

Descriptive Analysis of Tracheostomy Resource Utilization Study

- Interested variables
- Plots of categorical variables and outcomes
 - Races
 - Indication for tracheostomy radio
 - Pediatric Cerebral Performance Category
 - Outcomes
- Bar plots of Resource Utilization Outcomes
- Longitudinal trajectories for FSS_total for each individual, mean (mark in red) and confidence interval
- Facet plots of FSS-total
 - ED visits at 1 and 3 -year follow-up
 - ED visits by 3 age groups: age at tracheostomy<3; 3<=age<8; age>=8
 - Medications at 1 and 3 -year follow-up
 - Medications by 3 age groups
 - Hospital admissions at 1 and 3 -year follow-up
 - Hospital admissions by 3 age groups
- Summary of age, mortality, race, insurance, indication_fortrach, hospital_lengthofstay, sedatives, and vasoactives
- Summary of pcpc and fss_total
- Summary of admit, edvisits and meds

Interested variables

Covariates:

demographics(record_id, age, race, insurance)

Mortality before one-year follow-up

Mortality before three-year follow-up

Indication for tracheostomy radio

Total hospital stay (days)

Duration (in days) of continuous infusion of sedatives

Duration (in days) of continuous infusion of vasoactives

Pediatric Cerebral Performance Category(Admission, Discharge, year1, year3, year5, mortality)

Functional Status Score TOTAL(pre-Admission, admission, discharge, year1, year3, year5, mortality)

Outcomes:

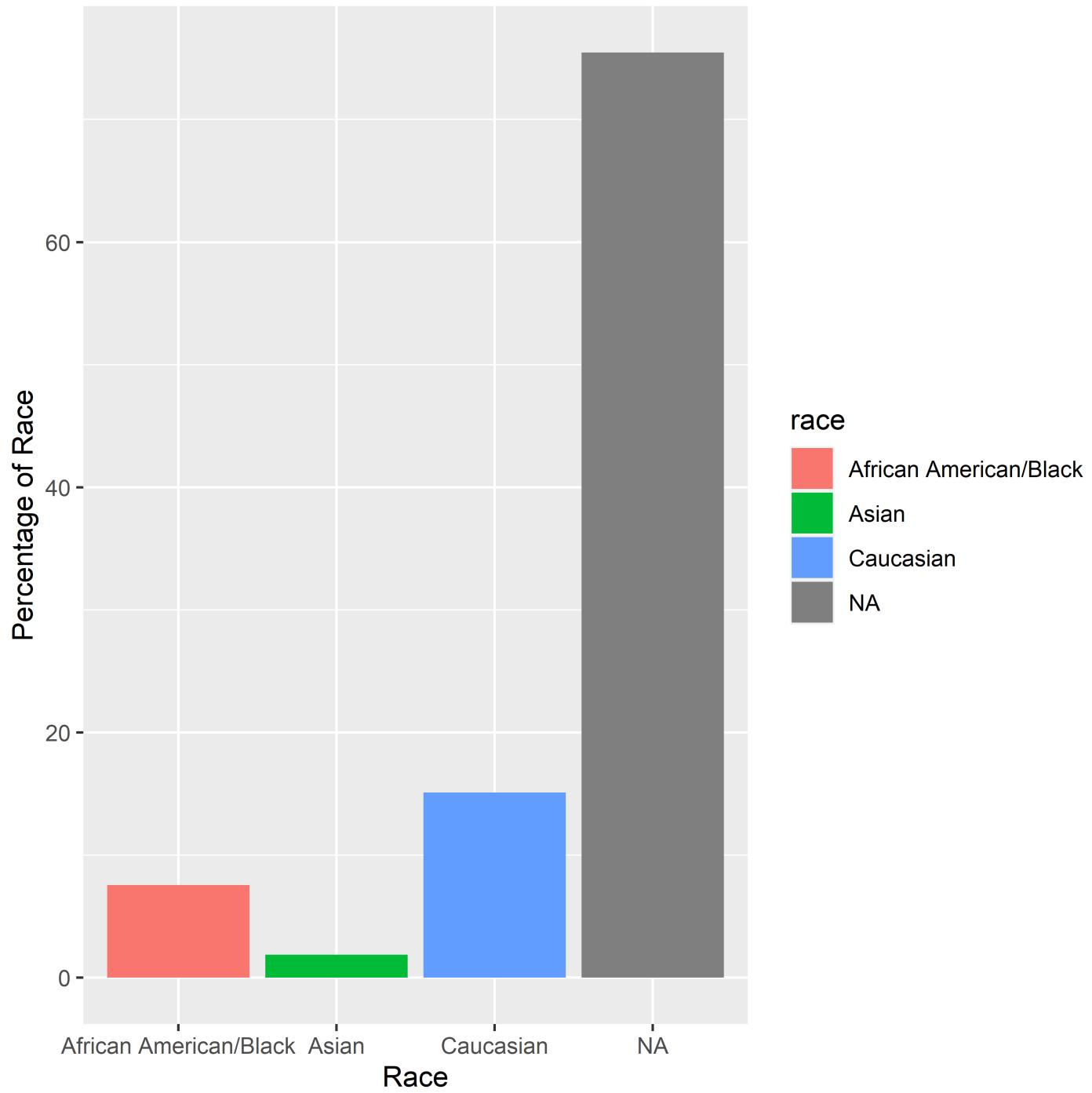
Number of hospital admissions(year1, year3, year5)

Number of ED visits(year1, year3, year5)

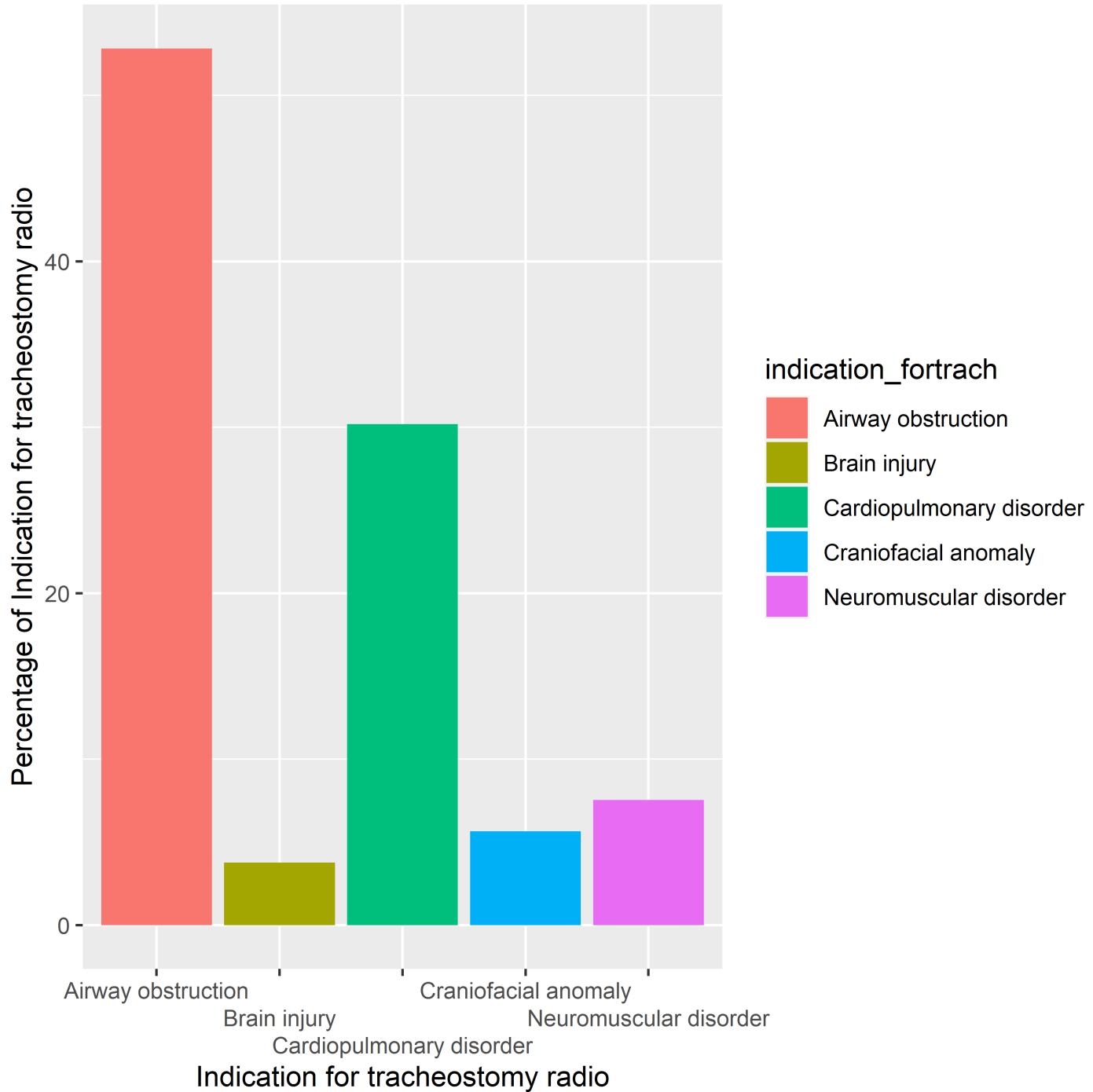
Number of Prescription Medications(Discharge, year1, year3, year5)

