

PREVALENCE OF HEPATITIS C VIRAL INFECTION IN GHANA; A SYSTEMATIC REVIEW AND META-ANALYSIS

STANDARDIZED DATA EXTRACTION FORM

#	Authors/year/ journal	Title	Study setting	Study population	Study objectives	Study design/ sample size(n)	Key findings
1	Madison Adanusa, George Adjei, Sebastian Eliason, Samuel Amoah, Cecil Benson, Ignatius Siriky, Faustina Pappoe, Anasthasia Ofori, Frederick Adjei, Bernice Appau, Benjamin Nyane, Rudolf Arthur, Oheneba C. K. Hagan 2023 africarxiv.pubpub.org	Sero-prevalence of Hepatitis B and C at a Primary Healthcare centre in Ghana License: Creative Commons Attribution 4.0 International License (CC-BY 4.0)	Central Region Ghana	Patients of a hospital	to estimate the prevalence of HBV and HCV among patients screened at a Ghanaian primary level hospital	Retrospective study n = 6,006	-The overall prevalence for hepatitis B in the study group was 5.06%. -The prevalence for hepatitis C was 0.93% .
2	Benedict Osei-Tawiah , Theophilus B Kwofie , Mohamed Mutocheluh , Richard Ephaim , and Emmanuel Awusah Blay International Journal of Virology and AIDS (2019) 6(1)	Prevalence of HIV, Hepatitis B, Hepatitis C and Syphilis Infections among Patients in a Psychiatric Hospital in Ghana	Central Region Ghana	Psychiatric Patients	This study sought to determine the prevalence of HIV, HCV, HBV and syphilis infections in patients with psychiatric disorders	cross-sectional study n = 200	Seroprevalence for HIV was 5% (10/200), HBV was 9.5% (19/200), syphilis was 13.5% (27/200) and HCV was 2% (4/200)

3	Kwasi Torpey Lily Ogyiri Vicky Cuylaerts Seth Agyeman Adwoa Agyei-Nkansah Jozefien Buyze Joseph Oliver Commey Lutgarde Lynen Anja De Weggheleire Journal of the International Association of Providers of AIDS Care (2021) 20 PUBMED CINAHL	Hepatitis C Prevalence and Validation of a Clinical Prediction Score for Targeted Screening among People Living with HIV in Ghana	Greater Accra Region Ghana	PLHIV	To study HCV prevalence among Ghanaian PLHIV, and assessed the external validity of a score to guide targeted testing.	single-center cross-sectional study n= 4023	HCV seroprevalence was 0.57%, and HCV- RNA was detectable in 0.5%.
4	A. T. Muktar A. Abdulai G. A. Aninanya M. Badawi UDS International Journal of Development [UDSIJD] Special Issue 10(1) 2023	Prevalence and Trends of Hepatitis B and C Among Blood Donors in all Blood Donors centers in The Northern Region of Ghana: A Five-Year Retrospective Study	Northern Region Ghana	Blood donors	This study was carried out to assess the prevalence and trends of HBsAg and HCV infections among blood donors in the Northern Region of Ghana.	5year Retrospective study (2011-2015) n= 123,152	The overall seroprevalence of HBsAg and HCV were 31.0 % (7319) and 28.0 % (4893) respectively.
5	Richard Boateng Mohamed	Sero-prevalence of Hepatitis B and C viral coinfections	Ashanti Region	PLHIV	The study assessed the hepatitis B virus	Cross-sectional study	The overall prevalence of

	Mutocheluh, Albert Dompkeh, - Dorcas ObiriYeboah, Enoch Odame Anto, Michael Owusu, Patrick Williams Narkwa PLOS ONE (2019) 14(4) PUBMED EMBASE WEB OFSCIENCE CINAHL	among HIV-1 infected ART-naïve individuals in Kumasi, Ghana	Ghana		(HBV) and hepatitis C virus (HCV) co-infection paradigm among the human immunodeficiency virus (HIV) infected patients attending a tertiary hospital in Ghana	n=400	HBV/HCV co-infection among the HIV-1 patients was 18.0%. The prevalence of HIV-HBV and HIV-HCV co-infections were 12.5% and 5.5% respectively. The prevalence of active viral hepatitis (HBeAg-positive) among HIV-HBV co-infected patients was 40%.
6	Daniel Berko, Faustina Kokloe Simon Nyarko Faridu Abdul-Wadudu4	Prevalence of Hepatitis B and C Virus Among Barbers and Mobile Nail Clippers in the Sekyere East District and Asante Mampong Municipality of Ghana	Ashanti Region Ghana	Barbers & Mobile Nail Cutters	The study was designed to find out the prevalence of HBV and HCV among Barbers and mobile nail clippers and to find out about their knowledge, attitudes, practices, and occupational exposure	Cross-sectional study n=300	HBV and HCV were more common in barbers (21.33% and 21% , respectively), whereas they were more common in MNCs (29% and 25%, respectively)

