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HEPATITIS C TREATMENT OUTCOMES AMONG PEOPLE WHO INJECT DRUGS IN KENYA

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BACKGROUND

- Hepatitis C virus (HCV) is a growing public health concern
- Globally ~1.5 million HCV infections occur every year
- Direct-acting-antivirals (DAAs) are highly efficacious in treating HCV
- Evidence to inform strategies tailored for disproportionally affected groups such as people who inject drugs (PWID) especially in low-and-middle income countries (LMICs) are scarce
- We sought to **assess outcomes of HCV treatment with ledipasvir-sofosbuvir among PWID** in a real world setting at needle syringe programs (NSP) and methadone clinics in 3 Kenyan counties

METHODS

- Observational cohort study
- Treatment success was measured as sustained viral response 12 weeks after treatment completion (SVR12)
- Recruitment done from a prospective cohort study involving PWID that identified individuals who were living with HCV or both HIV and HCV
- Used negative binomial regression to compare the proportion of clients who achieved a SVR12 between NSPs and methadone programs
- Multivariate models assessed factors associated with treatment completion and achieving SVR12

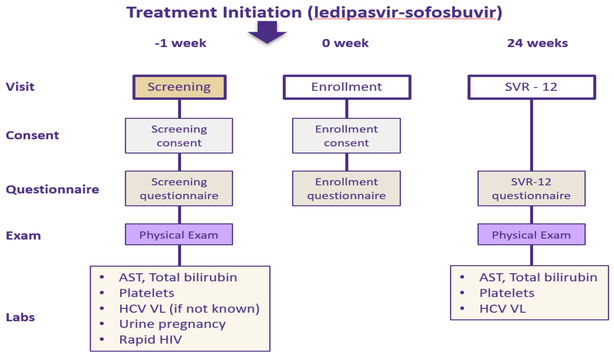

Figure 1: Treatment and Study Processes

- ❖ Client treated at methadone clinics were significantly more likely to achieve SVR12 compared to those treated at NSP (aRR= 1.48; p=0.006)
- ❖ Travelling >20min to reach treatment sites was associated with lower likelihood to achieve SVR12 compared to those who travelled <20min

RESULTS

- Participants were enrolled and treated in Nairobi, Mombasa and Kilifi counties
- Study sites included 7 needle-syringe programs (NSP) and 3 methadone clinics
- A total of 142 clients with confirmed genotype 1 or 4 HCV infection were screened for eligibility
  - 86.6% (123/142) were initiated on treatment
- Of those treated, 37.6% were treated at NSP sites and 63.4% at methadone clinics
- The median age was 38 years (IQR: 31 to 44) and 84.9% were men
- SVR12 testing was conducted on 109 (88.6%) clients

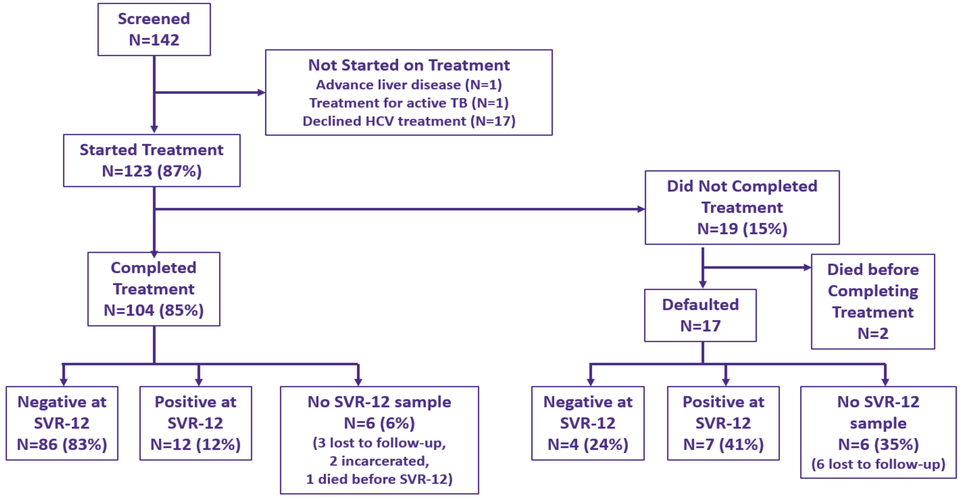

Figure 2: Flow Diagram of Study Participants

Table 1: Factors Associated with achieving sustained viral response 12 weeks after treatment

Characteristics	n of N (%)	RR (95% CI)	P-value	aRR (95% CI)	P-value
Treatment Site					
• NSP	27 of 45 (60)	1 (ref)		1 (ref)	
• Methadone clinic	63 of 78 (80.8)	1.35 (1.03, 1.75)	0.027	1.48 (1.11, 1.97)	0.006
Region					
• Nairobi	36 of 55 (65.5)	1 (ref)		1 (ref)	
• Coast	54 of 68 (79.4)	1.21 (0.97, 1.52)	0.096	1.02 (0.80, 1.31)	0.88
Age (years)					
• ≤ 31	27 of 32 (84.4)	1 (ref)		1 (ref)	
• 31-37	20 of 31 (64.5)	0.76 (0.57, 1.03)	0.081	0.83 (0.62, 1.11)	0.21
• 38-43	20 of 28 (71.4)	0.85 (0.64, 1.12)	0.24	0.96 (0.72, 1.29)	0.81
• ≥43	22 of 28 (78.6)	0.93 (0.73, 1.19)	0.57	0.98 (0.76, 1.25)	0.87
Married					
• No	59 of 80 (73.8)	1 (ref)		1 (ref)	
• Yes	30 of 39 (76.9)	1.04 (0.84, 1.30)	0.70	1.02 (0.80, 1.30)	0.86
Sex					
• Male	76 of 101 (75.3)	1 (ref)			
• Female	13 of 18 (72.2)	0.96 (0.70, 1.31)	0.80		
HIV status					
• Negative	61 of 82 (74.4)	1 (ref)			
• Positive	29 of 41 (70.7)	0.95 (0.75, 1.20)	0.67		
Travel time to the site (min)					
• ≤20	31 of 34 (91.2)	1 (ref)		1 (ref)	
• 21-3	29 of 44 (65.9)	0.72 (0.57, 0.92)	0.007	0.65 (0.49, 0.87)	0.004
• 31-45	15 of 18 (83.3)	0.91 (0.72, 1.15)	0.54	0.92 (0.68. 1.23)	0.56
• >45	14 of 23 (60.2)	0.66 (0.47, 0.94)	0.021	0.66 (0.46, 0.95)	0.027
Duration of injection drug use (yrs)					
• ≤5	38 of 45 (84.4)	1 (ref)			
• 6-7	10 of 15 (66.7)	0.79 (0.54, 1.16)	0.22		
• 8-13	23 of 32 (71.9)	0.85 (0.66, 1.09)	0.21		
• >13	18 of 27 (66.7)	0.79 (0.59, 1.06)	0.12		

CONCLUSIONS

- HCV treatment for PWID using a DOT model resulted in a high proportion achieving SVR12
- Best outcomes were observed among those treated at methadone clinics and those with shorter travel times to treatment sites
- Future studies will explore barriers and facilitators of HCV treatment delivery at NSPs and methadone clinics

ADDITIONAL KEY INFORMATION

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