The status of renal disease in Sulaimani city, Kurdistan region, Iraq

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Head of medical department, college of medicine, university of Sulaimani

RESEARCH ARTICLE

Global Prevalence of Chronic Kidney Disease – A Systematic Review and Meta-Analysis

Nathan R. Hill[1]*, Samuel T. Fatoba[1], Jason L. Oke[1], Jennifer A. Hirst[1], Christopher A. O'Callaghan[2], Daniel S. Lasserson[1], F. D. Richard Hobbs[1]

PLOS | ONE

Table 1. Mean prevalence of CKD split by geographical region with 95% Confidence Intervals.

	Stage 1 to 5		Stages 3 to 5	
	N*	Prevalence (%)	N*	Prevalence (%)
S Africa, Senegal, Congo	5,497	8.66 (1.31, 16.01)	1,202	7.60 (6.10, 9.10)
India, Bangladesh	1,000	13.10 (11.01, 15.19)	12,752	6.76 (3.68, 9.85)
Iran	17,911	17.95 (7.37, 28.53)	20,867	11.68 (4.51, 18.84)
Chile	0	NONE	27,894	12.10 (11.72, 12.48)
China, Taiwan, Mongolia	570,187	13.18 (12.07, 14.30)	62,062	10.06 (6.63, 13.49)
Japan, S Korea, Oceania	654,832	13.74 (10.75, 16.72)	298,000	11.73 (5.36, 18.10)
Australia	12,107	14.71 (11.71, 17.71)	896,941	8.14 (4.48, 11.79)
USA, Canada	20,352	15.45 (11.71, 19.20)	1,319,003	14.44 (8.52, 20.36)
Europe	821,902	18.38 (11.57, 25.20)	2,169,183	11.86 (9.93, 13.79)

*N is number of participants in the sample estimate.

doi:10.1371/journal.pone.0158765.t001

Hill NR, Fatoba ST, Oke JL, et al. 2016;11(7):e0158765.

Fast Stats

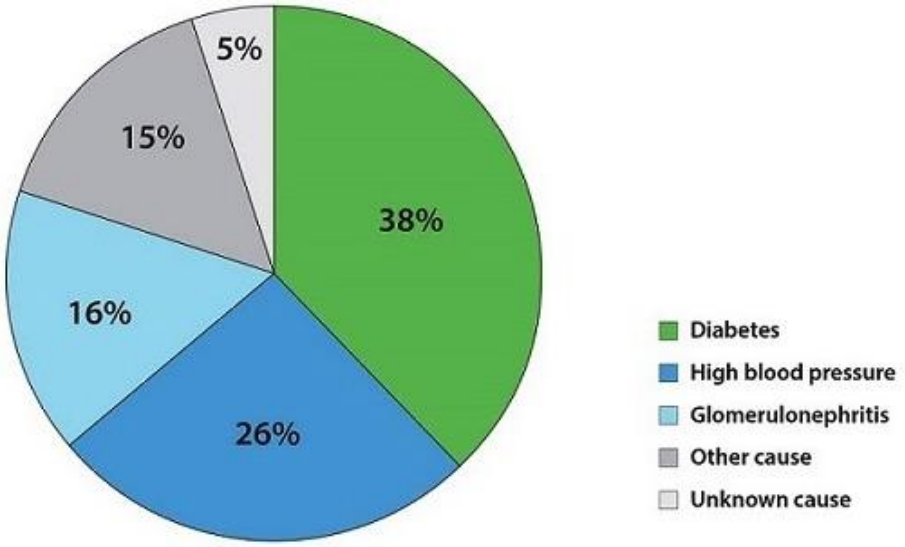
- 15% of US adults—37 million people—are estimated to have CKD.*
- Most (9 in 10) adults with CKD do not know they have it.
- 1 in 2 people with very low kidney function who are not on dialysis do not know they have CKD.

Facts About ESKD

- In 2016, nearly 125,000 people in the United States started treatment for ESKD, and more than 726,000 (2 in every 1,000 people) were on dialysis or were living with a kidney transplant.
- Every day, more than 240 people on dialysis die.
- For every 2 women who develop ESKD, 3 men develop ESKD.
- African Americans are about 3 times more likely than whites to develop ESKD.
- For every 3 non-Hispanics who develop ESKD, 4 Hispanics develop ESKD.
- In US adults aged 18 years or older, diabetes and high blood pressure are the main reported causes of ESKD.
- In US children and adolescents younger than 18 years, polycystic kidney disease and glomerulonephritis (inflammation of the kidneys) are the main causes of ESKD.

Centers for Disease Control and Prevention. Chronic Kidney Disease Surveillance System. Accessed January 7, 2019

Reported Causes of End-stage Kidney Disease in the United States



N=726,331 (all ages, 2016)
Source: US Renal Data System
*Includes polycystic kidney disease, among other causes.

Centers for Disease Control and Prevention. Chronic Kidney Disease Surveillance System. Accessed January 7, 2019

Sex and the incidence and prevalence of kidney replacement therapy (KRT)

CJASN
Clinical Journal of American Society of Nephrology

Methods and Cohort

9 countries reporting to ERA-EDTA 1965-2015

N = 230,378
38% women

Sex distribution data compared to Eurostat

Stratified by age group & diabetes status

Findings

For all KRT modalities
Incidence and prevalence rates were consistently higher in men

Male:female ratios for incident & prevalent KRT
1.2 – 2.4 across age groups

Male:female ratios increased with age consistently across decades and for individual countries

Male:female ratios higher for transplantation especially in patients with diabetes

Conclusions Since the 1960s, fewer women than men have received KRT. The relative difference between men and women initiating and undergoing KRT has remained consistent over the last 5 decades and in all studied countries.

Marlies Antlanger, Marlies Noordzij, Moniek van de Luijtgaarden, et al. ***Sex Differences in Kidney Replacement Therapy Initiation and Maintenance.*** CJASN doi: https://doi.org/10.2215/CJN.04400419. **Visual Abstract by Michelle Lim, MBChB**

nephron
Clinical
Practice

Nephron 2018;139(suppl1):1–12
DOI: 10.1159/000490958

Published online: July 11, 2018

UK Renal Registry 20th Annual Report: Introduction

Katharine Evans, Rhodri Pyart, Retha Steenkamp, Tim Whitlock, Catherine Stannard, Rachel Gair, James McCann, Julie Slevin, James Medcalf, Fergus Caskey

UK Renal Registry, Bristol, UK

Table 1.2. Number of new adult patients starting RRT in the UK in 2016

	England[b]	N Ireland	Scotland[c]	Wales	UK[b]
Number starting RRT	6,599	226	559	375	**7,759**
Total estimated population mid-2016 (millions)[a]	55.3	1.9	5.4	3.1	**65.6**
Incidence rate (pmp)	119	121	103	120	**118**
(95% CI)	(117–122)	(106–137)	(95–112)	(108–133)	**(116–121)**

[a]Data from the Office for National Statistics, National Records of Scotland and the Northern Ireland Statistics and Research Agency – based on the 2011 census

