

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

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## 2012 Survey

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University of Geneva Faculty of Medicine

Unit of Development and Research in Medical Education (UDREM)

**With the participation of**

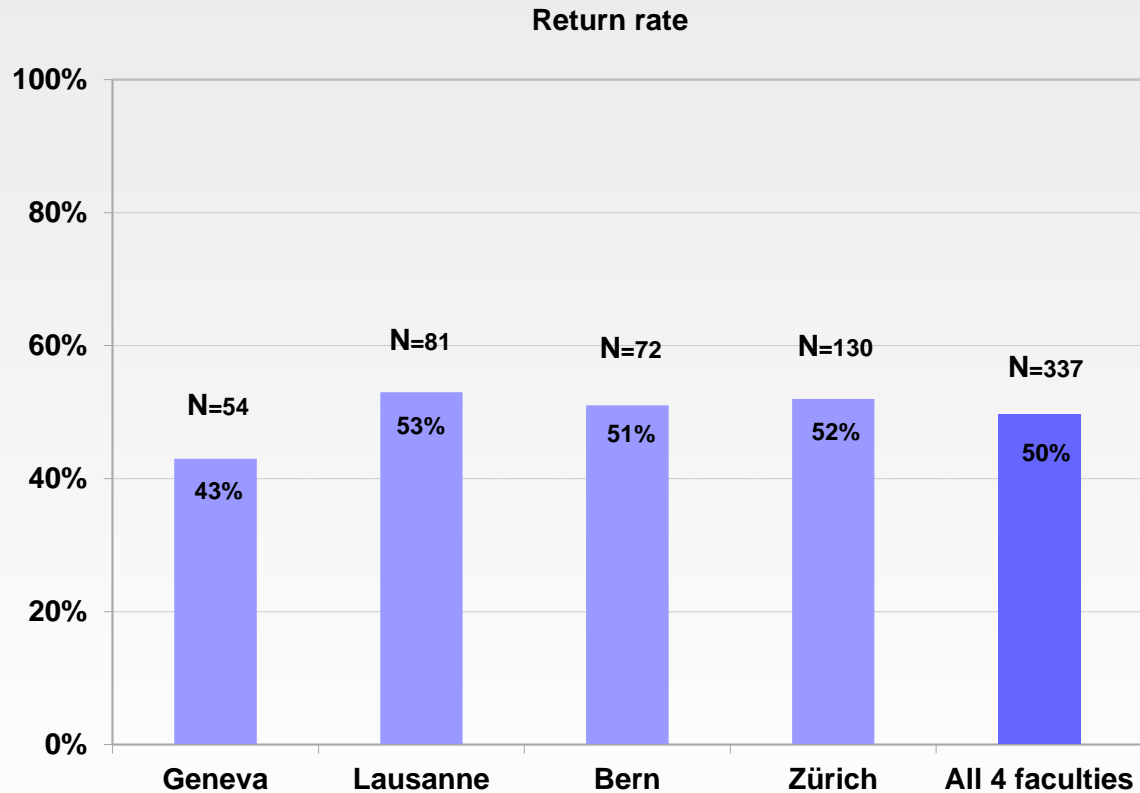
Raphael Bonvin, MD, MME - University of Lausanne Faculty of Medicine

Christina Kuhn, MD, MME - University of Zurich Faculty of Medicine

Christine Bögli, Lic. Phil., 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, the Academic Society of Geneva and the Gabriella Giorgi-Cavaglieri Foundation. The opinions expressed here are those of the authors and should not be attributed to the institutions and funding agencies.*

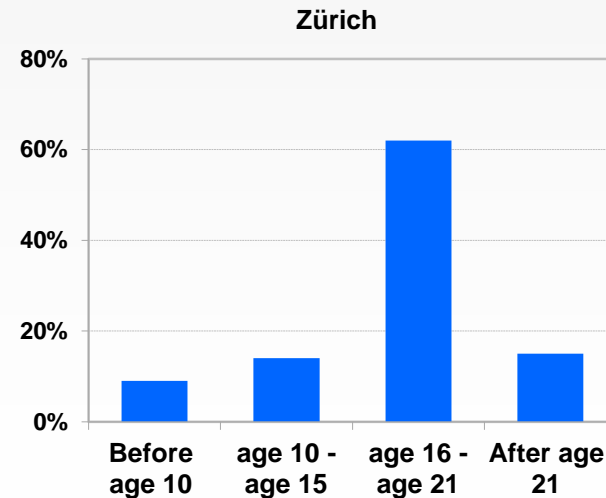
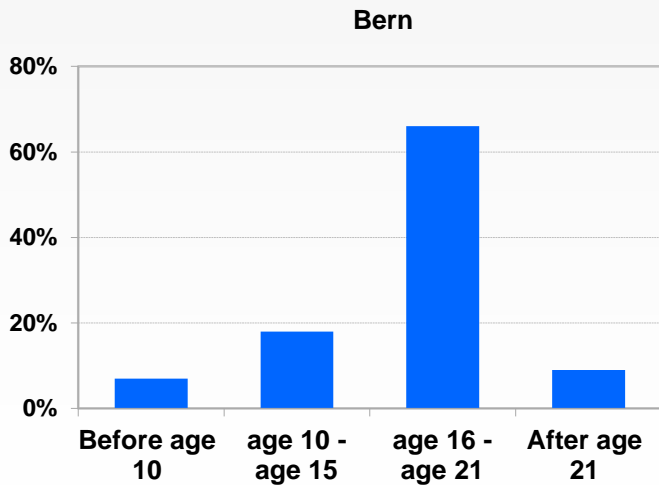
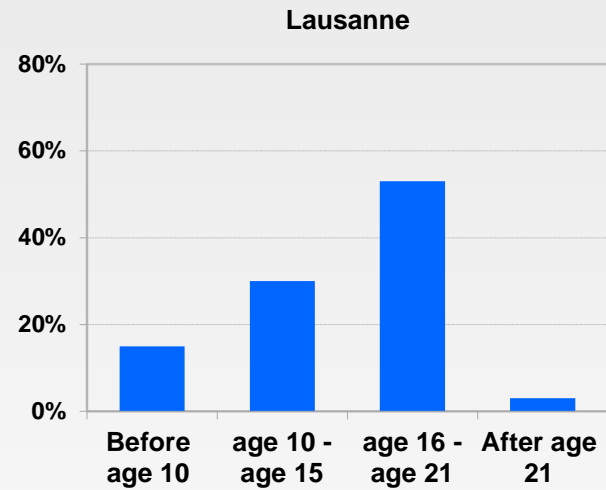
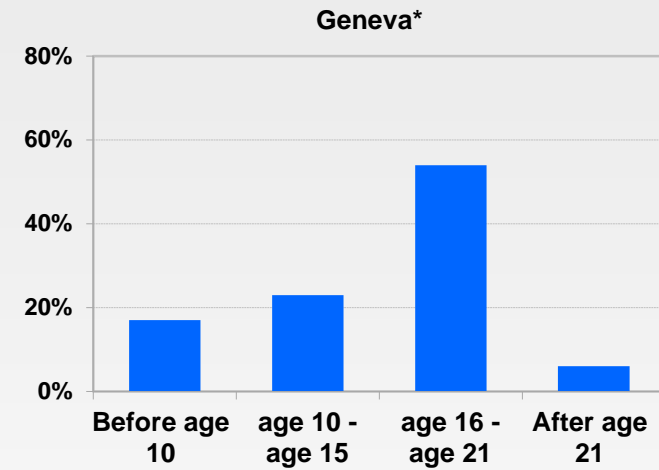
# 2012 survey conducted with students from the Faculty of Medicine of Lausanne, Bern, Zurich and Geneva\*



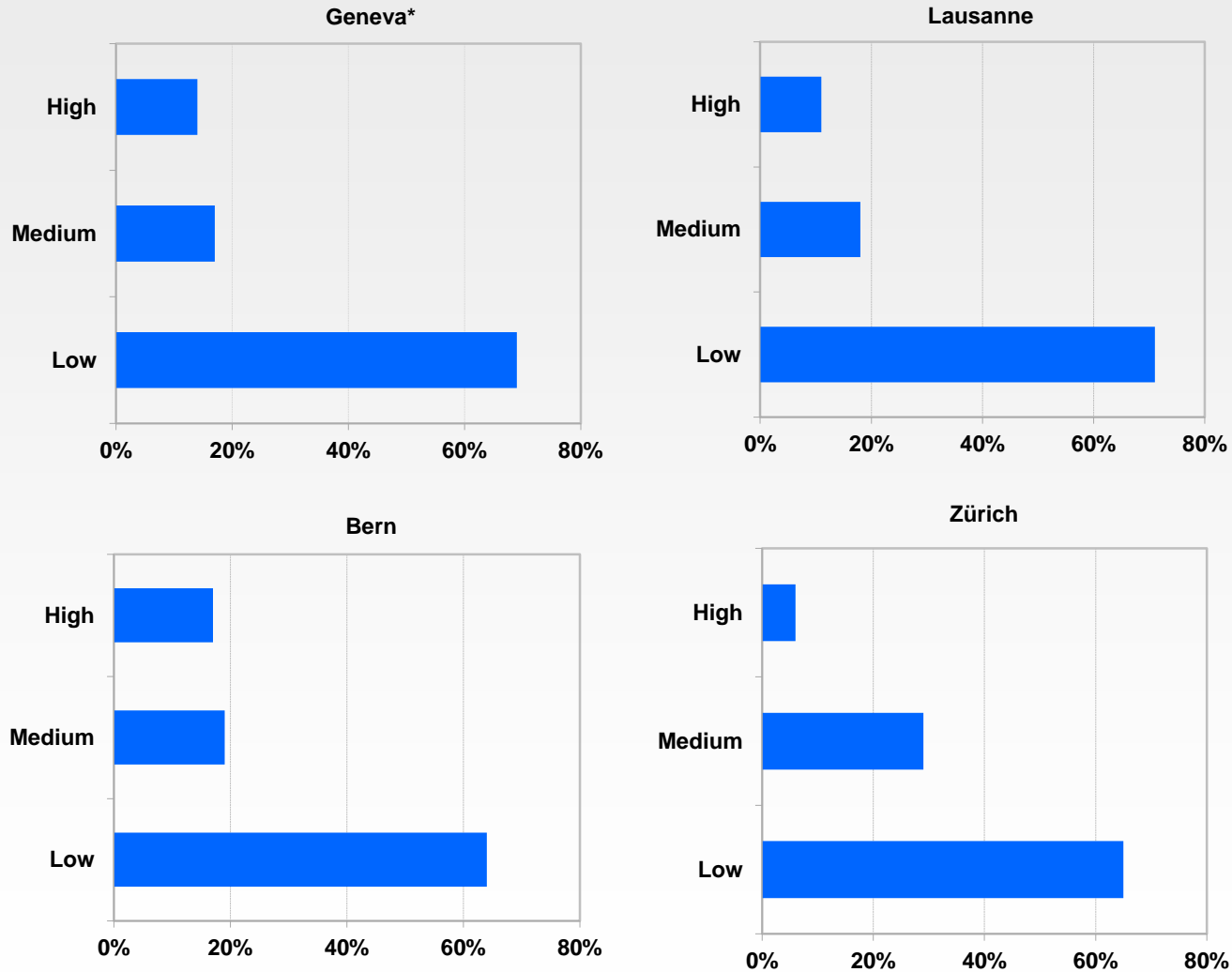
\* Geneva (N total = 125), Lausanne (N total = 154), Bern (N total = 141), Zurich (N total = 248) / Surveys administered in the 6th year

\* The surveys for Lausanne and Geneva were administered on paper while the ones for Bern and Zurich were on-line

# Age of decision to study medicine

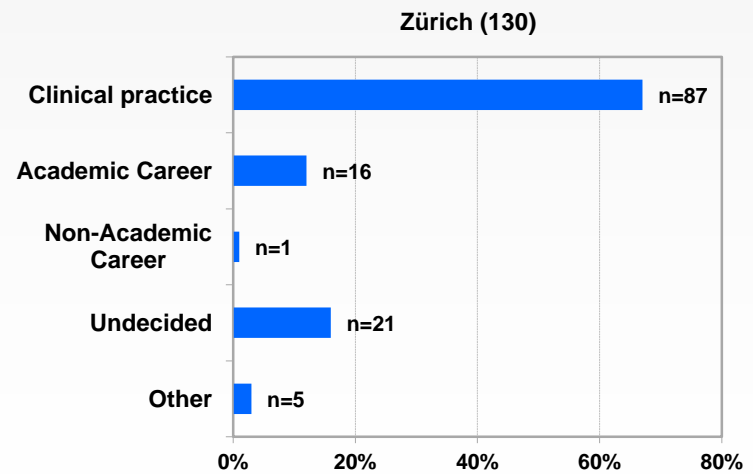
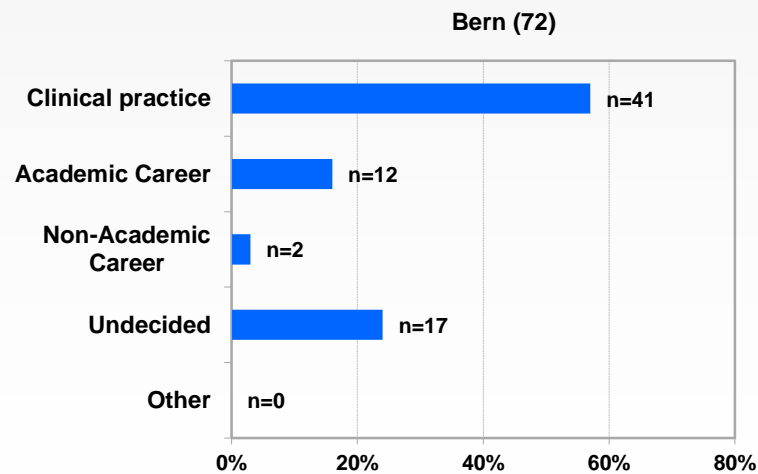
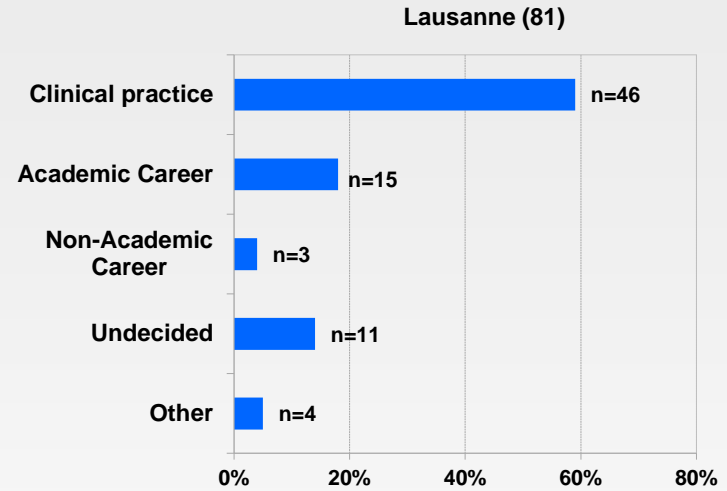
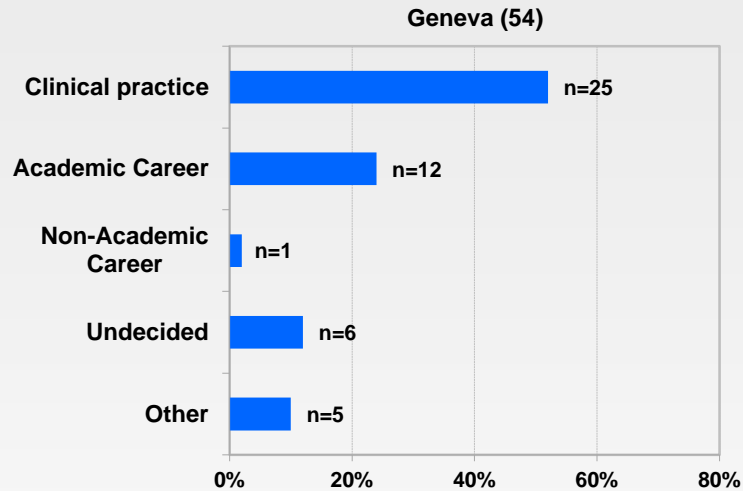


# Degree of hesitation to study medicine



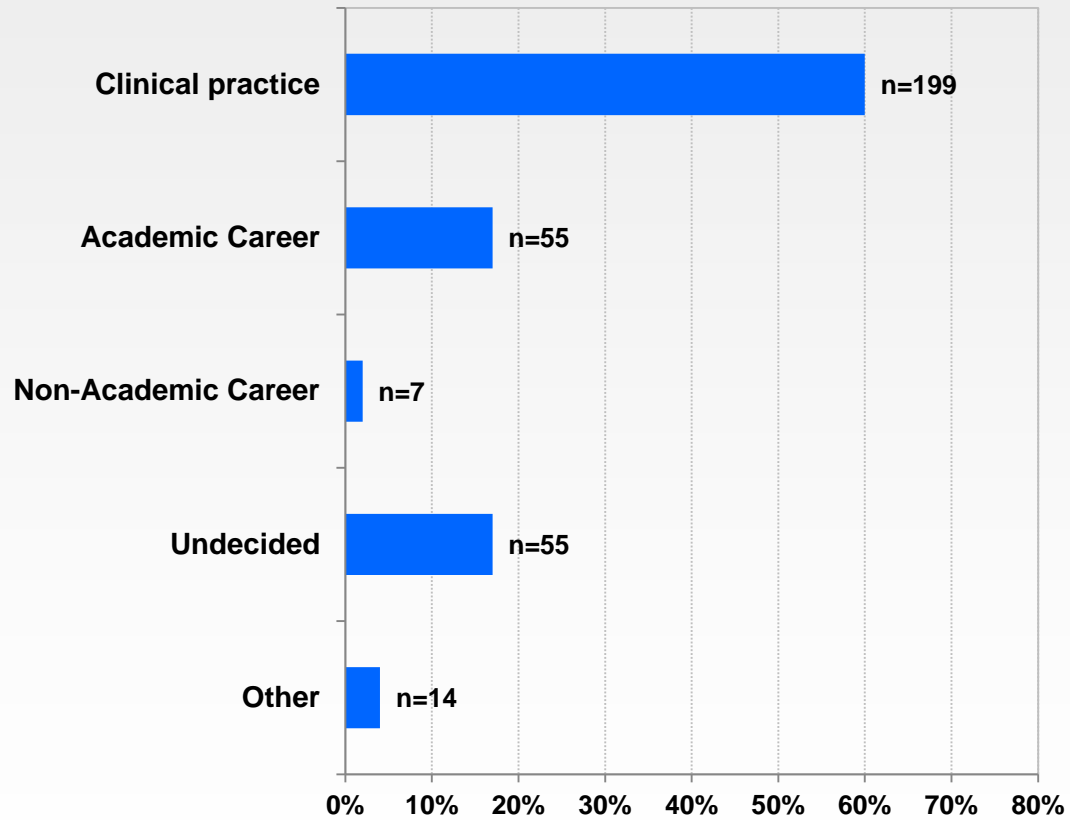
\* This item was asked to the students in Geneva (n=155/167) at the end of their second year in a separate survey questionnaire