Plots of categorical variables and outcomes

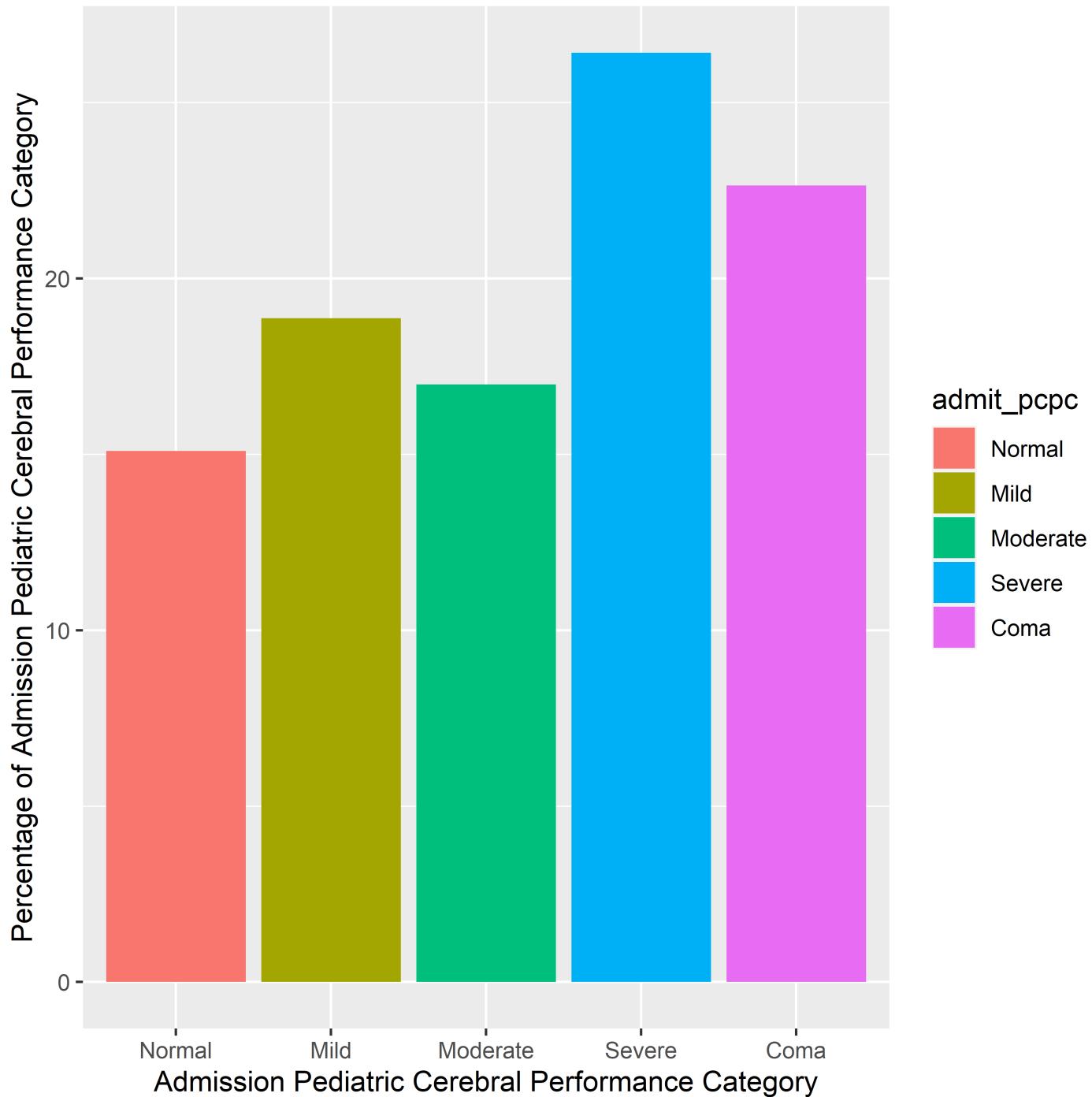
Races

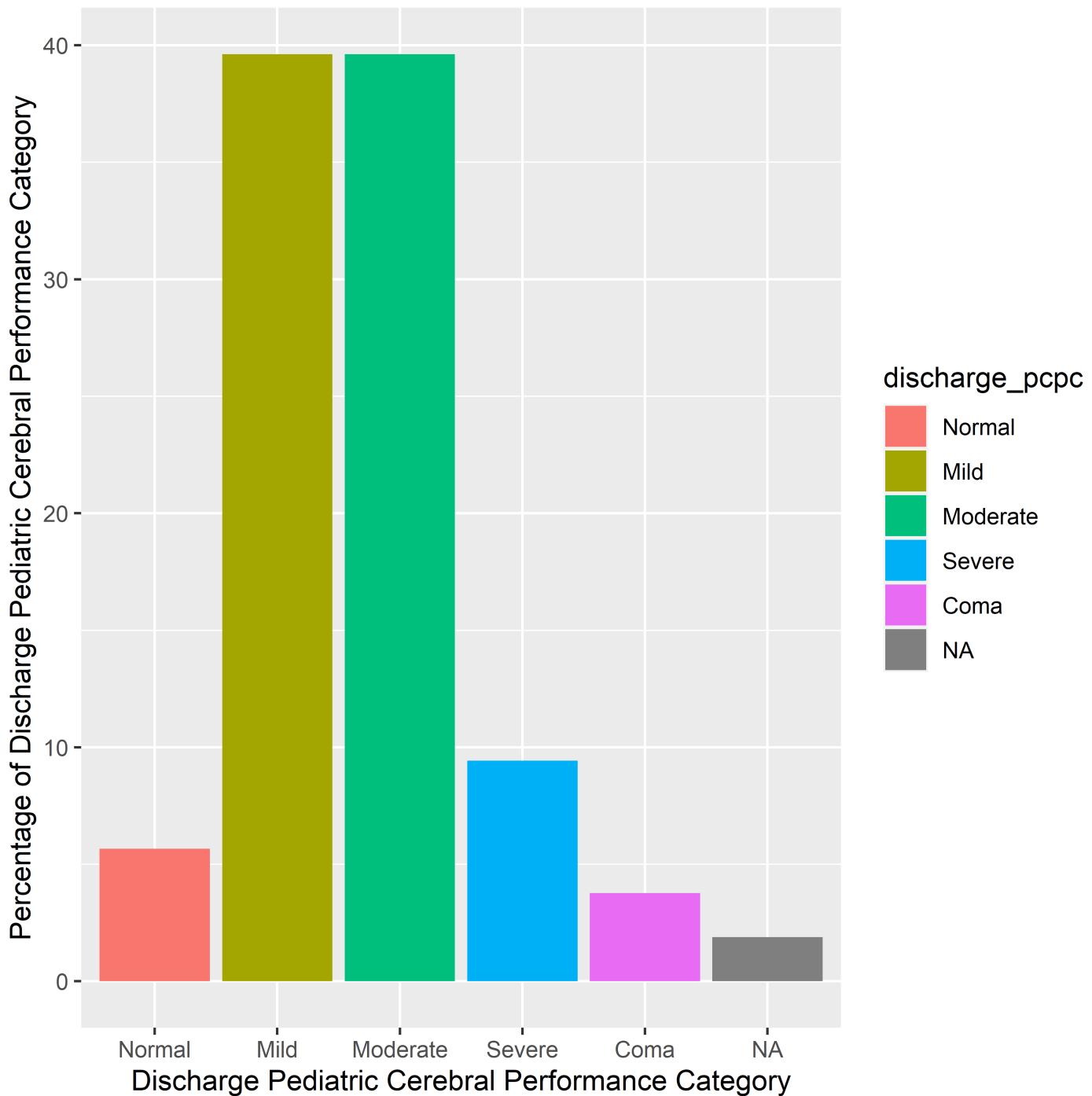


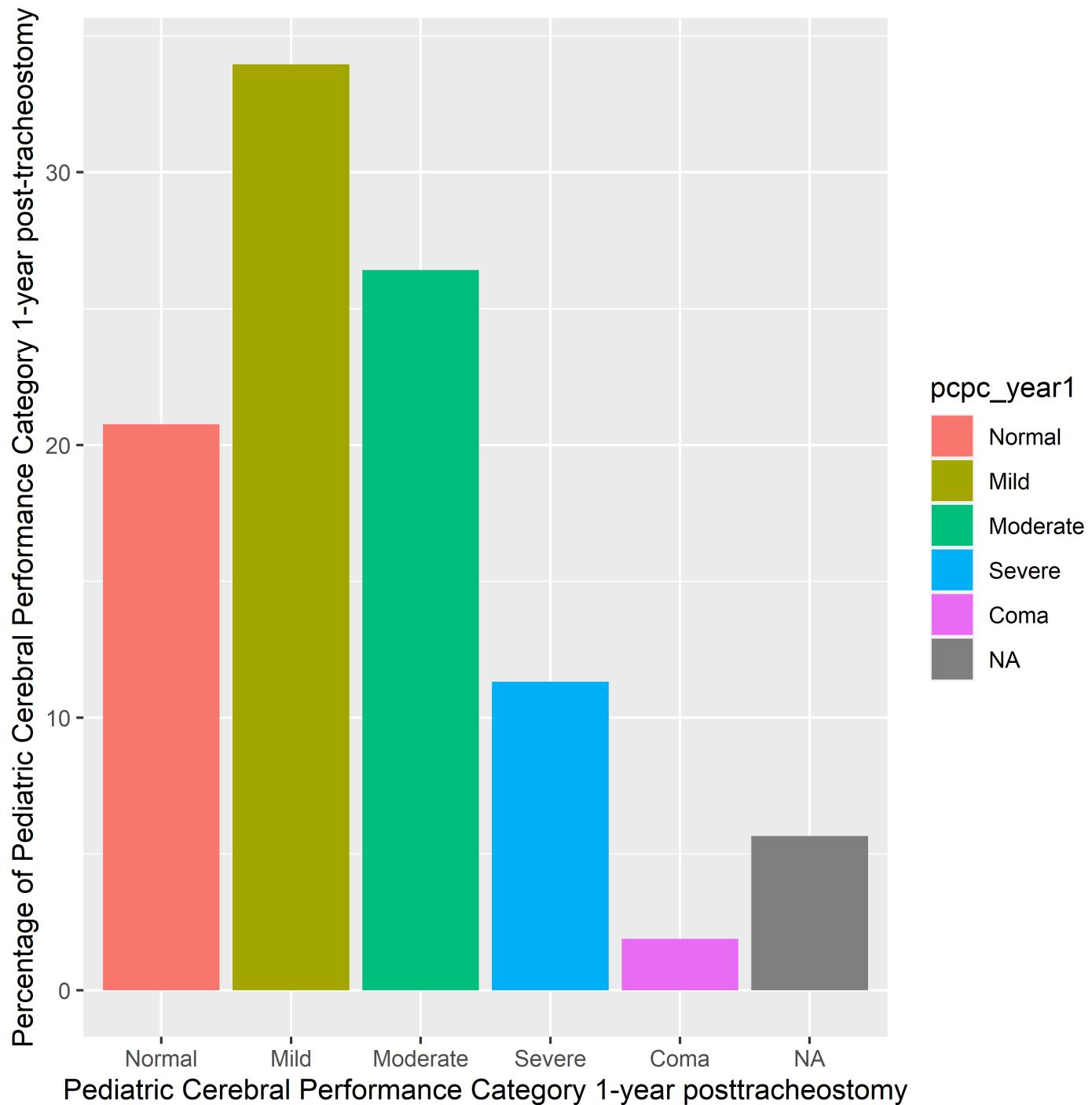
Indication for tracheostomy radio

