EDITORIAL

Observations on the launch of new drugs for hepatitis C

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Morbidity and mortality from hepatitis C virus infection have been increasing in Australia. This is partly due to the low uptake of treatment with interferon. The development of highly effective direct-acting antiviral therapy and the listing of these drugs on the Pharmaceutical Benefits Scheme (PBS) in March 2016 has revolutionised the clinical management of hepatitis C in Australia.

A goal of therapy is a sustained virologic response (SVR). This is defined as undetectable hepatitis C virus RNA in the patient's blood 12 weeks after treatment. An SVR is associated with favourable clinical outcomes, including reversal of liver fibrosis, improved quality of life and increased survival. The vast majority (>90%) of people treated with the new drugs will achieve an SVR after 8–12 weeks of therapy.[1,2] The availability of direct-acting antiviral therapy has therefore fostered optimism, providing the tools required to reverse the growing burden of hepatitis C virus-related liver disease in Australia.

In 2015, an estimated 227 300 Australians were living with chronic hepatitis C.[3] However, while the vast majority (82%) had been diagnosed, only a small proportion had ever received treatment (22%) and even fewer had been cured (14%). There was a persistently low uptake of treatment (1% per year),[3] due to the suboptimal efficacy and marked toxicity of interferon-based regimens. In contrast, direct-acting antiviral regimens have excellent efficacy and minimal toxicity, with shorter treatment durations and once-daily dosing,[1] which are potential enablers of treatment uptake.

Australia is currently unique in providing unrestricted government-subsidised direct-acting antiviral therapy to all adults living with chronic hepatitis C virus infection. 'Access for all' was achieved through strong advocacy, robust data, bipartisan political support and established partnerships between government, clinical, academic and community organisations. In the first 10 months of PBS listing (March–December 2016), an estimated 32 400 Australians started treatment. That is approximately 14% of the infected population.[4] Additionally, in 2014 and 2015, 4340 people had started direct-acting antiviral therapy via clinical trials, early access programs and personal importation.[5] In stark contrast, over the preceding two decades (1997–2015), only 46 310 people started interferon-based therapy.

Some key features of the PBS listing have enabled the rapid uptake of treatment. First, unlike most other countries, there are no restrictions based on the stage of an individual's liver disease or drug and alcohol use. This permits direct-acting antiviral uptake across the entire infected population. Encouragingly, significant (direct-acting antiviral) uptake has been reported among marginalised populations, including people who inject drugs[6] and people living with HIV,[7] with corresponding high rates of SVRs.[1,7]

Second, access to treatment has been enhanced with a wide range of health professionals (including authorised nurse practitioners and GPs) able to prescribe, with dispensing through public hospital and community pharmacies. In March 2016 only 8% of prescribers were GPs, but this had risen to 31% by December 2016.[4]

Additionally, the Australian Government has negotiated a five-year risk-sharing arrangement with the pharmaceutical companies. The Government has allocated $1 billion for hepatitis C treatment over five years (2016–20) with no cap on the number of people treated per year.

In 2015, the United Nations and World Health Organization set ambitious hepatitis C elimination and control targets. Specific targets included an 80% reduction in hepatitis C virus incidence, a 65% reduction in hepatitis C virus-related mortality and an increase in hepatitis C treatment uptake to 80% of those eligible by 2030.

In order to reduce the incidence of hepatitis C, people at risk of hepatitis C virus transmission, including those who inject drugs, prisoners and HIV-positive homosexual-and-bisexual men, will require expedient treatment (and re-treatment for reinfection). To reduce hepatitis C virus-related mortality, patients with cirrhosis will require assessment, treatment and screening, particularly for hepatocellular carcinoma.

Very encouragingly, an estimated 70% of Australians with cirrhosis related to hepatitis C began direct-acting antiviral therapy between 2014 and 2016.[5] In addition to broad access to direct-acting antiviral therapy, effective hepatitis C virus elimination strategies will require high rates of testing, diagnosis linkage to care and treatment, along with education and prevention strategies, including harm reduction interventions such as opioid substitution therapy and needle exchange programs.[8]

The substantial uptake of therapy in the first 10 months after PBS listing has established a basis for the elimination of hepatitis C in Australia. Evaluating the progress towards elimination will require monitoring treatment uptake, adherence, adverse effects and outcomes,[1] particularly among populations at high risk of transmission. There will also need to be monitoring of hepatitis C virus prevalence and incidence (both primary infection and reinfection) and monitoring of the impact of therapy on hepatitis C virus-related morbidity and mortality on the Australian population. One of the keys to hepatitis C elimination in Australia will be a sustained high uptake of direct-acting antiviral treatment with equitable access to therapy.

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