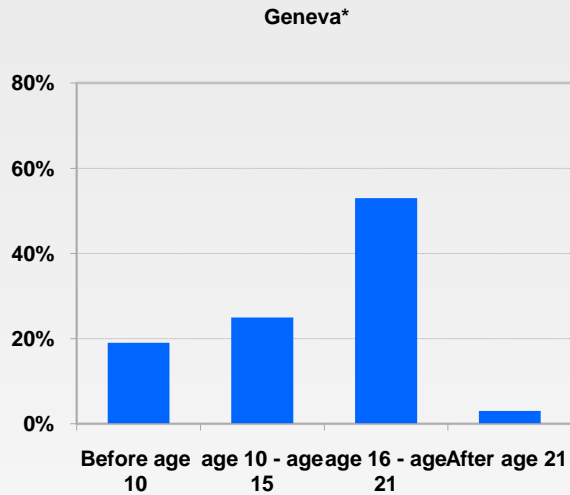


* Geneva (N total = 110) / Survey administered end of the 5th year

* Lausanne (N total = 111), Bern (N total = 143), Zurich (N total = 221). Surveys administered in the 6th year

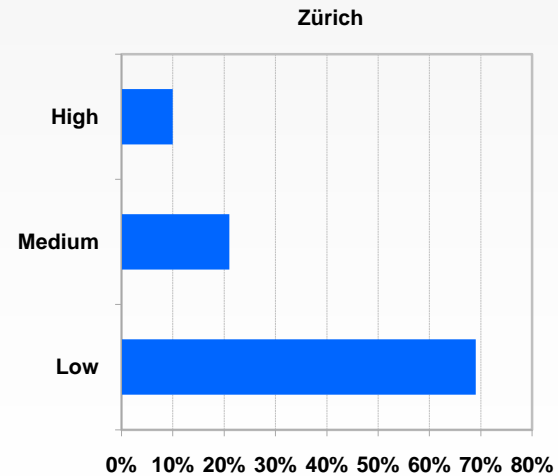
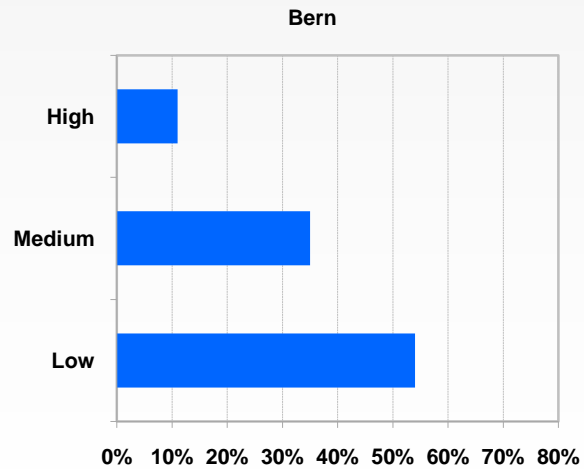
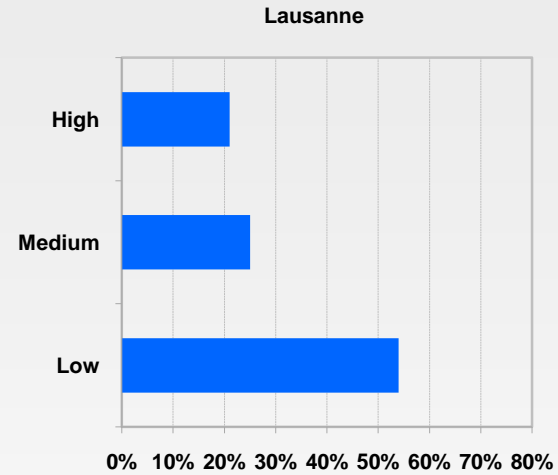
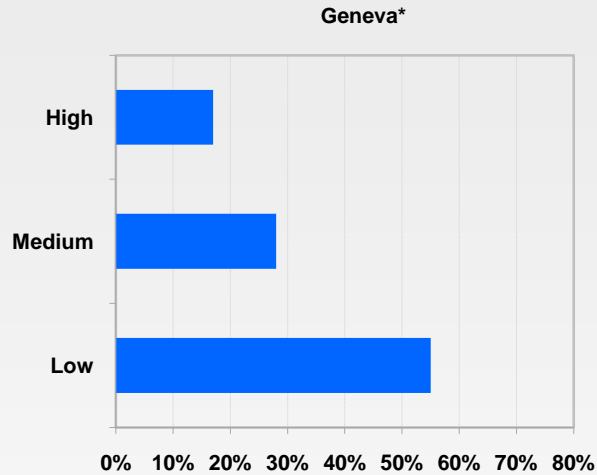
* The survey for Lausanne was administered on paper while the ones for Geneva, Bern and Zurich were on-line

Age of decision to study medicine

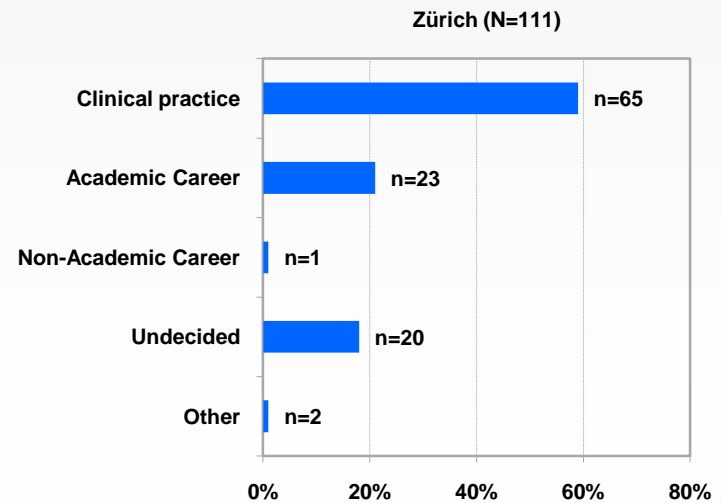
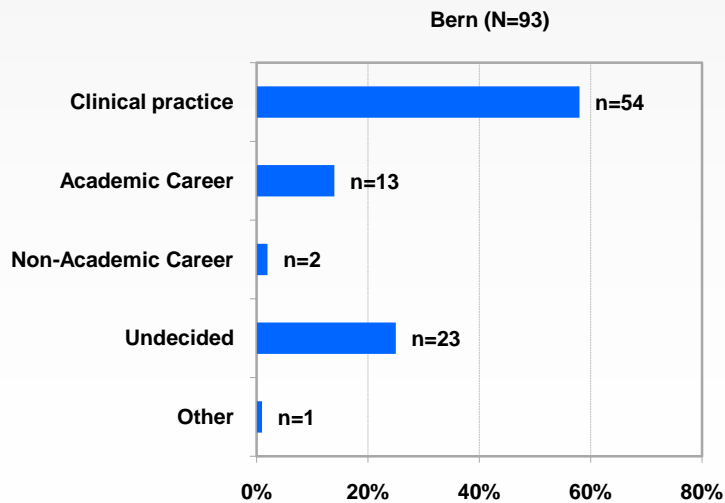
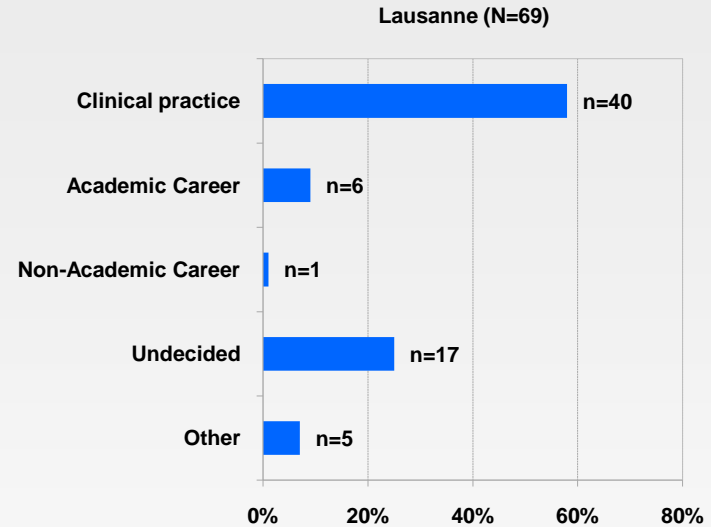
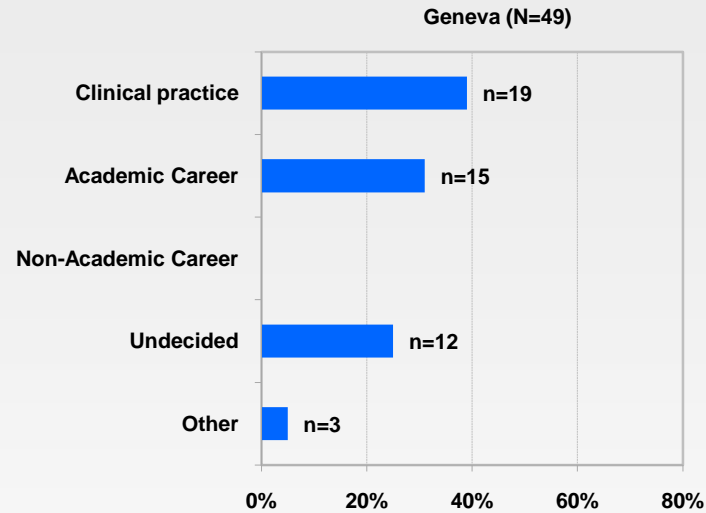


* This item was asked to the students in Geneva (n=135) at the end of their second year in a separate survey questionnaire

Degree of hesitation to study medicine

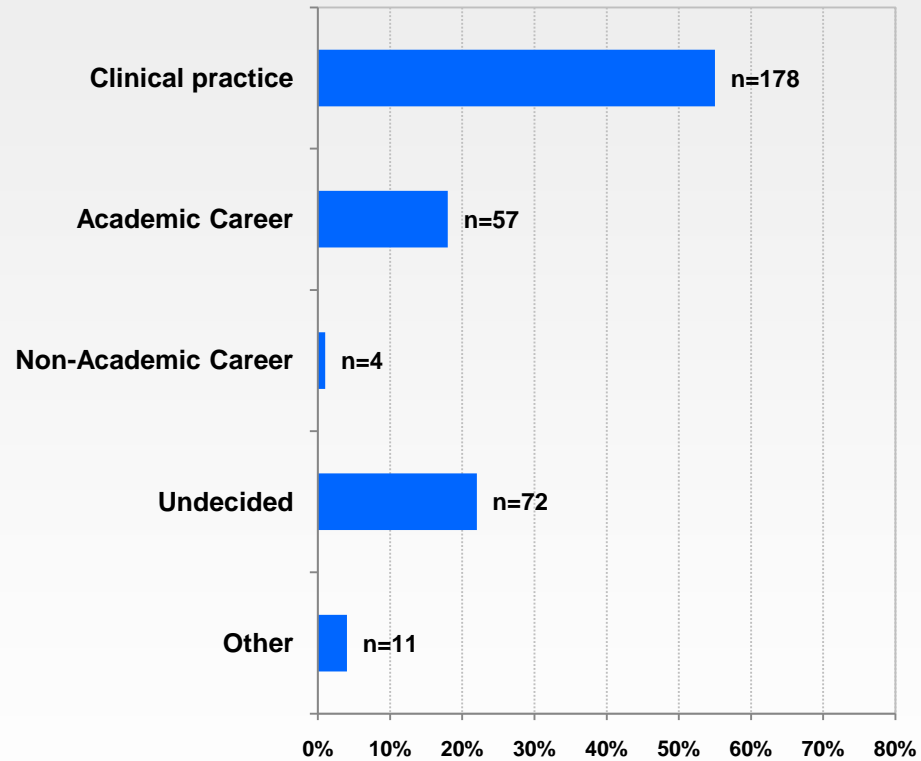


Choice of career plan By faculty



Choice of career plan

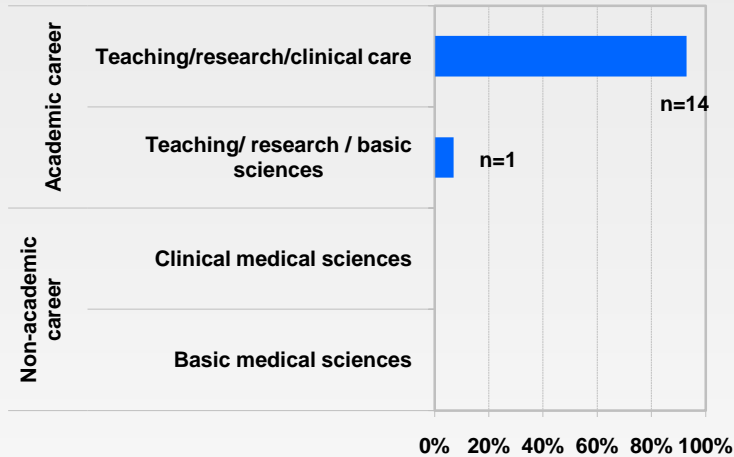
All 4 faculties (N=322)



Choice within academic vs. non-academic career plan By faculty

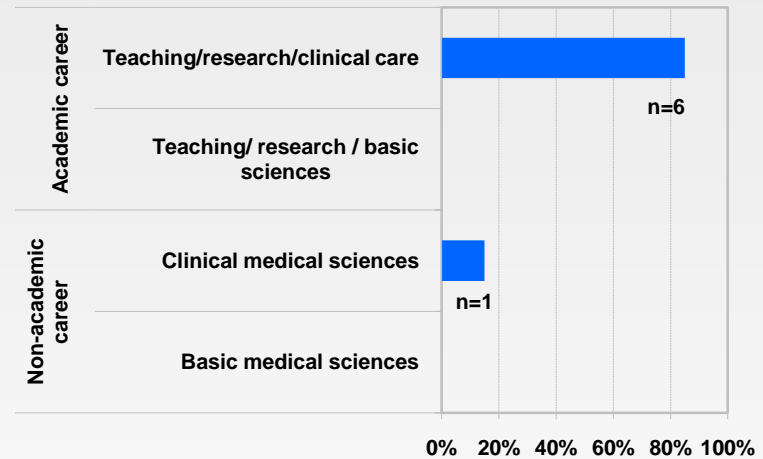
N=15

Geneva



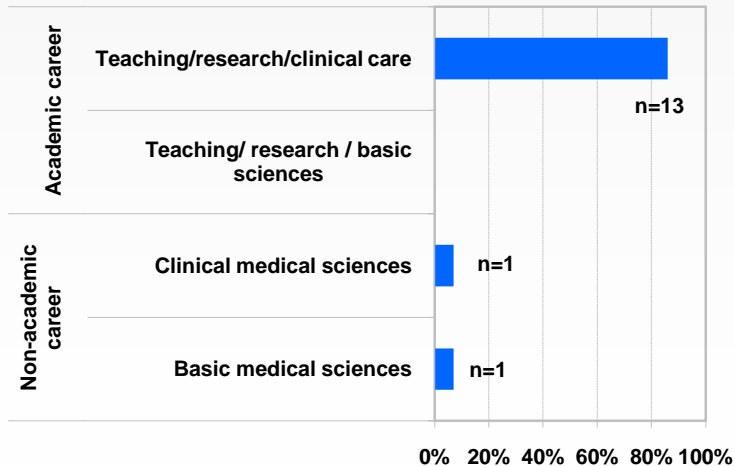
Lausanne

N= 7



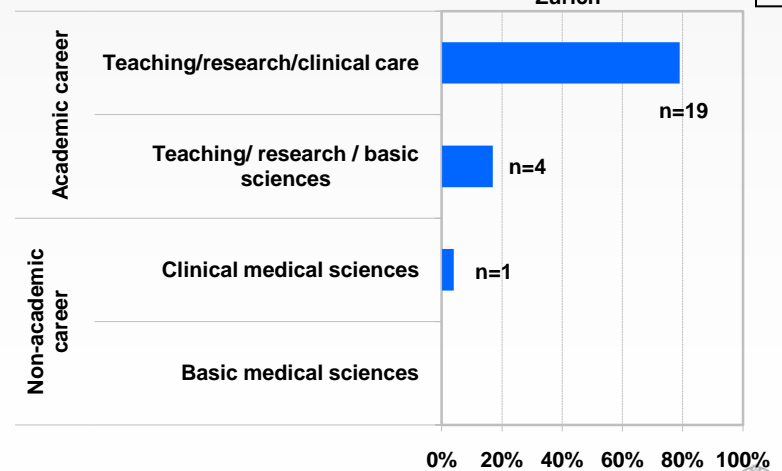
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Bern



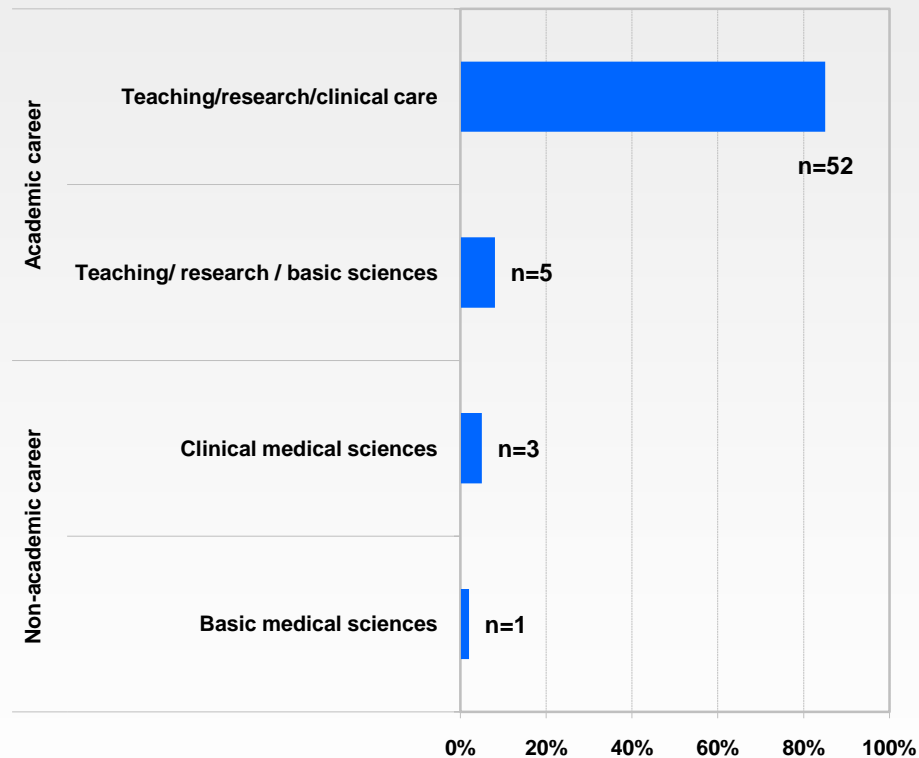
Zürich

N=24



Choice within academic vs. non-academic career plan

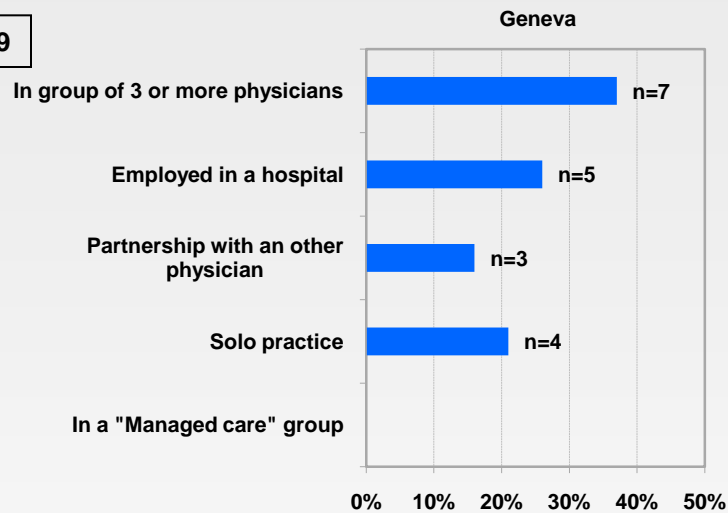
All 4 faculties (N=61/250)*



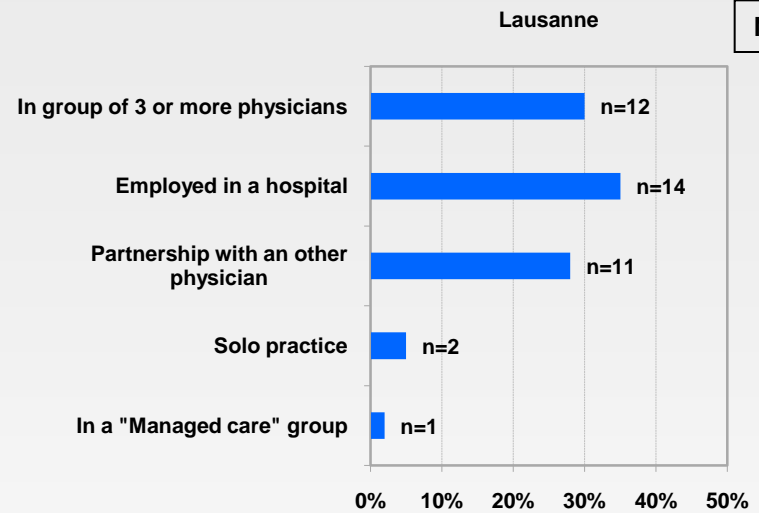
*Number of students with an academic vs non-academic career plan / Number of students having made a career plan choice