[b]Cambridge was unable to submit patient level data for 2015 or 2016 but provided the UKRR with information allowing their incident numbers for 2015 and 2016 to be estimated. These numbers have been used here and in table 1.4 but not elsewhere in this chapter

[c]The number starting RRT, and hence the RRT incidence rate, published in the Scottish Renal Registry report for the same period is slightly higher at 573 (106 pmp). This is explained by their inclusion of under 18 year olds and other differences in the definition of incident RRT patients between the two registries

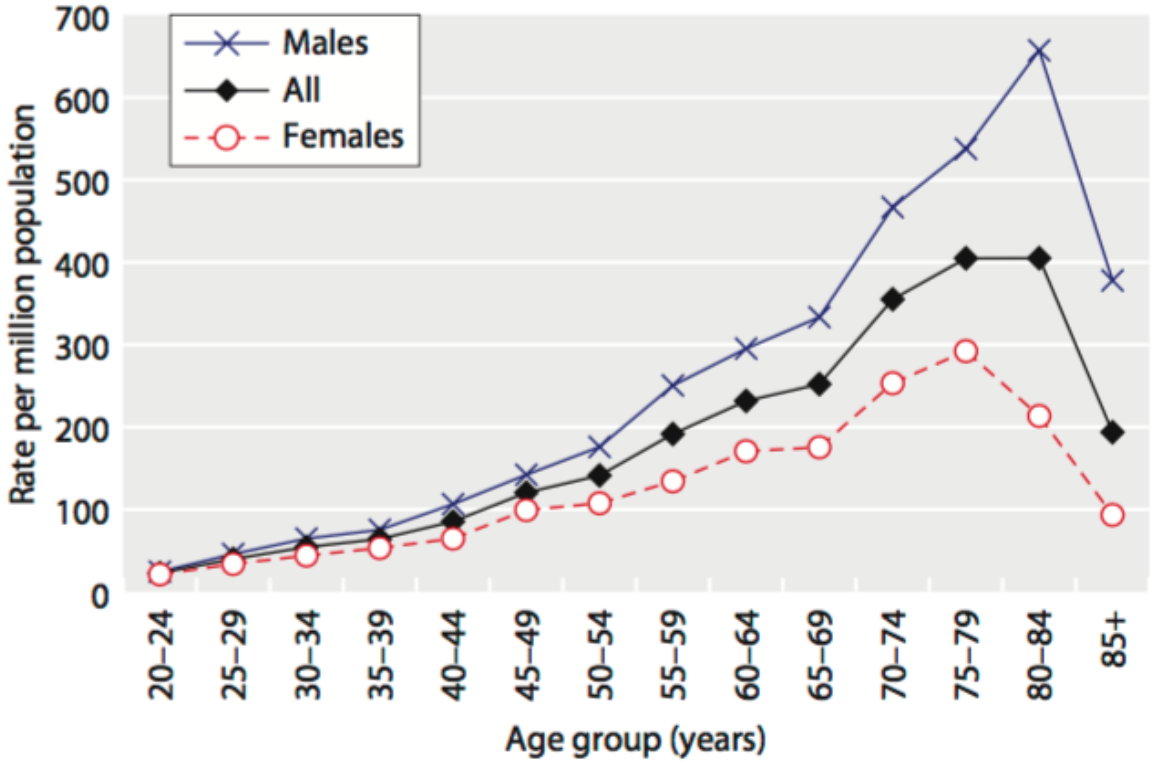


Fig. 1.5. RRT incidence rates in 2016 by age and sex

Table 1.10. Primary renal diagnosis RRT incidence rates (2016) per million population (unadjusted)

Diagnosis	England	N Ireland	Scotland	Wales	UK
Diabetes	30.0	29.5	30.9	30.8	30.1
Glomerulonephritis	13.6	14.0	17.2	19.3	14.2
Pyelonephritis	6.7	8.1	5.4	7.7	6.7
Hypertension	7.3	2.7	3.9	3.5	6.7
Polycystic kidney	7.3	7.5	7.4	8.4	7.3
Renal vascular disease	6.4	9.7	8.5	10.3	6.8
Other	17.9	25.8	17.6	19.3	18.1
Uncertain aetiology	15.7	19.3	10.4	17.3	15.4
Data not available	15.0	4.8	2.2	3.9	13.1
All	**120**	**121**	**103**	**120**	**119**

The overall rates per country may be slightly different to those in table 1.2 as Cambridge (due to missing data) and Colchester (due to high percentage with uncertain aetiology) have been excluded from both the numerator and the denominator here

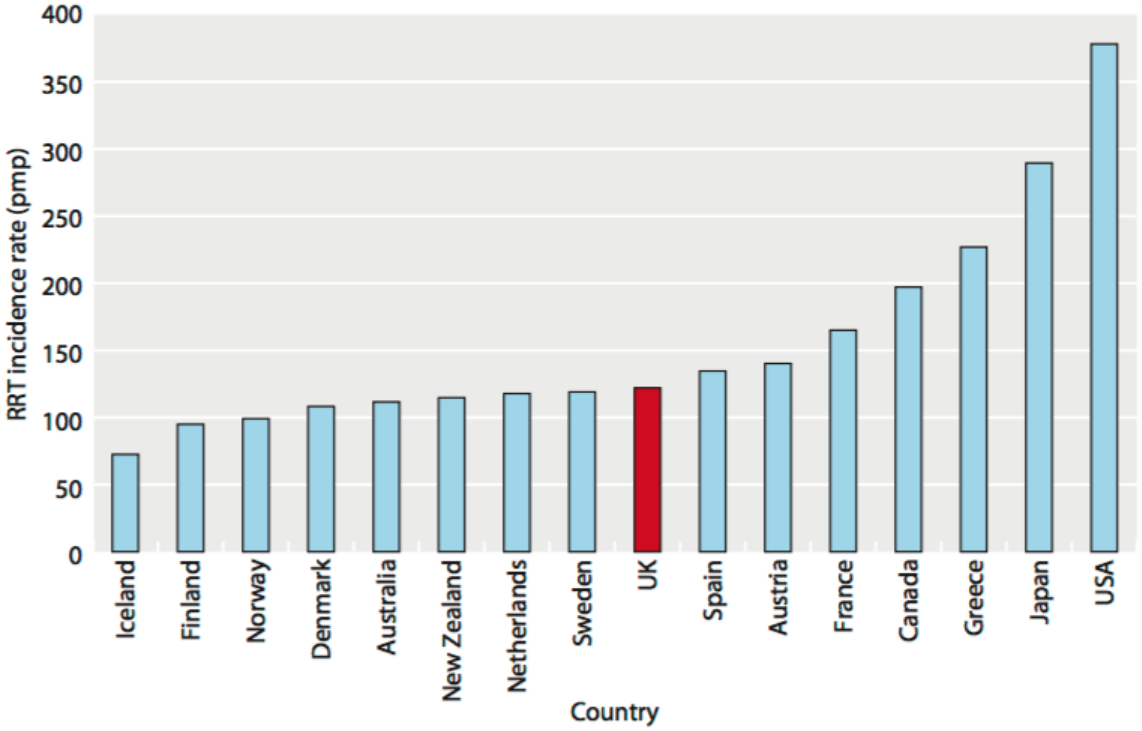


Fig. 1.15. International comparison of RRT incidence rates in 2015
Non-UK data from USRDS [9]

