

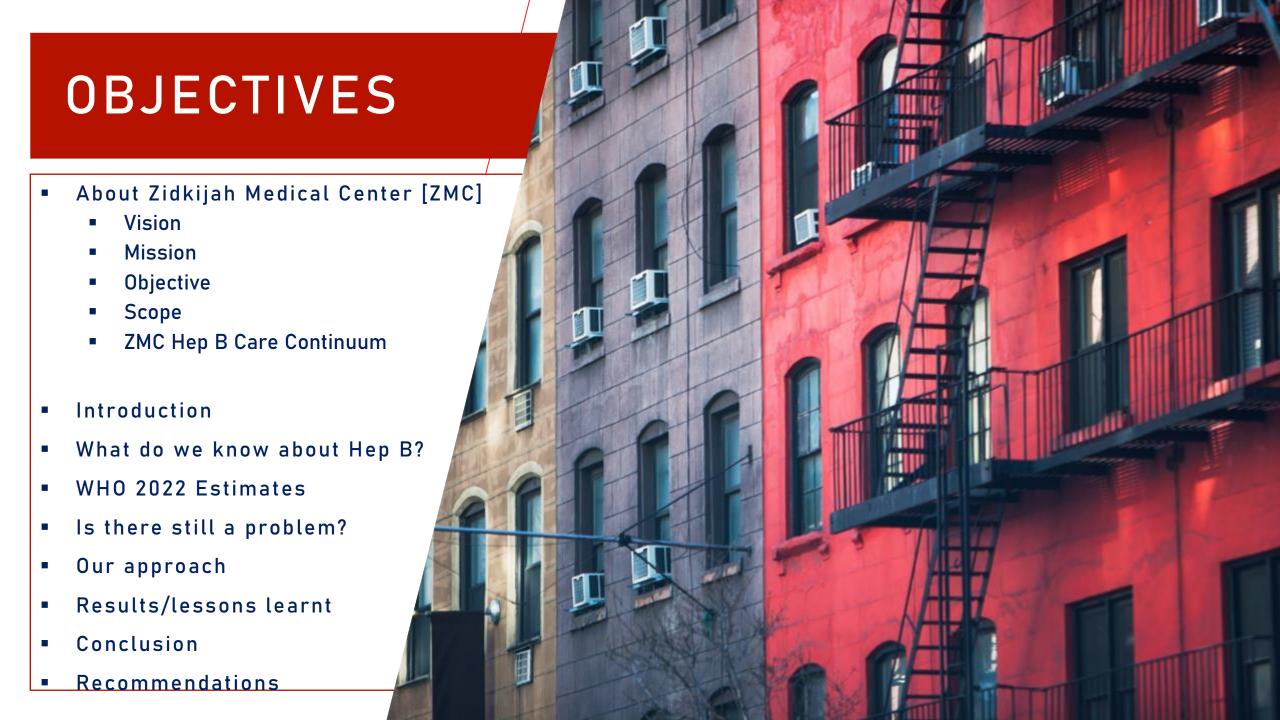
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IT IS POSSIBLE: HEPATITIS B SCREENING, CARE AND TREATMENT INTEGRATION INTO PRIMARY CARE SETTING

N. Okoko^I
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Director – Clinical Services
Pediatric Adolescent Technical Lead