# Choice of career plan By faculty

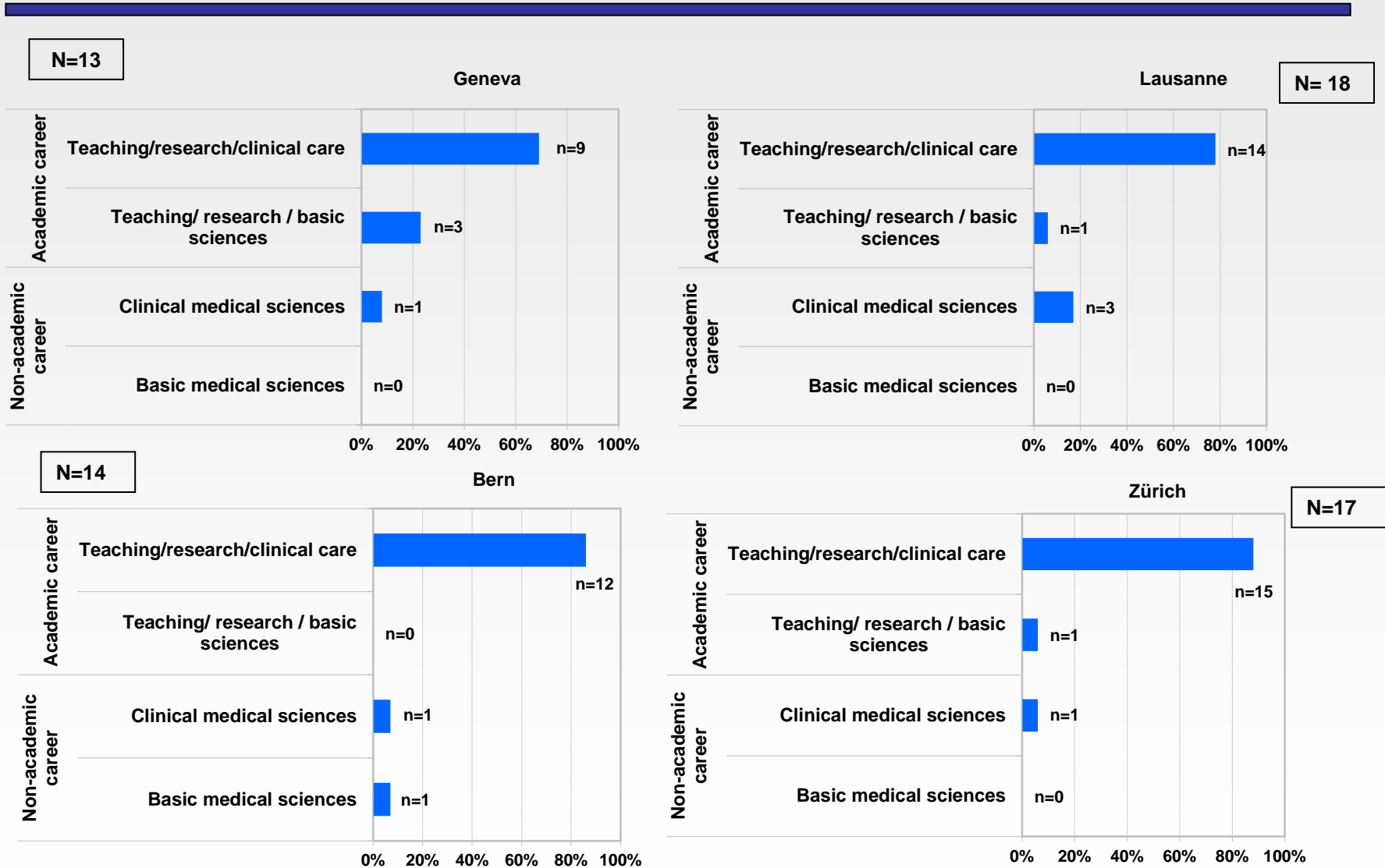


# Choice of career plan

## All 4 faculties (N=337)

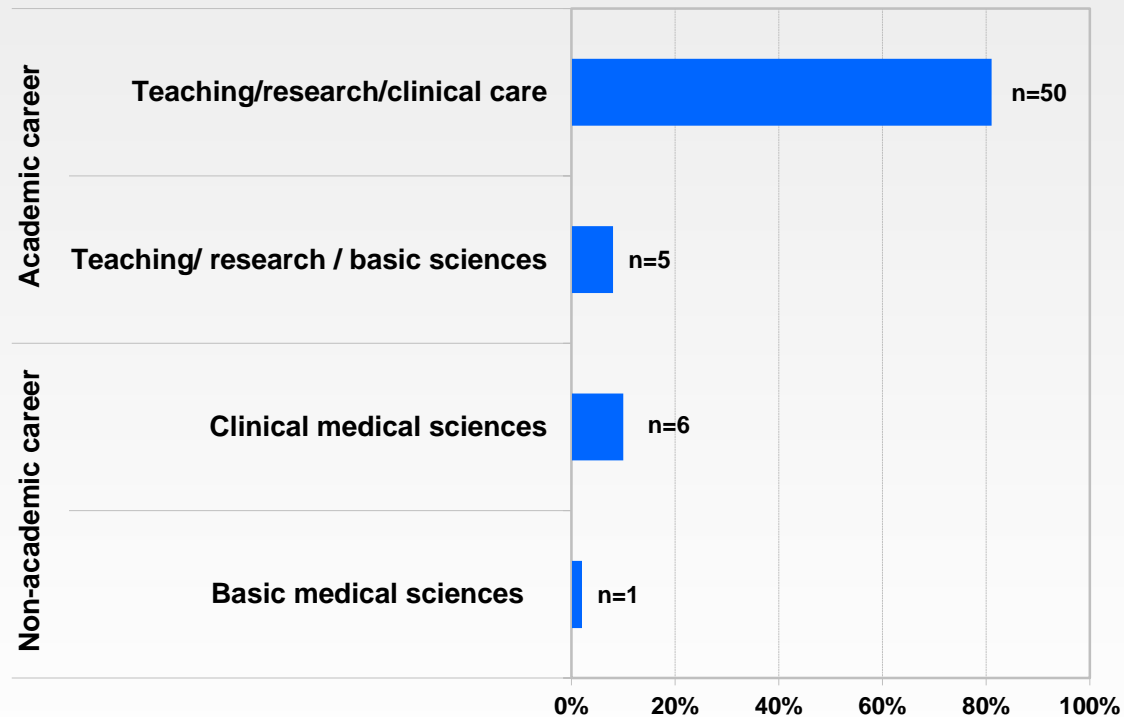


# Choice within academic vs. non-academic career plan By faculty



# Choice within academic vs. non-academic career plan

## All 4 faculties (N=62/275)\*



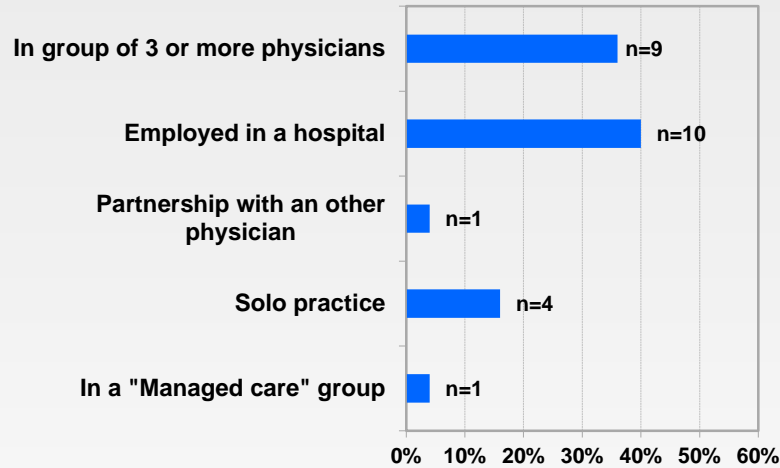
\*Number of students with an academic vs non-academic career plan / Number of students having made a career plan choice



# Choice of clinical practice as career plan By faculty

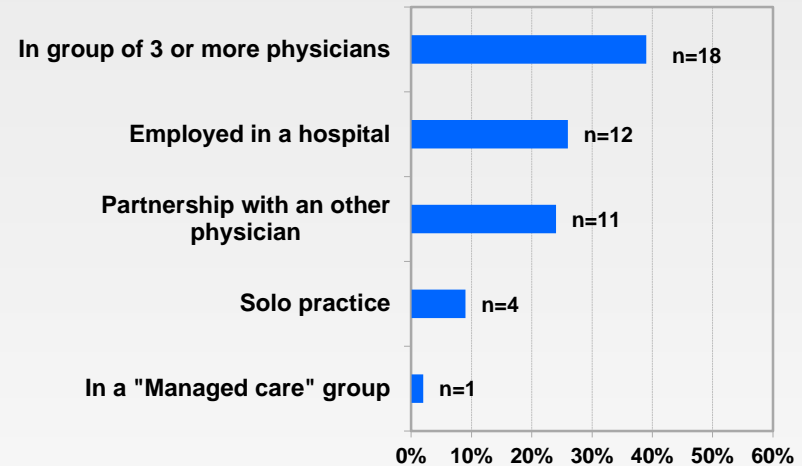
N=25

Geneva



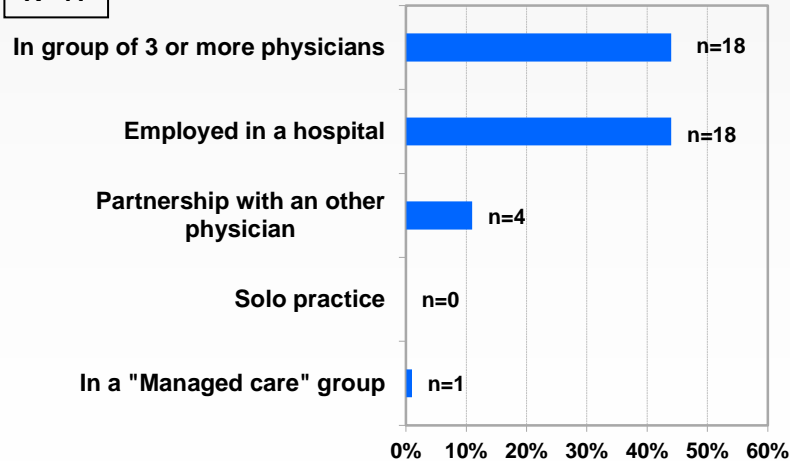
N=46

Lausanne



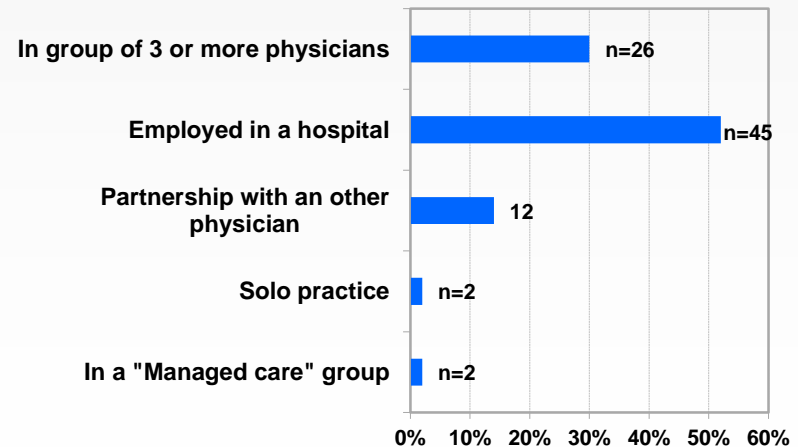
N=41

Bern



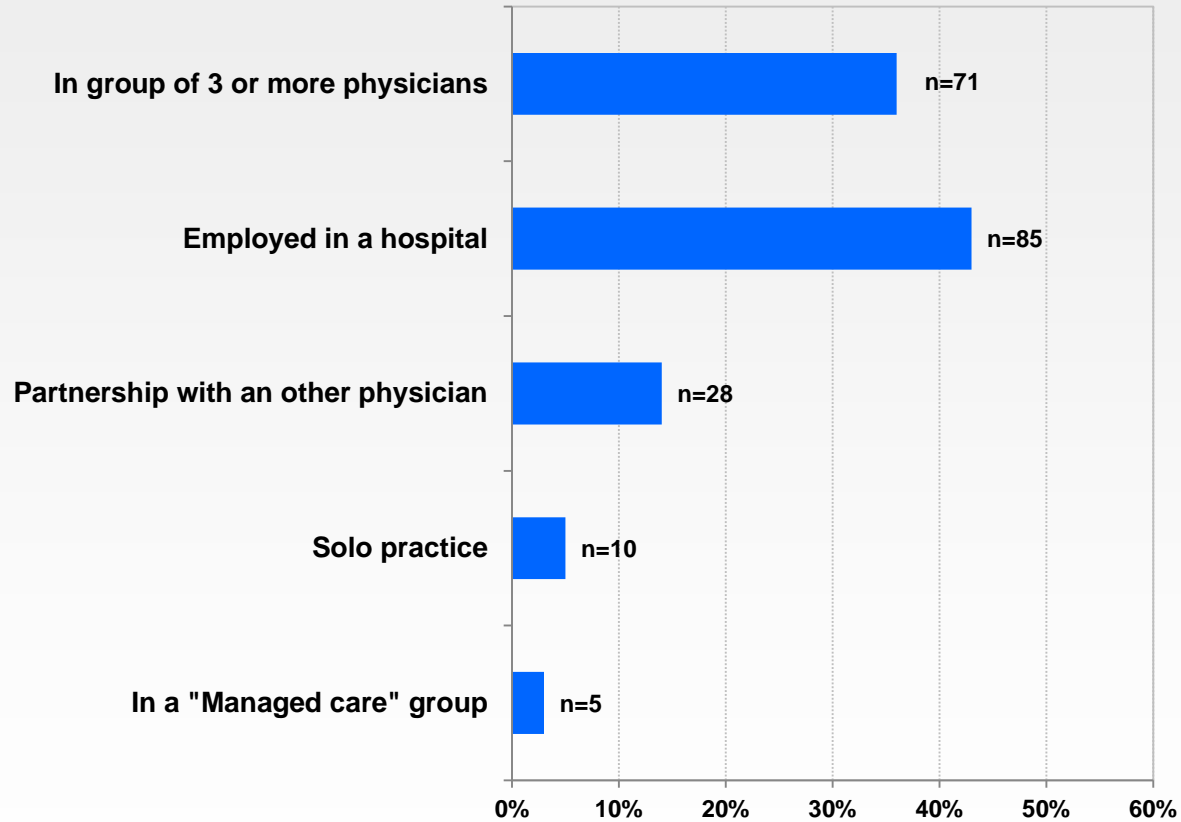
N=87

Zürich



# Choice of clinical practice as career plan

## All 4 faculties (N=199/275)\*



\*Number of students with a clinical practice career plan / Number of students having made a career plan choice

# Reasons for career plan choice

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## Personal values/ considerations

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

## 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

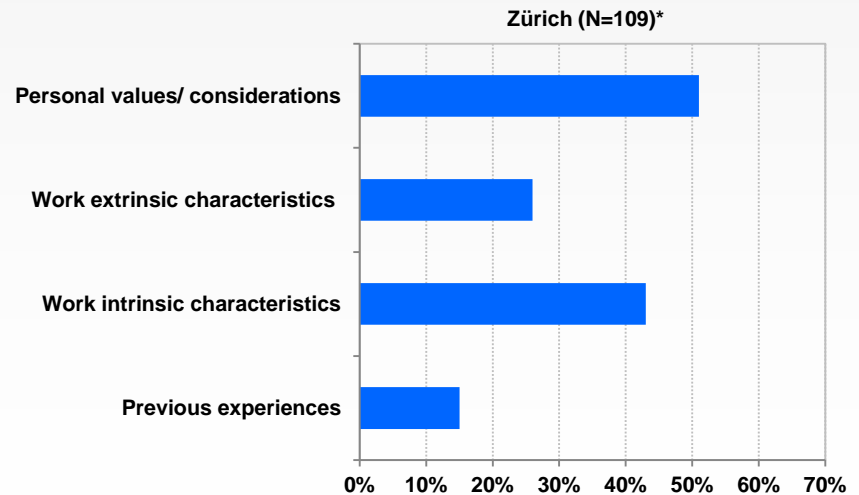
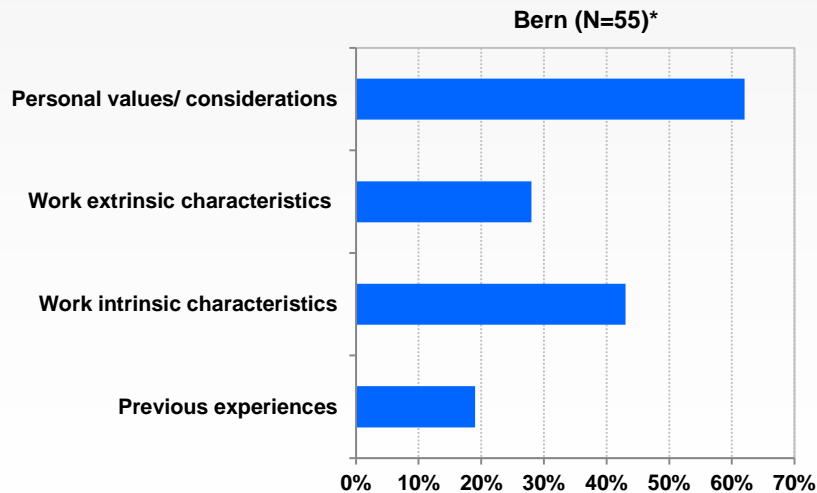
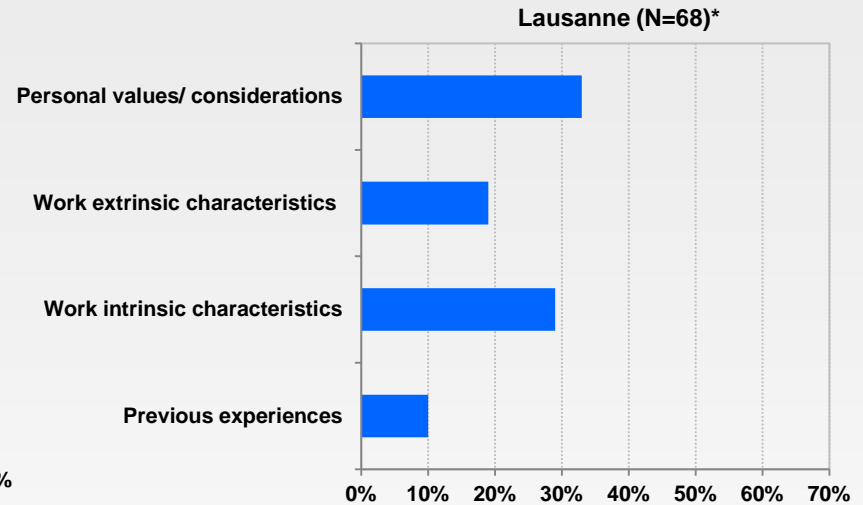
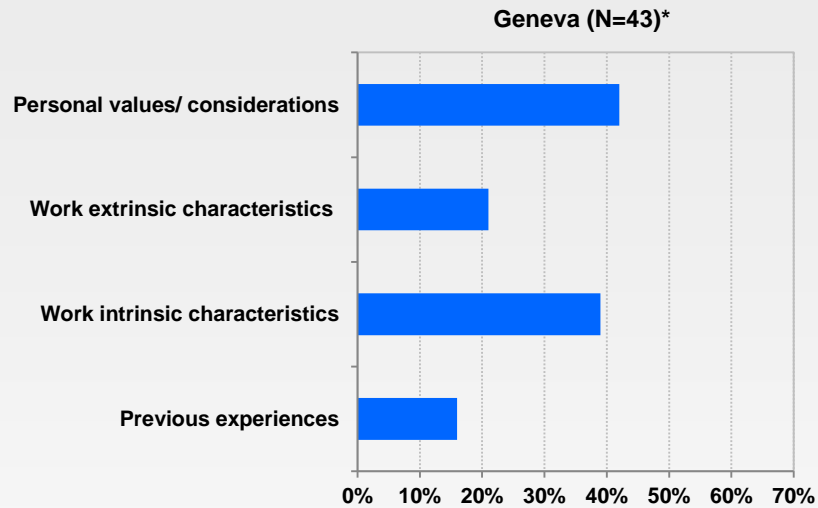
## Work extrinsic characteristics

- 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

## 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

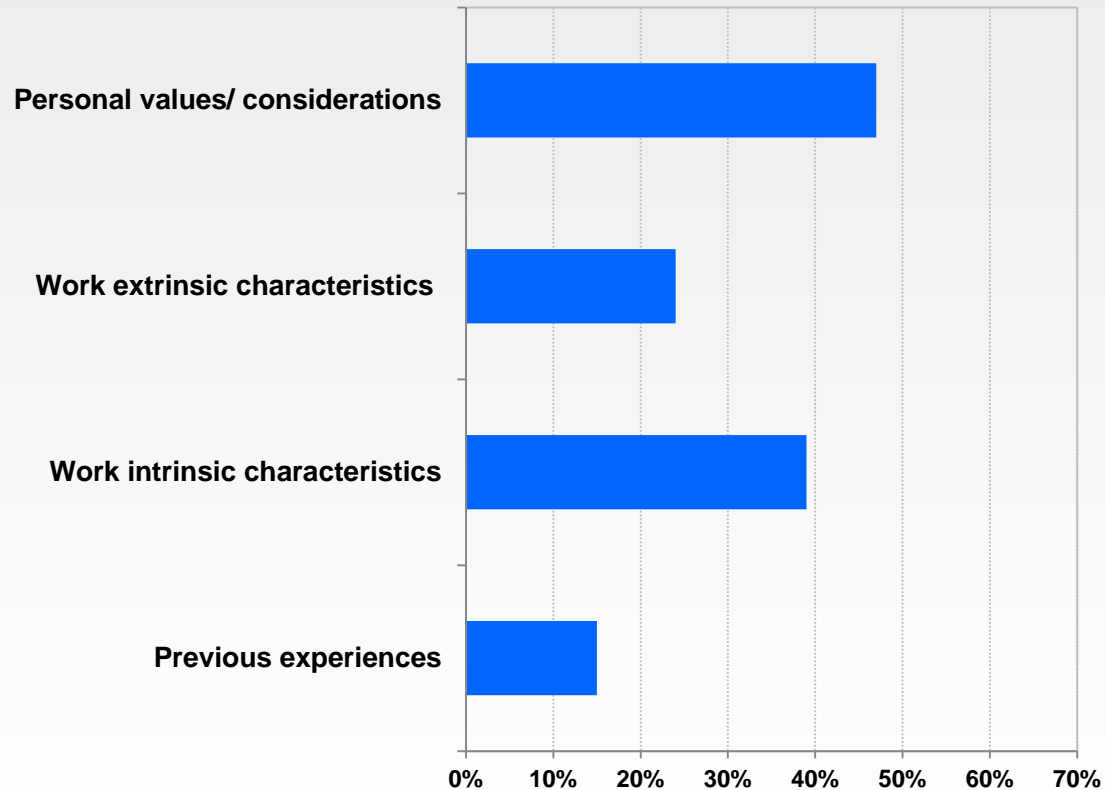
# Reasons for career plan choice By faculty



