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Title	Effectiveness of treating recently acquired hepatitis C virus infection
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Summary	<p>Hepatitis C virus infection affects an estimated 180 million people globally. Individuals at high-risk of acquiring infection include people who inject drugs, particularly in high-income settings where medically-acquired or perinatal hepatitis C infection is now rare. While treatment can be curative, detecting recently acquired infection, linking individuals to care, and initiating therapy all remain challenges.</p> <p>This thesis aims to determine whether treatment of recently acquired hepatitis C infection is worthwhile given the complexities and toxicities of antiviral therapy, particularly among people who inject drugs, and recent improvements in treatment of chronic hepatitis C infection. It first explores the effectiveness of antiviral therapy with pegylated-interferon for recent hepatitis C and determines that host IFNL4 genotype and duration of infection, among other factors, can be used to predict cure. It then evaluates how treatment affects quality of life and social functioning, finding that medication side effects have a short-term adverse impact on individuals. Social stability is an independent predictor of treatment uptake and cure. Providing social supports to individuals before treatment could therefore become an important intervention, regardless of which medications are available. Finally, the thesis presents the first, prospective long-term evaluation after acute infection and treatment. Hepatitis C reinfection incidence was low and injecting-risk taking declined over time, indicating that the benefits of early cure are sustained.</p> <p>Recent hepatitis C treatment is shown to be a feasible intervention where incident hepatitis C infection is identified, potentially avoiding long-term complications associated with chronic infection. With the evolution toward simpler, more effective, but more costly interferon-free therapy for chronic hepatitis C, future population health research needs to evaluate the cost-effectiveness of recent HCV treatment and any effect of treatment on preventing transmission. Access to interferon-free treatment should be prioritised for this marginalised population in order to maximise treatment uptake.</p>
Publications	<p>Doyle JS, Sacks-Davis R, Hellard ME. Acute hepatitis C infection: new approaches to surveillance, treatment and prevention. <i>Curr Hepatitis Rep</i> 2012;11(4):221-230. doi:10.1007/s11901-012-0143-5</p> <p>Doyle JS, Thompson AJ, Hellard ME. The role of viral and host genetics in natural history and treatment of chronic HCV infection. <i>Best Pract Res Clin Gastroenterol</i> 2012;26(4):413-427. doi:10.1016/j.bpg.2012.09.004</p>

	<p>Doyle JS, Apsinall E, Liew D, Thompson AJ, Hellard ME. Current and emerging antiviral treatments for hepatitis C infection. Br J Clin Pharmacol 2013;75(4):931-43. doi:10.1111/j.1365-2125.2012.04419.x.</p> <p>Doyle JS Deterding K, Grebely J, Wedermeyer H, Sacks-Davis R, Spelman T, Matthews GV, Rice TM, Morris MD, McGovern BH, Kim AY, Bruneau J, Lloyd AR, Page K, Manns MP, Hellard ME* and Dore GJ* on behalf of the InC3 Study Group, Response to treatment following recently acquired hepatitis C virus infection: a multi-centre international collaborative cohort. J Viral Hepat. 2015 June; 22(12):1020-1023</p> <p>Doyle JS, Grebely J, Spelman T, Alavi M, Matthews GV, Thompson AJ, Dore GJ, Hellard ME on behalf of the ATAHC Study Group, Quality of Life and Social Functioning during Treatment of Recent Hepatitis C Infection: A Multi-Centre Prospective Cohort. PlosOne. 2016 Jun; 11(6):e0150655</p>
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