



**Interdisciplinary Care Models:
Implementation strategies to address
global unmet needs, including
pragmatic approaches in resource-
limited settings.**

DISCLOSURES

- Elke Eaton I have Nothing to disclose

Patient Case

Mr. D. –Difficult Diabetes

- 64 y/o M with poorly controlled type 2 diabetes mellitus complicated by HFmrEF (non-ischemic, non-obstructive CAD), hypertension, Chronic Kidney Disease (CKD), class II obesity, obstructive sleep apnea, tobacco abuse, low health literacy and not technologically savvy
- Medications included:
- ASA, rosuvastatin 40 mg, losartan 100 mg, glimepiride 4 mg bid

CINEMA Laboratory Values

Biomarker	Baseline CINEMA Evaluation
Hb A1c	11.3%
BMI	34 kg/m2
Blood Pressure	142/90 mmHg
LDL-C	63 mg/dl
UACR	60 mg/g
eGFR	59 ml/min/1.73m2
LVEF	45% on Echo
Fib 4 Score (for NAFLD)	1.72

CAC Score of 785

***UH has a No Charge Calcium Scoring Program**

The patient has
never had a Urine
Microalbumin
checked!
Retinal Exams
Were not done in
over 3 years
No Podiatry
Evaluation!

Goals of Care in Cardiometabolic Disease

Prolong life

Keep patients
out of the
hospital/ED

Improve the
quality of life

- Best accomplished by preventing morbid complications
- Cardiovascular disease and Diabetic Kidney Disease are the two most common and morbid complications of Type 2 Diabetes.
- Many patients are not aware of their risk for these complications
- Reduce cardiovascular events

Diabetes is a major global threat

A growing medical problem associated with high mortality.

Deaths due to diabetes (20–79 years) in 2017

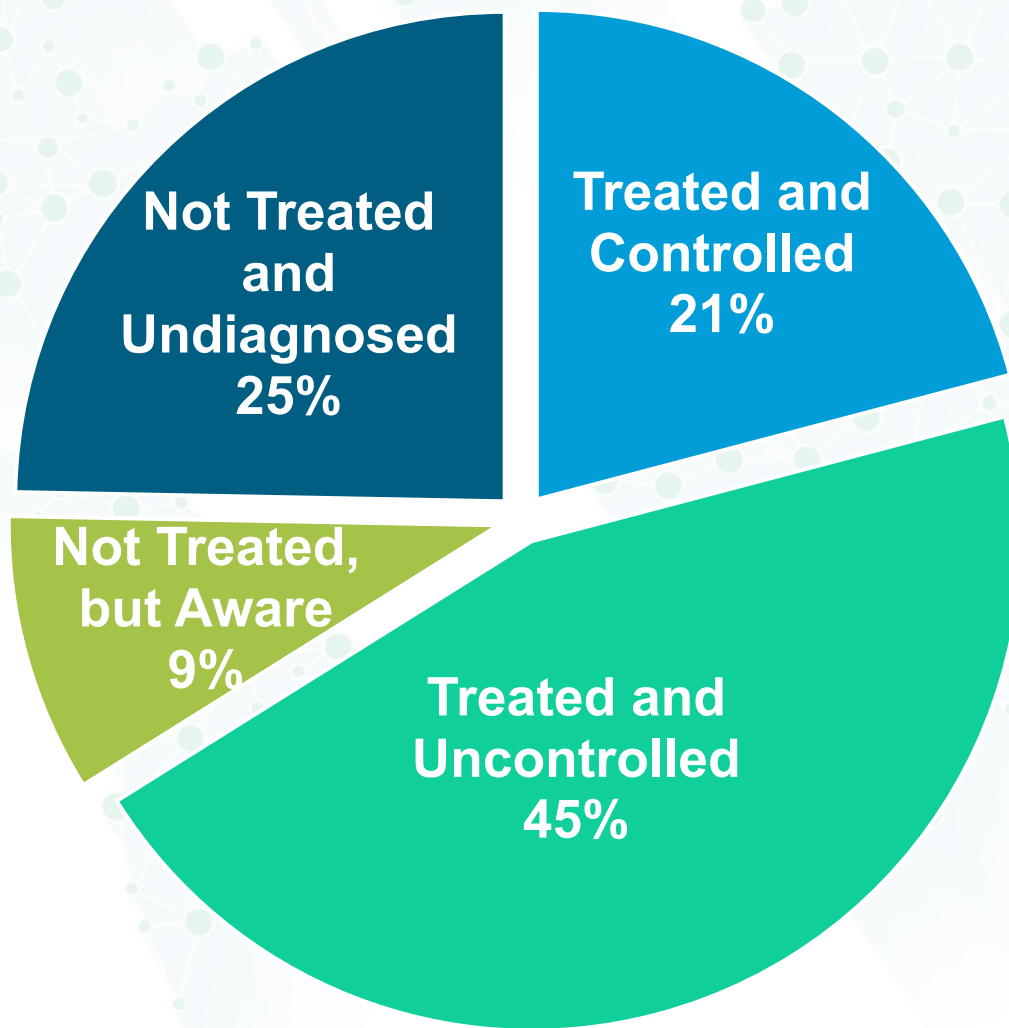


Growing global prevalence of diabetes



Diabetes accounted for ~4.0 million deaths and cost ~\$727 billion (USD) in health spending in 2017