	European Journal of Preventive Medicine (2022) 10(4) 88-96						
7	Masood Maleki Birjandi Mahbobeh Oroe PUBMED WEB OF SCIENCE	The prevalence of positive rapid diagnostic test of hepatitis C virus infection in Ghana	Greater Accra Region Ghana	Mixed Population	to determine prevalence of cases with positive rapid diagnostic test of HCV infection	cross-sectional study using convenience sampling n=728	there was 1.6% positive RDT in our participants
8	Yvonne Ayerki Nartey, Rafiq Okine, Atsu Seake-Kwawu, Georgia Gharthey, Yaw Karikari Asamoah, Ampem Darko Jnr Siaw, Kafui Senya, Amoako Duah, Alex Owusu-Ofori, Opei Adarkwa, Seth Agyeman, Sally Afua Bampoh, Lindsey Hiebert, Henry Njuguna, Neil Gupta, John W. Ward, Lewis Rowland Roberts, Ansumana Sandy Bockarie, Yaw Asante Awuku, Dorcas Obiri-Yeboah PLOS ONE (2023) 18(6 JUNE	Hepatitis C virus seroprevalence, testing, and treatment capacity in public health facilities in Ghana, 2016-2021; A multi-centre cross-sectional study	Nationwide Ghana	Blood donors	This study investigated the HCV seroprevalence and testing and treatment capacity in Ghana	multi-centre cross-sectional study n= 103,609	The crude HCV seroprevalence was 2.62% (95% CI 2.53–2.72) pooled estimate was 4.58% (95% CI 4.06–5.11) among 103,609 persons tested in laboratories. Northern administrative regions in Ghana had the highest HCV seroprevalence ranging from 8.3–14.4%. Among 55, 458 potential blood donors, crude HCV seroprevalence was

	PUBMED EMBASE WEB OFSCIENCE						3.57% (95% CI 3.42–3.72). This study found a seroprevalence of 2.13% among children aged 0–11 years and 3.31% among those aged 12–17 years attending healthcare facility laboratories
9	Kwabena Obeng Duedu, Donzala Asomah, Seraphine Kugbemanya, Theophilus Korku Adiku Pan African Medical Journal (2021) 40 PUBMED EMBASE WEB OFSCIENCE CINAHL	Low seroprevalence of hepatitis c among children at the princess Marie louis children's hospital in Accra, Ghana	Greater Accra Ghana	Children	to determine the sero-prevalence and associated pre-disposing risk factor for HCV infection among children attending the Princes Marie Louis Children's Hospital in Accra	cross-sectional study n=200	Out of the 200 samples tested, one (1) tested positive for HCV antibodies giving a prevalence of 0.5% among the study group
10	Gifty Mawuli, Bartholomew Dzudzor, Kenneth Tachi, Amma Anima Benneh-Akwasi Kuma, James Odame-Aboagye, Billal Musah Obeng, Anthony Twumasi Boateng, Elijah Paa	Hepatitis C virus (HCV) infection among patients with sickle cell disease at the Korle-Bu teaching hospital	Greater Accra Region Ghana	Sickle Cell Disease patients	This study sought to determine the prevalence and genotypes of HCV infection in SCD patients	Cross-sectional study n= 141	Twelve (9%) out of the 141 patients were sero-positive for HCV total antibodies. HCV RNA was amplified from 8 (6%) out of the total number of patients' samples.

	Edu-Quansah, Keren Okerebea Attiku, Esinam Agbosu, Augustina Arjarquah, Joseph Humphrey Kofi Bonney Virology Journal (2022) 19(1) PUBMED EMBASE WEB OFSCIENCE CINAHL						One of the 12 sero-positives was HCV RNA positive. Our study recorded 11 (92%) out of the 12 anti-HCV antibodies positive patients who were HCV-RNA negative by PCR
11	Vital Glah Abuku Emmanuel Alote Allotey Maxwell Akonde PLOS ONE 2023 PUBMED EMBASE WEB OFSCIENCE CINAHL	Clinical and laboratory presentation of first-time antenatal care visits of pregnant women in Ghana, a hospital-based study	Volta Region Ghana	Pregnant women	This study therefore presents laboratory and clinical information of pregnant women at their first antenatal visits	Cross sectional retrospective study n=250	The prevalence of HBV, HCV and malaria were 4.4%, 3.6% and 2.4%, respectively.
12	Yvonne A. Nartey, Samuel O. Antwi, Ansumana S. Bockarie, Lindsey Hiebert, Henry Njuguna, John W. Ward, Yaw A. Awuku, Amelie Plymoth, Lewis R. Roberts	Mortality burden due to liver cirrhosis and hepatocellular carcinoma in Ghana; prevalence of risk factors and predictors of poor in-hospital survival	Central Region Ghana	Liver Disease Patients	The objectives of this study were to determine the proportion of liver-related deaths associated with liver cirrhosis, HCC, and their known risk factors, and secondly to determine predictors of in-hospital	Cross-sectional retrospective study n=174	The proportion of liver-related deaths attributed to HBV infection was 48.8% (95% CI: 45.95–51.76), HCV infection was 7.0% (95% CI: 5.58–8.45),

	PLOS ONE (2022) 17(9 September) CINAHL				mortality among cirrhosis and HCC patients in Ghana		HBV-HCV co- infection 0.5% (95% CI: 0.1–0.9) and alcohol was 10.0% (95% CI: 8.30–11.67).
13	Volker F. Cooper P. Bader O. Uy A. Zimmermann O. Lugert R. Gross U. BMC Pregnancy and Childbirth 2017 PUBMED EMBASE WEB OF SCIENCE CINAHL	Prevalence of pregnancy- relevant infections in a rural setting of Ghana	Western Region Ghana	Pregnant women	to determine the prevalence rates of pregnancy-relevant infections which might have an impact on newborn health	Cross-sectional Retrospective single-centre study. n=180	prevalence of hepatitis B virus (16.7% HBs antigen positive). Seroprevalence of hepatitis C virus (1.1% anti-HCV) and HIV (0.6%) were rare.
14	Margaret T. Frempong, Paul Ntiamoah, Max Efui Annani-AkollorID1 *, William K. B. A. Owiredu1 , Otchere Addai-Mensah2 , Eddie-Williams OwireduID1 , Denis Adu-Gyasi3 , Evans Owusu Agyapong4 , Lorraine Sallah5	Hepatitis B and C infections in HIV-1 and non-HIV infected pregnant women in the Brong-Ahafo Region, Ghana	Brong Ahafo Region Ghana	PLHIV	This study was conducted to ascertain the sero- prevalence of HIV/HBV and HIV/HCV coinfections, evaluate the effect of the co-infections on the immunological and virological characteristics and	A comparative cross-sectional study n=248	The sero-prevalence of HIV (+) /HBV --- 14.9% HIV (+) /HCV – 4.1% HIV (-)/HBV – 10.0% HIV (-)/HCV – 12.0%