Choice of clinical practice as career plan By faculty

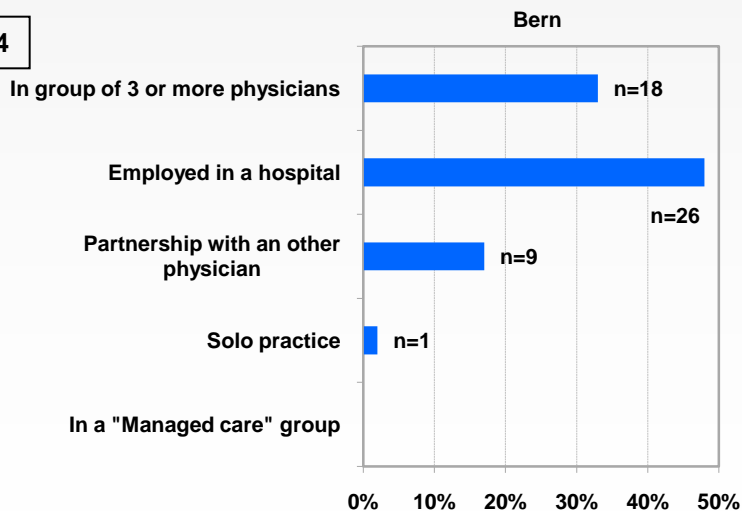
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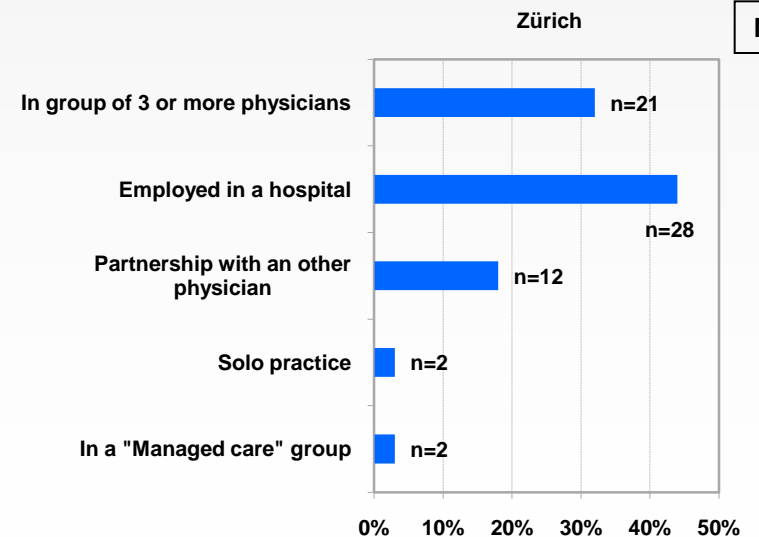
N=40



N=54

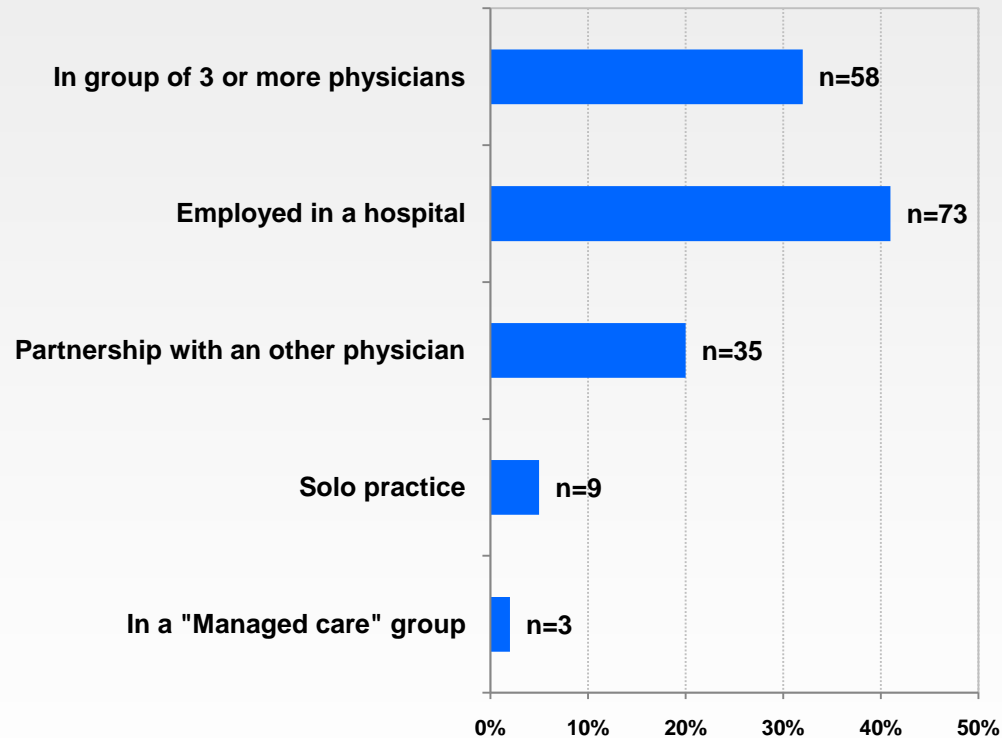


N=65



Choice of clinical practice as career plan

All 4 faculties (N=178/250)*



*Number of students with an academic vs non-academic career plan / Number of students having made a career plan choice

Reasons for career plan choice

Personal values/ considerations

- Passionate for medicine
- Influence of family (parents are doctors...)
- Intellectually challenging
- Have great interest and affinity for medicine

Work extrinsic characteristics

- Career advancement and competitiveness
- Financial security
- Working conditions (schedule, private practice/hospital, full/part time)
- Working environment
- Lifestyle (family-work equilibrium)
- Swiss law on limitation of opening new medical practices
- Number of residency positions
- Needs of physicians in the specialty

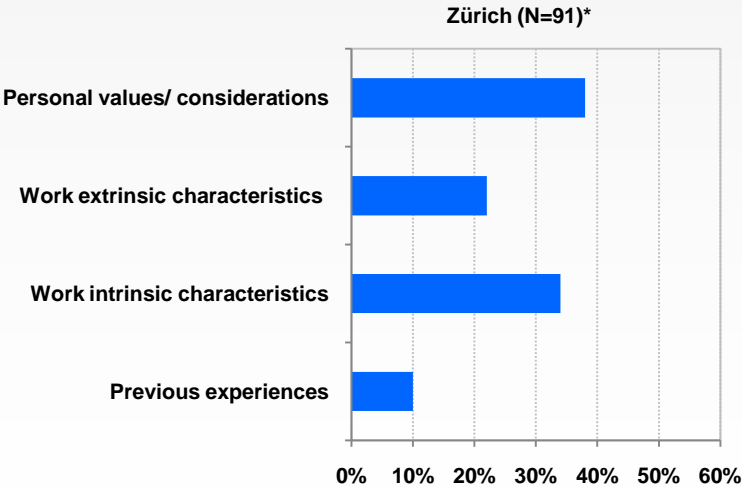
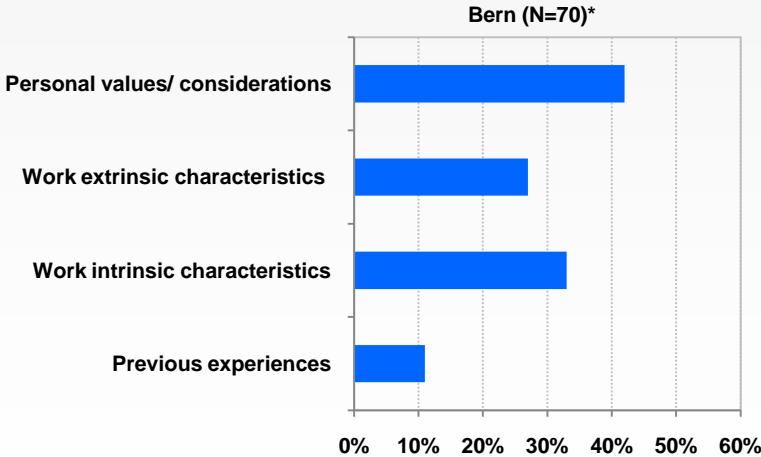
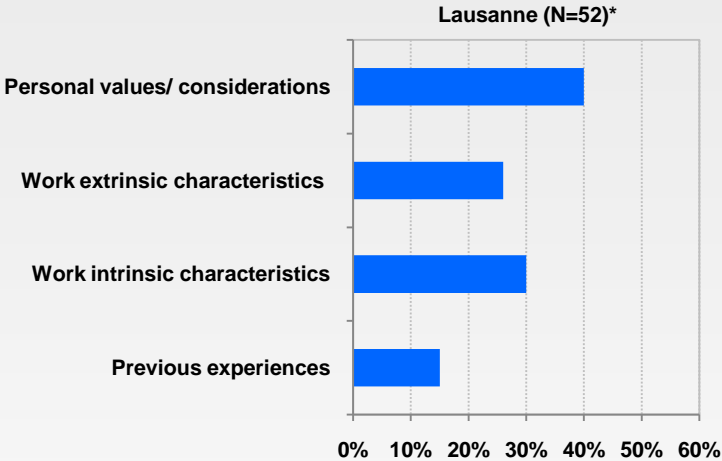
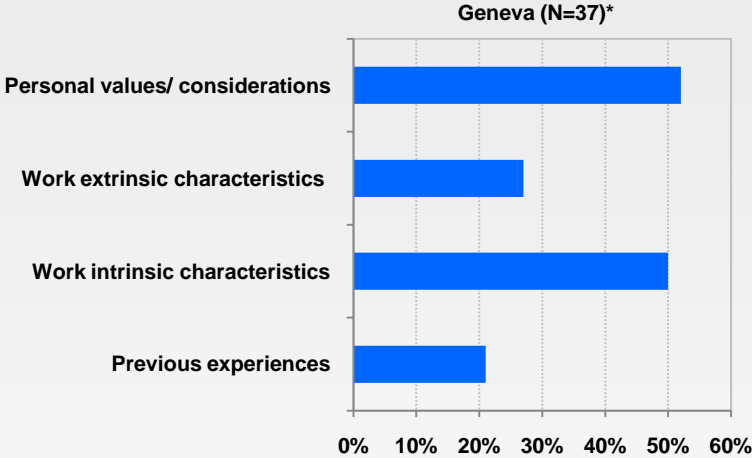
Work intrinsic characteristics

- Interpersonal relationship and contact with patients
- Multidisciplinarity
- Variety of activities, experiences, types of pathologies...
- Team work
- Tied to research
- Technical skills (manual, precise skills)
- High level of complexity and leading edge progress
- Level of responsibility and decision-making

Previous experiences

- Personal experiences (accident, disease...)
- Experiences while a student (clinical clerkship, work as substitute)
- Influence of a family member
- Influence of a course, teacher, chief resident
- Other

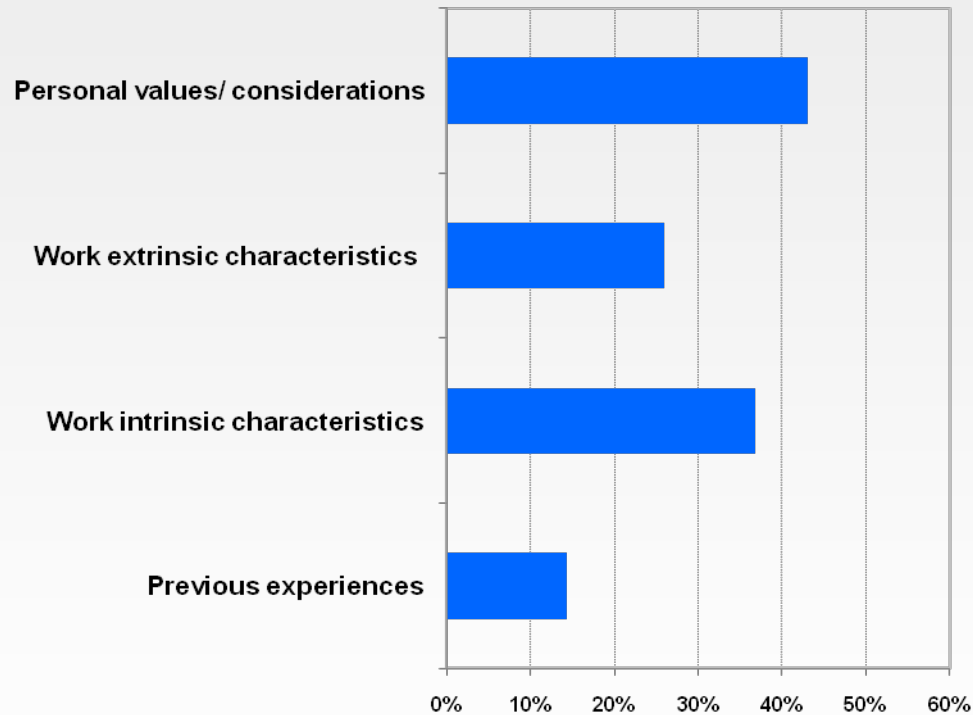
Reasons for career plan choice By faculty



* Percentages based on number of students who indicated having made a career plan choice

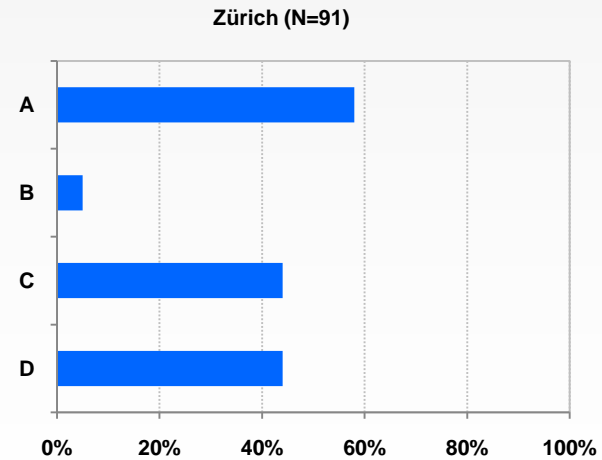
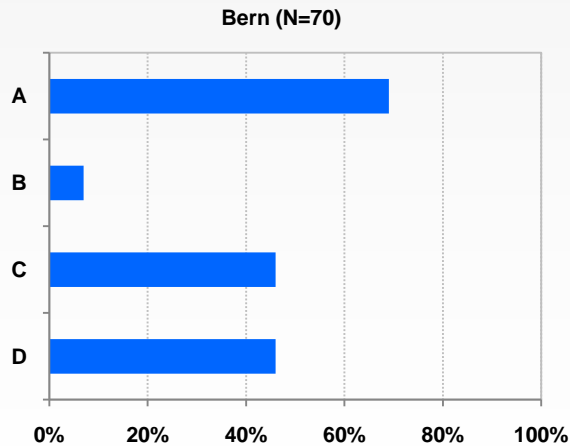
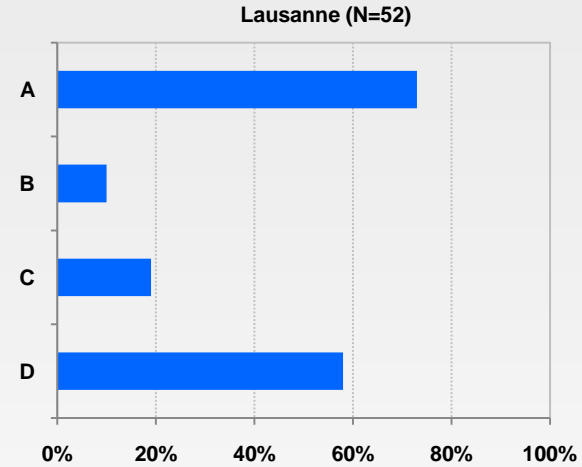
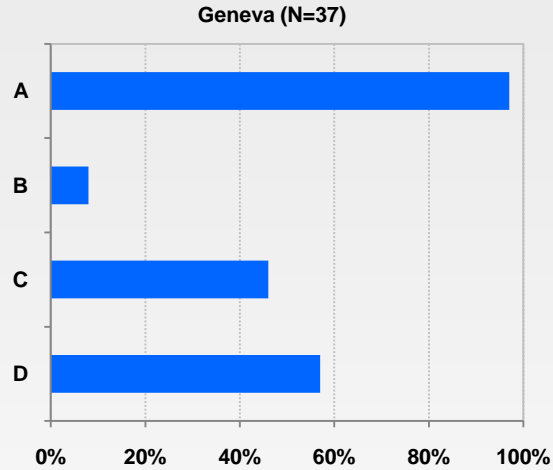
Reasons for career plan choice

All 4 faculties (N=250/322)*



* Percentages based on number of students who indicated having made a career plan choice

Reasons for career plan choice: Personal values/considerations By faculty

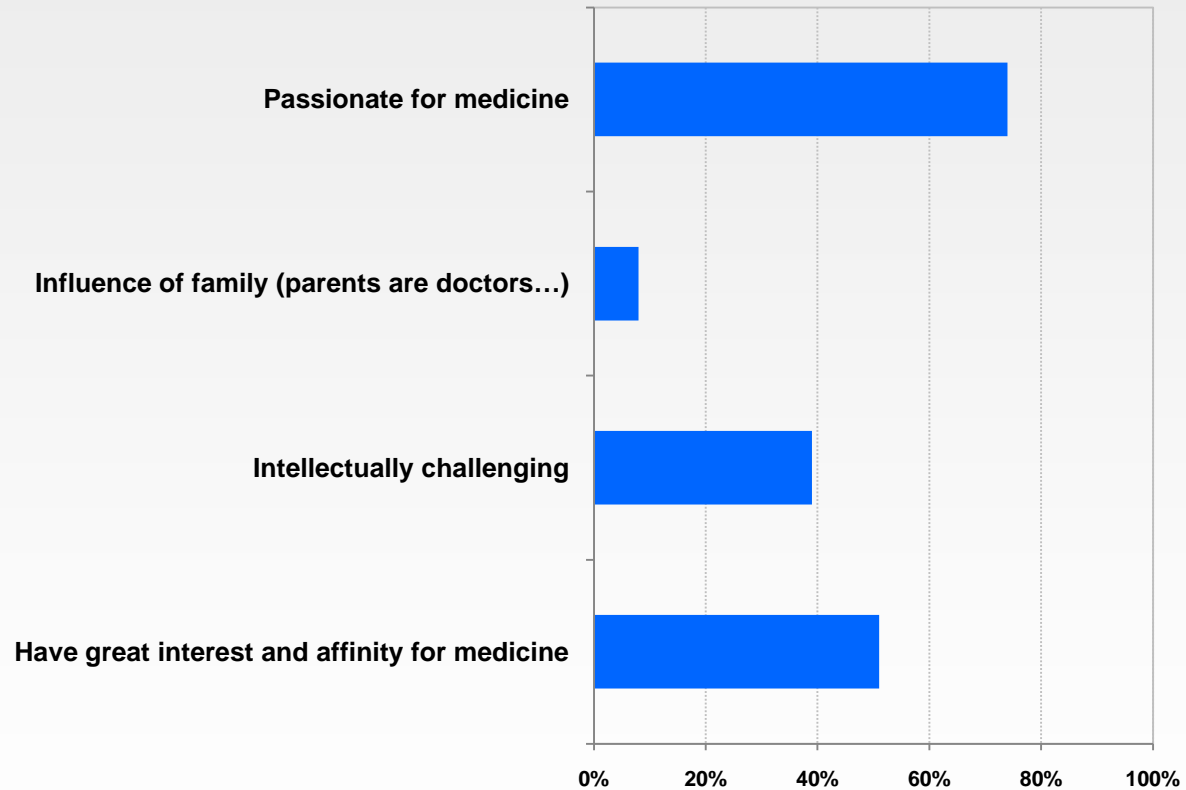


- A Passionate for medicine
- B Influence of family (parents are doctors...)