Therapeutic Apheresis and Dialysis

Original Article

Prevalence of Chronic Kidney Disease in Iranian General Population: A Meta-Analysis and Systematic Review

Salehoddin Bouya, Abbas Balouchi, Hosein Rafiemanesh, Mehran Hesaraki

9 studies. Based on the results of the random effect method (95% CI), the overall prevalence of chronic kidney disease in 70 605 people was 15.14% ($I2$ = 99.77%). The prevalence of CKD in female patients (18.80%) was 1.7 times higher than in male patients (10.83)

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Saudi J Kidney Dis Transpl 2014;25(3):697-702

Saudi Journal
of Kidney Diseases
and Transplantation

Renal Data from Asia-Africa

Epidemiology of End-Stage Renal Disease in Iran: A Review Article

Seyed Seifollah Beladi Mousavi[1], Alireza Soleimani[2], Marzieh Beladi Mousavi[3]

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Diabetes and hypertensive nephrosclerosis

BMC Public Health

BioMed Central

Research article

Open Access

High prevalence of chronic kidney disease in Iran: a large population-based study

Farhad Hosseinpanah*[1], Farshad Kasraei[1], Amir A Nassiri[1] and Fereidoun Azizi[2]

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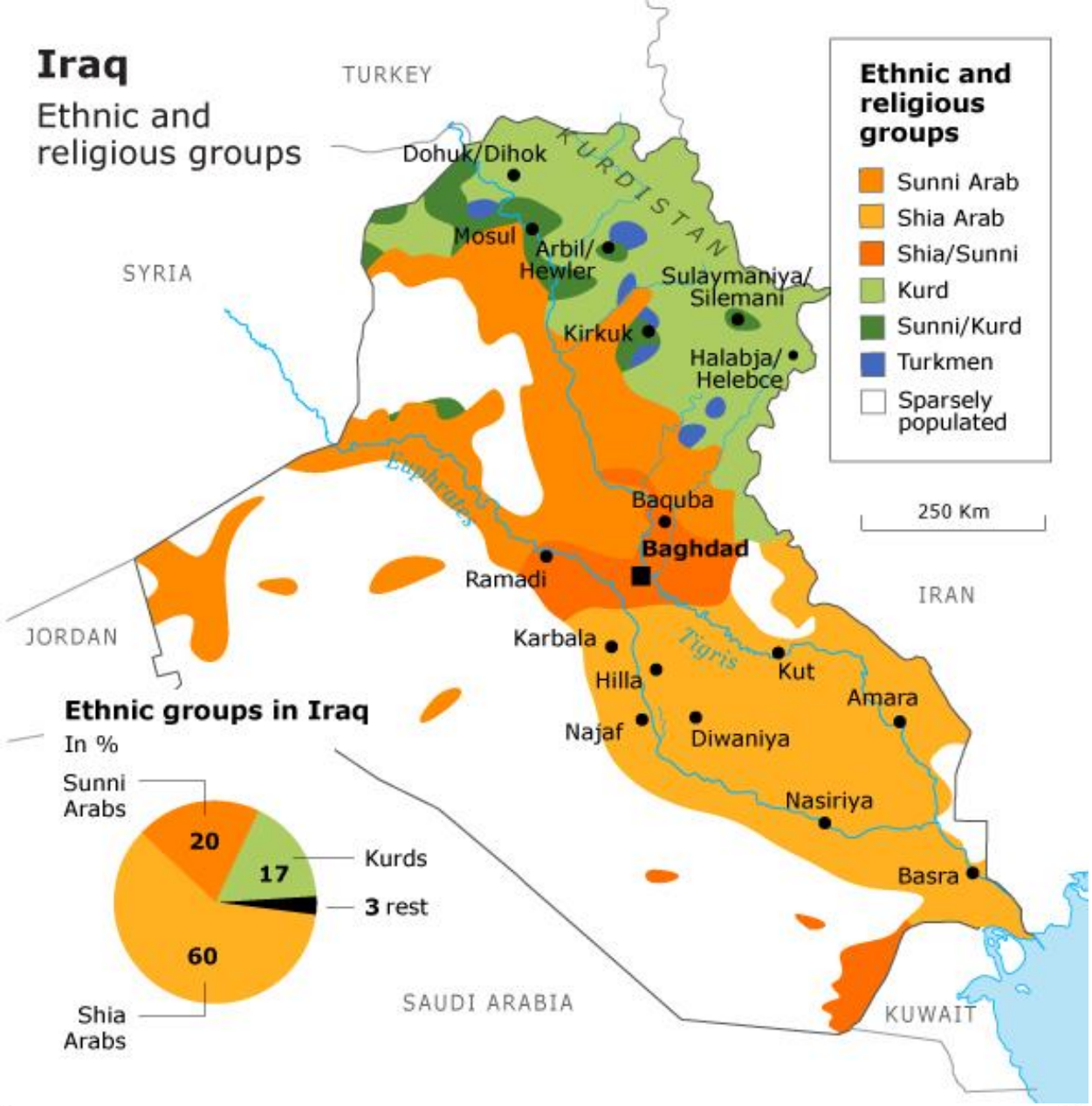
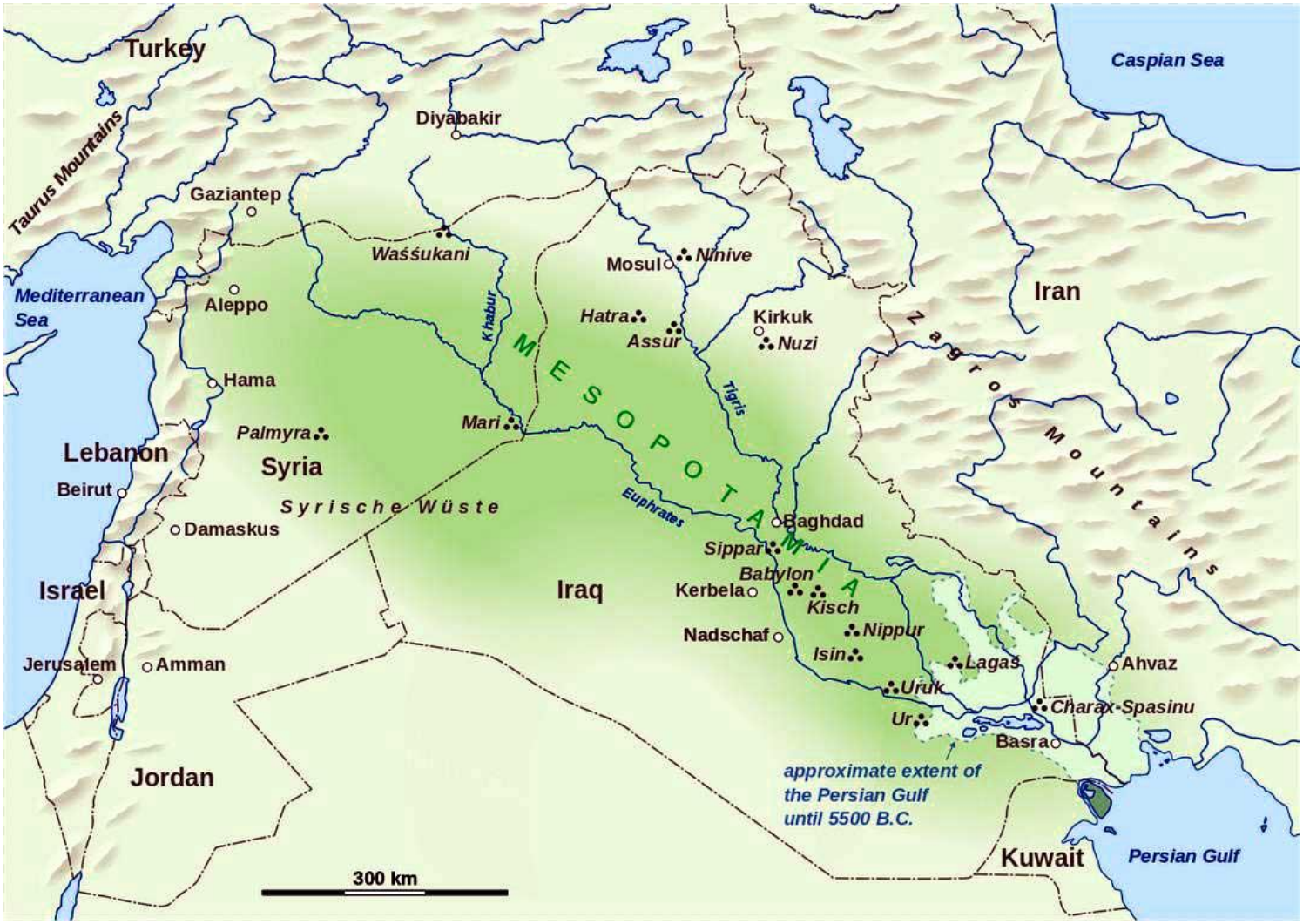