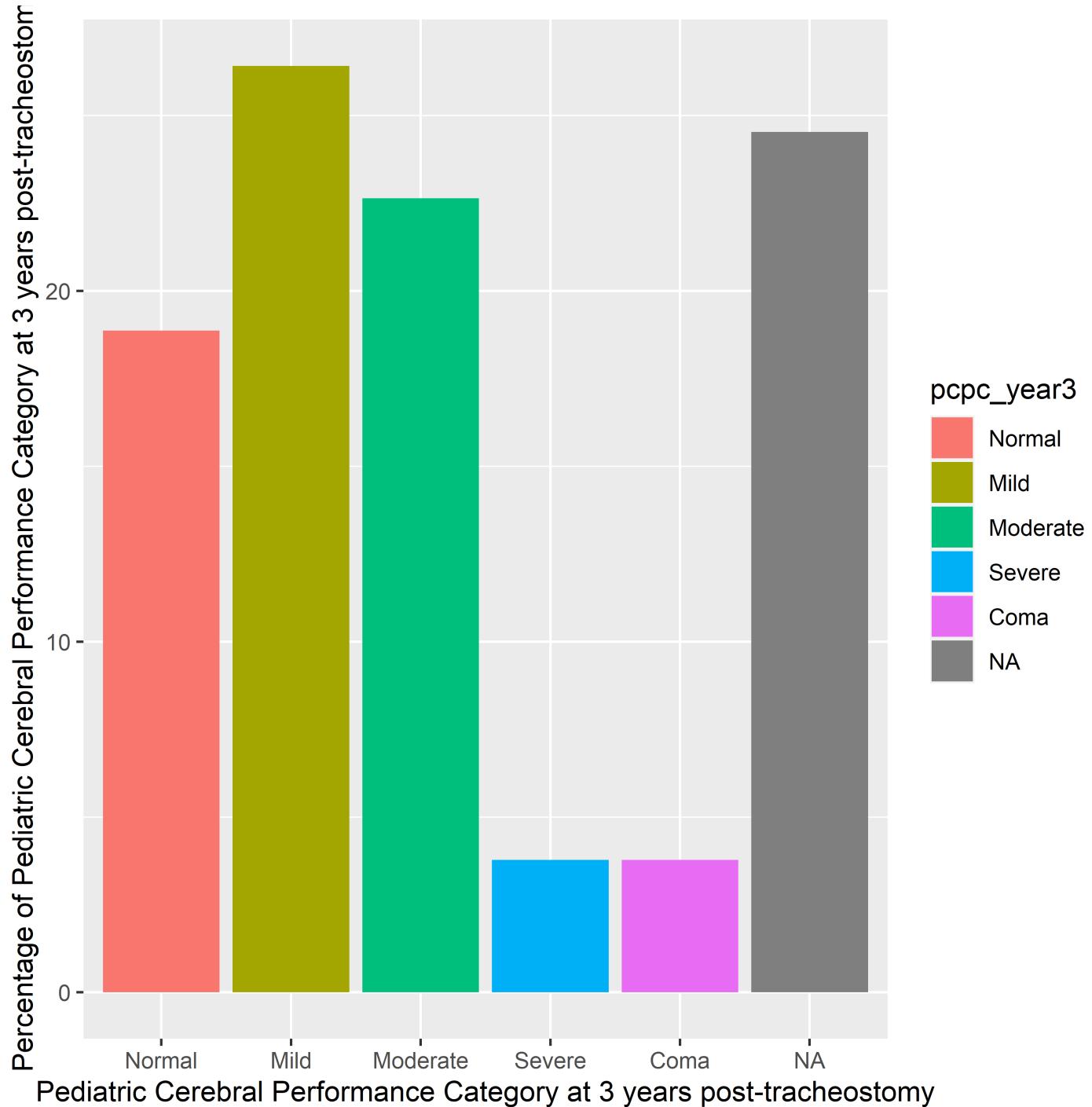


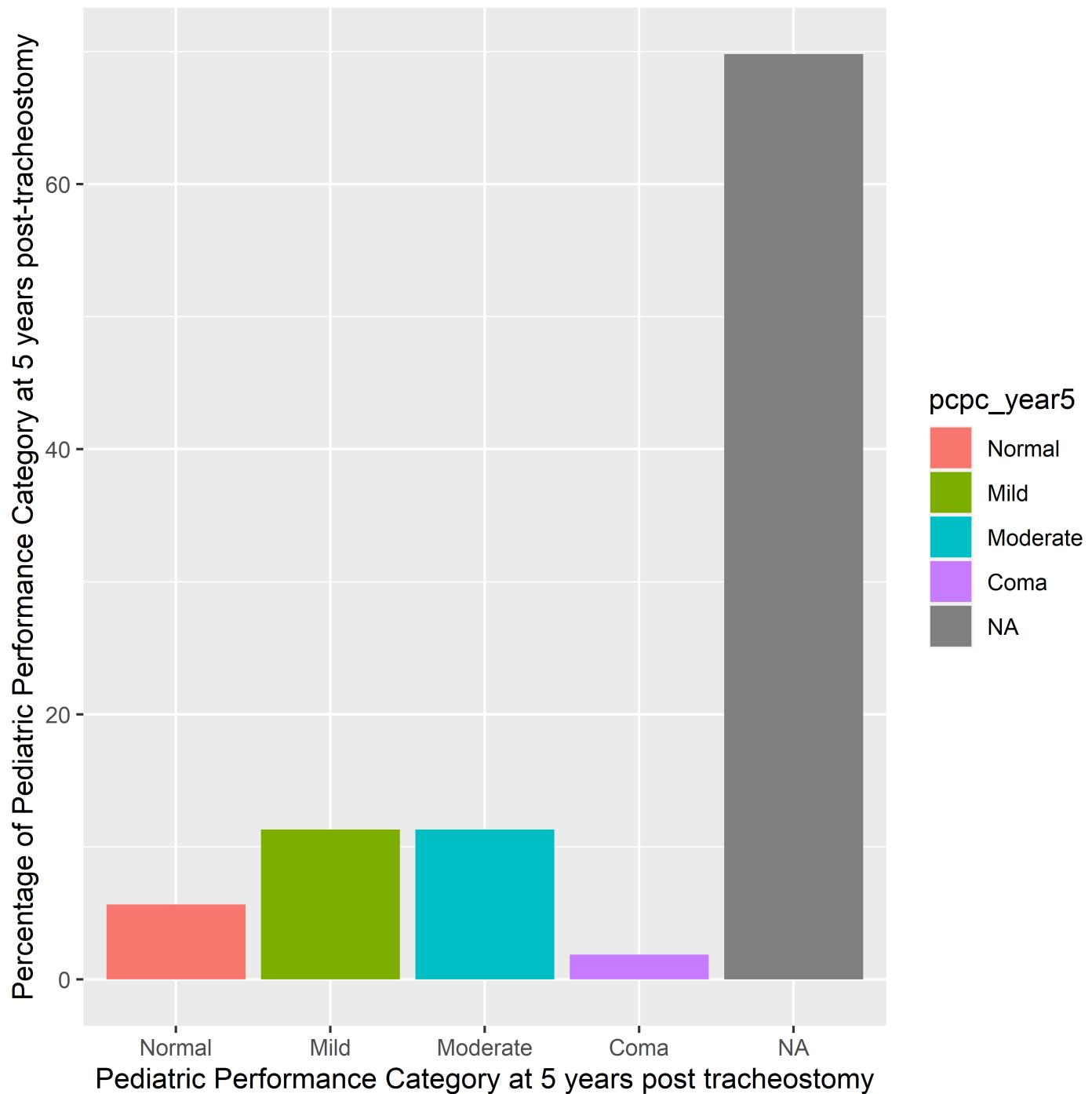
Pediatric Cerebral Performance Category

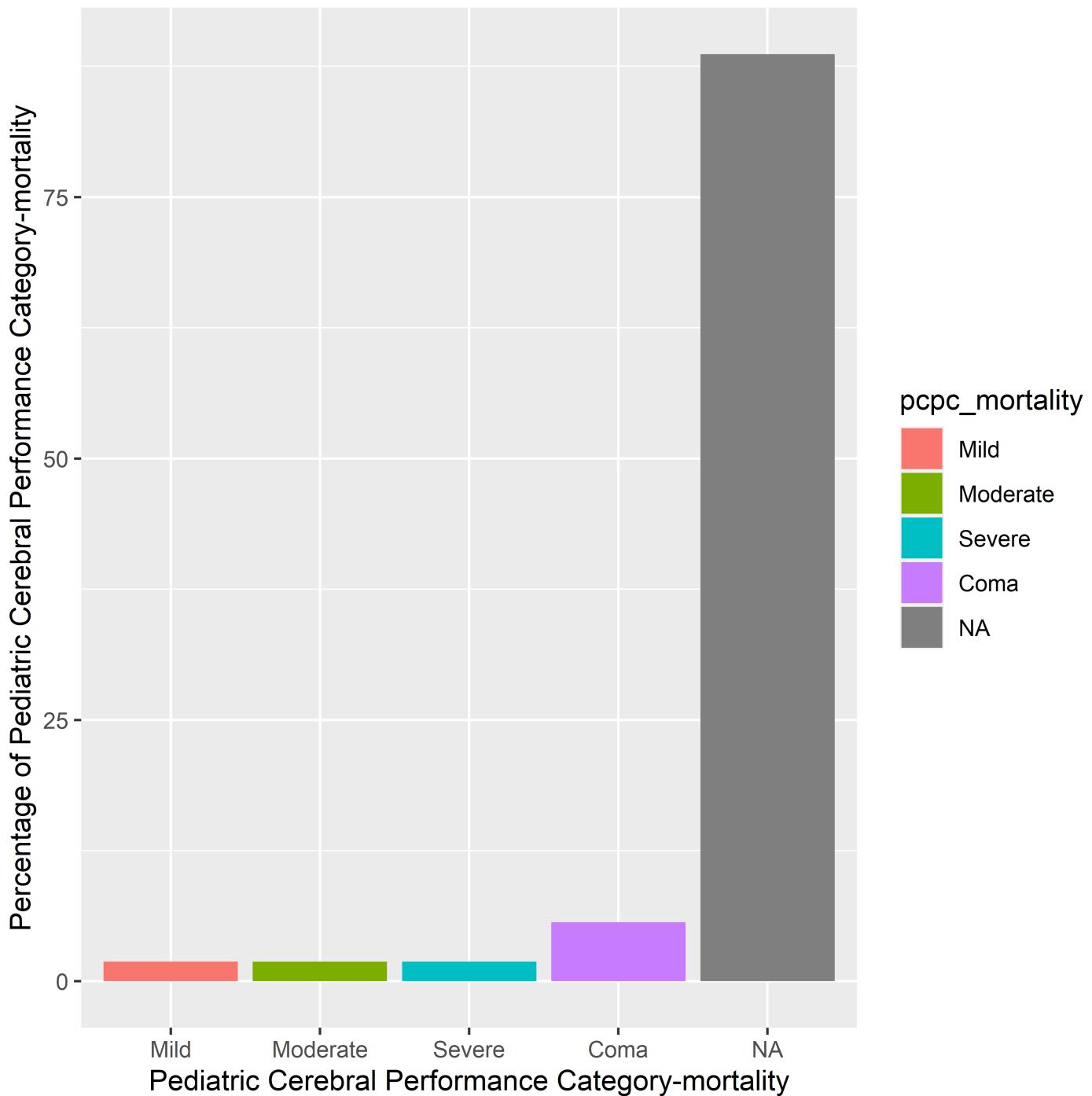




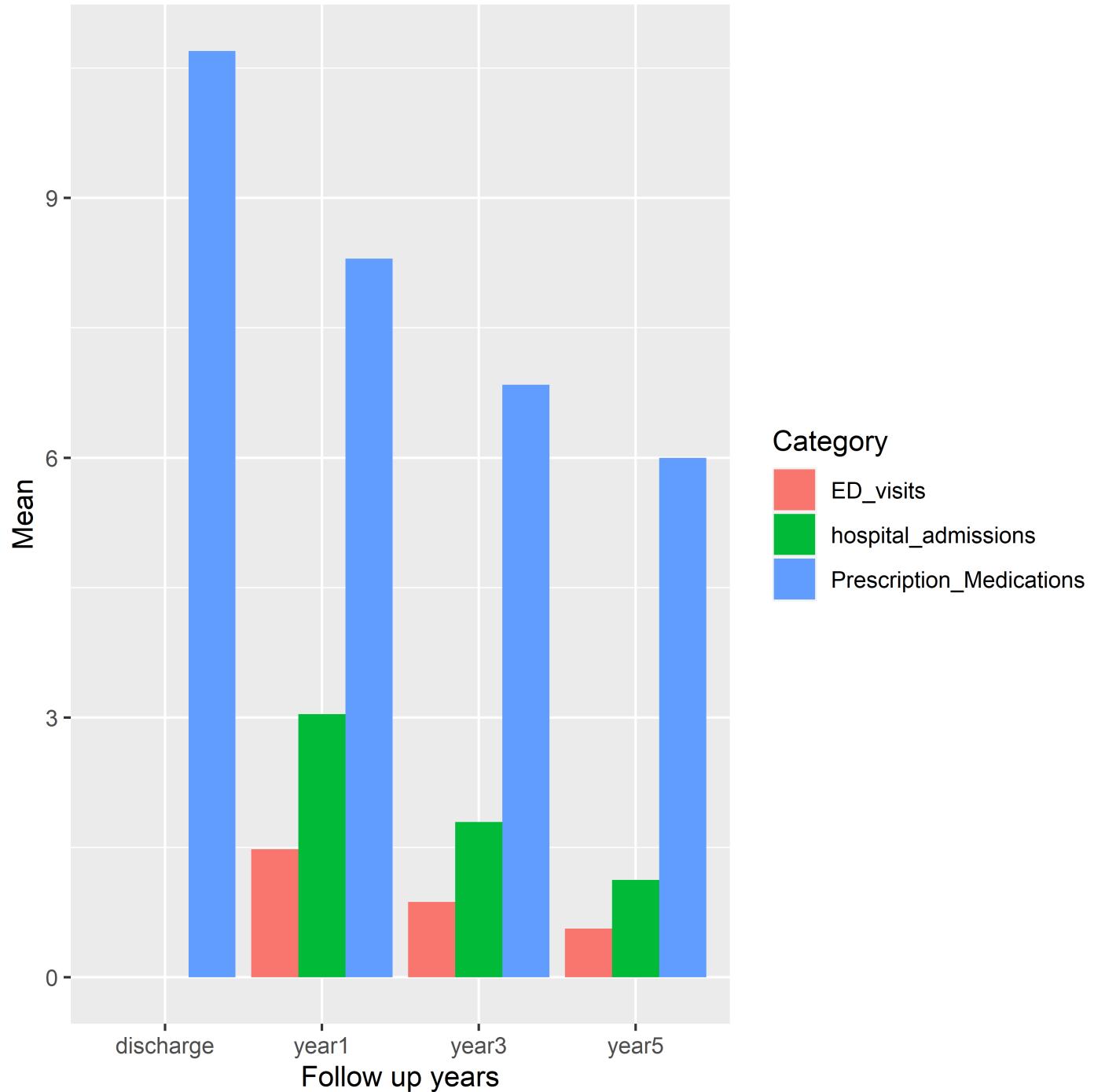