- C Intellectually challenging
- D Have great interest and affinity for medicine

Reasons for career plan choice: Personal values/considerations

All 4 faculties (N=250/322)*

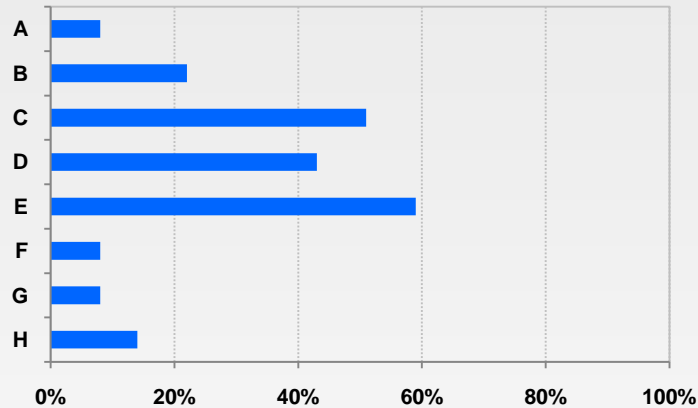


* Percentages based on number of students who indicated having made a career plan choice

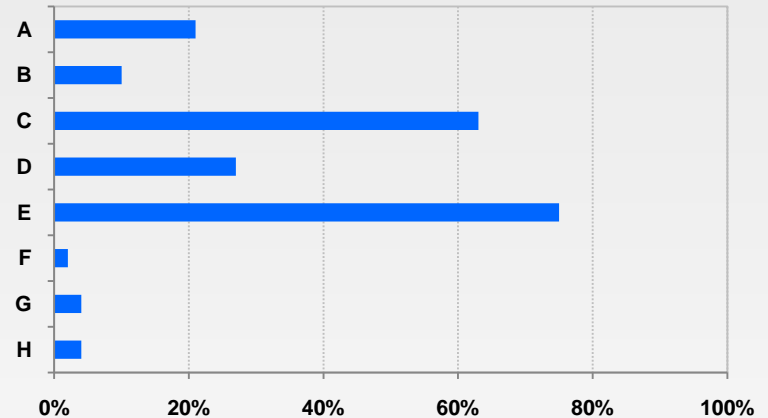
Reasons for career plan choice: Work extrinsic characteristics

By faculty

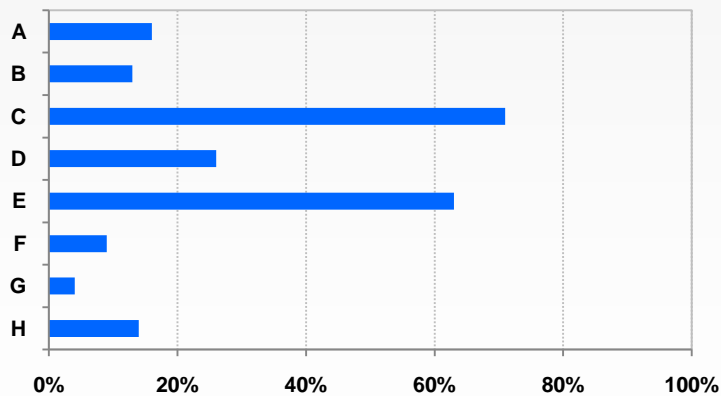
Genève (N=37)



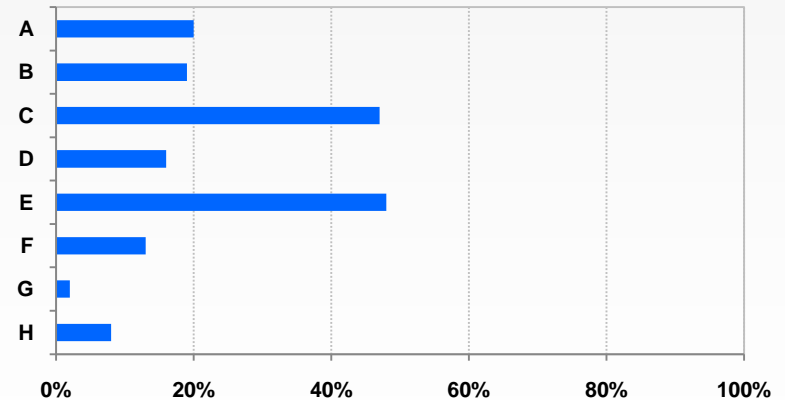
Lausanne (N=52)



Bern (N=70)



Zürich (N=91)

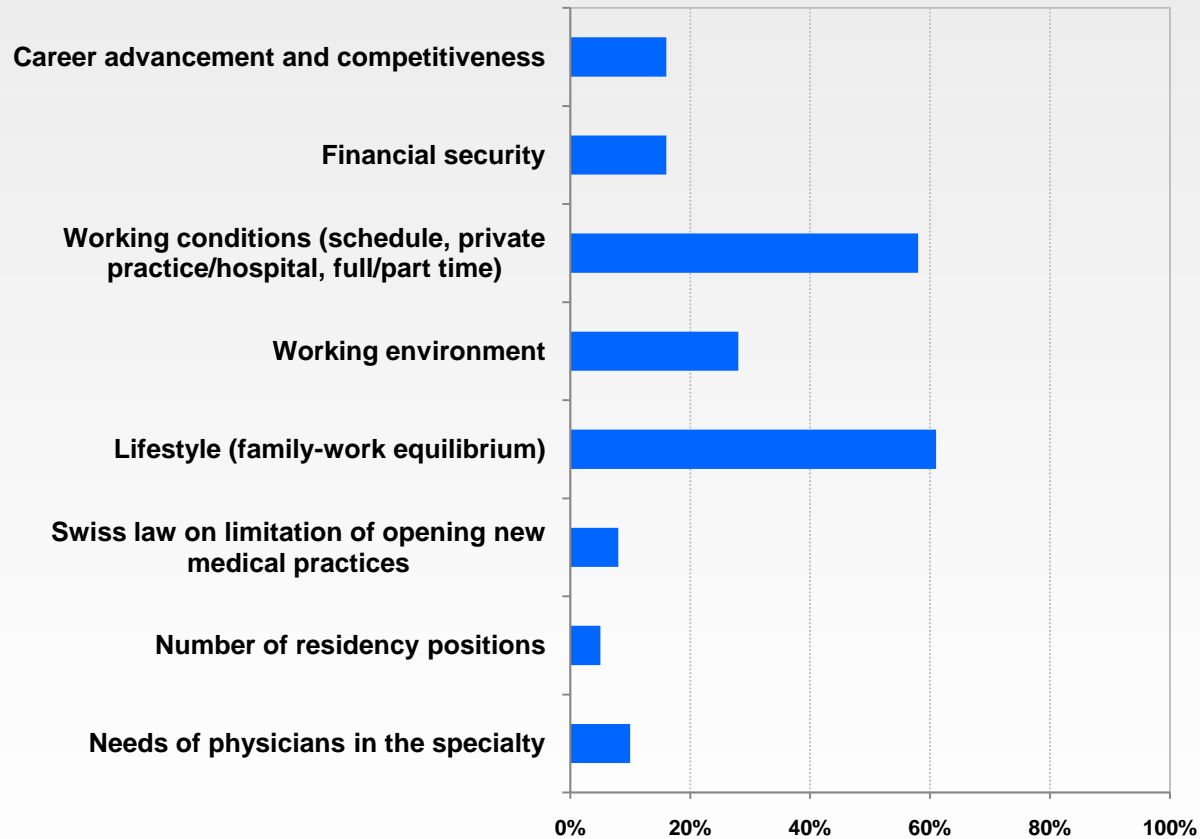


- A Career advancement and competitiveness
- B Financial security
- C Working conditions (schedule, private practice/hospital, full/part time)
- D Working environment

- E Lifestyle (family-work equilibrium)
- F Swiss law on limitation of opening new medical practices
- G Number of residency positions
- H Needs of physicians in the specialty

Reasons for career plan choice: Work extrinsic characteristics

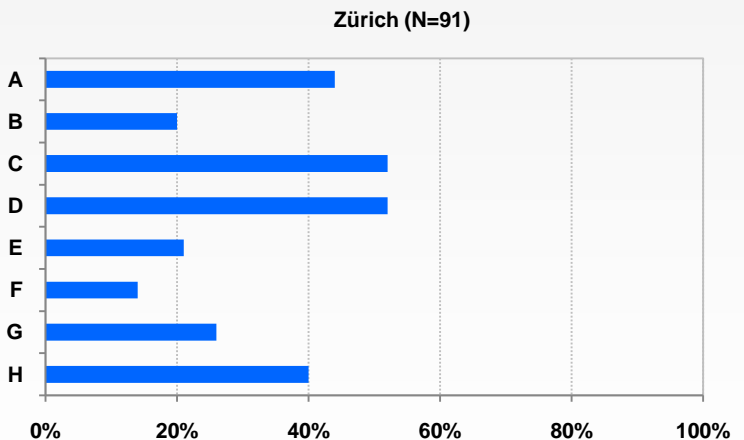
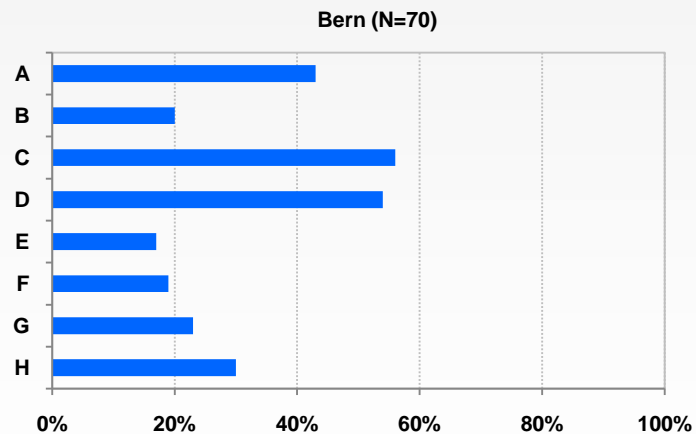
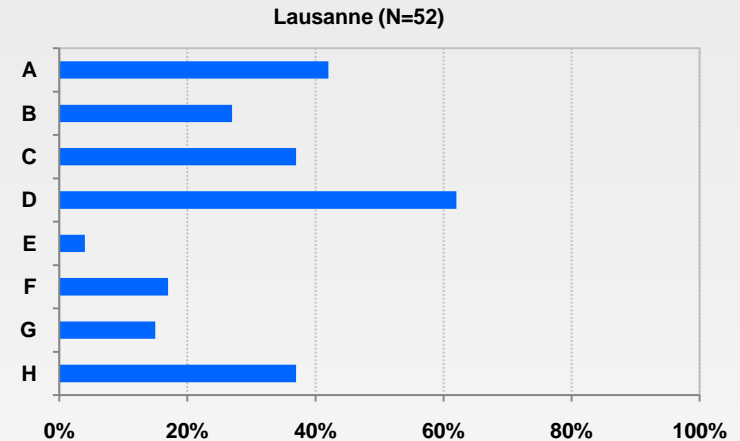
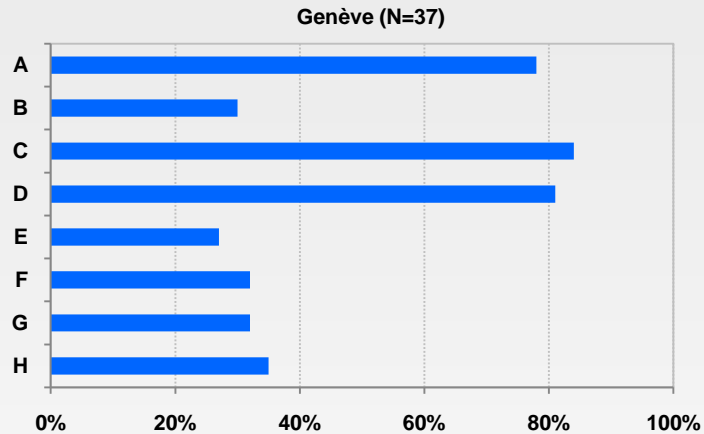
All 4 faculties (N=250/322)*



* Percentages based on number of students who indicated having made a career plan choice

Reasons for career plan choice: Work intrinsic characteristics

By faculty

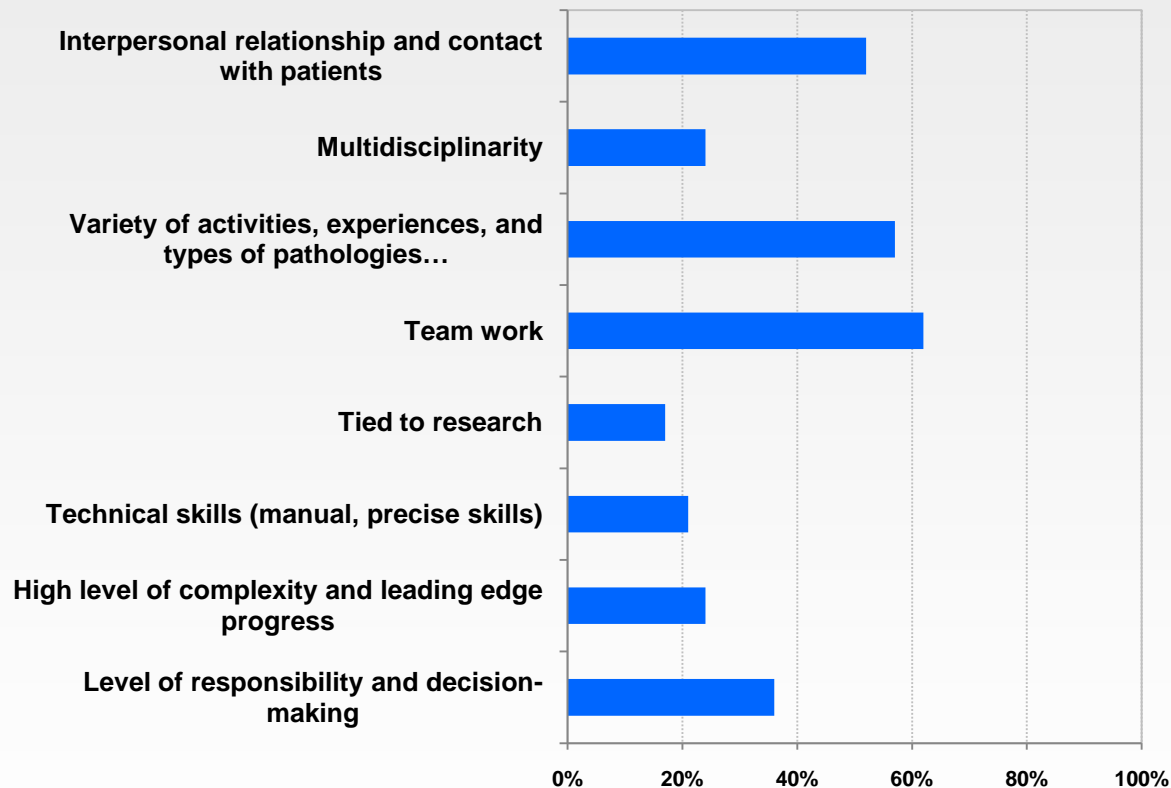


- A Interpersonal relationship and contact with patients
- B Multidisciplinarity
- C Variety of activities, experiences, and types of pathologies...
- D Team work

- E Tied to research
- F Technical skills (manual, precise skills)
- G High level of complexity and leading edge progress
- H Level of responsibility and decision-making

Reasons for career plan choice: Work intrinsic characteristics

All 4 faculties (N=250/322)*

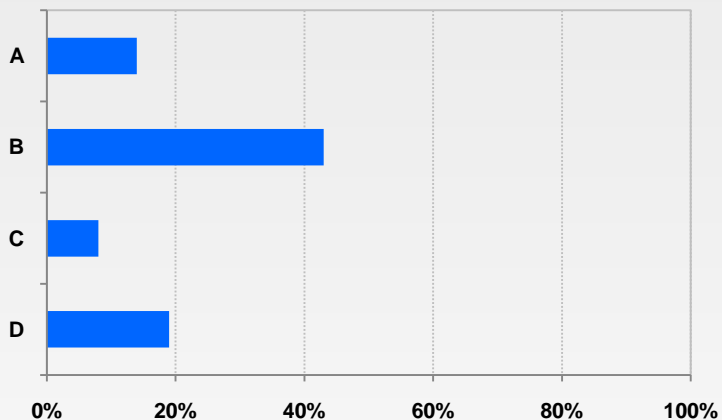


* Percentages based on number of students who indicated having made a career plan choice

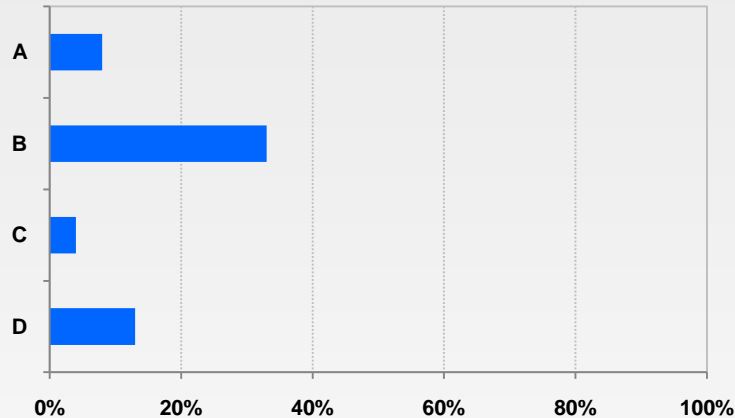
Reasons for career plan choice: Previous experiences

By faculty

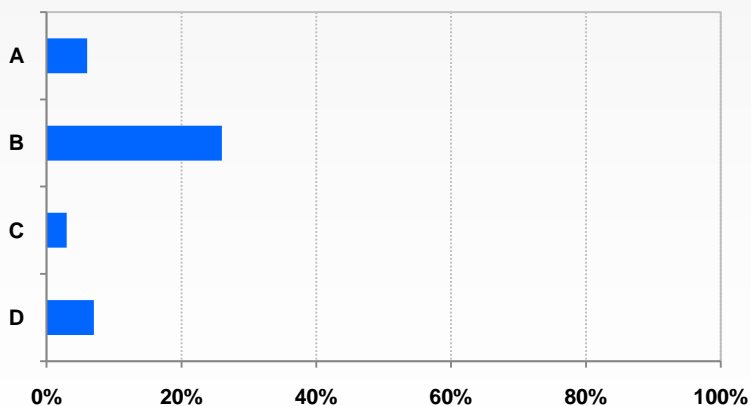
Genève (N=37)



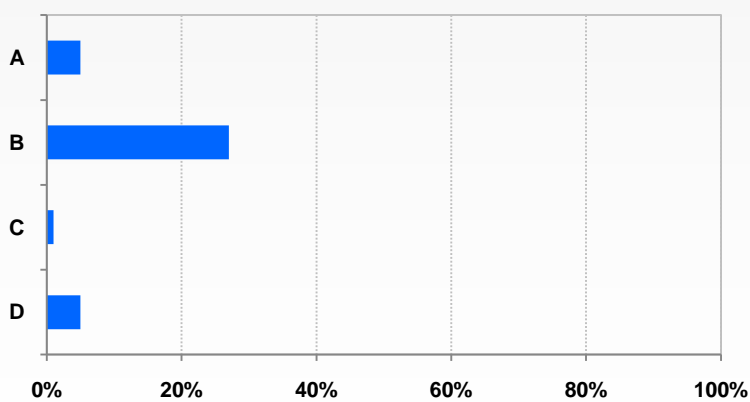
Lausanne (N=52)



Bern (N=70)



Zürich (N=91)



A Personal experiences (accident, disease...)

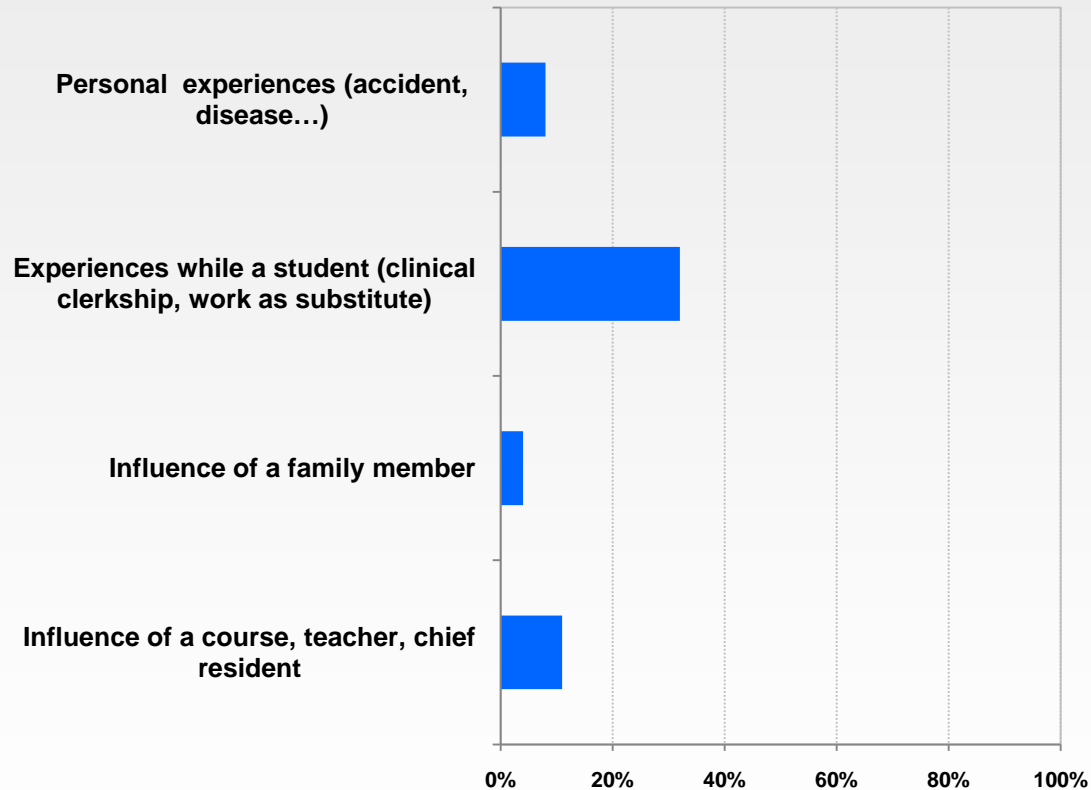
B Experiences while a student (clinical clerkship, work as substitute)

