

# Increasing Hepatitis Screening in Patients Born from 1945 to 1965 in a Multi-Site Gastroenterology Clinic

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# Background of the Problem

- Hepatitis C (HCV) is a blood-borne disease of liver (acute or chronic)
  - Chronic HCV increases liver complications
  - In 2017, 140,000 cases of chronic HCV
  - In 2017, 17,000 deaths related to HCV complications
- HCV screenings provide the benefit necessary to decrease the burden of HCV for individual and population health, as well as the financial cost for healthcare. Chronic HCV increases liver complications.
- The purpose of this project was to improve HCV screening in patients born from 1945 to 1965 within a multi-site gastroenterology (GI) clinic.
- Would use of an HCV algorithm and focused education of providers and staff increase HCV screening in patients born from 1945 to 1965?

# Sample and Setting

- 100 pre-intervention
  - Born from 1945 to 1965
  - Multi site GI clinic seen within 5 weeks of staff educational session
- 65 post-intervention
  - same birth cohort that had been seen during the 4 -week intervention
- Multi-site GI clinic in southern Mississippi
- 1700 patients seen per month in the clinics combined

# Interventions

- Provider and staff education staff meeting
- Informational patient flyer
- Intake-based protocol
- Algorithm

## HCV Intake Based Protocol

### **HCV Testing Protocol**

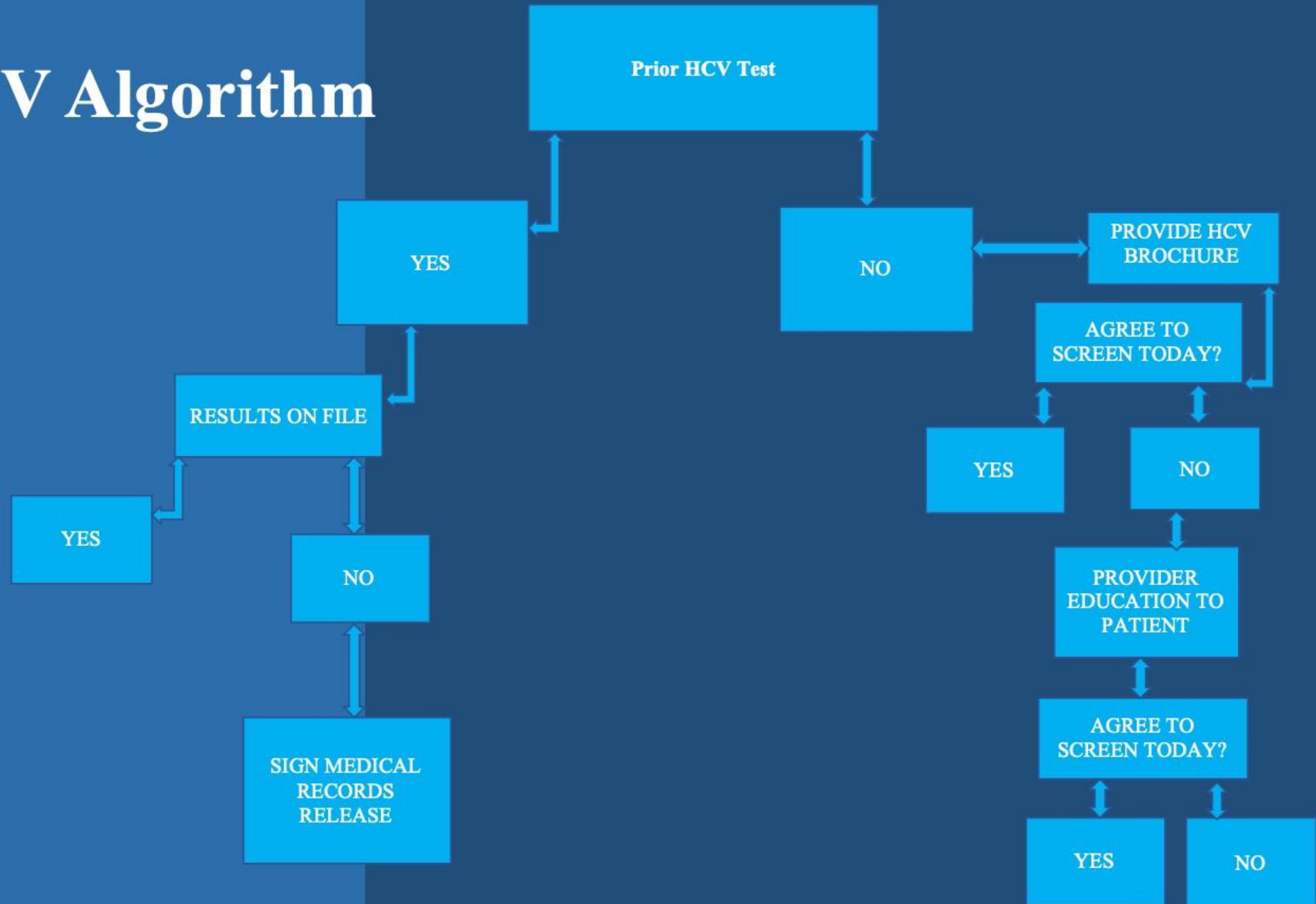
Were you born between the years 1945-1965?      YES ☐ NO ☐

