Associate Professor Nazir Ibrahim (MRCP)

Syrian Private University (SPU)

Chairman of the NASH committee ASSLD

Member of SWGSVH

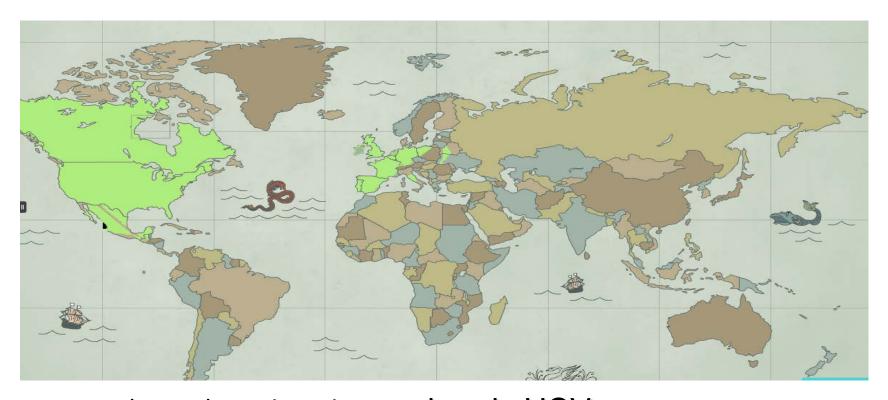
mber of national committee for viral hepatitis

Member of the Syrian scientific board of Gastroenterology

Co-Author of the Cochrane collaboration Hepato-biliary group







(WHO) studies detect chronic HCV

21.3 million carriers in the Middle East





May 2016

WHO adopted the first-ever global hepatitis strategy with a goal to eliminate viral hepatitis as a public health threat by 2030

"Unlike most communicable diseases, the absolute burden between 1990 and 2013 increased"

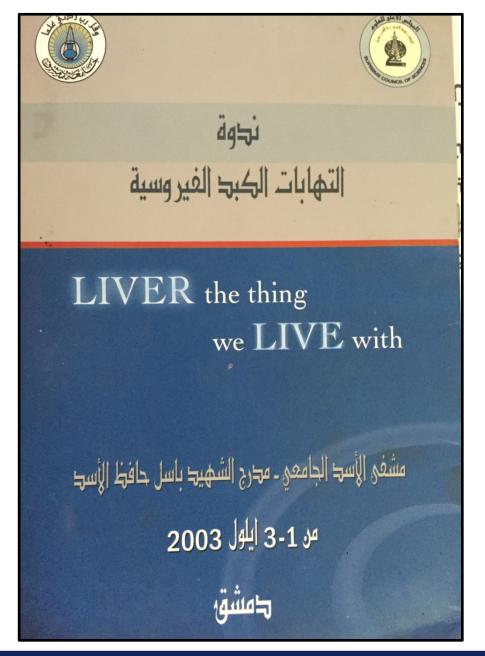
Stanaway and colleagues (2016), B&M review



in North Africa and the Middle East, nearly one million deaths in 2013 due to viral hepatitis.

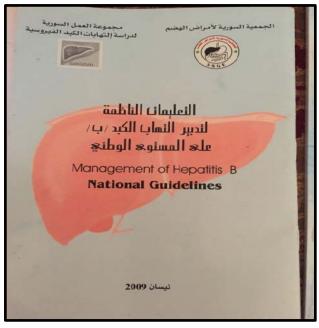
Stanaway and colleagues (2016)



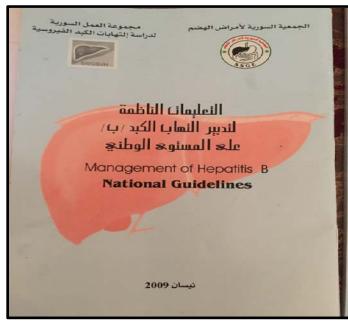






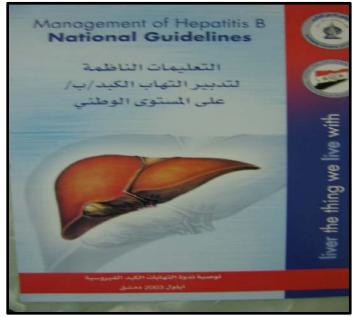












Prevalence of Hepatitis B/C in >1milion blood donors

	1996	1997	1998	1999	2000	2001	2002
HBsAg	7.01	%5	4.4 %	3.94	3.85	3.6	%3.6
HCV	2.53	1.8	1.7	1.74	1.19	0.74	%0.4