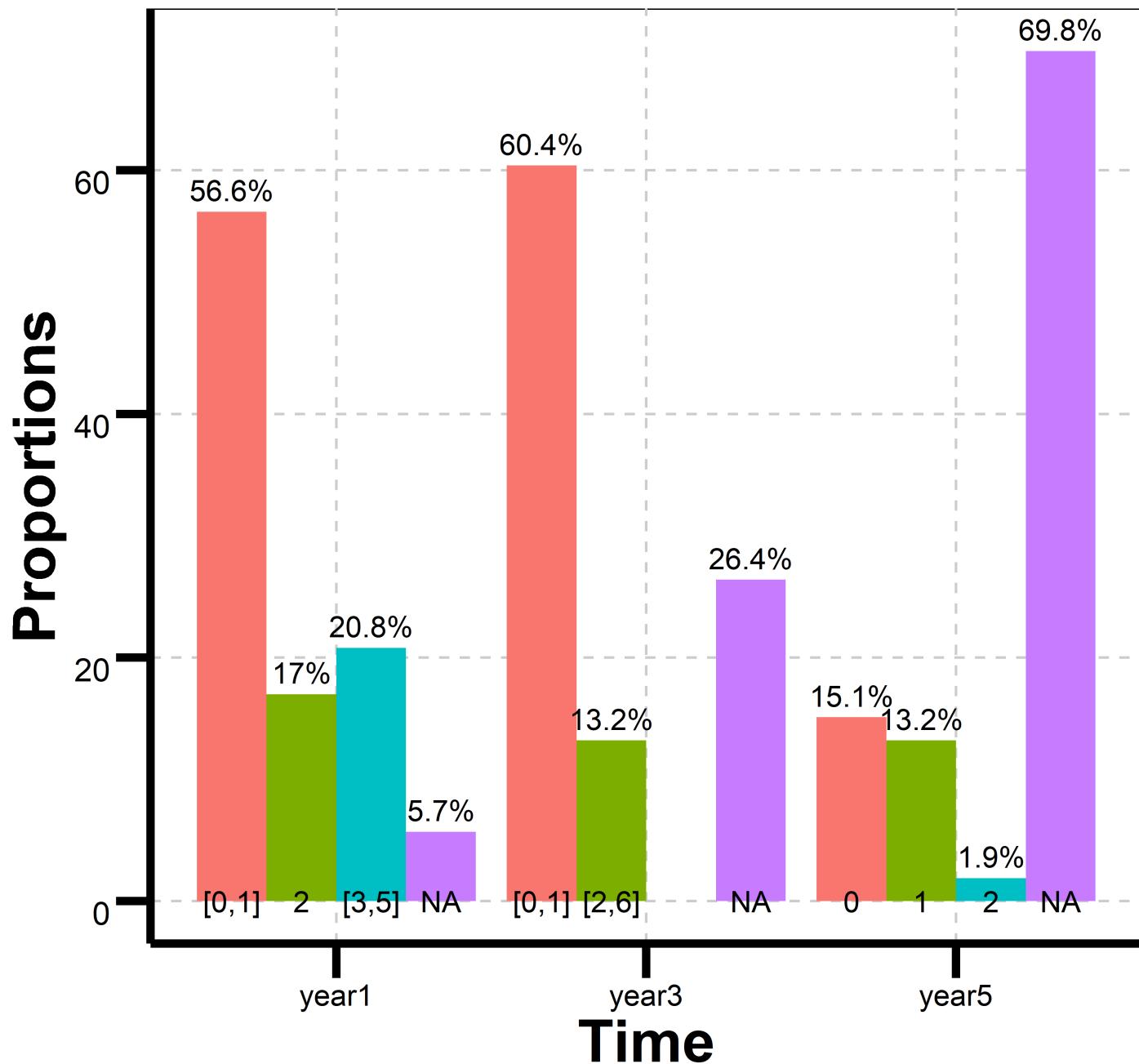


Outcomes

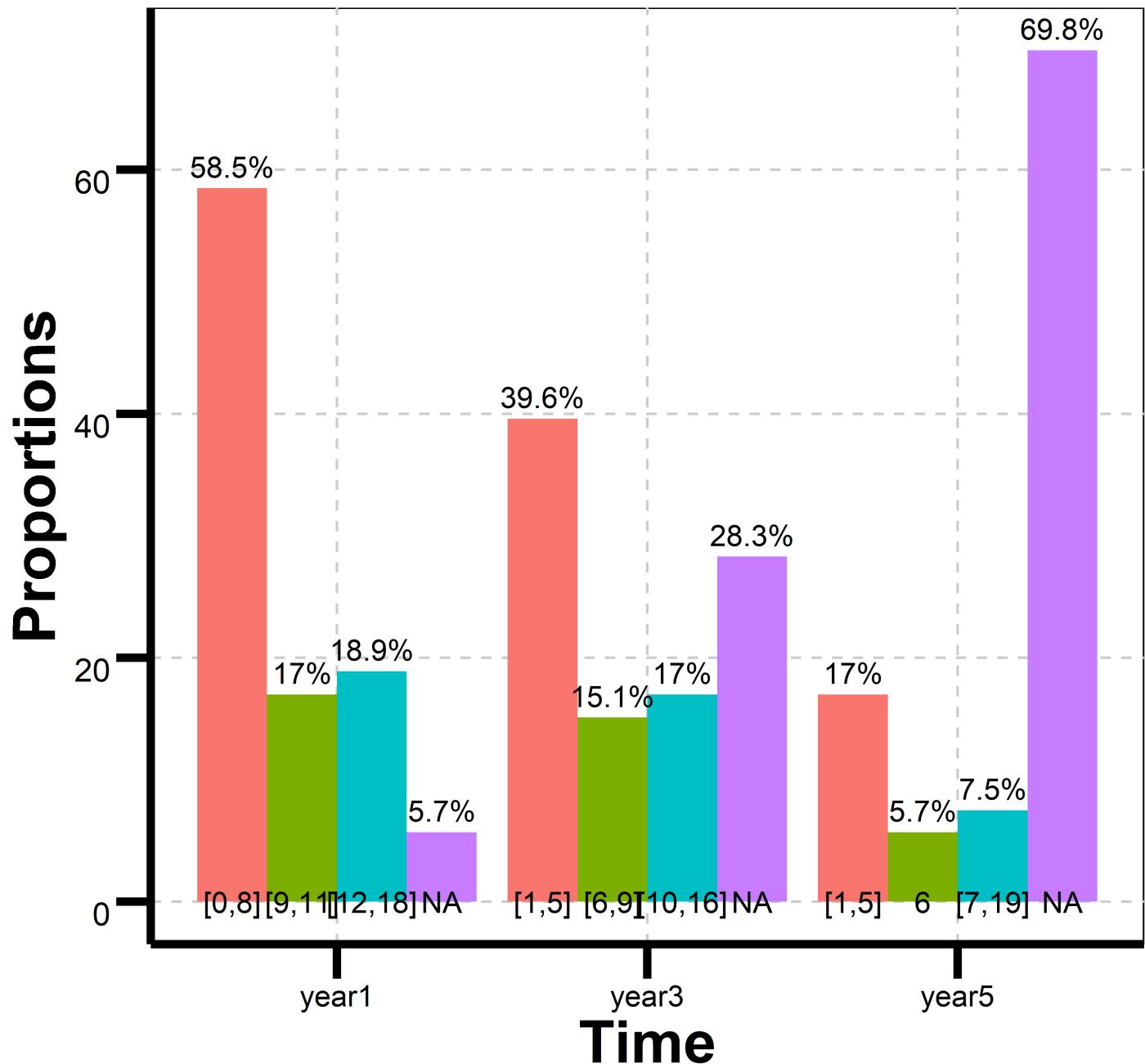


Bar plots of Resource Utilization Outcomes

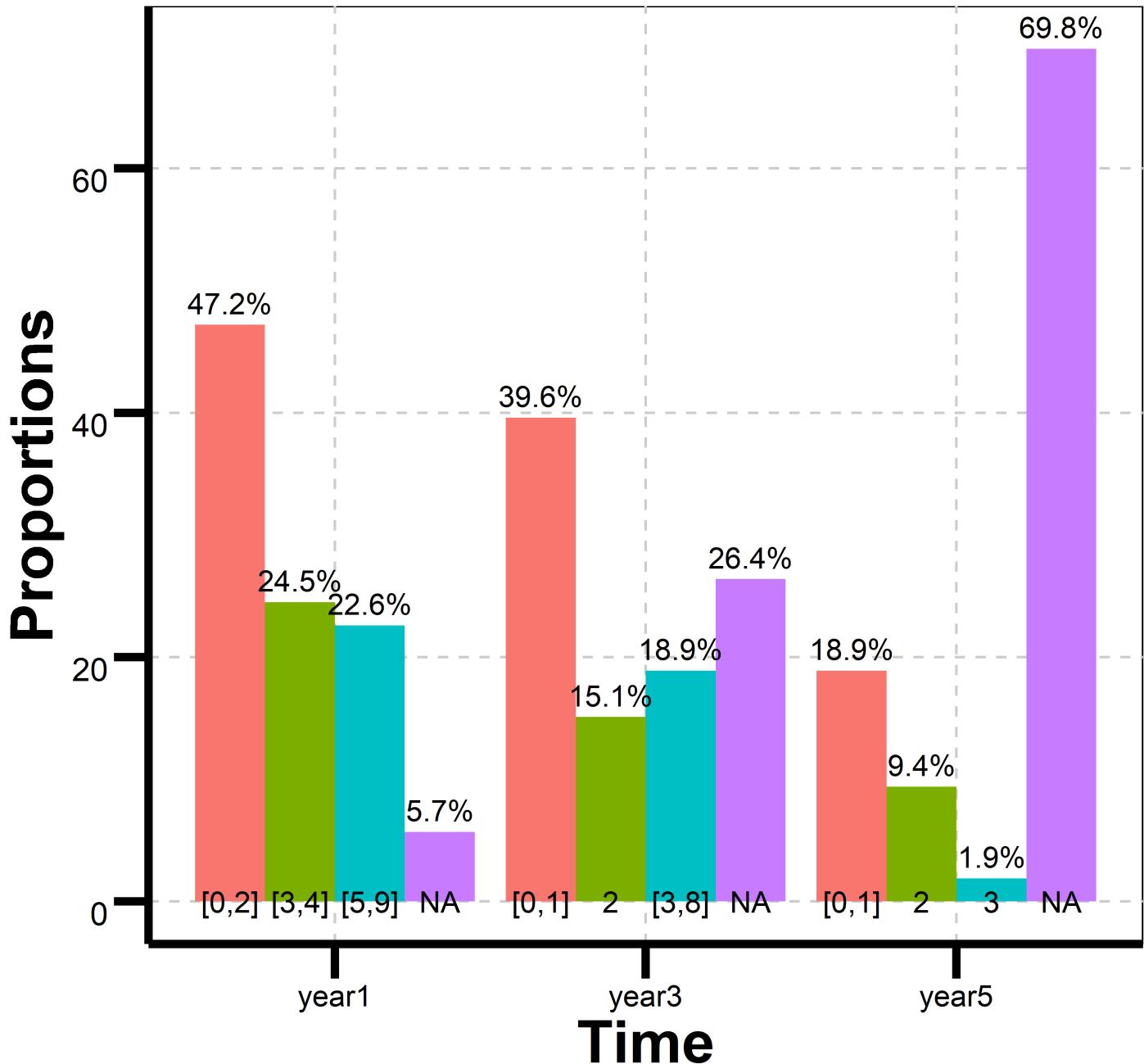