Awareness, Treatment and Control of Diabetes in US Adults

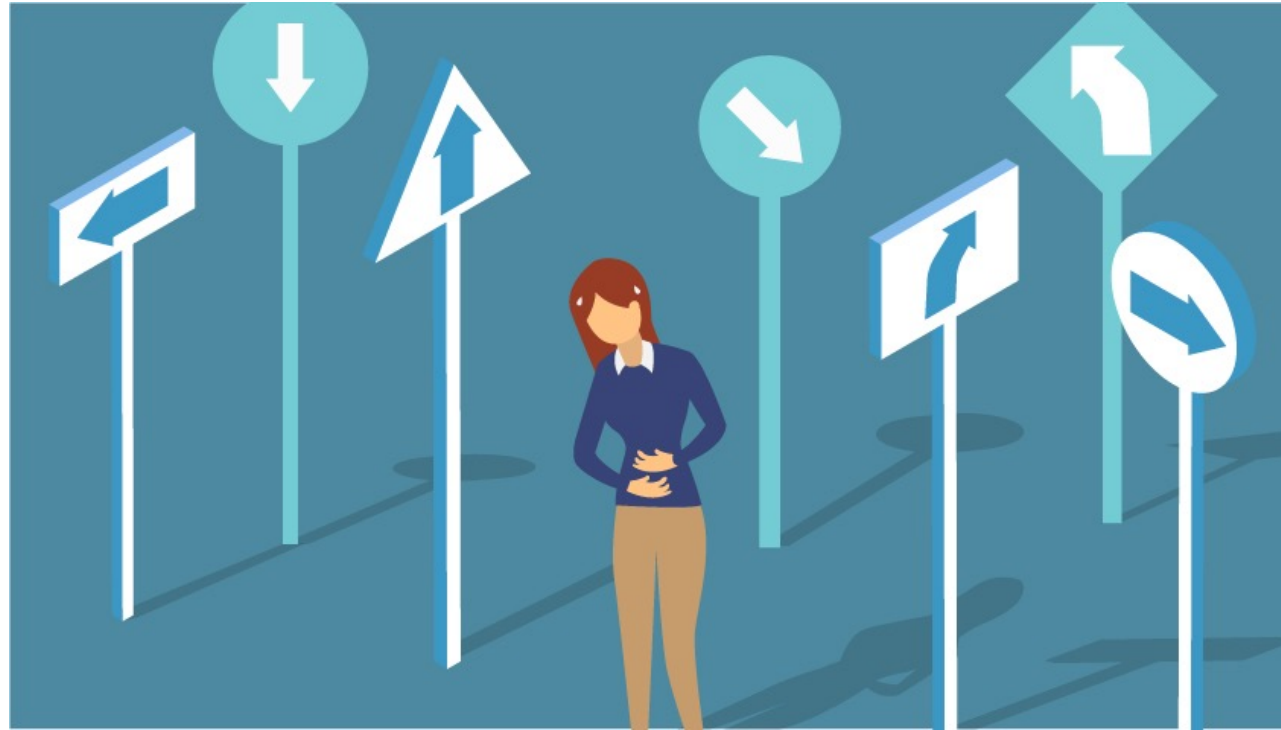


80% of all adults are either uncontrolled, untreated or unaware.

■ Treated and Controlled ■ Treated and Uncontrolled ■ Not Treated, but Aware ■ Not Treated and Undiagnosed

Heart Disease and Stroke Statistics 2020

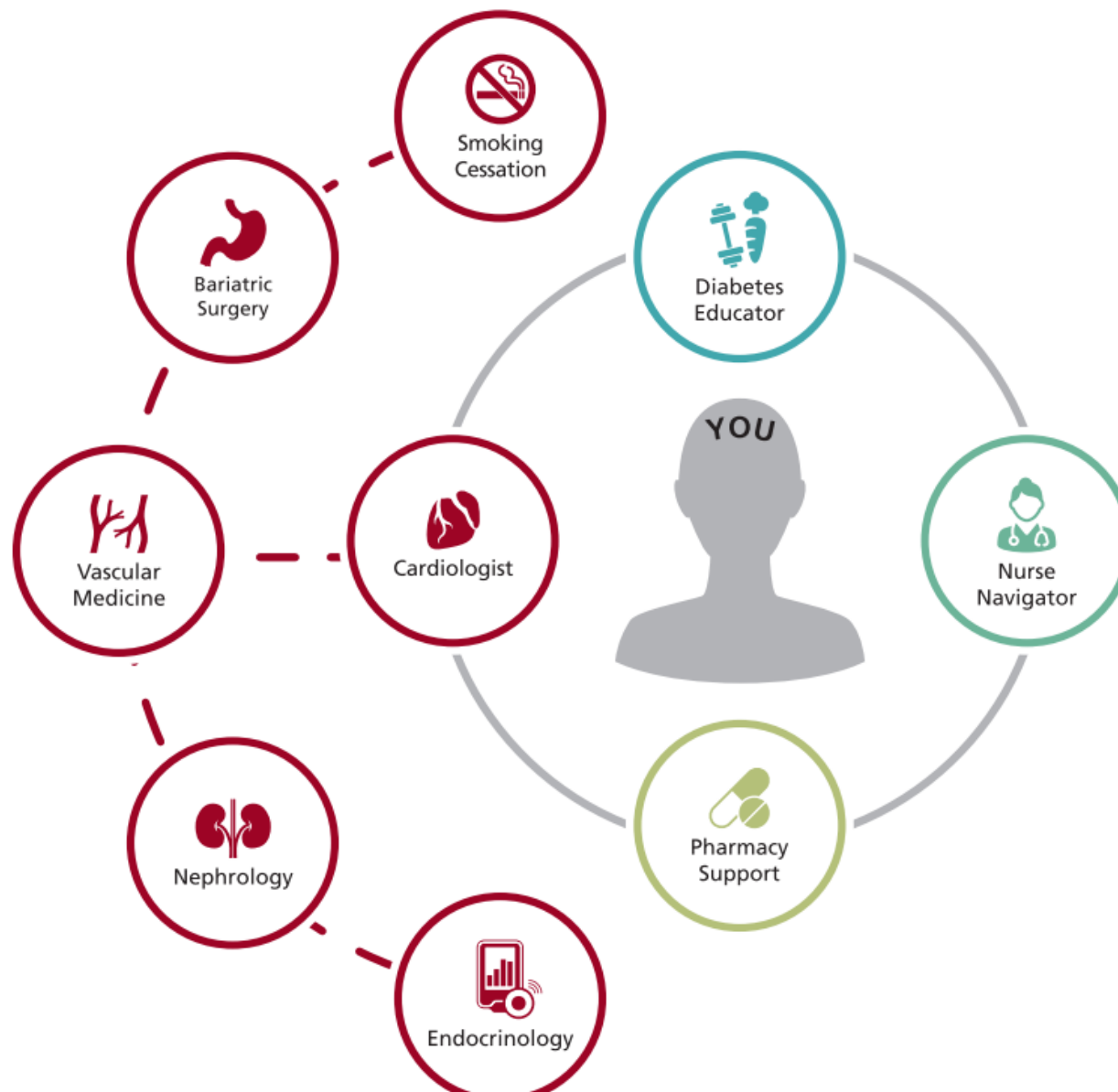
Fragmented and “siloed” care is the norm in people with Type 2 Diabetes leading to defects in care



- On an average a Type 2 diabetic may see 3-5 specialists including their PCP
- Substantial delays in care leading to inadequate glycemic and risk factor control is often the norm
- Many patients with Type 2 diabetes lack the support systems for adequate control

Eliminating Missed Opportunities in the Care of Patients with or at Risk for Type 2 Diabetes. Rajagopalan S, Pronovost P, Neeland I. Trends in Endocrinology and Metabolism 2021.