Iraq
Ethnic and religious groups
TURKEY
SYRIA
JORDAN
IRAN
SAUDI ARABIA
KUWAIT
KURDISTAN
Dohuk/Dihok
Mosul
Arbil/ Hewler
Sulaymaniya/ Silemani
Kirkuk
Halabja/ Helebce
Baquba
Baghdad
Ramadi
Karbala
Hilla
Kut
Amara
Najaf
Diwaniya
Nasiriya
Basra
Euphrates
Tigris
Ethnic and religious groups
Sunni Arab
Shia Arab
Shia/Sunni
Kurd
Sunni/Kurd
Turkmen
Sparsely populated
250 Km
Ethnic groups in Iraq
In %
Sunni Arabs
20
Kurds
17
3 rest
60
Shia Arabs


Turkey
Caspian Sea
Taurus Mountains
Diyarbakir
Gaziantep
Waššukani
Mosul
Ninive
Mediterranean Sea
Aleppo
Khabur
Hatra
Assur
Kirkuk
Nuzi
Iran
Zagros Mountains
Hama
MESOPOTAMIA
Tigris
Palmyra
Mari
Lebanon
Syria
Beirut
Syrische Wüste
Euphrates
Damaskus
Baghdad
Sippar
Babylon
Israel
Iraq
Kerbela
Kisch
Nippur
Nadschaf
Isin
Jerusalem
Amman
Lagaš
Ahvaz
Uruk
Charax-Spasinu
Ur
Basra
approximate extent of the Persian Gulf until 5500 B.C.
Jordan
Kuwait
Persian Gulf
300 km

We don’t have renal data registry

Limited Data

Haemodialysis services in Iraq in 2012: situation analysis, epidemiology and infrastructure

Yasir Younis Majeed[1], Faris Hassan Al-Lami[2], Kadhim Baldawi[3], Ala Sh. Ali[4]

Table 1: Frequency, Gender distribution, and Prevalence of patients with ESRD on haemodialysis in all Iraqi provinces, January 2012

Province	Patients No.	Male	Female	Total Population	Prevalence
Baghdad	593	349	244	7046029	84
Ninawa	308	168	140	3258180	95
Basrah	73			2526957	29
Erbil	12(			1609937	75
Sulaymania	1			1875893	89
Dohuk	9			1125260	84
Kirkuk	13			1391647	96
Salah-Eldeen	4(			1400317	29
Diyala	6(			1435641	42
Anbar	8			1553320	55
Babil	121	70	51	1811123	67
Wasit	86	46	40	1205512	71
Karbalaa	135	80	55	1062934	127
Najaf	87	51	36	1281763	68
Diwaniya	172	101	71	1129295	152
Missan	40	30	10	968801	41
Al-Muthanna	92	57	35	714991	129
Thi-qar	38	23	15	1829284	21
Total	2445	1375	1070	33226884	74

33 millions

2445 patients

36 HD units

74 pmp

Iraqi New Medical Journal July 2018;4(8)

Haemodialysis services in Iraq in 2012: situation analysis, epidemiology and infrastructure

Yasir Younis Majeed[1], Faris Hassan Al-Lami[2], Kadhim Baldawi[3], Ala Sh. Ali[4]

Table 2: Haemodialysis Units (HU), Haemodialysis Machine: Population ratio and Patients: Haemodialysis Machines Ratio in all Iraqi provinces, January 2012

Province	Population	HD Units	Machines	HD units/ Pop	HD machines/Pop	Patients/Machine
Baghdad	7046029	10	192	1.42:1000000	27.25:1000000	3.09:1
Ninawa	3258180	2	46	0.61:1000000	14.12:1000000	6.70:1
Basrah	2526957	1	25	0.40:1000000	9.89:1000000	2.92:1
Erbil	1609937	1	28	0.62:1000000	17.39:1000000	4.29:1
Sulaymania	1875893	5	35	2.67:1000000	18.66:1000000	4.77:1
Dohuk	1125260	3	38	2.67:1000000	33.77:1000000	2.50:1
Kirkuk	13916	1	12	0.72:1000000	8.62:1000000	11.08:1
Salah-Eldeen	1400317	1	25	0.71:1000000	17.85:1000000	1.60:1
Diyala	435641	1	13	0.70:1000000	9.06:1000000	4.62:1
Anbar	1553320	2	20	1.29:1000000	12.88:1000000	4.25:1
Babil	1811123	1	15	0.55:1000000	8.28:1000000	8.07:1
Wasit	1205512	1	13	0.83:1000000	10.78:1000000	6.62:1
Karbalaa	1062934	1	18	0.94:1000000	16.93:1000000	7.50:1
Najaf	1281763	2	29	1.56:1000000	22.63:1000000	3.00:1
Diwaniya	1129295	1	20	0.89:1000000	17.71:1000000	8.60:1
Missan	968801	1	11	1.03:1000000	11.35:1000000	3.64:1
Al-Muthanna	714991	1	11	1.40:1000000	15.38:1000000	8.36:1
Thi-qar	1829284	1	6	0.55:1000000	3.28:1000000	6.33:1
Total	33226884	36	557	1.08:1000000	16.76:1000000	4.39:1

