Appendix 1 (as supplied by the authors): Detailed Methodology

We used the previously developed state-transition model and followed the same approach[1] to examine the health and economic effects of two general screening strategies: 1) "No screening"; and 2) "Screen-and-treat with direct-acting antiviral agents (DAA).

Cohort

We examined four different cohorts that are under consideration by CTFPHC: 1) Asymptomatic individuals not at high risk for HCV; 2) Immigrant populations with high prevalence; 3) Birth cohort aged 25 to 64 years of age; and 4) Birth cohort aged 45-64 years of age. Detailed cohort definitions are provided in Table 1.

Strategies

In our baseline analysis, for each cohort, we consider the following screening strategies.

1. "*No Screening*, treat with DAA" if diagnosed: Depending on different scenarios, we assume that certain proportions of HCV-infected patients are initially unaware of their infection and do not receive antiviral treatment. Each year, we assume that 0.68% of the unaware infected individuals will discover that they are infected with CHC[2], and may undergo treatment. If HCV infection remains undetected, we assume that liver disease is detected when they develop cirrhosis with liver failure and/or hepatocellular carcinoma (HCC).
2. *"Screen and Treat* with DAA*"*: Individuals are offered one-time screening for HCV infection through their primary care physician at a visit scheduled for another purpose. This represents a "case finding" strategy. Screening involves a blood test for HCV antibody. All positive antibody tests will be followed by an HCV RNA test to confirm infection. Our analysis assumes that all individuals who are tested positive for both tests

will be referred to a hepatologist /gastroenterologist/ infectious disease specialist and may be offered treatment with DAA according to the Canadian guidelines[3].

Treatment Considered

We assumed that patients with genotype 1 infection would be treated either with 12 weeks of Holkira Pak (dasabuvir + ombitasvir/paritaprevir/ritonavir) or Harvoni (ledipasvir + sofosbuvir); genotype 2 patients would be treated with 12 weeks of sofosbuvir plus ribavirin; genotype 3 patients would be treated with 24 weeks of sofosbuvir plus ribavirin; while all the other genotypes would receive PR. Additionally, in an exploratory analysis, we assumed patients with genotype 4/5/6 infections would receive 12 weeks of Epclusa (sofosbuvir+velpatasvir). We also assumed that treatment reimbursement restrictions[4] were imposed for F0 and F1 patients in our base case analysis, where diagnosed F0 and F1 patients were not treated by the interferon-free DAA immediately, but were followed-up and offered treatment when they progressed to F2 or above[4].

Decision Model

In our analysis, we developed a cohort-based, state transition model using TreeAge Pro 2016 software[5]. In our simulations, cohort members move between predefined health states in weekly cycles until all members die. Health states related to treatment, fibrosis stages (F0 to F4), presence or absence of a clinical diagnosis, and clinical states (e.g., Cirrhosis, HCC). Detailed health states and allowed transitions among health states are shown in Figure 1.

When simulation was initiated, a cohort member might be in any of the following health states: undiagnosed CHC (further subdivided into health states according to different levels of fibrosis); diagnosed CHC (also subdivided into health states according to different levels of fibrosis) or no evidence of previous exposure to HCV.

The diagnosed CHC cohort members may receive one of the treatment regimens depending on genotype and the uptake of treatment, which takes into account loss to follow-up prior to treatment initiation, Table 2. After treatment, treated cohort members were classified into SVR group or non-SVR group depending on the probability of achieving SVR based on the efficacy of the treatment regimens, Table 2. The model assumed that non-cirrhotic (F0, F1, F2, and F3) patents who achieved SVR would not further progress into advanced liver disease, while patients with cirrhosis (F4) who achieved SVR will progress into advanced liver disease in a lowered rate. For those patients who are undiagnosed or did not achieved SVR, the model assumed that they will progress over time to different clinical states of CHC infection and/or cirrhosis based on the natural history progression.

