with chronic hepatitis B (CH-B). Whether pre-treatment HBsAg plasma levels correlate with liver relaxed circular (RC) HBV DNA and covalently closed circular (ccc) DNA is controversial. To date, no information is available on HBsAg plasma level behaviour and response to treatment prediction in tolerant patients with infancy-acquired CH-B treated with lamivudine (LAM) and IFN.

Aim To investigate whether HBsAg plasma levels predict response to LAM + IFN treatment in tolerant children with infancy-acquired CH-B, and to determine their association with plasma HBV DNA levels during treatment and with pre-treatment liver RC HBV DNA and cccDNA.

Method Patients: 23 children (8 males, median age 10.2 yrs) with infancy-acquired CH-B (all HBeAg positive), treated for 52 weeks [lead-in LAM (3 mg/kg/d) for 9 weeks; LAM plus IFN-α (5 MU/m^2 TIW) from week 9 for 44 weeks], were divided according to treatment response: 5 responders (R = anti-HBs seroconversion) and 18 non-responders (NR).

Methods: Plasma HBsAg and HBV DNA levels were measured before (treatment week 0, TW0), during (TW9, TW28, TW52) and after (follow-up week, FUW24) therapy by Abbott ARCHTECT_ assay and real-time TaqMan PCR [both $\log_{10}$ IU/ml]. Baseline liver RC HBV DNA and cccDNA was quantified by real-time TaqMan PCR [copies/ng genomic DNA]. Results are presented as median.

Results Baseline HBsAg levels were lower in R than NR (4.36 vs 4.74, p=0.02), but similar in R and NR at the end of LAM lead-in therapy (TW9) (4.34 vs 4.66, p=0.1). During IFN add-on therapy, at TW28 (2.34 vs 4.33) and TW52 (0 vs 4.08) levels were markedly lower in R than NR, the difference persisting at FUW24 (0 vs 4.51) (p<0.01 for all). Plasma HBV DNA levels were similar at baseline in R and NR (8.94 vs 8.98), but decreased significantly in R compared to NR at TW9 (4.91 vs 5.48), TW28 (3.42 vs 4.39), TW52 (1.57 vs 4.07) and FUW24 (0.27 vs 7.75) (p<0.01 for all). There was a strong positive correlation between plasma HBsAg and HBV DNA levels at TW28 (r=0.6, p<0.01) and TW52 (r=0.64, p<0.01). Baseline liver RC HBV DNA (43 800 vs 52 300 copies/ng genomic DNA) and cccDNA (41 vs 49 copies/ng genomic DNA) were similar in R and NR, with no correlation between liver RC HBV DNA or cccDNA and baseline HBsAg.

Conclusion Lower baseline HBsAg plasma levels and a sharp decrease of plasma HBV DNA levels at TW9 (LAM lead-in) followed by declining plasma HBsAg levels from TW28 (IFN add-on) heralds HBsAg clearance and response to treatment in tolerant children with CH-B.

P67 SWITCH TO OTHER NUCLEOS(T)IDE ANALOGUES THERAPY IN CHRONIC HEPATITIS B COHORT ON LONG-TERM DE-NOVO COMBINATION THERAPY WITH LAMIVUDINE PLUS ADEFOVIR: EFFICACY AND SAFETY

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Introduction Long-term de-novo combination therapy with lamivudine (LAM) 100 mg/d + adefovir (ADV) 10 mg/d is highly efficient, with no/minimal drug resistance and good safety profile. Tenofovir (TDF) 245 mg/d or entecavir (ETV) 0.5 mg/d are highly efficacious antivirals with high resistance barrier and provide alternative to LAM + ADV combination therapy.

Aim We aimed to investigate the virological and serological responses and renal/bone safety after switch from LAM + ADV to other antiviral drugs.

Method Patients: Nucleos(t)ide analogues naive 192 CHB patients (78% males, median age 40 y, 35% HBeAg+, 34% cirrhosis) were treated with de-novo LAM+ADV at a single-centre practice (median 36 months). 149 patients from this cohort were switched to other nucleos(t)ide analogues therapy: 101 (68%) to TDF monotherapy, 28 (19%) to TDF plus emctritabine, 14 (9%) patients to ETV monotherapy and 6 (4%) patients to other antivirals. Median duration of therapy after switch was 14 months. Reasons for the switch were following: 33 patients slow-response/non-response, 14 had drug-related renal impairment, 5 due to pregnancy, 2 after liver transplantation and 95 patients were switched for other reasons.

