Overview

Liver disease is the third most common cause of premature death in the UK and the national liver disease health outcomes are worse than in other western European countries. Over the last decade, the number of liver disease-related hospital admissions in the UK has increased by half, placing an ever greater strain on the health service. Liver disease disproportionately affects the poorest and the most vulnerable in society and is a major factor in perpetuating socio-economic health inequalities.

There are 3 main risk factors for Liver disease in the UK:

- Alcohol
- Obesity
- Viral hepatitis

The Together for Health Liver Disease Delivery plan 2015-2020 aims to improve activity and outcomes across six key themes:

1. Preventing liver disease and promoting liver health
2. Timely detection
3. Fast and effective care
4. Living with liver disease
5. Improving information
6. Research

To support the implementation of the plan, a Liver Disease Implementation Group (LDIG) was established. The LDIG includes broad representation with clinicians from each health board in Wales, the British Liver Trust and Children’s Liver Disease Foundation and, crucially a patient representative. To facilitate the delivery of the priorities of the LDIG a number of subgroups overseen by a project delivery team have been established. Individuals within these groups link in with the work of the Welsh Association of Gastroenterology and Endoscopy (WAGE) and also the Lancet Commission on liver disease in the UK.

In the early phase of the implementation of the plan the following areas were prioritised for investment:

- The development of hospital based alcohol care teams;
- Strengthening the early detection of liver disease;
• Developing integrated and streamlined pathways;
• Building on the legacy of the blood borne virus plan;
• Education and awareness raising for the prevention of liver disease;
• The appointment of a part time clinical lead;
• Implementation of satellite liver transplant outpatient clinics.

Progress over the last twelve months

Alcohol Care Teams

Health Boards in Wales have been provided with funding from the Liver Disease Delivery Plan to pump-prime their secondary care alcohol care teams. A total of £1 million has been allocated over 2 years to this crucial objective. Four of the 6 health boards that provide acute services have now recruited staff to establish or strengthen these services and the remaining two health boards are in an advanced stage of planning. These service developments have been shown elsewhere in the UK to be both cost and clinically effective. It is anticipated that alcohol care teams will become incorporated into health board core activity in the future. Completion of recruitment based on the funding made available will increase the pool of alcohol liaison nurses within Welsh Health Boards from 13 to 21. Furthermore 3 Health Boards now have dedicated clinical leads with dedicated sessions, thereby providing a crucial leadership, development and co-ordination role. Typically, alcohol care teams demonstrate an impact in terms of length of stay or prevention of readmission within just a few months. Nonetheless, a service evaluation toolkit is in development to ensure expected benefits are being realised across Wales. This is complemented by a service user involvement toolkit that has already been developed.

As an example of these initiatives, within Hywel Dda UHB, the Llanelli site has introduced the Clinical Institute Withdrawal Assessment for Alcohol (CIWA) in the management of alcohol withdrawal across all clinical areas. Recent local audit indicates a subsequent reduction in lengths of stay following the introduction of this service.

Early Detection of Liver Disease

To strengthen the early detection of liver disease, a pilot project has been undertaken in Aneurin Bevau UHB related to liver function testing. This pilot set out to determine the usefulness of the reflex measurement of an AST (Aspartate aminotransferase) test when the ALT (Alanine aminotransferase) test is raised in order to calculate an AST:ALT ratio. It has been repeatedly shown over many years that an AST:ALT ratio greater than 1 is associated with a high risk of advanced fibrosis (scarring) of the liver. The novel aspect of this pilot was the
automatic testing of the AST (which is not routinely measured). As well as reflexly measuring the AST, the ratio is also calculated automatically and primary care doctors are linked to a management algorithm.