إدارة نقل الدم 2003



Medicine can be notoriously insular



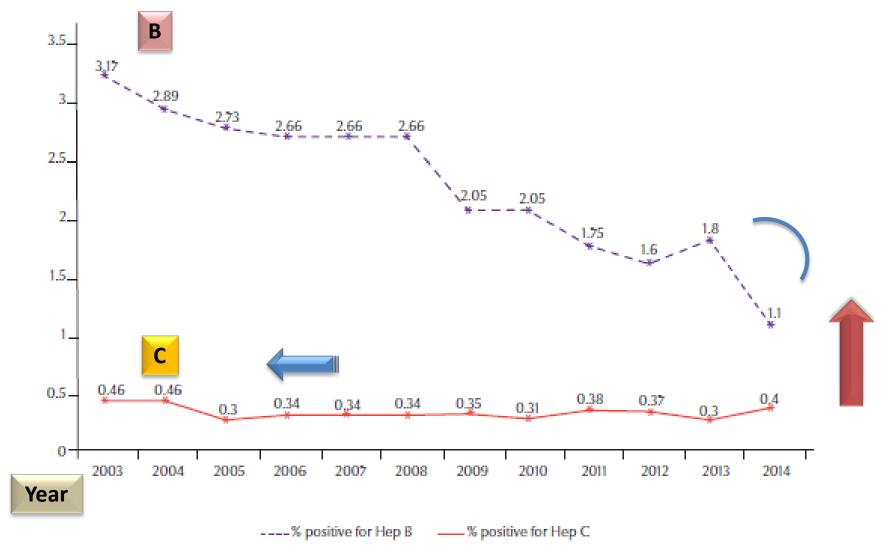


Rationale

Last seroprevalence survey in 2004



City	NO.	HBSA g	Prevalence rate	HCV	Prevalence rate
Damascus	366	ь	5.19		0.55
R . Damascus	384		3.12		1.04
* Aleppo	720		10.55		10.14
Latakia	210		3.8		0
Tartous	142		2.1		0.7
Idlib	186		4.3		1.07
Homs	281		3.9		1
Hama	216		2.24		0.46
AL Raka	108		3.7		0.9
Deer Al Zour	132		3.78		0.75
* AL Hsaka	198		10.6		0.5
Dara	120		1.66		0
AL Swidea	78		2.56		0
AL kownetra	24		0		0
Total Laham 2004	3165		5.62		2.8



proportion positive for hepatitis B virus and hepatitis C virus in the blood banks
(2003-2014) as reported to the Syrian ministry of health





Seroprevalence of Hepatitis B and C among selected population groups in Syria



Acknowledgment









Rationale



 Before the conflict began, Syria had one of the most advanced health care systems in the Middle East.

 Over half the country's public hospitals and primary health care centres are either closed or only partially functioning

Study Sample

All targeted

22000

Each Target Group

2000

Random
 selection of
 some target
 groups but
 <u>convenience</u>
 sample of
 others

Seroprevalence of Hepatitis B and C among selected population groups in Syria

Target group

University and graduate students (20-29 years)

Users of health centers (30-59 years)

Retired (60+ years)

Preschool children (less or equal 6

year)

School children (7-19 years)

Blood donors

Pregnant women

Health Care Workers

High Risk groups

Frequent blood transfusions and

hemodialysis patients

Internally Displaced Populations



Sample distribution

		Sample distribution										
Gover norate	20-29 Y	30-59 Y	60+ Y	0-6 Y	7-19 Y	Blood donors	Pregnant women	HCWs	HRGs	Blood disorders & Hemodialysis patients	IDPs	Total
Damascu s	720	220	220	220	220	220	220	220	220	220	260	2960
Rural Damascus	0	360	360	360	360	360	360	360	360	360	350	3590
Daraa	80	100	100	100	100	100	100	100	100	100	0	980
Sweida	100	100	100	100	100	100	100	100	100	100	0	1000
Quneitra	0	100	100	100	100	100	100	100	100	100	0	900
Homs	360	160	160	160	160	160	160	160	160	160	200	2000
Hama	160	300	300	300	300	300	300	300	300	300	250	3110
Lattakia	400	300	300	300	300	300	300	300	300	300	250	3350
Tartous	180	160	160	160	160	160	160	160	160	160	180	1800

