
Driving patterns of young drivers within a graduated driver licensing system

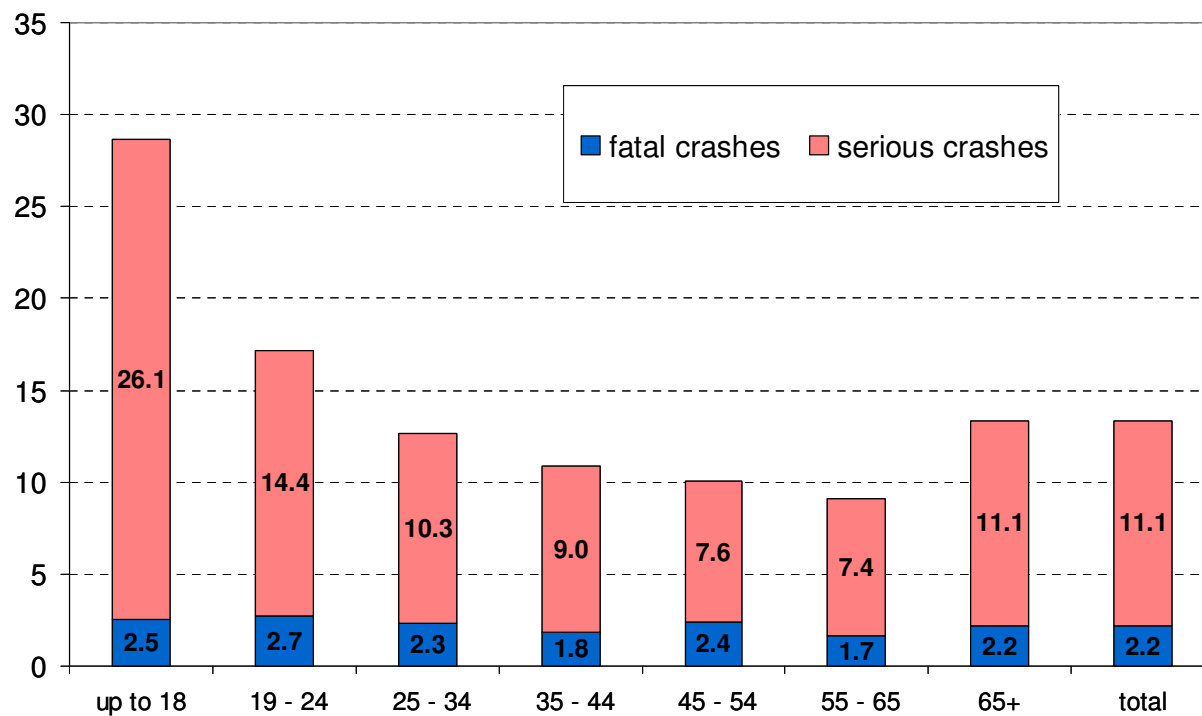
**Tsippy Lotan, Or Yarok, Israel
Tomer Toledo, Technion, Israel**

TRB, January 2007

Young Drivers in Israel

Basically they are like young drivers elsewhere

Driver's involvement rate in car crashes
drivers involved for 10,000 drivers



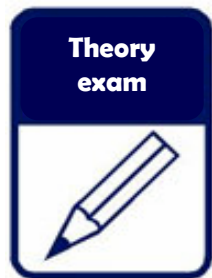
The Israeli National Safety Authority, 2005