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

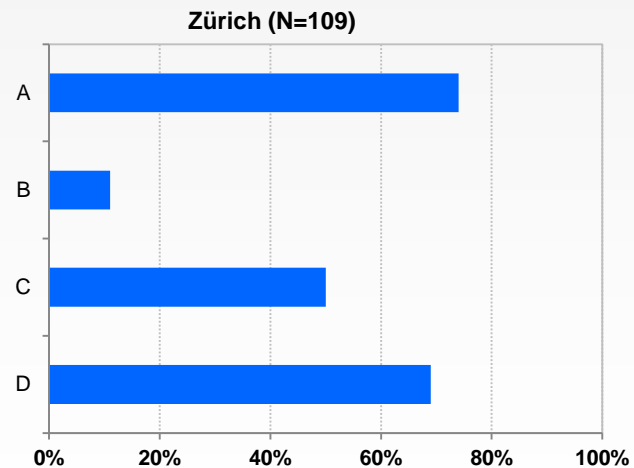
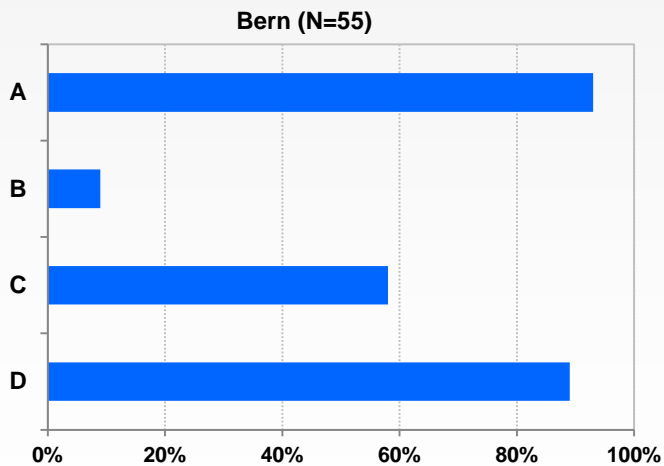
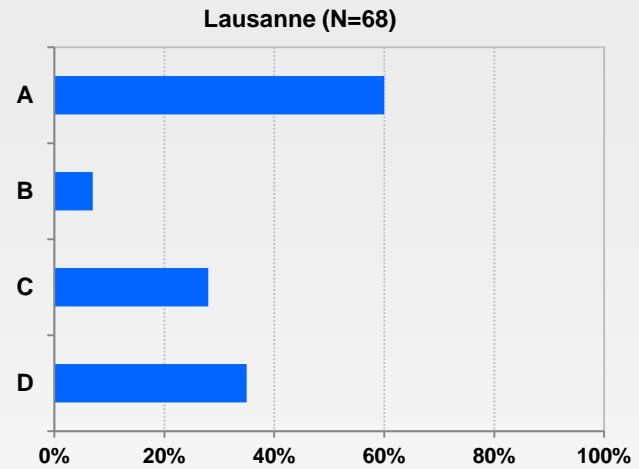
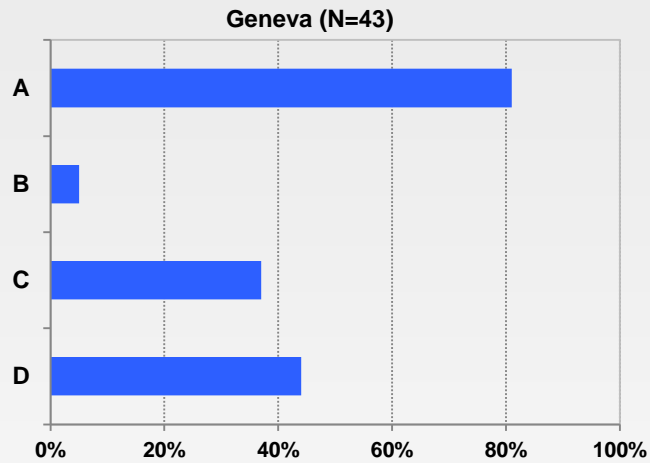
# Reasons for career plan choice

## All 4 faculties (N=275/337)\*



\* 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

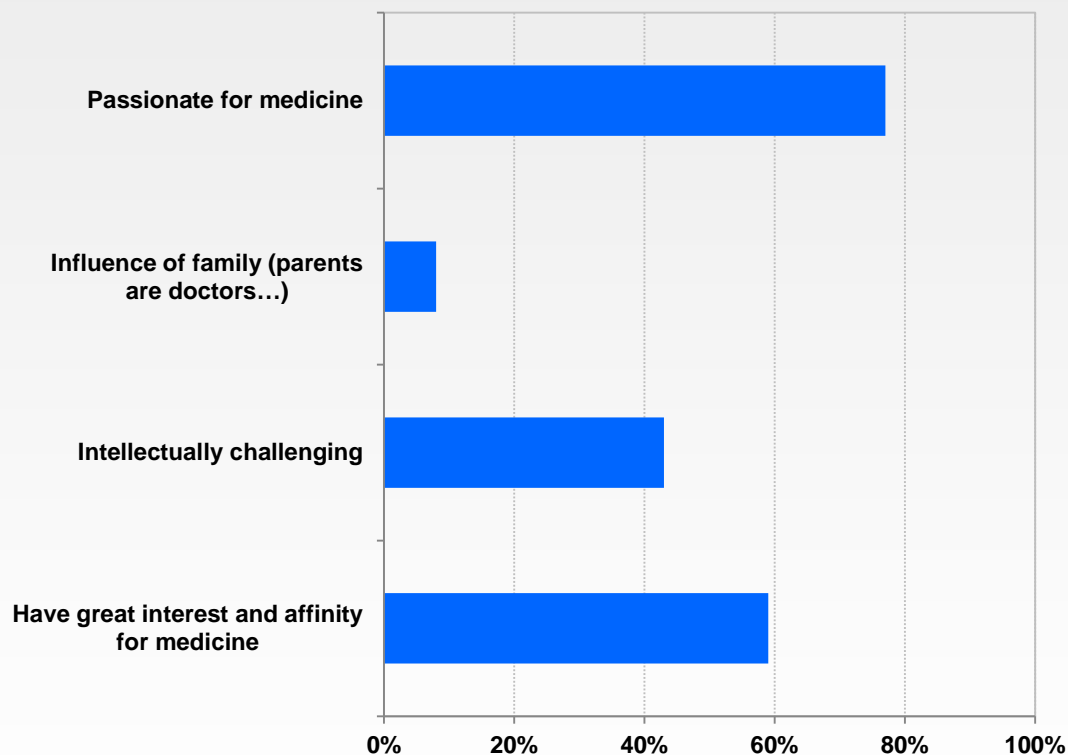
B Influence of family (parents are doctors...)

C Intellectually challenging

D Have great interest and affinity for medicine

# Reasons for career plan choice: Personal values/considerations

## All 4 faculties (N=275/337)\*

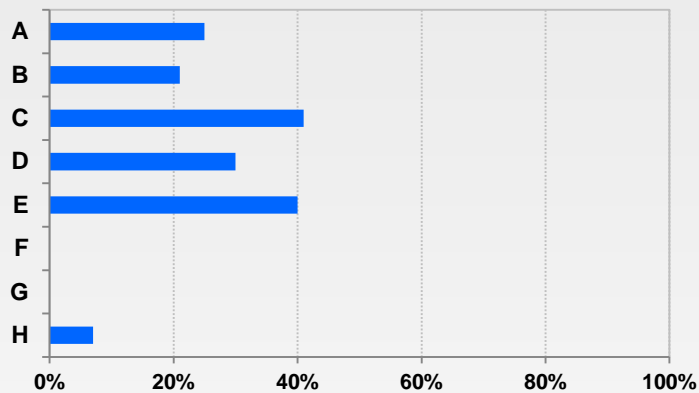


\* Percentages based on number of students who indicated having made a career plan choice

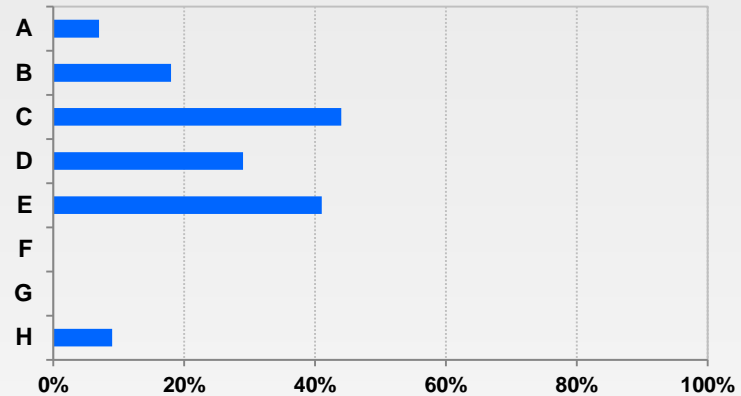
# Reasons for career plan choice: Work extrinsic characteristics

## By faculty

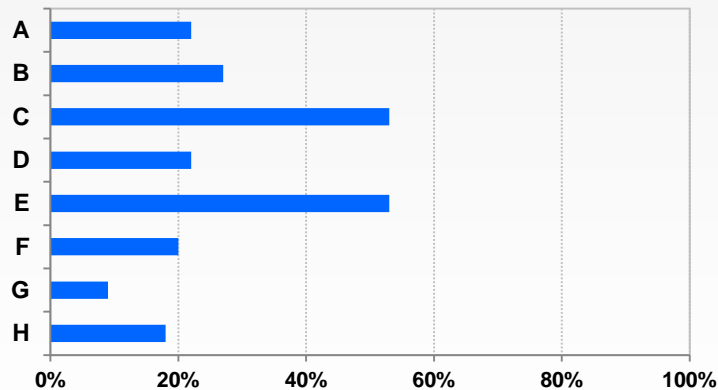
Genève (N=43)



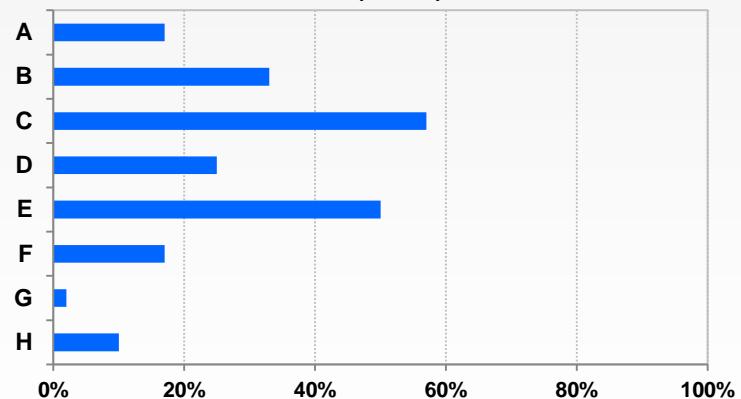
Lausanne (N=68)



Bern (N=55)



Zürich (N=109)



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

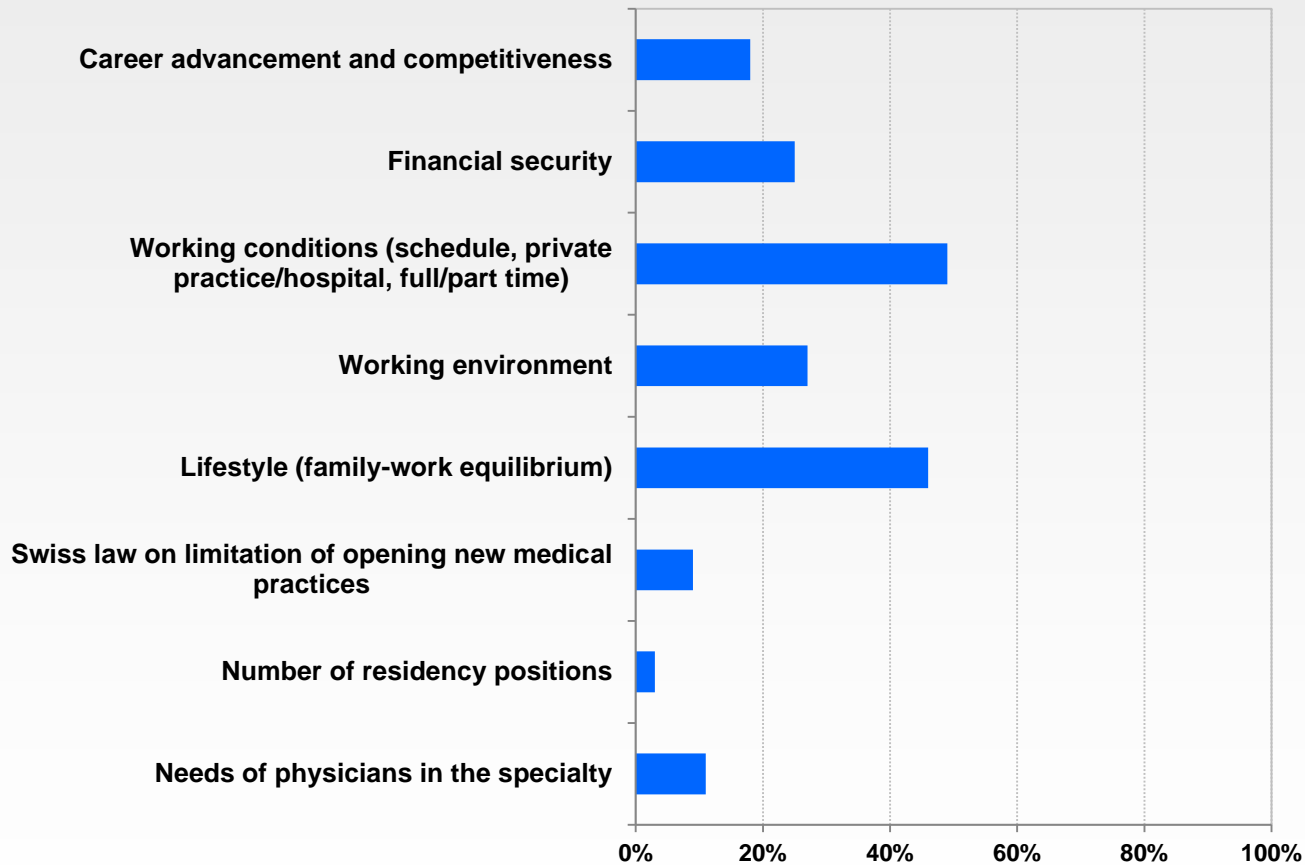
G Number of residency positions

H Needs of physicians in the specialty



# Reasons for career plan choice: Work extrinsic characteristics

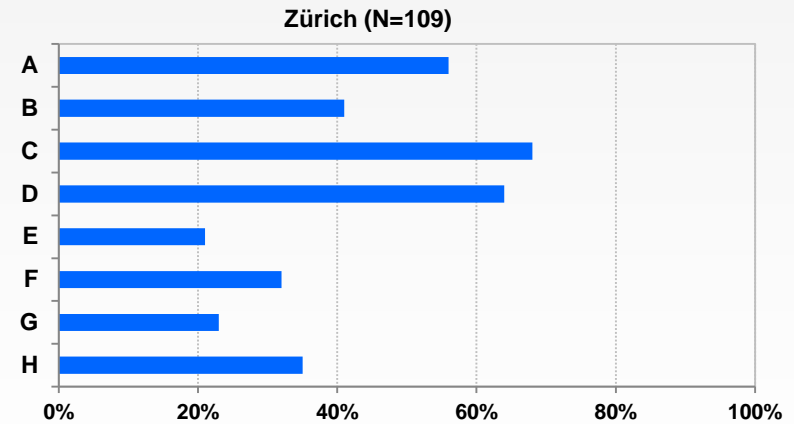
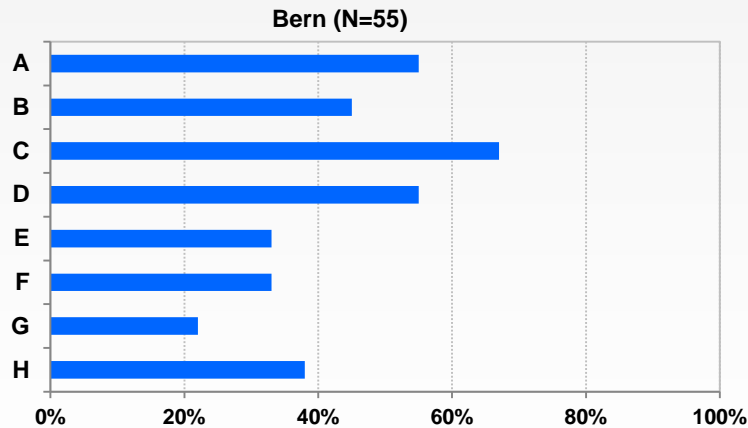
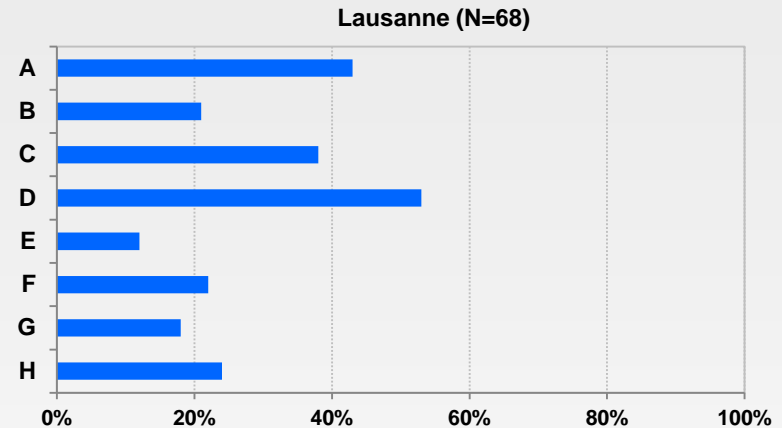
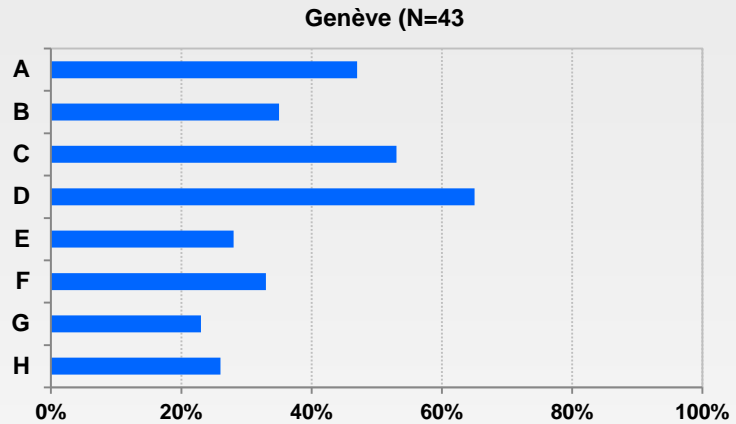
## All 4 faculties (N=275/337)\*



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

# Reasons for career plan choice: Work intrinsic characteristics

## By faculty

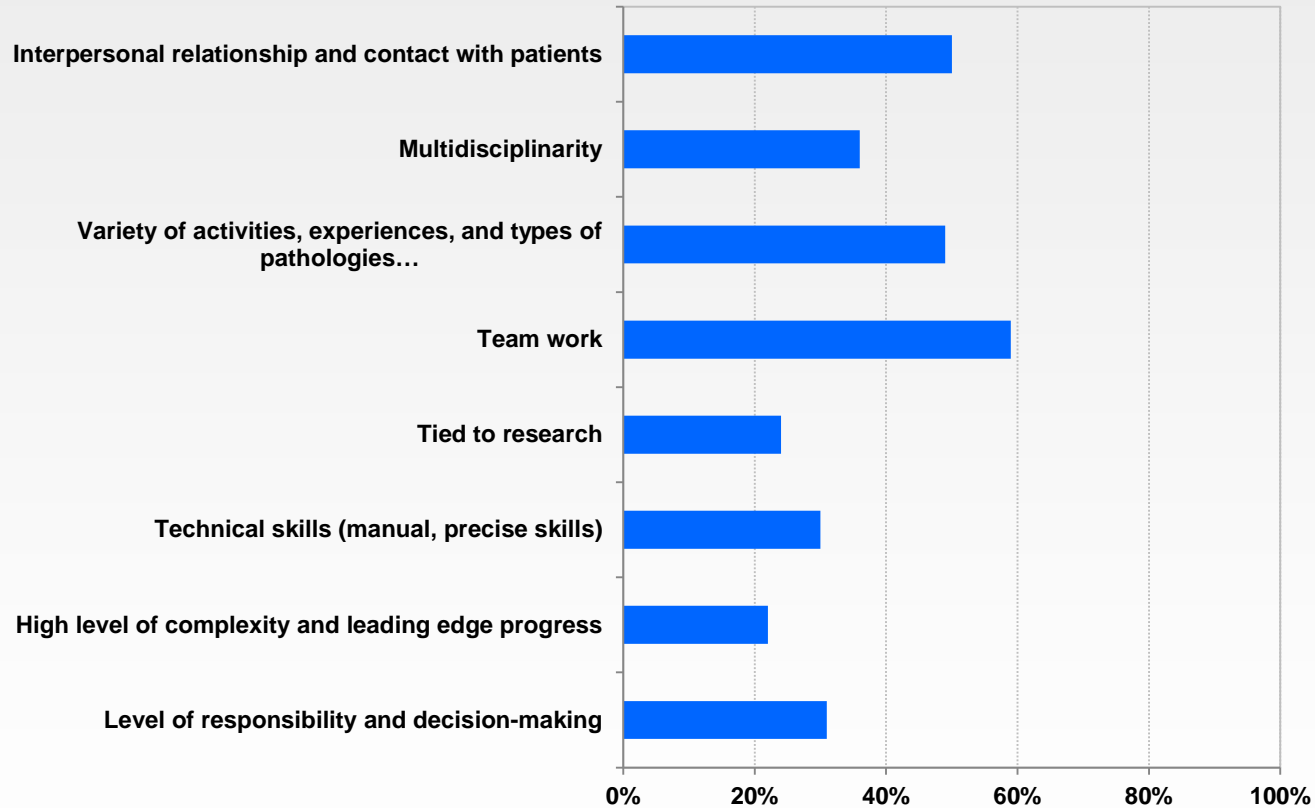


- A Interpersonal relationship and contact with patients
- B Multidisciplinary
- C Variety of activities, experiences, and types of pathologies...
- D Team work