Bar plots of ED visits



Bar plots of medications

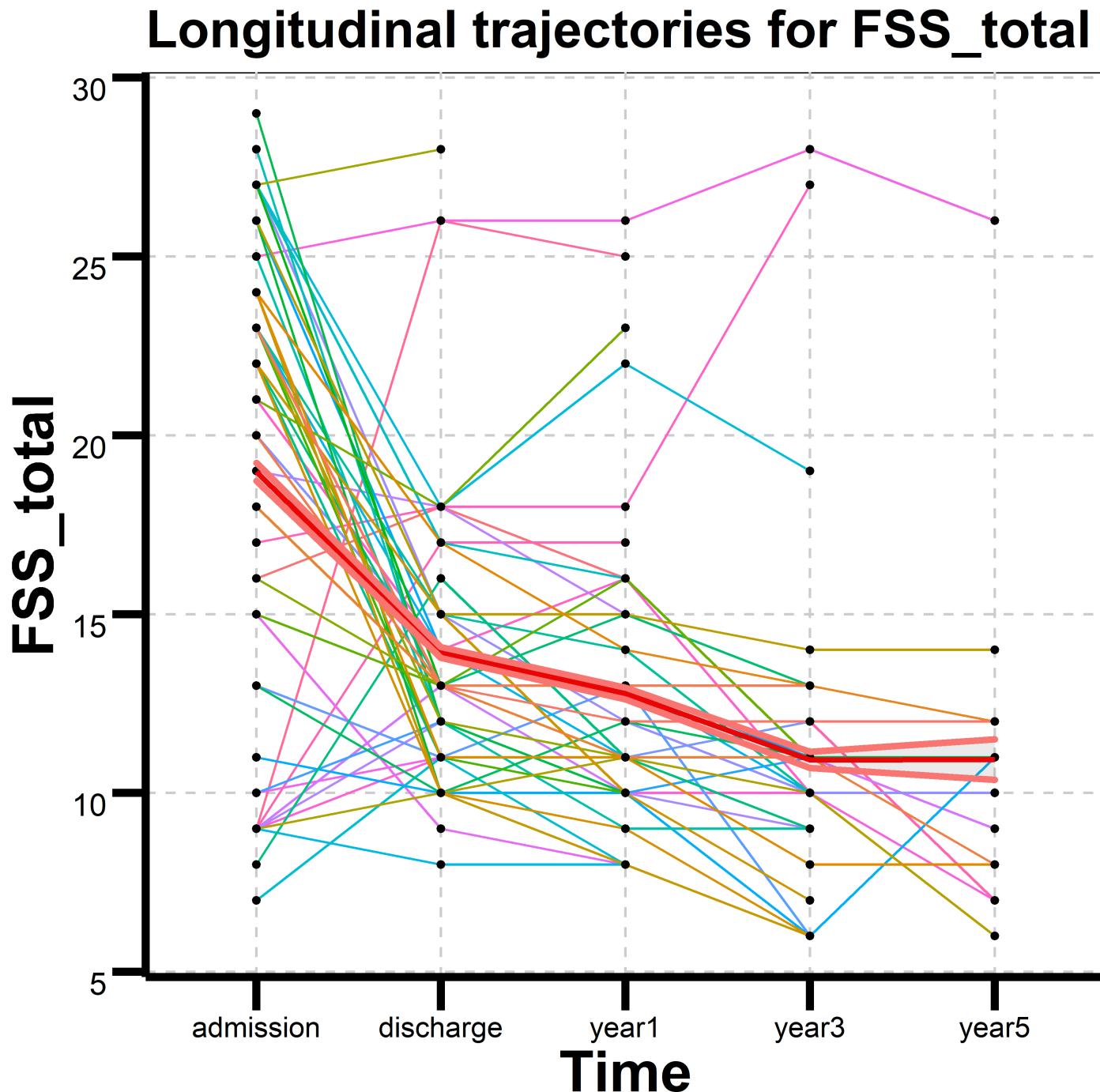


Bar plots of admission



Longitudinal trajectories for FSS_total for each individual, mean (mark in red) and confidence

