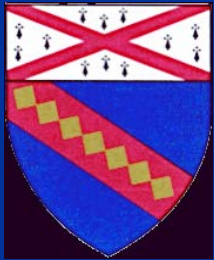
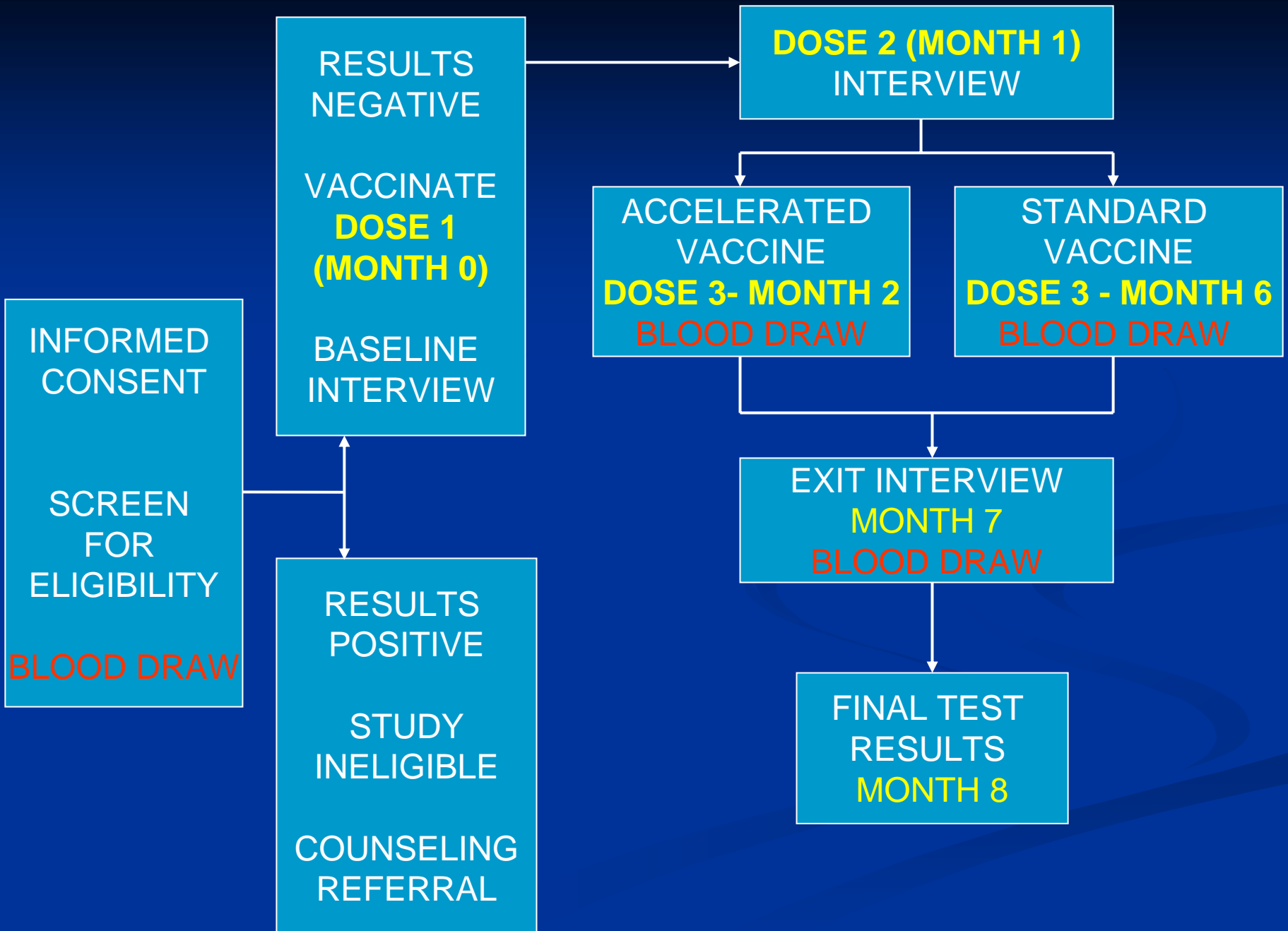


FINDINGS FROM THE HEPATITIS VACCINE STUDY



OVERVIEW OF PRESENTATION

- General Description of Study
- Vaccine Efficacy
- Cost-Benefit Analysis
- Hepatitis C in Connecticut Cohort



STUDY SITES

- 2003-06 -- SEP van sites in Chicago and Hartford.
- 2004-06 -- Health department office in Bridgeport.