The UH CINEMA Way...



Who is Ideal for UH CINEMA?

Diagnosed with
Type 2 Diabetes
or Prediabetes
and one of the
following:



Cardiovascular disease

Heart attack, stroke, heart failure,
coronary artery disease, peripheral artery disease



Chronic kidney disease



Elevated coronary artery calcium score (greater than 100)



Risk factor for heart disease

High blood pressure, high cholesterol,
Overweight, or obesity with
metabolic syndrome

CINEMA Targets

Reduction in CV events...

- Glycemic control
 - Lifestyle, medication, CGM
- Body weight control
 - Lifestyle, GLP-1 RA, CGM
- Cholesterol control
 - Maximize lipid-lowering therapies
- CKD progression control
 - BP, ACEi/ARB, SGLT2i, non-steroidal MRA

CINEMA Patient Appointment Work Flow

Pre-Appointment

CINEMA Care Team



- Reviews individual patient medical history and determines pre-appointment labs to create personalized treatment plan
- Sends detailed communication to both patient and care team on what to expect at upcoming appointment

Appointment Day

Diabetes Educator



- Assessment with certified diabetes care specialist
- Review lifestyle, diet, exercise, and other factors
- Provides education and sets goals with patient for their disease management

Physician



- Assessment with physician to review:
 - Patient medical history
 - Risk reduction strategies
 - Patient goals for disease management
 - Usage of new medications

Post Appointment

CINEMA Nurse and CDES



- Discuss next steps and follow up appointments, provide education and medication teachings, and schedules needed labs/tests
- Resources/videos sent to patient

Usual visit schedule: Initial Visit → 3 months follow-up → 3-6 months follow-up → 1 year Encore visit

CINEMA Lifestyle Education

Educational Talks

Every Monday from 5:30 – 6:15 p.m.
via Zoom invitation

Resistance Band Exercise Class

Every Tuesday at 12:00 p.m.
via Zoom invitation

FOCUS
Eating Patterns for Diabetes
Exercise and Diabetes
Holidays and Diabetes
Diabetes Causes and Risk Factors
Diabetes: Sex, Smoking and Sleep
Eating on the Run/Dining Out with Diabetes
High Cholesterol/High Blood Pressure and Diabetes
Diabetes Medications
Diabetes and Mental Health
Healthy Cooking and Recipe Modification
Foot and Vision Care for Patients with Diabetes
Lab Tests and Blood Glucose Monitoring

Quarterly In Person Support Meetings

- Meet every three months from 12-2 pm.
- An opportunity for patients to share personal experiences, feelings, coping strategies and firsthand information about disease or treatment

Topic Driven:

- Podiatrist: Foot care
- Chef: Timesaving tips
- Blood glucose monitoring
- Stress management
- Exercise physiologist



UH CINEMA Patient Education Videos and Webinars



Pharmacy Services

- New medication counseling
- Virtual follow-up
- Medication optimization
- Prior authorization assistance
- Financial assistance
- Home delivery services
- Medication and lifestyle education series

Mr. D.

CINEMA Laboratory Values

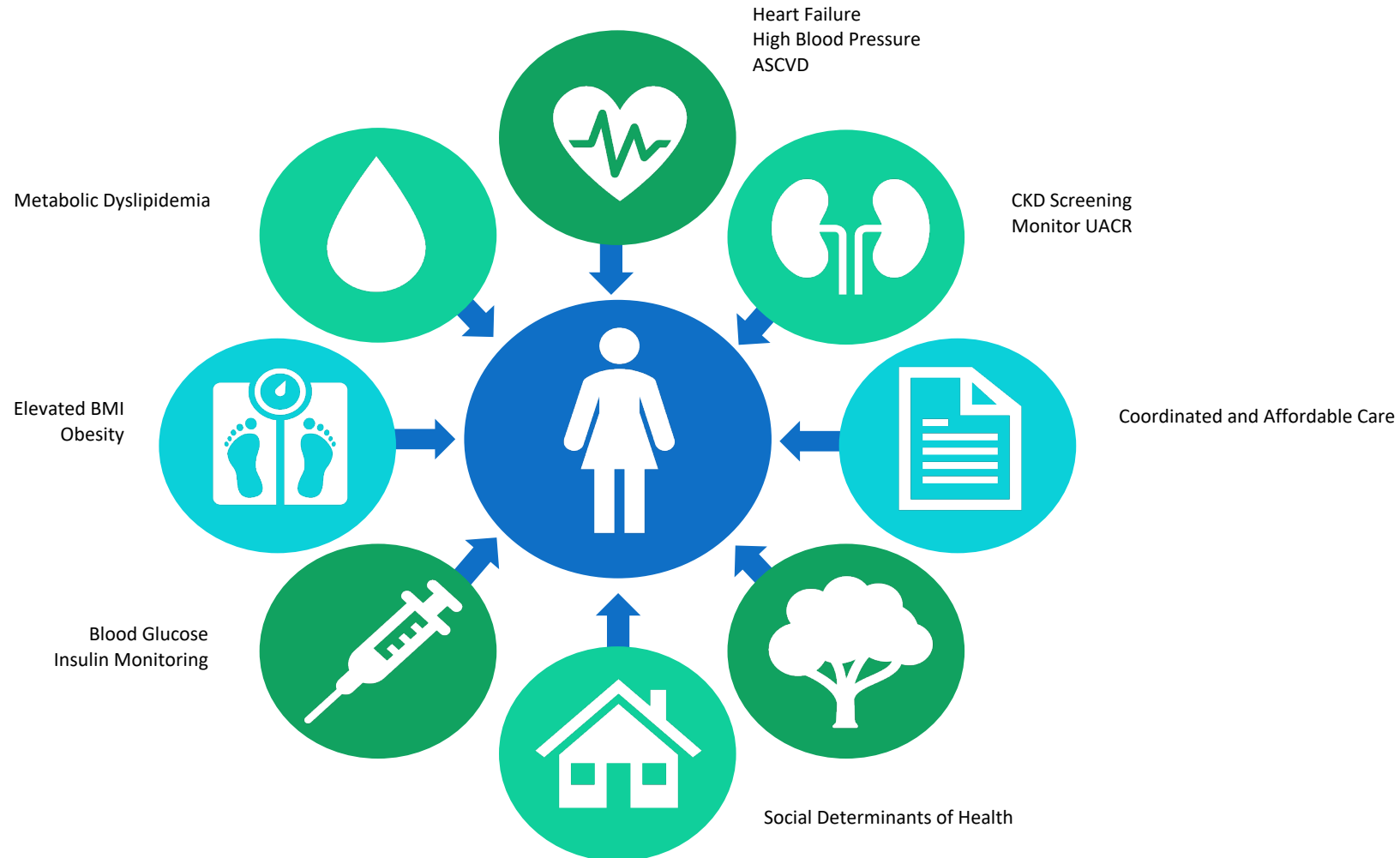
3 Months

Biomarker	Baseline	Follow-Up
Hb A1c	11.3%	6.0%
BMI	34 kg/m2	29 kg/m2
Blood Pressure	142/90 mmHg	119/73 mmHg
LDL-C	63 mg/dl	28 mg/dl
UACR	60 mg/g	31 mg/g
eGFR	59 ml/min/1.73m2	72 ml/min/1.73m2
LVEF	45%	55%
Fib 4 score (NAFLD)	1.72	1.48