Iraqi New Medical Journal July 2018;4(8)

Haemodialysis services in Iraq in 2012: situation analysis, epidemiology and infrastructure

Yasir Younis Majeed[1], Faris Hassan Al-Lami[2], Kadhim Baldawi[3], Ala Sh. Ali[4]

Table 5: The prevalence of ESRD in Iraq compared to different communities for the years 2008-2010

Country	ESRD Prevalence PMP
Iraq	74*
Jordan	456 (2010)[11]
Saudi Arabia	498 (2010)[12]
Turkey	765 (2008)[13]
Malaysia	812 (2010)[14]
Egypt	483 (2008)[15]
The United Kingdom	354 (2009)[16]

* It represents number of with ESRD on regular dialysis and not the total patients with ESRD

Iraqi New Medical Journal July 2018;4(8)

Haemodialysis services in Iraq in 2012: situation analysis, epidemiology and infrastructure

Yasir Younis Majeed[1], Faris Hassan Al-Lami[2], Kadhim Baldawi[3], Ala Sh. Ali[4]

Table 6: Haemodialysis unit and Haemodialysis machines to population ration in Iraq and neighbouring countries

Country	Haemodialysis Unit: Population Ratio	Haemodialysis Machines: Population Ratio
Iraq	1.08:1000000	12:100000
Jordan	12:1000000 [11]	124: 1000000
Saudi Arabia	7: 1000000 [12]	177: 1000000
Turkey	11: 1000000 [13]	202: 1000000
Iran	4.24:1000000 [20]	305:100000

Iraqi New Medical Journal July 2018;4(8)

MOH Data

- ? 21 000 CKD patients
- 5000 patients on HD
- 131 pmp
- 1000 HD machines (5 patients/machine)
- No peritoneal dialysis
- Transplant rate of 16.6 pmp


TURKEY
Hakkari
Urmia
Lake Urmia
Cizre
Silopi
Zakho
SYRIA
Duhok
Amadia
Mosul
Nineveh
Arbil
Rewanduz
Mahabad
Koy Sanjak
Dokkan Dam
Sardasht
IRAN
Greater Zab R.
Lesser Zab R.
Kirkuk
Sulaimania
Marivan
Halabja
Pawa
Tigris R.
Klar
Kifri
Qasri Shirin
Khanaqin
Shahabad
Lake Tharthar
Euphrates R.
Awi Spi R.

Demographic and Characteristic Distribution of End Stage Renal Failure in Sulaimani Governorate, Kurdistan Region, Iraq

Dana A Sharif[1], Alaa H Awn[2*], Kosar M Murad[3], Ibrahim M A Meran[4]

Table 1: Prevalence of ESRD patients in Sulaimani governorate.

Place	Total no. of Population	Number of patients	Total prevalence %	Dialysis center	Number of patients
Sulaimani	854541	169	0.02	Qirga	104
				Shar	58
				Shorsh	7
Halabja	104540	9	0.008		
Kalar	191485	17	0.009		
Ranya	223227	25	0.01		
Said-Sadiq	83764	7	0.008		
Total	1,457,557	227	0.01%		

155 pmp

Table 4: Renal failure causes in dialysis patients.

Causes of renal failure	No.	%
Diabetes	53	23.35
Hypertension	41	18
Urological cause	32	14
Glomerular disease	28	12.33
Inherited	16	7.22
Others	15	6.6
Unknown	42	18.5
Total	227	100.0

Ali *et al. BMC Nephrology* (2018) 19:257
https://doi.org/10.1186/s12882-018-1062-7

BMC Nephrology

RESEARCH ARTICLE Open Access

Incidence of glomerulonephritis and non-diabetic end-stage renal disease in a developing middle-east region near armed conflict

Alaa A Ali[1], Dana A Sharif[2], Safa E Almukhtar[3], Kais Hasan Abd[4], Zana Sidiq M Saleem[4] and Michael D Hughson[1*]

Table 1

2012–2013 renal biopsy diagnoses. Sub-types of diseases are listed

Diagnosis	n	Male	Age (years)	Subtypes (n)
MCD	82	58%	21.5 ± 15.8	IgMN(2), FGGS(4)
FSGS	135	53%	27.3 ± 17.6	Collapsing(2)
MGN	71	46%	37.1 ± 15.0	
SLE	51	16%	30.5 ± 11.8	Class I (3), II(3), III(9), IV(23), V(10), VI(3)
IGAN	28	61%	29.5 ± 17.0	Haas class I(3), II(8), III(7), IV(3), V(3), HSP(4)
Crescentic GN	26	54%	37.1 ± 19.8	Pauci-immune(21); crescentic class(6), mixed class(8), sclerotic class(7). AGBMD(2), ICD(3)
MPGN	12	75%	37.8 ± 20.3	Type 1(11), type2(0), cryoglobulinemia-associated(1)
PSGN	10	80%	18.0 ± 19.5	
Other GN	18	56%	29.9 ± 14.4	MePGN(13), C1qN(2), fibril GN(1), diffuse mesangial sclerosis(1) Obesity-associated glomerulomegaly(1)
CGN-NOS	24	71%	27.2 ± 14.0	
HUS	9	55%	29.0 ± 20.5	D+ (3), APL(1), PP(2)
TIN	46	55%	32.9 ± 20.4	acute pyelonephritis(6)
arteriolosclerosis	52	48%	49.6 ± 15.2	
Amyloidosis AL	2	40%	55.5 ± 0.7	Myeloma(2)
Amyloidosis AA	19	40%	40.2 ± 23.4	RA(4), JRA(3), arthritis(2), SLE (1), FMF(1), asthma(1), bronchiectasis(3), unknown(4).
Myeloma kidney	4	50%	59.3 ± 7.7	
Diabetes	5	40%	47.0 ± 6.4	
Other non-glomerular	28	46%	29.7 ± 14.7	Acute kidney injury(14),basement membrane disease(2) CKD NOS (10), Fabry's(1), scleroderma(1)

Characteristic of CKD in Sulaimani city

- Unpublished data
- Observational case series study
- Sept 2018- March 2019
- 192 patients CKD

Characteristics of the patients

	No.	(%)
Age		
< 18	22	(11.5)
18-64	113	(58.9)
≥ 65	57	(29.7)
Gender		
Male	100	(52.1)
Female	92	(47.9)
Residency		
Rural	64	(33.3)
Urban	128	(66.7)
SES		
Low	127	(66.1)
Medium	61	(31.8)
High	4	(2.1)
Total	192	(100.0)