Current training procedure

16.5

17

17+
3 months

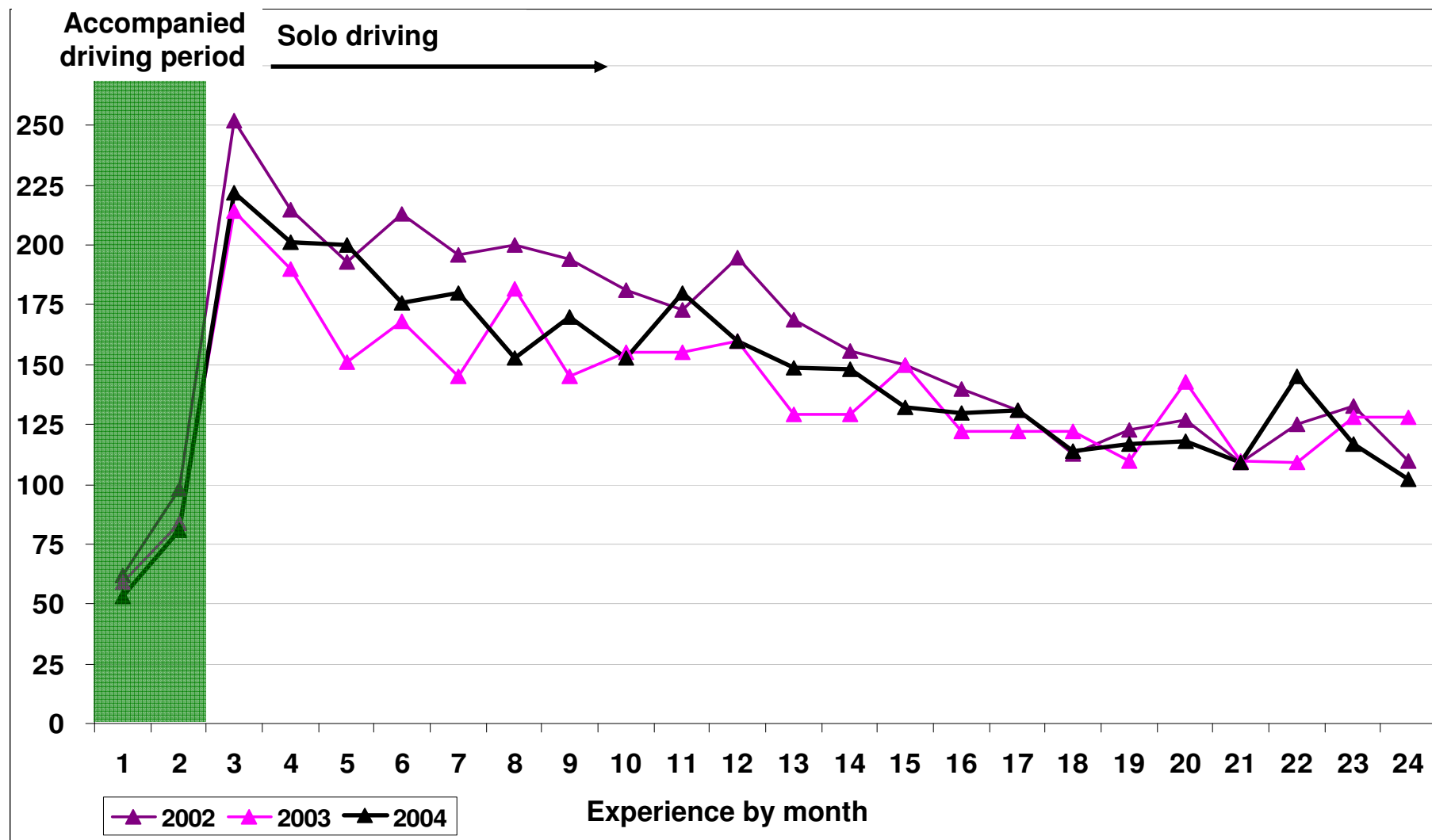


3 months

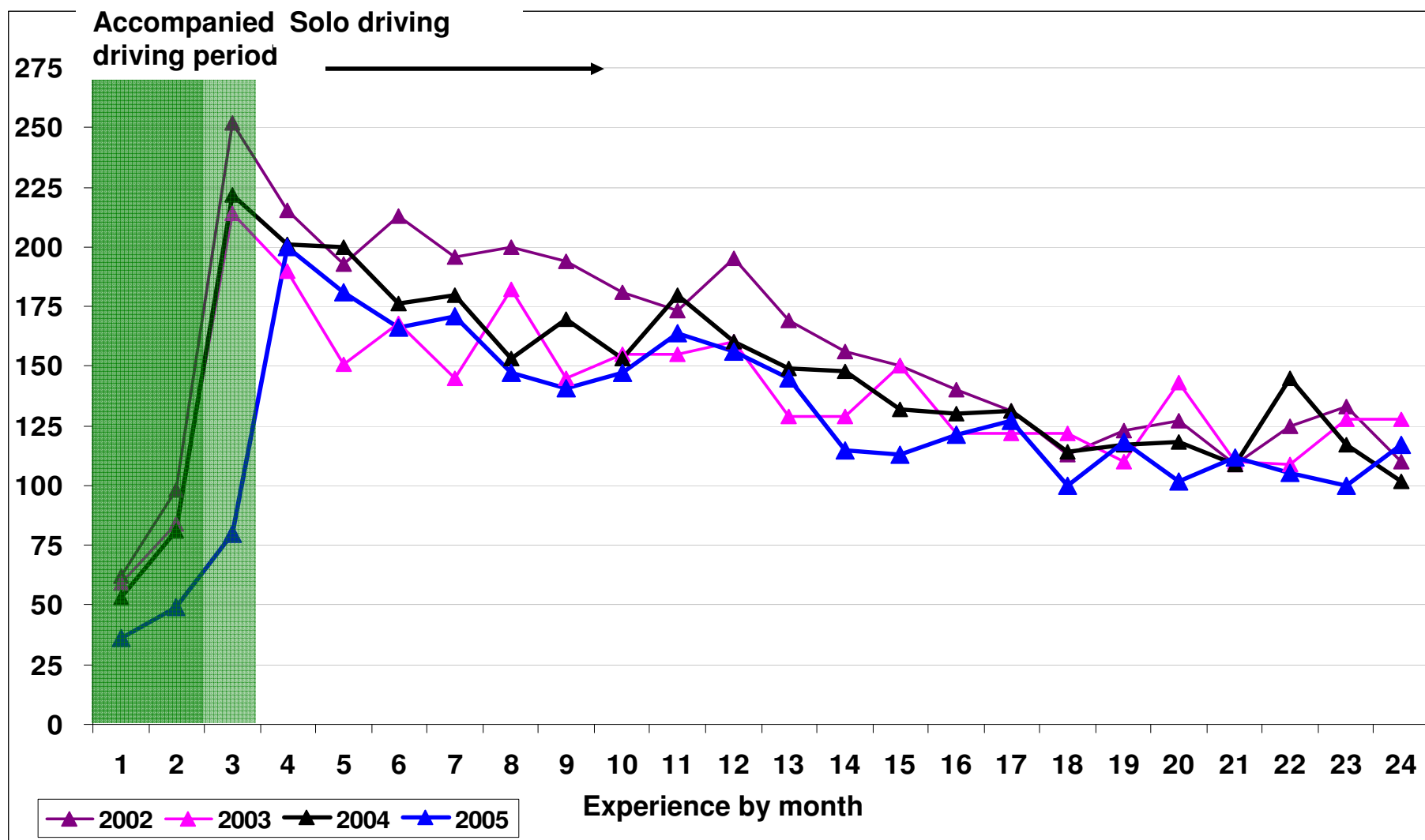
limitation
Up to 2 passengers



Young drivers involved in car crashes by experience (2002-2004)



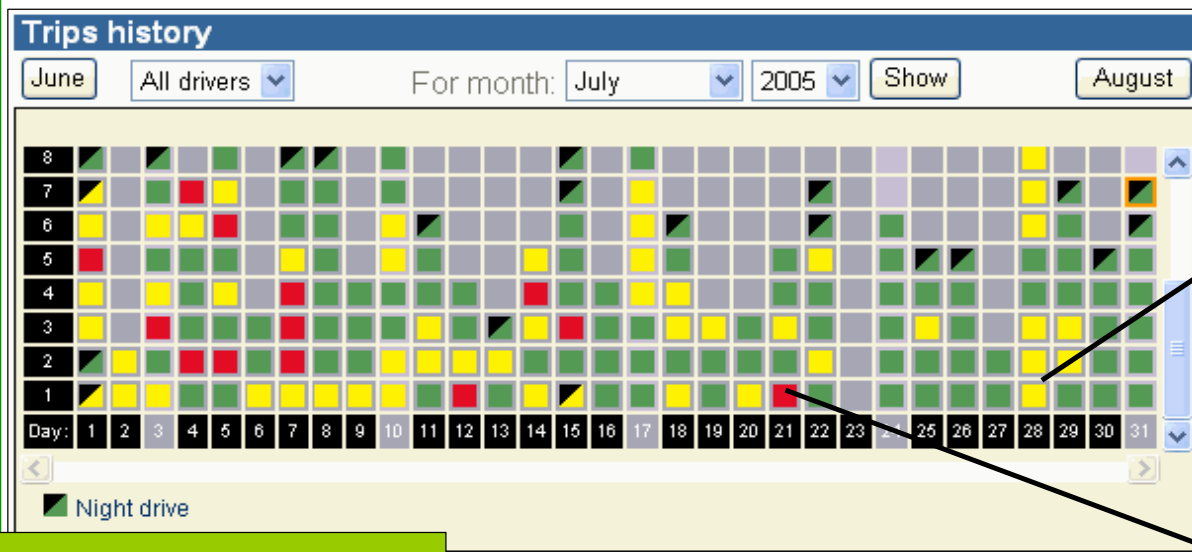
Young drivers involved in car crashes by experience (2002-2005)



GREEN BOX



Web reports



Each square indicates one driving trip; the color indicates safety level

9:06:02 AM	Speed alert	103	
9:07:11 AM	Speed alert	108	