Targeted Interventions

- Lifestyle: Increased vegetables at meals and less pasta and bread, replace processed snack bars with nuts, started exercise 30 min/day.
- Added Synjardy
- Added Semaglutide
- Titrated off of glimepiride
- Changed Losartan to Candasartan and titrated from 32 mg qd to 8 mg qd.
- Targeted weight loss – he went from size 44 to 38 waist!
- Smoking cessation counseling – he quit smoking!
- CGM enrollment – able to learn and utilize CGM technology

Patient-Centered, Evidenced-Based, Harmonized Approach



Common roles for CHWs in Cardiometabolic Care



Clerical: Outreach for appointments with reminder calls, confirmation of a means of transportation to the appointment, and general follow-up afterwards.



Educational: Providing key information Obesity and Type 2 Diabetes, such as chronic disease management, and recommended action steps.



Clinical: Providing guidance aimed at slowing the progress of metabolic diseases as long as these services are initiated by a licensed provider, e.g. taking vitals and reason(s) for a person being seen by the medical provider, health screenings, and interpreting medical terminology.



Hospitals: Assisting patients in their transition back to their homes and reducing the possibility of a re-admission to the hospital.



Insurance Navigation: Helping individuals and families enroll in health insurance and link to other health services and low-cost financial resources to pay for needed health services.



Referral: Connecting an individual and their family with available resources.

Using Technology



Scale



BPM



Smart Watch



5G Hub

Key Features

- Connects to various third party medical devices
- Provides connectivity out of the box
- Built in cellular connectivity
- Upgrades automatically over the air
- Discrete size and profile



Hardware

Thank you for listening!



INTERDISCIPLINARY CLINICS

Controversies conference 22 March 2024 Vancouver

DISCLOSURES

- Debasish Banerjee - Research Grant - AstraZeneca, Speaker Fees – AstraZeneca, CSL Vifor, Advisory Board – Medice
- Lisa Anderson - Research Grant - AstraZeneca, Pfizer, Speaker Fees - Alynan

How can we help HF patients with CKD

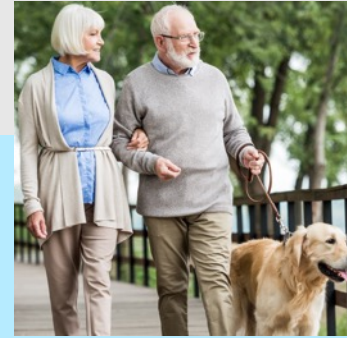
Diagnoses:

- Type 2 diabetes
- Ischaemic heart disease, LAD stenting
- Abdominal aortic aneurysm
- Carotid endarterectomy
- AKI due to cholesterol emboli
- MRI brain showing multiple infarcts
- Peripheral vascular disease
- Gout
- HFrEF 28% with global hypokinesia
- Chronic kidney disease stage IV, GFR 16



Presentation

- 84-year-old male
- Lives with his wife
- Independent, walks his dog
- Wishes to stay at home and walk
- Pulse 62, BP 100/60
- No oedema



Laboratory

- Sodium 143
- Potassium 5.2
- eGFR 30
- Hb 114
- Ferritin 88



Medications:

- Clopidogrel 75 mg once a day
- Atorvastatin 80 mg once a day
- Sodium bicarbonate 500 mg TDS
- Frusemide 40 mg twice a day
- Isosorbide 10 mg twice a day
- Famotidine 20 mg once a day
- Vitamin D 1000 units once a day
- NovoMix 30 insulin twice a day
- Bisoprolol 3.75 mg once a day

LIFT study

- Dapagliflozin 10 mg once a day
- Sacubitril/Valsartan 97/103 mg BD
- Epleronone 50 mg OD
- IV iron



No hospital admission 2 years

Why do we need interdisciplinary care

- CKD is common in heart failure (50%)
- What are the issues with single specialty care?
- What are the barriers of CKD-HF care?
- What is the evidence for CKD-HF?
- What do the patients CKD-HF need?
- *What do the patients expect?*