PARTICIPANT CHARACTERISTICS

Sample: N = 1970 Chicago (1339); Hartford (478); Bridgeport (153)

Sex ($p < 0.001$): ~75% male

Mean Age ($p < 0.001$): 40 (9.8 SD) Bridgeport Ss were ~ 4 years younger

Ethnicity ($p < 0.001$):

	Chicago (n=1339)	Htfd/Bpt (n=631)
White (22%)	23%	21%
African American (45%)	59%	15%
Hispanic (31%)	15%	65%

Homeless status ($p < 0.01$): 38% overall rate. Significantly fewer homeless Ss in Bridgeport (24%) and more in Hartford (57%)

HBV SCREENING RESULTS

	Chicago (n=1333)	Hartford (n=477)	Bridgeport (n=154)	Total (N=1964)
Previously Infected	582 44%	295 61%	72 47%	949 48%
Carriers	3 <1%	17 3%	3 2%	23 1%
Already Vaccinated	48 4%	48 10%	18 12%	114 6%
Never Infected/Not Vaccinated	684 51%	116 24%	60 39%	860 44%
Missing	16 1%	2 <1%	0	18 <1%

FACTORS ASSOCIATED WITH RETURN

- Of 860 susceptible, 595 (69%) returned for Dose 1.
 - SEP customers more likely to return ($p = 0.006$).
- 460 (77%) returned for Dose 2.
 - SEP customers more likely to return ($p = 0.004$).
 - Returnees 4.3 years older than non-returnees ($p = 0.001$).
- Significantly more Ss in the accelerated arm (81%) than in the traditional arm (68%) returned for Dose 3 ($p < 0.004$).
 - SEP customers more likely to return ($p = 0.0013$).
 - Returnees 4.2 years older than non-returnees ($p = 0.001$).
 - Ss with Spanish as primary language less likely to return (OR 0.4, $p = 0.016$)

WHO WAS SUCCESSFULLY IMMUNIZED?

- Immunization rates were lower than expected for each arm (87% standard; 84% accelerated).
 - Immunization rates did not correlate with age, HIV or HCV status, or type or amount of drug injected.
 - Similarly low rates were observed in three other published studies with injection drug users.

DETERMINING VACCINE EFFICACY

- Efficacy is the product of the vaccination success rate and the immunization rate.
- Efficacies were 53% for the accelerated arm and 45% for the standard arm.
- Difference just fails to achieve statistical significance ($p = 0.052$).

