Appendix Figure 1. Repeated-mailing outreach: Contents of mailing packets sent at different times

Appendix Figure 2. Electronic medical record-integrated provider best practice alert detailing Centers for Disease Control and Prevention birth cohort testing guidelines

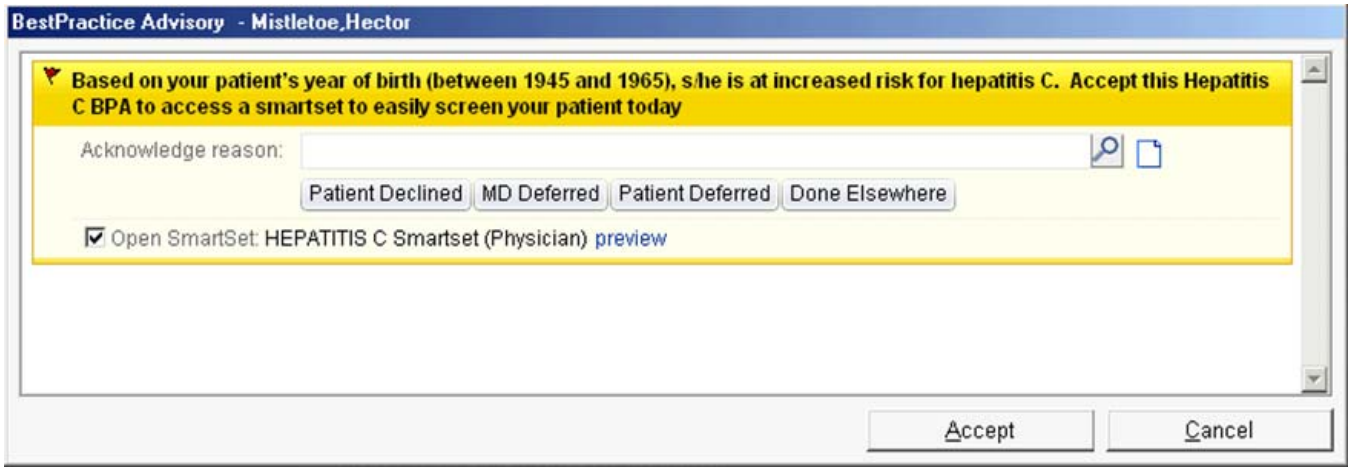
Appendix Figure 3. Sample Centers for Disease Control and Prevention educational hepatitis C handout

Appendix Figure 4. Sample Size Estimation

Appendix Figure 1.

Time Since Intervention Initiation	Description of Mailing Contents
Week 0 (Initiation)	Patients assigned to the intervention group received a packet containing the following: information about HCV and the rationale for testing based on birth year; a pre-registered and prepaid lab form that could be brought to any affiliated lab for a free HCV antibody test; and an information sheet providing the addresses of the closest affiliated labs. Information about the study was branded with logos of the healthcare system and CDC
Week 1 (1 week after initiation)	A reminder letter was mailed to patients encouraging them to utilize the pre-registered lab form they received the week prior for HCV testing
Week 4	Patients who had not received testing for HCV antibody received a replacement pre-registration packet (as in week 0, above) with information intended to re-orient them to the study and the importance getting tested for HCV
Week 8	Another reminder letter was mailed to patients who had not been tested
Week 12	A third and final replacement pre-registration packet was mailed to patients who had not been tested to this point
Week 16	Intervention declared over for trial purposes

Appendix Figure 2.