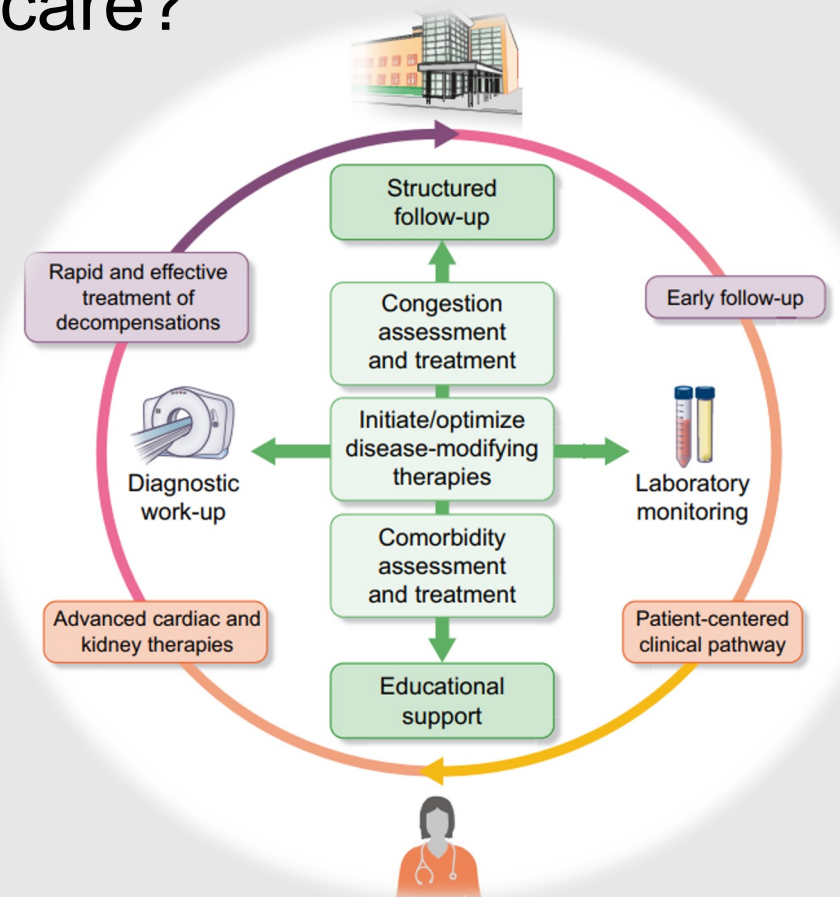
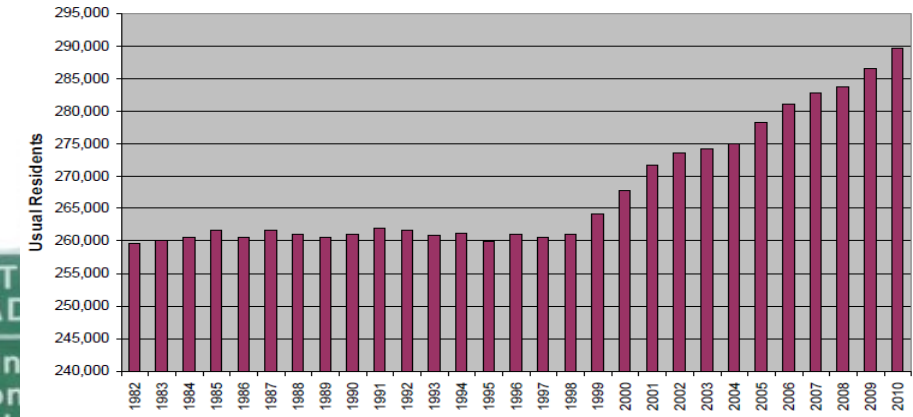
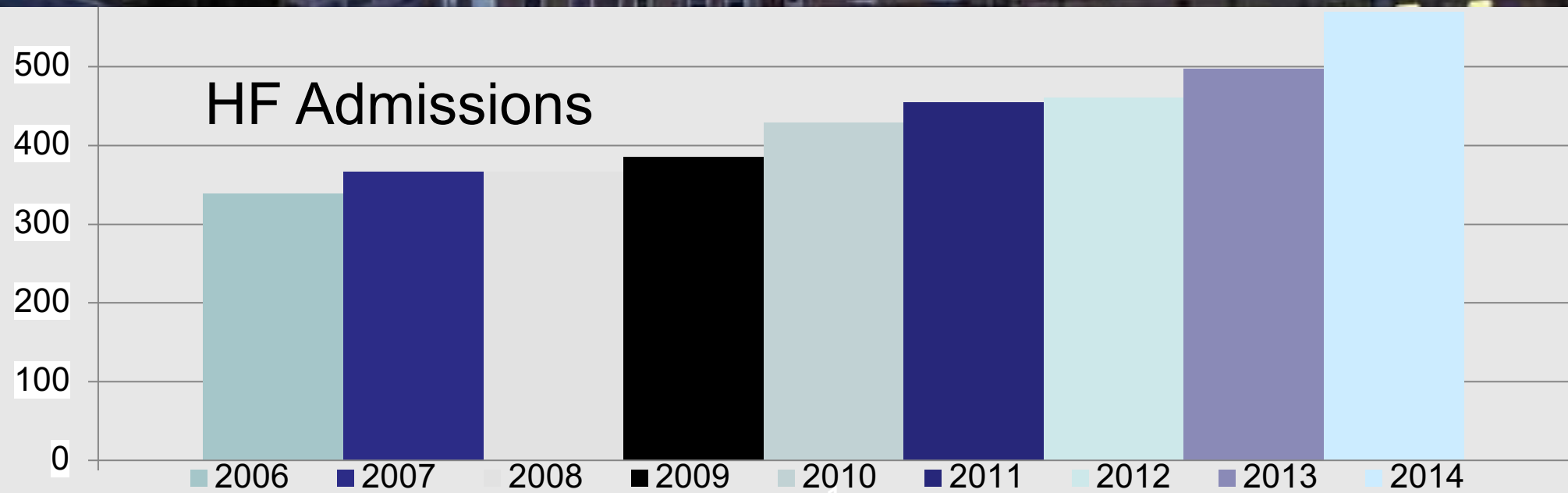




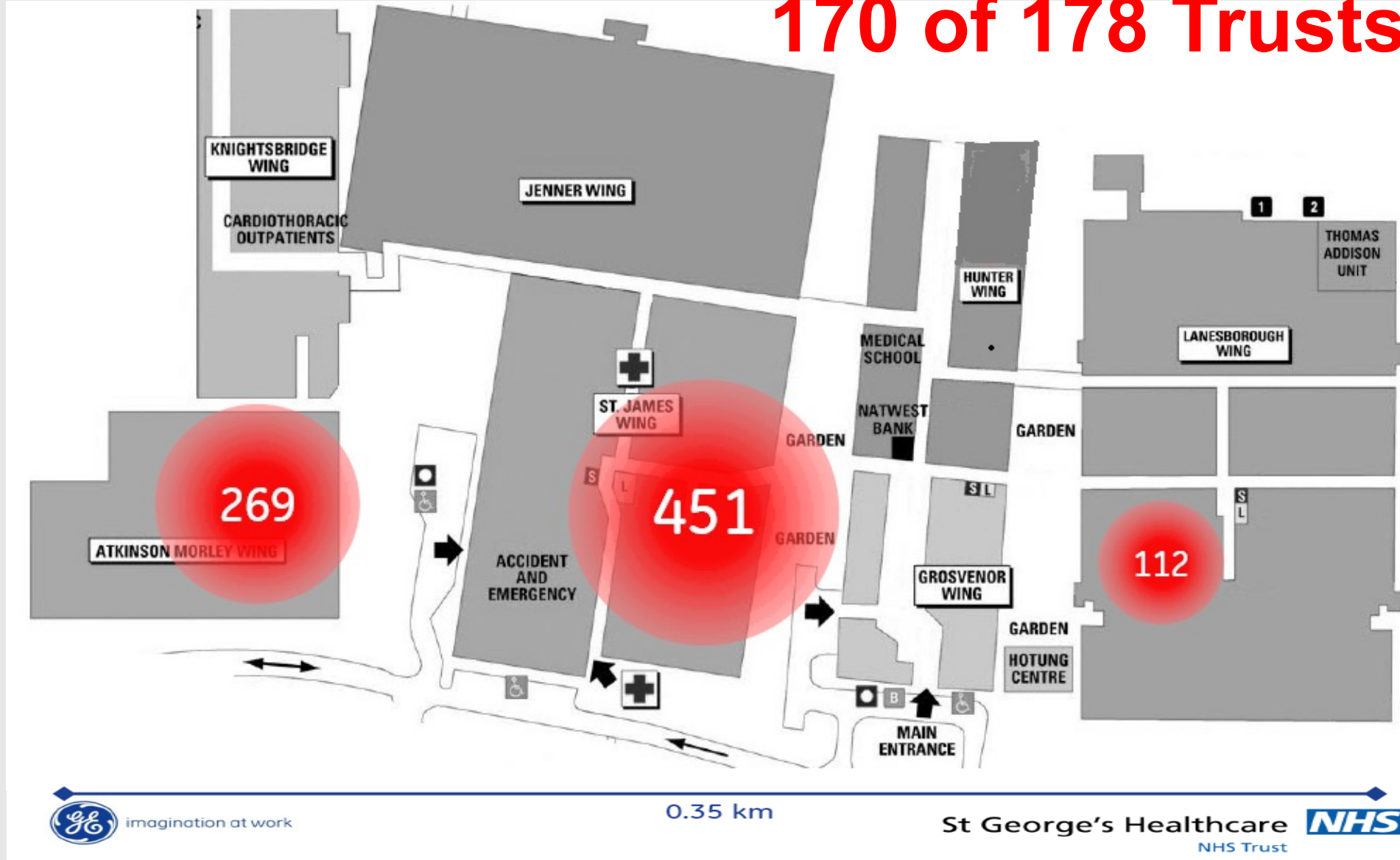
Figure 1: Wandsworth Mid-Year Population Estimates