	2019 PLOS ONE PUBMED WEB OFSCIENCE CINAHL				assess the association between some demographic and lifestyle characteristics and risk of HBV, HCV, HIV/HBV and HIV/HCV co-infections among pregnant women living in the Brong-Ahafo Region of Ghana		
15	Abel Makija Nlankpe, Precious Kwablah Kwadzokpui, David Adedia, Jacob Nabei Nignan, Patrick Kwasi Owiafe BioMed Research International (2021) 2021 PUBMED WEB OFSCIENCE CINAHL	Seroepidemiology of Hepatitis B and C Virus Infections: A Five-Year Retrospective Study among Blood Donors in Saboba District in the Northern Region of Ghana	Northern Region Ghana	Blood donors	This study was aimed at determining the seroprevalence and trend of Hepatitis B and C coinfections among blood donors in Saboba District of the Northern Region of Ghana	five-year hospital-based retrospective study n=8605	The overall prevalence of asymptomatic viral hepatitis B and C infections in the general adult population was 9.59% (95% CI: 9.00-10.20) and 12.71% (95% CI: 12.00-13.40), respectively, HBV/HCV coinfection rate of 2.23% (95% CI: 1.90-2.60)
16	Michael B Yakass, Bryan J Woodward, Mary A Otoo, Edem K Hiadzi	Prevalence of blood borne viruses in IVF: An audit of a fertility centre	Greater Accra	women with Infertility	The aim of this study was to evaluate the prevalence of BBVs in people with infertility attending	A retrospective cohort study	We found prevalence rates of 1.7% (HIV), 7.9% (HBV) and 0.4% (HCV)

	Jornal Brasileiro de Reproducao Assistida (2016) PUBMED EMBASE		Ghana		an IVF clinic and whether or not BBVs impacted on sperm parameters.	n=229	
17	Faustina Pappoe, Charles Kofi Oheneba Hagan, Dorcas Obiri-Yeboah, Paul Nsiah BMC Infectious Diseases (2019) PUBMED WEB OF SCIENCE CINAHL	Sero-prevalence of hepatitis B and C viral infections in Ghanaian HIV positive cohort: A consideration for their health care	Central Region Ghana	PLHIV	The aim of this study was to determine the seroprevalence of HBV and HCV among HIV infected individuals receiving care from three different hospitals in the Central Region of Ghana.	Cross sectional study. n=394	Circulating HBsAg and anti-HCV were detected in 6.1% (24/394) and 0.5% (2/393) participants respectively with an overall seroprevalence of 6.6% (26/394).
18	Carmen de Mendoza, José M. Bautista, Susana Pérez-Benavente, Roger Kwawu, Julius Fobil, Vicente Soriano, Amalia Díez Therapeutic Advances in	Screening for retroviruses and hepatitis viruses using dried blood spots reveals a high prevalence of occult hepatitis B in Ghana	Ghana	Mixed population	This survey is to determine the prevalence of infections with HBV, HCV, HIV-1, HIV-2, HTLV-1 and human T-cell leukaemia virus type 2 (HTLV-2) in Ghana using DBS	Cross sectional study n=305	A high prevalence of chronic HBV (8.5%) and occult hepatitis B (14.2%) was found whereas rates were lower for HIV-1, HTLV-1 and HCV (3.2%, 1.3% and 0.6%, respectively).

	Infectious Disease (2019) 6 1-8 PUBMED						
19	Nsoh Godwin Anabire, William Jackson Tetteh, Dorcas Obiri- Yaboah, Isaac Annan, Arnold Togiwe Luuse, Paul Armah Aryee, Gideon Kofi Helegbe, Oheneba Charles Kofi Hagan, Sabastian Eliason BMC Research Notes (2019) 12(1) PUBMED WEB OFSCIENCE CINAHL	Evaluation of hepatic and kidney dysfunction among newly diagnosed HIV patients with viral hepatitis infection in Cape Coast, Ghana	Central Region Ghana	PLHIV	This study evaluated the prevalence of HBV and HCV, and extent of liver and renal dysfunction among 90 newly diagnosed HIV patients attending the Cape Coast Teaching Hospital HIV clinic.	This was a hospital-based retrospective cross-sectional study. n=90	75.6% (n=68) had HIV1 mono-infection, 24.4% (n=22) had HIV1/HBV co- infection while 0.0% (n=0) had HIV1/HCV co- infection.
20	Chris Guure, Sharren Margaret Obiri- Yeboah Laryea, Samuel Dery, Carlota Baptista da Silva, Comfort Asamoah- Adu, Stephen Ayisi- Addo, Maria-Goretti Loglo, Adamu Mohammed, Kwasi Torpey Interdisciplinary Perspectives on	Behavioural Risk for HIV, Hepatitis B, and Hepatitis C Infections among a Population of Drug Users and Injectors across Four Regions in Ghana	Greater Accra Region Ashanti Region Western Region Northern Region Ghana	PWID & PWUD	The objective of this study was to provide an overview of the prevalence of HIV, HCV, and HBV and their corresponding determinants among a population of drug users and injectors in Ghana.	Cross-sectional study n=323	The prevalence of HIV, HBV, and HCV infection in the study was 2.5%, 4.6%, and 6.0% , respectively. The prevalence of HIV, HBV, and HCV among drug users was 2.5% (95% CI: 0.7%– 4.2%), 4.1% (95% CI: 1.8%– 6.2%), and 6.7% (95% CI: 3.9%– 9.4%), respectively