C Influence of a family member

D Influence of a course, teacher, chief resident

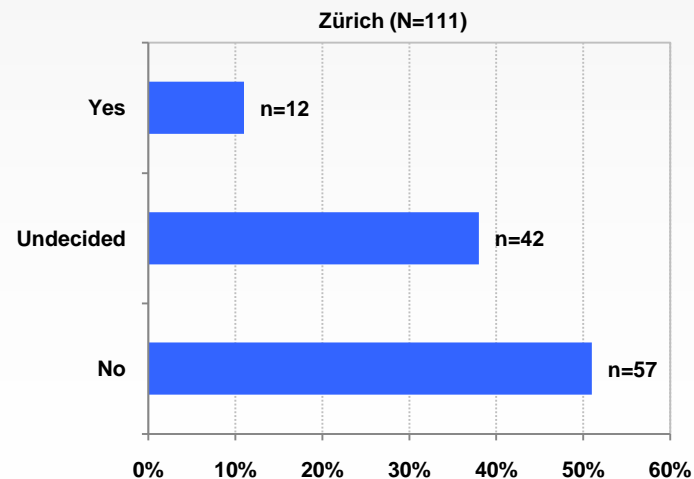
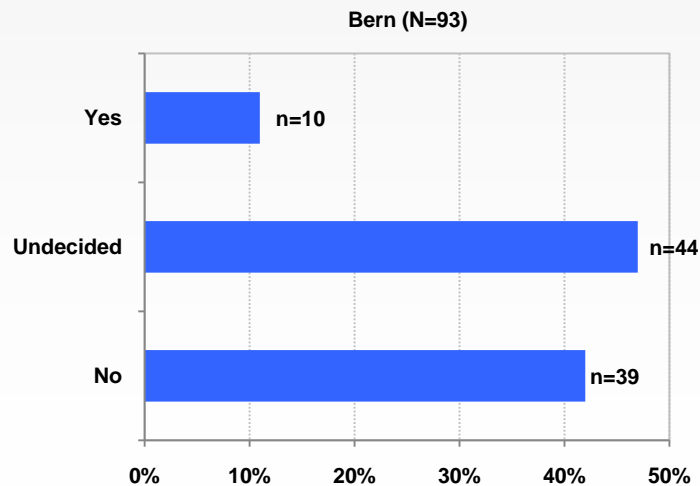
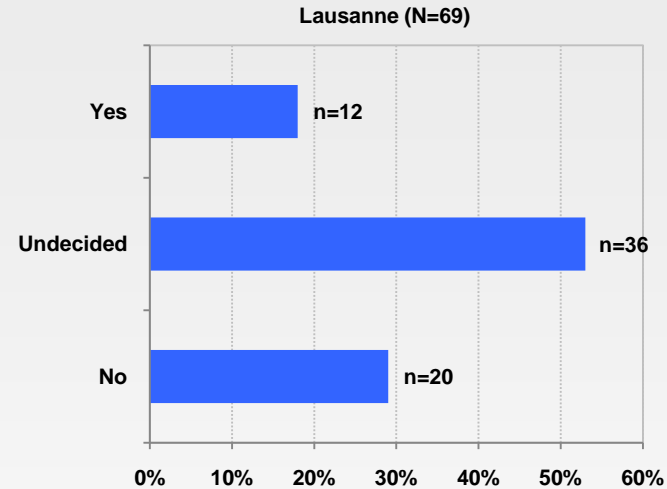
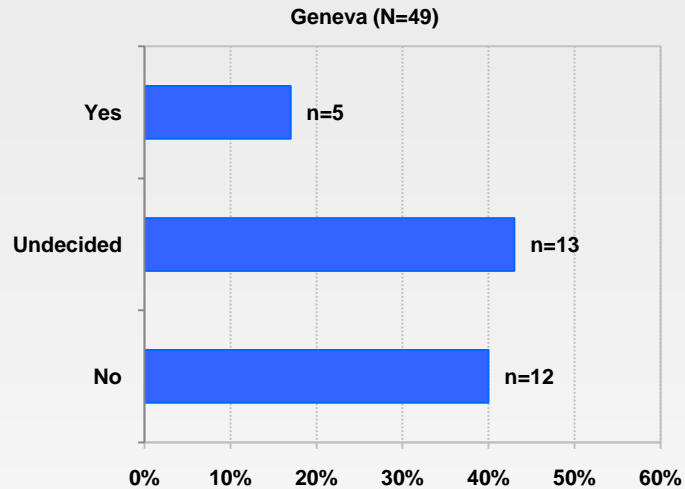
Reasons for career plan choice: Previous experiences

All 4 faculties (N=250/322)*



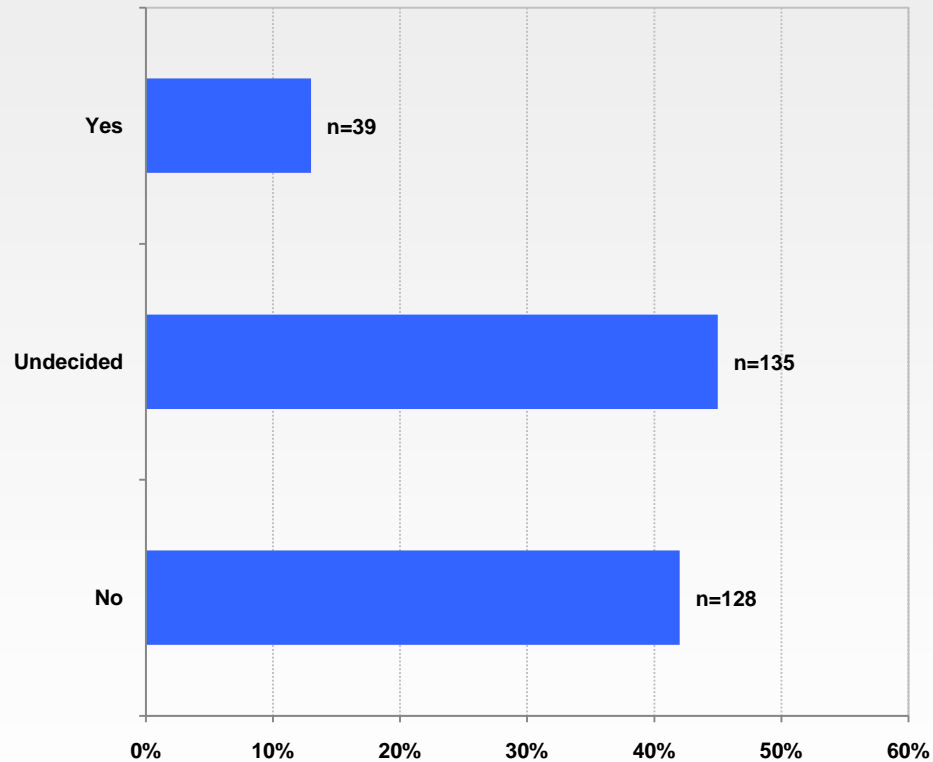
* Percentages based on number of students who indicated having made a career plan choice

Intention of practice in medically underserved areas By faculty (new item)



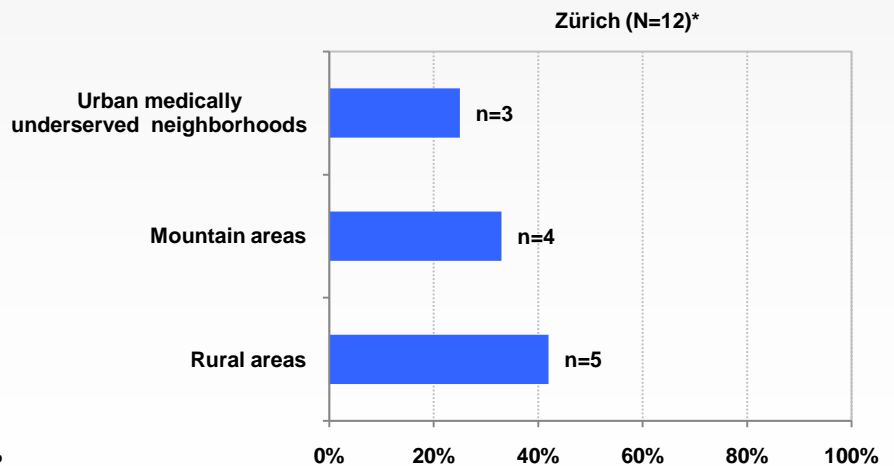
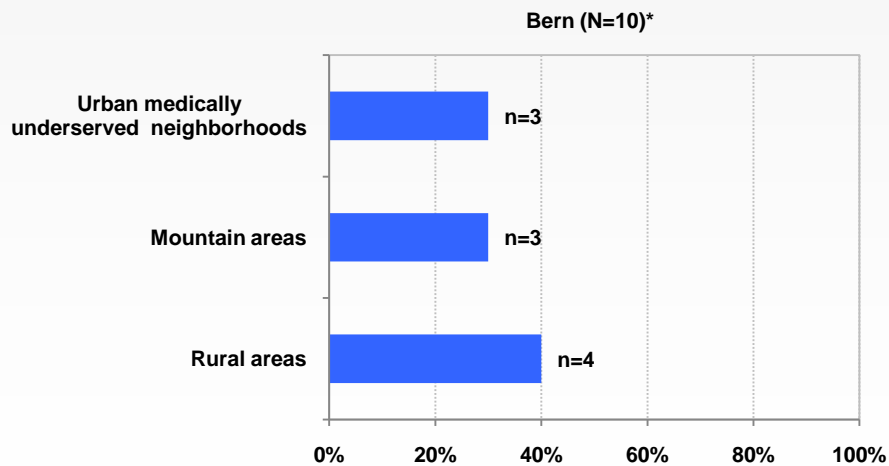
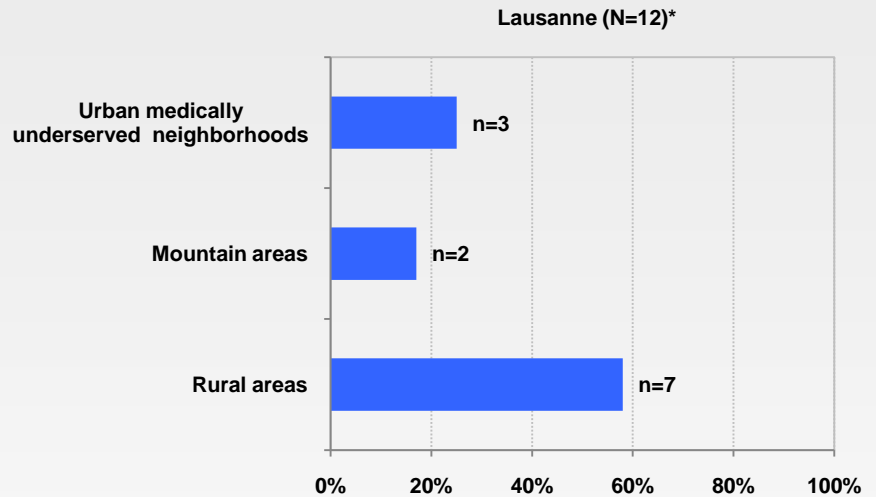
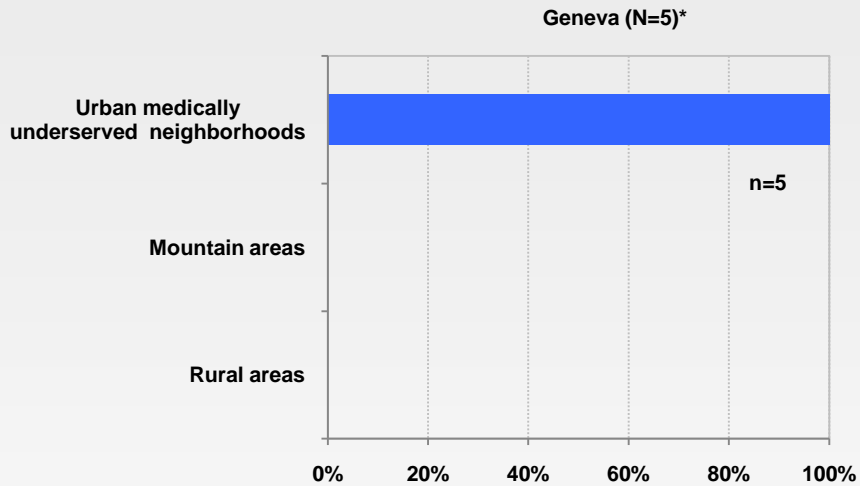
Intention of practice in medically underserved area

All 4 faculties (N=322)



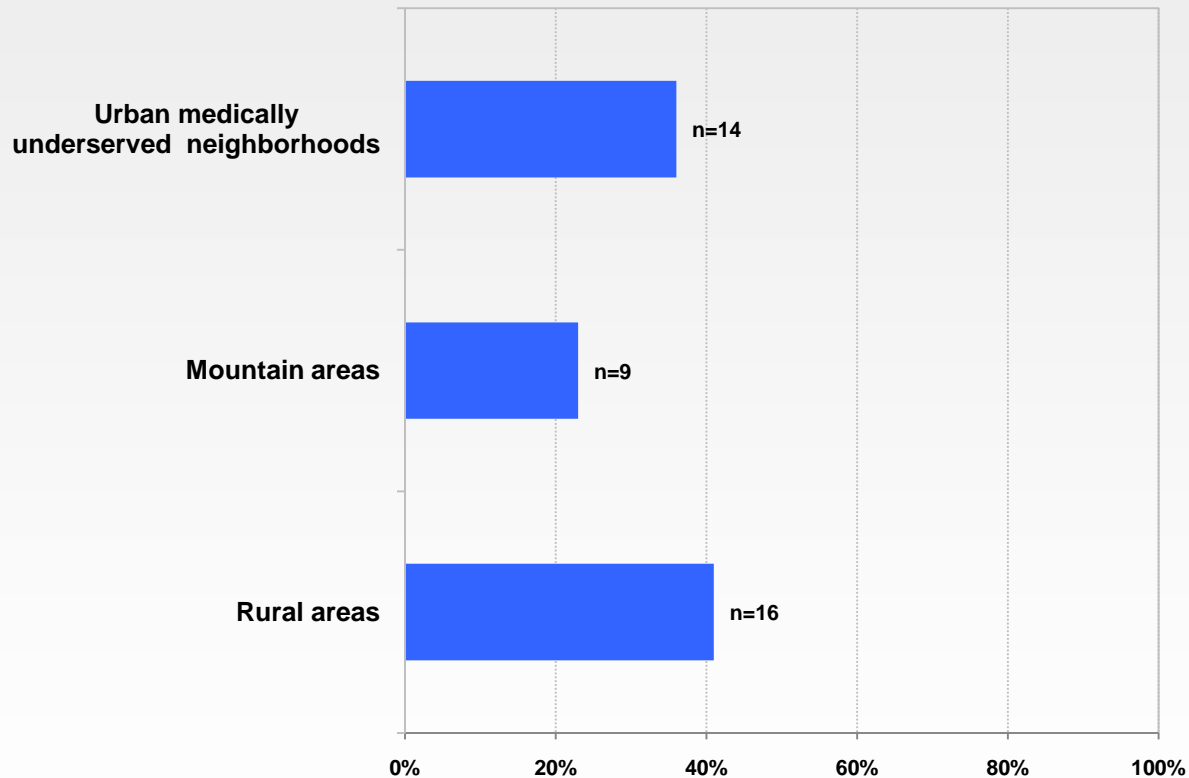
Choice of place of practice in medically underserved areas

By faculty



Choice of place of practice in medically underserved areas

All 4 faculties (N=39/322)*

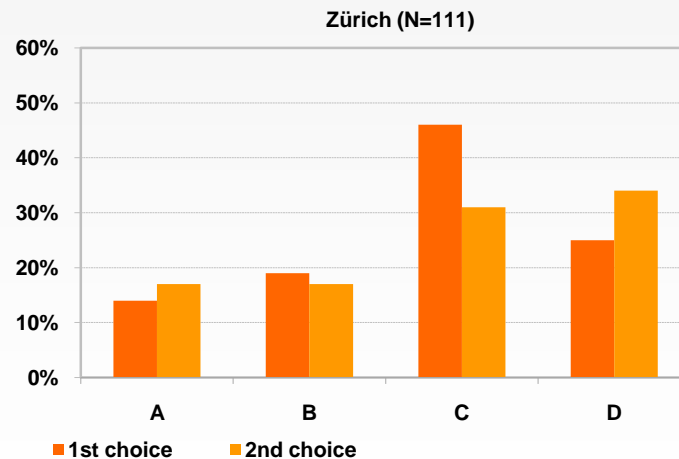
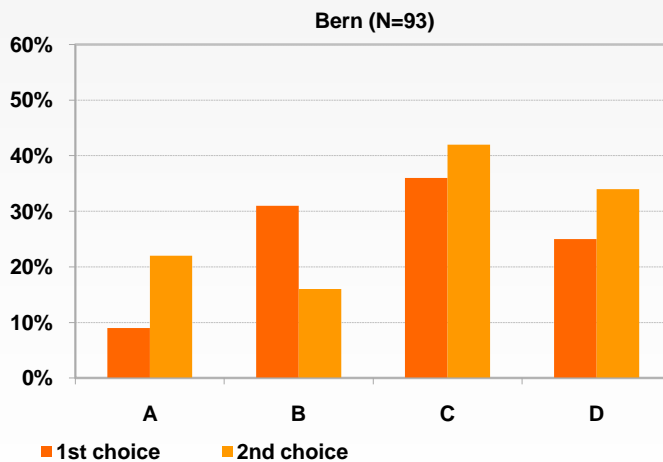
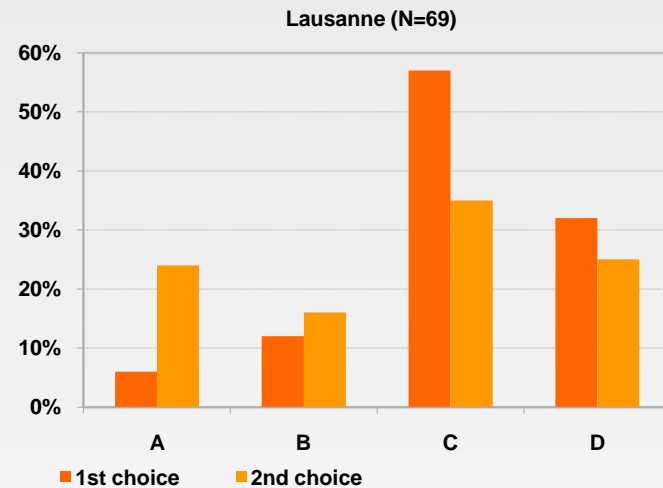
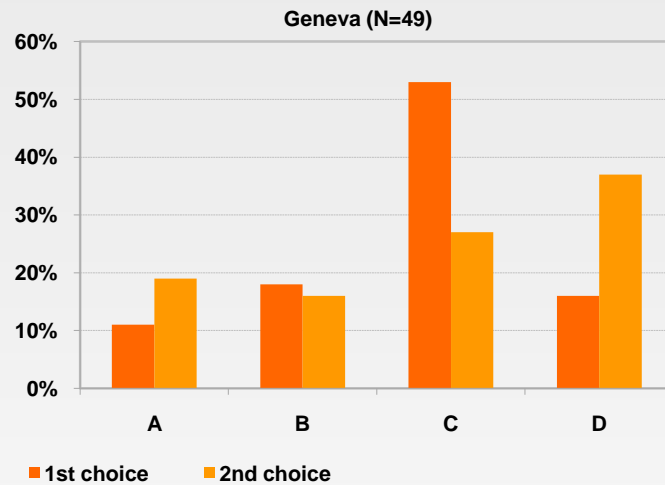


* Percentages based on the number of students who indicated having intention to practice in medically underserved areas

Career plan: Type of specialization

A	Performing specialized diagnostic or technical procedures, basic or applied laboratory research; Primarily hospital- based. (ex : radiology, pathology ...)
B	Performing highly skilled and specialized therapeutic techniques or procedures. Primarily hospital-based with some office activity. (ex : orthopedic surgery, ophthalmology ...)
C	Providing episodic or long-term care of a limited number of medical problems that may include instrumentation and technical interventions. Mix of ambulatory and hospital-based practice. (ex : internal medicine, cardiology, psychiatry, dermatology, obstetrics/ gynecology ...)
D	Providing first encounter health or illness appraisal, preventive education and interventions, episodic and long-term comprehensive care of a wide variety of medical problems. Primarily office-based. (ex : family medicine, general medicine ...)

1st and 2nd choices of type of specialization By faculty



A ex : radiology, pathology ...

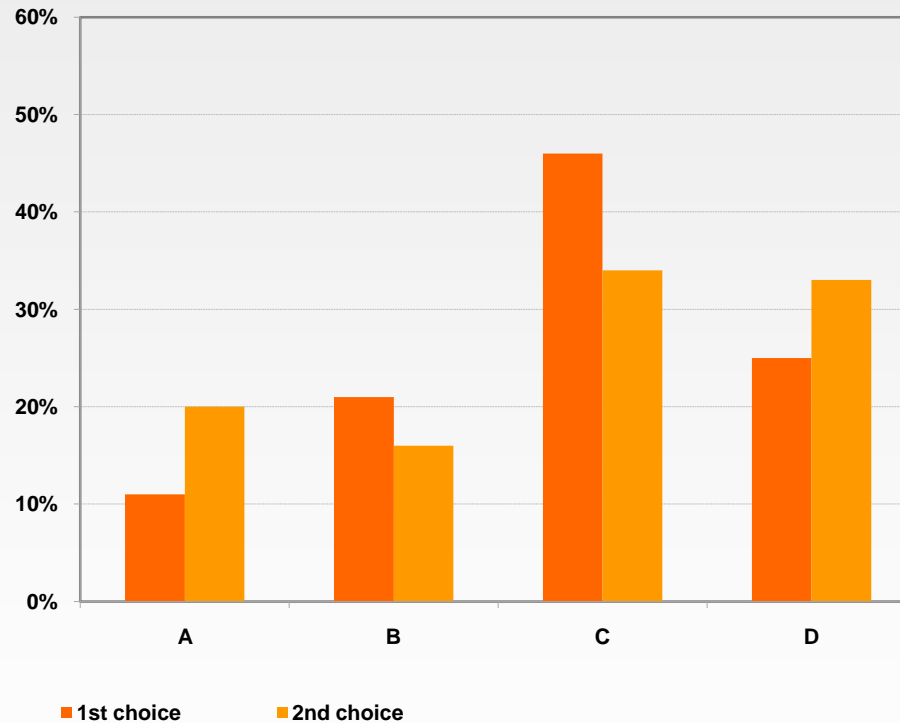
B ex : orthopedic surgery, ophtalmology...

C ex : internal medicine, cardiology, psychiatry, dermatology, ob/gyn ...

D ex : family medicine, general medicine ...