UK: 48% HF in cardiology, St George's 13% in cardiology

170 of 178 Trusts



£1.2m CQUIN for Dedicated HF Unit

- Agreed Sept 2013, for Delivery in 2014/15
 - Senior and Junior Ward Manager
 - Therapy team
 - Pharmacy team
 - Senior and Junior fellow
 - Echo physiologist
-
- ...Inaction...business case commenced Sept 14, submitted Feb 15.
 - End of year – not progressed, money spent

Where was all the money going?....

St George's becomes an NHS Foundation Trust

Published: 2 Feb 2015

Health regulator Monitor has approved St George's as an NHS Foundation Trust.

To reflect this achievement, the trust has changed its name to St George's University NHS Foundation Trust.



St George's chief executive, Myles Scott, said:

"This is a great day for our staff, our patients and the communities we serve. Achieving Foundation Trust status



ALASTAIR MCLELLAN

The HSJ100 s
now - but it c



The [south London trust became an FT in February](#), on the basis that it would break even in 2014-15 and make a surplus in the current financial year. But by the time the trust's board met later that month, it was already forecasting a £5.5m deficit, and things only got worse from there.

By the end of March it was £16.8m in the red. It is [now planning for a deficit of up to £30m for 2015-16](#).

Further £250K invested by Wandsworth CCG July 2015

3m business case approved July 2015

Original Financial model based on 17 beds		Revised Financial Model				Revised Financial Model	
Description	Related Activity YEAR 1	Q4 2015/16	Comment		Related activity YEAR 2	2015/16 FY Value (£) updated	
Improved coding of heart failure patients to EB03H						549,242	
Increase in cardiac diagnostic activity from new consultant (echos)					1,756	415,764	
Increase in outpatient activity from new consultant					756	113,430	
Outpatient Activity already in the baseline					564	-	
CCG Funding		250,000	CCG funding				
Reduced fines for readmissions (5% reduction, 12.3% fine)						8,769	
Total income		250,000				1,087,206	
Total pay costs	19	179,364	Q4 costs of staffing		19	942,685	
Total pay costs already in budget					-	37,312	
Total direct non-pay costs		19,568	Q4 Costs			78,271	
Total indirect pay costs (overhead costs)		8,465	Q4 Costs			33,859	
Total capital		42,826				25,000	
Total expenditure		250,222				1,042,503	
commissioners funding							

Message to all staff

Appointment of turnaround director and turnaround support from KPMG

No progress...

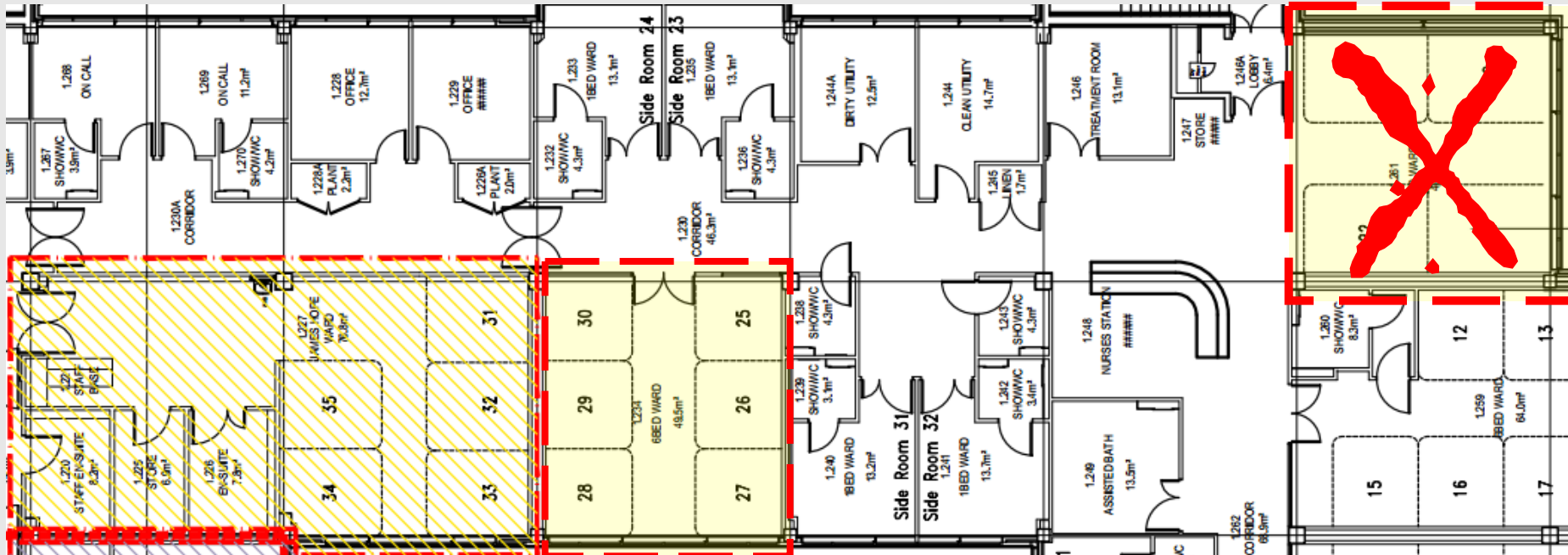
Contract Performance Notice Issued Sept 2015

NHS
England



**NHS Standard Contract
2015/16
General Conditions**
*Draft for consultation
December 2014*

Progress.....