9:08:24 AM	Braking	94	
9:08:56 AM	Speed alert	101	

9:24:52 AM	Braking	73	
9:26:51 AM	Excessive maneuver	55	
9:29:25 AM	Braking	49	
9:30:42 AM	Braking	47	
9:31:57 AM	Braking	53	
9:32:16 AM	Accelerating	Less than 18	
9:32:41 AM	Brake into turn	42	

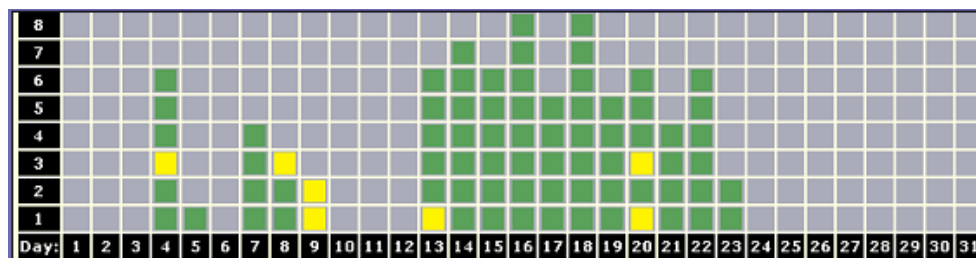
General statistics

For last 7 days	Fleet average	757 - ד"ן
Total number of trips during the last 7 days	44	18
Total driving time in the last 7 days	27 hours	6 hours
Aggressive maneuvers per 10 hours of driving	12	80

