Web-appendices

Web-appendix table 1. CKD management recommendations provided by the interdisciplinary CKD-guideline for primary care and nephrology.

	Annual monitoring of disease progression				Annual monitoring of metabolic parameters					
	eGFR	albumin urine	fasting glucose	blood pressure	hemoglobin	calcium	phosphate	PTH	serum albumin	potassium
Patients ≥ 65 years										
eGFR ≥ 60 and microalbuminuria	●	●	●	●						
eGFR 45 – 60 and normo- or micro-albuminuria	●	●	●	●						
eGFR 30 – 45 and normo- or micro-albuminuria	●	●	●	●	●	●	●	●	●	●
eGFR < 30 and normo- or micro-albuminuria	●	●	●	●	●	●	●	●	●	●
eGFR any and macroalbuminuria	●	●	●	●	●	●	●	●	●	●
Patients < 65 years										
eGFR ≥ 60 and microalbuminuria	●	●	●	●						

eGFR 45 – 60 and normo- or micro-albuminuria	●	●	●	●	●	●	●	●	●	●
eGFR 30 – 45 and normo- or micro-albuminuria	●	●	●	●	●	●	●	●	●	●
eGFR < 30 and normo- or micro-albuminuria	●	●	●	●	●	●	●	●	●	●
eGFR any and macroalbuminuria	●	●	●	●	●	●	●	●	●	●

'primary care group': treatment in primary care. 'consultation group': consultation of a nephrologist without referral. 'referral group': referral to secondary care. eGFR in ml/min/1.73m^2

Web-appendix table 2. Practice characteristics

Practice type	N
Solo practice	6
Duo practice	16
Group practice	25
Vocational training practice	30
Rural location	15
General Practice Information System	
Medicom	25
Micro-HIS	6
MIRA	6
Promedico ASP	8
Promedico VDF	2

Web-appendix table 3a. Classification of included CDK patients <u>with</u> diabetes under care of their GP using the interdisciplinary CKD-guideline for primary care and nephrology.

	Albuminuria			
	Not known	Normal	Microalbuminuria	Macroalbuminuria
Patients ≥ 65 years (*n* = 2.164)				
eGFR ≥ 60			559	44
eGFR 45 – 60	133	690	253	27
eGFR 30 – 45	76	214	127	14
eGFR < 30	6	9	10	2
Patients < 65 years (*n* = 729)				
eGFR ≥ 60			418	22
eGFR 45 – 60	46	186	31	4
eGFR 30 – 45	5	8	6	2
eGFR < 30	1	0	0	0

Classification of patients based on renal function, albuminuria and age. 'primary care group' n=2.053: treatment in primary care. 'consultation group' n=680: consultation of a nephrologist without referral. 'referral group' n=160: referral to secondary care. eGFR in ml/min/1.73m^2

Web-appendix table 3b. Classification of included CKD patients <u>without</u> diabetes under care of their GP using the interdisciplinary CKD-guideline for primary care and nephrology.

	Albuminuria			
	Not known	Normal	Microalbuminuria	Macroalbuminuria
Patients ≥ 65 years (*n* = 4.281)				
eGFR ≥ 60			333	11
eGFR 45 – 60	1950	941	158	7
eGFR 30 – 45	533	221	64	7
eGFR < 30	46	5	3	2
Patients < 65 years (*n* = 1.620)				
eGFR ≥ 60			275	10
eGFR 45 – 60	817	428	37	3
eGFR 30 – 45	31	12	1	0
eGFR < 30	2	2	1	1

Classification of patients based on renal function, albuminuria and age. 'primary care group' n=3.657: treatment in primary care. 'consultation group' n=2.100: consultation of a nephrologist without referral. 'referral group' n=144: referral to secondary care. eGFR in ml/min/1.73m^2

Web-appendix table 4a. Performance on process- and outcome indicators for CKD patients <u>with</u> diabetes, within 15 months prior to data extraction.