In addition to early detection of advanced liver disease, the project was also designed to increase GP knowledge of the management of abnormal liver function tests and provide early reassurance as well as lifestyle advice for those who don’t have liver disease. The reflex testing aspect is also a good example of prudent healthcare principles as it minimises the need to repeat bloods tests to obtain the required information. A full evaluation of this initiative is due to be completed by August 2017 and will inform the development of an All Wales abnormal liver function test pathway. Importantly this work has led to liver disease being identified as a primary care priority area for 2017-2018 within the GP contract for Wales.

Other examples of developments to support the early detection of liver disease include the development of a guide for the primary care management of suspected Non-alcoholic Fatty Liver Disease (NAFLD) in Abertawe Bro Morgannwg UHB. This will be used as the basis for an All Wales NAFLD pathway and subject to formal evaluation.

Pathway Development

There have been a number of initiatives undertaken across Wales related to pathway development for individuals with liver disease and some examples from different health boards are given here.

In Hywel Dda UHB nurse led, consultant assisted cirrhosis clinics have been established at 2 sites. Dedicated cirrhosis clinics are an important way of ensuring appropriate chronic disease management with the focus on patient support and early detection of complications of cirrhosis which facilitates timely referral for liver transplantation, where appropriate.

Betsi Cadwaladr UHB have established dedicated liver outpatient clinics, with transient elastography (Fibroscan) now located in each of the 3 acute hospital sites, facilitating consistent clinical / operational standards. In addition, a dedicated Gastroenterology Ward opened at the end of April 2017, with a consultant looking after liver disease patients with a weekly Liver MDT in support of this.

Abertawe Bro Morgannwg UHB have expanded the medical day unit at Singleton hospital to increase capacity for ambulatory procedures such as large volume paracentesis, while dedicated liver clinics (6 per year) have been established in Neath Port Talbot Hospital as planned.

In line with the delivery plan, Cwm Taf UHB have introduced nurse led ambulatory care pathways for the management of advanced liver
disease and the BSG/BASL cirrhosis care bundle for acute admissions has been introduced.

Cardiff & Vale UHB have introduced a dedicated Hepatology team to cover in-patients with liver disease via a retrieval service, with all acute hospital admissions due to liver disease seen by a consultant within 24 hours of admission.

In Aneurin Bevan UHB, an MDT to support the care of individuals with complex liver disease has been introduced and a comprehensive ambulatory care service is in evolution, focusing on the concept of “liver rehabilitation”.

Building on the Legacy of the Blood Borne Virus Action Plan

The BBV clinical network in Wales has established and delivered transparent and equitable access to the multitude of new, highly effective and well tolerated treatments for hepatitis C infection. This has resulted in a dramatic increase of the numbers of individuals both treated and cured of the virus over the last two years. During 2016-17 772 individuals were treated for hepatitis C infection in Wales with a cure rate of around 95%. The network / collaborative working and bargaining approach has also resulted in significant savings to the NHS in Wales. Crucially, there is no restriction on access to treatment for hepatitis C infection based on disease stage, the only country in the UK, and one of the few in the world to not place such a restriction. The next stage of upscaling hepatitis C treatment is to improve detection of those not known but at risk of infection. In this regard, and off the back of the success of the clinical network approach, four projects, involving investment from industry partners are in development to improve detection and reduce the burden of hepatitis C in Wales.

Education and Awareness Raising For the Prevention of Liver Disease

To meet this key objective, funding has been agreed via the LDIG, for the British Liver Trust to undertake a comprehensive education and engagement programme within Wales, working alongside other relevant partners /projects including Public Health Wales and local public health teams. Examples of this work include the undertaking of community awareness in each local authority within Wales events and aid the widespread development across Wales of patient and carer support groups.

In regards to the prevention of liver disease, within Cwm Taf UHB, the Drink Wise Age Well has made good progress with positive impacts and a joint care programme (exercise and weight management) has been extended and employed two additional dieticians via primary care cluster money.
The Living Well, Living Longer wellness programme within Aneurin Bevan UHB has modified its advice script to educate individuals about how their personal behaviours impact on their risk of liver disease.

