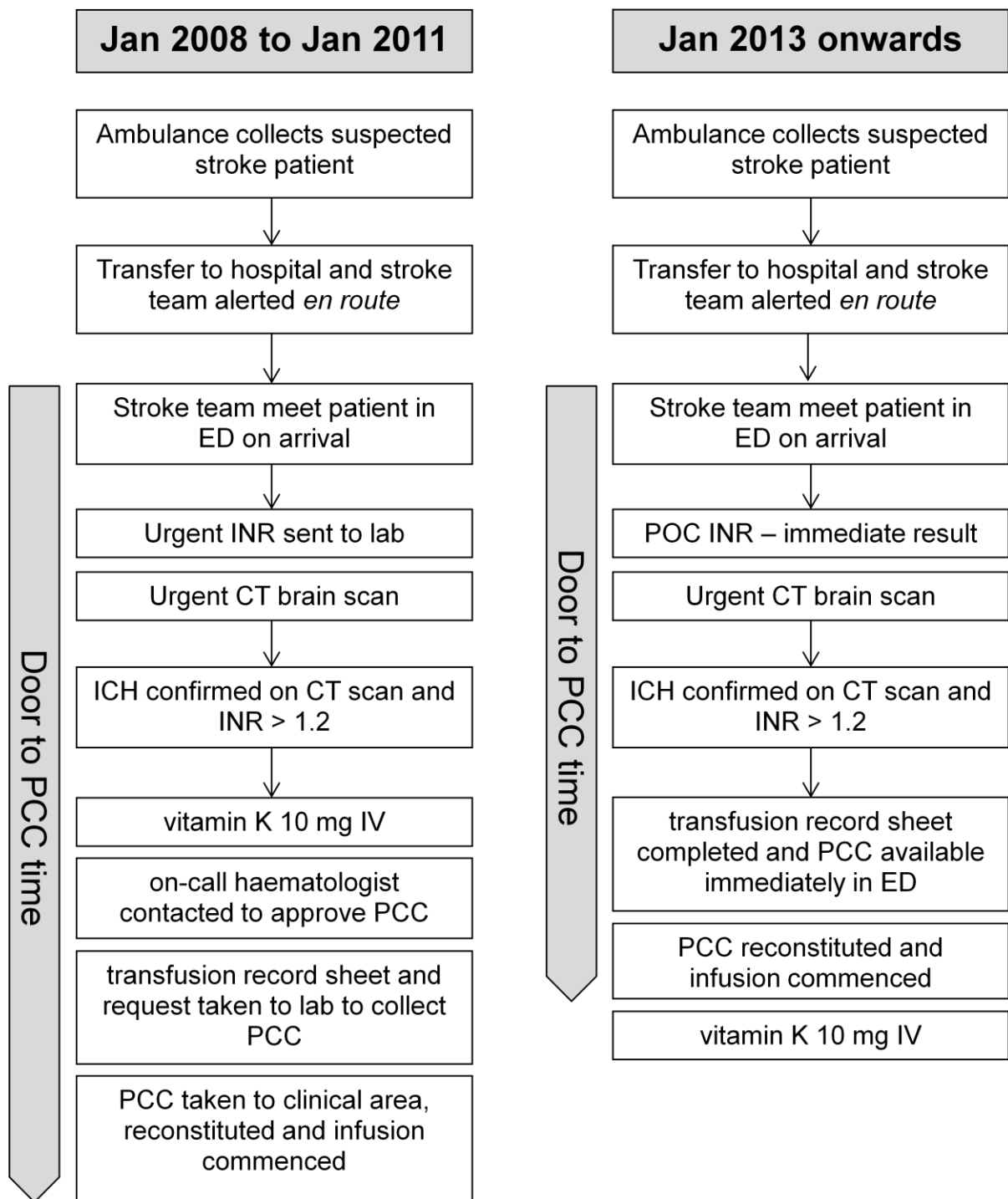


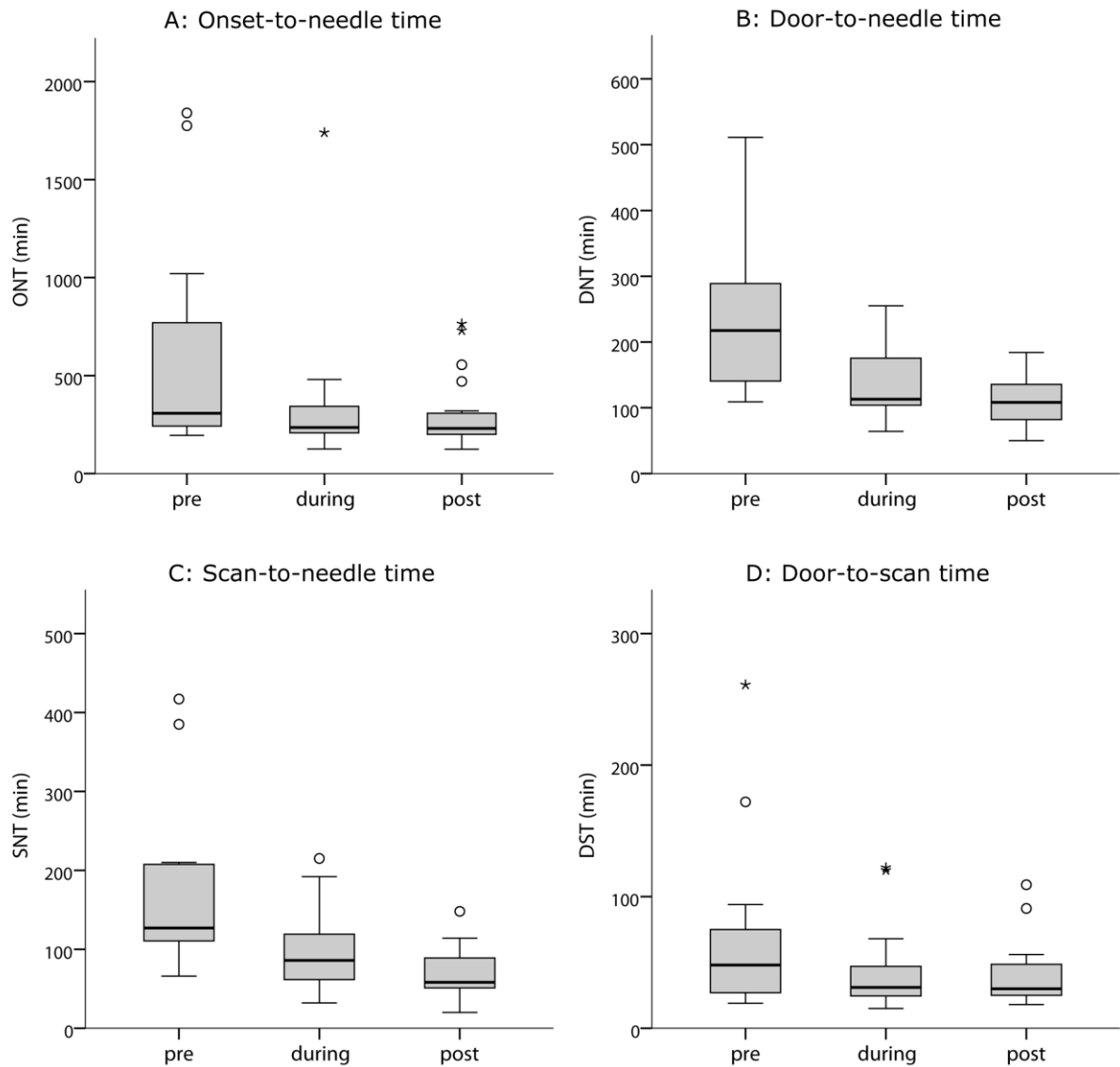
**Table:** Baseline characteristics of all patients with VKA-ICH presenting via the acute stroke pathway and not palliated on admission, divided by time period (pre-change, 1/1/2008 to 24/1/2011; during change, 25/1/2011 to 30/12/2012; post-change, 31/12/2012 to 31/7/2014).

	<b>Pre-change (n=13)</b>	<b>During change (n=19)</b>	<b>Post-change (n=23)</b>
<b>Age</b>	80 (67 to 84)	77 (75 to 80)	78 (71 to 84)
<b>Male sex</b>	8 (62%)	11 (58%)	10 (43%)
<b>GCS at admission</b>	14 (10 to 15)	14 (11 to 15)	14 (12 to 15)
<b>Baseline ICH volume, mL</b>	28.4 (9.0 to 57.0)	23.0 (5.6 to 61.8)	8.3 (5.8 to 42.6)
<b>Infratentorial location</b>	0 (0%)	3 (16%)	1 (4%)
<b>Intraventricular extension</b>	3 (23%)	9 (47%)	10 (43%)
<b>Lobar ICH</b>	5 (38%)	5 (26%)	8 (35%)
<b>INR at admission</b>	3.0 (2.6 to 3.3)	2.9 (2.5 to 3.4)	3.1 (2.6 to 4.0)
<b>INR after treatment*</b>	1.3 (1.1 to 1.4); n=11	1.3 (1.2 to 1.3); n=17	1.4 (1.2 to 1.5); n=18
<b>PCC given</b>	12 (92%)	19 (100%)	23 (100%)
<b>In-hours (0800 – 1700)</b>	3 (23%)	12 (63%)	11 (48%)
<b>30-day case-fatality</b>	6 (46%)	10 (53%)	10 (43%)

\*No post-treatment INR was available for patients who died shortly after treatment. GCS, Glasgow Coma Scale; ICH, intracerebral haemorrhage; INR, international normalised ratio; PCC, prothrombin complex concentrate; VKA-ICH, vitamin K associated intracerebral haemorrhage. Data are shown as median (interquartile range) unless otherwise stated.



**Figure 1:** Flowchart describing steps involved in reversal of anticoagulation with prothrombin complex concentrate (PCC) before and after service changes designed to remove barriers to rapid treatment. The key changes we have introduced are: (1) point-of-care (POC) INR testing in the Emergency Department (ED); (2) removal of the need to contact the on-call Haematologist to obtain approval for the use of PCC; (3) storage of PCC in the ED for immediate availability; (4) delaying administration of vitamin K until the PCC infusion has commenced.



**Figure 2:** Times for key processes in administering PCC after VKA-ICH including (A) onset-to-needle time (ONT), (B) door-to-needle time (DNT), (C) scan-to-needle time (SNT), and (D) door to scan time. Data are shown for time intervals pre- (1/1/2008 to 24/1/2011, n=12), during (25/1/2011 to 30/12/2012, n=19), and post- (31/12/2012 to 31/7/2014, n=23) implementation of service changes.