Staffing HR1s signed off Dec 2015
PFI building work began Jan 11th 2016
HFU opened Feb 20th 2016

IDDG

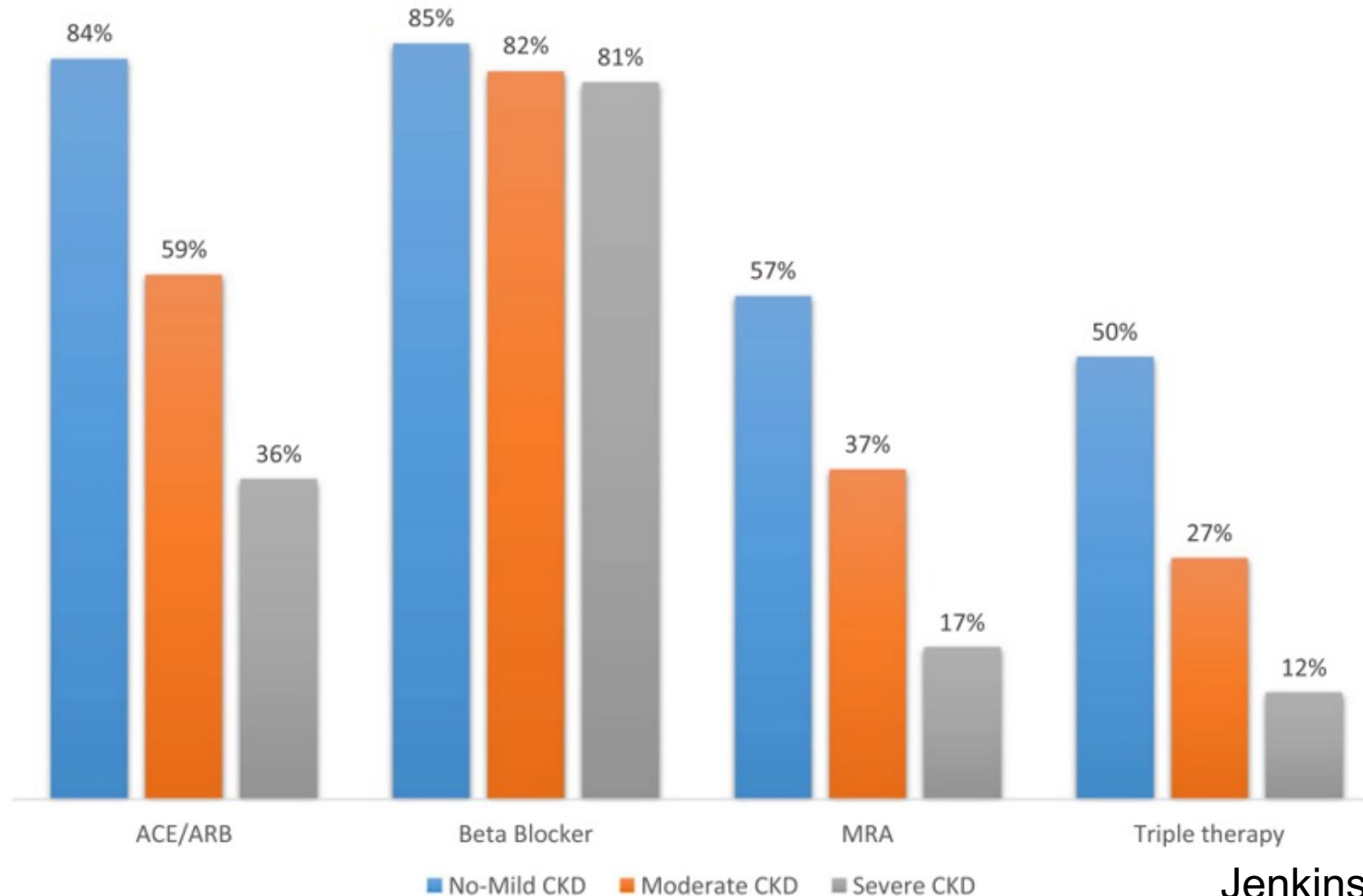
Investment, Divestment, Disinvestment Group

Conditions of approval (and commitments from the service) were to disinvest if financial benefits were not delivered. Based on this, resources should be removed as the service is unable to provide the return on investment necessary to pay for the higher level of care provided. The Trust must however consider that the quality of care may deteriorate, with a risk of increased mortality if patients are not treated in an

Assistance needed.....renal input for diuretic resistant patients

First Paper: Under-treatment of HF with CKD

Figure 1 Use of medications with different stages of chronic kidney disease in patients with left ventricular systolic dysfunction. ACE, angiotensin-converting enzyme inhibitor; ARB, angiotensin receptor blocker; CKD, chronic kidney disease; MRA, mineralocorticoid receptor antagonist. No-mild CKD, no CKD or CKD Stages 1–2; moderate CKD, CKD Stages 3a–3b; severe CKD, CKD Stages 4–5.



AKI as a dominant risk factor in AHF

Table 1 Frequency and in-hospital mortality by chronic kidney disease stage (all admissions)

CKD stage	Number (% of total admissions)	Death in hospital (%)	Age in years (mean and SD)*
0 or 1	261 (24.72)	20/261 (7.66)	70.69 (15.57)
2	295 (27.94)	23/295 (7.80)	76.63 (12.08)
3a	193 (18.28)	21/193 (10.88)	76.79 (11.03)
3b	191 (18.09)	16/191 (8.38)	79.66 (9.20)
4	94 (8.90)	14/94 (14.89)	79.55 (10.87)
5	22 (2.08)	2/22 (9.09)	72.77 (16.12)

Table 4 Incidence and in hospital mortality of stages of acute kidney injury in all admissions

Stage of AKI	Frequency (%)	Mortality $P < 0.001$
No AKI	876 (83.0)	44/876 (5.0%)
1	110 (10.4)	23/110 (20.9%)
2	39 (3.7)	14/39 (35.9%)
3	31 (2.9)	15/31 (48.4%)

AKI, acute kidney injury.