Model Parameters

We parameterized the existing model with values suggested by CTFPHC and validated by clinical experts. Specifically, the important parameters included: 1) Prevalence[6,7]; 2) Uptake of screening; 3) Distribution of the disease stages at diagnosis (fibrosis stages); and 4) Uptake of treatment, which takes into account loss to follow-up prior to treatment initiation. Table 2 represents the key parameter values for each scenario.

Fibrosis progression parameters were obtained from a systematic review conducted by Thein et al. in 2008[8]. Transition probabilities to advanced liver disease were obtained from a published study that provided separate estimates for both SVR and non-SVR among CHC infected patients[9]. Transition probabilities to liver transplant were also obtained from a published study[10]. The baseline probability of achieving SVR were updated based on the findings of the current CADTH therapeutic review[11,12] (Table 2). The annual mortality risks associated with

advanced liver diseases were obtained from a US study based on cancer registries[13], as well as a systematic review[14]. All-cause mortality was obtained from Statistics Canada[15] (Appendix 1).

The CHC infection-related costs were collected from a large Canadian costing study using administrative data. The model assumed that when an individual achieved SVR, annual costs for non-CHC individuals would be applied. The liver transplant–related costs were collected from a Canadian costing study based on patient medical records obtained from hospitals[16]. The costs of antiviral therapies (Table 3) were collected from CADTH therapeutic review[11,12].

Utility information for health states were obtained from the most recent and valid Canadian utility study available using Health Utilities Index Mark 2 (HUI2)[17]. The study included 700 patients across different CHC infection health states.

Economic Assumptions

All the analyses were carried out from the payer perspective were structured as a cost-utility analysis, with primary outcomes expressed in expected quality-adjusted-life-years (QALYs) and costs. Health events such as the number of cases of decompensated cirrhosis, number of cases of hepatocellular carcinoma (HCC), number of HCV-related liver deaths and the number of HCV-deaths prevented were reported. Future costs and health benefits were discounted at 5% annually. All cost data were inflated to 2015 using the Statistics Canada Consumer Price Index for healthcare and personal items. Supplementary Table 2 summarizes all the assumptions.

Model Validation

For validation purposes, we ran our model using the baseline parameter values. We compared the predicted outcomes of our model against published studies[10,18,19]. These outcomes

included: probability of progression to cirrhosis and probability of liver-death at 20 years and/or at 30 years. Our model results closely matched the results of the published studies[10,18,19].

Analytic Strategy

In our analysis, we first conducted a base-case analysis to estimate the expected value using deterministic calculations. We then ran deterministic one-way sensitivity analysis on all model parameters over the plausible ranges using the reported 95% confidence interval (CI) ranges if available or using ± 25% of the reference value as indicated in tables. Finally, we ran probabilistic sensitivity analyses (PSA) using the Monte Carlo simulation for 1,000 iterations for each sub-group analysis. All probabilistic parameters and utilities used in the model are represented by beta distributions formed by the corresponding ranges as indicated in tables; all the cost parameters are represented by gamma distributions formed by the corresponding ranges as indicated in tables.

Supplementary Table 1: All Parameters used in the model

Costs	Baseline	Low	High	Source
Cost				
Cost of transplant	$120,593	$90,445	$150,741	[20]
Cost of post-transplant	$19,400	$14,550	$24,250	[20]
Cost of adverse events				
Anemia (Cost per week)	$107	$80	$134	[21]
Depression (Cost per week)	$73	$55	$91	[21]
Rash (Cost per week)	$12	$9	$15	[21]
Cost of Anti-HCV test	$14.48	$10.86	$18.1	[22]
Cost of HCV RNA test	$100	$75	$125	[22]

Utilities	Baseline	Low	High	Source
Utilities				
Canadian population average				
Age 25 – 34	0.90	0.89	0.92	[23,24]
Age 35 – 44	0.88	0.86	0.91	[23,24]
Age 45 – 54	0.86	0.83	0.88	[23,24]
Age 55 – 64	0.83	0.80	0.87	[23,24]
Utility for CHC related health states				