Table

Established cause of CKD	No.	(%)
DM type II†	37	(19.3)
Hypertension	28	(14.6)
Unknown	25	(13.0)
Focal segmental glomerulosclerosis	15	(7.8)
Polycystic kidney disease	13	(6.8)
DM type I†	8	(4.2)
Congenital bilateral vesicoureteric reflux nephropathy	7	(3.6)
Minimal change disease	7	(3.6)
IgA nephropathy	6	(3.1)
membranous nephropathy	6	(3.1)
Unilateral renal artery stenosis	5	(2.6)
Cardio-renal syndrome type I	4	(2.1)
Cardio-renal syndrome type II	4	(2.1)
Systemic lupus erythematosus	4	(2.1)
membranous nephropathy + focal segmental glomerulo sclerosis	3	(1.6)
Congenital bilateral kidney dysplasia	2	(1.0)
neurogenic bladder	2	(1.0)
Prolonged use of NSAID	2	(1.0)
Cystinosis	2	(1.0)
Acute kidney injury-postrenal due to bilateral obstructive uropathy by stones	2	(1.0)
Mesangioproliferative glomerulo nephritis	1	(0.5)
Bilateral renal artery stenosis	1	(0.5)
Liver cirrhosis	1	(0.5)
Gout	1	(0.5)
Acute kidney injury-postrenal due to CA prostate metastasized to the bladder	1	(0.5)
Acute kidney injury-intrinsic cause due to rabdomyolysis	1	(0.5)
Acute kidney injury-prerenal cause due to bleeding	1	(0.5)
Acute kidney injury-postrenal due to bilateral obstructive uropathy by BPH	1	(0.5)
IgA nephropathy + focal crescentric glomerulo nephritis	1	(0.5)
Acute kidney injury-postrenal due to bilateral obstructive uropathy by retroperitoneal fibrosis	1	(0.5)
Total	192	(100.0)

†Diabetic nephropathy (23.5%)

Stages of CKD at time of the study	No.	(%)
Stage 1	5	(2.7)
Stage 2	20	(10.8)
Stage 3a	15	(8.1)
Stage 3b	33	(17.7)
Stage 4	71	(38.2)
Stage 5	42	(22.6)
Total	186*	(100.0)

Table 4. Types of glomerular diseases as diagnosed by renal biopsy

	No.	%
Focal segmental glomerulosclerosis	15	29.4
Minimal change disease	7	13.7
IgA nephropathy	6	11.8
Membranous nephropathy	6	11.8
Proliferative arteriolonephrosclerosis	5	9.8
Lupus nephritis	4	7.8
Membranous + focal segmental glomerulosclerosis	3	5.9
Chronic tubulointerstitial nephritis	3	5.9
Mesangioproliferative glomerulonephritis	1	2.0
IgA nephropathy + focal crescentric GN	1	2.0
Total	51	100.0

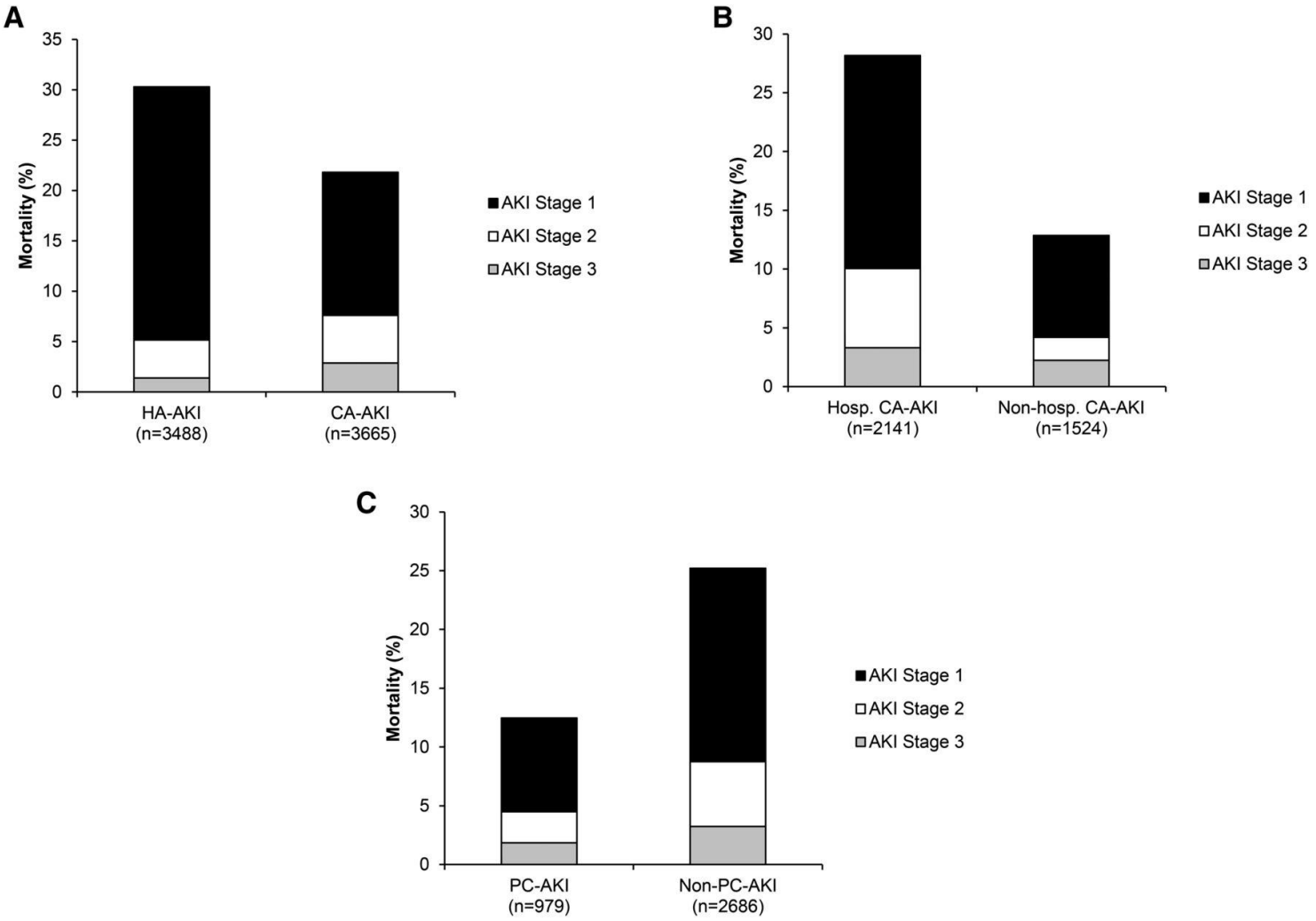
What about the incidence of AKI?