- 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

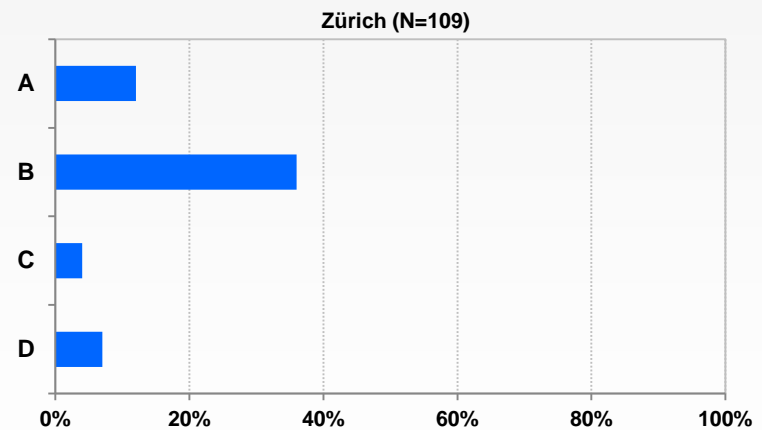
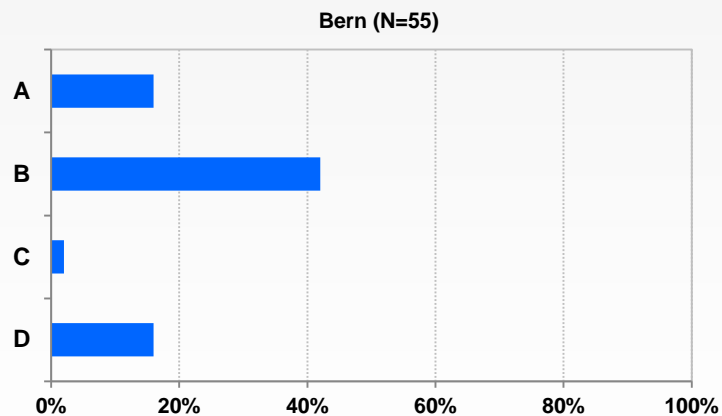
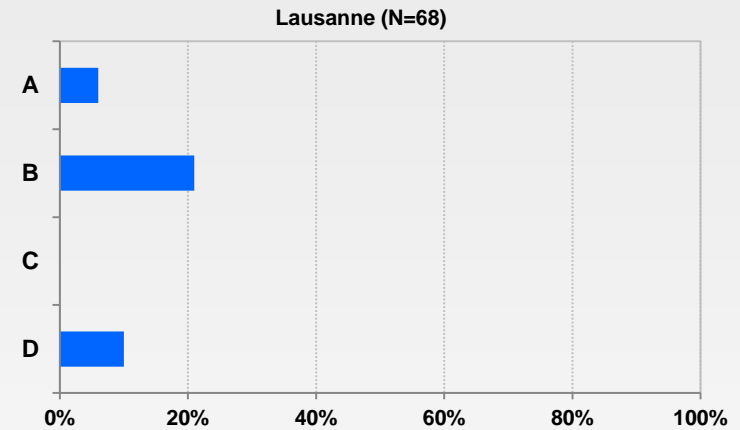
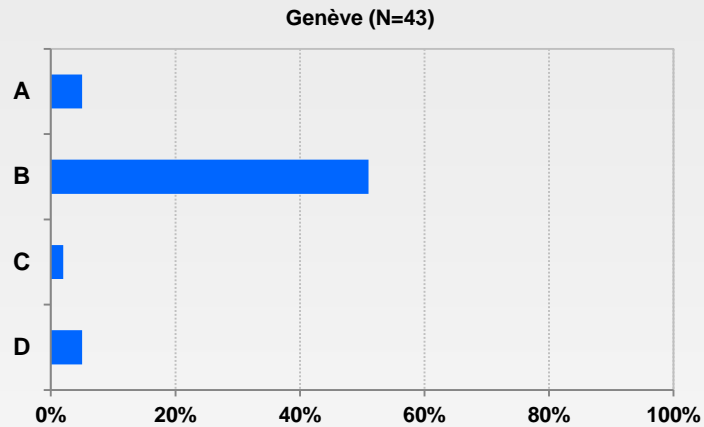
## All 4 faculties (N=275/337)\*



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

# Reasons for career plan choice: Previous experiences

## By faculty



A Personal experiences (accident, disease...)

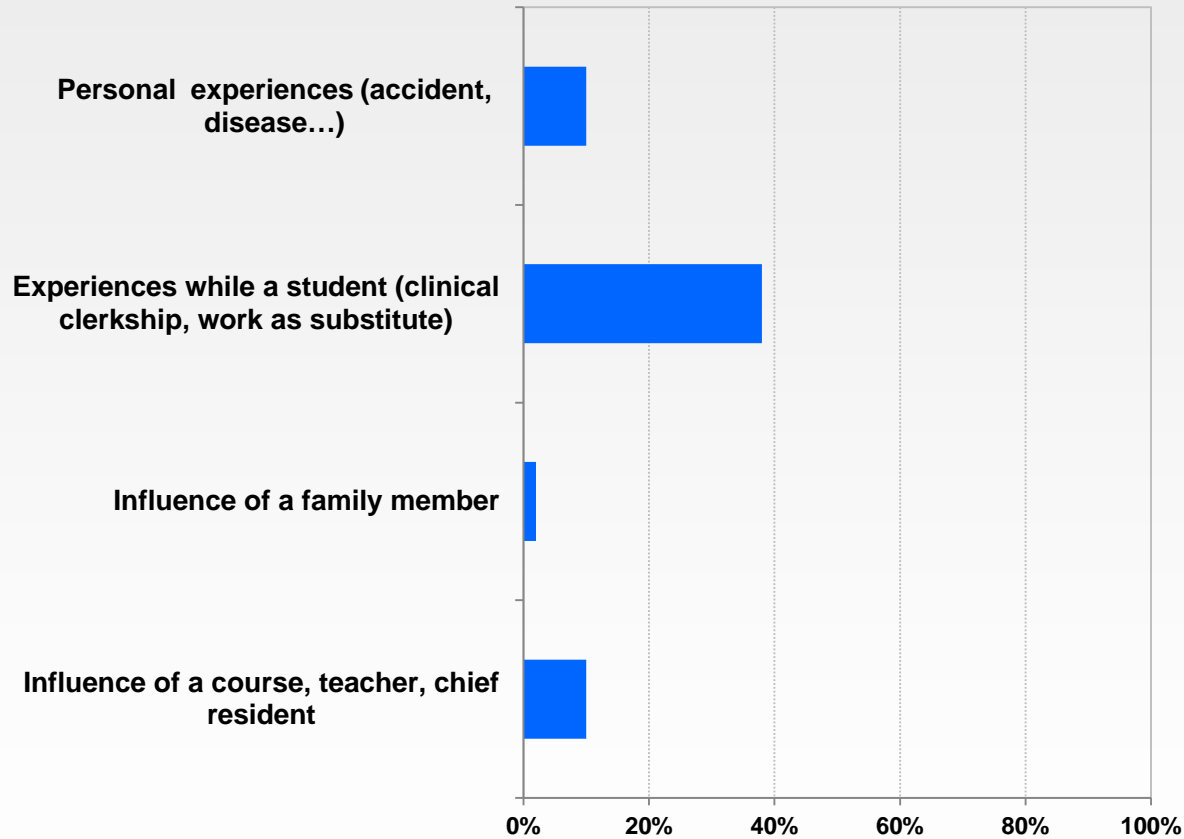
B Experiences while a student (clinical clerkship, work as substitute)

C Influence of a family member

D Influence of a course, teacher, chief resident

# Reasons for career plan choice: Previous experiences

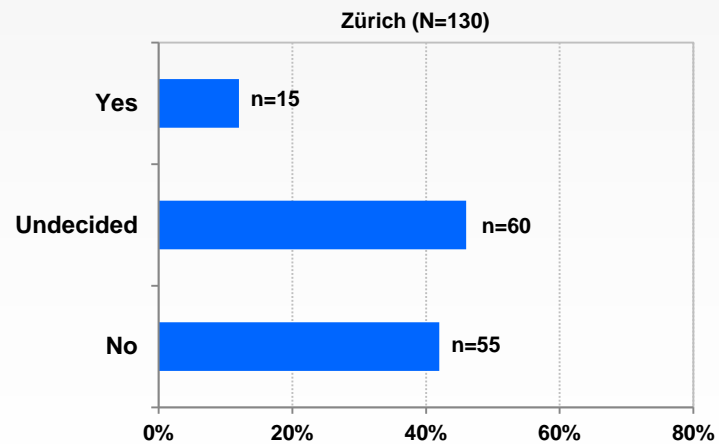
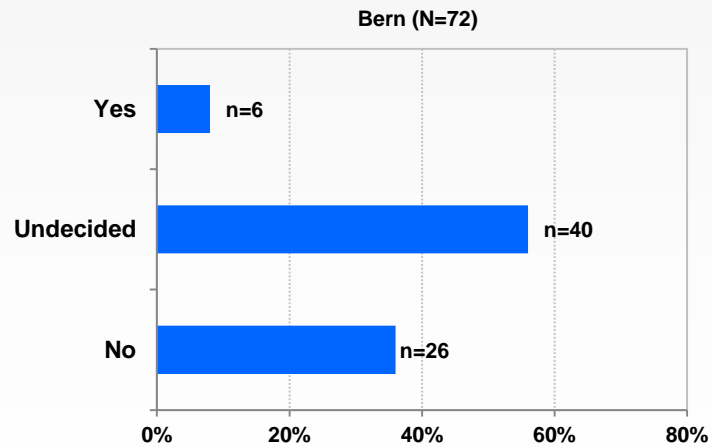
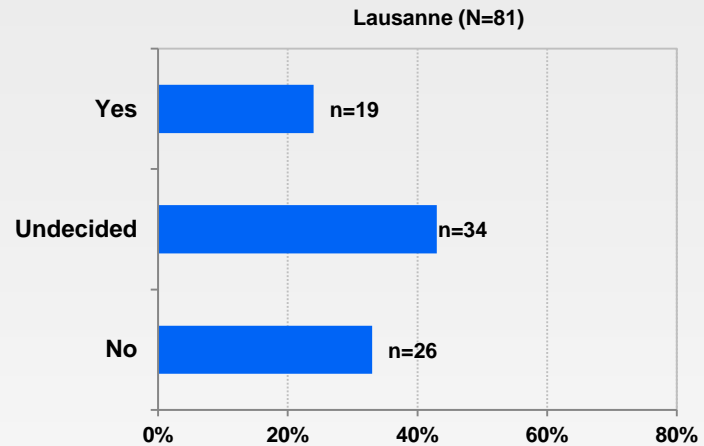
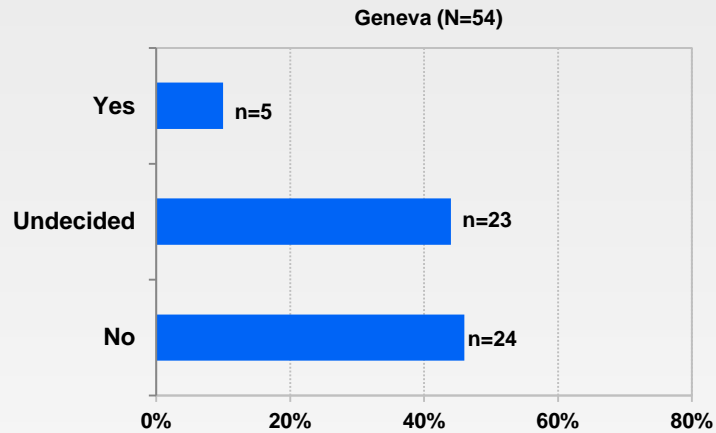
## All 4 faculties (N=275/337)\*



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

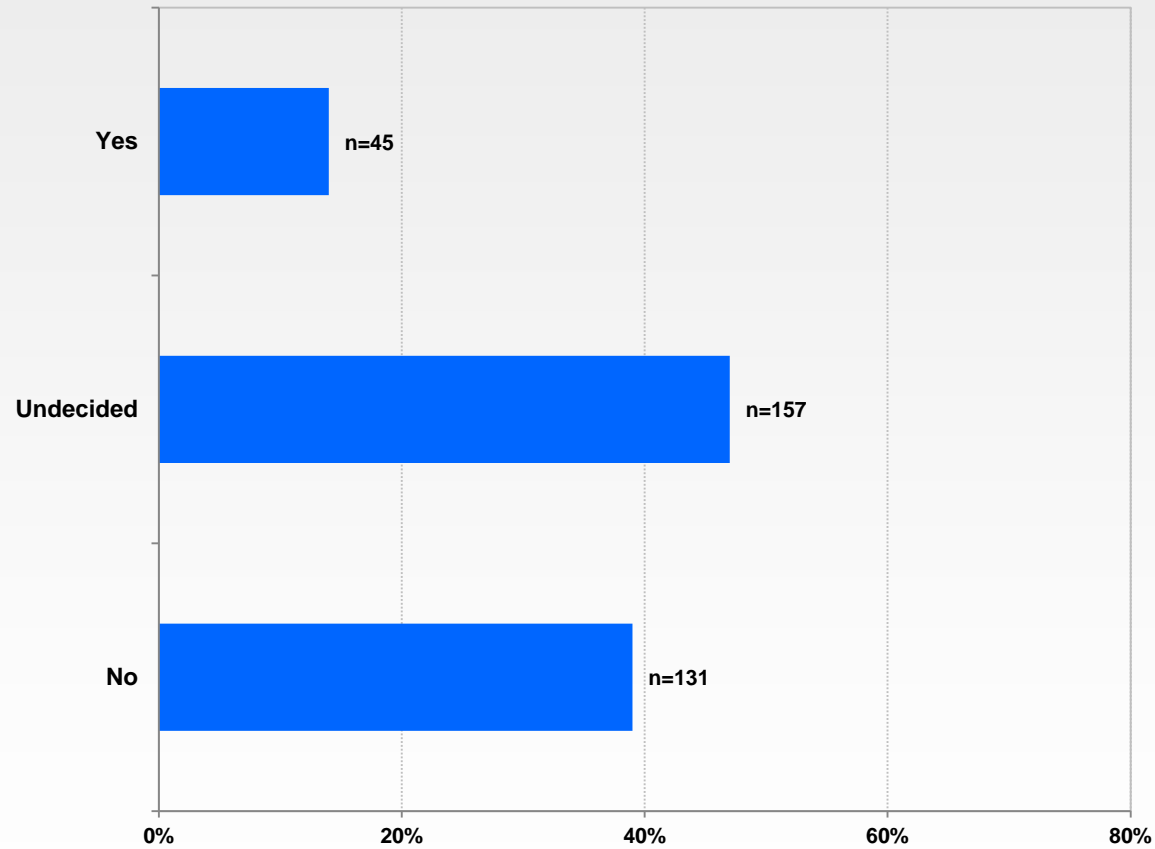
# Intention of practice in medically underserved areas

## By faculty



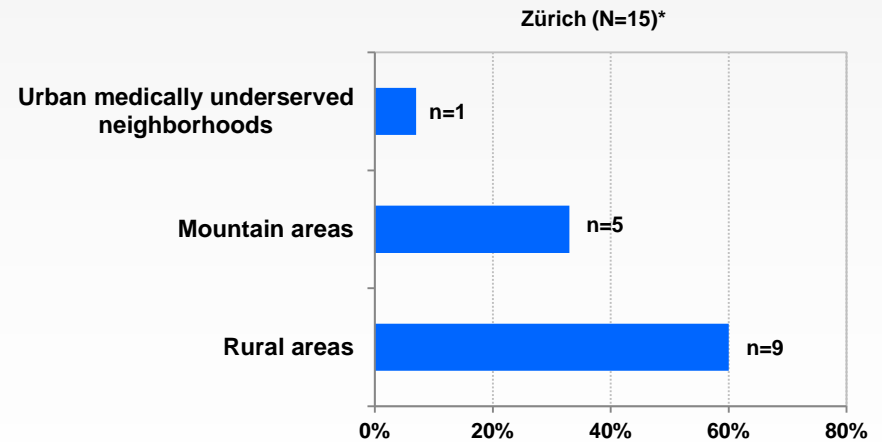
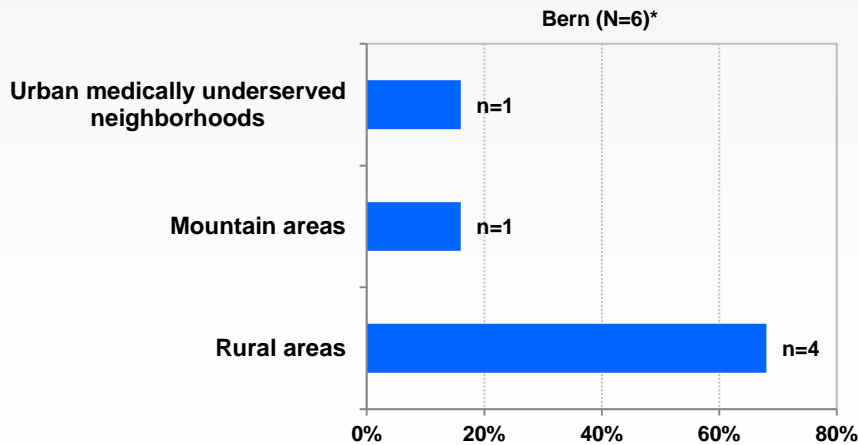
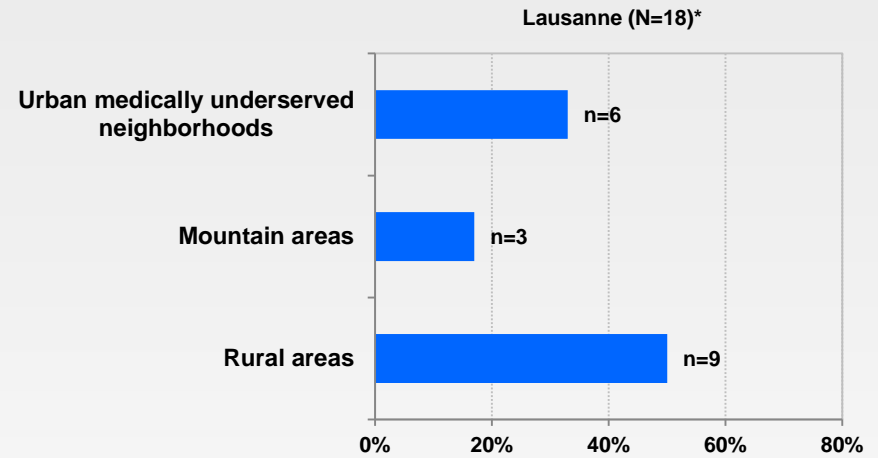
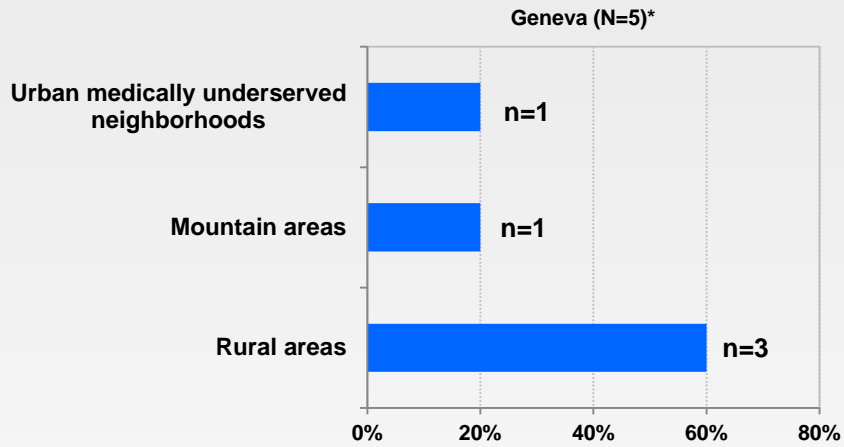
# Intention of practice in medically underserved area