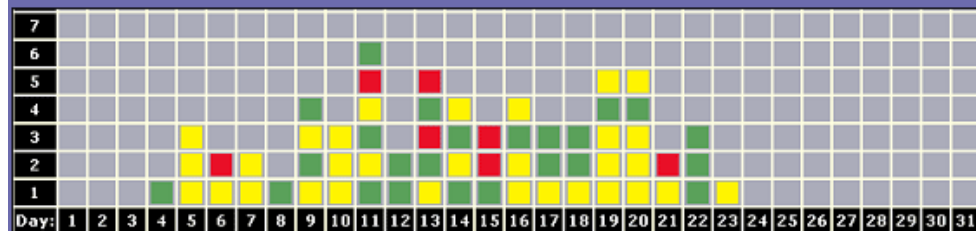
Cumulated information used to create drivers indices

Profiles of Drivers

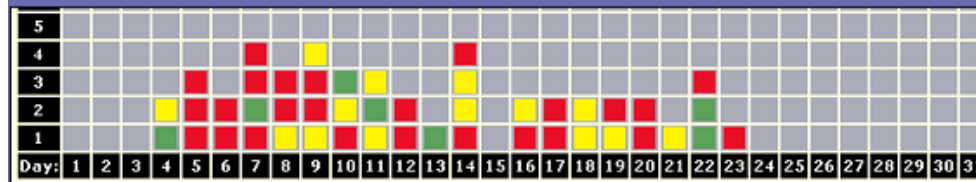
Green driver



Yellow driver



Red driver



The graph displays the weekly number of deaths from malaria in the Democratic Republic of Congo for the years 2002, 2003, and 2004. The Y-axis represents the number of deaths, ranging from 0 to 225 in increments of 25. The X-axis represents the week of the year, from 1 to 24. A shaded green area covers the first three weeks of the year. The data shows a significant peak in deaths in week 3 for all three years, with 2003 having the highest peak at 200 deaths. After week 3, the number of deaths generally decreases, with some fluctuations, and remains relatively low for the rest of the year.

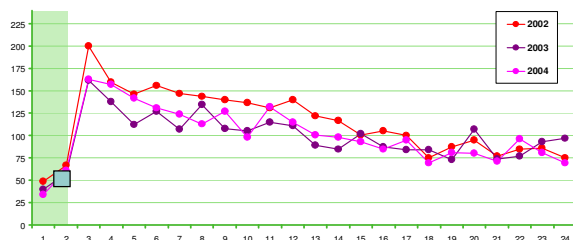
Week	2002	2003	2004
1	55	45	40
2	65	65	65
3	200	200	170
4	165	140	165
5	145	115	140
6	155	115	135
7	145	110	125
8	140	140	125
9	135	105	115
10	130	105	130
11	125	110	130
12	140	95	110
13	115	90	105
14	105	85	100
15	100	100	95
16	100	85	85
17	100	85	85
18	75	85	75
19	85	85	85
20	85	100	85
21	85	75	85
22	85	85	85
23	85	85	85
24	75	95	75



c



How do young drivers **really** drive?



Trips history

DriveDiagnostics
Saving lives through innovation

Monthly trips

The horizontal axis displays the day in the month
The vertical axis displays the trip number for each day

