

Supplement Table 1: Key Model Parameters

Parameter	Value	95% Interval		Source	Distribution
		Used in Simulation			
Screening and Treatment Probabilities					
Screening probability if screening intervention is offered	0.91	—		Honeycutt et al., 2007 (30)	Beta
Screening probability if screening intervention is not offered	0.18	0.12–0.34		Honeycutt et al., 2007 (30)	Beta
Ribonucleic acid test acceptance probability	1	—			—
Return for anti-HCV results probability	0.9	0.79–0.97		Honeycutt et al., 2007 (30)	Beta
Probability of viral clearance rate given antibody positive status	0.25	0.23–0.28		Honeycutt et al., 2007 (30)	Beta
Probability of being considered for treatment if insured	1	—		Assumption	—
Probability of being offered treatment if uninsured	0	—		Assumption	—
Risk of contraindication for care for nonmodifiable reasons	0.12	0.11–0.13		Falck-Ytter, 2002 (20); Zeuzem et al., 2000 (31)	Beta
Risk of contraindication for care for modifiable reasons	0.23	0.20–0.27		Falck-Ytter, 2002 (20); Zeuzem et al., 2000 (31)	Beta
Probability of refusing treatment	0.09	0.06–0.12		Falck-Ytter, 2002 (20)	Beta
Probability of SVR, genotype 1, pegylated interferon and ribavirin treatment only	0.33	0.23–0.44		See text	Beta
Probability of SVR, genotype 1, DAA plus pegylated interferon and ribavirin	0.54	0.48–0.59		Jacobson et al., 2011 (32); assumptions. See text.	Beta
Probability of SVR, genotype 2/3, pegylated interferon and ribavirin treatment	0.69	0.58–0.80		See text	Beta
Proportion of Background QALYs retained at Each Disease Stage					
No HCV	1	—		See text	—

SVR	0.93	0.83–1		Beta
Chronic HCV—0	0.93	0.83–1		Beta
Chronic HCV—1–2	0.86	0.78–0.94		Beta
Chronic HCV—2–3	0.83	0.78–0.89		Beta
Compensated cirrhosis	0.81	0.68–0.89		Beta
Decompensated cirrhosis	0.70	0.56–0.79		Beta
HCC	0.67	0.56–0.78		Beta
Prior transplant	0.78	0.72–0.84		Beta
Currently undergoing treatment—genotype 1	0.88	0.78–0.94		Beta
Currently undergoing treatment—genotype 2/3	0.97	0.83–1		Beta
Annual Probability of Complications from Cirrhosis				
HCC	0.025	0.023–0.028	Thomas and Seeff, 2005 (3)	Beta
Decompensated cirrhosis	0.039	0.035–0.043	Wright et al., 2006 (26)	Beta
Transplant given HCC or decompensated cirrhosis	0.031	0.029–0.033	Bennet et al., 1997 (33); Solomon et al., 2004 (34)	Beta
Annual Probability of Death from Complications				
HCC	0.409	0.369–0.451	Salomon et al., 2002 (28)	Beta
Decompensated cirrhosis	0.135	0.122–0.149	Planas et al., 2004 (29)	Beta
Transplant first year	0.14	0.126–0.154	Ortner and Cosway, 2005 (35)	Beta
Transplant years 2–4	0.038	0.035–0.042	Ortner and Cosway, 2005 (35)	Beta
Transplant years 5–15	0.025	0.023–0.028	Jain et al., 2000 (36)	Beta
Transplant years 16–18	0.014	0.012–0.015	Jain et al., 2000 (36)	Beta
Relative annual risk of mortality for IDUs—20–39 years old	2.13	1.49–2.75	Vlahov et al., 2008 (37)	Normal
Relative annual risk of mortality for IDUs—40 and older	1.52	1.12–1.92	Vlahov et al., 2008 (37)	Normal
Annual Incremental Increase in METAVIR Score Units				
Relative METAVIR score increase for patients infected with HIV, regardless of age, gender, or alcohol use status	2.00	Not applicable	Thomas and Seeff, 2005 (3)	Did not vary
<i>Under 40</i>				
Male, alcohol	0.146	0.125–0.167	Poynard, Bedossa, and Opolon, 1997 (25)	Uniform
Male, no alcohol	0.111	0.091–0.130	Poynard, Bedossa, and Opolon, 1997 (25)	Uniform
Female, alcohol*	0.094	0.088–0.100	Poynard, Bedossa, and Opolon, 1997 (25)	Uniform