## All 4 faculties (N=337)



# Choice of place of practice in medically underserved areas

## By faculty

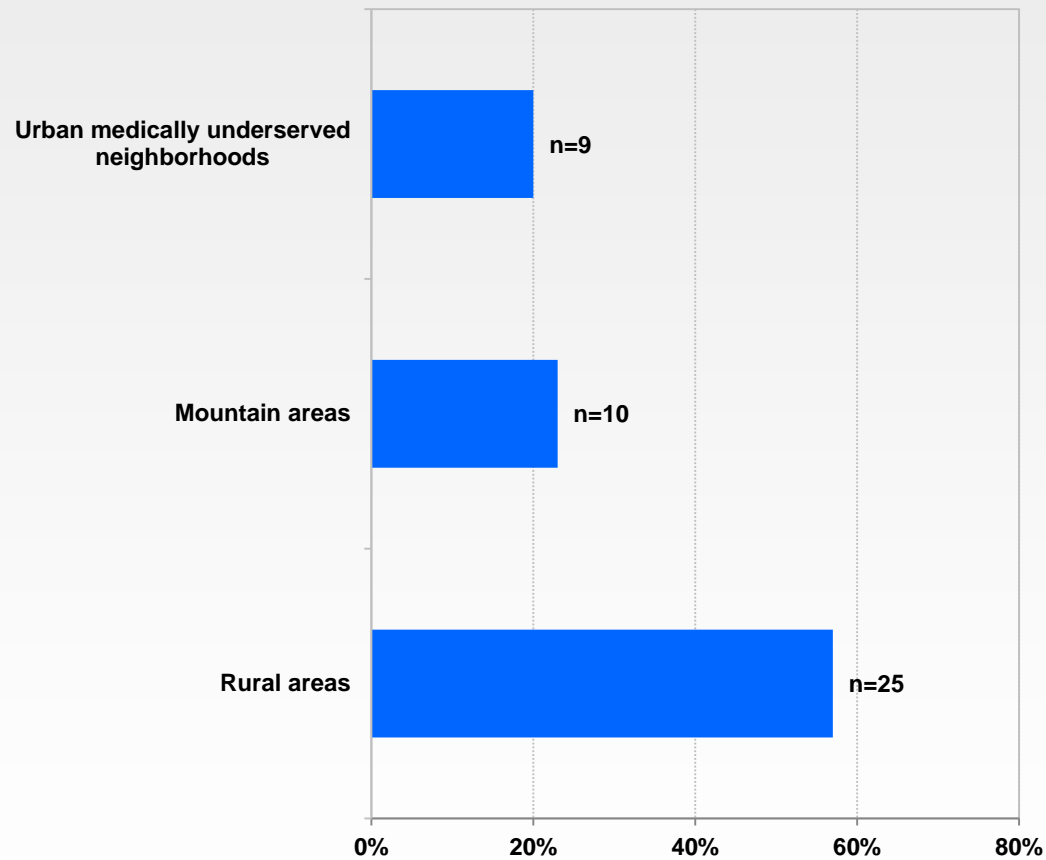


\* Percentages based on the number of students who indicated having intention to practice in medically underserved areas



# Choice of place of practice in medically underserved areas

## All 4 faculties (N=44/337)\*

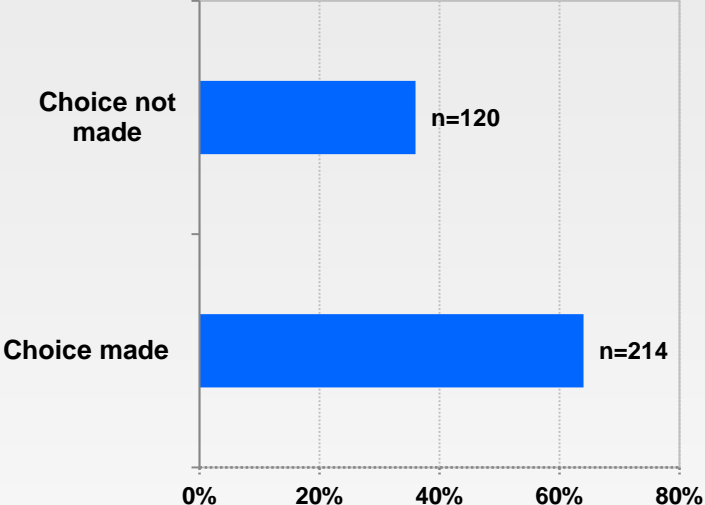


\* Percentages based on the number of students who indicated having intention to practice in medically underserved areas

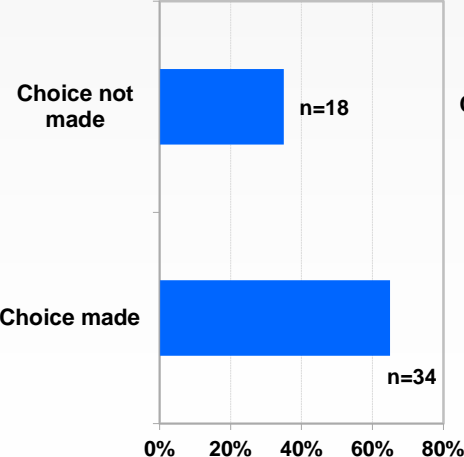
# Specialty choice status

## All 4 faculties and by faculty

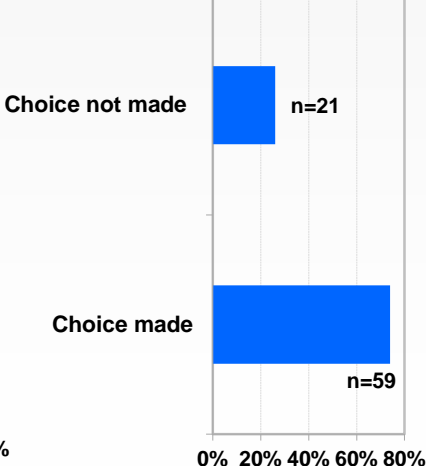
### All 4 Faculties



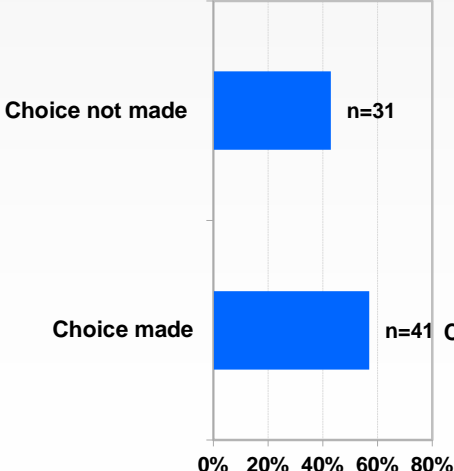
### Geneva (N=54)



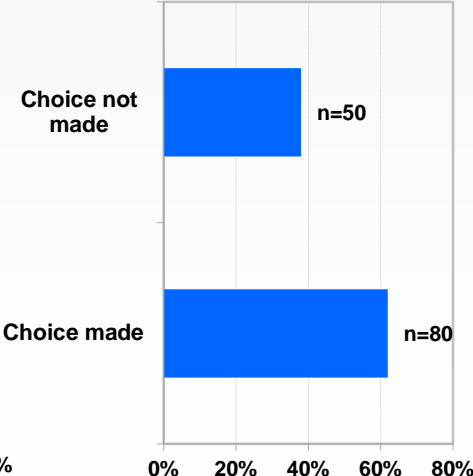
### Lausanne (N=81)



### Bern (N=72)



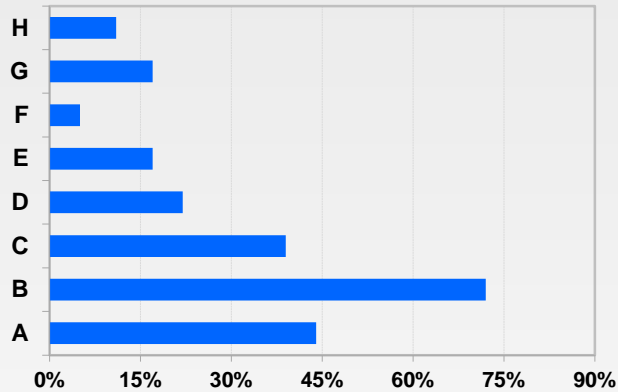
### Zürich (N=130)



# Reasons for not making a specialty choice By faculty

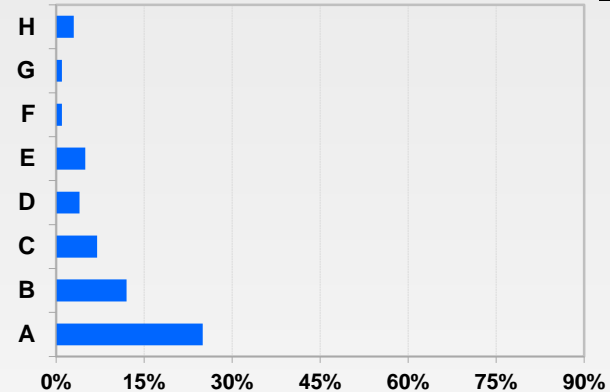
N=18\*

Geneva



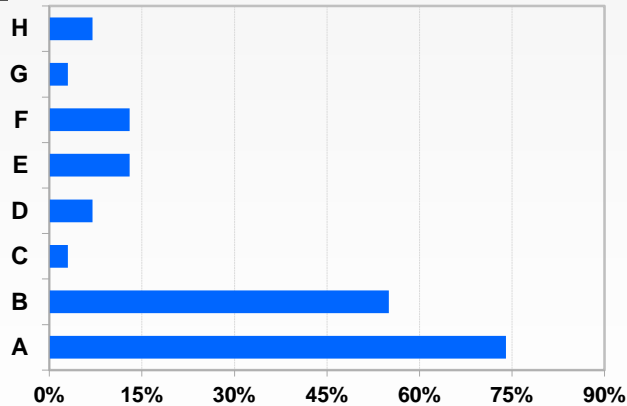
Lausanne

N=21\*



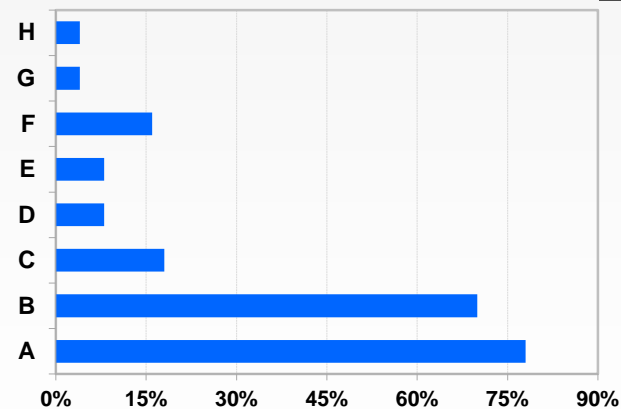
N=31\*

Bern



Zürich

N=50\*



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

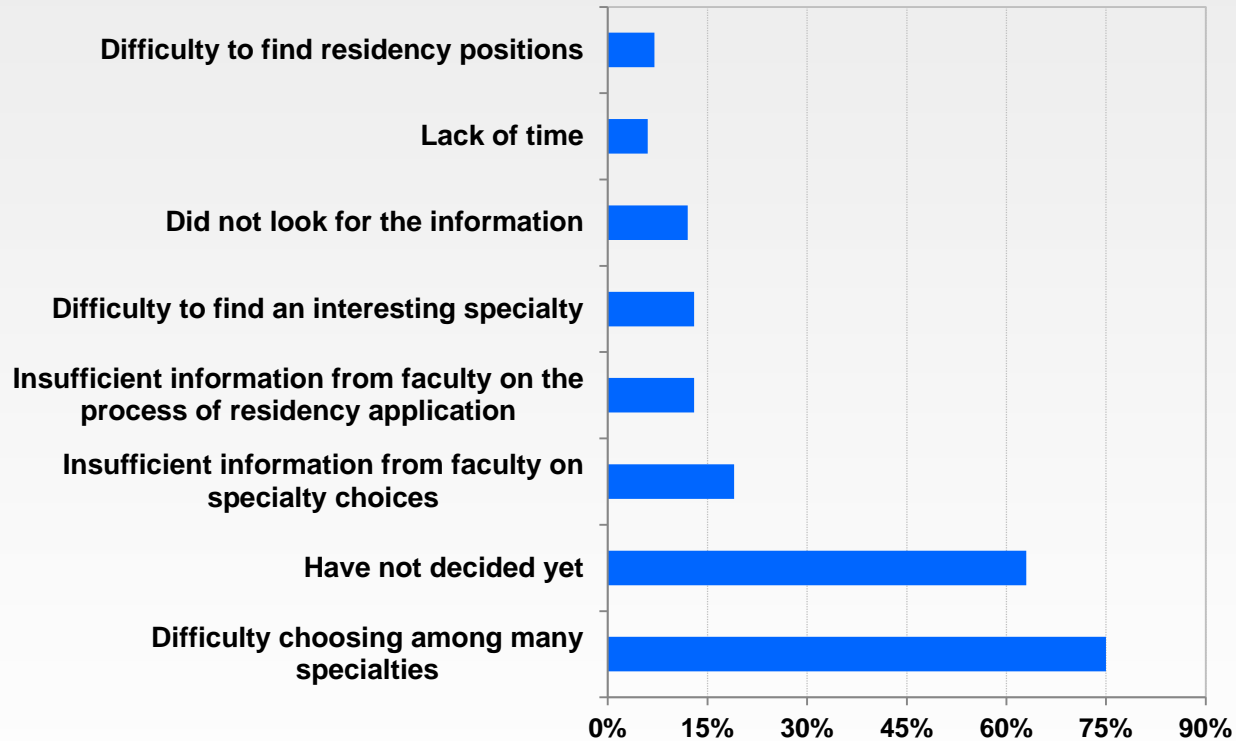
F Did not look for the information

G Lack of time

H Difficulty to find residency positions

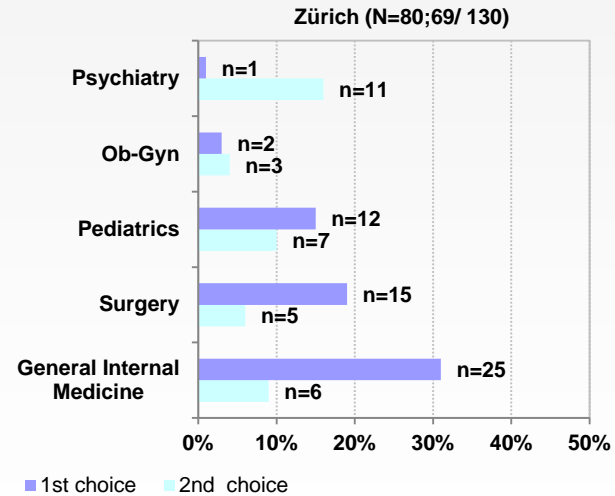
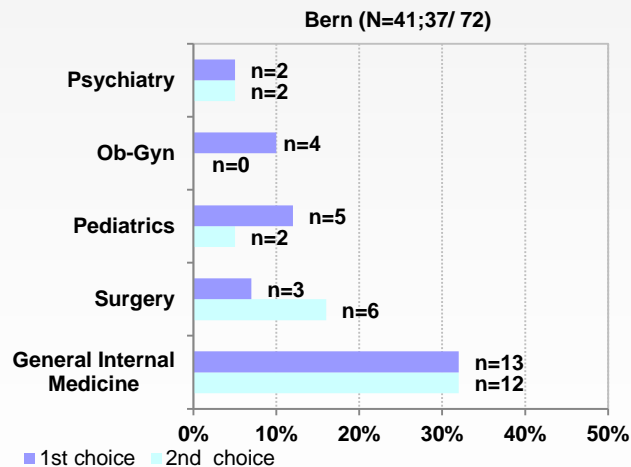
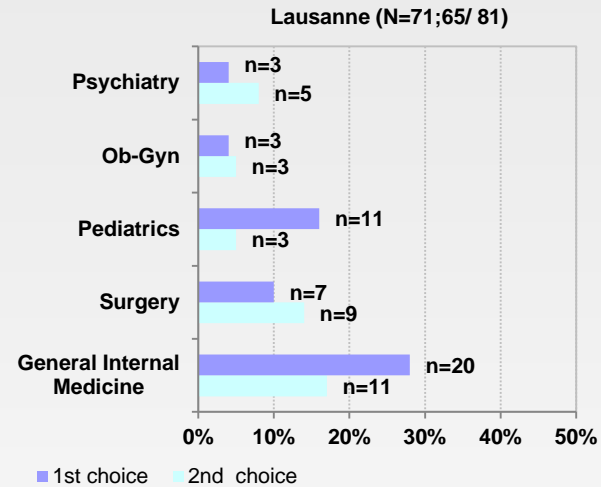
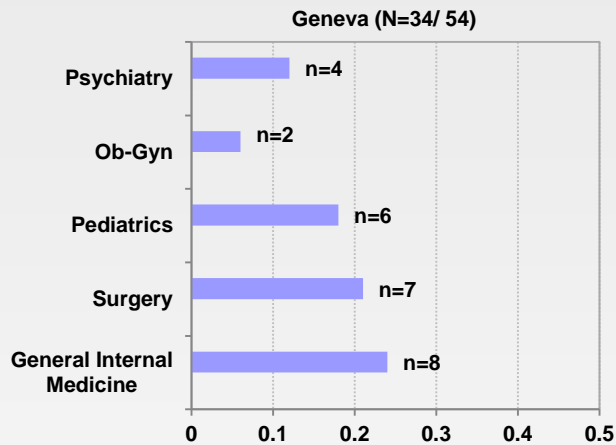
# Reasons for not making a specialty choice

## All 4 faculties (N=120/337)\*



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

# Specialty 1st and 2<sup>nd</sup> choices By faculty (N)

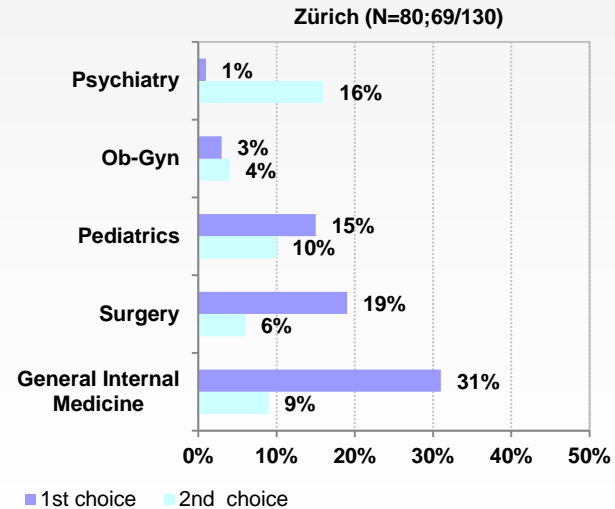
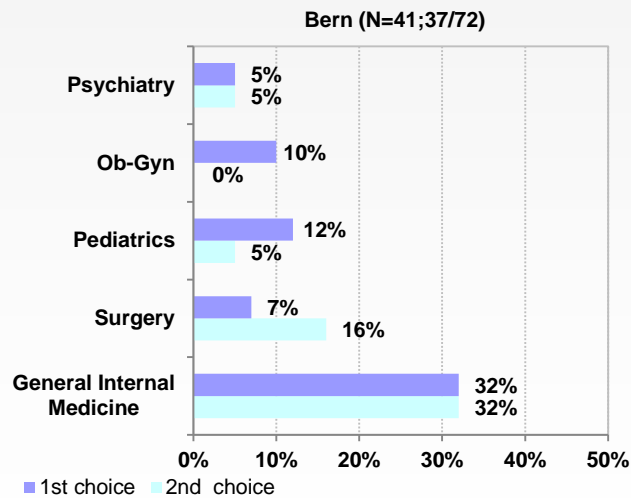
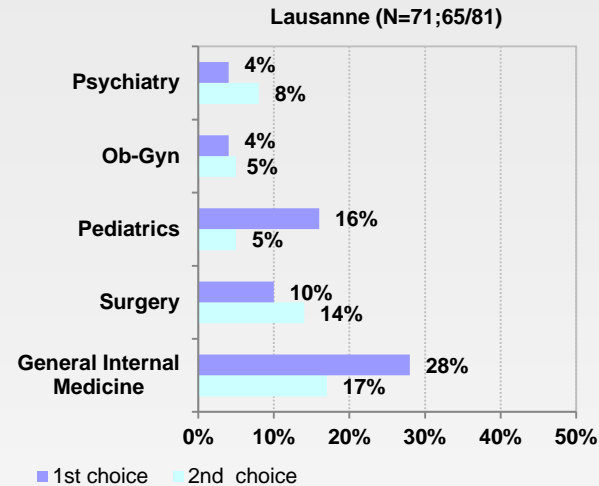
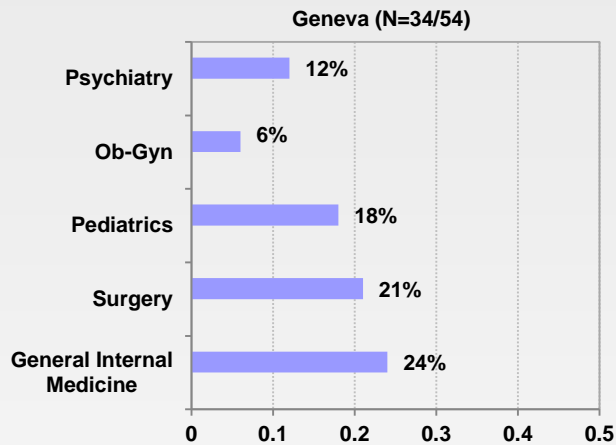


\* N= No of students who make the 1<sup>st</sup> choice; No of students who make the 2<sup>nd</sup> choice; No of students who filled out the questionnaire