National Clinical Leadership

A part-time (0.2 WTE) national clinical lead has been appointed to provide national clinical leadership to help take the plan forward and to act as an ambassador for Hepatology in Wales. Current activities related to this role include:

- Working with Welsh Health Specialised Services Committee (WHSSC) to undertake an options appraisal related to improving access to liver transplantation services for patients in Wales. It is of interest to note that liver transplant rates for Welsh patients have increased by approximately 50% between 2014-15 and 2015-2016.
- Overseeing the pilot work in relation to the AST ratio.
- The chairmanship and reporting of the WAGE away day related to liver disease in autumn 2016 - http://www.wage.org.uk/
- Organisation of a National Liver Day on 13 June 2017 to bring together health care professionals in Wales with the main focus on delivering objectives set out in the liver disease delivery plan.
- Representing Wales on the UK wide Lancet Commission and reports on progress of the liver plan.
- Contributing to the soon to be published British Society of Gastroenterology Abnormal Liver Function Tests guideline.

Other Areas of Progress

Wales continues to support research related to liver disease and its risk factors. Centres in Wales have participated in a number of commercial and non-commercial studies for example Abertawe Bro Morgannwg UHB have been involved in several NIHR portfolio studies including HCV Research UK and STOPHCV. This will continue to raise the profile of Wales within industry and sends the message that Wales is open and willing to participate in future research.

More broadly the implementation of this plan is considered to have resulted in a greater strategic consideration of the need for development of liver services across Wales to meet the needs of the population in a sustainable way. The success of the BBV lead, working with the chief executives of health boards in Wales, to secure the funding of Hepatitis C treatments represents an example of how the profile of liver disease is being raised within Welsh health boards.
In this respect the LDIG has funded the LiverQuest quality improvement and accreditation programme to be rolled out across all Health Boards in Wales over the next 3 years. This important programme provides a clear framework through which managerial support can aid clinicians in improving service delivery.

**Areas for Improvement and Priorities**

There are a number of key challenges in tackling liver disease in Wales. Some of these challenges are not specific to liver disease and affect a number of different chronic conditions e.g. high levels of obesity within the population, low consultant Hepatologist numbers, challenges with data collection to better understand disease burden, disease trends over time as well as financial challenges within the NHS.

More specific to liver disease, and its risk factors, include the challenges of identifying all those individuals with HCV infection and delivering against the WHO target of elimination as a major public health threat by 2030. In particular, increasing testing rates of individuals know to be at high risk within certain services e.g. such as substance misuse services, and modification of traditional models of care, which do not necessarily support successful patient outcomes, are key priorities.

Another key challenge is managing the increasing incidence of hepatocellular cancer seen in Wales over the past 10 years. Between 2003-2005 to 2013-2015 liver cancer has seen the largest percentage increase in age-adjusted incidence rate of all cancers at 62%.

Access to liver transplantation and the services to support this also remain a key challenge.

The implementation of the liver plan 2015-2020 has gained momentum during 2016-2017 and the building blocks to take forward important areas of work have been developed to address a number of the priorities outlined in the plan.

The key priorities identified for 2017-18 include the following:

1. Further develop the opportunistic assessment of alcohol in different settings and enhance secondary care-based alcohol care teams to provide timely interventions as appropriate.

2. Raising public and healthcare professionals’ awareness of the risk factors contributing to preventable liver disease and help support individuals already living with liver disease.

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http://www.wcisu.wales.nhs.uk/cancer-incidence-in-wales-1#i

accessed 2/5/2017
3. Taking forward the legacy of the Blood Borne Viral Hepatitis Action Plan in all relevant settings and continue the effort to eradicate viral hepatitis with improvements in access to testing, treatment and harm reduction services.

4. Improve the provision of assessment and testing of those at highest risk of developing liver disease.

5. Health Board liver disease units to work with WAGE to meet common standards and meet regularly to share best practice and assess performance against standards.