1st and 2nd choices of type of specialization

All 4 faculties (N=322)

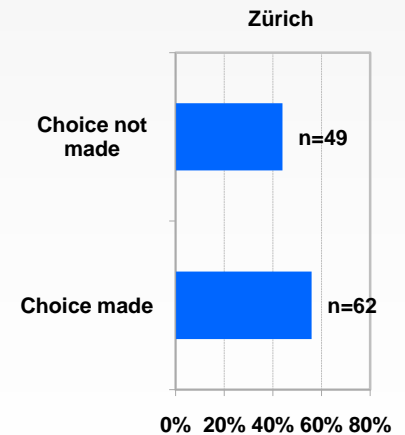
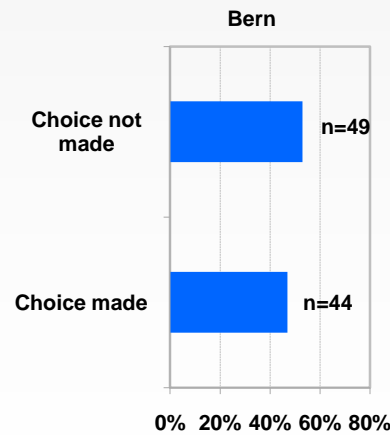
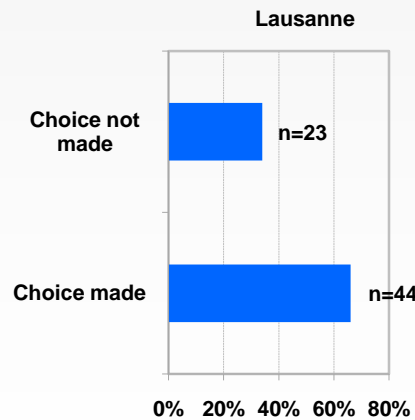
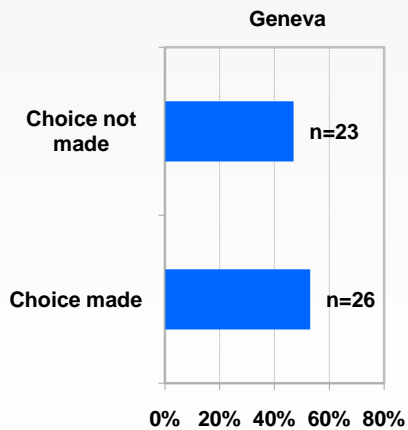
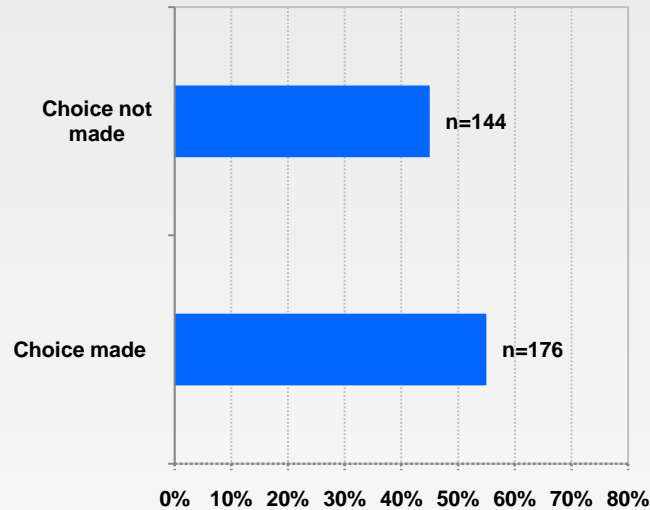


- A ex : radiology, pathology ...
- B ex : orthopedic surgery, ophtalmology...
- C ex : internal medicine,cardiology, psychiatry, dermatology, ob/gyn...
- D ex : family medicine, general medicine ...

Specialty choice status

All 4 faculties and by faculty*

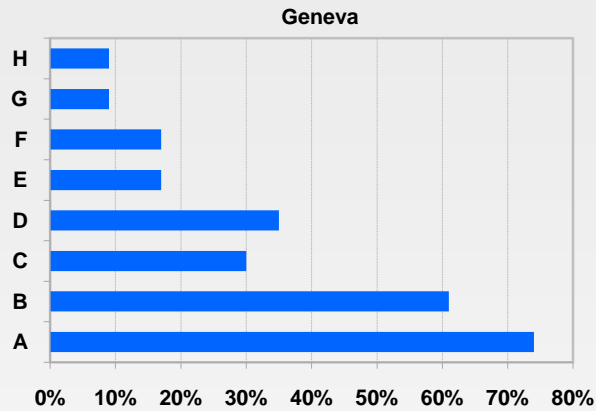
All 4 faculties



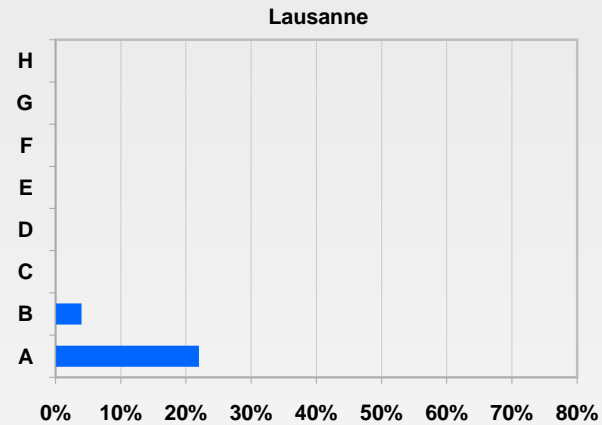
* This item was asked at the end of the 5th year to the students in Geneva, and at the end of the 6th year to the students in Lausanne, Bern, and Zurich.

Reasons for not making a specialty choice By faculty

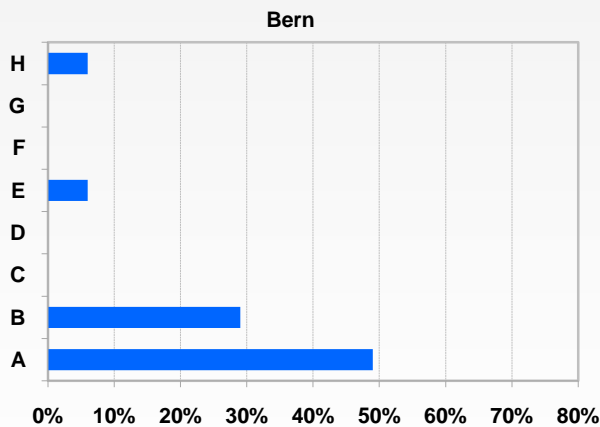
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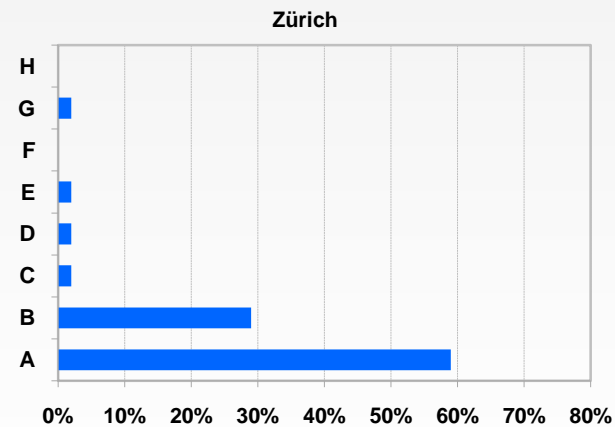
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N=49*



N=49*



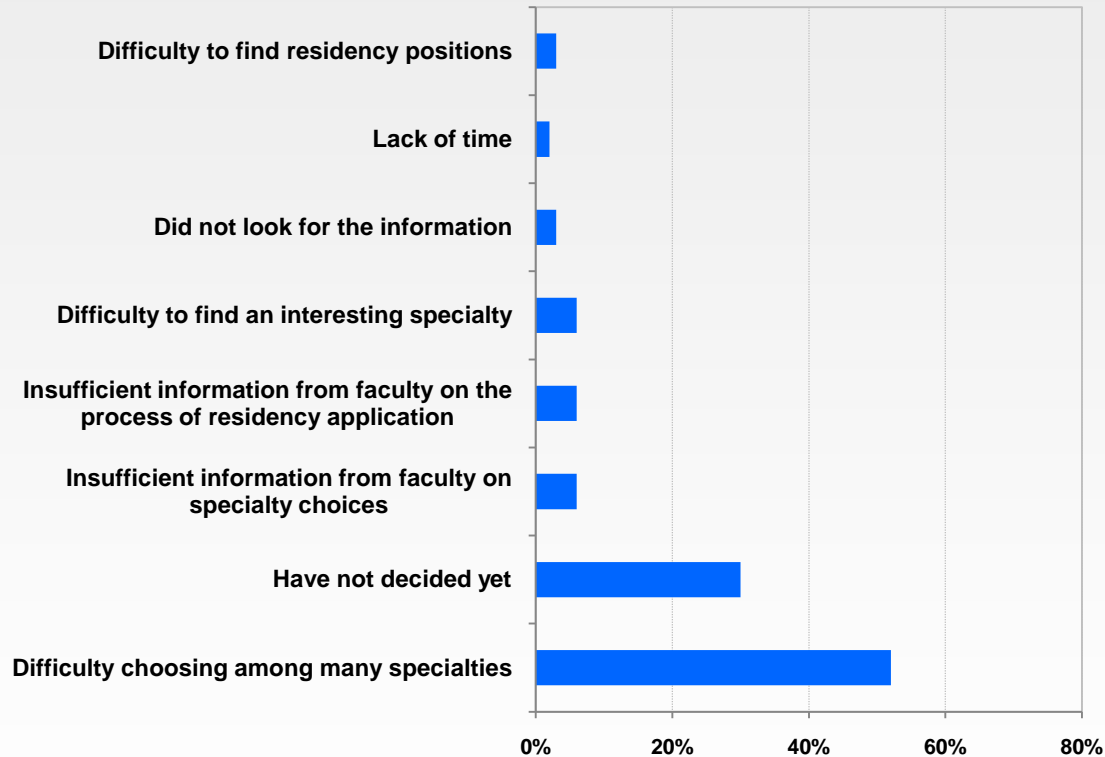
- A Difficulty choosing among many specialties
- B Have not decided yet
- C Insufficient information from faculty on specialty choices
- D Insufficient information from faculty on the process of residency application

- E Difficulty to find an interesting specialty
- F Did not look for the information
- G Lack of time
- H Difficulty to find residency positions

* Percentages based on number of students who indicated having not made a specialty choice

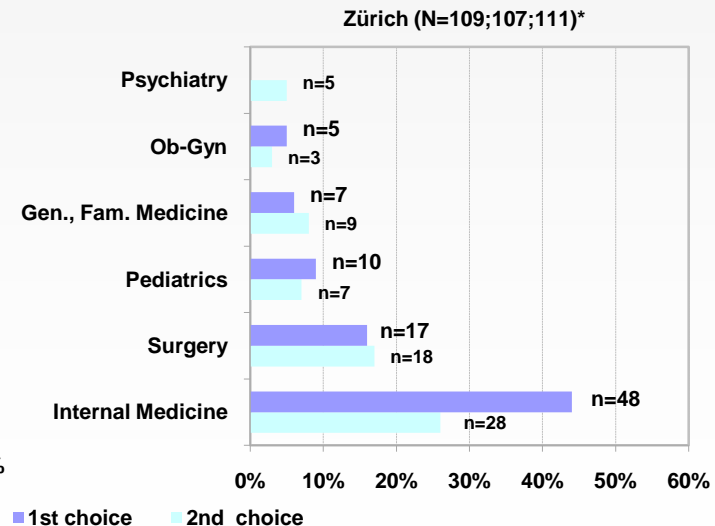
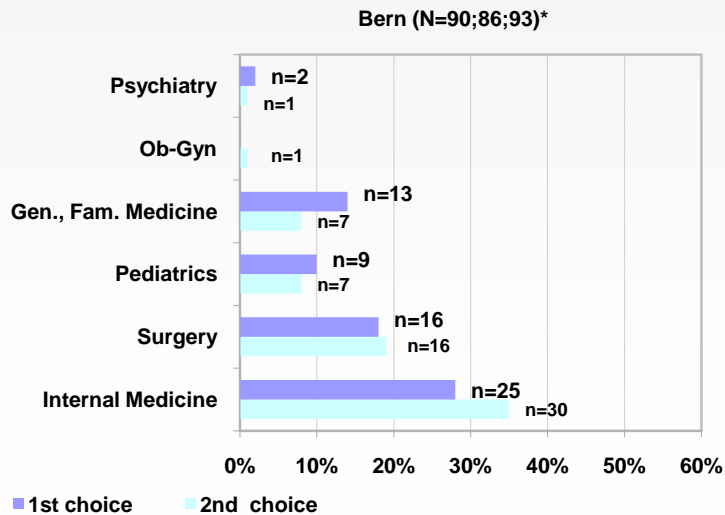
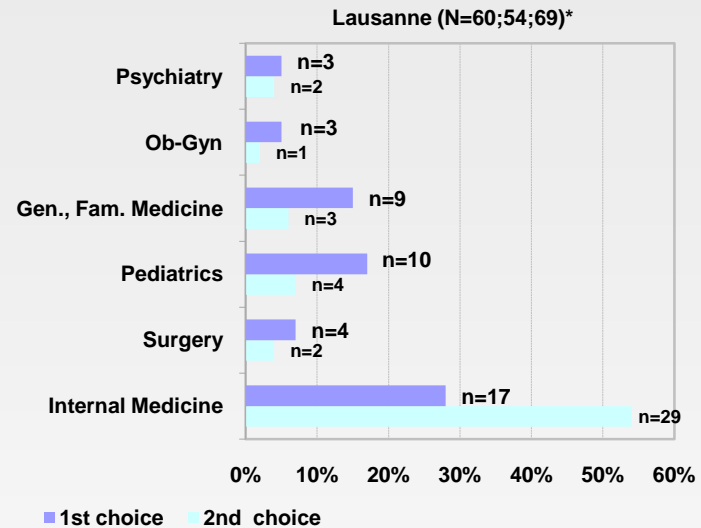
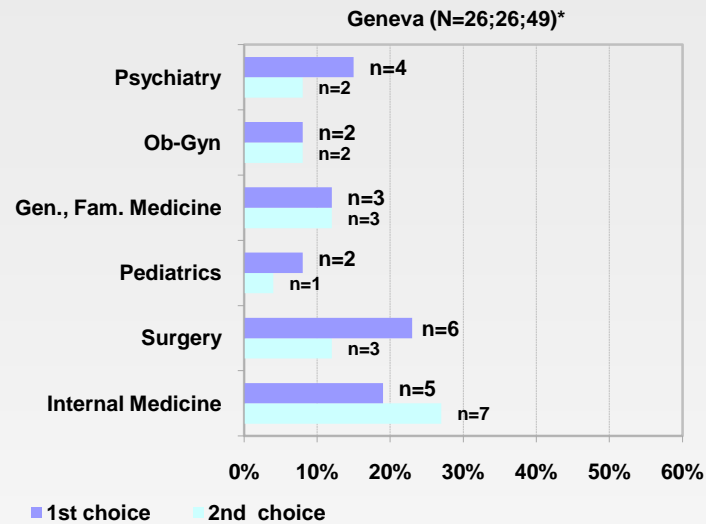
Reasons for not making a specialty choice

All 4 faculties (N=144/322)*

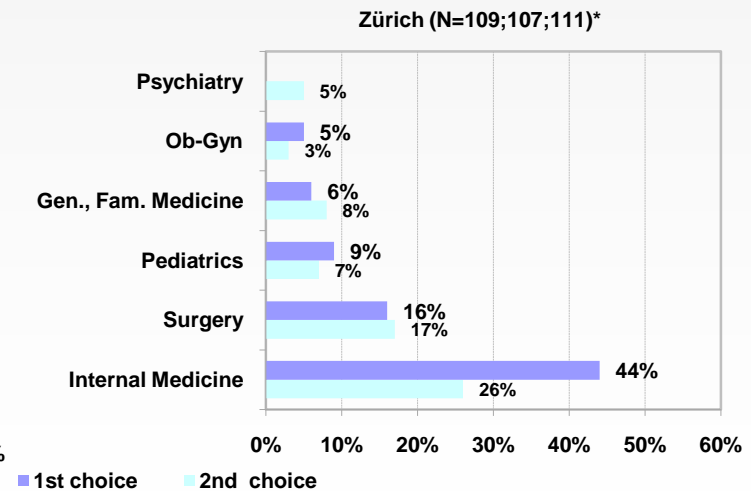
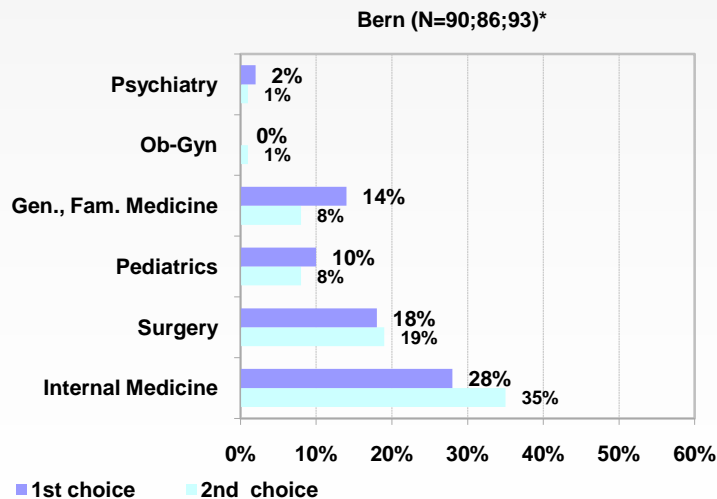
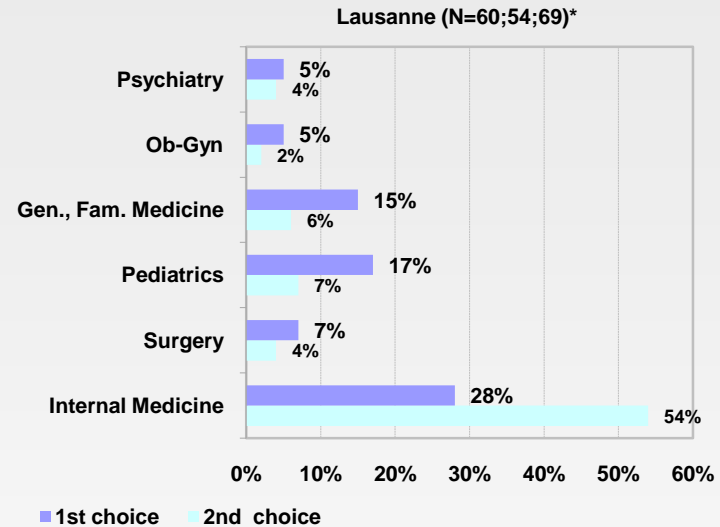
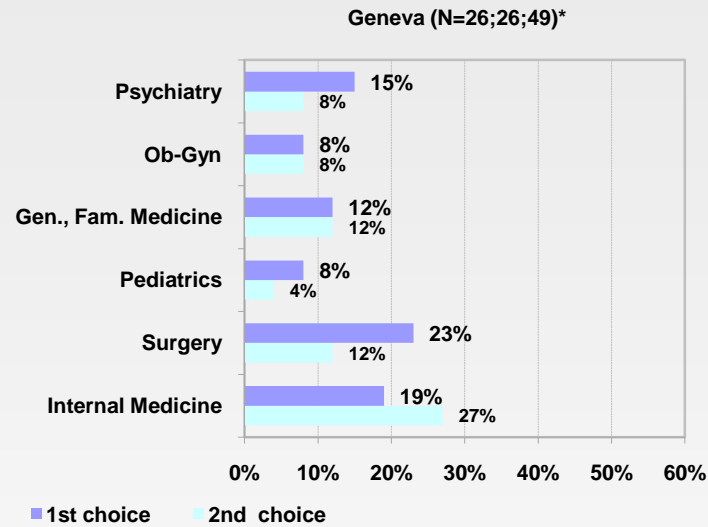


* Percentages based on number of students who indicated having not made a specialty choice

Specialty 1st and 2nd choices By faculty (N)