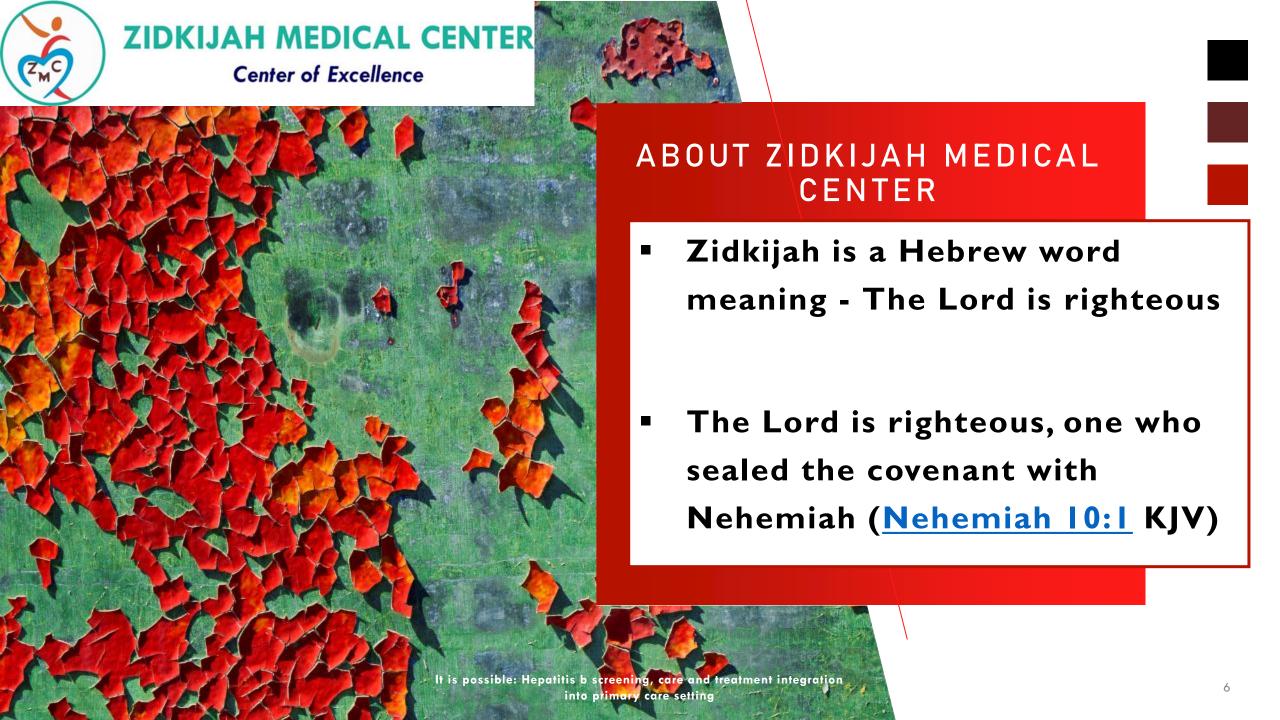
ABOUT ZIDKIJAH MEDICAL CENTER

- A level 2 private out patient health facility, founded in February 2019, based in Rongo Sub County, Migori County, Kenya
- **Duly registered by Kenya Medical Practitioners Dentist Council (KMPDC**
 - Registration certificate number 016141)



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MISSION

■ To improve access to highest attainable evidence based quality health care with an objective to deliver timely, affordable and compassionate quality health care services to patients and families

OBJECTIVE

To deliver timely, affordable and compassionate quality health care services to patients and families irrespective of their social status, gender and age, ethnic, religious or political affiliations

While paying keen attention to our 8 key values of: Fear for God, integrity, compassion, customer focus, leadership, empathy, respect and moral courage



SCOPE

We support access to comprehensive high quality primary health care services

 General outpatient, Pharmacy, Maternal Neonatal Child Health (MNCH), laboratory, adolescent health services, sexual reproductive health services including Hepatitis B Virus screening and follow up services

as we strive to meet the growing demand for high quality integrated health care services with special attention to access, affordability, clinical and service excellence in Rongo Sub County, Migori County in Rural Kenya



ZMC POPULATION

ZMC serves ALL irrespective of their social status, gender, age, ethnic, religious or political affiliations



PAEDIATRICS
[O-9YRS]

ADOLESCENTS
[10-19YRS]
YOUNG
PERSONS
[20-24YRS]

HCPS
PREGNANT
WOMEN

PLHIV PLHEPB



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OUR TARGET POPULATION

Infants born to mothers with chronic HBV

- Risk if MTCT is 5 to 90% in the absence of maternal antiviral treatment or neonatal immunoprophylaxis
- Approximately 90% of perinatal HBV infections becoming chronic
- The use of antiviral therapy for mothers with high HBV viral loads—in addition to standard immunoprophylaxis—can further reduce the risk of perinatal HBV transmission

Household contacts

 The CDC estimates that among persons living in the same household as an individual with chronic HBV infection, 16% have evidence of current infection and 45% have evidence of past infection

This risk is highest among unvaccinated children and sex partners of persons chronically infected with HBV

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OUR TARGET POPULATION

Injection-drug users

Most at Risk Populations (MARPs)

Developmentally disabled persons in long-term care facilities

Persons from correctional facilities

Persons at risk for occupational exposure to HBV - HCWs



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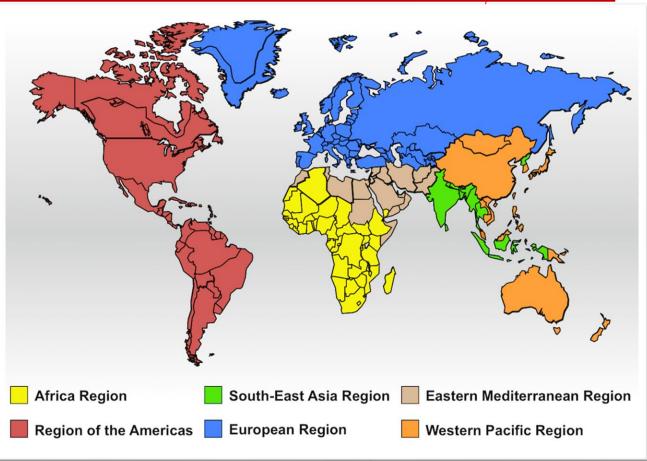
OUR TARGET POPULATION

- Persons receiving haemodialysis
- Persons with HCV
 - Due to co-occurring modes of transmission, higher rates of HBV infection have been reported in persons infected with hepatitis C virus (HCV), likely due to overlapping risk factors for acquisition of these two hepatitis viruses
- Persons with HIV
 - Owing to similar modes of transmission, the global prevalence of chronic HBV among persons with HIV is approximately 10%
- Travelers visiting Kenya
- Persons with diabetes
- Persons with history of transfusion history
- Transplant recipients



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INTRODUCTION



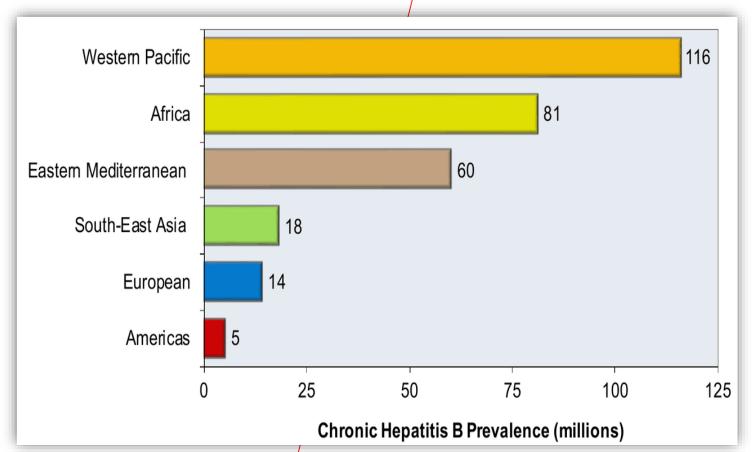


Difference in Regional HBV Prevalence and Prevalence Rates exists [WHO 2019]