	Infectious Diseases (2022) 2022 PUBMED EMBASE CINAHL						
21	Lawrence Annison, Henry Hackman, Paulina Franklin Eshun, Sharon Annison, Peter Forson, Samuel Antwi-Baffour PLOS ONE (2022) PUBMED WEB OFSCIENCE	Seroprevalence and effect of HBV and HCV coinfections on the immuno-virologic responses of adult HIV-infected persons on antiretroviral therapy	Greater Accra Ghana	PLHIV	The study sought to determine the seroprevalence of HIV/HBV and HIV/HCV co-infections among HIV patients on antiretroviral therapy and to evaluate the effect of HIV/HBV and HIV/HCV co-infections on the immunologic and virologic responses of patients.	A cross-sectional study n=500	The seroprevalence of HIV/HBV and HIV/HCV co-infections among people living with HIV was 8.4% and 0.2% respectively. 309.9 cell/μL (95% CI 261.9–357.9) respectively
22	Theophilus Benjamin Kwofie, Daniel Adigbli, James Osei-Yeboah, Emmanuel Ativi, Sylvester Yao Lokpo Heliyon (2021) 7(6) PUBMED WEB OFSCIENCE CINAHL	Hepatitis B and C infections in HIV-1 patients on combination antiretroviral therapy (cART) in Ghana: implications for immunologic recovery, clinical response to treatment, and hepatotoxicity	Volta & Oti Regions Ghana	PLHIV	In this study, we sought to determine the prevalence of hepatitis B and C infections and examine the effect on the treatment response in HIV-1 patients attending antiretroviral therapy (ART) centers in the Volta and Oti Regions of Ghana.	A longitudinal study design n=200	The overall HIV-viral hepatitis sero-positivity was 8.5%. HBV and HCV co-infections were 7.0% and 1.5% respectively.

23	Eugene D. Kuugbee , 1 Gloria Maaldu,2,3 Aseta Adamu,2 Nafsa Salia,2 Williams Walana,4 Sylvanus Kampo,1 Ezekiel K. Vicar , 4 and Juventus B. Ziem1 Canadian Journal of Infectious Diseases and Medical Microbiology (2023) 2023 PUBMED EMBASE CINAHL WEB OF SCIENCE	Seroprevalence and Risk Factors of Sexually Transmitted Blood-Borne Infections among Pregnant Women Attending Antenatal Care in Jirapa, Upper West Region of Ghana	Upper West region Ghana	Pregnant women	This study assessed the prevalence, knowledge, and risk factors of STBBIs (HBV, HCV, HIV, and syphilis) among pregnant women attending antenatal clinics in Jirapa.	A cross-sectional study design n=246	57.2% had body scarifications while 23.2% of them had female genital mutilation (FGM) Specifically, the prevalence of the studied infections was 9.8% for HBV and 0.8% each for HCV, HIV, and syphilis HBV coinfection with syphilis 1(0.4%) and with HCV 1(0.4%) was observed
24	Williams Walana, Ezekiel K. Vicar, Isaac Dari, Grace Bichenlib, Christian N. Aneba, Kwasi N. Hinne, Iddrisu B. Yabasin, Koray N. Issaka, Michael O. Danso, Theophilus N. Amoatey, Juventus B. Ziem Health Science Reports (2023)	Transfusion transmissible infections among blood donors in Ghana: A 3-year multicentered health facility- based retrospective study	Ghana Four Regions Oti, Greater Accra, Northern &	Blood donors	To establish the prevalence and the pattern of TTIs, particularly HBV, HCV, HIV, and <i>T. pallidum</i>, in a multicentered manner to guide local and national policy on the prevention and management of TTIs in Ghana	Three (3) year multicentered hospital-based retrospective study n=6094	The overall prevalence of TTIs was 21.0% (1232/5868). The prevalence of HBV infection 6.6%. HCV overall prevalence was 4.9%,

	Google Scholar		Upper West Regions				
25	Sylvester Yao Lokpo Mavis Popuelle Dakorah Gameli Kwame Norgbe James Osei-Yeboah Godwin Adzakupah Isaac Sarsah John Gameli Deku Innocent Afeke Emmanuel Akomanin Asiamah Nana Yaw Barimah Manaphraim Isaac Asare Bright Justice Ayidzoe Emmanuel Alote Allotey Emmanuel Agbeko Nani Paul Amoah Journal of Tropical Medicine (2017) 2017 EMBASE WEB OF SCIENCE CINAHL	The Burden and Trend of Blood-Borne Pathogens among Asymptomatic Adult Population in Akwatia: A Retrospective Study at the St. Dominic Hospital, Ghana	Ghana Eastern Region	Blood donors	This study was aimed at evaluating the seroprevalence and trend of blood-borne pathogens (HIV, HCV, HBV, and Syphilis) among asymptomatic adults at Akwatia during a four-year period (2013–2016).	Four (4) year retrospective study n=11,436	The prevalence of blood-borne pathogens in the donor population was HIV - 4.06% HBV - 7.23% HCV - 5.81% Syphilis - 10.42%
26	Sylvester Yao Lokpo, James Osei-Yeboah, Gameli Kwame Norgbe, Patrick Kwasi Owiafe, Felix Ayroo, Francis Abeku	Viral Hepatitis Endemicity and Trends among an Asymptomatic Adult Population in Ho: A 5-Year Retrospective Study at the	Ghana Volta Region	Blood donors	Using prospective blood donors as a proxy, this study was aimed at estimating the burden and five-year (2012–2016)	A retrospective analysis was done on secondary data extracted from the hospital archives	The prevalence of asymptomatic viral hepatitis (HBV and HCV) infection in the general adult population was 6.94%