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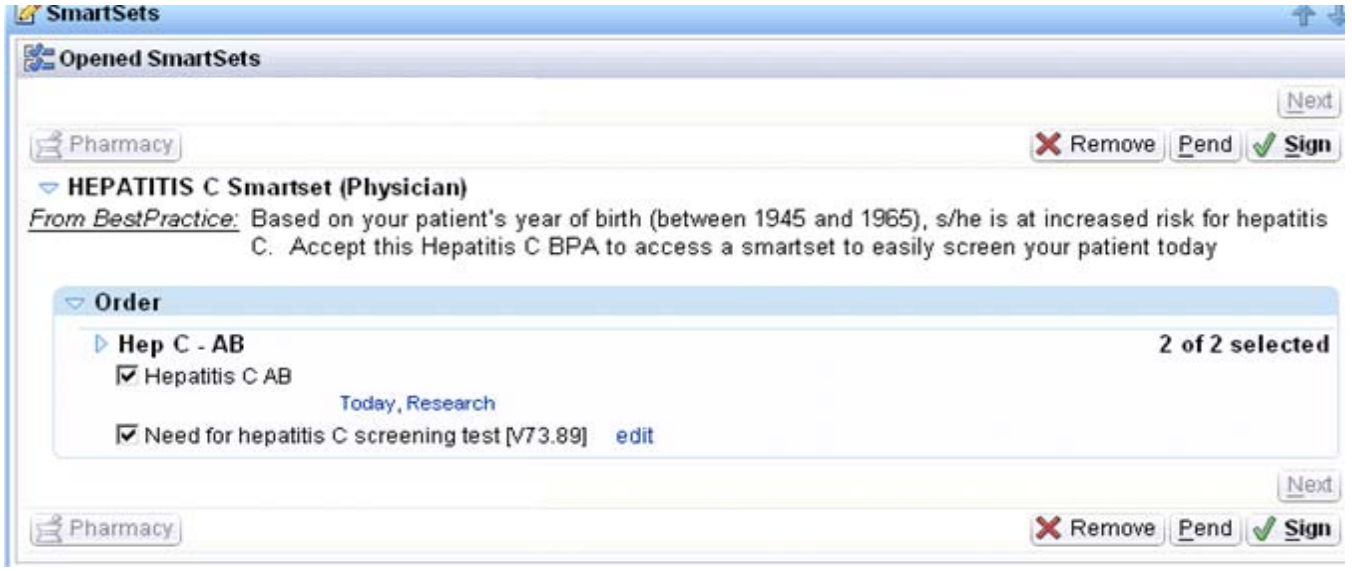

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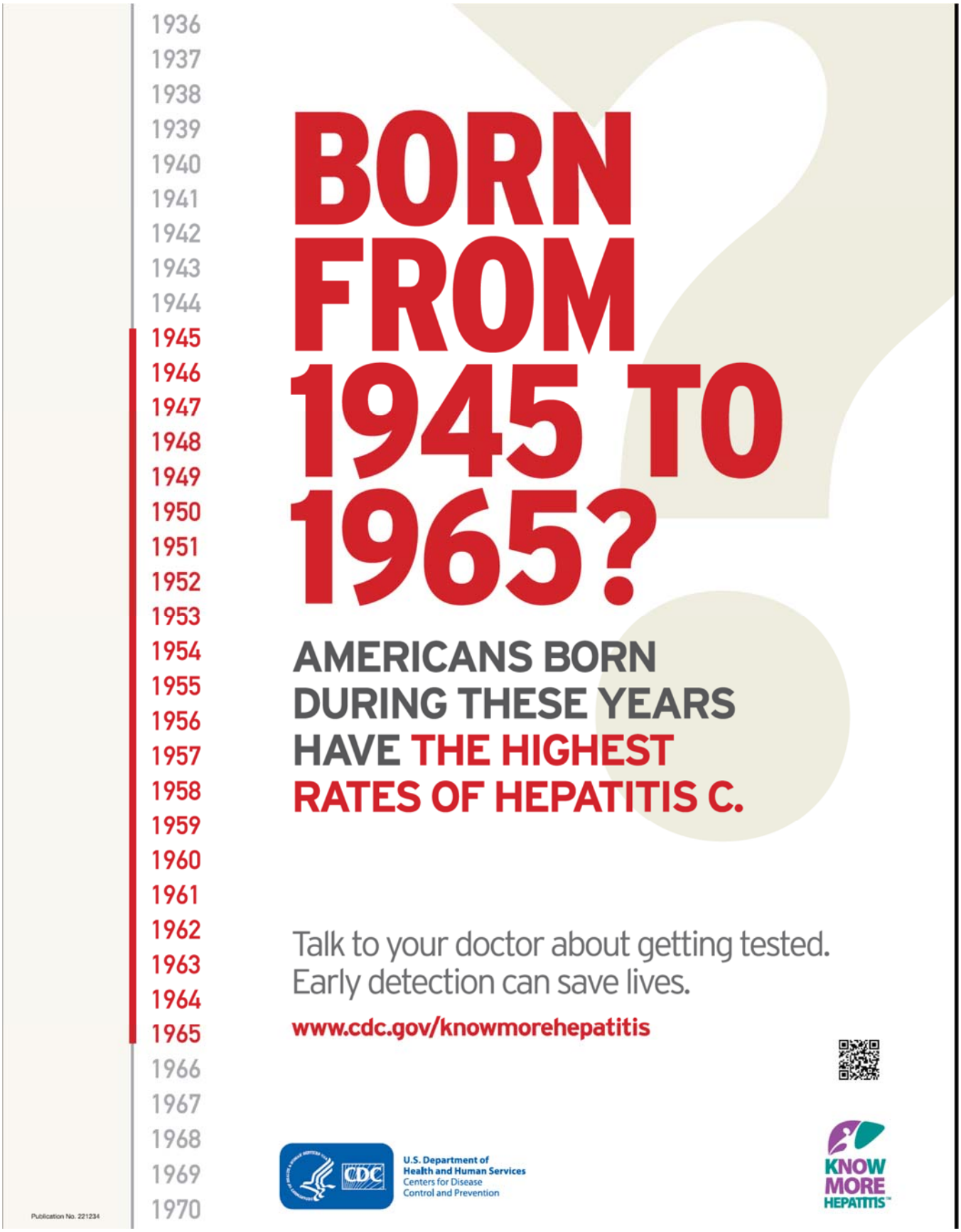
Appendix Figure 3.