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

- In Geneva, only the first choice was asked to the students

# Specialty 1st and 2<sup>nd</sup> choices By faculty (%)



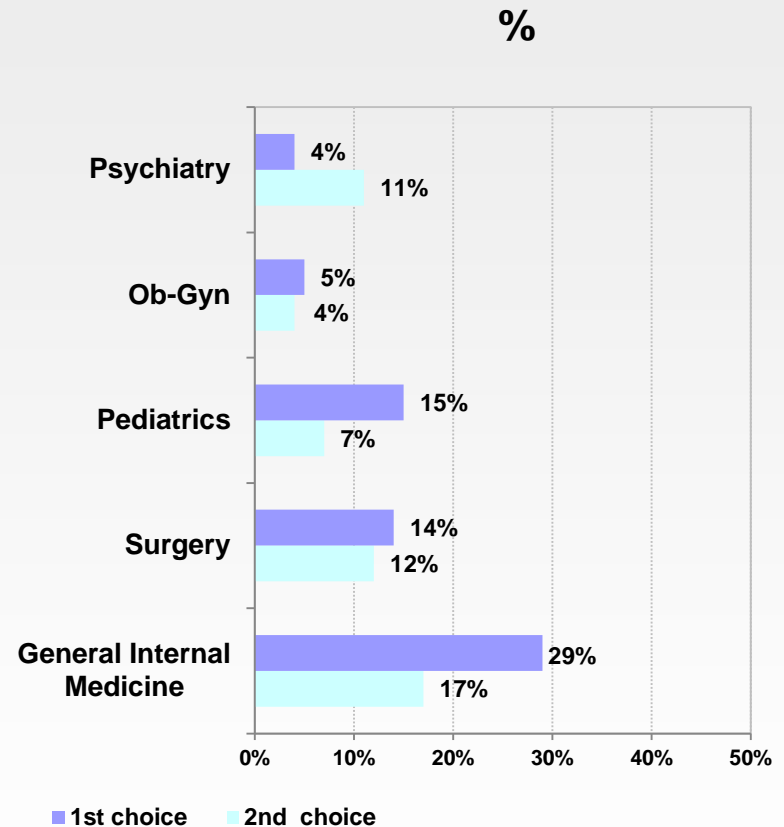
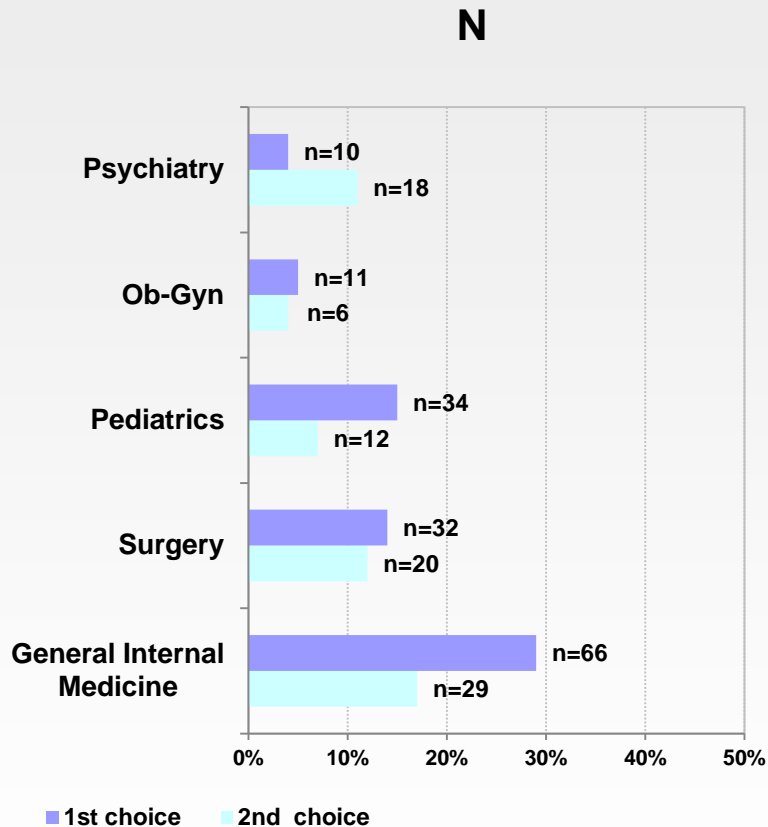
\* N= No of students who make the 1<sup>st</sup> choice; No of students who make the 2<sup>nd</sup> choice; No of students who filled out the questionnaire

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

- In Geneva, only the first choice was asked to the students

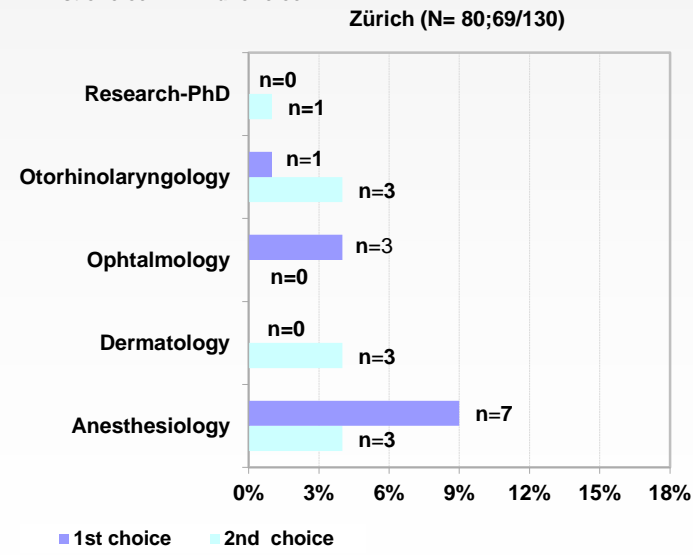
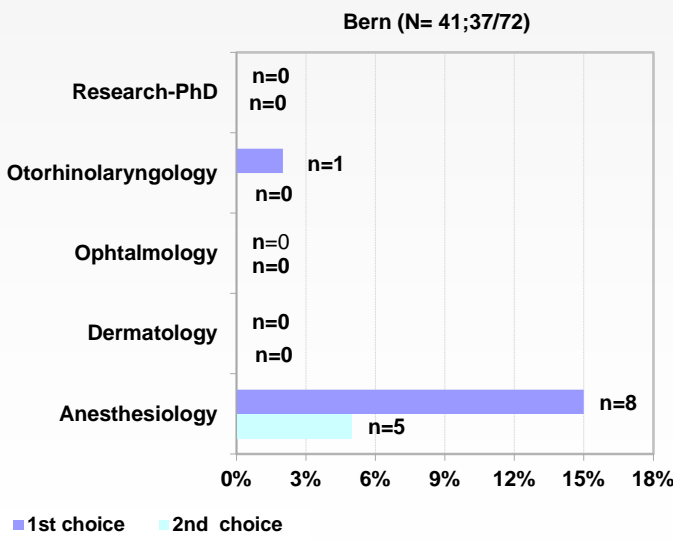
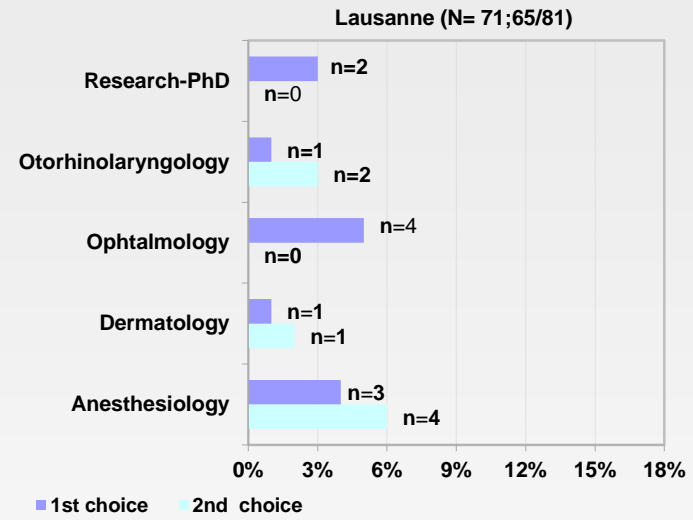
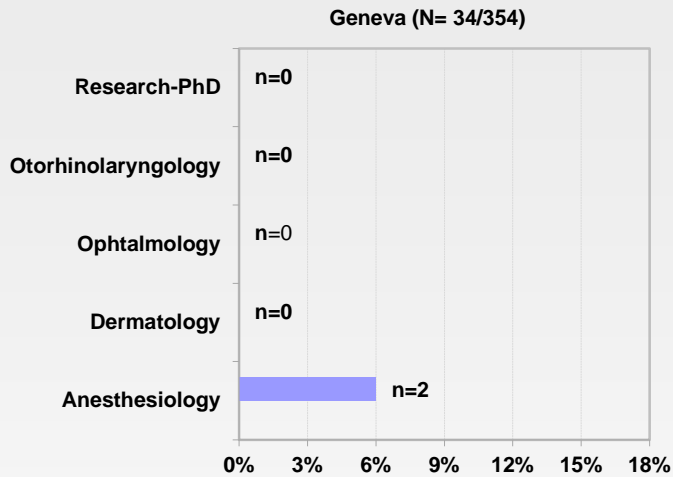
# Specialty 1st and 2<sup>nd</sup> choices

## All 4 faculties (N=226;171;337)\*



\* 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

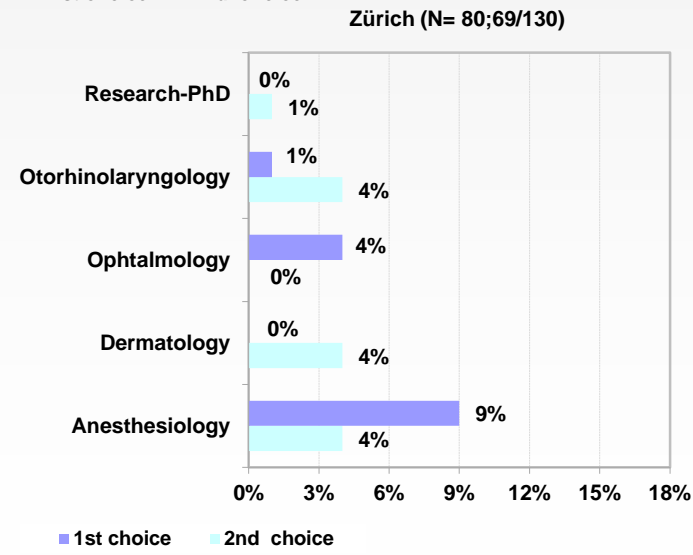
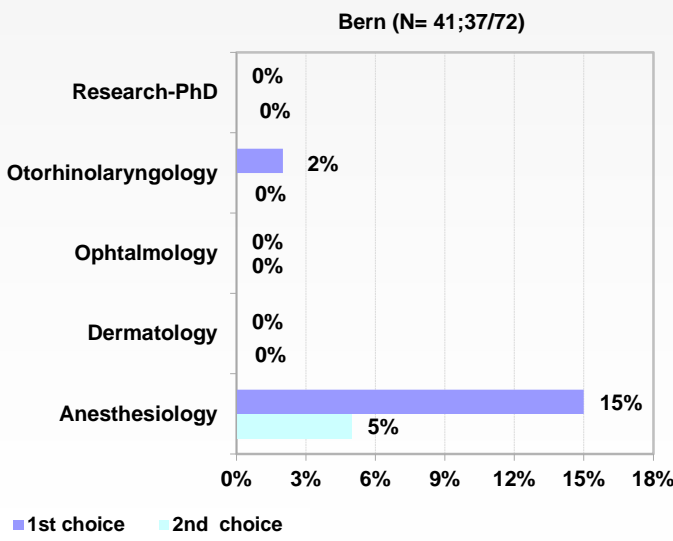
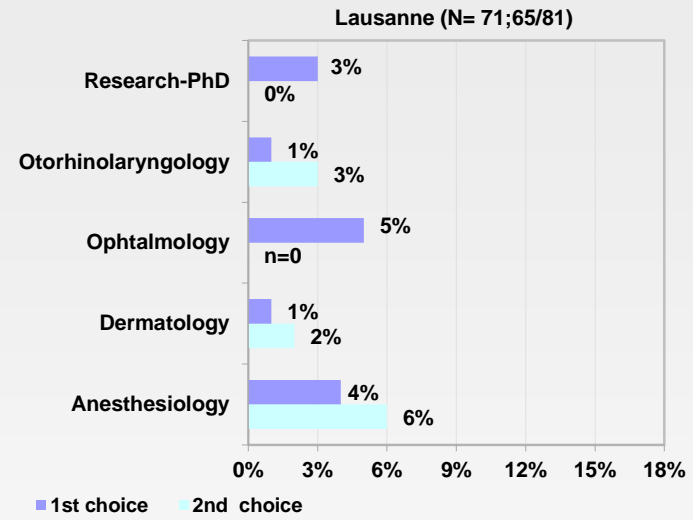
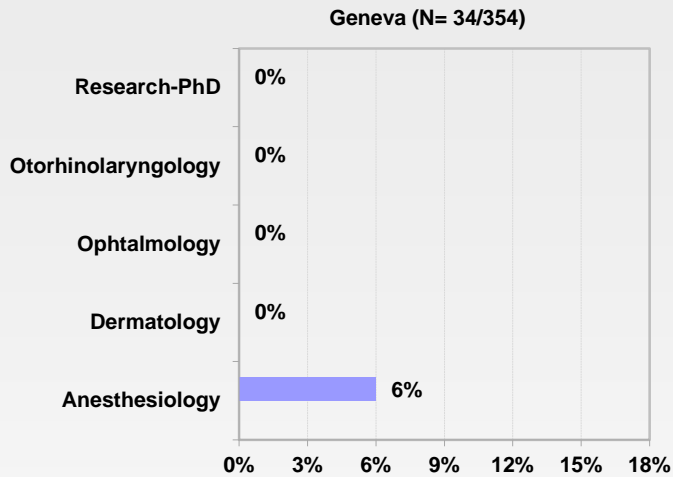
# Subspecialty 1st and 2<sup>nd</sup> choices By faculty (N)



Note : - Not listed are subspecialties not selected by the students or having an N ≤ 1 as 1st or 2<sup>nd</sup> choice.  
 - In Geneva, only the first choice was asked to the students



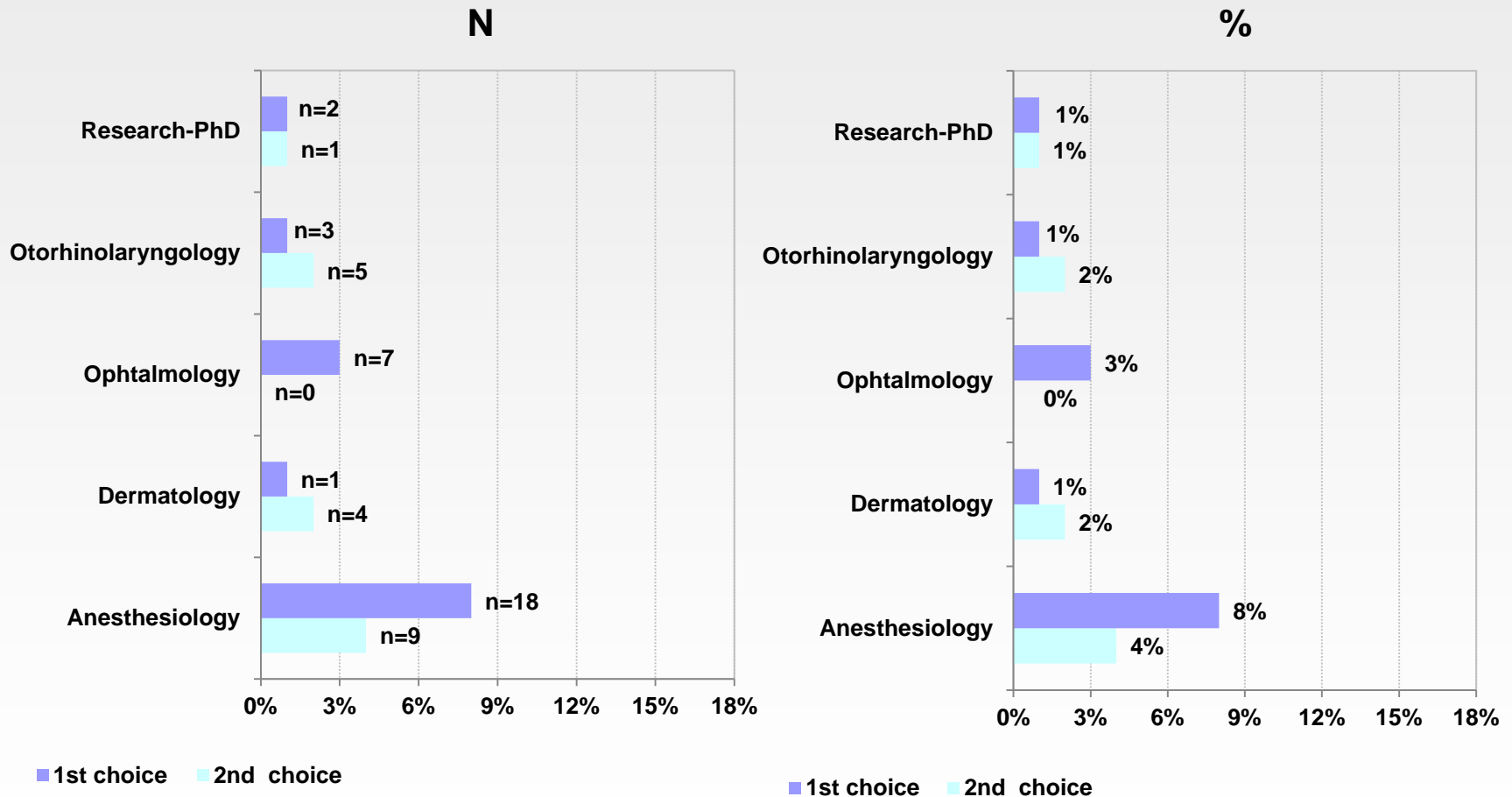
# Subspecialty 1st and 2<sup>nd</sup> choices By faculty (%)



Note : - Not listed are subspecialties not selected by the students or having an N ≤ 1 as 1st or 2<sup>nd</sup> choice.  
 - In Geneva, only the first choice was asked to the students