Priorities

Whilst the development of alcohol care teams across Wales has been very successful in certain areas, there still appears to be some inequity in the availability of this service provision. Improvements in the provision of these services have been identified as an area for improvement in certain health boards and will be supported by the clinical lead. Another priority area related to this will be the adoption of these services within core health board activity post the 2 year pump priming offered from Liver Delivery Plan funds. To help facilitate the ongoing inclusion of these services within health boards integrated medium term plans (IMTP’s) a systematic evaluation of these services is in development and will incorporate the existing service user involvement toolkit.

The planned work of the British Liver Trust in Wales will form a key part in taking forward the raising of public and healthcare professionals’ awareness of liver disease and its risk factors as well as help support individuals already living with liver disease. Designated staff will be employed by the British Liver Trust to work across Wales to deliver on this agenda. This work will tie into the raising awareness and prevention subgroup already established and link with other relevant work being undertaken in Wales.

A scoping exercise has taken place in respect of Liver Transplant services and the ways in which Health Boards in Wales can better engage with referral centres in England. The clinical lead is now working with WHSSC to formalise service level agreements with a focus on information sharing and rapid access to highly specialist opinion.

Building on the work that has been achieved in treating individuals with HCV infection currently accessing specialist services, the focus will now be on targeting strategies to improve diagnosis in populations where prevalence is known to be high and working to engage with individuals with historic diagnosis of chronic viral hepatitis to facilitate specialist assessment for those who may not have been treated in the past. As already alluded to, a number of pilot projects are currently underway or in development, with the aim of sharing the learning
across Wales. There are also specific projects looking to improving testing within community pharmacies and within the prison environment.

Key to any improvement in our understanding of the burden of liver disease in Wales and our attempt to reduce the morbidity and mortality from it will be a strong focus on informatics. In this respect, a number of IT projects have also been initiated to help both with individual patient care and facilitate improved data to estimate the burden of disease related to HCV infection in particular, and also to help monitor trends and our progress against the WHO targets related to HCV and HBV infection. These include:

- The development by NWIS of a HCV e-form which has been tested in Cardiff & Vale UHB and planned for national roll out over the coming year;
- The development and roll out of a comprehensive blood borne virus module within the national web-based data collection system used to record a range of activity related to harm reduction interventions;
- The development of templates within the clinical management system utilised within the prison setting for recording treatment for HCV infection.

To support the eradication of HCV agenda laboratory testing service developments are also being addressed and work is underway to further develop laboratory capacity in relation to testing for blood borne viruses including piloting of point of care testing.

To improve the provision of assessment and testing of those at highest risk of developing liver disease an early detection subgroup will take this forward and build upon the pilot undertaken in Aneurin Bevan UHB. It is planned that links to the Living Well, Living Longer programme will be further developed to potentially include point of care testing for blood borne viruses, with the future roll out of this work across Wales.

Many health boards have made improvements in pathway developments in 2017-18 and it is planned that health boards will learn from each other’s achievements. In this regard, the agreement that all health boards in Wales will take part in the Liver Quality Enhancement Service Tool (LiverQuEST) to improve liver services through a standards framework and assessment process will augment this.

In addition, an information repository to share best practice, business cases and job descriptions, has been agreed and will be hosted on the WAGE website.
Summary and conclusion

In conclusion, whilst much work lies ahead, it is clear there has been excellent progress in relation to important aspects of each major theme within the Liver Disease Delivery Plan. Indeed, in areas such as Hepatitis C treatment, Wales is leading the way within the United Kingdom. Additionally, the focus on enhancing and improving alcohol care services is bucking UK trends. As a consequence, the work of the Liver Disease Implementation Group is attracting attention and praise from outside of Wales, particularly from the Lancet Commission.

Vital next steps will be to ensure we realise our ambition to develop All Wales clinical pathways and continue the relentless focus on improving data capture and utilisation to reduce the risk factors for liver disease and to provide high quality care for those with it.

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