Methods Number of patients achieved HBeAg seroconversion and complete virological response (CR) (HBV DNA<12 IU/ml) was compared (LAM+ADV vs. switch). Differences between serum levels of HBV DNA, creatinine and phosphate and estimated glomerular filtration rates (eGFR) were assessed at each time-point and compared between groups and with baseline. HBV genotypic resistance was tested in all patients with suboptimal response by direct sequencing.

Results Baseline HBV DNA was significantly higher in LAM+ADV vs switch group (median $\log_{10}$ 4.6 vs 0.89 IU/ml, p<0.01), there was higher proportion of responses after switch than at time of switch and when compared to LAM+ADV (switch baseline 76% vs m3 switch 91%, p=0.02 vs m3 LAM+ADV 48%, p<0.01). On LAM +ADV therapy 14 patients achieved HBeAg and 3 patients HBsAg seroconversion and additional 3 patients and 1 patient seroconverted HBeAg and HBsAg after switch. No viral mutations associated with drug resistance were detected in LAM+ADV and after switch. There were no significant differences in serum creatinine or eGFR between groups at each time-point, but comparing to baseline there was significant decrease in eGFR from M18 onwards in LAM+ADV group (82.2 vs76.2 ml/s, p=0.04). The proportion of patients with eGFR <60 ml/s did not changed during LAM+ADV therapy and after switch. Serum phosphate levels [mmol/l] fell on therapy in LAM+ADV from M12 (M12: −0.04, M18: −0.06 and M24: −0.05) and remained unchanged after switch.

Conclusion Switch to other nucleos(t)ide analogues from long-term de-novo combination LAM+ADV therapy was efficient and was not associated with impact on renal/bone safety.

P68 IS IT WORTH TESTING UNSTABLE DRUG USERS FOR HEPATITIS C?

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Introduction Within the UK the main source of hepatitis C virus (HCV) infection is injecting drug use however, diagnosing HCV in chaotic drug users has often proved challenging, particularly if venous access is a problem.

Aim To evaluate the introduction of HCV dry blood spot testing (DBST) by staff working in addiction services and to determine if individuals who agreed to testing, returned for their results and accessed appropriate follow-up into either drug or HCV treatment.

Method The study was carried out over an 18-month period between 2009 and 2010. Testing for HCV was offered to individuals who accessed addiction services during this period. A follow-up appointment was issued for 2 weeks after testing. The numbers tested were monitored and data were collected on follow-up appointments attended.

Results During the study, 661 tests were carried out using the DBST method. 479 (72.5%) within needle exchange services and 182 (27.5%) from drug treatment services. 439 (66%) were male, and the age range was 18 to 51 years with a median age of 32 years. 608 (91.3%) individuals returned for the results of their test and 186 (28%) of the 661 tests were HCV antibody positive. Follow-up bloods were offered to all positive patients. Of the 147 (79%) who

had blood taken 90 (61.1%) were HCV PCR positive. HCV PCR negative individuals were provided with harm reduction advice, were encouraged to access drug treatment, and discharged from further HCV follow-up. All PCR positive individuals were offered referral onto drug treatment and/or specialist HCV services for assessment and treatment. Abstract P68 table 1 lists summary of outcomes.

Abstract P68 Table 1 Engagement of HCV PCR positive individuals

	Number	%
In HCV and drug treatment programme	44	48.9
In current contact with addiction services	12	13.3
In drug treatment programme	21	23.3
Disengaged with services/lost to follow-up	12	13.3
Died	1	1.1

Conclusion The study has shown DBST is easy to use and can be carried out without difficulty by staff within drug services. The offer of HCV testing was well received by this particular client group with over 90% of individuals returning for their results. The study has shown that DBST in practice significantly increased the number of new diagnosis within our region by 77% from 245 in 2007–2008 to 435 in 2009–2010. DBST led a significant number of people into drug and HCV treatment services and therefore proves that diagnosing hepatitis C can have life improving benefits for people.

P69 HOW TO RE-ENGAGE PATIENTS WITH HEPATITIS C INFECTION: LINKING TO METHADONE PRESCRIBING WORKS

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Introduction New patients' attendance rates at the specialist clinic for hepatitis C virus (HCV) management in Grampian are around 45% and a significant proportion of those attending fail to remain under follow-up for a variety of reasons. In an attempt to increase the number of HCV positive individuals attending specialist care, an appointment with a Hepatology Nurse Specialist at their General Practice surgery or community hospital was offered to all those previously referred, still alive and living in our Health Board area.