Non-cirrhosis (F0 – F3)	0.73	0.69	0.77	[17]
Compensated cirrhosis (F4)	0.69	0.65	0.73	[17]
HCC	0.72	0.68	0.75	[17]
Decompensated cirrhosis	0.65	0.65	0.73	[17,25]
Post-transplant	0.75	0.70	0.79	[17]
Viral clearance	0.80	0.76	0.84	[17]
On-treatment	0.71	0.67	0.75	[17]

Other Variables	Baseline	Low	High	Source
Population				
Proportion known infected CHC	0.305	0.157	0.507	[6]
Proportion of spontaneous clearance	0.28	0.16	0.30	[26]
Annual diagnosis rate (no screening)	0.0068	0.0034	0.0085	[2]
Genotype distribution				
G1	0.67	0.50	0.84	[27]
G2	0.09	0.07	0.11	[27]
G3	0.22	0.17	0.28	[27]
G4	0.01	0.00	0.02	[27]
G5/6	0.01	0.00	0.02	[27]
Natural history of CHC				
Annual probability for fibrosis progression				
F0 → F1	0.117	0.104	0.13	[8]
F1 → F2	0.085	0.075	0.096	[8]
F2 → F3	0.12	0.109	0.133	[8]
F3 → F4	0.116	0.104	0.129	[8]
Annual probability for cirrhosis progression				
F4 → decompensated (Non-SVR)	0.035	0.027	0.043	[9]
F4 → decompensated (SVR)	0.002	0.0001	0.005	[9]
F4 → HCC (Non-SVR)	0.024	0.018	0.031	[9]
F4 → HCC (SVR)	0.005	0.001	0.030	[9,28]
Annual CHC related mortality				
HCC	0.411	0.31*	0.51*	[13]
Decompensated Cirrhosis	0.216	0.162*	0.27*	[14]
Liver transplant (1st year)	0.142	0.124	0.159	[29]
Liver transplant (> 1 year)	0.034	0.024	0.043	[29]
Annual probability for liver transplantation				
From Decompensated Cirrhosis	0.033	0.017	0.049	[10]
From HCC	0.033	0.017	0.049	[10]
Discount Rate	5%	3%	5%	[30]

Costs	Baseline	Low*	High*	Source
Cost+				
Annual cost CHC early phase				
Age 15 – 24	$4,179	$4,016	$4,350	[16]
Age 25 – 34	$4,069	$3,988	$4,151	[16]
Age 35 – 44	$3,888	$3,812	$3,967	[16]

Age 45 – 54	$4,589	$4,498	$4,682	[16]
Age 55 – 64	$5,541	$5,377	$5,710	[16]
Age 65 – 74	$7,325	$7,038	$7,624	[16]
Age 75+	$7,736	$6,930	$8,635	[16]
Annual cost CHC late phase				
Age 15 – 24	$5,103	$4,054	$6,422	[16]
Age 25 – 34	$10,344	$8,640	$12,384	[16]
Age 35 – 44	$12,054	$11,582	$12,546	[16]
Age 45 – 54	$14,597	$13,475	$15,813	[16]
Age 55 – 64	$12,337	$11,619	$13,100	[16]
Age 65 – 74	$11,558	$10,670	$12,520	[16]
Age 75+	$9,885	$8,855	$11,034	[16]
Annual cost CHC pre-death phase				
Age 15 – 24	$23,970	$19,822	$28,985	[16]
Age 25 – 34	$42,955	$36,603	$50,408	[16]
Age 35 – 44	$35,544	$32,811	$38,504	[16]
Age 45 – 54	$41,823	$39,388	$44,410	[16]
Age 55 – 64	$52,102	$49,561	$54,773	[16]
Age 65 – 74	$44,649	$43,765	$45,551	[16]
Age 75+	$40,424	$38,453	$42,497	[16]
Annual cost non-CHC before pre-death phase				
Age 15 – 24	$1,665	$1,616	$1,716	[16]
Age 25 – 34	$1,633	$1,600	$1,665	[16]
Age 35 – 44	$1,813	$1,777	$1,850	[16]
Age 45 – 54	$2,362	$2,338	$2,387	[16]
Age 55 – 64	$3,925	$3,809	$4,044	[16]
Age 65 – 74	$6,083	$5,962	$6,205	[16]
Age 75+	$7,440	$7,148	$7,743	[16]
Annual cost non-CHC pre-death phase				
Age 15 – 24	$60,850	$49,324	$75,069	[16]
Age 25 – 34	$39,226	$34,791	$44,228	[16]
Age 35 – 44	$42,291	$40,229	$44,459	[16]
Age 45 – 54	$45,207	$44,312	$46,120	[16]
Age 55 – 64	$44,542	$43,660	$45,442	[16]
Age 65 – 74	$44,854	$43,966	$45,761	[16]
Age 75+	$36,548	$35,825	$37,287	[16]