Hassakeh

Aleppo

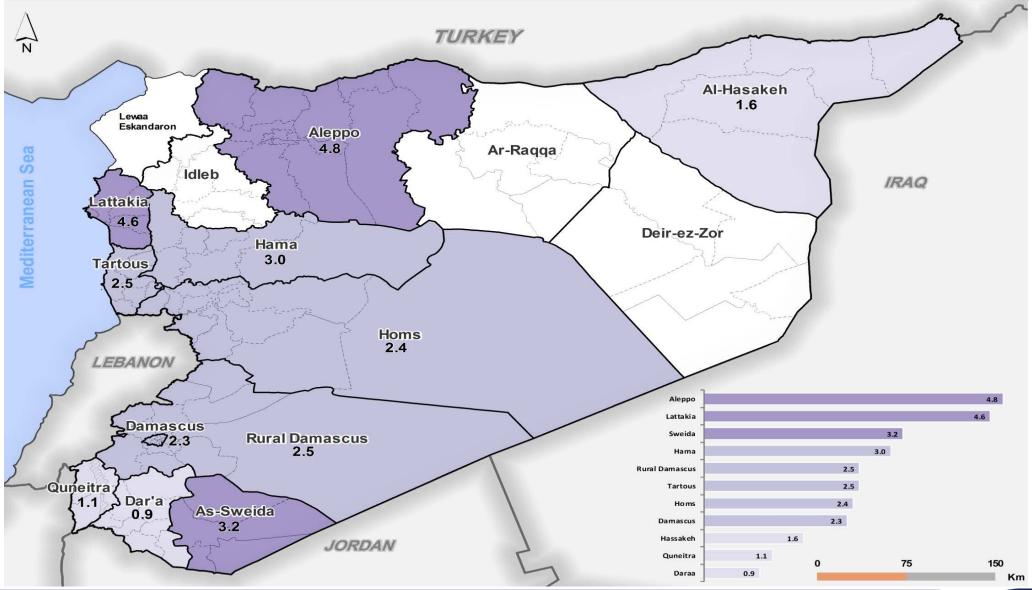
Total

Prevalence of HCV infection By Governorate



	Anti HCV+		
Governorate			
	No	%	
Damascus	66/2929	2.3	
Rural Damascus	89/3528	2.5	
Daraa	9/975	0.9	
Sweida	32/990 10/889	→ 3.2	
Quneitra	10/889	1.1	
Homs	49/2065 93/3099	→ 2.4	
Hama		3	
Lattakia	153/3317	4.6	
Tartous	45/1772	2.5	
Hassakeh	32/1984 15/310	1.6	
Aleppo	15/310	→ ^{4.8}	





Distribution of sample by selected target group

Target group	No actually recruited	% covered
University and graduate students	1994	99.7
Users of health centers (30-59 y)	2068	103.4
Elderly (>60)	1984	99.2
Preschool children (I< or equal 6 y)	1993	99.7
School children (7-19 years)	1999	99.7
Blood donors	1990	99.9
Pregnant women	1974	98.7
Health Care Workers	1907	95.4
High Risk groups	1985	99.3
Frequent blood transfusions and hemodialysis patients	1996	99.8
Internally Displaced Populations	1968	98.4
All targeted	21858	99.4

Prevalence of HBsAg and Anti HCV by target group

Target group	HBsAg Positive No.	HBsAg Positive %	Anti HCV Positive No.	Anti HCV Positive %
University and graduate students (20-29 years)	14/1994	0.7	15/1994	0.8
Users of health centers (30-59 years)	51/2068	2.5	11/2068	0.5
Elderly (60+ years)	62/1984	3.1	34/1984	1.7
Preschool children (less or equal 6 year)	12/1993	0.6	14/1993	0.7
School children (7-19 years)	11/1999	0.6	15/1999	0.8
Blood donors	27/1990	1.4	7/1990	0.4
Pregnant women	27/1974	1.4	10/1974	0.5
Health Care Workers	26/1907	1.4	16/1907	0.8
High Risk groups	51/1985	2.6	150/1985	7.6
Frequent blood transfusions and hemodialysis patients	38/1996	1.9	288/1996	14.4
Internally Displaced Populations	45/1968	2.3	33/1968	1.7
All population groups	364/21858	1.7	593/21858	2.7