Patient group	N	Monitoring of disease progression						Monitoring of metabolic complications								Recog-nition	Blood pressure targets[*]	
		renal function	albu-minuria	Fasting glucose	blood pressure	complete		hemo-globin	calcium	phos-phate	PTH	serum albumin	potassium	complete			<140/90 mmHg	<130/80 mmHg
Primary care group																		
Age ≥ 65 eGFR ≥ 60 and micro-albuminuria	559	519	500	526	504	462 (83%)											182 (36%)	67 (13%)
Age < 65 eGFR ≥ 60 and micro-albuminuria	418	368	352	369	340	307 (73%)											159 (47%)	55 (16%)
Age ≥ 65 eGFR 45 – 60	1076	1000	849	961	945	792 (74%)										335 (31%)	429 (45%)	195 (21%)
Total primary care	2053	1887 (91.9%)	1701 (82.9%)	1856 (90.4%)	1789 (87.1%)	1561 (76.0%)											770 (43.0%)	317 (17.7%)
Consultation group																		
Age ≥ 65 eGFR 30 – 45	417	371	283	341	344	269 (65%)		209	64	53	26	44	310	18 (4%)		259 (62%)	188 (55%)	88 (26%)

Age < 65 eGFR 45 – 60	263	228	190	212	204	169 (64%)		77	15	11	3	8	173	2 (1%)		58 (22%)	100 (49%)	37 (18%)
Total consultation	680	599 (88.1%)	473 (69.6%)	553 (81.3%)	548 (80.6%)	438 (64.4%)		286 (42.1%)	79 (11.6%)	64 (9.4%)	29 (4.3%)	52 (7.6%)	483 (71.0%)	20 (2.9%)		317 (46.6%)	288 (52.6%)	125 (22.8%)
Referral group																		
Age ≥ 65 eGFR < 30	25	23	13	17	17	12 (48%)		16	5	2	0	2	21	0 (0%)		18 (72%)	7 (41%)	6 (35%)
Age < 65 eGFR 30 – 45	19	16	14	17	14	12 (63%)		11	6	5	1	2	17	1 (5%)		10 (53%)	7 (50%)	5 (36%)
Age < 65 eGFR < 30	1	0	0	0	0	0 (0%)		0	0	0	0	0	0	0 (0%)		0 (0%)	0 (0%)	0 (0%)
Macro-albuminuria	115	105	91	107	100	84 (73%)		43	13	5	3	8	88	1 (1%)		16[**] (33%)	27 (27%)	13 (13%)
Total referral	160	144 (90.0%)	118 (73.8%)	141 (88.1%)	131 (81.9%)	108 (67.5%)		70 (43.8%)	24 (15.0%)	12 (7.5%)	4 (2.5%)	12 (7.5%)	126 (78.8%)	2 (1.3%)		44 (46.8%)[**]	41 (31.3%)	24 (18.3%)

Total consultation and referral	840	743 (88.5%)	591 (70.4%)	694 (82.6%)	679 (80.8%)	546 (65.0%)	356 (42.4%)	103 (12.3%)	76 (9.0%)	33 (3.9%)	64 (7.6%)	609 (72.5%)	22 (2.6%)	361 (46.6%)[**]	329 (48.5%)	149 (21.9%)		
Total	2893	2630 (90.9%)	2292 (79.2%)	2550 (88.1%)	2468 (85.3%)	2107 (72.8%)								696 (37.6%)[**]	1099 (44.5%)	466 (18.9%)		

Process- and outcome indicators are derived from the interdisciplinary CKD-guideline for primary care and nephrology. For each indicator, performance in the preceding 15 months is shown. (Renal function: eGFR or serum creatinine; Albuminuria: albumin creatinine ratio or urine albumin). [*] the percentages show the achieved blood pressure targets divided by the number of blood pressure measurements. [**] Percentage calculated with patients with eGFR < 60 ml/min/1.73m^2 as denominator (n = 49 in macroalbuminuria group).

Web-appendix table 4b. Performance on process- and outcome indicators for CKD patients <u>without</u> diabetes, within 15 months prior to data extraction.