Supplementary Table 2 – Summary of Assumptions

• Treatment restriction were assumed for patients with F0 and F1 CHC patients.
• HCC and decompensated cirrhosis were assumed to occur only at F4.
• One-time treatment was assumed for all patinets.
• Model assumed no other pre-existing conditions; e.g., HIV.
• Model assumed no spontaneous remission.
• Patients who discontinued treatment were assumed not to have achieved SVR.
• For non-cirrhotic (F0, F1, F2, and F3) patents who achieved SVR, the model assumed that they would not further progress into advanced liver disease, while those with cirrhosis (F4) who achieved SVR would progress into advanced liver disease at a lower rate.
• For patients who are undiagnosed or who did not achieved SVR, the model assumed that they will progress over time to different clinical states of CHC and/or cirrhosis based on the natural history of CHC.
• Model did not consider negotiated drug prices.
• Analyses were carried out from the payer perspective.
• Future costs and health benefits were discounted at 5% annually.

Appendix to: Wong WWL, Erman A, Feld JJ, et al. Model-based projection of health and economic effects of screening for hepatitis C in Canada. *CMAJ Open* 2017. DOI:10.9778/cmajo.20170048.

Supplementary Table 3 – Undiscounted Life Years Results

Undiscounted Life Years Results for Scenario 1

Age range	Strategy	LY*	Δ LY*
15-79	No screening, treat with Interferon-free DAA if diagnosed	41.8691	
	Screen & treat with Interferon-free DAA*	41.8778	0.0087

Undiscounted Life Years Results for Scenario 2

Age range	Strategy	LY*	Δ LY*
15-79	No screening, treat with Interferon-free DAA if diagnosed	39.5067	
	Screen & treat with Interferon-free DAA*	39.5859	0.0791-0.0792

Undiscounted Life Years Results for Scenario 3

Age range	Strategy	LY*	Δ LY*
25-64	No screening, treat with Interferon-free DAA if diagnosed	40.2555	
	Screen & treat with Interferon-free DAA*	40.2808-40.2809	0.02534-0.02539

Undiscounted Life Years Results for Scenario 4

Age range	Strategy	LY*	Δ LY*
45-64	No screening, treat with Interferon-free DAA if diagnosed	31.9540	
	Screen & treat with Interferon-free DAA*	31.9796-31.9797	0.02561-0.02566

*Range indicate the different between which DAA was used for treating genotype 1 patients
Abbreviations: LY: life-years; DAA; Direct acting agents

Supplementary Table 4 - Net Life Year and QALY Life Year Gained for Screening Scenarios 1 to 4

	Maximum Estimated Affected population screening size[+31]	Per person LY gained (undiscounted)*	Per person QALY gained (5% discounted)*	Net LY gained (undiscounted)*	Net QALY gained (5% discounted)*
Scenario 1	27,370,909	0.008740551	0.002011377	239,237	55,053
Scenario 2	5,801,856	0.079163108	0.019654945	459,293	114,035
Scenario 3	19,171,503	0.025339886	0.007979182	485,804	152,973
Scenario 4	9,814,702	0.025614459	0.008779324	251,398	86,166

+Maximum estimated affected population screening size according to the data source.
*compare between "Screen & treat with Inferferon-free DAA" with "No screening, treat with Interferon-free DAA"

Appendix to: Wong WWL, Erman A, Feld JJ, et al. Model-based projection of health and economic effects of screening for hepatitis C in Canada. *CMAJ Open* 2017. DOI:10.9778/cmajo.20170048.