	Ussher, Mavis Popuelle Dakorah, John Gameli Deku, Nana Yaw Barimah Manaphraim, Emmanuel Akomanin Asiamah, Tibemponi Ntoni, Prince Senyo Kwasi Nyamadi, Edward Yiadom Boakye, Roseline Avorkliyah Hepatitis Research and Treatment (2017) 2017 1-5 Cinahl Google Scholar	Ho Municipal Hospital, Ghana			trend of viral hepatitis (HBV and HCV) infection among asymptomatic adult population in Ho.	n=4,180 prospective blood donors from January 2012 to December 2016	and 1.84% , respectively.
27	Ampem Darko Jnr Siaw James Amugsi Maame Adwoa Agyeman Owusu- Konadu Samuel Teye Drah Emmanuel Gustav Imbeah Dominic Oduro- Donkor Amoako Duah Yvonne Ayerki Nartey PLOS ONE-2024 PubMed Embase Web of Science Cinahl	Prevalence and risk factors of Hepatitis C virus infection in the Upper East Region of Ghana; a community-based cross-sectional study	Ghana Upper East Region	Mixed population	The aim of this study was to determine the prevalence of, and risk factors associated with hepatitis C virus infection in the Upper East Region located in the northern part of Ghana	A community- based cross- sectional study n= 1,769	The anti-HCV prevalence was 8.4% , with 149 out of 1,769 testing anti-HCV positive.

	Google Scholar						
28	William K Agbozo Bartholomew Dzudzor Eric Nyarko Karen Larrey- Abrahams Roberta N A Mensah · Kenneth Tachi Ghana Medical Journal 2022 PubMed Embase Cinahl Google Scholar	Sociodemographic and medical characteristics of liver cirrhosis deaths in a Ghanaian tertiary hospital	Ghana Greater Accra Region	Patients with Liver Cirrhosis	This study aimed to study the clinical, and laboratory characteristics of cirrhotic patients in a tertiary hospital in Ghana	This was a retrospective study n=247.	The most common etiological factors among the patients were Hepatitis B virus infection (53.8%), alcohol use (31.6%) and Hepatitis C virus infection (4.9%).
29	Felix Osei-Boakye Charles Nkansah Samuel Kwasi Appiah Charles Angnataa Derigubah Kofi Mensah Abraham Azumah Apandago Vida Animah Boateng Obed Gadufia Norsi Dominic Kogh-Nuu Journal of Immunoassay and Immunochemistry 2023	Seroprevalence, trends, and risk factors of hepatitis B and C among family replacement blood donors; a 7-year retrospective study at Sunyani Municipal Hospital, Ghana	Ghana Brong-Ahafo Region	Blood donors	This study determined the seroprevalence, trends, and risk factors of HBV and HCV among family replacement donors	A seven (7) year retrospective study n=6847	The seroprevalences of HBV and HCV were 3.2% and 1.9% , respectively

	PubMed Embase Google Scholar						
30	Yvonne Ayerki Nartey Yaw Asante Awuku Adwoa Agyei-Nkansah Amoako Duah Sally Afua Bampoh Joshua Ayawin Shadrack Osei Asibey Niklas K Björkström Weimin Ye Mary Yeboah Afihene Lewis Rowland Roberts Amelie Plymoth BMC Gastroenterol . 2020 PubMed Google Scholar Web of Science Cinahl	Ambulatory end-stage liver disease in Ghana; patient profile and utility of alpha fetoprotein and aspartate aminotransferase: platelet ratio index	Ghana Greater Accra Region Ashanti Region Central Region	Patients with chronic liver Disease (CLDs)	We aimed to describe clinical characteristics of ESLD from cirrhosis or hepatocellular carcinoma (HCC) and the performance of aspartate aminotransferase (AST)-platelet ratio index (APRI) and alpha fetoprotein (AFP) in Ghana	An observational cross-sectional study in outpatient hepatology clinics at three teaching hospitals in Ghana, West Africa n=575	HBV was found in 69.5% of HCC and 47.2% of cirrhosis cases, and Overall prevalence of HCV is 10.1%
31	Samuel Amoah 1, Andrew Nicholas Yartey 1, Praise Fosu Adjei 2, Margaret Owusu-	HBV Infection Is an Intermediate-Risk Disease, Whereas Anaemia Is a Mild-to-Moderate Public Health Problem in Young Ghanaian	Ghana Central Region	University students	This study determined the 4-year trends of anaemia, hepatitis B virus (HBV), and	Retrospective study	The prevalence of HBV and HCV infections were 5.4% (95% CI:0.0506-0.0567) and 0.9%

	Akyaw 2, Joseph Boachie 2, David Larbi Simpong 2, Patrick Adu 2 2023 PUBMED	Adults: A Four-Year Retrospective Analysis of Students' Medical Records			HCV infections and factors associated with anaemia in young Ghanaian adults	n=21,716	
32	Priscilla Yeboah Hadfield Godwin Adjei Vechey Emmanuel Bansah Morkporkpor Nyahe Nelisiwe Khuzwayo Elvis Enowbeyang Tarkang Journal of the Int. Assoc of Providers of AIDS Care 2024 PubMed Embase Web of Science Cinahl Google Scholar	Transfusion-Transmissible Infections Among Blood Donors in a Regional Hospital in Ghana: A 6-Year Trend Analysis (2017-2022)	Ghana Volta Region	Blood donors	This study determined the trends of transfusion-transmissible infections (TTIs) among blood donors in a regional hospital in Ghana from 2017 to 2022	A retrospective analysis was conducted on 6339 blood donor records. Data were analyzed using STATA version 17.0 at the 0.05 significance level. n=6339	HIV was present in 99 donors (1.6%), HBV in 196 donors (3.1%), HCV in 320 donors (5.0%), and Syphilis in 404 donors (6.4%).
33	Madison A. Adjei G. Agyeman S. Banson C. Nyane B. Arthur R.A. Amoah S. Halm-Lai F. Boadi D. Hagan O.C.K. medRxiv	HBV and HCV prevalence and treatment eligibility assessment at a primary health facility in Ghana.	Ghana Central Region	Mixed population	To determine the prevalence of HBV and HCV in a cohort of patients and to assess the HBV infected for treatment eligibility	A cross-sectional study n= 3358	Prevalence for HBV and HCV was estimated at 4.3% and 1.9% respectively.