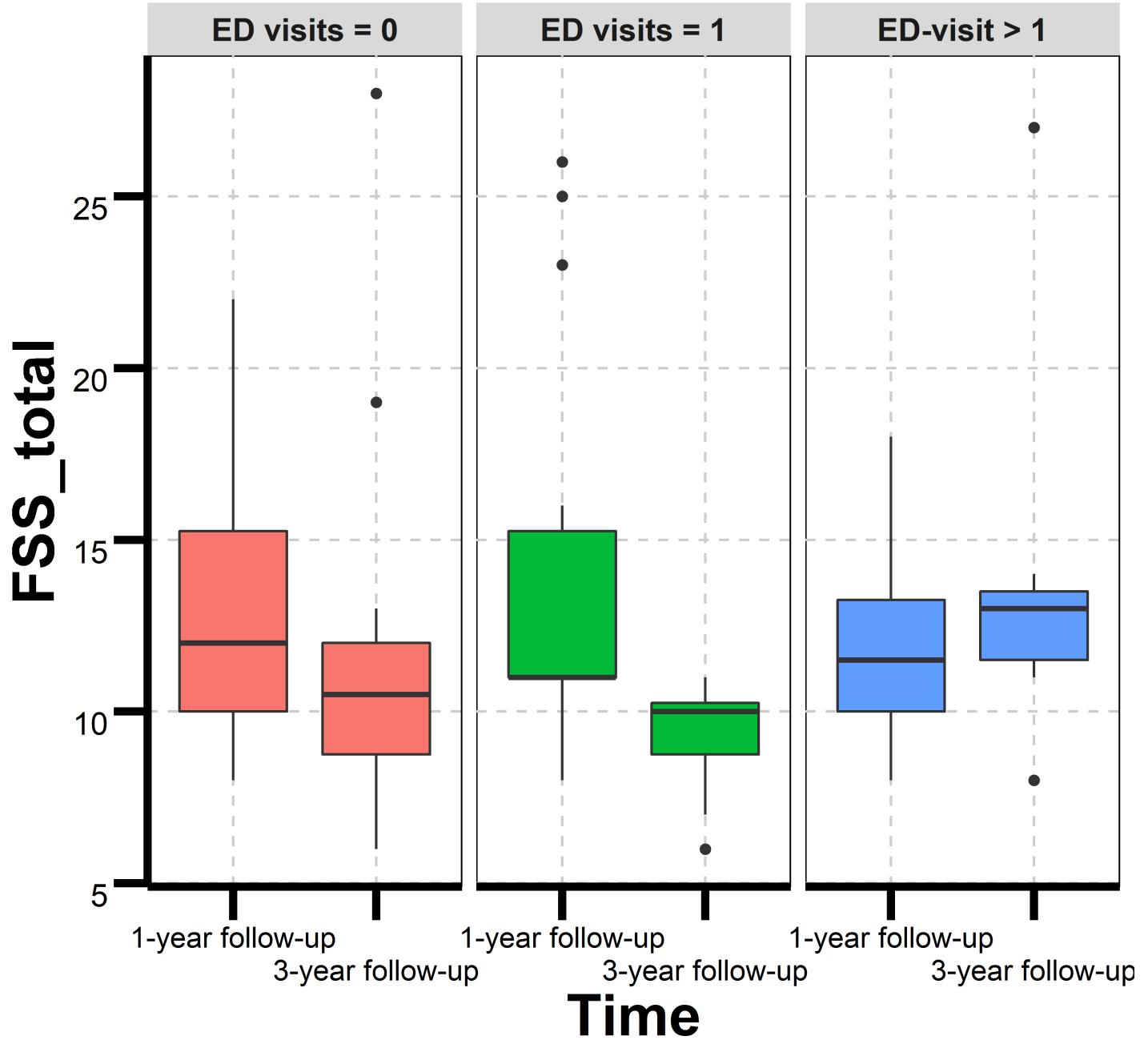
interval



Facet plots of FSS-total

ED visits at 1 and 3 -year follow-up

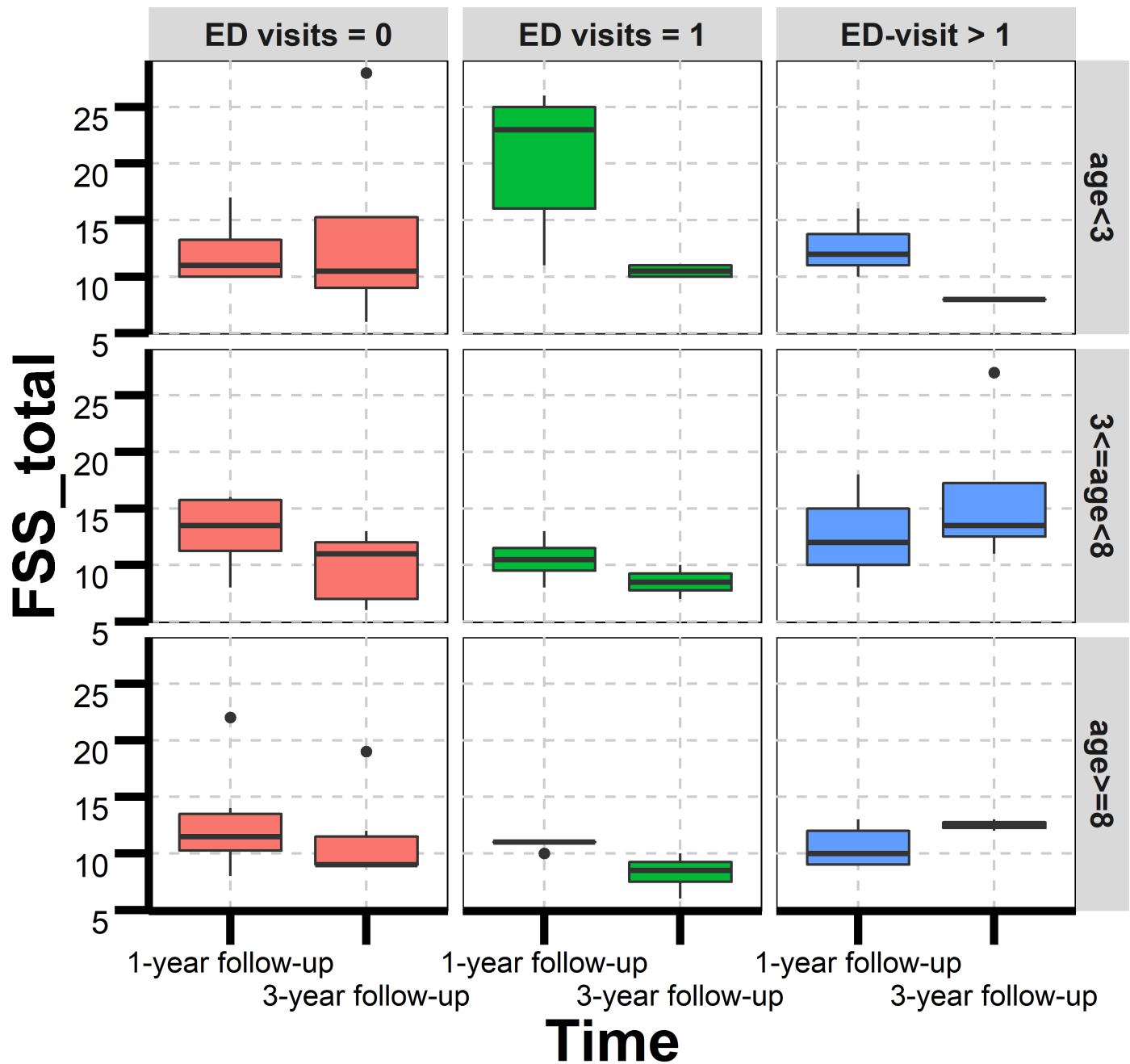
Facet plots of FSS-total in ED visits



ED visits by 3 age groups: age at tracheostomy<3; 3<=age<8;