Patient group	N	Monitoring of disease progression					Monitoring of metabolic complications							Recog-nition	Blood pressure targets[*]	
		renal function	albu-minuria	Fasting glucose	blood pressure	complete	hemo-globin	calcium	phos-phate	PTH	serum albumin	potassium	complete		<140/90 mmHg	<130/80 mmHg
Primary care group																
Age ≥ 65 eGFR ≥ 60 and micro-albuminuria	333	298	263	269	272	214 (64%)									83 (31%)	23 (8%)
Age < 65 eGFR ≥ 60 and micro-albuminuria	275	220	203	196	192	148 (54%)									90 (47%)	29 (15%)
Age ≥ 65 eGFR 45 – 60	3049	2403	837	1612	2058	737 (24%)								753 (25%)	805 (39%)	283 (14%)
Total primary care	3657	2921 (79.9%)	1303 (35.6%)	2077 (56.8%)	2522 (69.0%)	1099 (30.1%)									978 (38.8%)	335 (13.3%)
Consultation group																

Age ≥ 65 eGFR 30 − 45	818	652	218	362	548	182 (22%)	487	130	106	49	80	562	33 (4%)	462 (57%)	239 (44%)	108 (20%)
Age < 65 eGFR 45 − 60	1282	903	350	632	703	278 (22%)	568	81	63	29	41	643	17 (1%)	266 (21%)	365 (52%)	112 (16%)
Total consultation	2100	1555 (74.0%)	568 (27.0%)	994 (47.3%)	1251 (59.6%)	460 (21.9%)	1055 (50.2%)	211 (10.0 %)	169 (8.0%)	78 (3.7%)	121 (5.8%)	1205 (57.4%)	50 (2.4%)	728 (34.7%)	604 (48.3%)	220 (17.6%)
Referral group																
Age ≥ 65 eGFR < 30	54	44	5	18	31	4 (7%)	42	15	11	2	11	38	1 (2%)	29 (54%)	17 (55%)	12 (39%)
Age < 65 eGFR 30 − 45	44	33	6	21	24	4 (9%)	25	8	6	1	6	22	1 (2%)	18 (41%)	16 (67%)	5 (21%)
Age < 65 eGFR < 30	5	3	0	1	1	0 (0%)	4	2	1	0	2	3	0 (0%)	3 (60%)	1 (100%)	1 (100%)
Macro-albuminuria	41	32	27	28	28	20 (49%)	17	6	5	0	4	29	0 (0%)	10 (50%)**	8 (29%)	0 (0%)
Total referral	144	112 (77.8%)	38 (26.4%)	68 (47.2%)	84 (58.3%)	28 (19.4%)	88 (61.1%	31 (21.5%)	23 (16.0 %)	3 (2.1%)	23 (16.0%)	92 (63.9%)	2 (1.4%)	60 (48.8%)	42 (50.0%)	18 (21.4%)

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Total consultation and referral	2244	1667 (74.3%)	606 (27.0%)	1062 (47.3%)	1335 (59.5%)	488 (21.7%)	1143 (50.9%)	242 (10.8%)	192 (8.6%)	81 (3.6%)	144 (6.4%)	1297 (57.8%)	52 (2.3%)		788 (35.4%) **	646 (48.4%)	238 (17.8%)
Total	5901	4588 (77.7%)	1909 (32.4%)	3139 (53.2%)	3857 (65.4%)	1587 (26.9%)									1541 (29.2%) **	1624 (42.1%)	573 (14.9%)

Process- and outcome indicators are derived from the interdisciplinary CKD-guideline for primary care and nephrology. For each indicator, performance in the preceding 15 months is shown. (Renal function: eGFR or serum creatinine; Albuminuria: albumin creatinine ratio or urine albumin). [*] the percentages show the achieved blood pressure targets divided by the number of blood pressure measurements. [**] Percentage calculated with patients with eGFR < 60 ml/min/1.73m^2 as denominator (n = 20 in macroalbuminuria group).