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INTRODUCTION





By 2019, Africa was a home to 81 million PLHepB

Chronic Hepatitis B Virus: Global Prevalence Estimates, by World Health Organization Regions, 2019



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Global Prevalence of Chr	ronic HBV Infection, by Country	
Prevalence Category	Country	
High >8%	Angola, Cabo Verde, Central African Republic, Chad, Eswatini, Ghana, Guinea, Guinea-Bissau, Kiribati, Lesotho, Liberia, Mali,	
	Mauritania, Niger, Nigeria, Philippines, Sao Tome and Principe, Sierra Leone, Solomon Islands, Taiwan, Timor-Leste, Togo, Tonga,	
Intermediate (5.0-7.9%)	Turkmenistan, Tuvalu, and Zimbabwe. Albania, Benin, Burkina Faso, Cameroon, China, Côte d'Ivoire, Democratic People's Republic of Korea, Djibouti, Eritrea, Ethiopia,	
intermediate (5.0-7.776)	Federated States of Micronesia, Gabon, Indonesia, Kyrgyzstan, Moldova, Mongolia, Mozambique, Myanmar, Papua New Guinea,	
	Senegal, Somalia, South Sudan, Syria, Tajikistan, Uzbekistan, Vanuatu, and Vietnam.	
Low Intermediate	Afghanistan, Azerbaijan, Bangladesh, Belarus, Bosnia and Herzegovina, Bulgaria, Burundi, Cambodia, Comoros, Congo,	
(2.0-4.9%)	Democratic Republic of Congo, Gambia, Georgia, Guyana, Haiti, Hong Kong, India, Iraq, Jamaica, Jordan, Kazakhstan, South Korea,	
	Laos, Madagascar, Malawi, Malaysia, Marshall Islands, Oman, Pakistan, Romania, Rwanda, Samoa, Singapore, South Africa, Sri Lanka,	
	Sudan, Tanzania, Thailand, Trinidad and Tobago, Tunisia, Turkey, Uganda, Yemen, and Zambia.	
Low (≤1.9%)	Algeria, Argentina, Armenia, Australia, Austria, Bahrain, Belgium, Belize, Bhutan, Bolivia, Brazil, Canada, Chile, Colombia, Costa	
	Rica, Croatia, Cuba, Czechia, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Fiji, Finland, France, Germany,	
	Greece, Guatemala, Honduras, Hungary, Iran, Ireland, Israel, Italy, Japan, Kenya , Kosovo, Kuwait, Lebanon, Libya, Mexico,	
	Morocco, Nepal, Netherlands, New Zealand, Nicaragua, Norway, Palestine, Panama, Paraguay, Peru, Poland, Portugal, Qatar,	
	Russia, Saudi Arabia, Slovakia, Slovenia, Spain, Suriname, Sweden, Switzerland, Ukraine, United Arab Emirates, United Kingdom,	
	United States, and Venezuela.	
Unknown prevalence (data	American Samoa, Andorra, Anguilla, Antigua and Barbuda, Aruba, Bahamas, Barbados, Bermuda, Bonaire Sint Eustatius and Saba,	
not available)	Botswana, British Virgin Islands, Brunei, Cayman Islands, Cook Islands, Curação, Cyprus, Dominica, Equatorial Guinea, Falkland	
	Islands, Faroe Islands, French Guiana, French Polynesia, Gibraltar, Greenland, Grenada, Guadeloupe, Guam, Holy See, Iceland, Isle	
	of Man, Latvia, Liechtenstein, Lithuania, Luxembourg, Macao, Macedonia, Maldives, Malta, Martinique, Mauritius, Mayotte, Monaco,	
	Montenegro, Montserrat, Namibia, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Puerto Rico, Réunion, Saint Barthélomy, Saint Holona, Saint Kitts and Novis, Saint Lucia, Saint Martin, Saint Biorra and Miguelon, Saint Vincent and the	
	Barthélemy, Saint Helena, Saint Kitts and Nevis, Saint Lucia, Saint Martin, Saint Pierre and Miquelon, Saint Vincent and the Grenadines, San Marino, Serbia, Seychelles, Sint Maarten, Tokelau, Turks and Caicos Islands, U.S.Virgin Islands, Uruguay, Wallis and	
	Futuna, and Western Sahara.	
Centers for Disease Control and Pro		
	ulos L, Hofmeister MG, et al. Screening and Testing for Hepatitis B Virus Infection: CDC Recommendations - United States, 2023. MMWR Recomm Rep. 2023;72:1-	17
25. [PubMed Abstract]		4

HEPATITIS

Hepatitis can affect anyone

It disproportionately affects people and communities most under served by healthcare systems

Every 30 seconds, someone dies from a viral hepatitis related illness

New Viral Hepatitis infections: over 6 000 people daily

Globally, perinatal transmission remains the predominant mode of HBV transmission

Hepatitis B is preventable with a vaccine

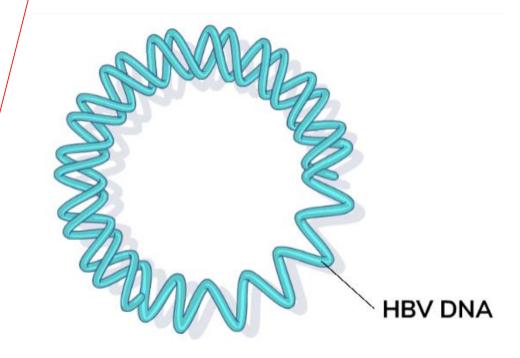


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HEPATITIS B

 Hepatitis B virus (HBV) is an enveloped, partially double-stranded DNA virus

 Transmitted via infected blood and bodily fluids





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IS THERE STILL A PROBLEM?



