Additional file 3. Fast track

Author Year, reference Country	**Study design and included patients**	**Size of emergency dept Admission rate**	**Intervention (I) Control (C)**	**Outcome**	**Results Intervention (I) Control (C) Difference (D)**	**Study quality and relevance Comments**
Rogers T et al 2004 [24] United Kingdom	Observational study Prospective vs. retrospective control (2–3 weeks before and after) Triage category 4 (not specified)	59 000/year	I: FT 8 am–6 pm Monday to Friday w senior house officer and nurse practitioners C: No FT	WT to see doctor or nurse practitioners LOS Discharge in 4 hours	I: 30 minutes C: 56 minutes D: 26 minutes I: 1h 17 minutes C: 1 h 39 minutes D: 22 minutes I: 92% C: 87%	Low Shorter WT and LOS No statistics No numbers
Fernandes CM et al 1996 [25] Canada	Observational study 48 hours periods (before and after)	54 000/year	I: Changing of FT (larger area, full-time nurse) N=106 C: FT without changes N=100	LOS (only FT) LOS (all patients)	I: 64 minutes C: 82 minutes D: 18 minutes p<0.05 I: 114 minutes C: 115 minutes D: 1 minute NS	Moderate Shorter LOS for FT-patients without effects on other patients Low numbers
Darraab AA et al 2006 [26] Canada	Observational study 1 week of intervention vs same week in previous year CTAS 3/4/5	38 000/year Admission rate 18%	I: FT during 1 pm–7 pm all days N=265 C: No FT N=248	LOS (CTAS 4/5) LOS (CTAS 3) LWBS (CTAS 4/5)	I: 110 minutes C: 170 minutes D: 60 minutes p=0.95 I: 60 minutes C: 66 minutes D: 6 minutes p<0.001 I: 2% C: 6% D: 4 % p=0.043	Moderate Shorter LOS for CTAS 3 Lower LWBS for CTAS 4 and 5 Low numbers
Kwa P et al 2008 [27] Australia	Observational study 6 months of intervention vs control	53 000/year Admission rate 21%	I: FT (8 beds, 2 doctors, 2 nurses, open: 8 am–10 pm every day)	WT(% met target, ATS 4)	I: 79.9% C: 77.8% p<0.001	Moderate Shorter WT for ATS 4

	(before and after) ATS 4 for FT		N=20 460 (FT=3 047) C: No FT N=18 267	WT (ATS 4) LOS (ATS 4) LWBS	I: 22 minutes C: 24 minutes D: 2 minutes p<0.001 I: 114 minutes C: 110 minutes D: 4 minutes p=0.06 I: 3.3% C: 3.5% D: 0.2% p=0.45	High numbers
Cooke MW et al 2002 [28] UK	Observational study Prospective vs retrospective control 5 weeks (before and after) Patients with minor injury without need of bed or intervention to FT (=triage category 4 and 5)	73 000/year	I: FT with junior doctor open 9 am–11 pm N=6 801 C: No FT N=7 117	WT to doctor <30 minutes <60 minutes Within target Triage category 2 Triage category 3 Triage category 4 Triage category 5	 I: 44% C: 35.4% p<0.0001 I: 76.2% C: 65.1% p<0.0001 I: 32% C: 41% NS I: 78.6% C: 72.8% p<0.0001 I: 94.1% C: 87.6% p<0.0001 I: 100% C: 96.1% NS	Moderate Only trauma Shorter WT for triage category 3 and 4
Bond PA 2001 [29] Saudi Arabia	Observational study Retrospective analysis of 200 randomized charts 1 month before and	68 000/year	I: Physician and nurse staffed patient assessment room (PAR) for non urgent patients	WT	I: 25 minutes C: 58 minutes D: 33 minutes p<0.05	Low Shorter WT for non-urgent patients with PAR

	200 charts 1 month after Non urgent patients to FT		N=200 C: No PAR N=200			Low numbers
Ardagh MW et al 2002 [30] New Zeeland	RCT 10 weeks: FT odd weeks and no FT even weeks. All patients	65 000/year	I: Rapid assessment clinic (RAC) Monday to Friday 9 am–5 pm N=2 263 with 361 to RAC C: No RAC N=2 204 of which 349 likely to RAC	WT to see doctor ATC 2 ATC 3 ATC 4 ATC 5 LOS ATC 2 ATC 3 ATC 4 ATC 5	 I: 8.2 minutes C: 7.7 minutes D: -0.5 minutes NS I: 29.7 minutes C: 28.4 minutes D: -1.3 minutes NS I: 34.5 minutes C: 42.7 minutes D: 8.2 minutes p=0.004 I: 34.3 minutes C: 45.4 minutes D: 11 minutes p=0.02 I: 172 minutes C: 193 minutes D: 21 minutes NS I: 190 minutes C: 191 minutes D: 1 minute NS I: 131 C: 158 D: 27 minutes p=0.03 I: 65 minutes C: 85 minutes D: 20 minutes	Moderate Shorter WT and LOS for ATC 4 and 5 with NS change for other patients