Aim (1). Describe the demography of those previously referred, still alive and living in the area but no longer attending specialist care; (2). Evaluate different strategies for re-engagement with Hepatitis C services; (3). Compare the demographic features of those accepting and declining offer of re-engagement.

Method Subjects were identified from the Grampian HCV database and the re-engagement exercise was conducted using three methods depending on the preference and resources of General Practice Surgeries: (1). Appointments coincided with provision of existing Methadone prescriptions; (2). Patients were telephoned and chose the time of their appointment. If patients were uncontactable by telephone, appointments were sent by post; (3). Appointments were allocated and time communicated by letter. Only one surgery linked appointments with current Methadone prescriptions. Data were analysed using PASW Statistics V.18. Characteristics of individuals under follow-up were compared to individuals requiring appointments using the Continuity corrected χ^2 test for categorical data and the non-parametric Mann–Whitney test for skewed continuous data. A logistic regression model was fitted to investigate whether gender, age and Carstair's deprivation category could influence loss to follow-up. The same statistical tests were used to compare characteristics of individuals who re-engaged with those who failed to attend clinic appointments. Associations between clinic attendance and method of re-engagement were examined using the Continuity corrected χ^2 test for categorical data.

Results We identified 276 patients requiring follow-up. Those lost to follow-up were significantly younger than patients under continued follow-up (median (IQR) age 34 (30–40) vs 39 (32–49)) ($p<0.001$). Patients under continued follow-up were more likely to live in deprivation category 1 (OR 2.50 (CI 1.07 to 5.85)) ($p=0.035$) and 2 (OR 2.43 (CI 1.27 to 4.62)) ($p=0.007$) than those lost to follow-up, although the gender distribution was similar in both groups. All 276 patients not under follow-up were offered appointments: 96 (35%) attended and 11 declined. Gender, age and deprivation category had no significant effect on re-engagement. Linking appointments with Methadone prescriptions resulted in 89% (31/35) attendance, significantly higher than arranging appointments by prior telephone discussion 43% (24/56) ($p=0.009$) or allocating appointments with communication by letter 24% (41/174) ($p<0.001$).

Conclusion Linking appointments with Methadone prescriptions was associated with significantly higher attendance than other methods although this was only possible in 13% of cases. Allocation and communication by letter resulted in very disappointing attendance rates. This study has demonstrated that a change in the traditional method of service delivery may be required for the successful re-engagement of those with hepatitis C infection and effort should be directed in linking appointments for management of Hepatitis C with their Methadone appointment in appropriate individuals.

P70 TELAPREVIR IN COMBINATION WITH PEGINTERFERON AND RIBAVIRIN IN GENOTYPE 1 HCV TREATMENT-NAÏVE PATIENTS: FINAL RESULTS OF PHASE 3 ADVANCE STUDY

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Aim The ADVANCE study is a 3-arm double-blind, randomised, placebo-controlled Phase 3 study assessing efficacy and safety of two telaprevir (TVR, T)-based response-guided regimens compared with peginterferon alfa-2a 180 _g/week and ribavirin 1000–1200 mg/day (PR) in treatment-naive patients with chronic genotype 1 HCV infection.

Method Treatment arms were (a) T 750 mg q8 h in combination with PR for 8 weeks, followed by additional weeks of PR; (b) T 750 mg q8 h in combination with PR for 12 weeks, followed by additional weeks of PR; (c) PR for 48 weeks (control arm). Patients in T arms achieving an extended rapid viral response (eRVR, undetectable HCV RNA at weeks 4 and 12) received a total of 24 weeks of therapy while those who did not received a total of 48 weeks of therapy. Randomisation was 1:1:1 and patients were stratified by HCV RNA (<800 000 IU/ml, ≥800 000 IU/ml), and genotype 1a vs. 1b. The primary endpoint was SVR (undetectable HCV RNA 24 weeks after last planned dose of treatment). The primary analysis was based on the Full Analysis (intention-to-treat) dataset. Safety is presented for TVR/Placebo duration phase.

Results Of 1088 patients, 839 (77%) had HCV RNA ≥800 000 IU/ml, 631 (58%) were genotype 1a, 636 (58%) male, 94 (9%) black, 117 (11%) Latino/Hispanic, 231 (21%) had bridging fibrosis or compensated cirrhosis. The most common (>25%) AEs in the T arms were fatigue, pruritus, nausea, headache, anaemia, rash, influenza-like illness, insomnia, fever, and diarrhoea. Discontinuation of treatment due to AEs occurred in 8% in T8PR, 7% in T12PR and 4% in PR48; due to rash occurred in 0.5%, 1.4% and 0.0% and