



## Review Article

# Nephrology Services in Libya, A literature Review

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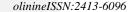
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Chronic kidney disease (CKD) is an on the public impact health issue globally and in Libya as Renal replacement therapy is completely covered by the public health care access to dialysis therapy for all with CKD patients is Health care expand dialysis services terms geographic of coverage with increasing demand [1]. contrast, Attention by the primary health care systems to combat the rising epidemic diseases chronic has been inadequate [2]. Although, there is a lack of local information and no renal registry to gather national data, some studies and works have done looking after number of patients with CKD and the prevalence of the disease. Nationally, the first launched separate dialysis unite in Libya was in Benghazi (AlHawari) 1971, later on the second one was launched in Tripoli (Tajoura) on 1979.

A survey in 2009, found a total of 2417 patients (HD 2382, PD 35) distributed between 41 centers, with 61 nephrologists (nephrologist to patient ratio 1:40),

and 641 nurses (nurse patient ratio 1: 3.7) [3]. Only 8 units dietitians. and had social workers. Half the surveyed 2 units operated shifts day, 27% one shift, 17% three shifts, and one unit operated shifts daily. One hundred ninety-two hemodialysis rooms 713 functioning hemodialysis stations, giving a ratio of machine to 3.4 patients. Separate were allocated chronic viral infection seropositive patients in 92.5% of the units.

The 2007 Ministry of Health annual showed report that 25% of units provided dialysis for 20 patients or Predicted Numbers of **Patients** Akkari et al [4]. Wrote according to Alashek colleagues report, the Libyan dialysis will population continue grow at a rate of 8% per year, from 2417 2009 7667 2024, Peritoneal dialysis populations expected be continue to drop by 5% per annum till with 2014, when re-launch of PD programs, the PD population will grow at 50% per annum





through 2019. The rate of growth will fall to 40% in 2010, and drop by 5% per year until 2024. PD as dialysis modality will account for 1.2% in 2014 and 16% of the total dialysis population by 2024.

# Prevalence and Incidence of CKD in Libya.

Alashek and colleagues reported the results of cross-sectional study of dialysis patients conducted in 2009 in Libya [3].

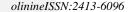
The estimated adult population of during 2009 Libya was 3,873,000, and the total number of CKD patients on dialysis 2417 in 2009, giving a prevalence of dialysis-treated **CKD** approximately 624 per million populations (pmp). The majority of dialysis patients were Libyan nationals (97.8% of prevalent). The prevalence rate varied slightly by region with the highest rate of 628 pmp in North West region, the most populated area the country.

The prevalence of CKD varied considerably with age, the most prevalent patients were under 65 years of age (85%), in the 55-64 year age group at 2475 pmp for males and 2197 pmp females and its low in young adults. majority of patients with CKD in Libya are of economically and CKD active age therefore has a significant impact on families and society. After age 74 years there was a sharp decline in prevalence and very few patients were over 85 Most prevalent patients on dialysis were white ethnicity (87%). However, distribution varied between regions with the highest black white ratio of 1.9 to 1 in the South. The prevalence of dialysistreated CKD was higher among males females at all Overall, males represented 58% of prevalent dialysis population. Female patients tended to males, older than in the South. The incidence rate is 282 varied between pmp. Ιt regions with a higher rate observed in South, and is higher males than females.

The incidence rate increased with age peaked it those aged 65-74 years and decreased beyond age years. Incident female patients were than slightly older male patients. Reasons for the high prevalence rate in Libya might include a high prevalence of CKD in the population and limited access to renal transplantation [5, 6]. explanations Possible these observations include a high mortality rate on dialysis rapidly increasing incidence of CKD.

#### Causes of CKD in Libya:

The risk factors for developing chronic kidney disease (CKD) such as diabetes and hypertension, has a high prevalence





[7]. Moreover, economic and environmental transformation has contributed to people tending to sedentary adopt life [8]. Diabetic kidney disease (26.5 %), glomerulonephritis (21.1 %), hypertensive nephropathy and (14.6)%) congenital/hereditary disease (12.3 %) [9]. Like many other countries diabetic nephropathy was the leading of **CKD** in dialysis populations and was significantly more common among older patients. Glomerulonephritis was the second frequent cause of CKD in Libya in cases and was significantly more common among young and male patients. Reasons for the high prevalence of glomerulonephritis complicated by the shortage of histopathology diagnosis. A substantial proportion of CKD was attributed to hypertension it is unclear what proportion of this hypertension represented secondary to primary renal disease. Congenital and hereditary kidney disease accounted for a significant minority of CKD both prevalent and incident patients. This is likely due to the high rate of close marriages between relatives, especially first cousins, in Arab communities including Libya Limitations [10-12]. incomplete medical records and lack histology difficulties are to confirm the cause of CKD in the

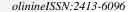
## The Hepatitis Problem:

According to Alashek et al [13] report, third a prevalent patients were either HBV or **HCV** infected (HCV 31.1%, HBV 2.6% both 1.2%). Although the prevalence HBV and HCV infection in this study rather similar to other countries in the region [14], It is only 4.7% concern that of patients were known to be infected with **HBV HCV** before starting dialysis. The reported overall sero-conversion rate 7.7% (HCV 7.1%, HBV 0.6%) during the study period. HBV and infection prevalence varied HCV the surveyed units across from 75.9%, while HCV conversion rates ranged between 1.5-31% during the study period [13]

#### Renal transplantation in Libya:

The transplantation program was 1989. launched on The program resumed its activity again on genetically 2004; and emotionally related living donor is the only available program for organ transplantation in Libya. The most common donorrecipient relationship was brother-tobrother. donor Mean age was 37 +/- 9.5 years (range, 18-56 while the recipient was 37 +/- 13.6 years (range, 7-67 vears). The recipients and the donors were mainly males [15]. Induction immunosuppressions used methylprednisolone and basiliximab, while, maintenance therapy

majority of cases.





with mycophenolate mofetil, cyclosporine, and prednisone. The latter was completely discontinued one month after transplantation [16].

Acute rejections are treated with methylprednisolone or methylprednisolone and

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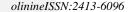
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antithymocyte globulin. Cadaveric transplantations not yet established because of lack of adequate public knowledge and convince about cadaveric donations, and religious concerns [17]. This led to increase and prolong the waiting time.

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