Prevalence of HBV and HCV infectionsBy Target Group



Anti HCV +

0.7%

0.8%

0.8%

0.5%

1.7%

Pre School children (6 years or less)

School children (7-16 years)

University and graduate students (20-29 years)

Users of health centres (30-59 years)

Elderly (60 years and more)

Prevalence of HCV ByTarget Group

Anti HCV +

Blood donors

0.4%

Pregnant women

0.5%

Health acre workers

0.8%

Special high risk groups

7.6%

Frequent blood transfusion or haemodialysis

14.4%

Internally displaced populations

1.7%

Study Population



- 21858 out of 22000 aimed at
- 364 individuals positive for HBV infection
- 593 individuals positive for HCV infection



Conclusions

Conclusions on HCV infection: Target Groups

- The sero prevalence of HCV is low (Less than 1.5%) among all apparently healthy groups
- The sero prevalence of HCV is moderate (1.5-3.5%) among elderly populations



Conclusions on HCV infection:

- very high (> 3.5%) among patients of:
- Haemodialysis & those with frequent blood transfusions
- High risk groups (IV drug users and individuals in correctional facilities)



Conclusions on HCV infection: Geography

- The seroprevalence of HCV infection is moderate (1.5-3.5%) in all governorates except
- Lattakia (4.6%)
- Aleppo (5%).



Conclusions on HCV infection: Risk Factors

- The following risk factors were statistically associated with the increase in risk of HCV infection:
 - Governorate
 - Exposure to tattoo
 - History of blood transfusion
 - Haemodialysis patient
 - Intravenous drug use
 - Share personal items
 - Being single was a protective factor



Thus

 The study indicates that the seroprevalence of HCV infection is concerning.

Have you heard of Hepatitis C?		
Yes	8297/17998	46.1%
No	9701/17998	53.9%
Do you know that a patient with hepatitis can transmit the disease to others?		
Yes	8325/12798	65%
No	4473/12798	35%
Can a woman who carry hepatitis virus transmit it to her newborn?		
Yes	8875/11902	74.6%
No	3027/11902	25.4%



Main Study Limitations

- Target groups rather than random population due to access problems
- Three governorates were excluded



Implications of the Study Findings

□ National Strategy of Hepatitis C control
 □ National Strategy for infection Control
 □ Screening programmes
 □ Management protocols
 □ Health Education

Ahmad et al. Int J Gastroenterol Hepatol Transpl Nutr 2017;2(iv):7-12

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Original Article

The prevalence of Hepatitis B Surface Antigen (HBsAg) among pregnant women admitted to one public Hospital in Damascus, Syria

Nazir Abd al-Wahab Ibrahim, Taghrid Younes Ahmad, Hasan Nabil Alhouri

 Methods: included 794 participants were screened for HBsAg using the fourth generation of ELISA.

 The prevalence of HBsAg among the pregnant women admitted to an obstetrics and gynecology center in Damascus, Syria was 0.75%.



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Arab Journal of Gastroenterology

journal homepage: www.elsevier.com



Hepatitis C virus antibodies are absent among high risk group of health care workers in Damascus Hospital

Hoda Alhamoudi*, Nawras Alhalabi, Mouhammed Zein, Nazir Ibrahim

Faculty of Medicine, Syrian Private University, Damascus, Syria

A total of 127 residents and 23 physicians in Damascus Hospital were tested through this study



prevalence of HCV among (HCWs)

- vary from country to another.
 - 0.3% in Saudi Arabia
 - 0.4% in Turkey
 - 1.7% in Brazil
 - 2.6% in Lebanon
 - 4% in New Delhi
 - 8% in Egypt