	2024						
	EMBASE						
35	Hamid A.-W.M. Oduro-Mensah M. Adase I. Kwadzokpui P.K. Agyemang K.O. Ayivor P. Bonsu K.K. Nanga S. Bawah A.T. Alidu H.W. Agudze I.T. Glover-Meni N. Jamfaru I. Kaba R. Ayamba A.M. Kwofie T.B. Adiku T. Ofori E.K. medRxiv 2022 EMBASE	Haemovigilance and Trends of Transfusion Transmissible Viral Infections among Asymptomatic Population at Akatsi South Municipal in Volta Region of Ghana from 2014 to 2019.	Volta region Ghana	Blood donors	This study assessed the dynamics associated with Blood Donation and TTIs among blood donors at the Akatsi South Municipality in the Volta Region of Ghana.	Six (6) year Retrospective study n=2588	The prevalence of HIV as well as HBV and HCV, was 3.8%, 3.2% and 1.0% respectively.
36	Guure C. Dery S. da Silva C.B. Asamoah-Adu C. Ayisi-Addo S. Diaba K. Loglo M.-G. Mohammed A. Sarpong Y.A. Hanu S. Torpey K. PLOS ONE 2024	Situational assessment and epidemiology of HIV, HBV and HCV among people who use and inject drugs in Ghana	Four (4) Regions: Greater Accra, Ashanti, Western & Northern Ghana	PWUD & PWID	To assess the epidemiology of people living with HIV and viral hepatitis and their access to care	Cross-sectional study design n=323	The prevalence of hepatitis C was 6.0%, and Hepatitis B was 4.5%

	EMBASE WEB OF SCIENCE CINAHL						
37	Nartey Y. Journal of hepatology Conference abstract 2022 EMBASE	Age, gender and region-specific HBsAg and anti-HCV seroprevalence in Ghana: a nationwide hospital based cross-sectional study	Nationwide Ghana	Mixed population	This study aimed to perform an epidemiological assessment of HBV and HCV infection in Ghana to determine age, gender, and region specific seroprevalence. Additionally, it aimed to convene a coalition of local stakeholders for policy development in Ghana.	A nationwide cross-sectional study n=162,000	seroprevalence was 8.90 (95% CI 8.65-9.16%) for HBsAg and 3.39% (95% CI 3.17-3.63) for anti-HCV
39	Nkansah C. Serwaa D. Osei-Boakye F. Owusu-Ampomah R. Journal of Immunoassay and Immunochemistry. 2020 EMBASE CINAHL	Seroprevalence and trend of hepatitides among blood donors in a district hospital in Ghana: a nine-year retrospective, descriptive cross-sectional study.	Ashanti region Ghana	Blood donors	This study aimed to determine the prevalence and trend of hepatitis infections among voluntary blood donors at Nkenkaasu District Hospital.	A retrospective study n=3306	the seroprevalence of hepatitis C infection was 11.7% and hepatitis B infection was 10.3%. Only 1.4% of the donors were co-infected with both pathogens and 82.7% had no infection
40	Amoako Duah Kofi Nyaako Nkrumah Kenneth Tachi Pan African Medical Journal	Oesophageal varices in patients with liver cirrhosis attending a major tertiary hospital in Ghana	Greater Accra region Ghana	Liver disease patients	This study was to determine the prevalence of esophageal varices and its clinical correlate in cirrhotic patients	Cross sectional study n=149	HCV prevalence 6.71%

	2017 CINAHL						
41	Lisa J Messersmith Rose Adjei Jennifer Beard Angela R. Bazzi Joel J. Earlywine Edwin Darko Thomas Agyarko-Poku Mabel Kissiwah Asafo Sherry Adoma Bempah Yaw Adu-Sarkodie Harm Reduction Journal 2021 WEB OFSCIENCE	High levels of used syringe use and unsafe sex among people who inject drugs in Kumasi, Ghana: an urgent call for a comprehensive harm reduction approach	Ashanti region Ghana	PWID	We aimed to learn more about the vulnerability of the PWID population in order to inform much-needed harm reduction interventions.	mixed methods study in Kumasi, n=221	prevalence estimates of 3.0% (HIV), 2.0% (HCV), and 9% (HBV;
42	Ato Kwamena Tetteh Godsway Aglagoh Charles Baffe Sadick Arthur Prince Bram Gifty Rhodalyn Tetteh Edward Agyarko Journal of Microbiology and Infectious Diseases 2020 Google Scholar	A Hepatitis C Sentinel Seroprevalence, Cape Coast, Ghana	Ghana Central Region	Pregnant women	This study determined the seroprevalence of hepatitis C virus (HCV) infection among pregnant women attending antenatal clinic at the Cape Coast Metropolitan Hospital	Cross sectional study n=258	Out of the total, 2.7% (7/258) tested seropositive for HCV antibodies