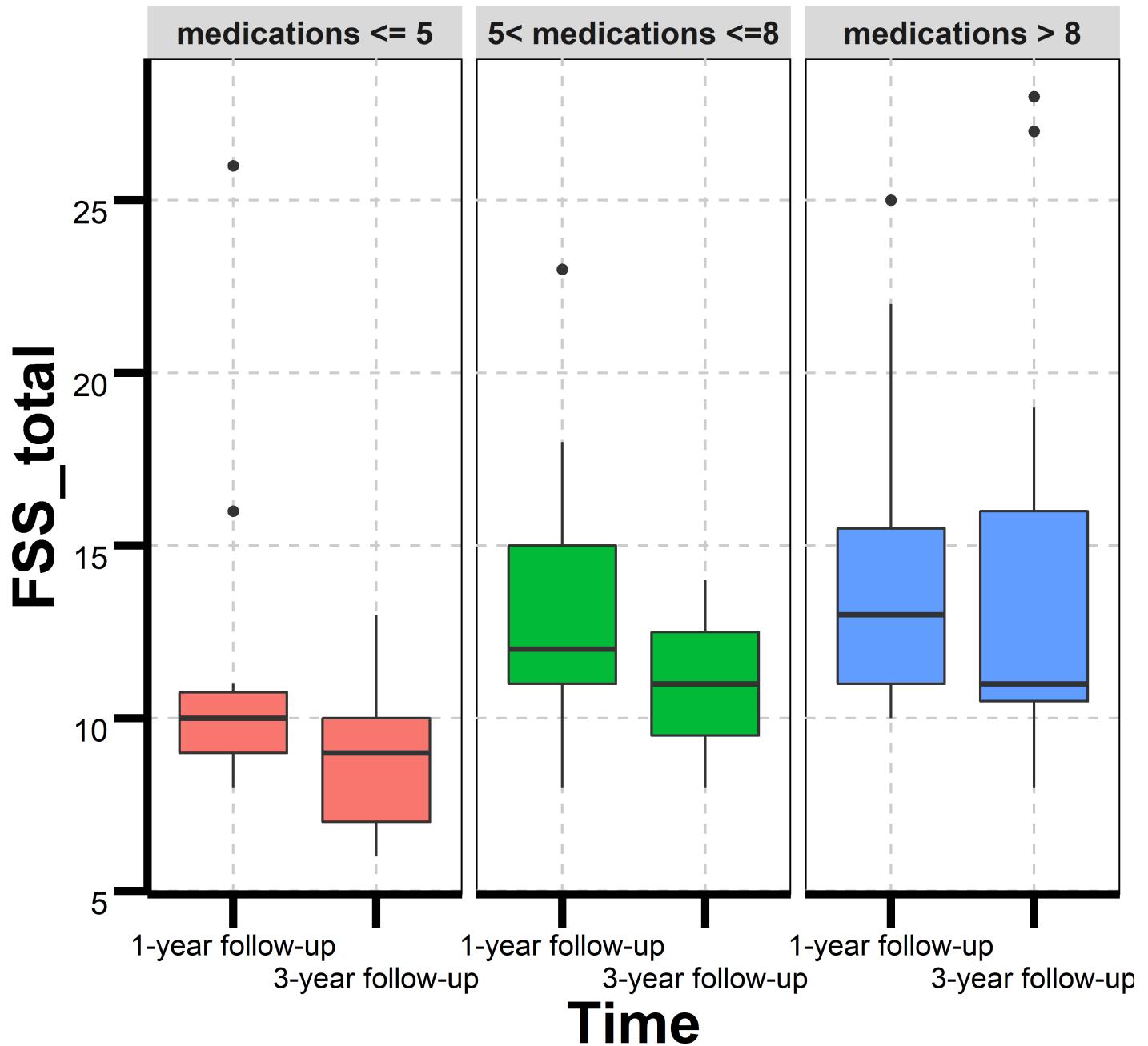
age \geq 8

Facet plots of FSS-total in ED visits by 3 age groups



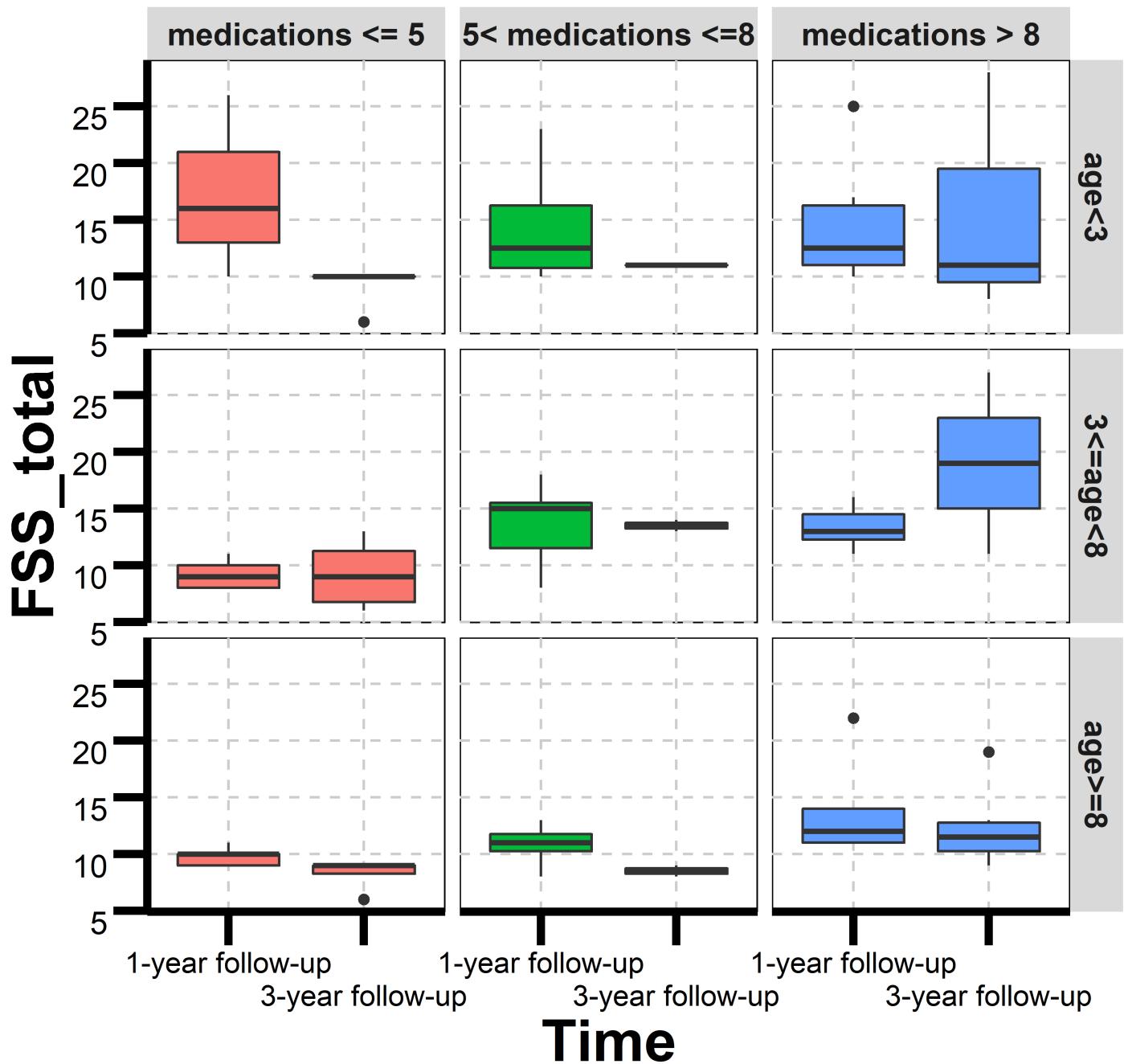
Medications at 1 and 3 -year follow-up

Facet plots of FSS-total in medications



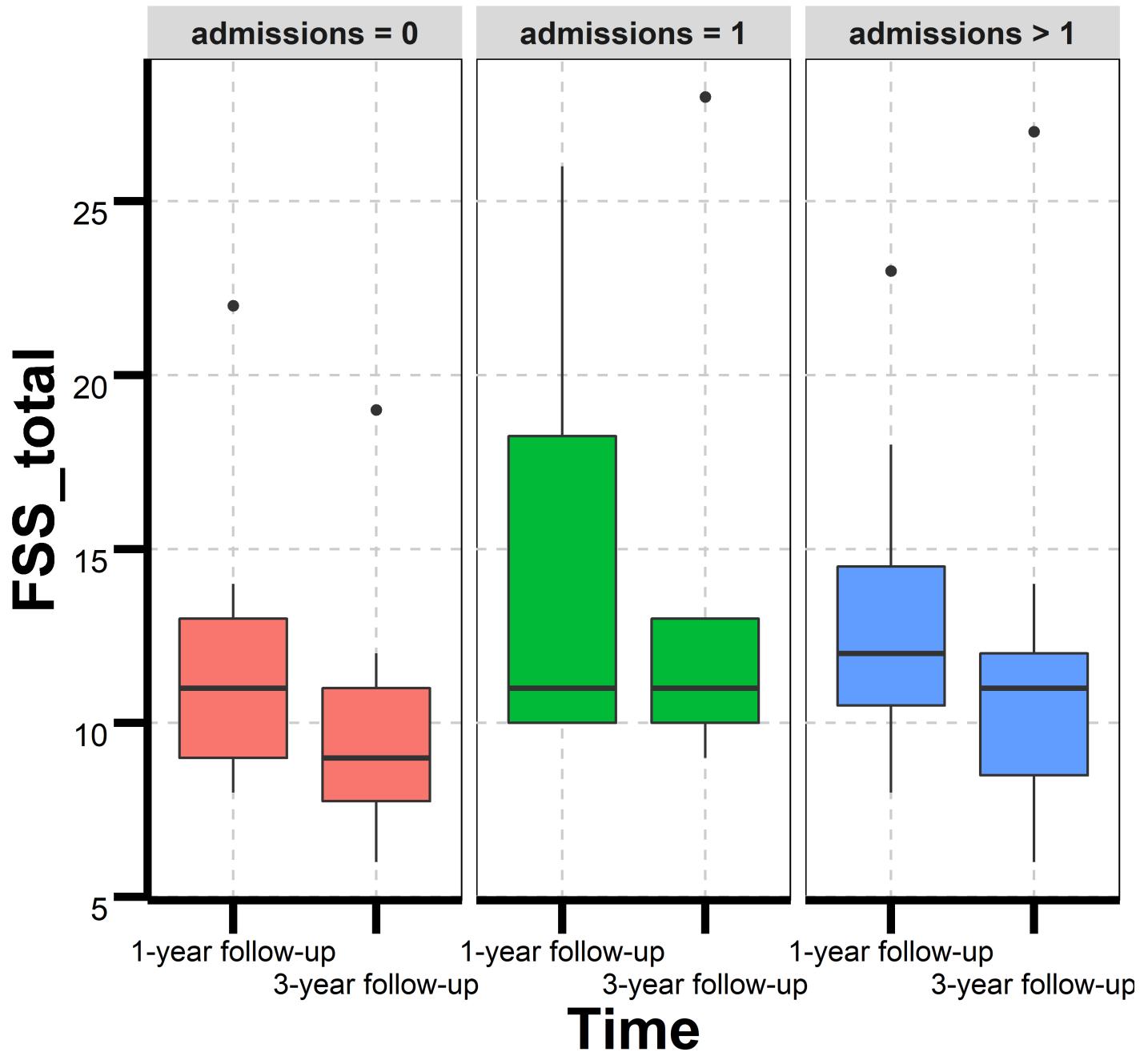
Medications by 3 age groups

Facet plots of FSS-total in medications by 3 age groups



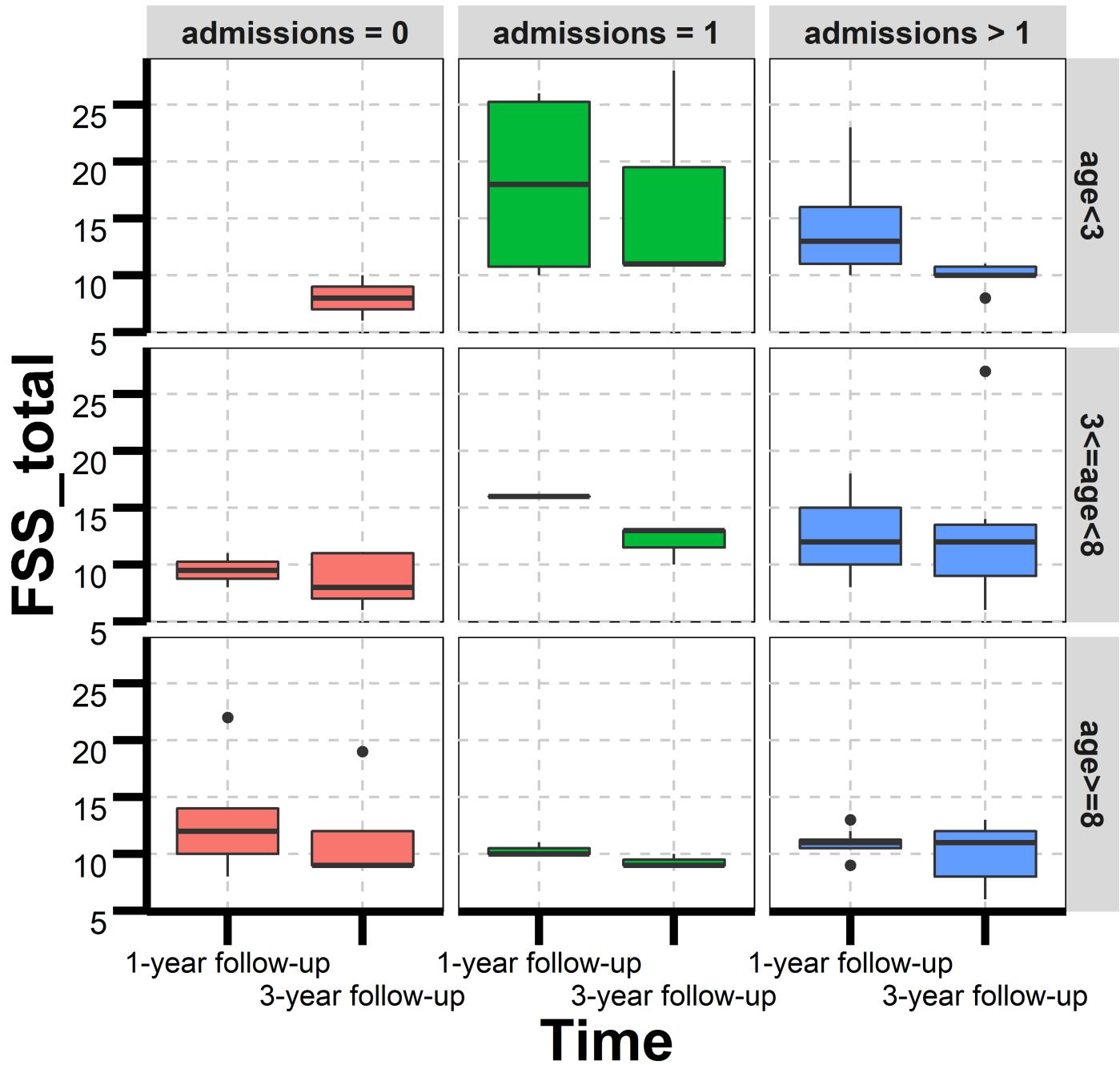
Hospital admissions at 1 and 3 -year follow-up

Facet plots of FSS-total in hospital admissions



Hospital admissions by 3 age groups

Facet plots of FSS-total in hospital admissions by 3 age groups



Summary of age, mortality, race, insurance, indication_fortrach, hospital_lengthofstay, sedatives, and vasoactives

	Overall (N=53)
ageatrch	
Mean (SD)	17.2 (36.2)

Overall (N=53)	
Median [Min, Max]	5.47 [0.200, 182]
mortality1	
No	51 (96.2%)
Yes	2 (3.8%)
age_year1	
Mean (SD)	29.7 (36.8)
Median [Min, Max]	17.5 [12.2, 194]
Missing	2 (3.8%)
mortality3	
No	44 (83.0%)
Yes	8 (15.1%)
Missing	1 (1.9%)
age_year3	
Mean (SD)	55.9 (39.2)
Median [Min, Max]	42.0 [36.2, 218]
Missing	9 (17.0%)
race	
African American/Black	4 (7.5%)
Asian	1 (1.9%)
Caucasian	8 (15.1%)
Missing	40 (75.5%)
insurance	
Medicaid or Medicare	1 (1.9%)
Medical Assistance	1 (1.9%)
None	3 (5.7%)
Private Insurance (PPO/HMO/POS)	4 (7.5%)
Unknown	1 (1.9%)
Missing	43 (81.1%)
indication_fortrach	
Airway obstruction	28 (52.8%)
Brain injury	2 (3.8%)
Cardiopulmonary disorder	16 (30.2%)
Craniofacial anomaly	3 (5.7%)
Neuromuscular disorder	4 (7.5%)
hospital_lengthofstay	

Overall (N=53)	
Mean (SD)	100 (93.9)
Median [Min, Max]	77.0 [7.00, 372]
Missing	2 (3.8%)
sedatives	
Mean (SD)	5.50 (2.12)
Median [Min, Max]	5.50 [4.00, 7.00]
Missing	51 (96.2%)
vasoactives	
Mean (SD)	21.5 (40.4)
Median [Min, Max]	2.00 [0, 82.0]
Missing	49 (92.5%)

Summary of pcpc and fss_total

	admit (N=53)	year1 (N=53)	year3 (N=53)	year5 (N=53)
pcpc				