Supplementary Table 5 – Exploratory Analysis (Epclusa (sofosbuvir+velpatasvir)) Details and Results

Treatment Efficacy (Sustained Virologic Response)				
Description	**Base Estimate**	**Lower Limit (95% CrI)**	**Upper Limit (95% CrI)**	**Source**
Genotype 4-6				
SOF12 + VEL12	0.98	0.85	1	[32,33]

Adverse Events				
Description	**Base Estimate**	**Lower Limit (95% CrI)**	**Upper Limit (95% CrI)**	**Source**
Treatment-Naive				
Depression				
SOF12 + VEL12	0.0026	0.0003	0.0137	Assumed same as SOF12 + LDV12
Anemia				
SOF12 + VEL12	0.0119	0.0047	0.0282	Assumed same as SOF12 + LDV12
Rash				
SOF12 + VEL12	0.0480	0.0259	0.0878	Assumed same as SOF12 + LDV12

Treatment Discontinuation Rate				
Description	**Base Estimate**	**Lower Limit (95% CI)**	**Upper Limit (95% CI)**	**Soruce**
SOF12 + VEL12	0.005	0.002	0.007	[32,33]

Drug Cost				
Description	**Base Estimate**	**Lower Limit (95% CI)**	**Upper Limit (95% CI)**	**Soruce**
SOF12 + VEL12	$60,000	$45,000	$75,000	[32,33]

Appendix to: Wong WWL, Erman A, Feld JJ, et al. Model-based projection of health and economic effects of screening for hepatitis C in Canada. *CMAJ Open* 2017. DOI:10.9778/cmajo.20170048.

Exploratory Analysis - Cost-Effectiveness Results

Scenario 1

Age range	Strategy	Cost	QALYs	ΔCost	ΔQALYs	ICER
15-79	No screening, treat with Interferon-free DAA if diagnosed	$69,770	14.0644			
	Screen & treat with Interferon-free DAA*	$69,872-$69,878	14.0664	$102 - $108	0.0020	$50,752-$53,313

Scenario 2

Age range	Strategy	Cost	QALYs	ΔCost	ΔQALYs	ICER
15-79	No screening, treat with Interferon-free DAA if diagnosed	$72,775	13.7297			
	Screen & treat with Interferon-free DAA*	$73,393-$73,455	13.7479-13.7480	$618-$680	0.0183	$33,841-$37,192

Scenario 3

Age range	Strategy	Cost	QALYs	ΔCost	ΔQALYs	ICER
25-64	No screening, treat with Interferon-free DAA if diagnosed	$72,507	14.2536			
	Screen & treat with Interferon-free DAA*	$72,770 $72,792	14.2616	$263-$286	0.0080	$32,968-$35,787

Scenario 4

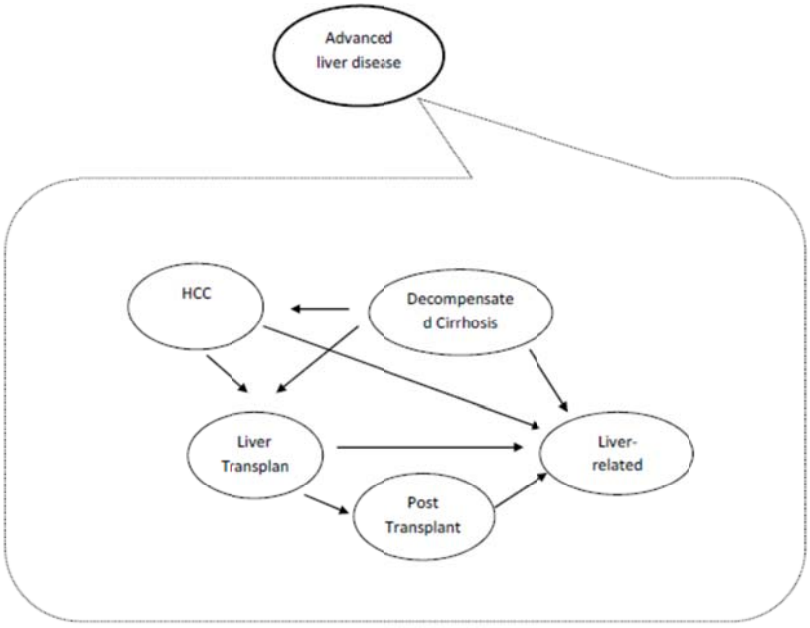
Age range	Strategy	Cost	QALYs	ΔCost	ΔQALYs	ICER
45-64	No screening, treat with Interferon-free DAA if diagnosed	$84,611	12.7980			
	Screen & treat with Interferon-free DAA*	$84,918-$84,942	12.8068	$306-$331	0.0088	$34,678-$37,442