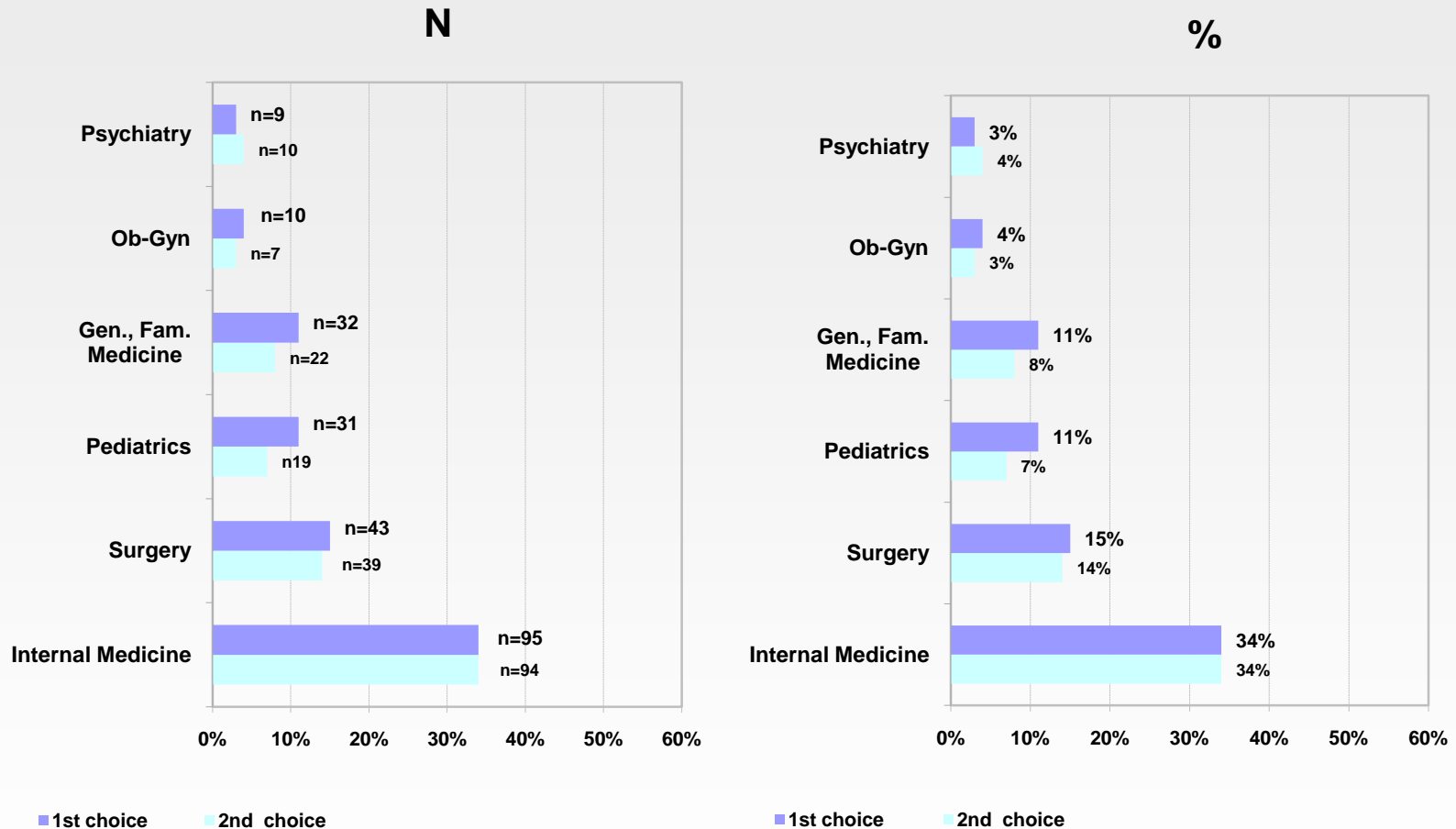


Specialty 1st and 2nd choices By faculty (%)



Specialty 1st and 2nd choices

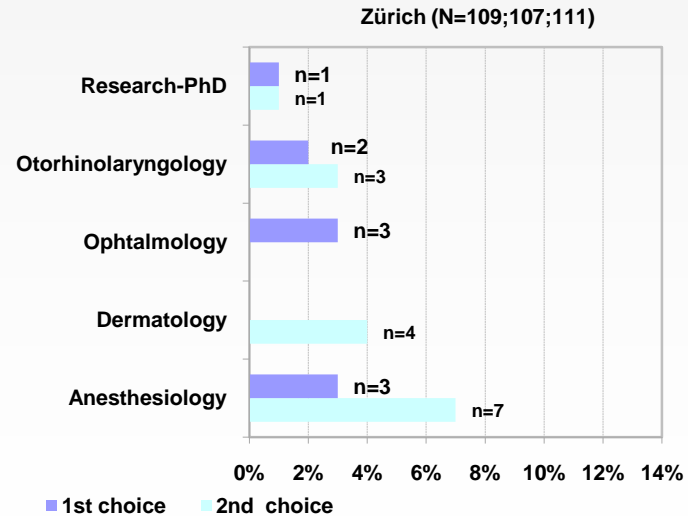
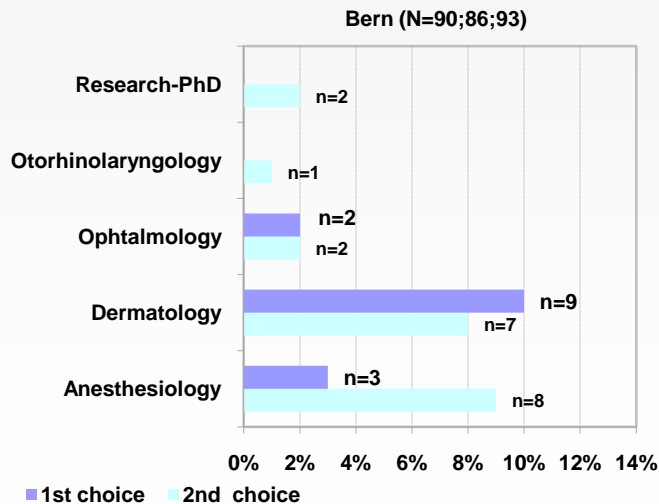
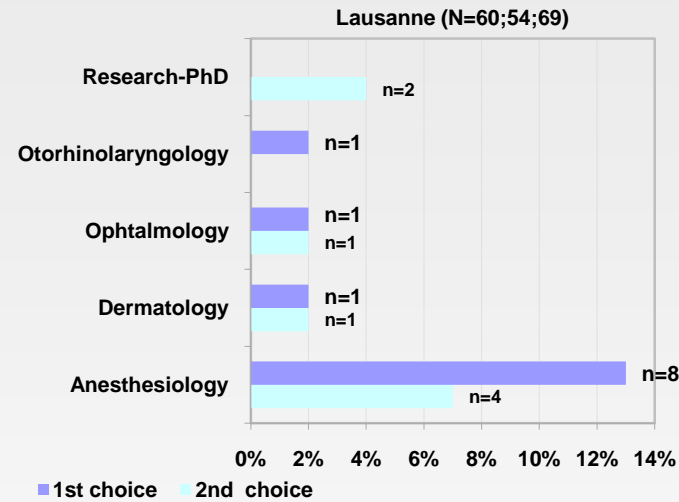
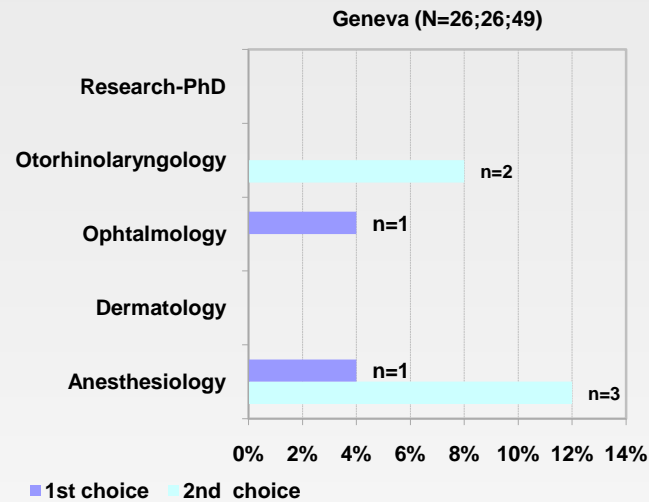
All 4 faculties (N=285; 273; 322)*



* N= No of students who make the 1st choice; No of students who make the 2nd choice; No of students who filled out the questionnaire

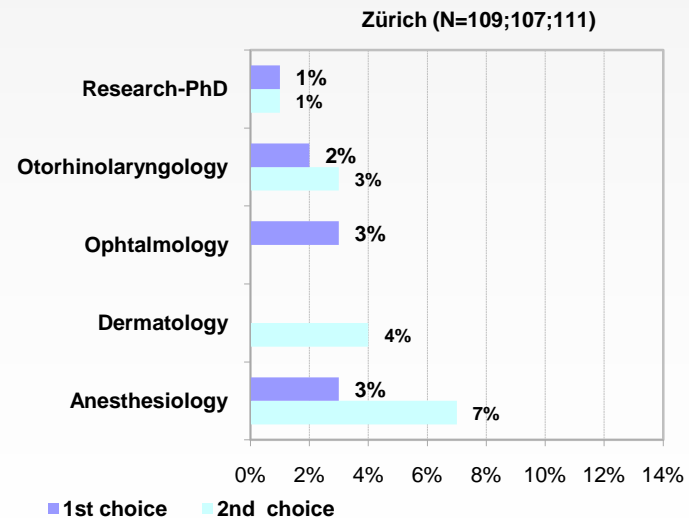
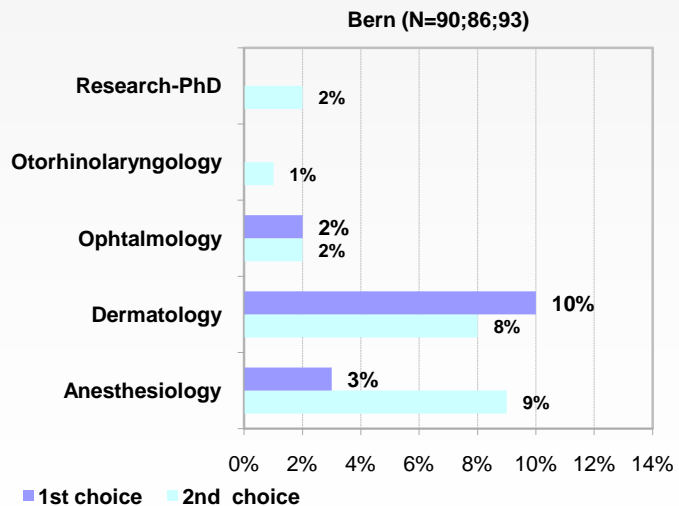
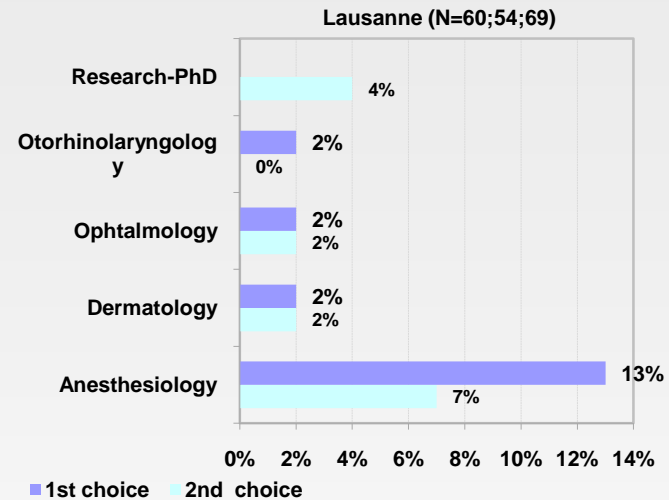
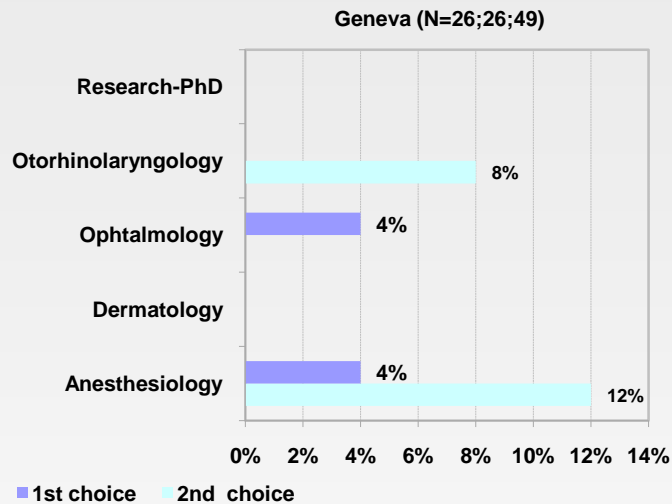
Note: Several students who indicated having not made a specialty choice did, however, select a specialty

Subspecialty 1st and 2nd choices By faculty* (N)



* Not listed are subspecialties not selected by the students or having an N ≤ 1 as 1st or 2nd choice.

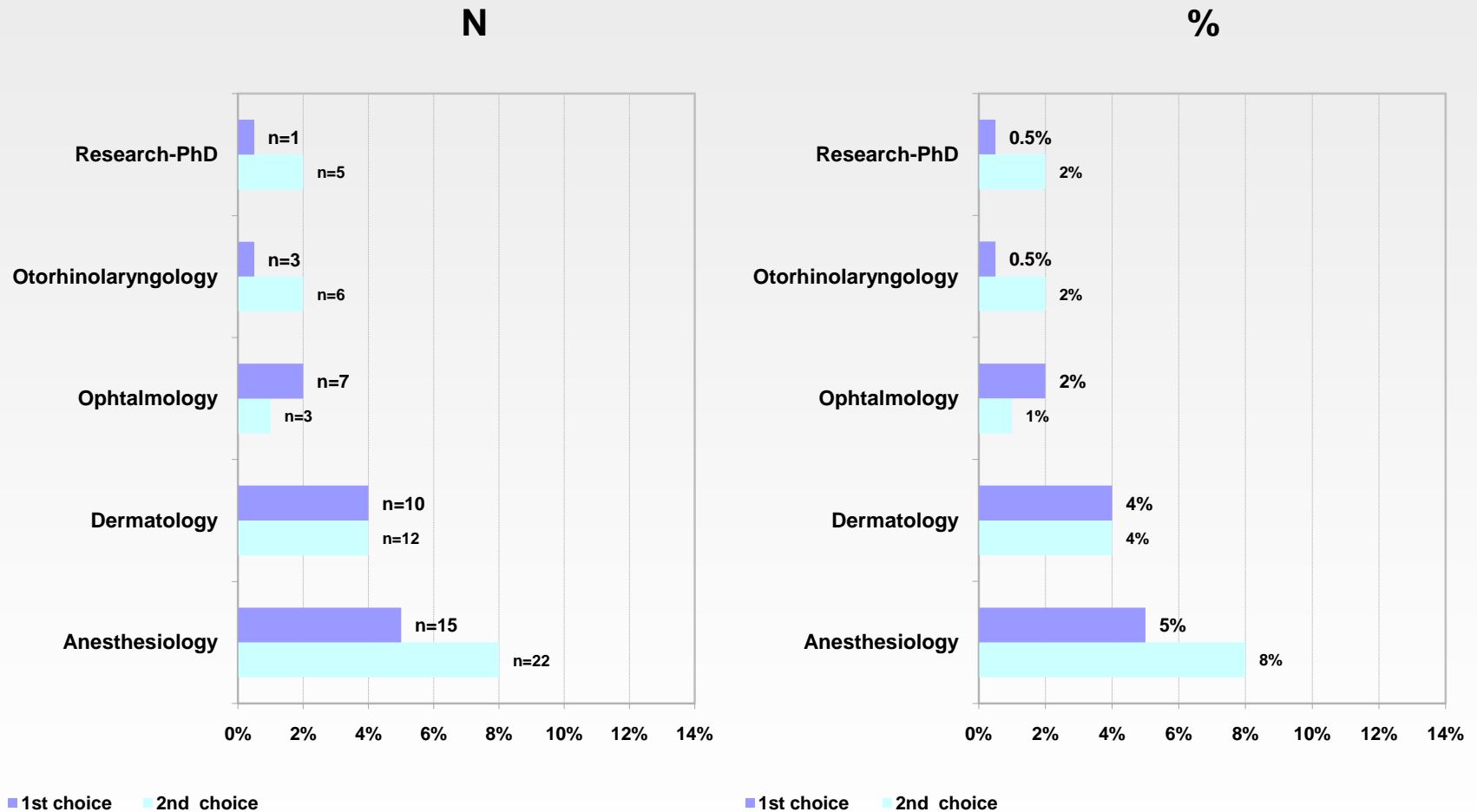
Subspecialty 1st and 2nd choices By faculty* (%)



* Not listed are subspecialties not selected by the students or having an N ≤ 1 as 1st or 2nd choice.

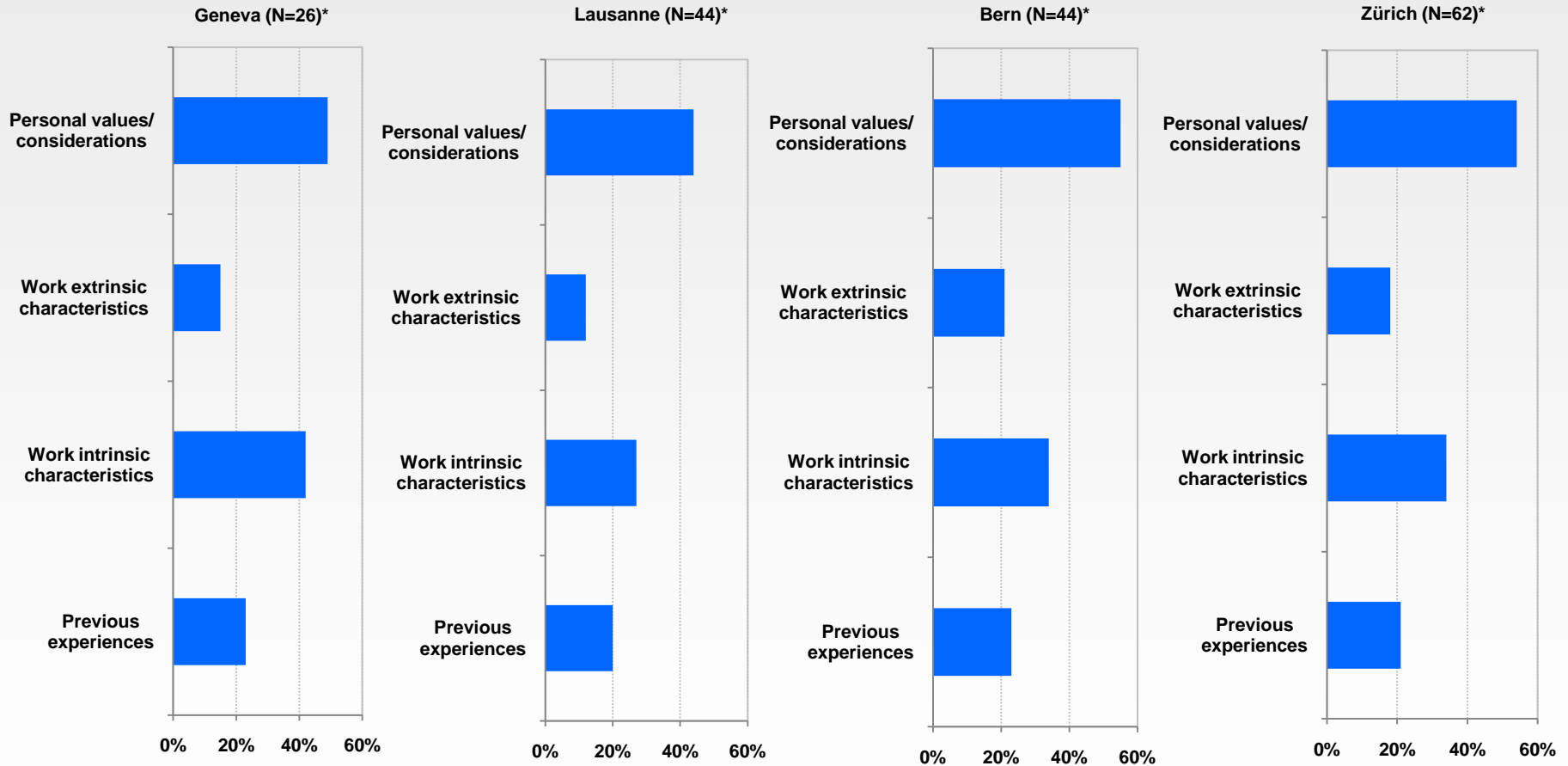
Subspecialty 1st and 2nd choices

All 4 faculties* (N=285; 273; 322)



* Not listed are subspecialties not selected by the students or having an N ≤ 1 as 1st or 2nd choice.