Palmar erythema graphic credit: Hep B Online

HEPATITIS B WHO ESTIMATES 2022

254 Million

PEOPLE LIVING WITH CHRONIC HEPATITIS B INFECTION 1.2 Million

NEW INFECTIONS EACH YEAR 1.1 Million

DEATHS
MOSTLY FROM
CIRRHOSIS
AND HCC

2.7 Million (1%)

HBV/HIV COINFECTION

33 Million (13%)

HBV INFECTION AWARENESS AMONG PLHEPB

Only 3% (7 million) of the people living with chronic hepatitis B were on treatment



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HEPATITIS B

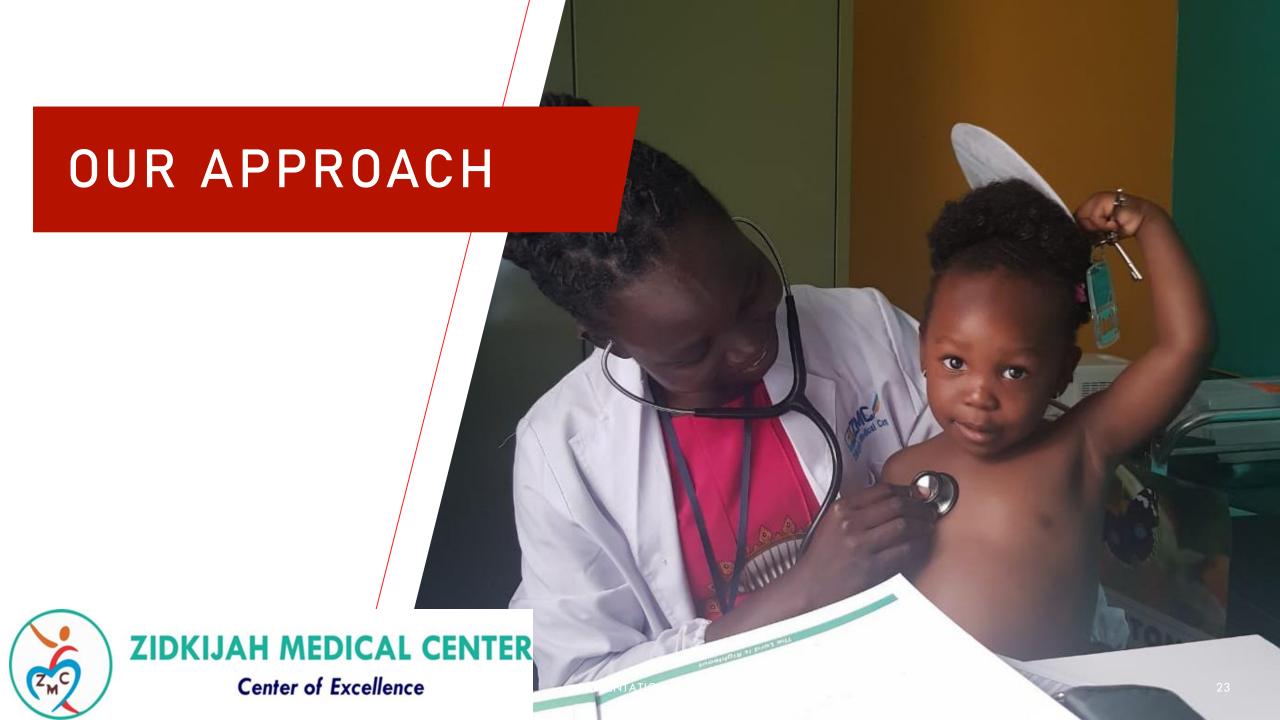
Lack of Hepatitis B related education and information contributes to the stigma that PLHepB face

Ignorance

Myths

Misconceptions about Hepatitis B





ZMC HEP B CARE CONTINUUM



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Linkage

Hep B Care and Treatment

Retention

Viral Suppression
Liver Health
Improvement

- Hep B
 Awareness/health
 education/IEC
 materials [Mostly from
 Hep B foundation but
 customised]
- Hep B screening/testing

- Real time [Same day]
- Feasible because of integration

- Treatment Eligibility Assessment
- Pre treatment Follow up care
- Treatment initiation for the eligible
- Post initiation follow up

- **DSD** [Well spaced follow up visits]
- Mostly Bi Annually
- Individualized approach [Off work, weekends]

- · DNA VL
- Imaging
- Staging Studies

Prevention

- Hep B Vaccination
- PMTCT
 - Maternal Prophylaxis
 - Birth Dose

Psychosocial support

- [patient and family counselling and support]
- Patient support groups
- Expert patient meaningful engagement



IMPLEMENTATION STRATEGIES

Prevention

- Facility based Health talks
- Awareness
 Outreaches [Leveraging on Church based events, medical camps]
- Facility based one on one

Identification

- HepB Testing
- Opt out approach
- Provider Initiated
- Family Testing approach to identification
- Linkage to care and treatment

Diagnosis and Treatment

- Integration into routine out patient care [Stigma reduction]
- Robust sample networking system
- Robust imaging networking system
- Leveraging on partnership with MoH to provide Free Medication [3TC/TDF]
- Implementation of the primary care guidance [Hep B online] and now the 2024 WHO guidelines