43	Justice Afrifa Albert Abaka Yawson Sarah V. Bachelie Perditer Okyere Hope Agbodzakey Prince Adoba Yaw A Awuku Richmond Teye Addo Richard K. Dadzie Ephraim Annals of Medical Laboratory Science – Research Gate 2022 Google Scholar	Prevalence of Hepatitis B, C and HIV infections among haemodialysis patients at the Cape Coast Teaching Hospital, Ghana; A retrospective study	Ghana Central Region	Patients with ESKD undergoing haemodialysis	The study investigated the prevalence of HBV, HCV, HIV and identified the determinants of these viral infections among end stage renal disease (ESRD) patients undergoing hemodialysis at the Cape Coast Teaching Hospital (CCTH)	This retrospective study n=89	11(12.4%) were found to be positive for HbsAg, and 6 (6.7%) were found to be positive for HCV infection.
44	Osei Samuel Sarpong; Awuku Albert Kumi Kporxah Maxwell Kwasi; Amon Samuel Ashie Kwadzokpui, Precious Kwablah Google Scholar	Prevalence of HBV and HCV among Pregnant Women Attending Kumasi South Hospital (KSH), Ghana	Ghana Ashanti Region	Pregnant women	This study therefore assessed the seroprevalence of HBV and HCV among pregnant women who received antenatal care services from the Kumasi South Hospital of the Kumasi Metropolis in the Ashanti Region of Ghana	A cross sectional study n=200	Seroprevalence of HBV and HCV infection was 20.0% and 2.5% respectively
45	Amoako Duah, Adwoa Agyei- Nkansah, Foster Osei-Poku, Francisca Duah, Daniel Ampofo-Boobi, Bright Peprah	The Prevalence, Predictors, and In-Hospital Mortality of Hepatic Encephalopathy in Patients with Liver Cirrhosis Admitted at St. Dominic Hospital in Akwatia, Ghana	Ghana Eastern Region	Liver disease patients	This study aimed therefore to determine the prevalence, predictors, and treatment outcomes of patients with liver cirrhosis admitted at	A prospective study n=167	The cause of liver cirrhosis was significant alcohol consumption and hepatitis B virus in 75 (44.9%) and 73 (43.7%) of participants,

	Canadian Journal of Gastroenterology and Hepatology 2020 Google Scholar				St. Dominic Hospital (SDH) in Akwatia, Ghana		respectively. Other causes were hepatitis C virus in 10 (6.0%)
46	Felix Kwame Korang Silas Adjei-Gyamfi Anthony Danso-Appiah Yasuhiko Kamiya BMC Infectious Diseases 2024 Google Scholar	Seroprevalence and risk factors of hepatitis B and C virus infections among street barbers and beauticians: a community-based study in the Eastern hemisphere of Ghana	Ghana Eastern Region	Street barbers and beauticians	This study was conducted to determine the seroprevalence and risk factors associated with HBV and HCV infections among street barbers and beauticians in the Eastern hemisphere of Ghana.	A community-based cross-sectional study n=340	The overall seroprevalence HBV - 9.7% (95% CI = 6.7–13.3%) HCV - 4.7% (95% CI = 2.7–7.5%),
47	Awuah, Maxwell Ahmed, Suleiman Edzeamey Fred Jonathan Wiredu Osei Kwame Sampong Bernard Berko Agyapong Richmond Asare Emmanuel Boakye International Journal of Research and Reports in Hematology 2019 Google Scholar	Trend of Donor Rejection Due to the Incidence of Hepatitis B and C Viruses, Human Immunodeficiency Virus (HIV 1&2) and Treponema pallidum in Ghana: A Retrospective Study	Ghana Ashanti Region	Blood donors	This research sought to determine the annual trend of donor rejection due to the incidence of Hepatitis B Surface Antigen (HBsAg), Hepatitis C Virus (HCV), Human Immunodeficiency Virus (HIV 1&2) and Treponema pallidum (syphilis) among blood donors in Ghana	Four (4) year Retrospective study n=1922	In general, 18.1% (347/1922) tested positive for at least one of the infections, HBV - 5.98% HCV - 2.2% HIV - 2.3% Treponema pallidum - 7.6%
48	Quaye Lawrence Adams Yussif; Dapare Peter Paul M; Bani Simon Bannison Banyeh	Hepatitis B and C Status and Associated Risk Factors among Migrant Female Head Porters [Kayayei] within La-	Ghana	Female head porters (Kayayei)	This study was conducted to determine the knowledge, prevalence and	Cross sectional study n=125.	Prevalence of hepatitis B was 7.2% and

	Moses; Samira Osman International Research Journal of Gastroenterology and Hepatology 2020 Google Scholar	Nkwantanang Madina Municipality, Ghana	Greater Accra Region		associated risk factors of viral hepatitis among migrant female head porters (Kayayei) in La-Nkwantanang Madina municipality of the Greater Accra region, Ghana.		hepatitis C was 6.4% respectively. One (0.8%) person was co-infected with hepatitis B and C virus
49	Solomon Quarshie Sosu Sandra A. Darfour-Oduro Researchsquare.com BMC 2024 Google Scholar	Seroprevalence and Determinants of Transfusion Transmissible Infections among Blood Donors in a Municipality in Ghana; A Three-year Retrospective Study	Ghana Greater Accra Region	Blood donors	The aim of this study was to determine the seroprevalence of transfusion-transmissible infections and associated factors among blood donors in Ashaiman Polyclinic, Ghana.	A three (3) year retrospective study	The prevalence rates were 4.9% for HBsAg, 1.5% for HCV, and 4.0% for syphilis
50	Flavia Adu-poku Eric Agboli Elvis Enowbeyang Tarkang Pan African Medical Journal-Clinical Medicine 2020 Google Scholar	Seroprevalence of transfusion-transmissible infections among blood donors in the Hohoe Municipality Hospital, Ghana: 2015-2016: a retrospective hospital-based cross-sectional study	Ghana Volta Region	Blood donors	This study determined the trends of transfusion-transmissible infections among blood donors in the Hohoe Municipal Hospital, Ghana from 2015 to 2016	Two (2) year Retrospective study n=3,173	seroprevalence of HIV - 3.9% HBV – 5.0% HCV – 4.2% Syphilis – 5.2%
51	Amoako Duah Kofi Nyaako Nkrumah PAMJ	Prevalence and predictors for spontaneous bacterial peritonitis in cirrhotic patients with ascites admitted at medical block in Korle-Bu Teaching Hospital, Ghana	Ghana Greater Accra Region	Patients with liver disease	This study aimed to determine the prevalence of SBP among in-patients with cirrhotic ascites attending our facility	Cross-sectional study n=103	HBV infection was the cause of liver cirrhosis in 53.4%