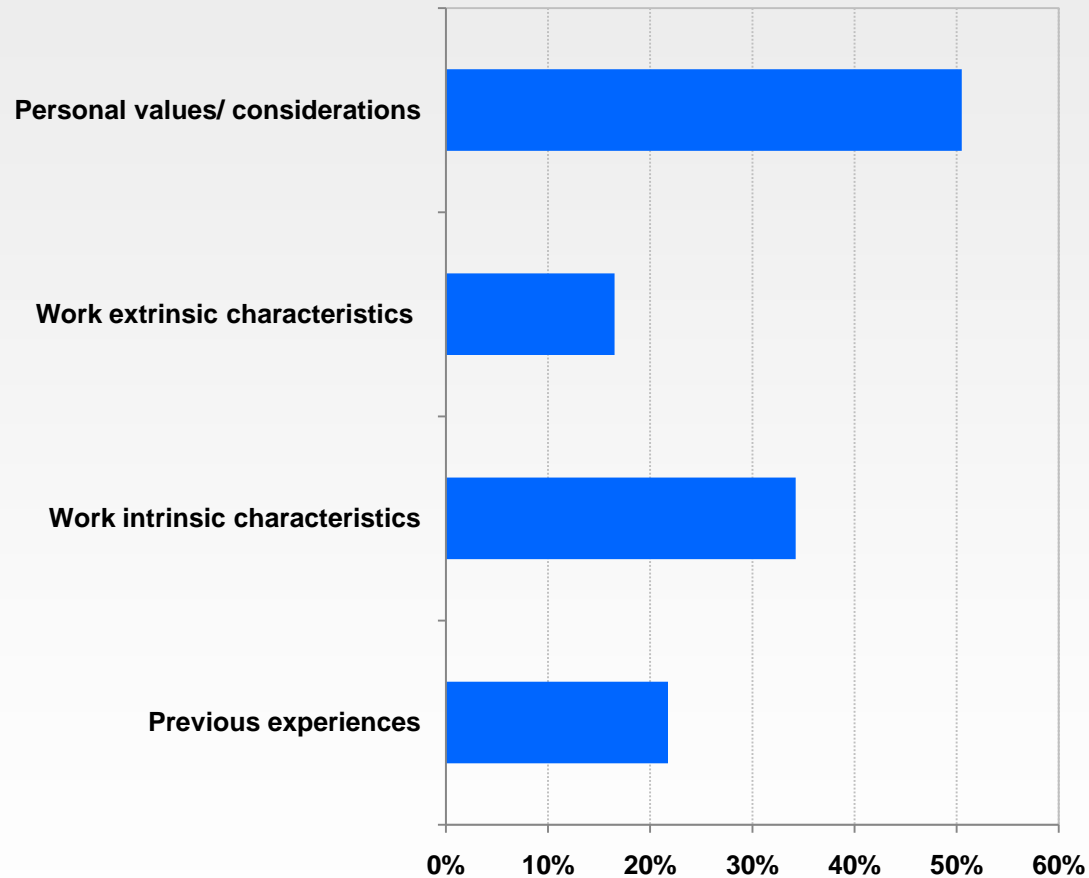
Reasons for specialty choice By faculty



* Percentages based on the number of students who indicated having made a specialty choice

Reasons for specialty choice

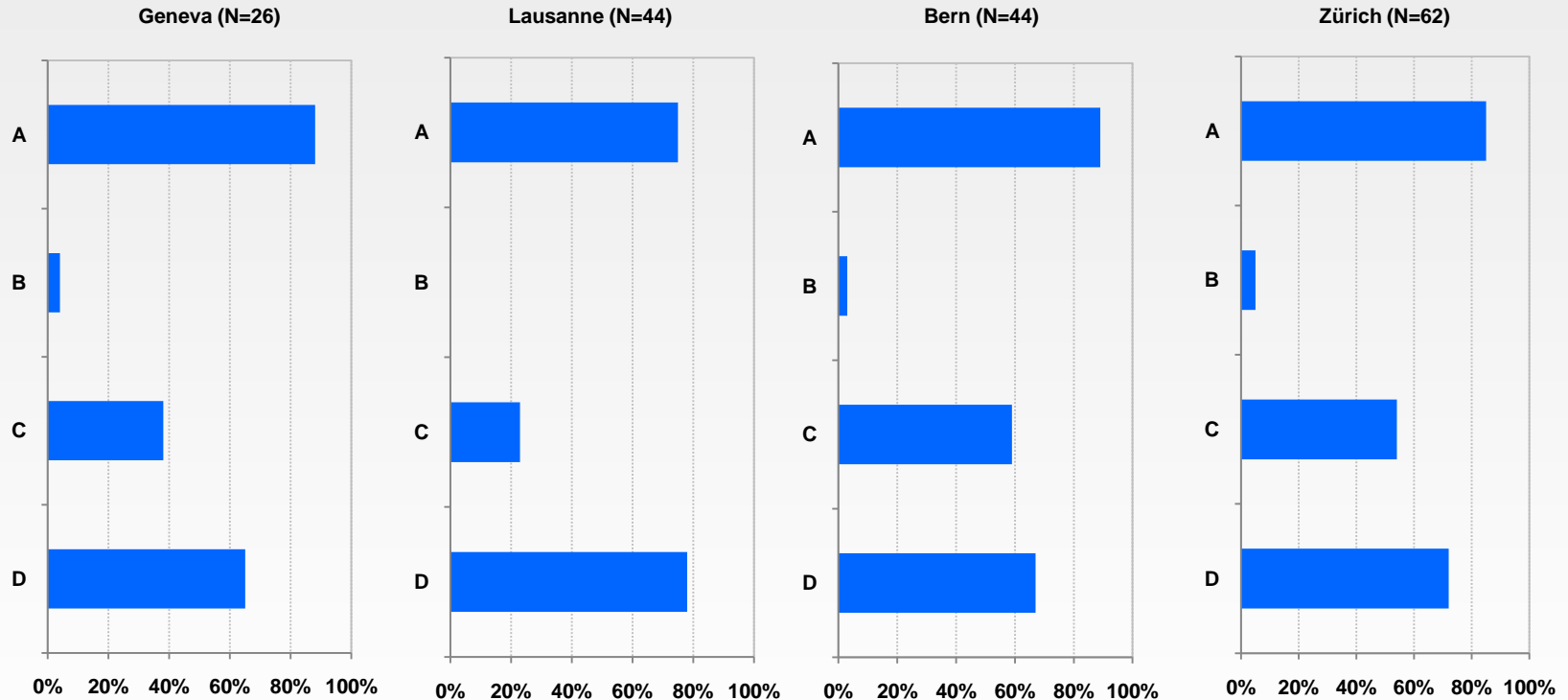
All 4 faculties (N=176/322)*



* Percentages based on the number of students who indicated having made a specialty choice

Reasons for specialty choice: Personal values/considerations

By faculty



A Passionate for medicine

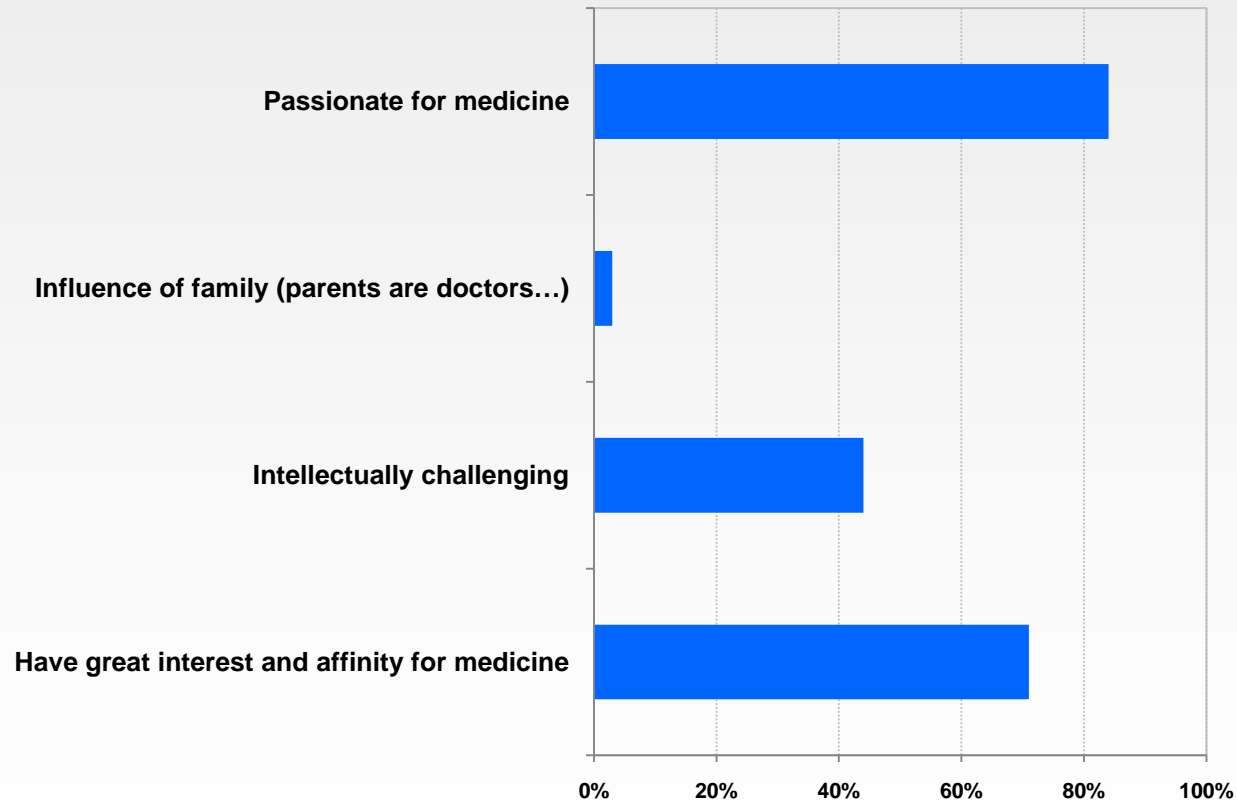
B Influence of family (parents are doctors...)

C Intellectually challenging

D Have great interest and affinity for medicine

Reasons for specialty choice: Personal values/considerations

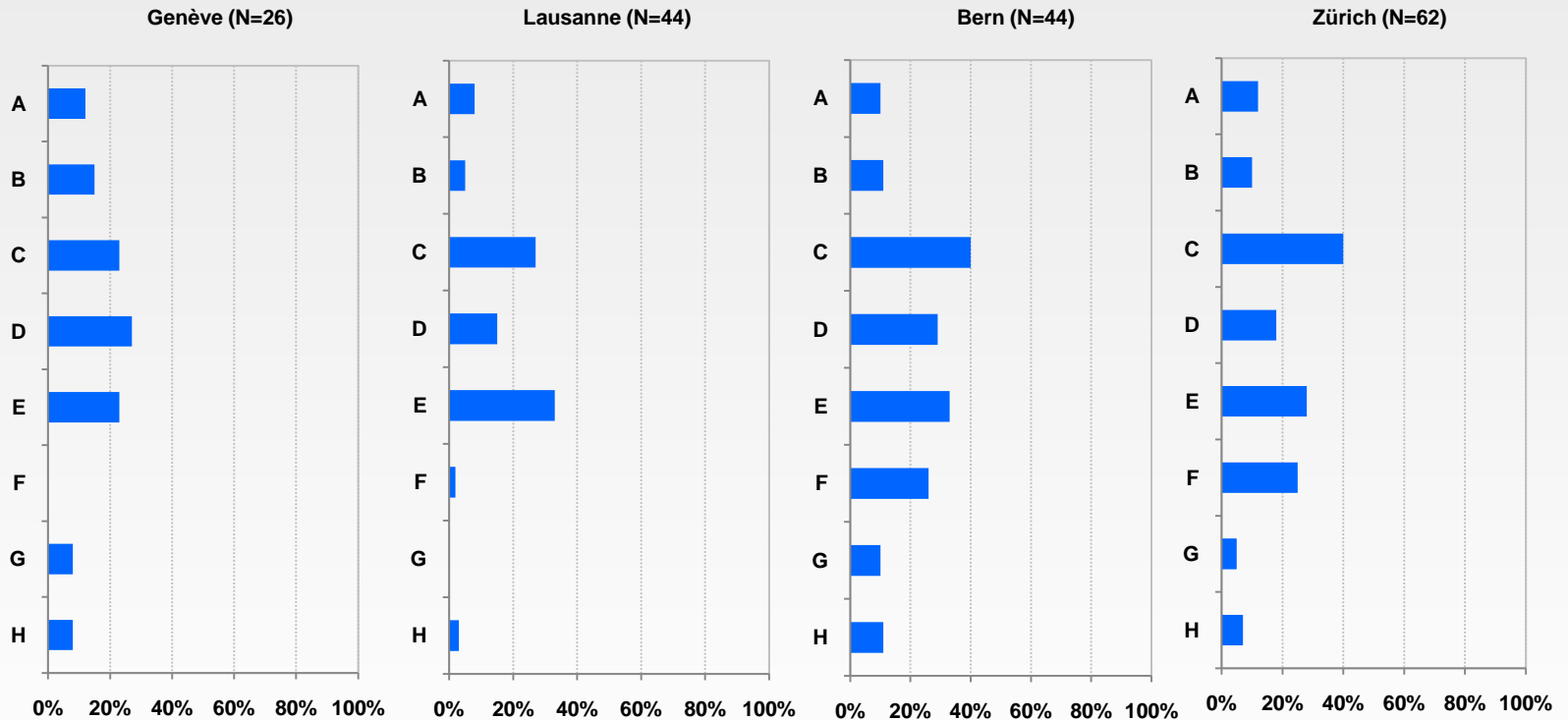
All 4 faculties (N=176/322)*



* Percentages based on the number of students who indicated having made a specialty choice

Reasons for specialty choice: Work extrinsic characteristics

By faculty

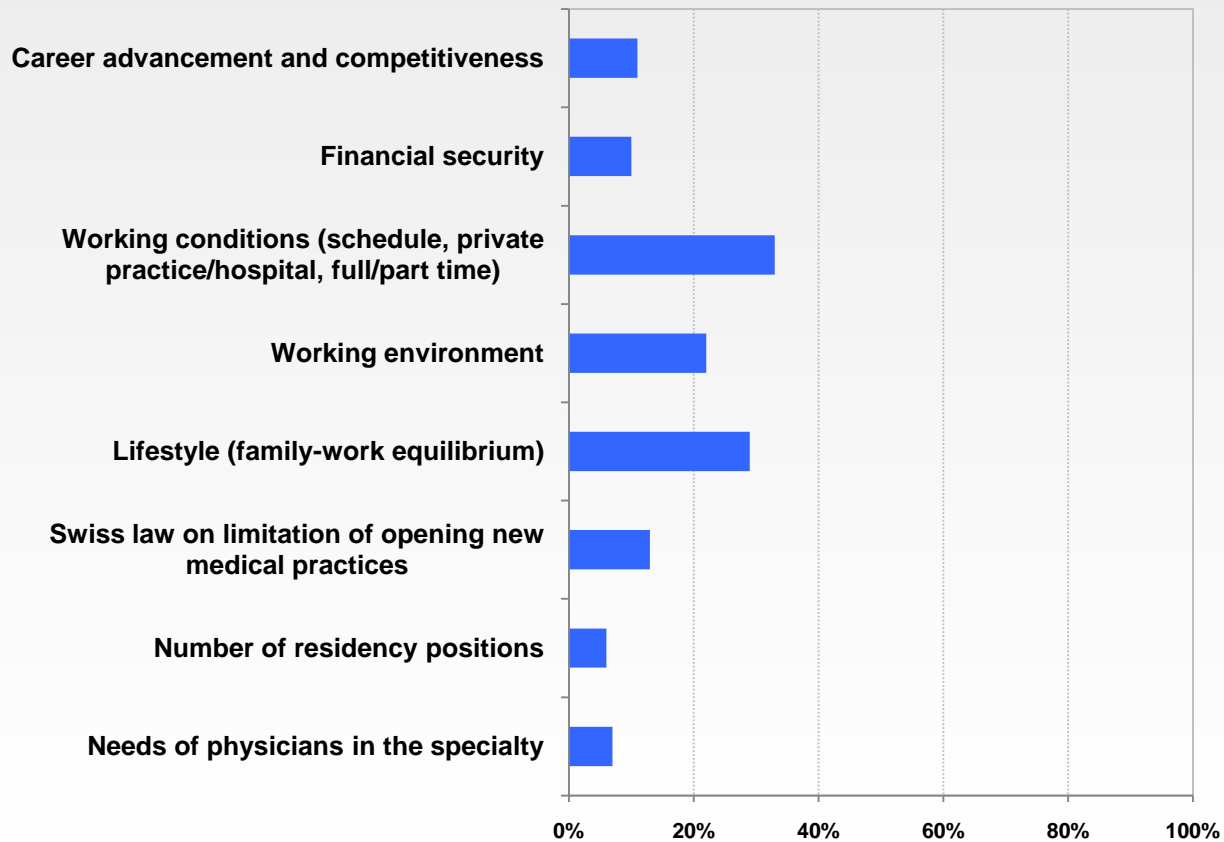


- A Career advancement and competitiveness
- B Financial security
- C Working conditions (schedule, private practice/hospital, full/part time)
- D Working environment

- E Lifestyle (family-work equilibrium)
- F Swiss law on limitation of opening new medical practices
- G Number of residency positions
- H Needs of physicians in the specialty

Reasons for specialty choice: Work extrinsic characteristics

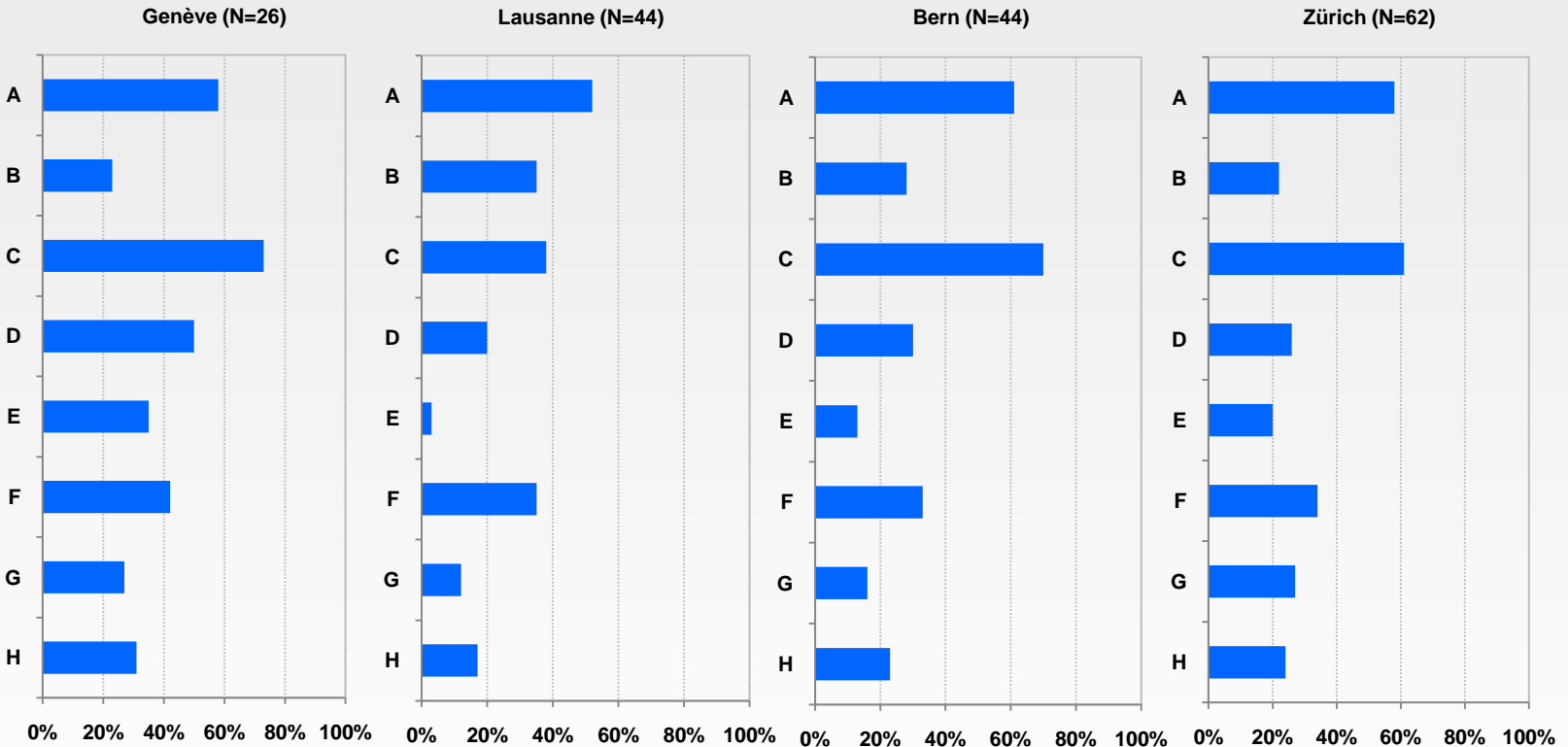
All 4 faculties (N=176/322)*



* Percentages based on the number of students who indicated having made a specialty choice

Reasons for specialty choice: Work intrinsic characteristics

By faculty

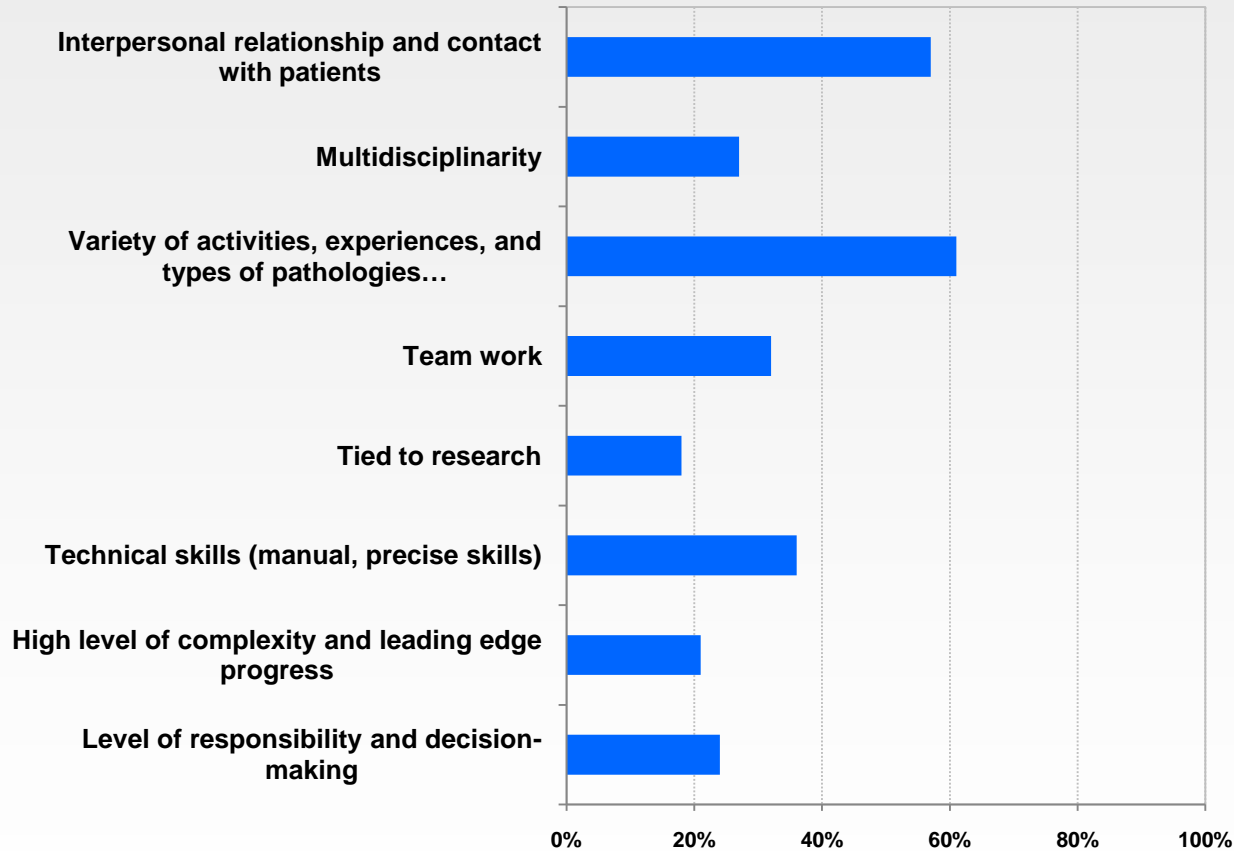


- A Interpersonal relationship and contact with patients
- B Multidisciplinarity
- C Variety of activities, experiences, and types of pathologies...
- D Team work