Hepatitis C virus antibodies are absent among high risk group of HCW in Damascus, Nazir Ibrahim et al Syrian Private University, SPU 2018



The prevalence of HCV among (HCWs)

One study conducted in Syria in 2001, detected HCV antibodies in 3% of HCWs, which are higher than normal population, measured at 0.4%

Othman BM, Monem FS. Prevalence of hepatitis C virus antibodies among health care workers in Damascus, Syria. Saudi

Med. J. 2001 Jul

Hepatitis C virus antibodies are absent among high risk group of HCW in Damascus, Nazir Ibrahim et al Syrian Private University, SPU 2018



Variable	Residents	%	Specialists	%	Total	%
Gender						
Male	105.0	70.0	21.0	14.0	126.0	84.0
Female	22.0	14.7	2.0	1.3	24.0	16.0
Occupation	Residents	%	Specialists	%	Total	%
Surgery	91.0	60.7	13.0	8.7	104.0	69.3
General	30.0	20.0	1.0	0.7	31.0	20.7
Pediatric	3.0	2.0	1.0	0.7	4.0	2.7
Vascular	3.0	2.0	3.0	2.0	6.0	4.0
Genitourinary	6.0	4.0	1.0	0.7	7.0	4.7
Plastic	7.0	4.7	2.0	1.3	9.0	6.0
Thoracic	0.0	0.0	1.0	0.7	1.0	0.7
Neurological	6.0	4.0	0.0	0.0	6.0	4.0
Orthopedic	19.0	12.7	3.0	2.0	22.0	14.7
Maxillofacial	17.0	11.3	1.0	0.7	18.0	12.0
Otolaryngology	14.0	9.3	1.0	0.7	15.0	10.0
Gastroenterology	8.0	5.3	3.0	2.0	11.0	7.3
Anaesthesiology	3.0	2.0	5.0	3.3	8.0	5.3
Laboratory	11.0	7.3	1.0	0.7	12.0	8.0
Total	127.0	84.7	23.0	15.3	150.0	100.0



Variable	No.	%	Notes
Currently married	51.0	34.0	
Antecedents			
Intravenous drugs use	55.0	36.7	
Surgical intervention	51.0	34.0	
Dental procedures	113.0	75.3	
Blood transfusion or haemodialysis	0.0	0.0	
Needle stick injury	122.0	81.3	
Dealing with HCV patients	119.0	79.3	
Injury while dealing with HCV patients	28.0	23.5	18.7 out of total
Sharing toothbrushes or Razers	0.0	0.0	
Piercing	24.0	16.0	(all the females)
Circumcision (males/126)	117.0	92.9	
Household member with HCV	0.0	0.0	

HCV -Health acre workers /Syria

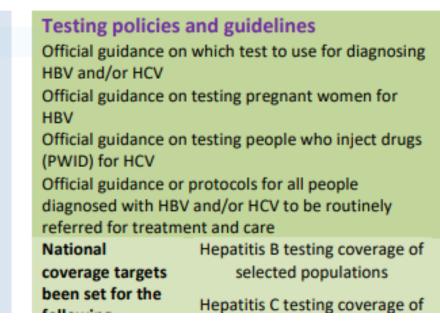
• SPU 2016	0.0	small	
• WHO 2016	0.8	1900	
• Othman, Monem 2001	3.0	small	

Syria Hepatitis Country profile 2017

Epidemiology

(2012)

% Estimated prevalence of chronic
Hepatitis B infection (HBsAg+)ⁱ
Estimated prevalence of chronic HCV
infectionⁱⁱ (%)ⁱⁱⁱ
Estimated prevalence of chronic HCV
infection (N)ⁱⁱⁱ
HCV prevalence among PWID [mean[95%
CI]]^{iv}
Hepatitis specific mortality rate per 100
000^v (2013)
Liver cancer incidence (ASR^{vi}) per 100 000^{vii}



Yes

No

No

Yes

Yes

Estimate of the total number of people initiated on	2500		
antiviral treatment for HCV for the years 2013			
Estimate of the total number of people initiated on	2000		
antiviral treatment for HCV for the years 2015	2000		
Estimate of the total number of people planned and	2000		
budgeted for treatment of HCV infection in 2017	3000		



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THANK YOU FOR YOUR TIME.