*Range indicate the different between which DAA was used for treating genotype 1 patients
Abbreviations: QALYs: Quality-adjusted-life-years; ICER: incremental cost-effectiveness ratio; DAA; Direct acting agents

Supplementary Table 6 – Exploratory Analysis (new discount rate and no treatment restriction) Results

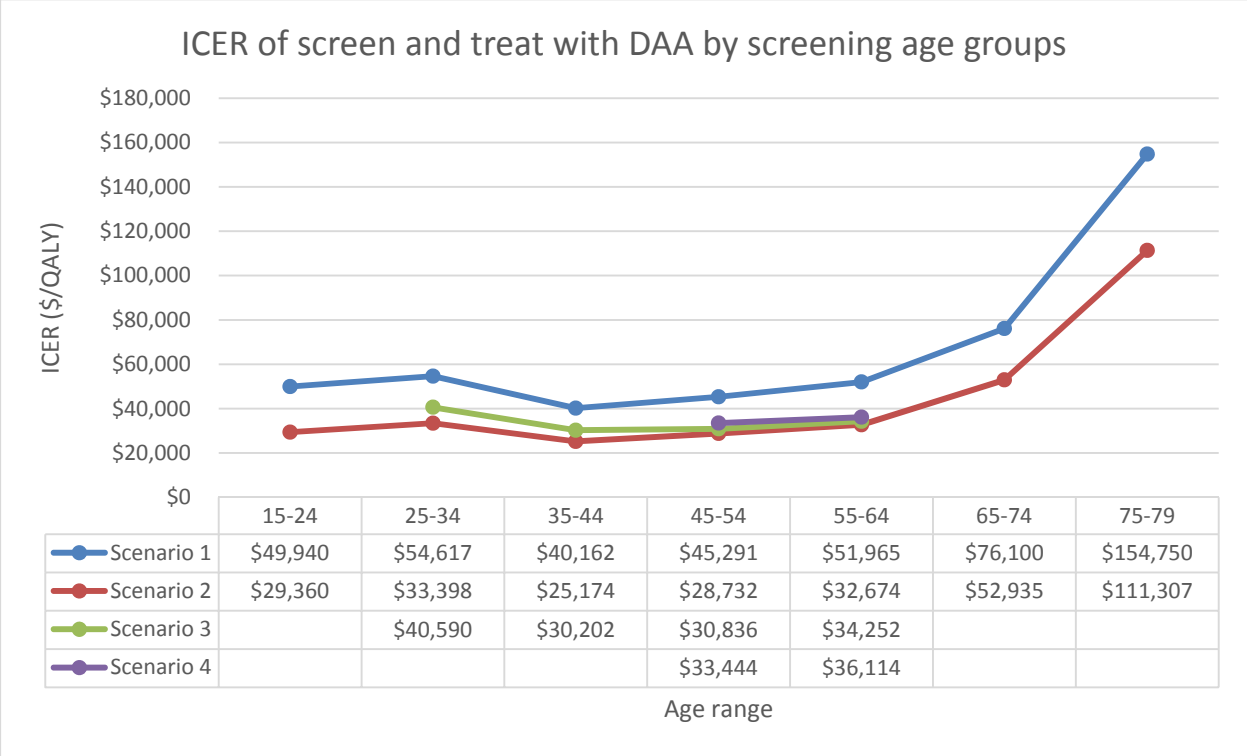
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Per person cost increased	$120-$128	$763-$847	$317-$346	$359-$388
Per person QALY gained	0.0052	0.0482	0.0178	0.0173
ICER (compare with no screening)	$23,123-$24,736	$15,821-$17,579	$17,780-$19,418	$20,754-$22,424
PSA Results % of cost-effectiveness (WTP:$50,000)	63.3%	71.7%	74.2%	72.2%