- E Tied to research
- F Technical skills (manual, precise skills)
- G High level of complexity and leading edge progress
- H Level of responsibility and decision-making

Reasons for specialty choice: Work intrinsic characteristics

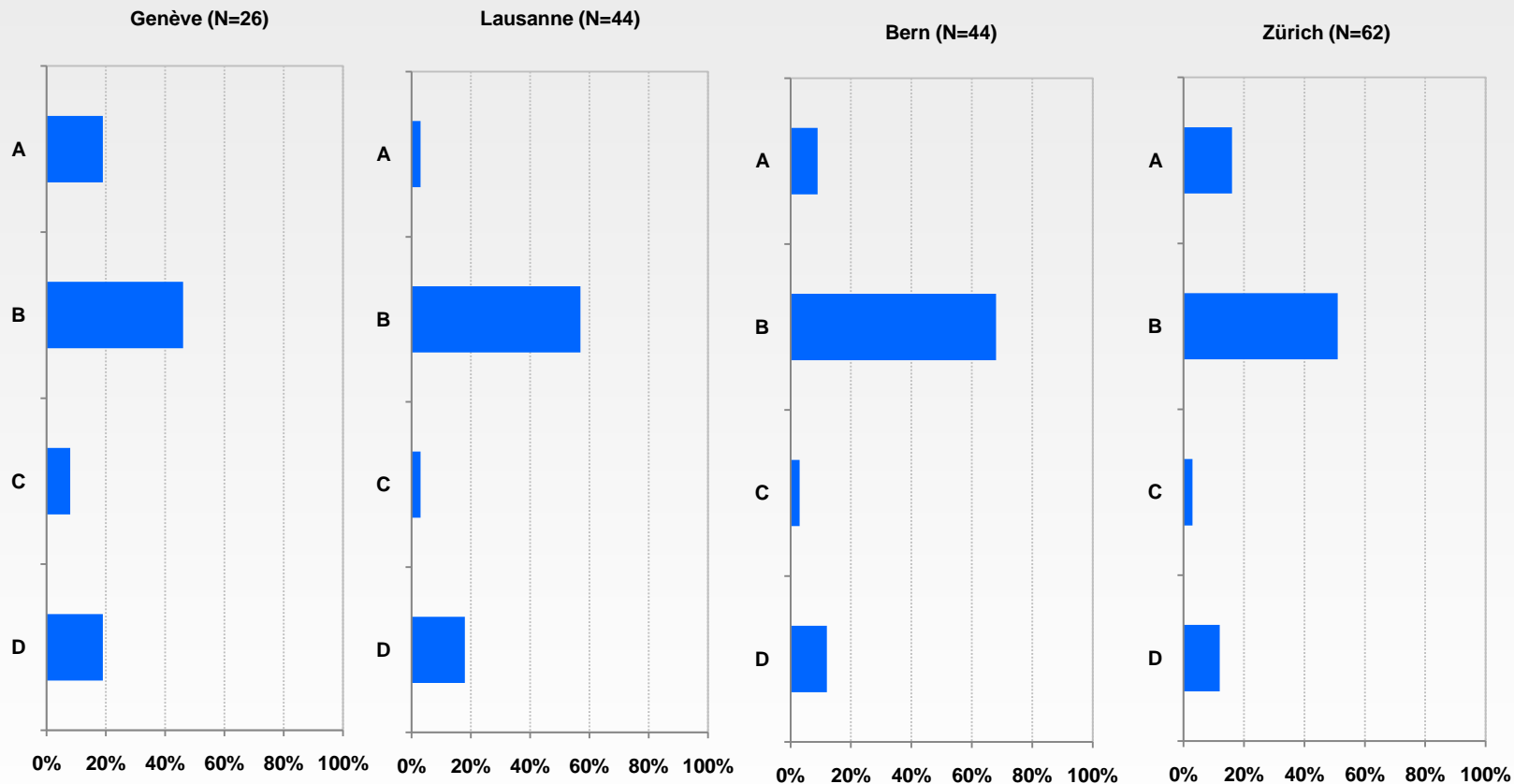
All 4 faculties (N=176/322)*



* Percentages based on the number of students who indicated having made a specialty choice

Reasons for specialty choice: Previous experiences

By faculty



A Personal experiences (accident, disease...)

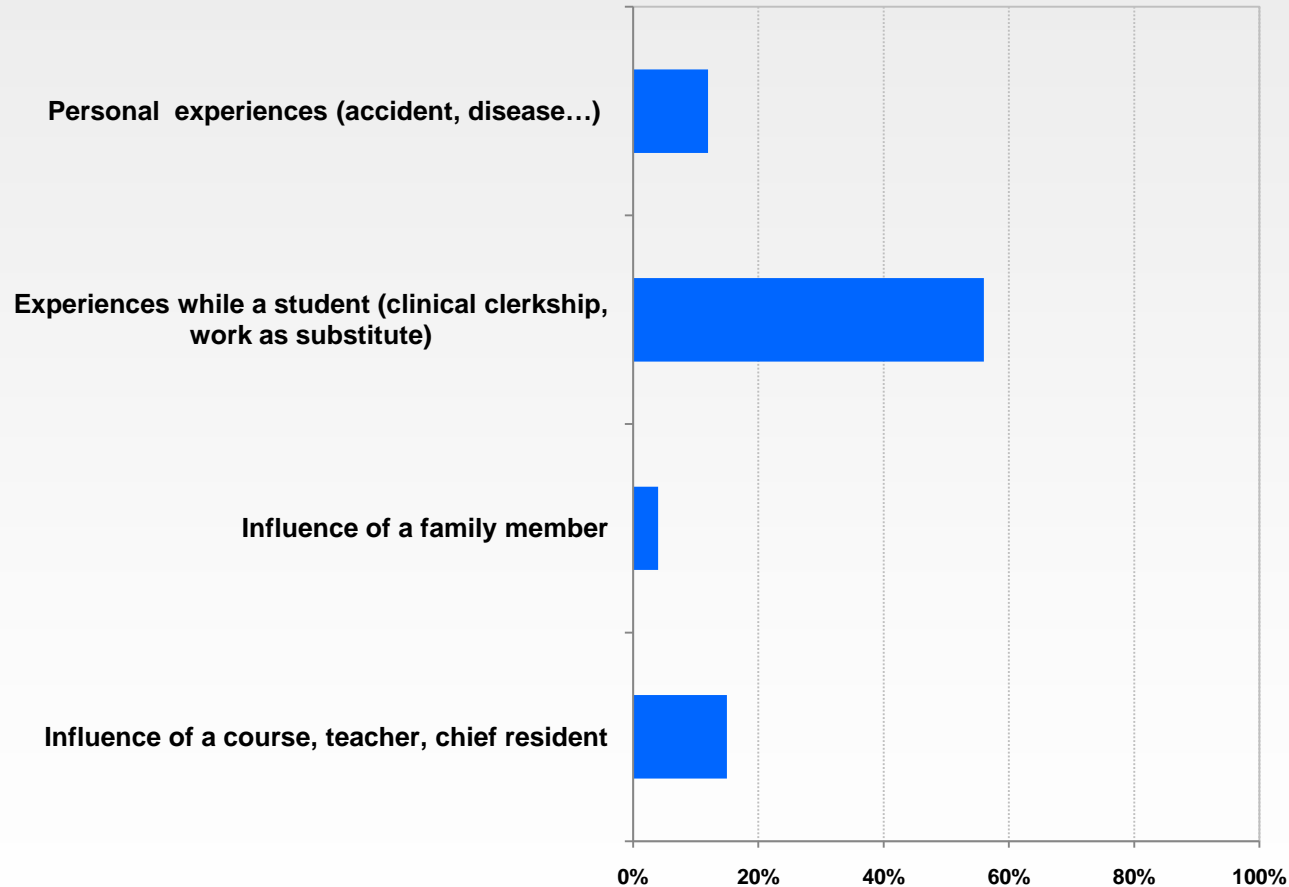
B Experiences while a student (clinical clerkship, work as substitute)

C Influence of a family member

D Influence of a course, teacher, chief resident

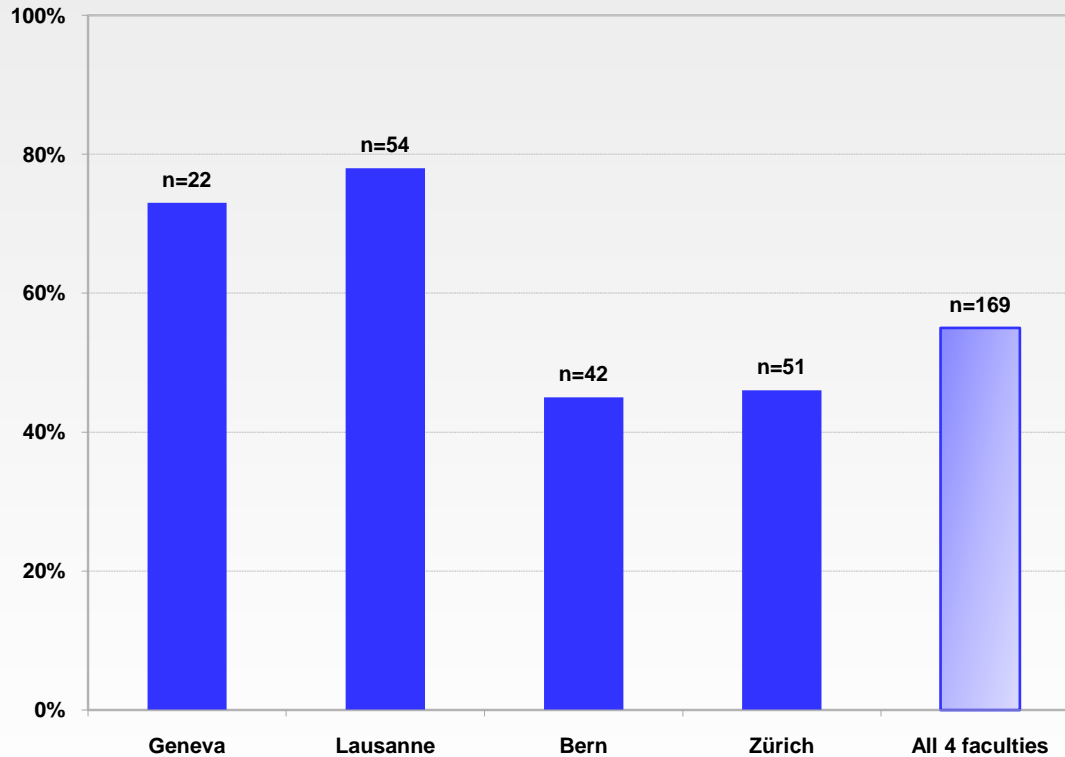
Reasons for specialty choice: Previous experiences

All 4 faculties (N=176/322)*



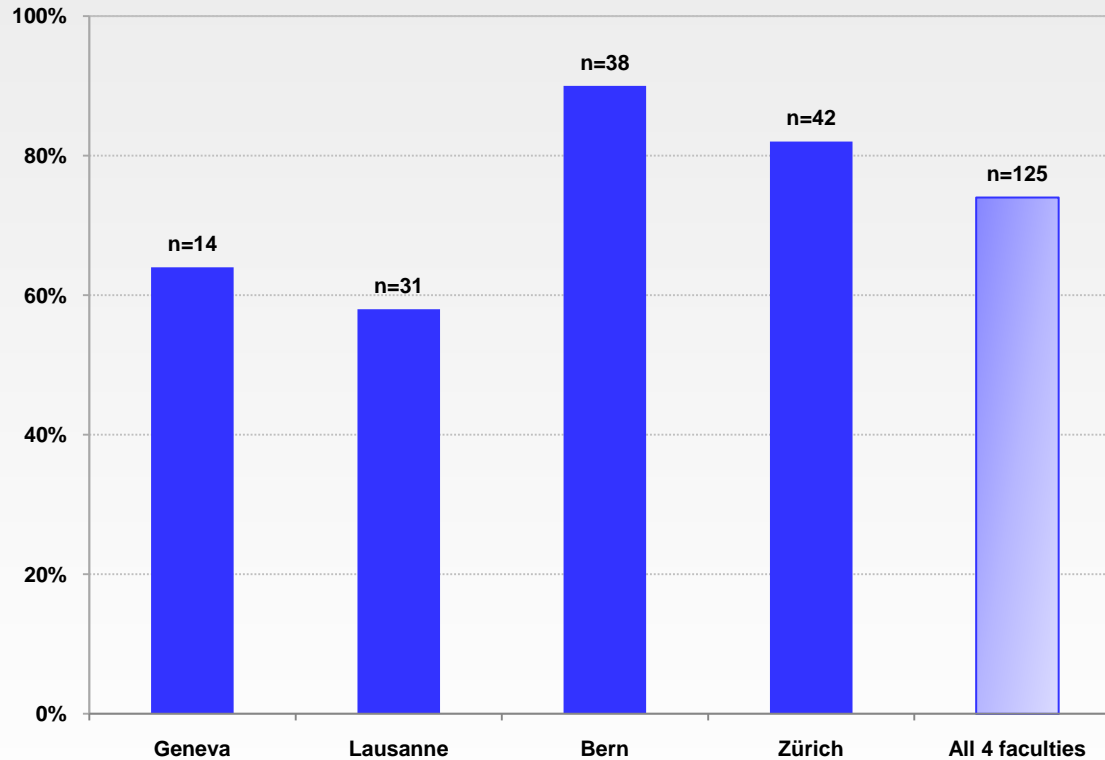
* Percentages based on the number of students who indicated having made a specialty choice

N and % of students who had been accepted to a first- year residency training program* (N=169/305)



* This item was asked to the students in Geneva (n=32) at the end of their 6th year in a separate survey questionnaire

N and % of students with first year residency training in their selected specialty* (N=125/169)**



* This item was asked to the students in Geneva (n=32) at the end of their 6th year in a separate survey questionnaire

** Percentages based on the number of students accepted to a first-year residency training program

First year residency training: Choice of location (canton and linguistic region) By faculty

		Cantons**					Linguistic region**		
		Geneva	Vaud	Bern	Zürich	Other***	Switzerland French-speaking	Switzerland German-speaking	Switzerland Italian-speaking
FACULTY	Geneva (22/30)*	50% (11)	27% (6)	0% (0)	0% (0)	23% (5)	95% (21)	0% (0)	5% (1)
	Lausanne (54/44)*	0% (0)	37% (20)	15% (8)	0% (0)	48% (26)	94% (50)	3% (2)	3% (2)
	Bern (42/44)*	0% (0)	0% (0)	60% (25)	6% (3)	33% (14)	5% (2)	95% (40)	0% (0)
	Zürich (51/62)*	0% (0)	4% (2)	9% (4)	44% (23)	43% (22)	4% (2)	92% (47)	4% (2)

* Number of students who found a residency position/ Number of students who made their specialty choice

** Percentages based on the number of students who indicated the location of their residency.

*** Other Swiss cantons

Specialty and residency training choices

All 4 faculties

Residency found		Residency not found		
150 (47%)		170 (53%)		
Residency in selected specialty	Residency not in selected specialty			
51 (34%)	99 (66%)			
	Have made specialty choice	Have not made specialty choice	Have made specialty choice	Have not made specialty choice
	45 (30%)	54 (36%)	80 (47%)	90 (53%)
N= 320 (2 with no completed answers)				

Specialty and residency training choices

All 4 faculties

Specialty selected		Specialty not selected	
176 (55%)		144 (45%)	
Residency found	Residency not found	Residency found	Residency not found
96 (55%)	80 (45%)	54 (38%)	90 (62%)
Residency in selected specilaty	Residency not in selected specilaty		
51 (29%)	45 (26%)		
N= 320 (2 with no completed answers)			

Main conclusions: Career plan (1)

■ **Medicine as a career:**

- Most Swiss students chose to study medicine between the age of 16 and 21
- About half to two thirds chose medicine with little or no hesitation

■ **Choice of type of career plan:**

- 55% chose to do clinical practice
- 18% chose to be in an academic career
- 1% chose to be in a non-academic career
- 22% were undecided

Main conclusions: Type of career plan (2)

- For those who chose an **academic career**, almost all (92%) chose to be involved in the area of clinical science (vs. basic science) related practice, teaching and research.

- For those who chose **clinical practice as a career**:
 - 41% chose to be employed in a hospital
 - 33% chose to practice in a group of 3 or more physicians
 - 20% chose to be a partner with an other physician
 - 5% chose to practice in solo
 - 1% chose to practice in a “managed care” group

Main conclusions: Type of career plan (3)

Students' main reasons for choosing a career plan

- **Personal values/ considerations (43%)**
 - Passionate for medicine (74%)

- **Work intrinsic characteristics (37%)**
 - Team work (62%)
 - Variety of activities, experiences, and types of pathologies... (57%)
 - Interpersonal relationship and contact with patients (52%)
 - Level of responsibility and decision-making (36%)
 - High level of complexity and leading edge progress (24%)
 - Multidisciplinarity (24%)
 - Technical skills (manual, precision skills) (21%)

- **Work extrinsic characteristics (26%)**
 - Lifestyle (family-work equilibrium) (61%)
 - Working conditions (schedule, private practice/hospital, full/part time) (58%)
 - Working environment (28%)

- **Previous experiences (14%)**
 - Experiences while a student (clinical clerkship, work as substitute) (32%)

Main conclusions: Type of specialization (4)

C 45%	Providing episodic or long-term care of a limited number of medical problems that may include instrumentation and technical interventions. Mix of ambulatory and hospital-based practice. ex : internal medicine, cardiology, psychiatry, dermatology, obstetrics/gynecology ...
D 25%	Providing first encounter health or illness appraisal, preventive education and interventions, episodic and long-term comprehensive care of a wide variety of medical problems. Primarily office-based. ex : family medicine, general medicine ...
B 20%	Performing highly skilled and specialized therapeutic techniques or procedures. Primarily hospital-based with some office activity. (ex : orthopedic surgery, ophthalmology ...)
A 10%	Performing specialized diagnostic or technical procedures, basic or applied laboratory research; Primarily hospital- based. (ex : radiology, pathology ...)

Main conclusions: Specialty choice (5)

- For Bern, Geneva and Zurich, about **half** of the students **chose their medical specialty** in their senior years while the other half did not.
- For Lausanne, about **two thirds** of the students **chose their medical specialty** in their senior years while one third did not.
- Main reasons for not choosing specialty:
 - Difficulty **choosing among many** specialties
 - Having **not made the decision** yet

Main conclusions: Main specialty choice (6)

- 33% Internal Medicine
- 15% Surgery
- 11% Pediatrics
- 11% General/ Community Medicine
- 4% Obstetrics-Gynecology
- 3% Psychiatry

Main conclusions: Specialty choice (7)

Main reasons for specialty choice

- **Personal values/ considerations (51%)**
 - Passionate for medicine (84%)
 - Have great interest and affinity for medicine (71%)

- **Work intrinsic characteristics (34%)**
 - Variety of activities, experiences, and types of pathologies... (61%)
 - Interpersonal relationship and contact with patients (57%)
 - Technical skills (manual, precise skills) (36%)
 - Team work (32%)
 - Multidisciplinary (27%)

- **Previous experiences (22%)**
 - Experiences while a student (clinical clerkship, work as substitute) (56%)

- **Work extrinsic characteristics (17%)**
 - Working conditions (schedule, private practice/hospital, full/part time) (33%)
 - Lifestyle (family-work equilibrium) (29%)
 - Working environment (22%)

Main conclusions:

Specialty and location of residency training (8)

■ Location of residency training:

- Most students tended to choose to do their first years of residency training in a canton of their respective main speaking language
- While about half of the students from Geneva and Bern (50%-60%) chose to stay in the canton of their undergraduate training, the same proportion of students from Lausanne and Zurich (56%-63%) chose their residency in other Swiss cantons other than the one of their undergraduate training

Main conclusions:

Specialty and residency training choices (9)

- About half (47%) of the Swiss senior students had **found a residency program**.
- Of those who **had a residency program**, only one third (34%) had the residency in their selected specialty.
- Of those who **had not find a residency program** (53%), about half had selected a specialty.

Main conclusions:

Specialty and residency training choices (10)

- Of those students who **had selected** their **specialty** (55%):
 - About half (55%) had found a residency program
 - Of those who had found a residency program, about half had a residency program in their selected specialty

- Of those students who **had not selected their specialty** (45%), only one third had found a residency program.

Main conclusions:

Specialty and residency training choices (11)

Overall, it seems that:

- A great majority of the students had not made a firm choice of their specialty at the end of their senior year.
- Not finding a residency training program is independent of whether the students have made a specialty choice or not.
- Only a small portion (34%) of the students started their residency in their selected residency.
- Similarly, 36% started their residency training program without having made their specialty choice.