Aim
To improve fluid prescription and fluid balance charting across NHS Fife.

Why is this needed?
20% of patients, particularly the elderly, who receive intravenous fluid in hospital suffer morbidity or mortality as a result. This is a huge burden to the NHS and to patients. Much of this is preventable but change has been slow to occur due to the widespread change in practices required. The OPAH Report of 2014 demonstrated that no Scottish hospitals chart fluid balance adequately.

Methods
1. Examine existing practice Fig 1.

2. Develop multidisciplinary fluid group.

3. Engage management.

4. Develop guidelines based on the CIFTASUP and NICE guidelines. Fig 2.

5. Educate medical and nursing staff. Fig 3.


7. Introduce new charts Fig 7,8 after employing a Quality Improvement Nurse for Fluid Management.

Outcomes
Process measures such as ward audits and prescription audits are ongoing. Fig 11. We have looked at fluid use in terms of total volumes used and the cost of the fluids. Fig 12, 13. A study of blood tests from 2007-2017 looking at lab results from thousands of patients is underway with Dundee University.

Conclusion
The culture around fluid use has changed and junior doctors now have a logical system on which to base prescribing decisions. Nursing education in the wards continues with a full-time Fluid Nurse (E. Ridley). Nurse education is effective in improving fluid balance charting.

Fig 12 Fluid use NHS Fife

Fig 14 National Fluid IV Programme

The Future
A national intravenous fluid programme with financial support for all boards was launched by the Scottish Government in February 2018, in conjunction with the NHS Fife Fluid team. Part of this programme will focus on peri-operative fluids and there will be a drive to standardise fluid education in the universities.