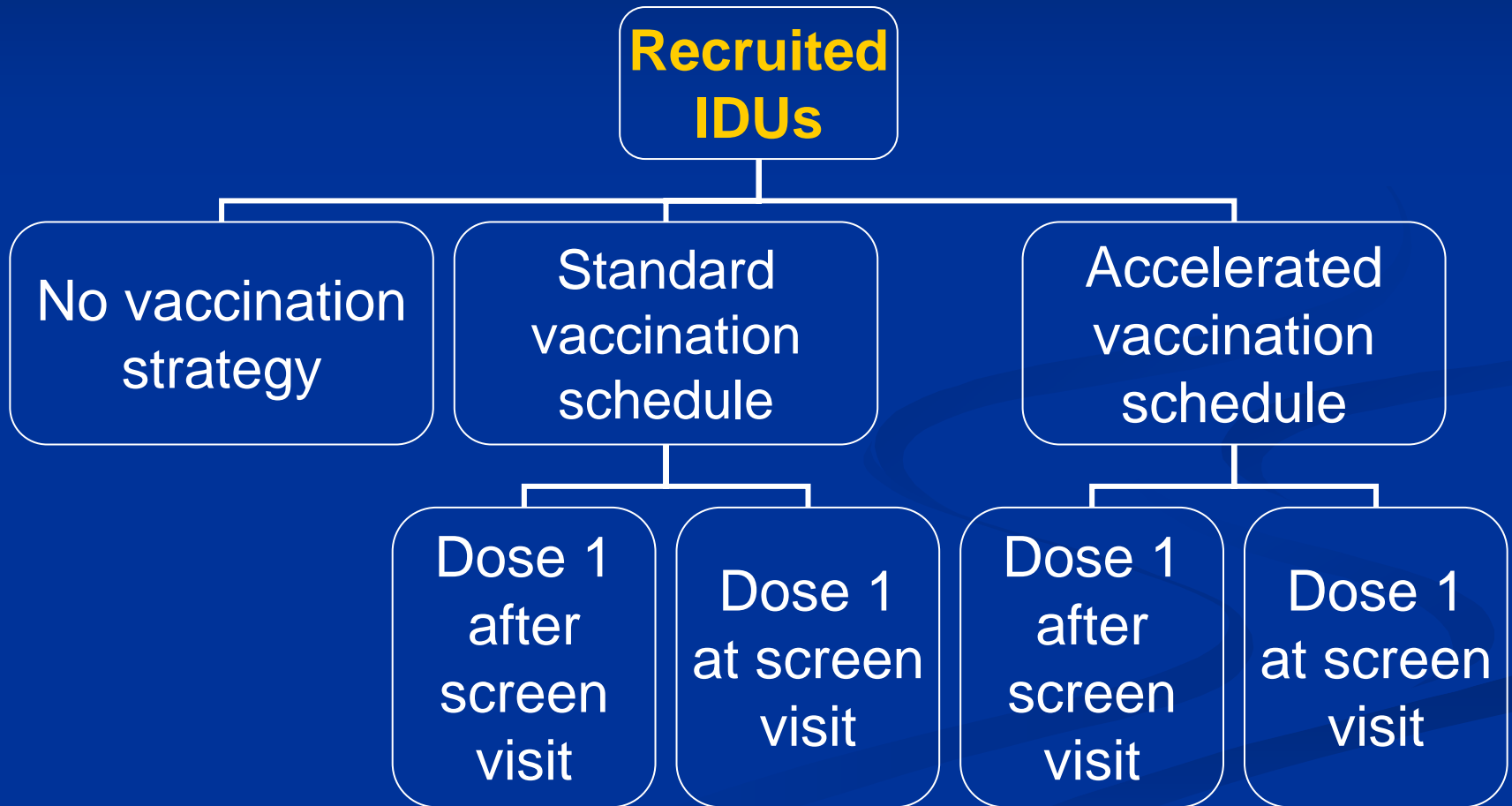
CONCLUSIONS

- Injectors are willing to be vaccinated.
- The accelerated schedule appears to be superior to the standard schedule.
- SEP customers are more likely to return for follow-up visits and to complete the three-dose series.
- Syringe exchange programs are an excellent venue to reach and vaccinate injectors.

COST-BENEFIT OF HBV VACCINATION PROGRAM

- No economic analyses have been published for vaccination programs in IDUs.
- What are the costs and cost-savings of hepatitis B vaccination programs for injection drug users?

COMPARISON OF FIVE STRATEGIES



ESTIMATED NET COST AND COST-EFFECTIVENESS RATIO

	No vaccination program	Standard arm		Accelerated arm	
		D1 after screen	D1 at screen	D1 after screen	D1 at screen
Net cost*	\$246,375	\$42,519	-\$41,034	\$28,092	-\$51,874
CER†	0	\$139	-\$91	\$86	-\$112

* Baseline value of vaccine is \$10

† CER = cost per averted infection

CONCLUSIONS

- HBV screening programs should also provide vaccination services.
- Hepatitis B vaccination program for IDUs is cost-saving if first vaccine dose is given to everyone screened and remaining two doses given only to HBV-susceptible individuals.
- Greatest cost-savings result from obtaining highly discounted vaccine from local health departments and using the accelerated vaccination schedule.

HCV SEROLOGIC TESTING

- Study objective: To assess HCV seroprevalence and possible associations with injection-associated behaviors and hepatitis knowledge.
- Participants screened (N = 631):
 - Hartford (n = 478; 76%)
 - Bridgeport (n = 153; 24%)
- Injection-associated behaviors and hepatitis knowledge data collected for the 112 participants receiving Dose 1

HCV SEROLOGICAL TEST RESULTS

	Hartford	Bridgeport	Total	p-value
HCV-positive at Screen	80% (379)	80% (116)	80% (495)	NS
Self-reported HCV-positive	36% (40)	28% (41)	34% (205)	.01

- Among those who were HBV-negative at screen, 59% (100) were HCV-positive at screen.
- None of the demographic variables or injection-associated behaviors predicted HCV serostatus.

HEPATITIS KNOWLEDGE

- Overall knowledge score higher for HCV-negatives ($p < .05$).
- Only 45% of HCV-positives (cf 70% of HCV-negatives) understood that hepatitis is more infectious than HIV.
- Only 7% of study sample correctly understood that HBV is cleared by most people (cf 92% understanding that HCV risk of transmission remains high for most).

CONCLUSIONS

- HCV prevalence and incidence remain high among IDUs in Connecticut.
- IDUs should be informed about available hepatitis screening programs and encouraged to seek testing for both HBV and HCV.
- Harm reduction outreach activities should seek to educate IDUs about **injection hygiene, hepatitis risk**, and available **hepatitis vaccination** programs.

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