Sound Clinical Mentorship program/structure

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ZMC'S INITIAL EVALUATION OF THE HBSAG(+) PATIENT

	History/Examination	R	outine Laboratory Tests	S	erology/Virology		Imaging/Staging Studies
Į	☐ Symptoms/signs of cirrhosis		Full Hemogram		HBeAg/anti-HBe		Abdominal ultrasound
[Alcohol and metabolic risk factors		Comprehensive metabolic panel including:	<u> </u>	HBV DNA		Elastography (e.g. FibroScan) or
Į	Family history of hepatocellular carcinoma (HCC)	-	AST/ALT		Anti-HAV (total or IgG) to determine need for vaccination if none documented	' _	Serum fibrosis assessment I (e.g. APRI, FibroSure, FIB-4)
Ţ	☐ Hepatitis A vaccination status		Total bilirubin		Anti-HCV		
			Alkaline phosphatase		Anti-HDV		
			Albumin		Anti-HIV		
			Creatinine				
			International Normalised Ratio [INR]				





HEALTH EDUCATION AND COUNSELLING FOR PERSONS WITH CHRONIC HBV

It's time for action!

Zidkijah Medical Center pledges to contribute to early identification of HEPATITIS B through HEPATITIS B Screening and Testing.

worldhepatitisday.org #WorldHepatitisDay













- I. Give a plan for follow-up care:
 - Patients need regular (minimum every 6 months) follow-up and monitoring for disease progression
- 2. Educate and counsel on the long-term implications of chronic HBV infection (e.g., cirrhosis and hepatocellular carcinoma)
- 3. Advise and empower patient to inform all current and future medical providers of their HBsAg-positive status, especially if they ever need treatment for cancer or any immunologic condition such as rheumatoid arthritis or other immune disorders
- 4. Counsel to avoid or substantially limit alcohol use
- 5. Advise to optimize body weight and address metabolic complications, including control of diabetes and dyslipidaemia (to prevent concurrent development of metabolic syndrome and fatty liver)
- 6. Provide education on how to prevent transmission of HBV to others

HBV TRANSMISSION PREVENTION EDUCATION FOR PLHBV

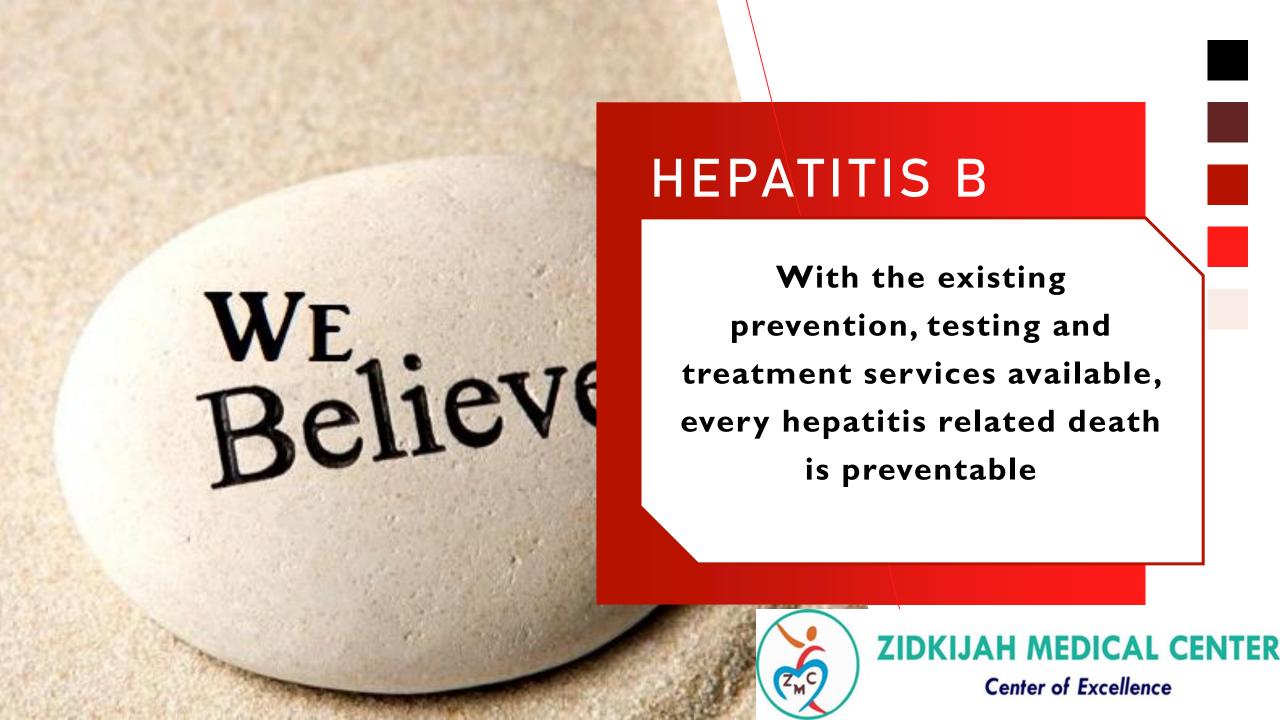


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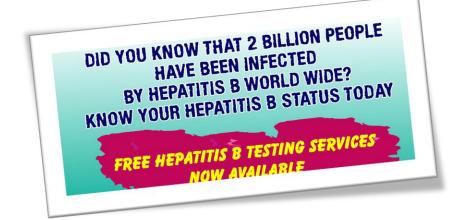
It's time for action! **Zidkijah Medical Center** pledges to contribute to early identification of HEPATITIS B through HEPATITIS B **Screening and Testing.** World worldhepatitisday.org Hepatitis Day, 28 July #WorldHepatitisDay World Hepatitis Alliance