CJASN Clinical Journal of American Society of Nephrology

Acute Kidney Injury in the Era of the AKI E-Alert

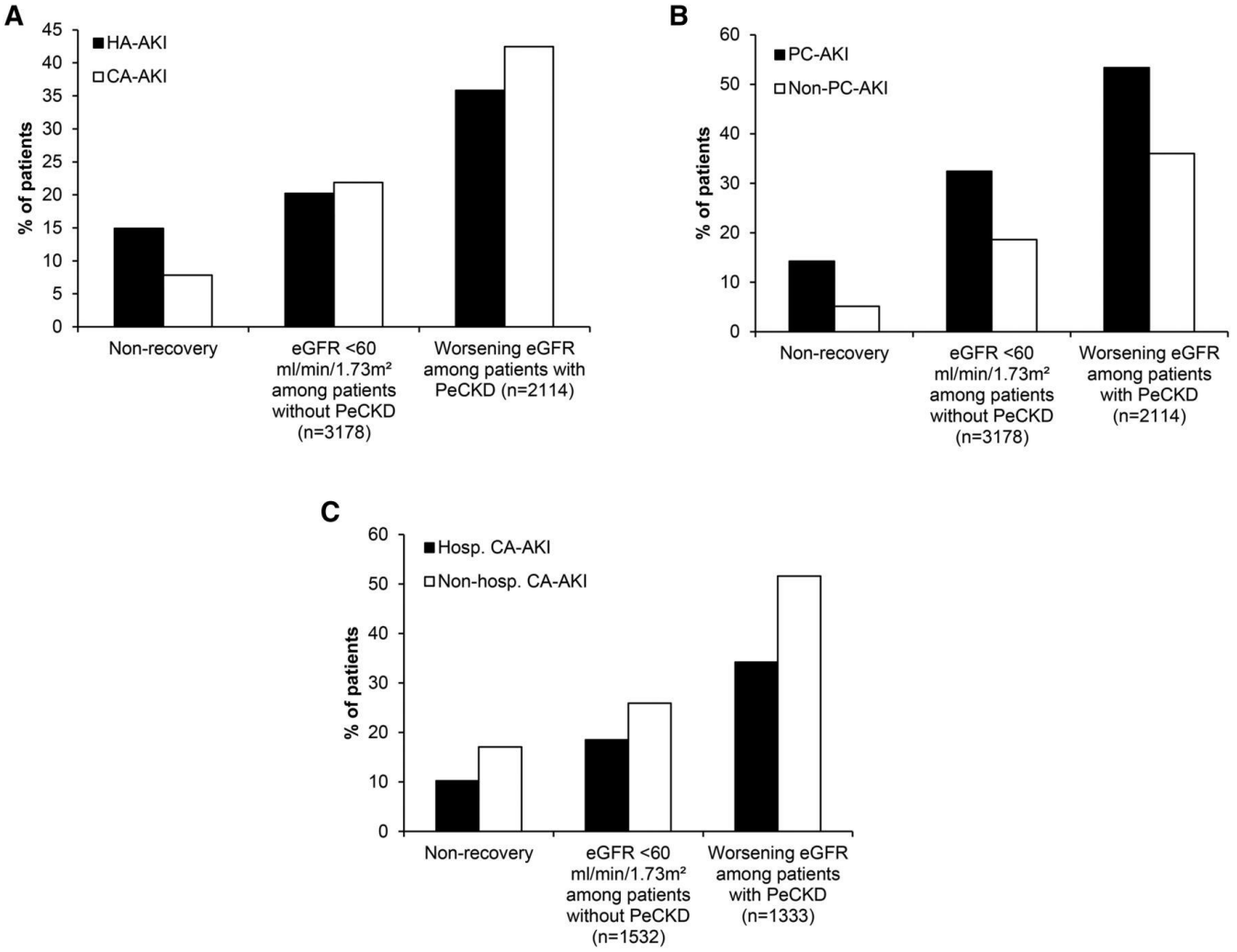
Jennifer Holmes, Timothy Rainer,† John Geen,‡§ Gethin Roberts,‖ Kate May,* Nick Wilson,* John D. Williams,¶ and Aled O. Phillips,¶ on behalf of the Welsh AKI Steering Group*

Differing ninety-day mortality rates associated with incident AKI electronic alerts for clinical location of AKI subsets.



Jennifer Holmes et al. CJASN 2016;11:2123-2131

Differing renal outcomes associated with AKI electronic alerts for clinical location of AKI subsets.



Jennifer Holmes et al. CJASN 2016;11:2123-2131

Neugarten *et al. BMC Nephrology* (2018) 19:131
https://doi.org/10.1186/s12882-018-0937-y

BMC Nephrology

RESEARCH ARTICLE Open Access

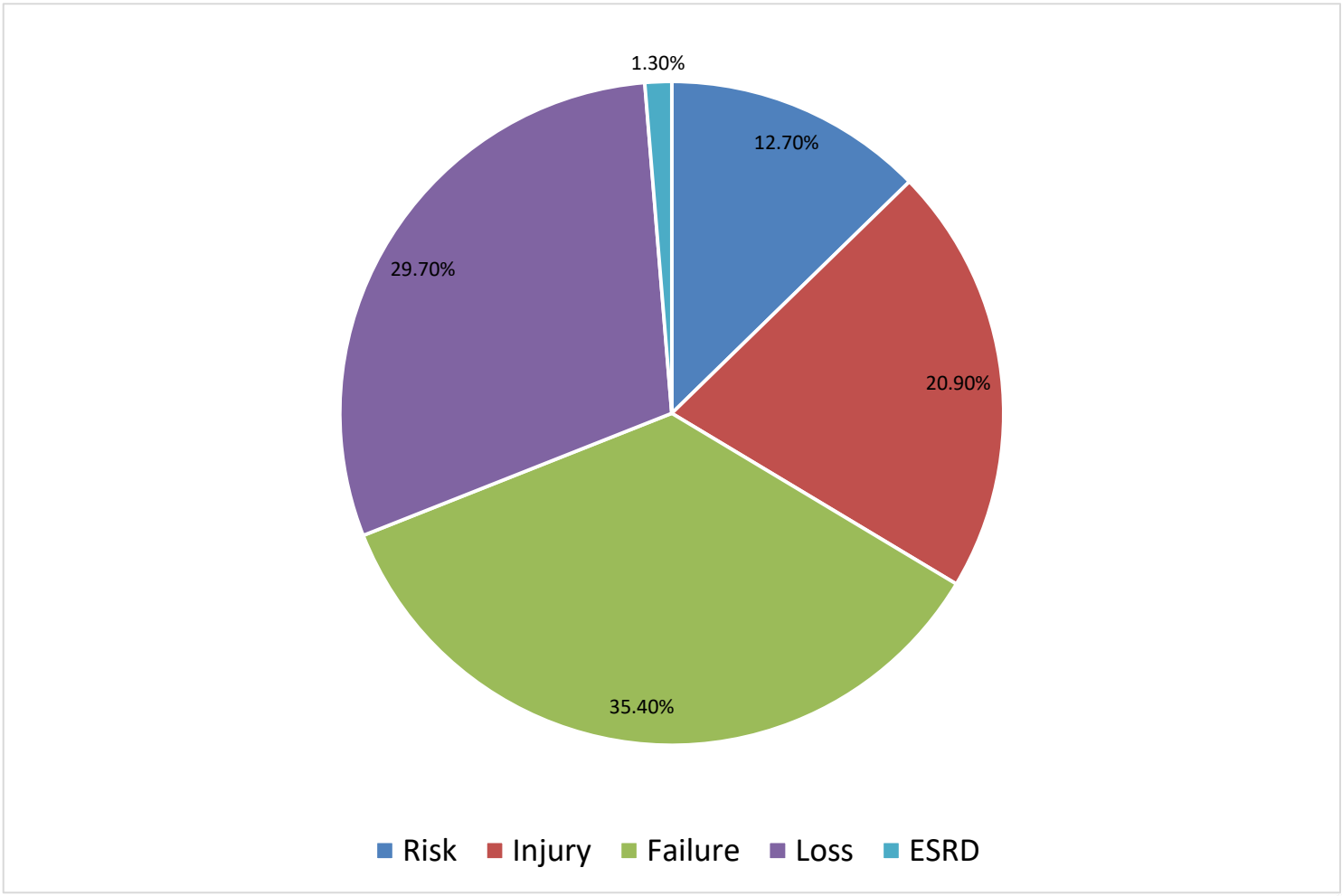
Sex differences in acute kidney injury requiring dialysis