August

September

2005

Show

October

☒ Braking Patterns

☒ Speed Handling

☒ Excessive Maneuvers

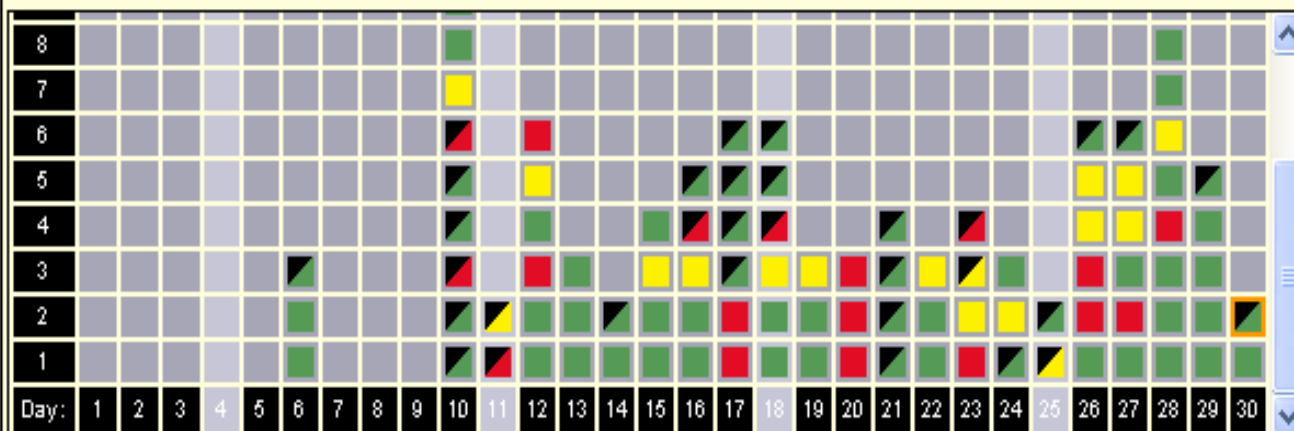
Filter

☒ Acceleration Patterns

☒ Corner Handling

☒ No category

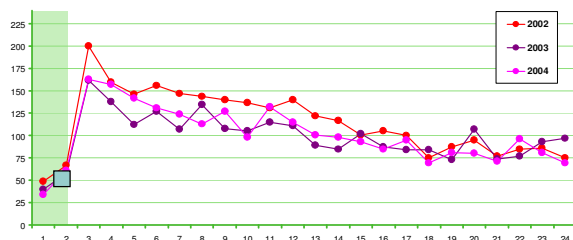
[Create printable report](#)



☒ Night Drive

SOLO, NO FEEDBACK

How do young drivers **really** drive?



Trips history

DriveDiagnostics

Saving lives through innovation

Monthly trips

The horizontal axis displays the day in the month
The vertical axis displays the trip number for each day