Have you previously been screened for hepatitis C?      YES ☐ NO ☐

Would you like to have a hepatitis C screening drawn today?      YES ☐ NO ☐



# HCV Algorithm



# Statistical Results

- Data was converted into a percentage of patients screened compared to the number of patients not screened
- Total of 165 participants, 108 women and 57 men
- Majority of the study participants (n=121) were Caucasian
- Post-intervention previously HCV screened
  - negative HCV tests 72.7%
  - positive HCV test 27.3%
- Post intervention newly HCV screened were 100% negative

# Statistical Results

*Frequencies of Variables for the Pre-and Post-Intervention Samples*

| Variables            | Pre-Intervention Sample<br>(N = 100) |      | Post-Intervention Sample<br>(N = 65) |      |
|----------------------|--------------------------------------|------|--------------------------------------|------|
|                      | n                                    | %    | n                                    | %    |
| Gender               |                                      |      |                                      |      |
| Males                | 34                                   | 34.0 | 23                                   | 35.4 |
| Females              | 66                                   | 66.0 | 42                                   | 64.6 |
| Ethnicity            |                                      |      |                                      |      |
| African American     | 28                                   | 28.0 | 14                                   | 21.5 |
| Caucasian            | 71                                   | 71.0 | 50                                   | 76.9 |
| Native Hawaiian      | 1                                    | 1    | 0                                    |      |
| Asian                | 1                                    | 1.5  | 0                                    |      |
| History alcohol use  |                                      |      |                                      |      |
| Yes                  | 61                                   | 61.0 | 37                                   | 56.9 |
| No                   | 39                                   | 39.0 | 28                                   | 43.1 |
| Current alcohol use  |                                      |      |                                      |      |
| Yes                  | 21                                   | 33.9 | 14                                   | 37.8 |
| No                   | 41                                   | 66.1 | 23                                   | 62.2 |
| History tobacco use  |                                      |      |                                      |      |
| Yes                  | 56                                   | 56.0 | 34                                   | 52.3 |
| No                   | 44                                   | 44.0 | 31                                   | 47.7 |
| Current tobacco use  |                                      |      |                                      |      |
| Yes                  | 24                                   | 42.1 | 23                                   | 67.6 |
| No                   | 33                                   | 57.9 | 11                                   | 32.4 |
| History illicit drug |                                      |      |                                      |      |
| Yes                  | 55                                   | 55.0 | 28                                   | 43.1 |
| No                   | 45                                   | 45.0 | 37                                   | 56.9 |
| Current illicit drug |                                      |      |                                      |      |
| Yes                  | 3                                    | 5.5  | 1                                    | 3.4  |
| No                   | 52                                   | 94.5 | 28                                   | 96.6 |
| Hypertension         |                                      |      |                                      |      |
| Yes                  | 59                                   | 59.0 | 39                                   | 60.0 |
| No                   | 41                                   | 41.0 | 26                                   | 40.0 |
| Diabetes             |                                      |      |                                      |      |
| Yes                  | 31                                   | 31.0 | 46                                   | 70.8 |
| No                   | 69                                   | 69.0 | 19                                   | 29.2 |

*Frequencies of Variables for the Pre-and Post-Intervention Samples*

| Variables              | Pre-Intervention<br>(N = 100) |      | Post-Intervention<br>(N = 65) |       |
|------------------------|-------------------------------|------|-------------------------------|-------|
|                        | n                             | %    | n                             | %     |
| History of HCV Testing |                               |      |                               |       |
| Yes                    | 35                            | 35.0 | 11                            | 16.9  |
| No                     | 65                            | 65.0 | 42                            | 83.1  |
| Family Hx of HCV       |                               |      |                               |       |
| Yes                    | 21                            | 21.0 | 11                            | 16.9  |
| No                     | 79                            | 79.0 | 54                            | 83.1  |
| Prior HCV Test Results |                               |      |                               |       |
| Positive               | 14                            | 40.0 | 3                             | 27.3  |
| Negative               | 21                            | 60.0 | 8                             | 72.7  |
| HCV Test Ordered       |                               |      |                               |       |
| Yes                    | 10                            | 15.4 | 54                            | 100.0 |
| No                     | 55                            | 84.6 | 0                             |       |

# Statistical Results

*Frequency and Column Percentages of History of HCV Testing by Sample (N = 165)*

| HCV Testing | Pre-intervention |      | Post-intervention |      | Total    |      |
|-------------|------------------|------|-------------------|------|----------|------|
|             | <i>n</i>         | %    | <i>n</i>          | %    | <i>n</i> | %    |
| Yes         | 35               | 21.2 | 11                | 6.7  | 46       | 27.9 |
| No          | 65               | 39.4 | 54                | 32.7 | 119      | 72.1 |
| Total       | 100              | 60.6 | 65                | 39.4 | 165      | 100  |

$\chi^2_{(1)} = 6.402, p < .05$

*Frequency and Column Percentages of New Orders for HCV Testing by Sample (N = 119)*

| HCV Testing Ordered | Pre-intervention |      | Post-intervention |      | Total    |      |
|---------------------|------------------|------|-------------------|------|----------|------|
|                     | <i>n</i>         | %    | <i>n</i>          | %    | <i>n</i> | %    |
| Yes                 | 10               | 8.4  | 54                | 45.4 | 64       | 55.8 |
| No                  | 55               | 46.2 | 0                 | 0    | 55       | 46.2 |
| Total               | 75               | 54.6 | 54                | 45.4 | 119      | 100  |

$\chi^2_{(1)} = 84.96, p < .001$



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? Questions