



IMPROVING CARE IN INTRACEREBRAL HAEMORRHAGE (ICH) MAY SIGNIFICANTLY IMPACT MORTALITY - REPORTING ADHERENCE TO THE ABC BUNDLE AT AN ACUTE STROKE CENTRE IN ENGLAND.

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Background

ICH accounts for approximately 1 in 10 strokes in the UK(1). Although Ischaemic stroke has a higher incidence, ICH accounts for a similar proportion of global deaths (5.8% vs. 6.0% for ischaemic stroke), due to its 35-40% early case fatality(2). ICH accounts for 28% of stroke globally but responsible for 49% of deaths.

The 'ABC' care bundle for intracerebral haemorrhage (ABC – ICH) was developed and implemented at [Salford Royal NHS Foundation Trust](#) in 2015-16 and reduced 30-day deaths by one-third (35.5% to 24/2%)

The ABC-ICH care bundle consists of:

- A. Rapid **reversal of Anticoagulation** door-to-needle time <90 min: Approximately 20% of acute ICH occurs in patients taking oral anticoagulants and this proportion is likely to increase(5). These patients have a high early risk of additional bleeding which worsens outcome and studies suggest the earlier reversal agents are given, the greater the benefit(6).
- B. Delivery of **intensive blood pressure(BP) lowering** to a systolic blood pressure (SBP) target of 130–140 mm Hg, for patients who arrive within 6 hours of onset with an SBP over 150 mm Hg, with a needle-to-target time <60 min: The phase-3 INTERACT2 trial recruited 2794 patients to demonstrate that intensive BP lowering to a systolic target of 130-140 mmHg within 1 h was safe and seemed to improved functional outcome at 90 days after ICH.
- C. Adherence to a care pathway, which prompts **immediate neurosurgical referral** of all patients with good premorbid function

Methods

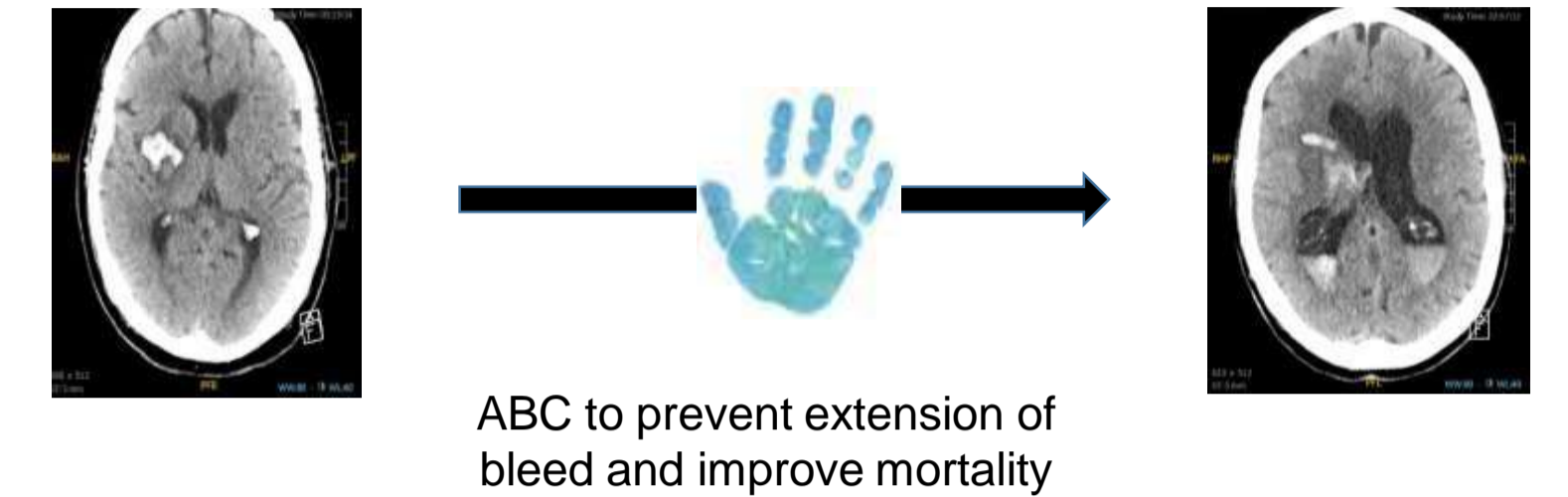
Patients entered onto the English national stroke registry (SSNAP) coded as Primary Intracerebral Haemorrhage for the financial year 2021-2022 (1st of April 2021 to 31st March 2022) at a Large Acute Stroke Centre in England (EKHUFT) were reviewed to assess for the adherence of to of the three aspects of the bundle.

A total of 116 patients were admitted during the study period (115) out of which 100 were included; 16 had insufficient data or incorrect coding or were subdural hematomas. Retrospective analysis of adherence to the ABC-ICH care bundle.

Results

The results highlighted excellent adherence to interventions and outcomes although room for improvement in speed of intervention.

- All eligible patients were commenced on appropriate IV anti hypertensive therapy, although target BP was achieved in only 35%
- All 13 patients who were on an anticoagulant prior to their admission were effectively reversed, but non within the time frame as stipulated in the bundle.
- 30day IP mortality was 18%
- The average length of stay was 18 days
- Commonest site of bleed was the basal ganglia with 34% of all the bleed



Conclusion

INTERACT3 (Intensive care bundle with blood pressure reduction in acute cerebral haemorrhage trial) showed implementing time sensitive care bundle demonstrated a statistically significant favourable shift, even when adjusted, in mRS (p=0.017) . WE have incorporated the ABC care bundle in our SSNAP supplementary performance which and has already shown significant improvements in care.

Recent data from SSNAP (Dec 2017-Sep 2019) highlights the urgent need for improvements in ICH care in the UK and showed that **only 35% of eligible patients received any BP lowering treatment and 46% of eligible patients received anticoagulation reversal.** Although our patients did receive appropriate therapy, not in a timely manner whereby potentially reducing therapeutic benefit. Extrapolating the findings from Salford, implementation of the ABC care bundle could potentially lead to **around 924 lives/year saved across England**, if similar effects to that observed in Salford we seen nation wide.

References

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