Appendix Figure 4

Sample size estimation for repeated-mailing trial: For the repeated-mailing trial, based on projections from pilot data, we estimated that 8,400 patients would be needed to achieve a minimum power of 80% assuming a two-tailed type I error of 5%, and anti-HCV+ identification rates, respectively, of 3.8 and 0.5 cases per 1000 eligible patients in the BC and control groups.

Sample size estimation for BPA trial: The initial sample size calculation was based on eight clusters with two extras to preserve statistical power in the event of cluster loss. We estimated that 440 patients per cluster (4400 patients total) would be required to achieve a power of 80% assuming equal number of participants per cluster, a 5% two-tailed type I error, an intracluster correlation coefficient (ICC) of 0.005, and anti-HCV+ identification rates of 3.5% and 1%, respectively, in the BC and controls groups.(22, 48-51) Preliminary data indicated that anti-HCV+ identification would be substantially lower than anticipated (due to low BPA testing rates and low anti-HCV positivity among patients tested) and average patient enrollment per cluster would need to be increased to approximately 1,600. However, this trial was terminated at the beginning of March 2014, immediately after a law in New York State requiring BC testing as usual care went into effect.

Sample size estimation for patient-solicitation trial: We determined that 1,240 patients per cluster (4960 patients total) would be sufficient to produce a minimum power of 80% assuming equal participants per cluster, a two-tailed type I error of 5%, ICC of 0.005, interperiod correlation coefficient of 0.0025 (assumed to be half of ICC), and anti-HCV+ identification rates of 1.5% and 0.03%, respectively, in the BC and control groups.(22, 25, 52) In each cluster, after accounting for about 10% participant inflation, it was estimated that 682 patients would receive the intervention in period one and another 682 patients would receive usual care in period two.

Appendix Only References:

48. Bornschlegel K, Berger M, Garg RK, Punsalang A, McKinney CM, Gwynn RC, et al. Prevalence of hepatitis C infection in New York City, 2004. J Urban Health. 2009;86(6):909-17.
49. Southern WN, Drainoni ML, Smith BD, Christiansen CL, McKee D, Gifford AL, et al. Hepatitis C testing practices and prevalence in a high-risk urban ambulatory care setting. J Viral Hepat. 2011;18(7):474-81.
50. Gulliford MC, Adams G, Ukoumunne OC, Latinovic R, Chinn S, Campbell MJ**.** Intraclass correlation coefficient and outcome prevalence are associated in clustered binary data. J Clin Epidemiol. 2005;58(3):246-51.
51. Cullen W, Stanley J, Langton D, Kelly Y, Staines A, Bury G**.** Hepatitis C infection among injecting drug users in general practice: a cluster randomised controlled trial of clinical guidelines' implementation. Br J Gen Pract. 2006;56:848–56.
52. Giraudeau B, Ravaud P, Donner A**.** Sample size calculation for cluster randomized cross-over trials. Stat Med. 2008;27(27):5578-85.