September

October

2005

Show

November

☒ Braking Patterns

☒ Speed Handling

☒ Excessive Maneuvers

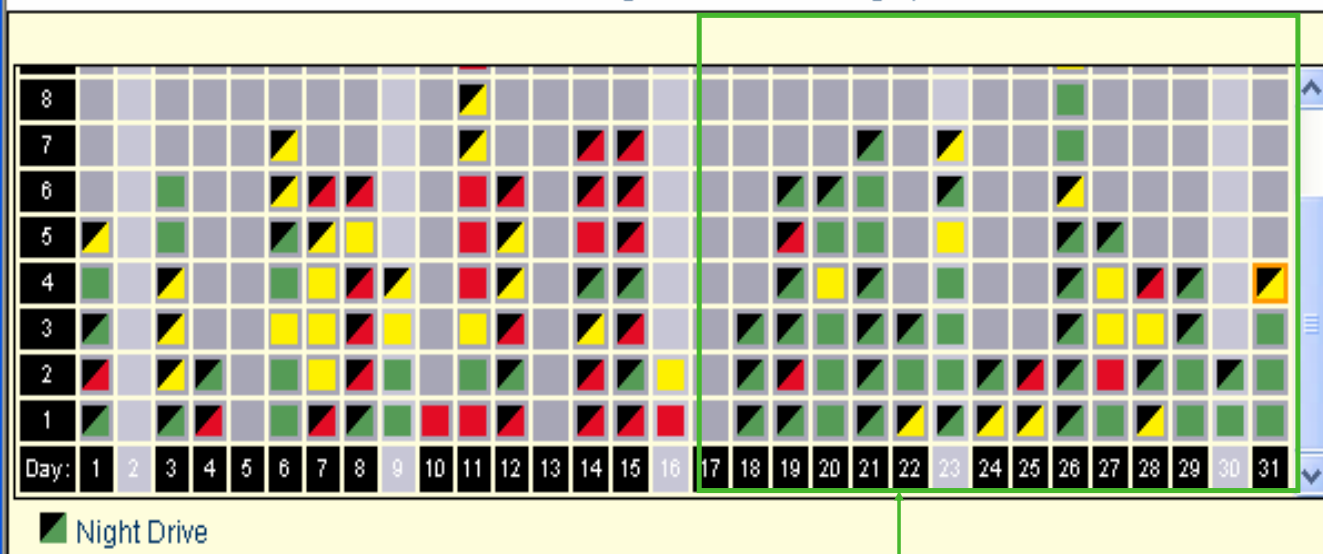
Filter

☒ Acceleration Patterns

☒ Corner Handling

☒ No category

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SOLO, WITH
FEEDBACK

sample

31 YOUNG DRIVERS
20 MALES 11 FEMALES

AVERAGE AGE: 17 and 4 MONTHS

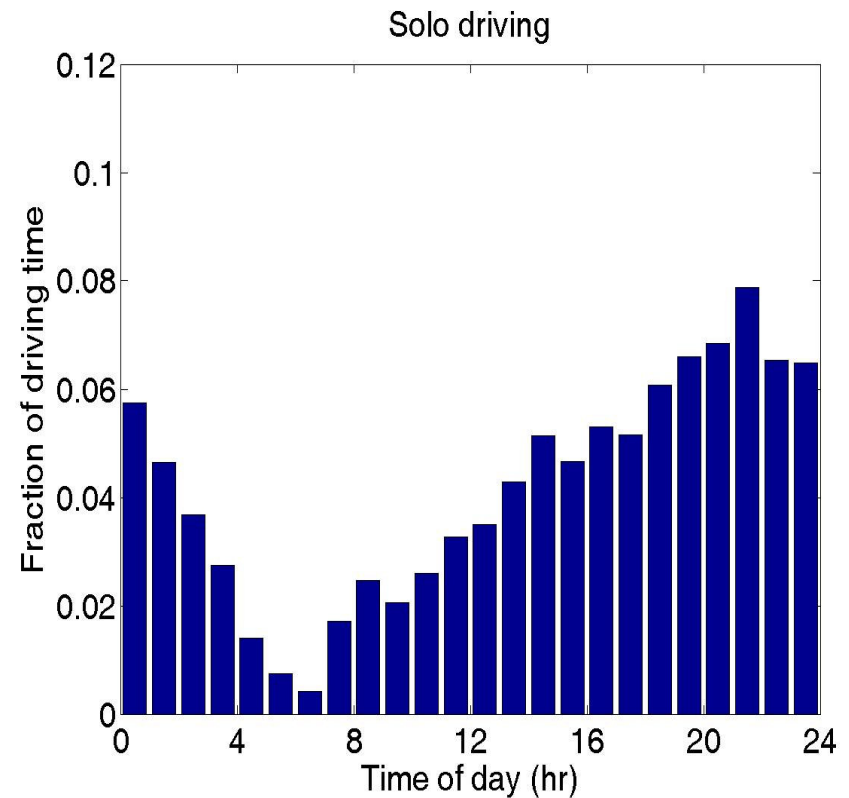
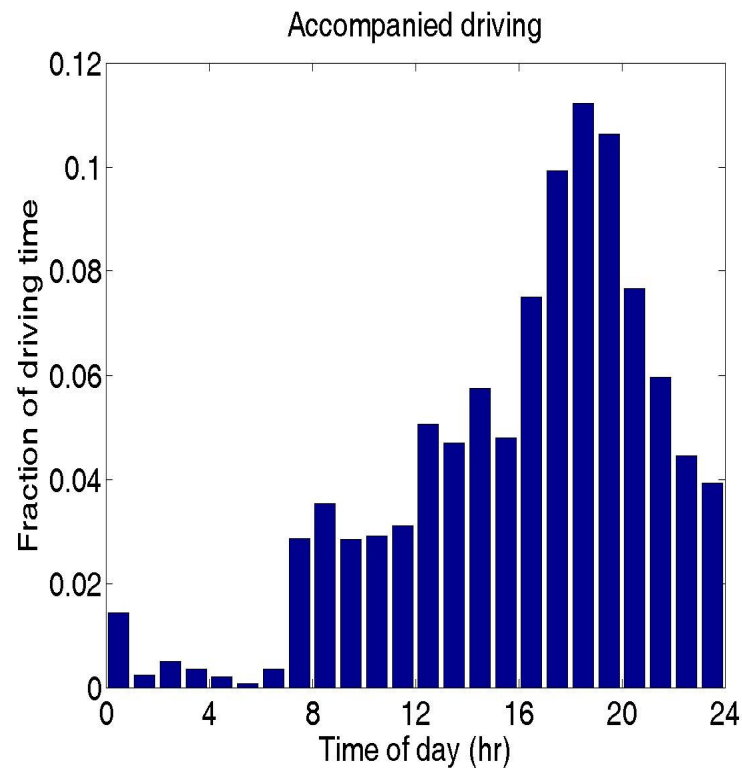
2842 DRIVING HOURS