	2019 Google Scholar				and to determine the clinical and laboratory parameters associated with SBP		HCV infection was the cause in 8.9% of cases
52	Matthew Aidoo Baba Sulemana Mohammed Central African Journal of Public Health 2020 Google Scholar	Distribution and Determinants of Etiologies and Complications of Chronic Liver Diseases Among Patients at a Tertiary Hospital in a Lower Economic Region of Ghana	Ghana Northern Region	Patients with chronic liver disease [CLDs]	To this extent, we intended to investigate the distribution and determinants of the etiologies and complications of CLDs at the Tamale Teaching Hospital, a referral hospital of northern Ghana	Retrospective study n=180	Etiologies of CLDs comprised hepatitis B viral infection (53.3%), hepatitis C viral infection (21.7%)
53	Eda Akyar Nallely Mora Amy Luke Jennifer Layden Richard Phillips Thomas Agyarko Poku Dorcas Owusu Helena A-Siaw Ronald Nahass <i>APHA's 2019 Annual Meeting and Expo</i> Google Scholar	Hepatitis C-HIV Co-Infection and Observed Risk Factors in Kumasi, Ghana	Ghana Ashanti Region	Patients with STI	To determine prevalence of hepatitis c and HIV and associated risk factors	Cross-sectional study n=312	Of the total 312 subjects, 15 were HCV positive (prevalence 4.8%). The prevalence of individuals co-infected with HIV and HCV was 3.5%
54	Osei Tawiah Benedict ir.knust.edu.gh 2016 Google Scholar	Human Immunodeficiency Virus (HIV), Hepatitis B Virus (HBV), Hepatitis C Virus (HCV) and Syphilis Infections among people with psychiatric disorders at the Ankaful Psychiatric Hospital, Ghana	Ghana Central Region	Psychiatric in-patients	This research is the first of its kind in Ghana and seeks to determine the prevalence of HIV, HBV, HCV and Syphilis infections, its related risk	This is a cross-sectional study n=200	The overall prevalence of HIV (5.0%), HBV (9.5%), HCV (2.0%) and

					behaviors among people with psychiatric disorders at the Ankaful psychiatric hospital		Syphilis (13.5%) were recorded.
55	Okyere Kennedy 2016	Prevalence of Hepatitis B and C viral infections among children and adults presenting with hepatic disease at Komfo Anokye Teaching Hospital	Ashanti Region Ghana	Patients with Chronic liver diseases	The present study sought to establish the prevalence of Hepatitis B and C viral infections among children and adults presenting with hepatic disease at Komfo Anokye Teaching Hospital (KATH	Cross-sectional study n=155	Of the 155 patients recruited, 71 were HBsAg positive (45.8%) 18 were anti-HCV positive (11.6%) and 4 were both HBV/HCV coinfectd – (2.5%)
56	Adigbli D. 2016 ir.knust.edu.gh Google Scholar	HIV, HBV and HCV co infected patients' response to highly active antiretroviral therapy in the Volta region of Ghana	Ghana Volta Region	PLHIV	This study sought to determine the treatment outcome of HAART on mono-infected HIV patients and HIV patients co-infected with viral hepatitis and the prevalence of Hepatitis B and/ or C co-infections among HIV patients in the Volta region of Ghana	A two (2) year prospective study n= 200	Among the HIV-1 positive individuals, 14 patients were infected with hepatitis B virus (7.5%), 3 with hepatitis C virus (1.5%) and none triply infected. The overall hepatitis-HIV prevalence was 8.5%
57	Holy A, Sarfo B, Ameme D, Afari E 2024	HIV, HBV, HCV and syphilis infections among blood donors in Koforidua	Ghana Eastern Region	Blood donors	This study determined the prevalence of HIV, HBV, HCV, and syphilis infections	A cross-sectional study	The prevalence rate are as follows: HIV - 4.5%, HBV - 13.1%, HCV - 8.0%

	Journal of interventional Epidemiology and public Health Google Scholar				and co-infections among blood donors in Koforidua, Ghana.	n= 426	Syphilis - 15.3%
59	Baba Sulemana Mohammed, Matthew Aidoo 2020 International Journal of hepatology Google Scholar	Drug Treatment of Patients with Liver Cirrhosis in a Tertiary Hospital in Northern Ghana: Does It Comply with Recommended Guidelines	Ghana Northern Region	Patients with Liver Cirrhosis	The aim of this study was to assess how drug prescribing in patients with liver cirrhosis at the Tamale Teaching Hospital comply with recommendations of pharmacotherapy and safety guidelines	A prospective cross-sectional study n=152	Common etiologies for liver cirrhosis were chronic hepatitis B 80 (52.6%) chronic hepatitis C 30 (19.7%) 12.5% of etiologies were unknown