Supplementary Figure 1: Detailed Markov model of Chronic HCV infection and progression



Appendix to: Wong WWL, Erman A, Feld JJ, et al. Model-based projection of health and economic effects of screening for hepatitis C in Canada. *CMAJ Open* 2017. DOI:10.9778/cmajo.20170048.

Supplementary Figure 2: Sensitivity Analyses Results – Cost-Effectiveness results by screening age groups and tornado Diagrams



	15-24	25-34	35-44	45-54	55-64	65-74	75-79
Scenario 1	$49,940	$54,617	$40,162	$45,291	$51,965	$76,100	$154,750
Scenario 2	$29,360	$33,398	$25,174	$28,732	$32,674	$52,935	$111,307
Scenario 3		$40,590	$30,202	$30,836	$34,252		
Scenario 4				$33,444	$36,114		

References

1. Wong WW, Tu HA, Feld JJ, Wong T, Krahn M. Cost-effectiveness of screening for hepatitis C in Canada. *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne.* 2015.
2. Ontario's use of funding provided by the federal hepatitis c undertaking agreement. Toronto, Ontario: Government of Ontario; 2007.
3. Myers RP, Shah H, Burak KW, Cooper C, Feld JJ. An update on the management of chronic hepatitis C: 2015 Consensus guidelines from the Canadian Association for the Study of the Liver. *Canadian journal of gastroenterology & hepatology.* 2015;29:19-34.
4. Marshall AD, Saeed S, Barrett L, et al. Restrictions for reimbursement of direct-acting antiviral treatment for hepatitis C virus infection in Canada: a descriptive study. *CMAJ Open.* 2016;4:E605-E14.
5. *TreeAge 2013 Professional* [computer program]. Williamstown, MA, USA.: TreeAge Software; 2013.
6. Rotermann M, Langlois K, Andonov A, Trubnikov M. Seroprevalence of hepatitis B and C virus infections: Results from the 2007 to 2009 and 2009 to 2011 Canadian Health Measures Survey. *Health Reports.* Vol 24: Health Analysis Division of Statistics Canada; 2013.