8246 TRIPS

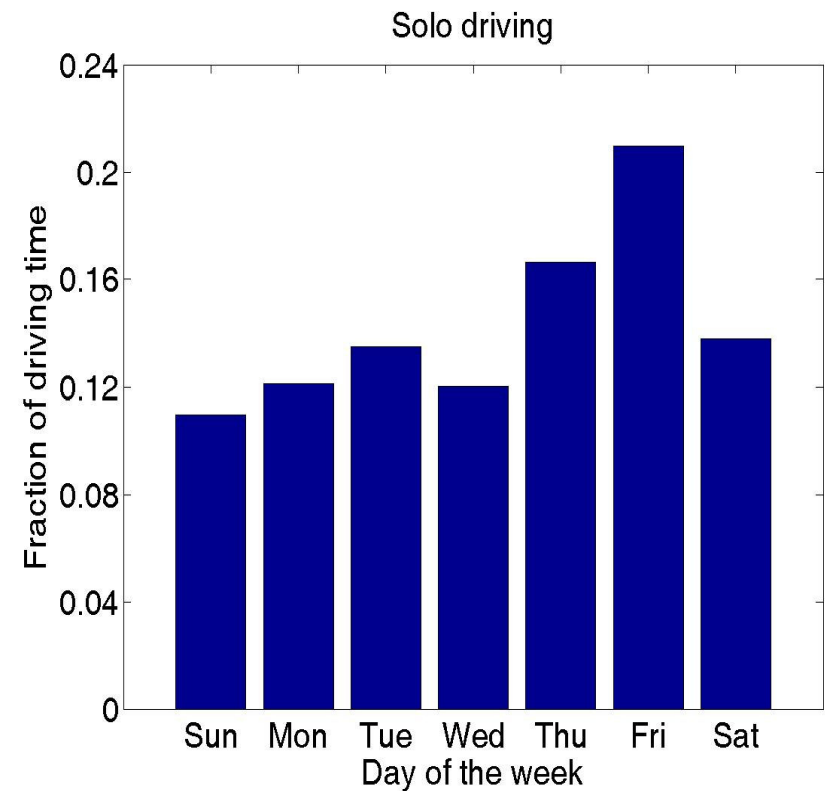
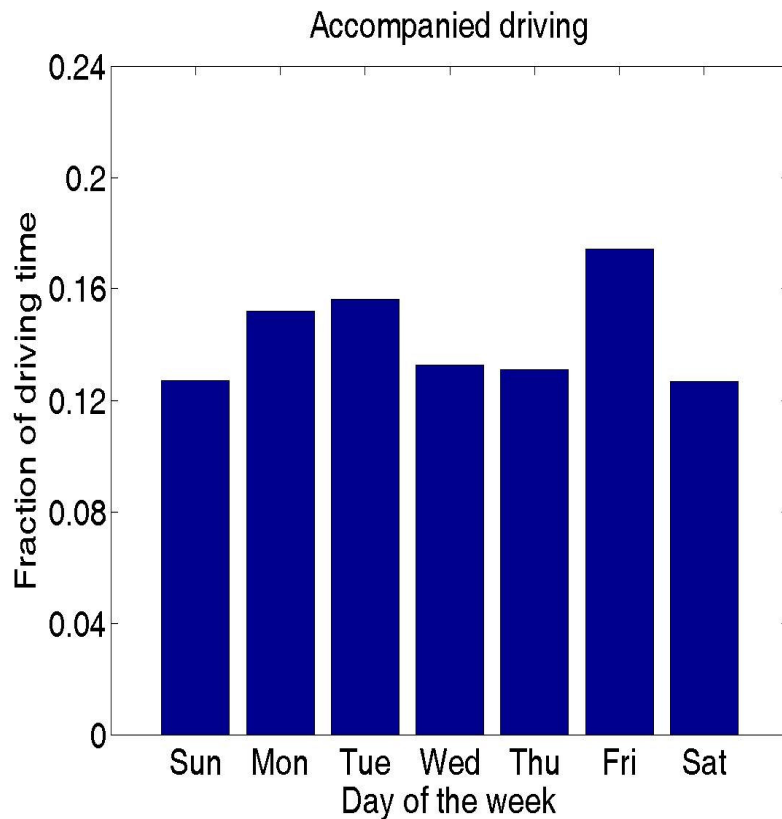
How much do young drivers **really** drive?

	accompanied driving	solo driving
hours per week	2.02	4.45
trips per week	4.82	13.22
trip length	25.2	21.3