					p=0.06	
Kilic YA et al 1998 [31] Turkey	RCT analysis during 1 month, FT every other day Patients included according to FT criteria without life-threats	30 000/year	I: FT open 8 am–5.30 pm, Monday to Friday N=143 C: No FT but registration of FT-cases N=126	LOS of FT-patients Patient satisfaction	I: 36 minutes C: 63 minutes D: 27 minutes p<0.001 I: Improved	Moderate Shorter LOS for patients in FT process Low numbers
O'Brien D et al 2006 [32] Australia	Observational study 12 weeks trial compared to same period previous year ATS 3, 4 and 5 likely to be discharged (=21.6% of all patients)	43 000/year Admission rate 48%	I: FT open 9 am–10 pm, Monday to Friday + 9.30 am–6 pm, Saturday and Sunday Junior doctor + nurse N=1 482 C: No FT N=not specified	LOS of all discharged patients WT of all discharged patients LWBS	I: 186.5 minutes C: 227.5 minutes D: 41 minutes Sign (95% CI) I: 59.4 minutes C: 74.4 minutes D: 15 minutes Sign (95% CI) I: 1.5% C: 2.2% D: 0.7% Sign (95% CI)	Low LOS and WT shorter for discharged patients with FT WT unchanged for admitted patients with FT
Sanchez M et al 2006 [33] Spain	Observational study one year of intervention vs one year before (control) Non-urgent patients selected by triage nurse (approx 30% of all patients)	75 000/year Admission rate 21%	I: FT with physician assistant and nurse practitioners open: 8.30 am–11 pm N=71 000 (all pat) C: No FT N=75 000 (all pat)	WT (all patients) LOS (all patients) LWBS (all patients) Mortality (all patients)	I: 51 minutes C: 102 minutes D: 51 minutes p<0.001 I: 258 minutes C: 286 minutes D: 28 minutes p<0.001 I: 3.72% C: 7.78% D: 4.06% p<0.001 I: 0.27% C: 0.28%	Moderate Shorter WT and LOS for all patients with FT Lower LWBS No change in mortality and revisit rate

				Revisit rate (all patients)	NS I: 4.51% C: 4.57% NS	
Rodi SW et al 2006 [34] USA	Observational study Prospective, retrospective control CTAS 4+5	30 000/year	I: FT with physician assistant and emergency department technician open: 9 am–7 pm N=91 C: No FT N=87	Patient satisfaction (excellent or very good) LOS	I: 86% C: 61% p<0.001 I: 53 minutes C: 127 minutes D: 74 minutes p<0.001	Low Shorter LOS with FT Increased patient satisfaction Low number
Ieraci S et al 2008 [35] Australia	Observational study Prospective analysis of 6 months before and 6 months after Patients not requiring a bed (approx 30% of all patients) to FT All patients included in analysis	40 000/year	I: FT with senior doctor and nurse 16 hours/day C: No FT	WT Compliance w targets LWBS Revisit rate within 48 hours	I: 32 minutes C: 55 minutes D: 23 minutes p<0.001 I: 77% C: 60% p<0.001 I: 3.1% C: 6.2% D: 3.1% p<0.001 I: 4.0% C: 3.2% p<0.001	Moderate Shorter WT for all patients with FT Lower LWBS for all patients with FT Small increase of revisit rate with FT
Considine J et al 2008 [36] Australia	Observational study of matched case-control Before/after Non-urgent patients expected to be discharged and expected LOS <60 minutes to FT	70 000/year Admission rate 25%	I: FT 10 am–2 am Nurse, junior doctor or nurse practitioners N=822 C: No FT N=822 (matched in pairs)	WT ATS 3 ATS 4	 I: 13 minutes C: 12 minutes D: -1 minute NS I: 29 minutes C: 31 minutes D: 2 minutes NS	Moderate Shorter LOS for discharged patients with FT No change in WT for ATS 3–5 with FT

				ATS 5 LOS Discharged patients Admitted patients	I: 26 minutes C: 25 minutes D: - 1 minute NS I: 116 minutes C: 132 minutes D: 16 minutes p<0.01 I: 309 minutes C: 313 minutes D: 4 minutes NS	

FT = fast track; WT = waiting time; LOS = length of stay; LWBS = left without being seen; CTAS = Canadian Emergency Department Triage and Acuity Scale; ATS = Australasian Triage Scale; ATC = Australasian Triage Category