Joel Neugarten[1*], Ladan Golestaneh[1] and Nitin V. Kolhe[2]

AKI in Sulaimani city

- A prospective observational study
- April to Oct 2019
- 158 patients had AKI (316/year)
- Male to female ratio 1.3:1
- Incidence 225 pmp

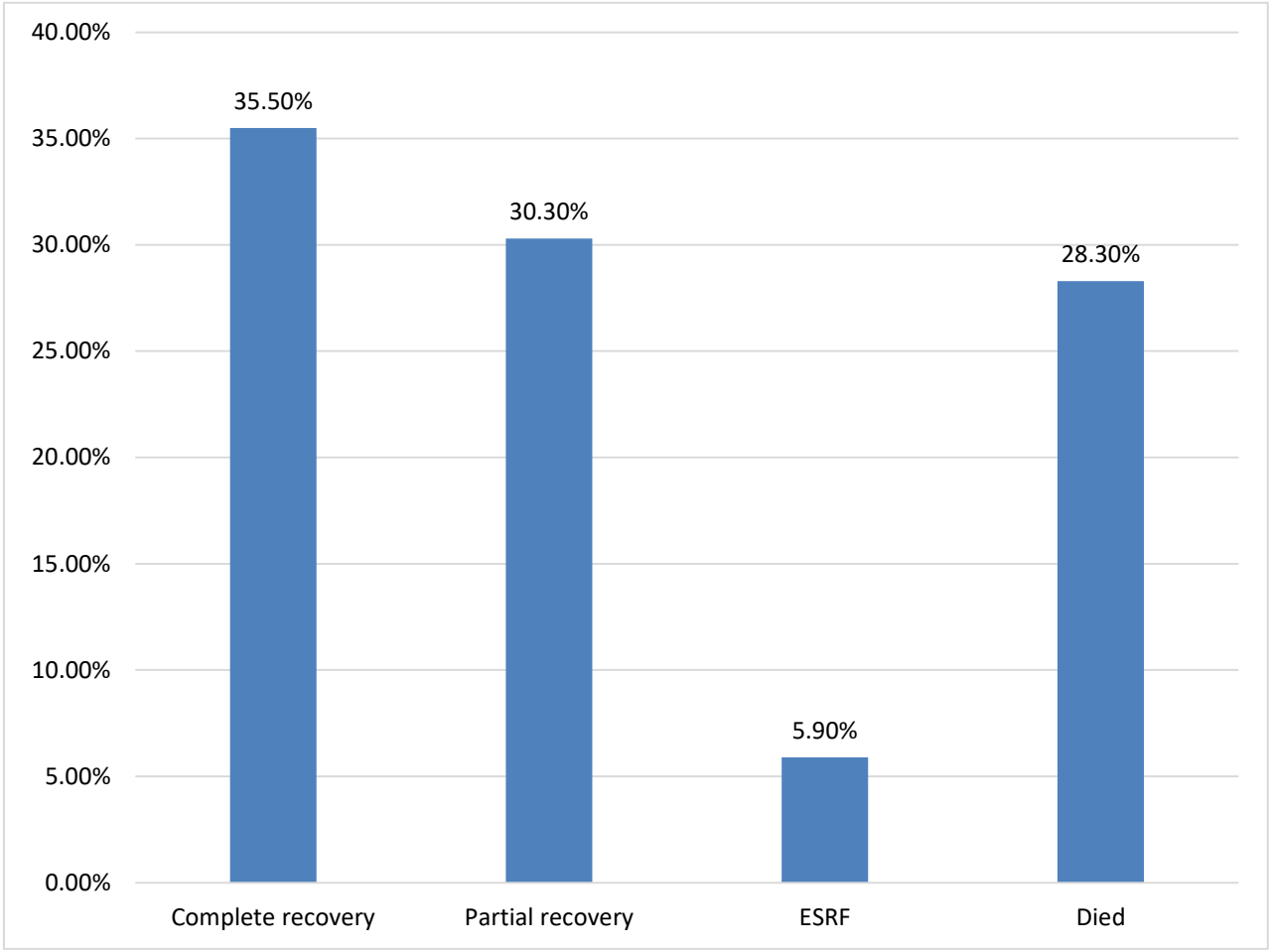
Renal failure	Frequency (%)
Prerenal	108(68.8)
Renal	22(14)
Postrenal	25(15.9)
Renal & post renal	2(1.3)


1.30%
12.70%
29.70%
20.90%
35.40%
Risk
Injury
Failure
Loss
ESRD

Causes of AKI (unpublished data)

Causes of renal failure	N (%)
ATN (ischemic)	55(43.5)
Obstructive	22(17.5)
Acute on chronic disease	11(8.7)
Rhabdomylsis	8(6.3)
Drug induce	6(4.8)
Contrast induce	4(3.2)
Sepsis induce	4(3.2)
HUS+TTP	2(1.6)
HELLP syndrome	2(1.6)
Glomerelonephritis	2(1.6)
Cardiorenal	2(1.6)
Hepatorenal syndrome	2(1.6)
SLE nephtritis	1(0.8)
TMA	1(0.8)
Multiorgan failure	1(0.8)
Tumor lysis syndrome	1(0.8)
pyelonephritis	1(0.8)
Viral infection	1(0.8)

Outcome


40.00%
35.00%
30.00%
25.00%
20.00%
15.00%
10.00%
5.00%
0.00%
35.50%
30.30%
5.90%
28.30%
Complete recovery
Partial recovery
ESRF
Died

Summary

- CKD accounts for 13-15% of general population
- Many patients do not know they have CKD or ESKD
- CKD is common in women but more men gets ESKD
- Diabetes and hypertension are the commonest cause world wide
- There is an increasing incidence of CKD

SHAR teaching hospital


Information
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