7. Trubnikov M, Yan P, Archibald C. Estimated prevalence of Hepatitis C virus infection in Canada, 2011. *Canada Communicable Disease Report.* 2014;40:429-37.
8. Thein HH, Yi Q, Dore GJ, Krahn MD. Estimation of stage-specific fibrosis progression rates in chronic hepatitis C virus infection: a meta-analysis and meta-regression. *Hepatology.* 2008;48:418-31.
9. van der Meer AJ, Veldt BJ, Feld JJ, et al. Association between sustained virological response and all-cause mortality among patients with chronic hepatitis C and advanced hepatic fibrosis. *JAMA.* 2012;308:2584-93.
10. Krahn M, Wong JB, Heathcote J, Scully L, Seeff L. Estimating the prognosis of hepatitis C patients infected by transfusion in Canada between 1986 and 1990. *Med Decis Making.* 2004;24:20-9.
11. Wong WWL, Krahn M, Lee K, Singh S. CADTH THERAPEUTIC REVIEW 8: Drugs for Chronic Hepatitis C Infection: Cost-Effectiveness Analysis. Ottawa, ON: Canadian Agency for Drugs and Technologies in Health; 2016.
12. *CADTH Therapeutic Review: Drugs for Chronic Hepatitis C Infection: Clinical Report.* Ottawa, Ontario, Canada2015.
13. Altekruse SF, McGlynn KA, Reichman ME. Hepatocellular carcinoma incidence, mortality, and survival trends in the United States from 1975 to 2005. *J Clin Oncol.* 2009;27:1485-91.
14. D'Amico G, Garcia-Tsao G, Pagliaro L. Natural history and prognostic indicators of survival in cirrhosis: a systematic review of 118 studies. *J Hepatol.* 2006;44:217-31.
15. Life Tables, Canada, Provinces and Territories, 2009-2011. Ottawa, ON: Statistic Canada; 2013.
16. Krajden M, Kuo M, Zagorski B, Alvarez M, Yu A, Krahn M. Health care costs associated with hepatitis C: a longitudinal cohort study. *Can J Gastroenterol.* 2010;24:717-26.
17. Hsu PC, Federico CA, Krajden M, et al. Health utilities and psychometric quality of life in patients with early- and late-stage hepatitis C virus infection. *J Gastroenterol Hepatol.* 2012;27:149-57.
18. Salomon JA, Weinstein MC, Hammitt JK, Goldie SJ. Cost-effectiveness of treatment for chronic hepatitis C infection in an evolving patient population. *JAMA.* 2003;290:228-37.
19. Wong JB, Bennett WG, Koff RS, Pauker SG. Pretreatment evaluation of chronic hepatitis C: risks, benefits, and costs. *JAMA.* 1998;280:2088-93.
20. Sullivan P. New price tag put on liver transplants. *Canadian Medical Association Journal* 2003;168:206.
21. Gao X, Stephens JM, Carter JA, Haider S, Rustgi VK. Impact of adverse events on costs and quality of life in protease inhibitor-based combination therapy for hepatitis C. *Expert Rev Pharmacoecon Outcomes Res.* 2012;12:335-43.
22. Schedule of Laboratory Fees Ontario Ministry of Health and Long-term Care; 2008. http://www.health.gov.on.ca/english/providers/program/ohip/sob/lab/labfimmu.html.
23. Chen W. *Chronic Hepatitis C among Immigrants Living in Canada: Natural History, Disease Burden, and Cost-Effectiveness of Screening.* Toronto: Department of Health Policy, Management and Evaluation, University of Toronto; 2010.
24. Maddigan SL, Feeny DH, Johnson JA. Health-related quality of life deficits associated with diabetes and comorbidities in a Canadian National Population Health Survey. *Qual Life Res.* 2005;14:1311-20.

25. McLernon DJ, Dillon J, Donnan PT. Health-state utilities in liver disease: a systematic review. *Medical decision making : an international journal of the Society for Medical Decision Making.* 2008;28:582-92.
26. Yeung LT, To T, King SM, Roberts EA. Spontaneous clearance of childhood hepatitis C virus infection. *Journal of viral hepatitis.* 2007;14:797-805.
27. Chaudhary R, Tepper M, Eisaadany S, Gully PR. Distribution of hepatitis C virus genotypes in Canada: Results from the LCDC Sentinel Health Unit Surveillance System. *Can J Infect Dis.* 1999;10:53-6.
28. Ng V, Saab S. Effects of a sustained virologic response on outcomes of patients with chronic hepatitis C. *Clin Gastroenterol Hepatol.* 2011;9:923-30.
29. Charlton M, Seaberg E, Wiesner R, et al. Predictors of patient and graft survival following liver transplantation for hepatitis C. *Hepatology.* 1998;28:823-30.
30. Guidelines for the Economic Evaluation of Health Technologies: Canada. 2006. www.cadth.ca/media/pdf/186_EconomicGuidelines_e.pdf.
31. Statistics Canada. Table 051-0001 - Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual (persons unless otherwise noted). 2011.
32. Feld JJ, Jacobson IM, Hezode C, et al. Sofosbuvir and Velpatasvir for HCV Genotype 1, 2, 4, 5, and 6 Infection. *N Engl J Med.* 2015;373:2599-607.
33. Common Drug Review - Sofosbuvir/Velpatasvir Final Recommendation. Canadian Agency for Drugs and Technologies in Health, Ottawa2016.