

# HIGH PREVALENCE OF LIVER FIBROSIS AMONG PEOPLE ATTENDING ADDICTION CLINICS AND REHABILITATION FACILITIES IN SOUTHERN SWITZERLAND: RESULTS OF TWO DIFFERENT SCREENING PROGRAMS FOR LIVER DISEASE

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## Introduction

People who use drugs (PWUD) are at higher risk of suffering from liver disease compared to the general population, having a vast range of risk factors for liver damage, such as infections, alcohol and drug consumption, unhealthy nutritional habits among others. Unfortunately, the rate of liver disease diagnosis, workup and treatment is low in this population. Early identification of people with liver fibrosis together with a proper diagnostic workup and treatment prevent the progression to cirrhosis and its complications, which are causes of high morbidity and mortality in this high-risk population.

## Methods

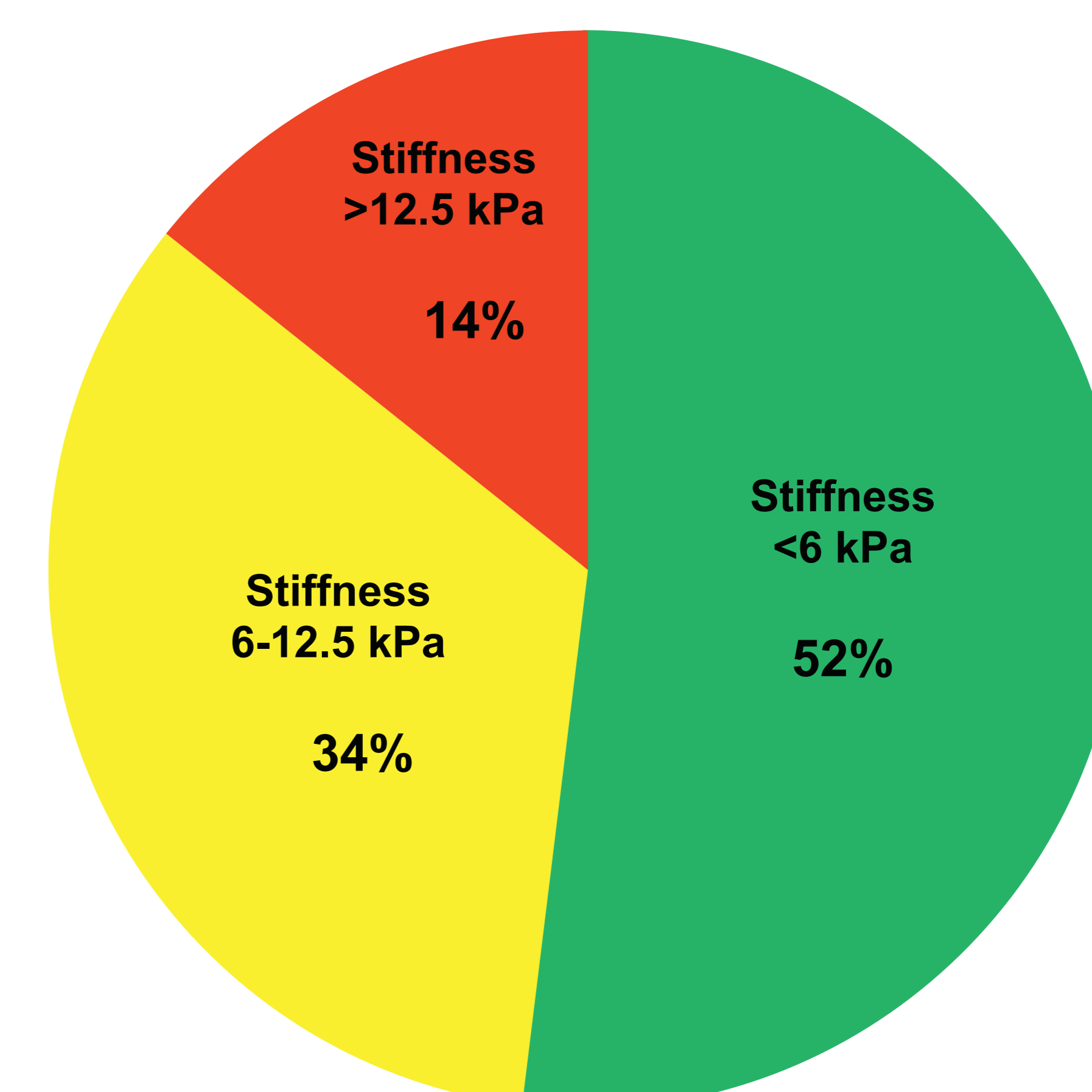
Two screening campaigns were conducted in institutions committed to rehabilitation of PWUD in Canton Ticino, southern Switzerland. The first program in 2011 consisted in an educational session followed by a transient elastography (TE) testing through a Fibroscan™ device and ALT (alanine aminotransferase) testing free of charge in an “opt-in” strategy. The second liver disease survey was performed in 2013-2014 using TE directly in loco as an “opt-out” counselling and testing program, where the patients were directly invited to undergo TE exams free of charge by health personnel as part of a medical workup. In both cases the results were discussed with a specialist and integrated in the medical records.

## Characteristics of participants (n=199)

	Total	Age (median)	Gender M/F (M%)	ALT (mean)	TE 10 valid/total	IQR ratio <=0.3/valid	TE successful/total
First survey (2011)	82	45 y	65/17 (79%)	52 IU/ml	73/82	61/73	61/82 (74%)
Second survey (2013/14)	117	45 y	71/46 (61%)	Not collected	99/117	93/99	93/117 (79%)

## Fibrosis stage according to TE measurement (n=154)

	First survey 2011		Second survey 2013-14		Pooled results	
	N	%	N	%	N	%
Stiffness <6 kPa	37	61%	43	46%	80	52%
Stiffness 6-9.5 kPa	14	23%	28	30%	42	27%
Stiffness 9.5-12.5 kPa	1	2%	9	10%	10	6%
Stiffness >12.5 kPa	9	15%	13	14%	22	14%
Total	61		93		154	



## Results

Pooling the results together, 11 institutions committed to the rehabilitation of substance users in Canton Ticino were globally involved in the two surveys, 7 of them offering residential and 4 of them offering daytime rehabilitation and opiate substitution programs. A total of 199 subjects underwent TE testing, of whom 154 (77%) had a valid and reliable measurement. Globally, 74 subjects (48%) had abnormal values (Stiffness > 6.0 kPa) and 22 (14%) had values compatible with advanced fibrosis/liver cirrhosis (Stiffness > 12.5 kPa).

## Conclusions

The results of our analysis point out a very high burden of liver disease among PWUD in southern Switzerland. Almost half of the subjects who were screened successfully had liver stiffness values requiring at least a second step of investigation to exclude the presence of some risk factor for liver disease. About 1 out of 7 participants in both screenings had results compatible with advanced fibrosis/cirrhosis, requiring some deeper diagnostic workup to better define liver disease, etiology and possible therapy needed.