Female, no alcohol	0.094	0.088–0.100	Poynard, Bedossa, and Opolon, 1997 (25)	Uniform
<i>Over 40</i>				
Male, alcohol	0.270	0.200–0.0500	Poynard, Bedossa, and Opolon, 1997 (25)	Uniform
Male, no alcohol	0.300	0.235–0.333	Poynard, Bedossa, and Opolon, 1997 (25)	Uniform
Female, alcohol	0.270	0.200–0.0500	Poynard, Bedossa, and Opolon, 1997 (25)	Uniform
Female, no alcohol	0.209	0.167–0.250	Poynard, Bedossa, and Opolon, 1997 (25)	Uniform
Costs				
<i>Screening</i>				
Negative test	34	17–51	Rein et al., 2011 (38)	Normal
Positive test, no return for results	34	17–54	Rein et al., 2011 (38)	Normal
Cost of returning for results	19	9–28	Rein et al., 2011 (38)	Normal
<i>Treatment</i>				
Cost of initial workup, if coordinated with treatment	686	342–1029	Carey et al., 2007 (39); Strader et al., 2004 (40); Gray, 2003 (41); AMA, 2007 (42)	Normal
Cost of treatment, genotype 1, pegIFN+R only	12,080	6,040–18,120	Roblin, 2010 (43)	Normal
Cost of treatment, genotype 1, DAA, pegIFN+R only	48,212	38,569–57,853	Personal communication, assumptions, see technical report	Normal
Cost of treatment, genotype 2/3	6,446	3,223–9,669	Roblin, 2010 (43)	Normal
Cost of year 1 post-treatment	247	123–370	Carey et al., 2007 (39); Strader et al., 2004 (40); Gray, 2003 (41); AMA, 2007 (42)	Log normal
Cost of years 2–5 post-treatment	123	62–185	Carey et al., 2007 (39); Strader et al., 2004 (40); Gray, 2003 (41); AMA, 2007 (42)	Log normal
Cost of years 6–death post-treatment	54	27–81	Carey et al., 2007 (39); Strader et al., 2004 (40); Gray, 2003 (41); AMA, 2007 (42)	Log normal
<i>Non-antiviral Medical Care</i>				
Cost of initial workup, if not treated	724	361–1,086	Carey et al., 2007 (39); Strader et al., 2004 (40); Gray, 2003 (41); AMA, 2007 (42)	Normal

Cost for METAVIR stages 0–4	263	132–395	Carey et al., 2007 (39); Strader et al., 2004 (40); Gray, 2003 (41); AMA, 2007 (42)	Log normal
Cost of compensated cirrhosis	263	132–395	Carey et al., 2007 (39); Strader et al., 2004 (40); Gray, 2003 (41); AMA, 2007 (42)	Log normal
Cost of decompensated cirrhosis	12,433	6,216–18,650	Davis et al., 2011 (44)	Log normal
Cost of HCC	12,433	6,216–18,650	Davis et al., 2011 (44)	Log normal
Cost of liver transplant (year of)	253,347	126,674– 380,021	Englesbe et al., 2006 (45); Haubolt, 2007 (46), personal communication; Showstack et al., 1999 (47)	Log normal
Cost of liver transplant (subsequent years)	23,983	11,991– 35,975	Salomon et al., 2003 (48)	Log normal

Annual discount rate	0.03	Not applicable	Assumed	Did not vary
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Note: AASLD = American Association for the Study of Liver Diseases; CBC/DIF = Complete Blood Count with

Differential Related Tests; HCC= hepatocellular carcinoma; HCV= hepatitis C virus; HIV = human

immunodeficiency virus; IDU = injecting drug use; METAVIR = meta-analysis of histological data in viral

hepatitis; MCR = Medicare; SVR = sustained viral response; VFC = Vaccines for Children;

*Assumed identical annual increase for women with high alcohol intake as low because point estimate for this value was slightly lower, likely due to sample variation.