He	ealth Education for Persons with chronic HBV
Should:	☐ Verify that sexual contacts, household contacts, family
	members, or injection partners are screened and vaccinated
	☐ Cover open cuts and scratches
	☐ Clean blood spills with diluted bleach (1:10)
	☐ Use condoms to prevent HBV transmission during
	sexual intercourse with partners who are susceptible
	to HBV infection.
Should NOT:	☐ Share toothbrushes, razors, nail clippers, or earrings
	☐ Share injection equipment
	☐ Share glucose testing equipment
	☐ Donate blood, organs, or sperm
Can:	☐ Participate in all activities, including contact sports
	☐ Share food and utensils, or kiss others
	☐ Pursue educational or career opportunities without
	limitations, including work as a health care
	professional





JULY 2019 CHURCH OUTREACH



HEPATITIS B SCREENING SERVICES - WOMEN'S CONFERENCE OUTREACH

SERVICE	<25YRS	25-49YRS	50YRS Plus	TOTAL
Previously vaccinated against Hep B	0	0	0	0
Eligible	I	14	3	18
Tested for Hep B	ı	14	3	18
Hep B Positive	0	2		3
Hep B Negative	ı	12	2	15
Hep B Positivity	0%	14.20%	33%	16.60%
Vaccination Status	0%	0%	0%	0%

3 [16.6%] out of 18 women tested positive for Hep B
2/3rds being 50yrs plus
2 out of the 3 are on follow up



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JUNE 2024 OUTREACH RESULTS



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PHOTO CREDIT: SPRING OF HOPE INTERNATIONAL

JUNE 2024 OUTREACH RESULTS

HEPATITIS B SCREENING AND TESTING SERVICES

Gender	0-9yrs	10-19yrs	20-49yrs	50- 82yrs	Total
Females	0	0	56	44	100
Males	I	4	12	18	35
Total	I	4	68	62	135



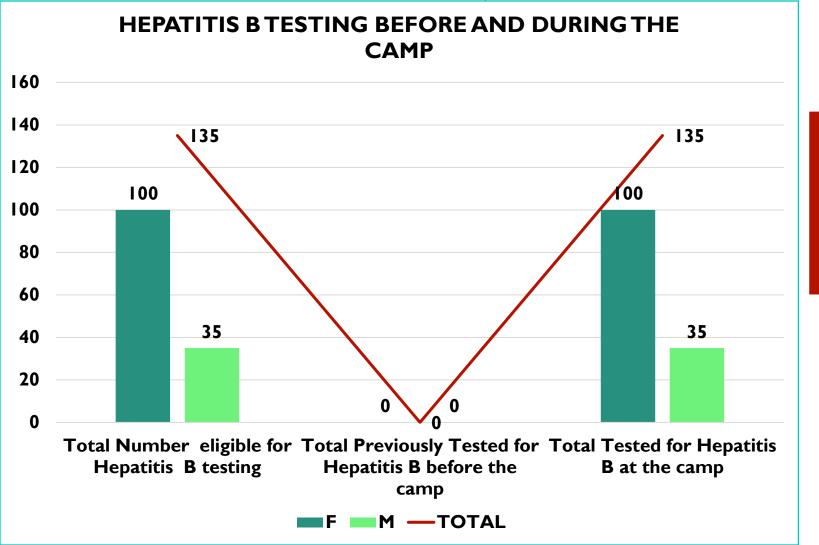
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It is possible: Hepatitis B screening, care and treatment integration into primary care setting



JUNE 2024 OUTREACH RESULTS



100% of those tested for Hepatitis B at
the camp were testing for the very
first time – they had never been tested for
Hepatitis B



HEPATITIS B ELIGIBILITY, TESTING AND POSITIVITY

	F	M	TOTAL
Total Number Eligible for Hep B Testing at the camp	100	35	135
Total Tested for Hepatitis B at the camp	100	35	135
Number Positive for Hepatitis B	4	2	6

6 out of 135 (4.4%) tested positive for Hepatitis B at the camp, majority being women



HEPATITIS B TESTING CASCADE /HBV HIV COINFECTION:

Sexual Partner Vaccinated against Hep B

Variable Description



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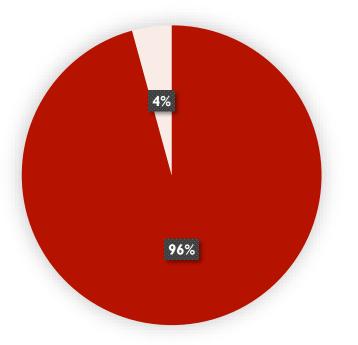
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TOTAL

Variable Description		171	IOIAL
Total Number seen at the camp	100	35	135
Previously Tested for Hep B	0	0	0
Index Client's Previous Test Result	0	0	0
Total Tested for Hepatitis B at the camp	100	35	135
Number Positive for Hepatitis B	4	2	6
Number Negative for Hepatitis B	96	33	129
Index clients Assessed for knowledge of HIV Status	100	0	100
			33
Number HIV positive	28	5	33
Number HIV Negative	44	16	60
Number with Unknown HIV status	28	14	42
Sexual Partner Hep B status known	0	0	0