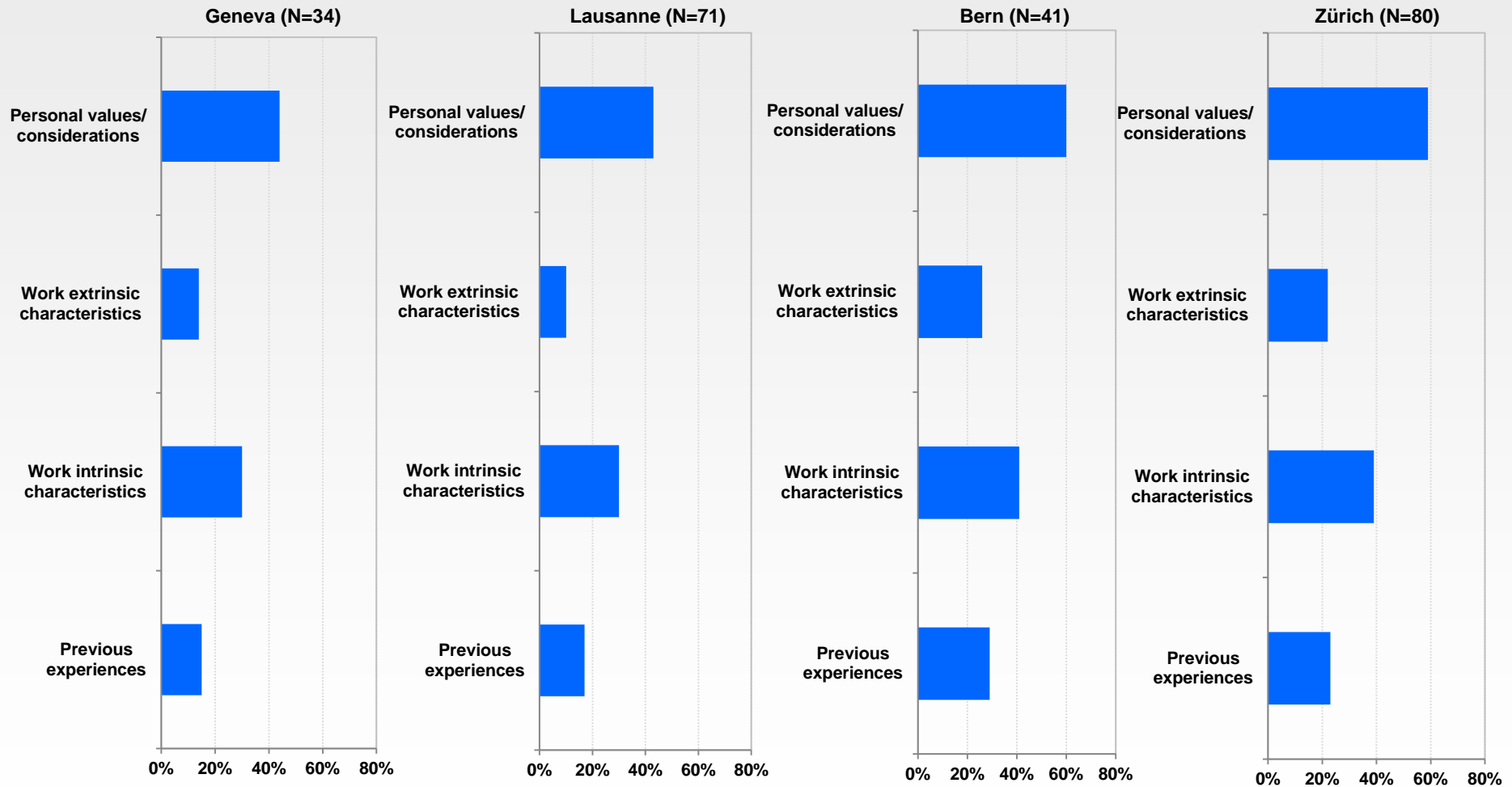
# Subspecialty 1st and 2nd Choices

## All 4 faculties (N=226;171;337)



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

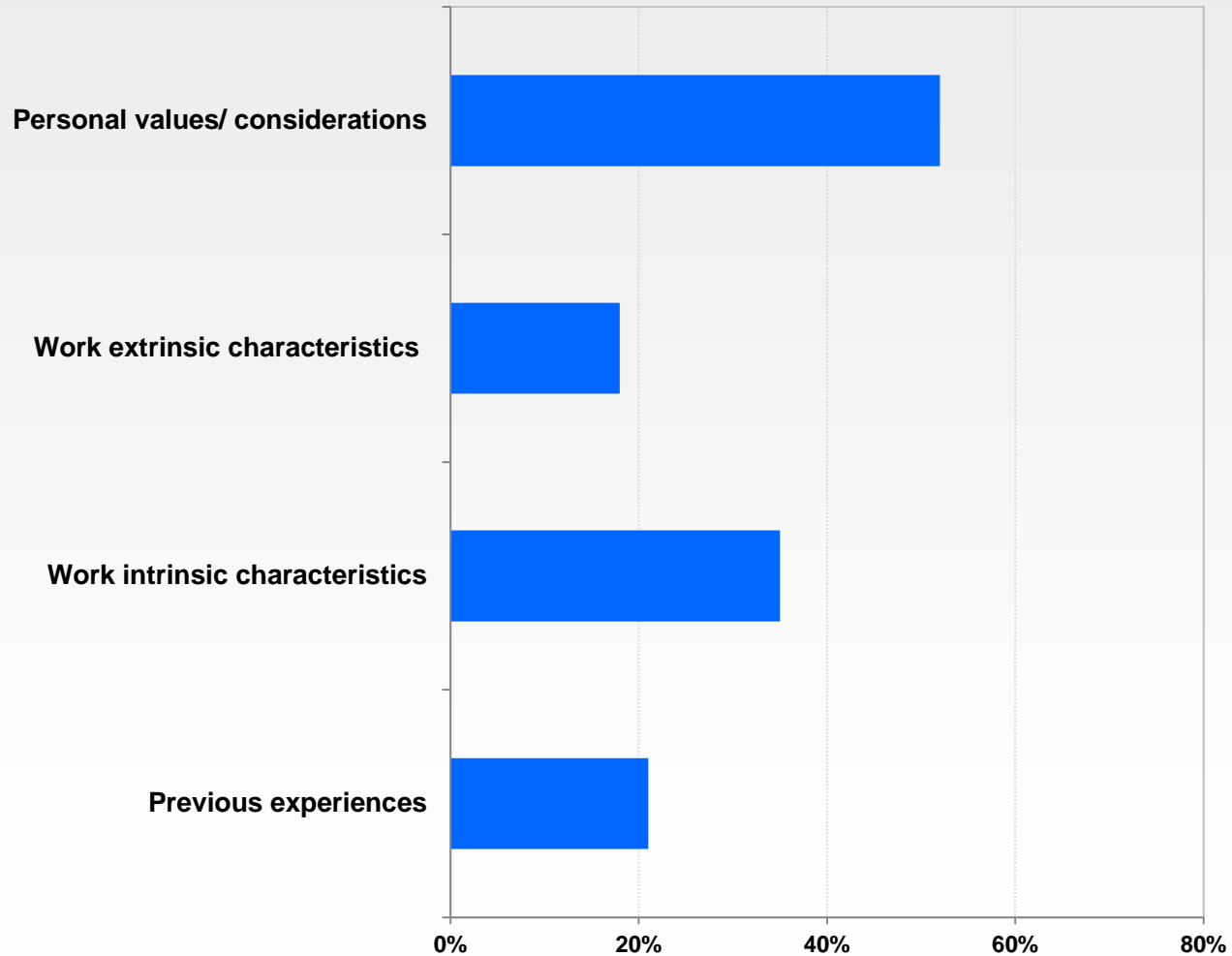
# Reasons for specialty choice By faculty



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

# Reasons for specialty choice

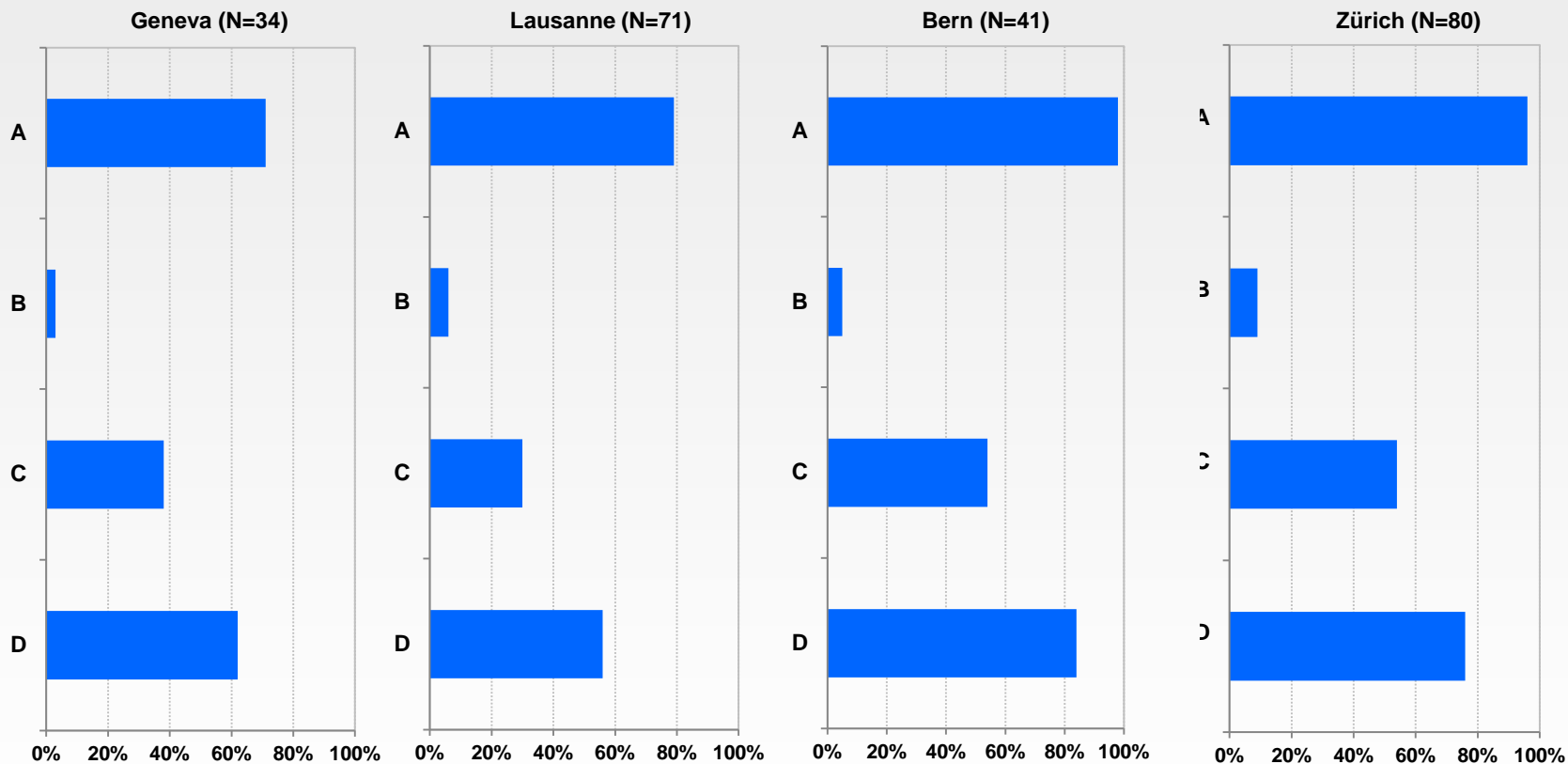
## All 4 faculties (N=226/337)\*



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

# Reasons for specialty choice: Personal values/considerations

## By faculty



**A** Passionate for medicine

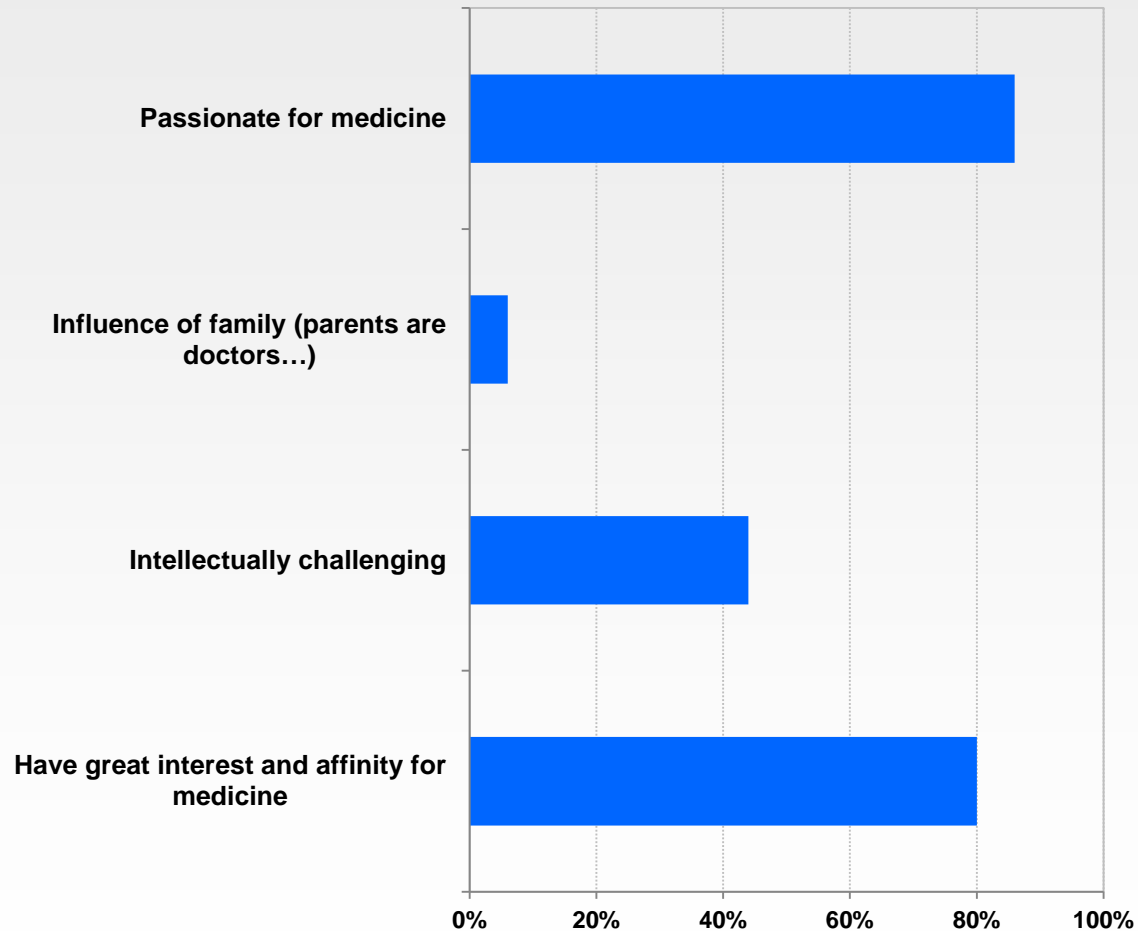
**B** Influence of family (parents are doctors...)

**C** Intellectually challenging

**D** Have great interest and affinity for medicine

# Reasons for specialty choice: Personal values/considerations

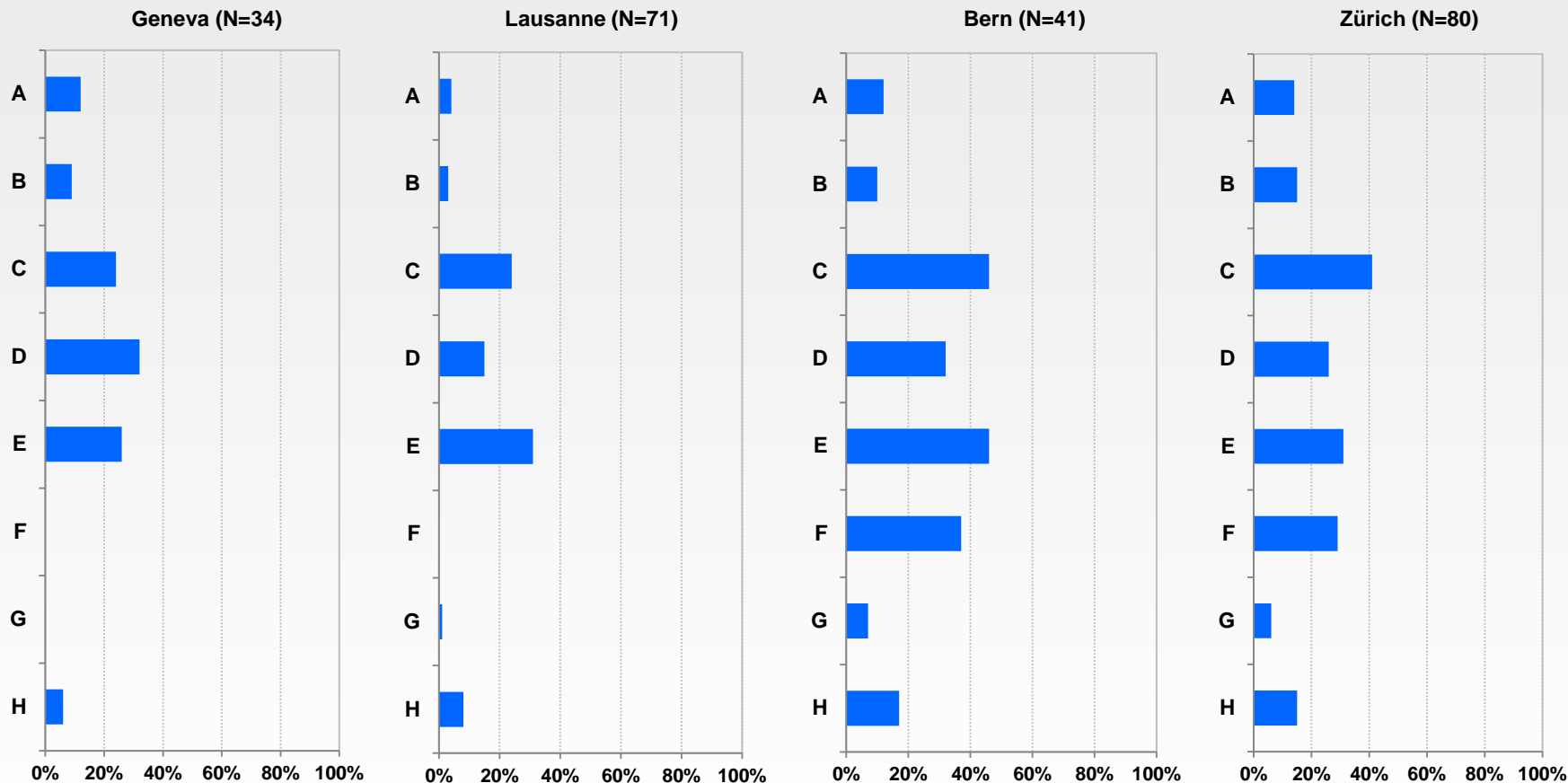
## All 4 faculties (N=226/337)\*



\* Percentages based on the number of students 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)

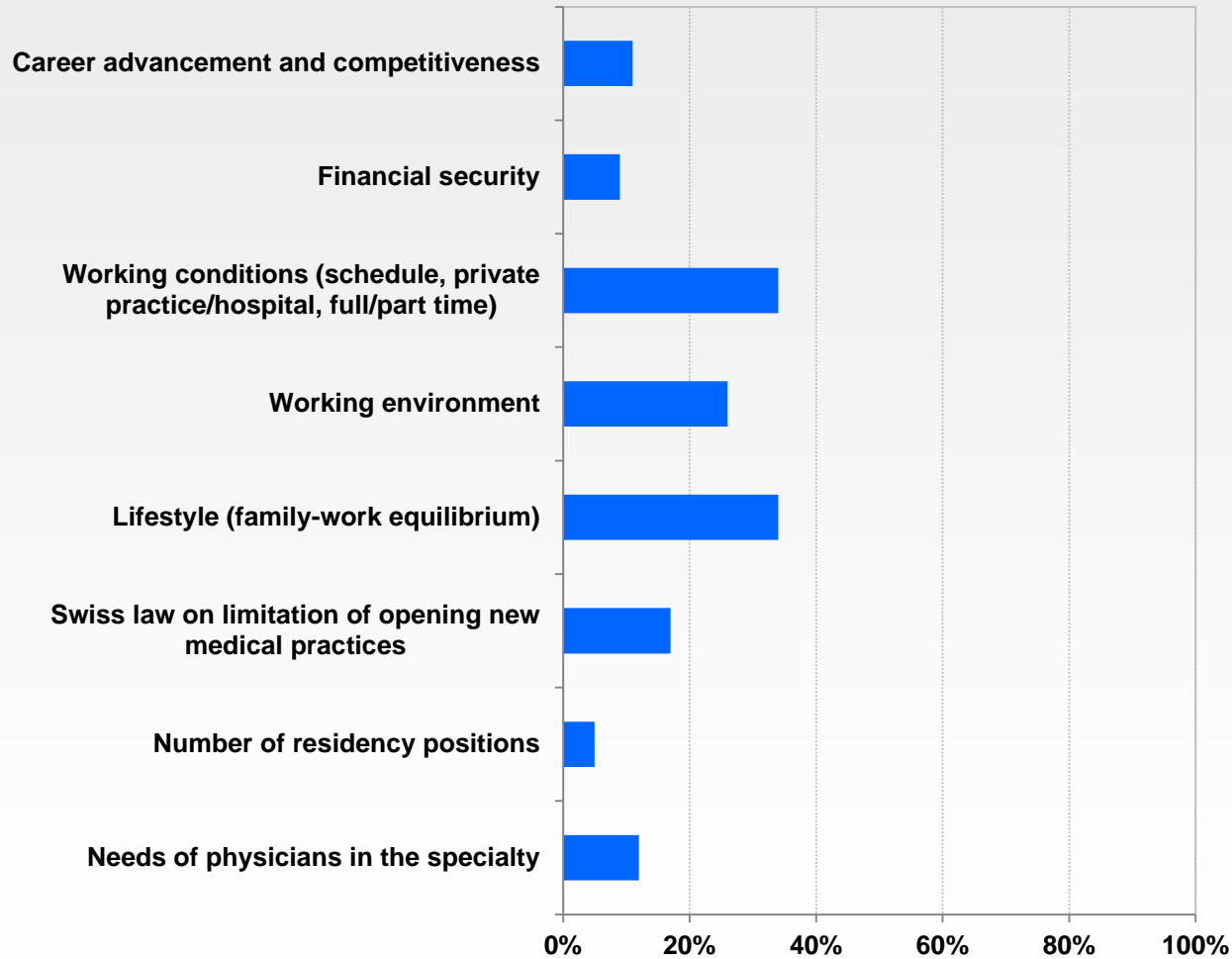
F Swiss law on limitation of opening new medical practices

G Number of residency positions

H Needs of physicians in the specialty

# Reasons for specialty choice: Work extrinsic characteristics

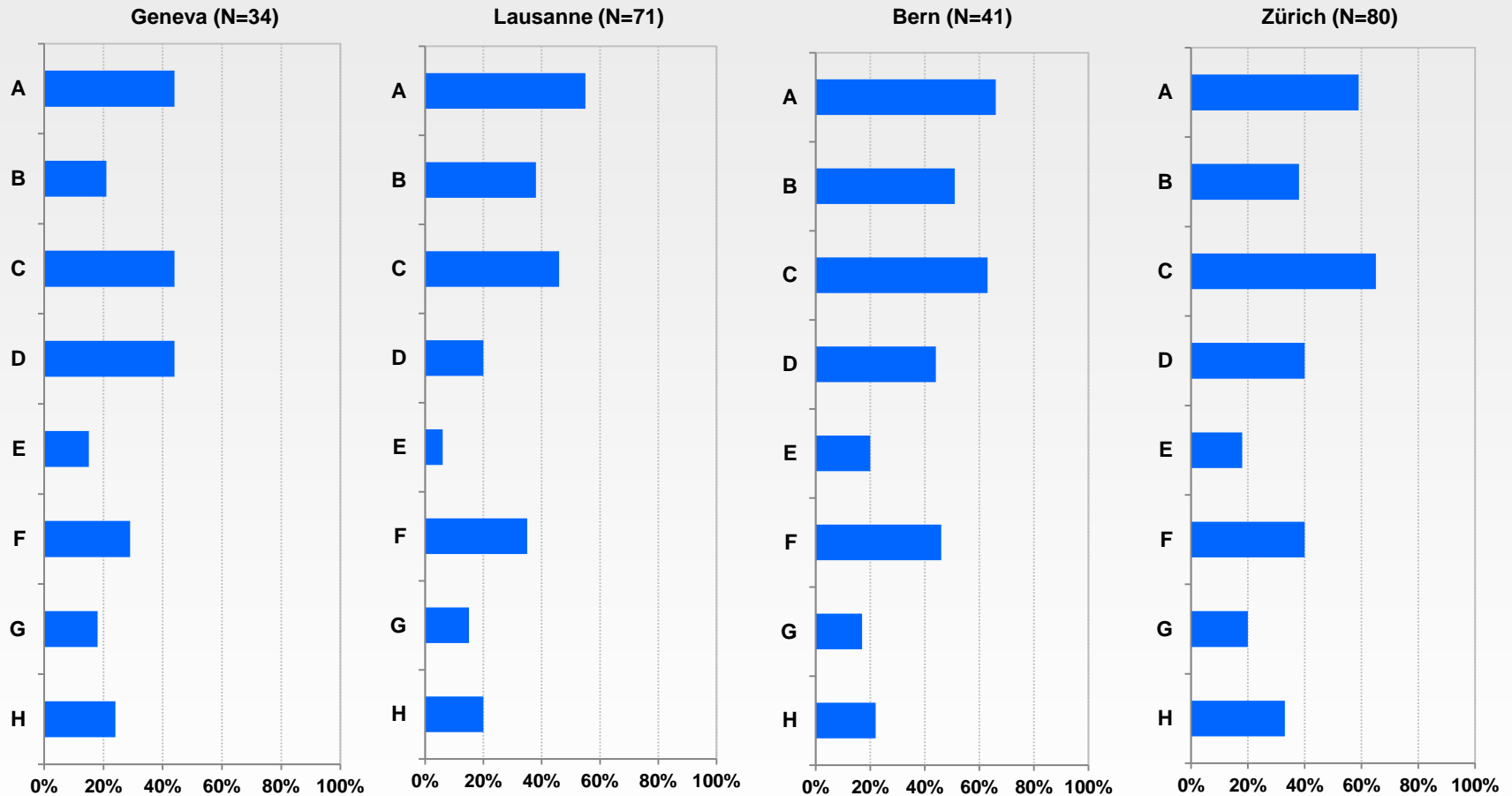
## All 4 faculties (N=226/337)\*



\* Percentages based on the number of students 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