Normal	8 (15.1%)	11 (20.8%)	10 (18.9%)	3 (5.7%)
Mild	10 (18.9%)	18 (34.0%)	14 (26.4%)	6 (11.3%)
Moderate	9 (17.0%)	14 (26.4%)	12 (22.6%)	6 (11.3%)
Severe	14 (26.4%)	6 (11.3%)	2 (3.8%)	0 (0%)
Coma	12 (22.6%)	1 (1.9%)	2 (3.8%)	1 (1.9%)
Missing	0 (0%)	3 (5.7%)	13 (24.5%)	37 (69.8%)
fss_total				
Mean (SD)	19.0 (6.81)	12.8 (4.19)	10.9 (4.66)	10.9 (4.61)
Median [Min, Max]	21.0 [7.00, 29.0]	11.0 [8.00, 26.0]	10.0 [6.00, 28.0]	10.5 [6.00, 26.0]
Missing	0 (0%)	3 (5.7%)	13 (24.5%)	37 (69.8%)

Summary of admit, edvisits and meds

	year1 (N=53)	year3 (N=53)	year5 (N=53)
admit			
Mean (SD)	3.04 (2.48)	1.79 (1.95)	1.13 (0.957)
Median [Min, Max]	2.50 [0, 9.00]	1.00 [0, 8.00]	1.00 [0, 3.00]
Missing	3 (5.7%)	14 (26.4%)	37 (69.8%)
edvisits			

	year1 (N=53)	year3 (N=53)	year5 (N=53)
Mean (SD)	1.48 (1.47)	0.872 (1.34)	0.563 (0.629)
Median [Min, Max]	1.00 [0, 5.00]	0 [0, 6.00]	0.500 [0, 2.00]
Missing	3 (5.7%)	14 (26.4%)	37 (69.8%)
meds			
Mean (SD)	8.30 (4.00)	6.84 (4.19)	6.00 (4.35)
Median [Min, Max]	8.00 [0, 18.0]	5.00 [1.00, 16.0]	5.00 [1.00, 19.0]
Missing	3 (5.7%)	15 (28.3%)	37 (69.8%)

```
##
##      [0,2.5]    (2.5,4]    (4,9]      <NA>
## 0.47169811 0.24528302 0.22641509 0.05660377
##
##      [0,1]    (1,2.5]    (2.5,8]      <NA>
## 0.3962264 0.1509434 0.1886792 0.2641509
##
##      [0,1]    (1,2]    (2,3]      <NA>
## 0.18867925 0.09433962 0.01886792 0.69811321
##
##      [0,1]    (1,2]    (2,5]      <NA>
## 0.56603774 0.16981132 0.20754717 0.05660377
##
##      [0,0.5]    (0.5,1]    (1,2]      <NA>
## 0.15094340 0.13207547 0.01886792 0.69811321
##
##      [0,8]    (8,11]    (11,18]      <NA>
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##
##      [1,5]    (5,9]    (9,16]      <NA>
## 0.3962264 0.1509434 0.1698113 0.2830189
##
##      [1,5]    (5,6.5]    (6.5,19]      <NA>
## 0.16981132 0.05660377 0.07547170 0.69811321
##
##      [0,1]    (1,6]      <NA>
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```