33% of those that opted for Hep B testing were HIV positive

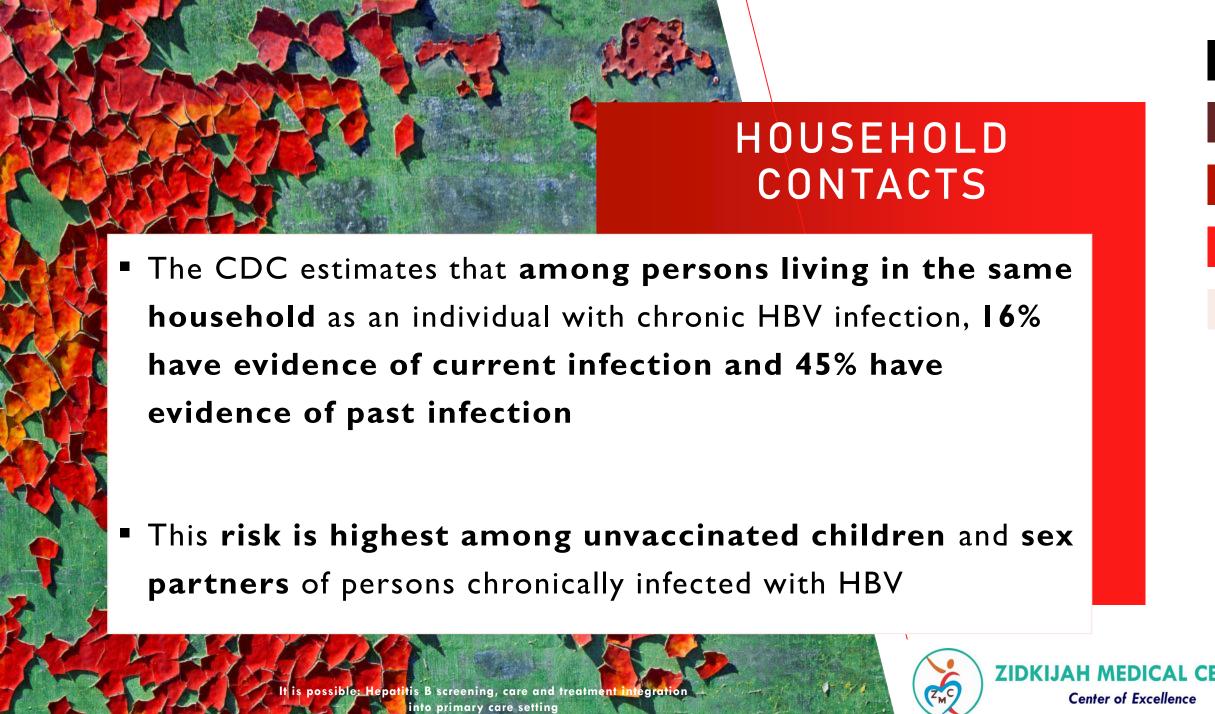
HEPATITIS B TESTING: POSITIVITY



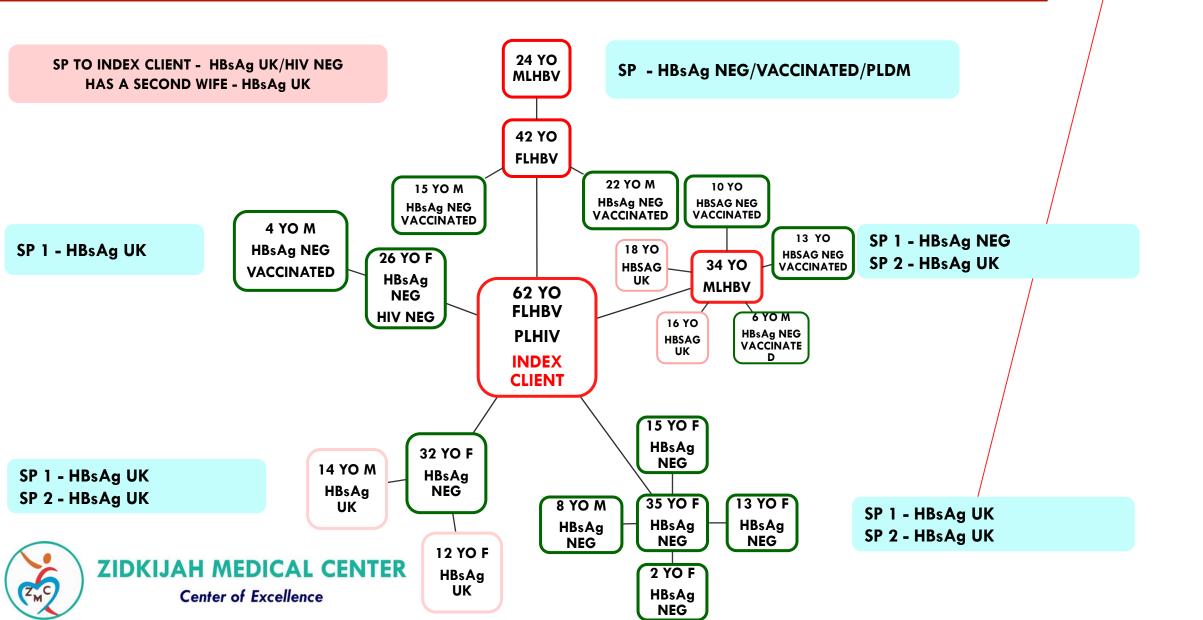
- Total Tested
 Negative for
 Hepatitis B at
 the camp
 - Number Positive for Hepatitis B

