Background: Influenza (flu) is a highly contagious virus which can cause serious illness in patients with co-morbidities, including chronic kidney disease (CKD). Annual flu vaccination programmes can deliver considerable protection but in 2015-2016 only 53.5 % of English CKD patients received the vaccine. Chronic haemodialysis (CHD) patients are at high risk of infection with known impaired immune responses. Moreover, CHD patients spend large amounts of time in close proximity to other patients at dialysis units. Flu infection in CHD is associated with significant morbidity and mortality, and the logistics of managing a flu outbreak on a dialysis unit are not to be underestimated. Response to flu vaccination in CHD patients is poorly studied and likely to be less effective than in the general population, but production of functional antibodies with reduction of hospital admission and death have been demonstrated. As such, it is recommended for CHD patients by KDIGO and the UK Renal Association. Herd immunity requires high levels of patient vaccination Anecdotal reports suggest that more co-morbid CHD patients find it difficult to access primary care for vaccination, and.in the spirit of ‘making every contact count’ we negotiated with NHS England to be able to provide flu vaccination in our dialysis units commencing in 2016-17. This was well received and achieved 82.3% vaccination rates. We now report on the programme for 2017-18 within a flu outbreak.

Methods: Specifications for service were established with NHS England Public Health. An SOP for administration with patient group directive, teaching slide set for staff and communication package for patients was drawn up. Vaccine was administered by nursing staff in our NHS and alternative provider units in the last 30 minutes of dialysis, starting as soon as available in late September 2017. Evaluation forms were completed by patients and data re flu cases collected.

Results: Of the 851 patients receiving chronic haemodialysis (CHD) at end of Dec 17, 86.7% (n=747) had received flu vaccination (range in units 67.7-93.5%). 62.1% (n=513) of patients received vaccination in the dialysis unit (range in units 34.5-75.3%) with 24.6 % of patients choosing to receive vaccination in primary care and the remaining 13.3% declining vaccination. 617 evaluation forms were received; 421 of answering patients were vaccinated within the dialysis units with 93% stating they were ‘very satisfied’. 522 patients answered the question ‘would you have the vaccine at the unit again in the future?’ with 460 (88%) answering ‘yes’ and 42 (8%) ‘no’. Of those answering ‘no’, 31 (74%) intended to again decline the vaccine with 11 (26%) stating they would rather have in primary care. 617 patients answered the question ‘did you have the flu vaccine in 2016?’. Of the 77 who stated ‘no’ 52 again declined (67%) but 23 (30%) this year received in the dialysis unit. During Jan 2018, at the height of the local flu outbreak, 25 cases of flu-like illness were reported within our CHD population; 18 were confirmed as having flu (1 serotype A and 17 serotype B), 3 were not swabbed and 4 were swab negative. 13 were admitted (median 7 days; range 1 to 30 days with 4 still hospitalised at end of January) with 8 developing secondary lower respiratory tract infections requiring antibiotics. Of the 25 cases, 17 had received the vaccine and 8 had not. All were managed by our local SOP for flu in CHD patients, including oseltamivir use for symptoms, and dialysis in a side room if possible or cohort area. There was no evidence of spread of influenza within a dialysis unit.

Conclusion: Provision of flu vaccination within the dialysis unit is possible, well received and provides excellent levels of coverage. Although immune response to the vaccine may be variable, in an outbreak our admission rates have been modest and spread within the units apparently low. Traditional commissioning boundaries should not prevent provision of care in a manner most appropriate for patient and services.