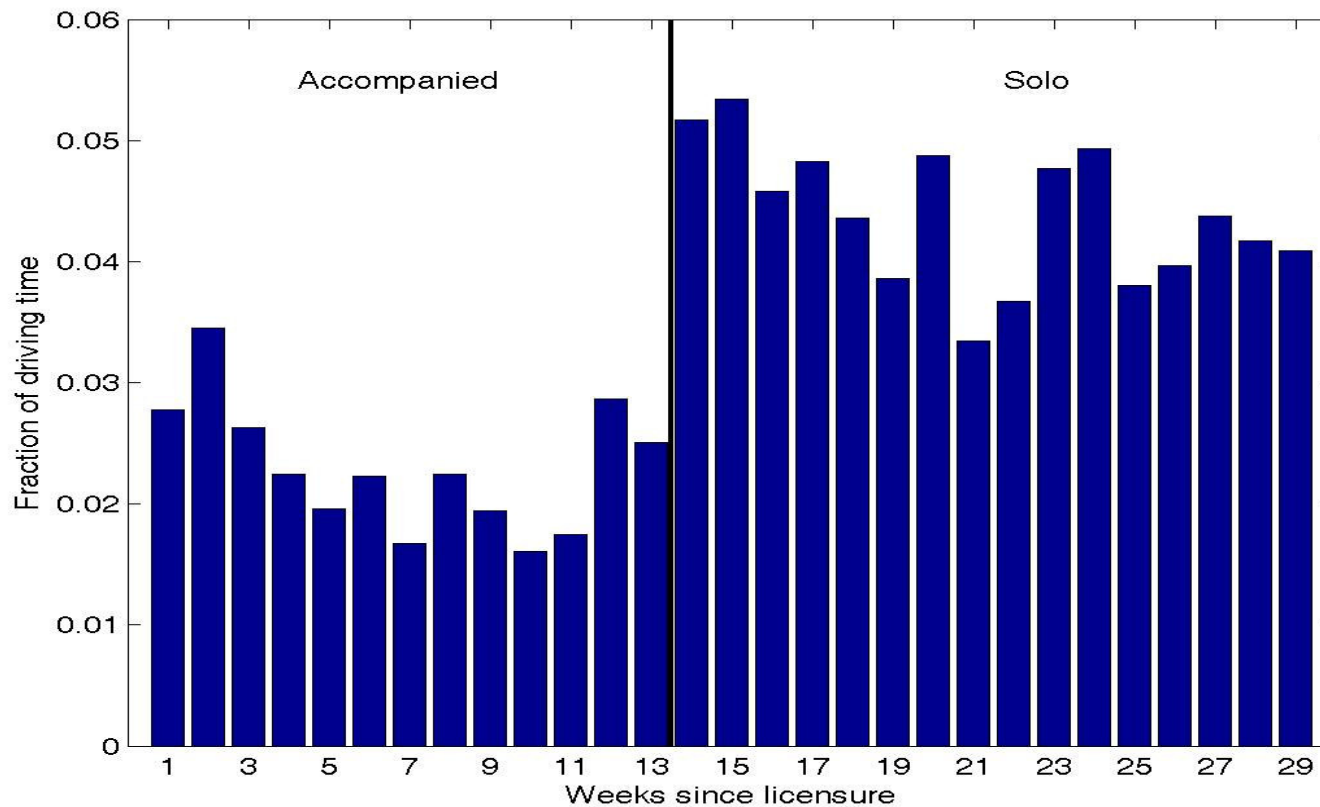
Distribution during the day





Distribution during the week



Distribution of the weeks



Difference between boys and girls

	 boys		 girls	
	accompanied	solo	accompanied	solo
hours per week	2.25	4.99	1.64	3.55
% of weekend driving	31.3	36.1	31.0	30.4

Comparison with self reports

Nr Dive	Дата Date	Место Place	Глубина Depth	Время Dive Time	Подробности Dive Details	Подпись партнеров Signature of partners
366	5.11.03	Maldives Kuda Guro Wreck	30.2	55	Супер! Сначала wreck с frog аппаратом, потом тунель с хвостом и отвлечением, потом jack-fish и jack-филла.	MALEESHA DIVING CRUISE
367	5.11.03	Maldives Kandooma Thila	28.5	47	Сначала утроба огромного тигря. Но красиво! Вода чистая, лососи, кораллы, много бабочек и рыбы...	MALEESHA DIVING CRUISE
368	5.11.03	Maldives Felidu Atoll Fushi Kanduv	28.2	48	Весьма красивая алува, скала, кораллов, много рыбок. Голубая за нами, чисто устал.	MALEESHA DIVING CRUISE
369	6.11.03	Maldives Fotteyo Out	30.2	52	Весьма красивый, into the blue. Вода в 5.30 хорошая, а не ханжера!	MALEESHA DIVING CRUISE
370	6.11.03	Maldives Fotteyo	42.1	52	Сначала jack-fish ball на вы- ходе 52м, потом бабочки и рыбы вверху. Красиво	MALEESHA DIVING CRUISE



Section 1
About your Organisation

Please tick a single category only

1 In years, which of the following time spans most closely illustrates how long the organisation has been running?

0-5 years ☐ 6-10 years ☐ 11-15 years ☐ 16-25 years ☐ 25 plus years ☐

2 Which of the following structures most closely represent the organisation?

single unit ☐ two unit ☐ three unit ☐ multiple unit ☐

3 Which of the following categories most accurately illustrate the number of employees that work for the organisation?

0-5 employees ☐ 6-10 employees ☐ 11-15 employees ☐ 16-25 employees ☐ 25 plus employees ☐

Section 2
Your Views on Recruitment

Please tick the box that most closely represent your feelings about each of the following statements from a strongly agree to a strongly disagree

4 We have experienced problems in recruiting staff

5 We prefer to employ staff that are already qualified

6 We rely on finding our own staff for the purpose of recruitment

7 We would consider poaching staff from other organisations if necessary for our own recruitment needs

8 The offer of higher wages by competitors has caused some of our staff to leave

Please tick a single category only

9 We expect to keep staff for:

under 1 year ☐ 1-3 years ☐ 4-6 years ☐ 7 plus years ☐

Number of questionnaires: 289

Avg.	Good	Average	Bad	No ans.
8.82	210	48	7	24
8.83	210	48	7	24
7.23	156	100	29	4
7.23	156	100	29	4
9.24	256	19	9	6
9.35	249	16	8	16
9.41	249	16	8	16
8.95	202	33	9	45
7.33	192	78	16	3
8.09	117	44	16	112
7.85	117	56	19	97
7.55	117	56	19	97
8.63	226	49	13	1
8.70	147	26	14	102
8.56	147	26	14	102
8.21	175	53	13	48
8.36	127	41	15	108
8.06	127	41	15	108
8.22	258	23	6	2
9.39	190	23	10	66
9.04	190	23	10	66
7.38	142	60	28	59
7.48	136	64	25	75
7.57	106	45	20	118
7.61	55	15	20	199
6.94	55	15	20	199
8.26	93	118	50	28
5.82	99	71	31	88
6.69	99	71	31	88
15				
27				
1240				



Comparison with self reports

	Green Box	self reports
Hours per week	2.02	~6
Trips per week	4.82	~7.5
% of night driving	13.9%	~40%

summary

- Significant differences between **accompanied** and **SOLO** driving
- During **SOLO** young drivers drive more, drive later at night, and drive more on weekends
- Results have been used to support policy

Current and future research

- Trip characteristics
- Relations with parents' driving
- Tools for wider dissemination
- Other target audiences

Thank you

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