4.4% positivity





THEY ARE LIKELY TO BE THERE: USING A FAMILY-CENTERED INDEX TESTING APPROACH TO IDENTIFY PLHBV IN RURAL KENYA



GENERATIONAL HBSAG POSITIVITY VARIANCE

INDEX PLHBY – 62YO FEMALE

- •The Greatest Generation: Born /901–1927
- •The Silent Generation: Born 1928–1945
- •Baby Boomers: Born 1946–1964 THE 62YO
- •Generation X: Born 1965–1980/
- •Millennials: Born 1981–1996 THE 2 POSITIVES
- •Generation Z: Born 1997–2010 ONE MALE
- •Generation Alpha: Born 2010–2024

Millennial	s: Born 1981	-1996 N - 5	;	
HBV STATUS	GENDER			
	М	F	TOTAL	
UK	0	0	0	
NEG	I	4	5	
POS	I	1	2	
% POSITIVITY		(2/5) 40%		

ALL PERINATAL INFECTIONS
2 FROM THE INDEX,
I FROM THE CHILDREN OF THE INDEX

Generation Z: Born 1997-2010 N-15				
	G			
HBV STATUS	М	F	TOTAL	
UK	2	ı	3	
NEG	7	4	/11	
POS	I	0	/ I	
% POSITIVITY		(I/II) 9 %	<u> </u>	

NEED TO PRIORITIZE IDENTIFICATION, LINK PLHBY TO TREATMENT, VACCINATION



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DO NOT WAIT FOR AN OPPORTUNITY, CREATE IT



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ONE HEP B POSITIVE TEST =[EQUALS] 100% IDENTIFICATION/DIAGNOSIS



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DO NOT POSTPONE TESTING DO NOT WAIT FOR A CROWD









I don't know what I would have done without the support from this facility, I am no longer anxious, I have become a voice and a support system for of my patients

32year old patient on month 12 HBV treatment



YOU HAVE BEEN EMPOWERED TO EMPOWER, PLAY YOUR PART



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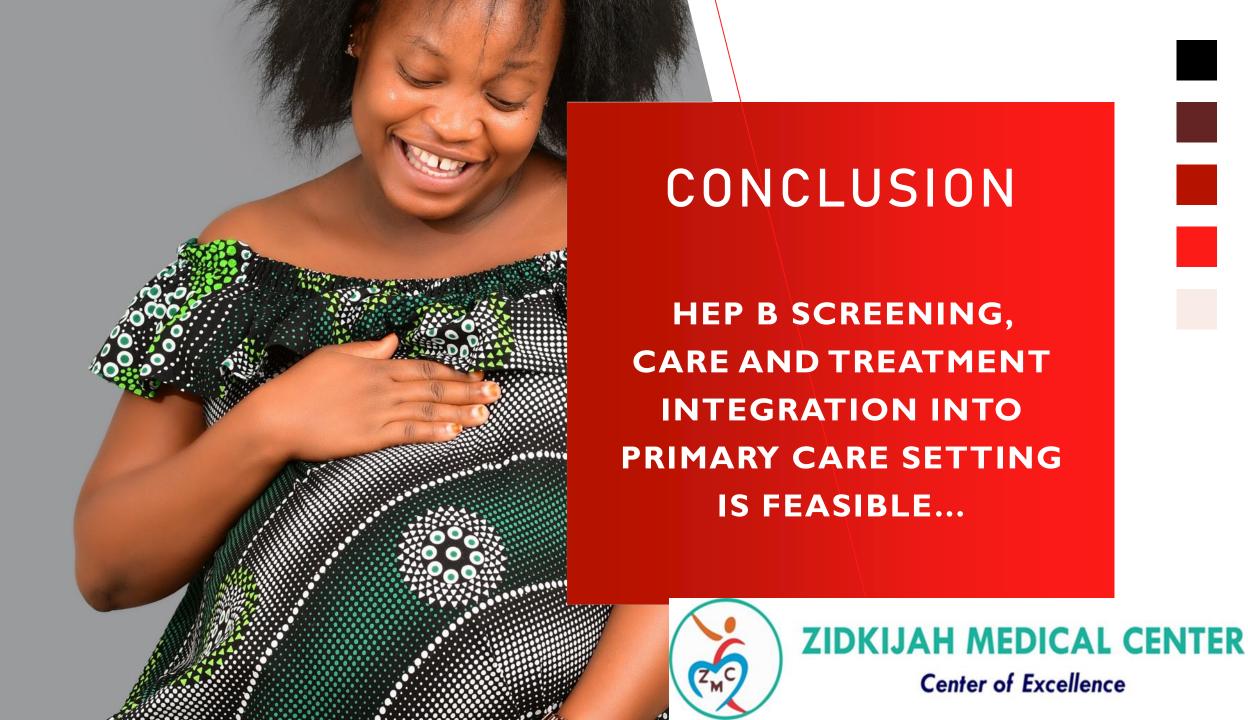
CHALLENGES

- Resource limitation [Facility solely relies on funds paid in by patients for other services, no external funding]
- Which is barely adequate given the economic tough times





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RECOMMENDATION

- Optimize the family unit to increase Hep B testing reach and care cascade entry
- Advocate for increased investment in testing, treatment and care for Hepatitis B
- Promote greater public and political awareness of hepatitis B





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RECOMMENDATION

 Support testing in both community and health facility settings

 Commit to delivering high-quality evidence-based, people-centred services

 Strengthen community and civil society involvement and create innovative partnerships

Leverage on the existing HIV programs of to facilitate free treatment

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MEET OUR TEAM

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ACKNOWLEDGMENT



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Zidkijah Medical Center staff

 Zidkijah Medical Center patients and their families

 The University of Washington's National Hepatitis Training Center (HTC) and the HBV Primary Care Workgroup













MAUR