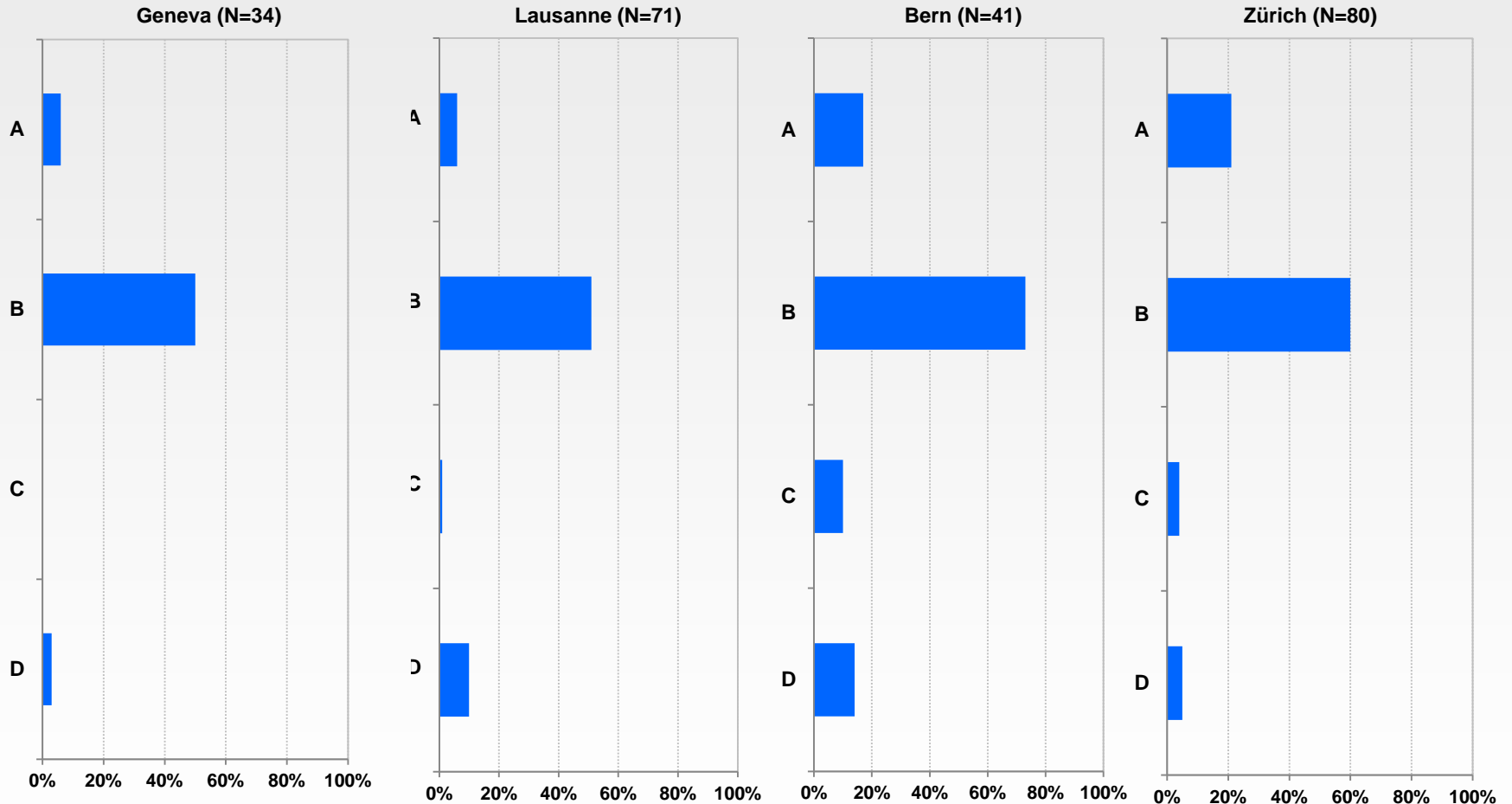
## All 4 faculties (N=226/337)\*



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

# Reasons for specialty choice: Previous experiences

## By faculty



A Personal experiences (accident, disease...)

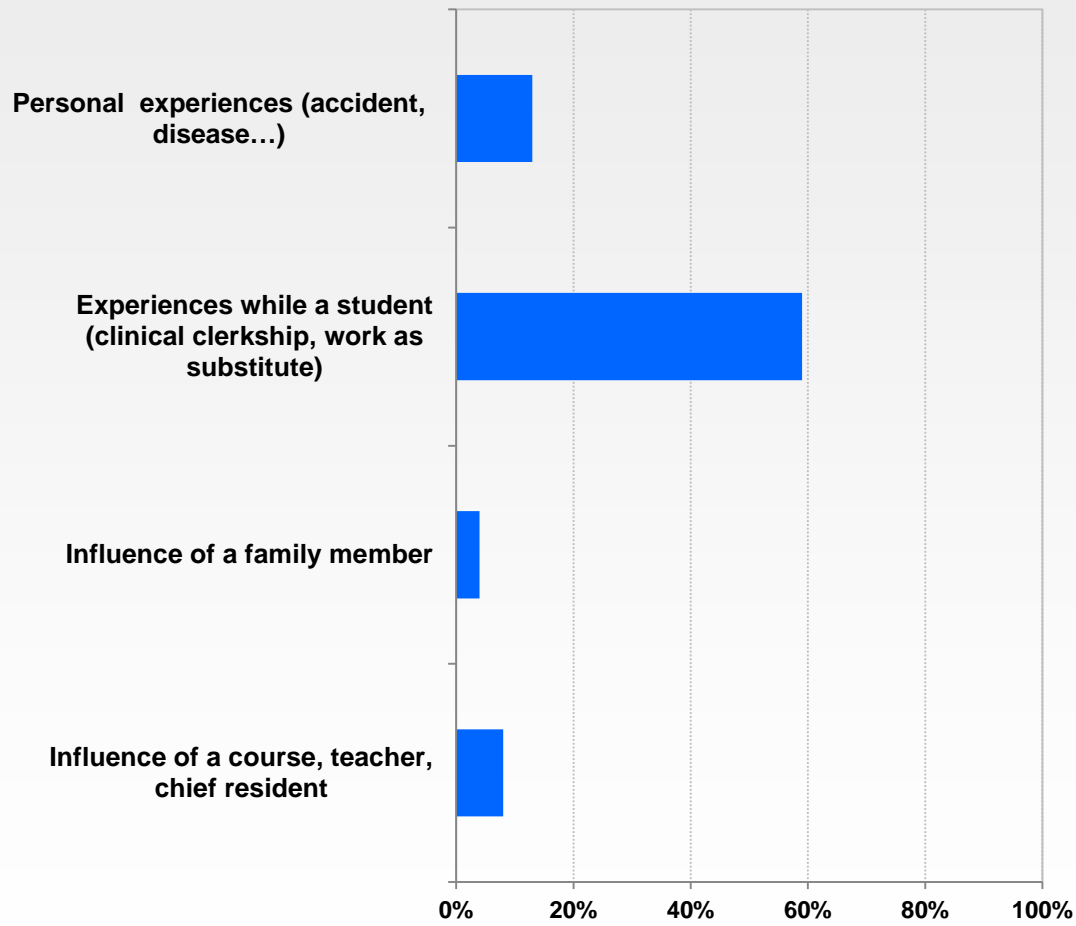
B Experiences while a student (clinical clerkship, work as substitute)

C Influence of a family member

D Influence of a course, teacher, chief resident

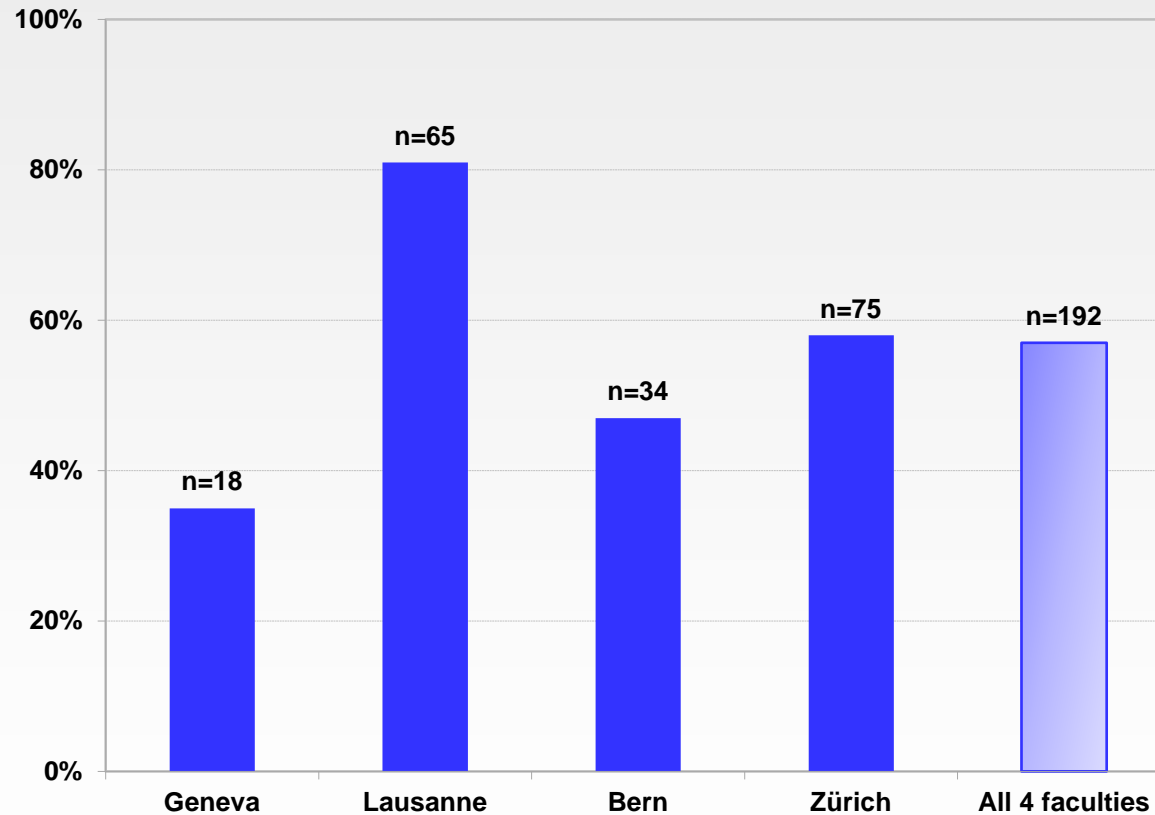
# Reasons for specialty choice: Previous experiences

## All 4 faculties (N=226/337)\*

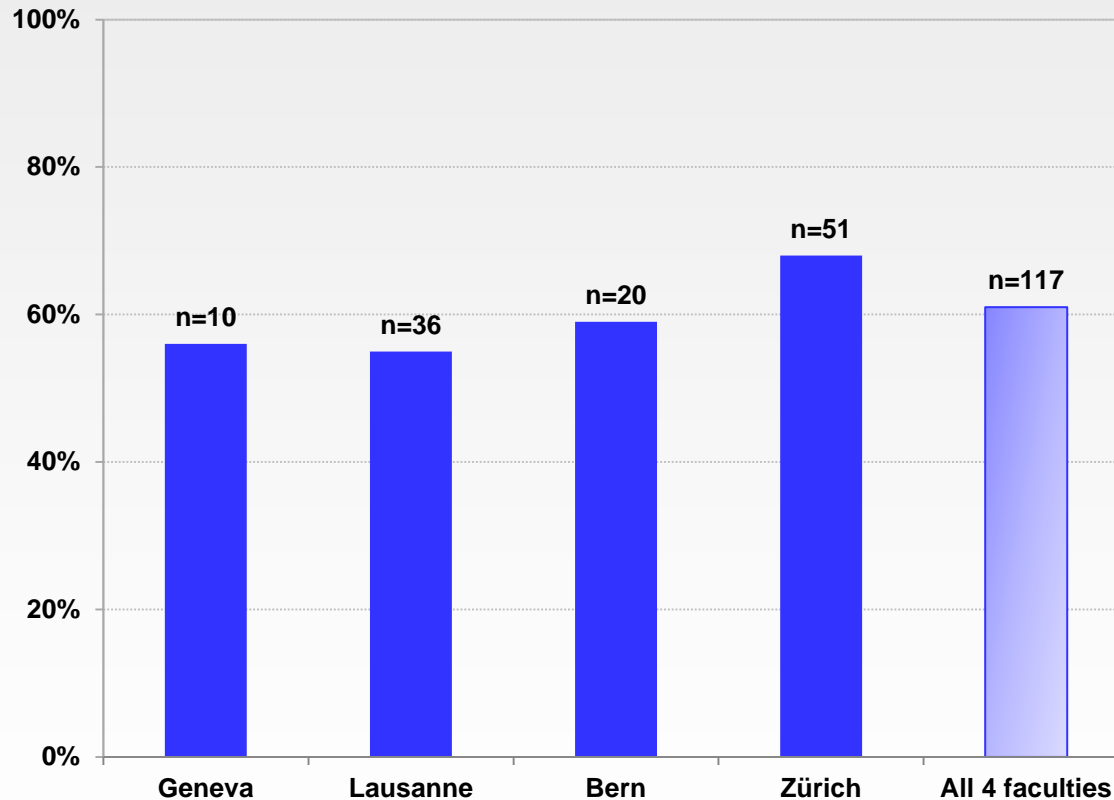


\* Percentages based on the number of students having made a specialty choice

# N and % of students who had been accepted to a first-year residency training program (N=192/337)



# N and % of students with first year residency training in their selected specialty (N=117/192)\*



\* 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
<b>FACULTY</b>	<b>Geneva</b> (18/34)*	<b>39%</b> (7)	28% (5)	0% (0)	0% (0)	33% (6)	<b>100%</b> (18)	0% (0)	0% (0)
	<b>Lausanne</b> (65/59)*	3% (2)	<b>50%</b> (32)	11% (7)	2% (1)	34% (22)	<b>94%</b> (61)	2% (1)	3% (2)
	<b>Bern</b> (34/41)*	0% (0)	0% (0)	<b>50%</b> (17)	6% (2)	44% (15)	0% (0)	<b>97%</b> (33)	3% (1)
	<b>Zürich</b> (47/80)*	0% (0)	0% (0)	4% (2)	<b>47%</b> (22)	49% (23)	4% (2)	<b>96%</b> (45)	0% (0)

\* 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		
192 (58%)		140 (42%)		
Residency in selected specialty	Residency not in selected specialty			
116* (62%)	70 *(38%)			
	Have made specialty choice	Have not made specialty choice	Have made specialty choice	Have not made specialty choice
	48 (26%)	22 (12%)	71 (51%)	69 (49%)
<b>N= 332 (5 with no completed answers)</b>				



# Specialty and residency training choices

## All 4 faculties

Specialty selected		Specialty not selected	
<b>214 (64%)</b>		<b>120 (36%)</b>	
Residency found	Residency not found	Residency found	Residency not found
<b>141*(67%)</b>	<b>71* (33%)</b>	<b>50 (42%)</b>	<b>70 (58%)</b>
Residency in selected specialty	Residency not in selected specialty		
<b>88** (65%)</b>	<b>48**(35%)</b>		
<b>N= 334 (3 with no completed answers)</b>			

\* 2 with no completed answers

\*\* 5 with no completed answers

# Main conclusions: Career plan (1)

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## ■ **Medicine as a career:**

- Most Swiss students chose to study medicine between the age of 16 and 21
- About 70% chose medicine with little or no hesitation

## ■ **Choice of type of career plan:**

- 60% chose to do clinical practice
- 17% chose to be in an academic career
- 2% chose to be in a non-academic career
- 16% were undecided

## Main conclusions: Type of career plan (2)

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- For those who chose an **academic career**, most students (90%) 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**:
  - 43% chose to be employed in a hospital
  - 36% chose to practice in a group of 3 or more physicians
  - 14% chose to be a partner with an other physician
  - 5% chose to practice in solo
  - 2% chose to practice in a “managed care” group

# Main conclusions: Type of career plan (3)

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## Students' main reasons for choosing career plan

- **Personal values/ considerations (39%)**
  - Passionate for medicine (62%)
  
- **Work intrinsic characteristics (32%)**
  - Team work (49%)
  - Variety of activities, experiences, and types of pathologies... (48%)
  - Interpersonal relationship and contact with patients (42%)
  - Multidisciplinarity (29%)
  - Level of responsibility and decision-making (26%)
  - High level of complexity and leading edge progress (26%)
  - Technical skills (manual, precision skills) (24%)
  
- **Work extrinsic characteristics (20%)**
  - Working conditions (schedule, private practice/hospital, full/part time) (41%)
  - Lifestyle (family-work equilibrium) (38%)
  - Working environment (21%)
  - Financial security (21%)
  
- **Previous experiences (12%)**
  - Experiences while a student (clinical clerkship, work as substitute) (29%)

## Main conclusions: Specialty choice (4)

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- For Geneva, Bern and Zürich, about **two thirds** of the students **chose their medical specialty** in their senior years while the last third did not.
- For Lausanne, about **three fourths** of the students **chose their medical specialty** in their senior years while one fourth did not.
- Main reasons for not choosing specialty:
  - Difficulty **choosing among many** specialties (44%)
  - Having **not made the decision** yet (38%)

# Main conclusions: Main specialty choice (5)

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- 29% General Internal Medicine
- 14% Surgery
- 15% Pediatrics
- 6% Obstetrics-Gynecology
- 6% Psychiatry

# Main conclusions: Specialty choice (6)

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## Main reasons for specialty choice

- **Personal values/ considerations (35%)**
  - Passionate for medicine (83%)
  - Have great interest and affinity for medicine (66%)
- **Work intrinsic characteristics (24%)**
  - Variety of activities, experiences, and types of pathologies... (53%)
  - Interpersonal relationship and contact with patients (53%)
  - Technical skills (manual, precise skills) (36%)
  - Multidisciplinarity (36%)
  - Team work (33%)
- **Previous experiences (14%)**
  - Experiences while a student (clinical clerkship, work as substitute) (55%)
- **Work extrinsic characteristics (12%)**
  - Working conditions (schedule, private practice/hospital, full/part time) (32%)
  - Lifestyle (family-work equilibrium) (32%)
  - Working environment (24%)

# Main conclusions:

## Specialty and location of residency training (7)

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### ■ 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.
- For Lausanne, Bern and Zürich, about half of the students (47%-50%) choose to stay in the canton of their undergraduate training, for Geneva only 39%. The other students had their first years of residency in different Swiss cantons.



# Main conclusions:

## Specialty and residency training choices (8)

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- Of those students who **had selected** their **specialty** (64%):
  - Two thirds (67%) had found a residency program
  - Of those who had found a residency program, two thirds (65%) had a residency program in their selected specialty
  
- Of those students who **had not selected their specialty** (36%), less than half of the students (42%) had found a residency program.

# Main conclusions:

## Specialty and residency training choices (9)

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- About two thirds (58%) of the Swiss senior students had **found a residency program**.
- Of those who **had a residency program**, about two thirds(62%) had their residency program in their selected specialty.
- Of those who **had not find a residency program** (42%), about half (51%) had selected a specialty.

# Main conclusions:

## Specialty and residency training choices (10)

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Overall, it seems that:

- A third of the senior students (36%) had not made a firm choice of their specialty at the end of their training.
- Not finding a residency training program is rather dependent of whether the students had made a specialty choice or not.
- About two thirds (62%) of the students started their residency in their selected specialty.
- Only 12% started their residency training program without having made their specialty.