CKD-HF risk: GFR OR albuminuria OR both

Kidney function

eGFR	Hospitalisation/100 person year
45-70	3.1 [2.5-3.7]
30-44	7.4 [6.2-8.6]
<30	10.3 [5.4-12.2]

Urine albumin

Urine ACR	Hospitalisation/100 person year
<30	2.9 [2.3-3.5]
30-300	6.6 [5.3-8.0]
>300	9.7 [8.3-11.2]

3791 patients eGFR 20-70, 2003-08 followed till 2014 1774 HHF risk,
other risk factors were age, men, black, DM, HTN, IHD, AF

CKD-HF Risk reduction with SGLT2i by KDIGO risk

Prognosis of CKD by GFR and albuminuria categories: KDIGO 2012

				Persistent albuminuria categories		
				Description and range		
				A1	A2	A3
				Normal to mildly increased	Moderately increased	Severely increased
				< 30 mg/g < 3 mg/mmol	30–300 mg/g 3–30 mg/mmol	> 300 mg/g > 30 mg/mmol
GFR categories (ml/min/1.73 m ²) Description and range	G1	Normal or high	≥ 90			
	G2	Mildly decreased	60–89			
	G3a	Mildly to moderately decreased	45–59			
	G3b	Moderately to severely decreased	30–44			
	G4	Severely decreased	15–29			
	G5	Kidney failure	< 15			

KDIGO RISK	GFR and Albuminuria	HR [95CI]	Event rate /100py	Absolute RR (%)
Low 32%	GFR>60 ACR<30	0.81 [0.66-1.01]	6.78	-1.26
Moderate 29%	GFR>60 ACR30-300 GFR45-59 ACR<30	0.63 [0.52-0.76]	11.30	-4.03
High 22%	GFR>60 ACR >300 GFR45-59 ACR 30-300 GFR30-44 ACR <30	0.82 [0.68-0.98]	15.15	-3.27
Very High 17%	GFR<30 GFR <45 ACR 30-300 GFR <60 ACR >300	0.84 [0.71-1.01]	20.70	-2.84

9714 HF patients pooled from EMPEROR reduced and EMPEROR preserved

Evidence for HF therapy from RCT: CKD and no-CKD

Trial	Exclusion	<60 ml/min/1.73m ²	>60 ml/min/1.73 m ²
DAPA -HF	eGFR<30	0.72 [0.66-0.86]	0.76 [0.63-0.92]
DELIVER	eGFR<25	0.81 [0.69-0.94]	0.84 [0.70-1.00]
EMPEROR-P	eGFR<20	0.78 [0.66-0.91]	0.81 [0.66-1.00]
EMPEROR-R	eGFR<20	0.83 [0.69-1.00]	0.67 [0.55-0.83]
SOLOIST-HF	eGFR<30	0.59 [0.44-0.79]	0.90 [0.58-1.37]
PIONEER-HF	eGFR<30	0.73 [0.61-0.87]	0.70 [0.59-0.84]
PARAGON-HF	eGFR<30	0.79 [0.66-0.95]	1.01 [0.80-1.27]
GALACTIC-HF	eGFR<20	0.98 [0.89-1.07]	0.84 [0.75-0.94]
PARADIGM-HF	eGFR<30	similar	similar
EMPHASIS	eGFR<30	similar	similar

Quality of guideline therapy in CKD patients with chronic HFrEF

	>60 [17032]	45-59 [6967]	30-44 [5363]	<30 [2306]
Prescription				
Beta Blocker	94	93	92	92
ACEi/ARB/ARNi	96	92	86	68
MRA	45	44	37	24
Triple therapy	38	35	28	15
Initiation				
Beta Blocker	75	73	73	74
ACEi/ARB/ARNi	89	84	77	61
MRA	41	39	31	20
Triple therapy	29	25	19	10
Age	74 [65-81]	69 [60-76]	80 [74-85]	80 [73-85]

31,668 HF patients age 74 [68-81], DM 28%, AF 55%, IHD 57%, Swedish HF registry

Janse EJHF 2022 24 2185

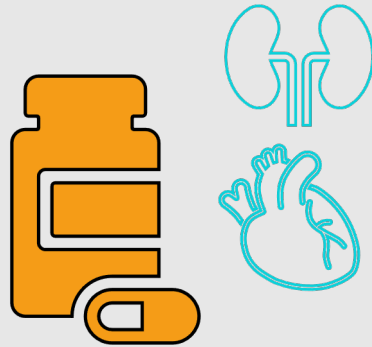
Frailty in CKD-HF can be a barrier

The **FRAIL** study: Investigating the relationship between **FR**ailty **A**nd Quality of **L**ife in patients with heart fai**L**ure & CKD

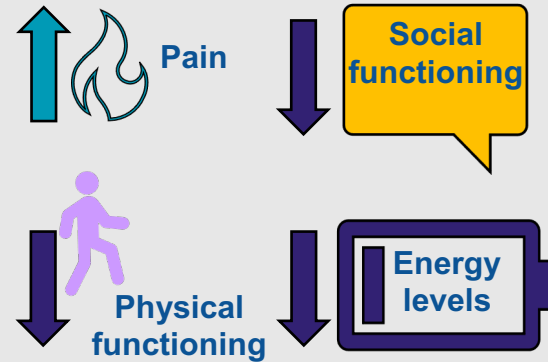
Results:



103 CKD-HF, frailty
rate was 49%



Frailty was associated with
polypharmacy



Frail patients had
reduced QoL scores



Priority was 'Better quality of
life', rather than longer survival

Recommendations:

Clinicians to prioritise the
prompt recognition and
intervention in frailty

Future research to focus
on interventions for
reducing frailty in patients
with CKD-HF

Future RCT's in this
cohort to routinely
incorporate frailty as
outcome measures

Benefits of therapy in Frail CKD-HF patients

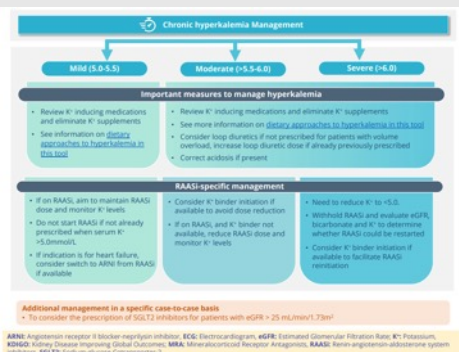
	Not Frail	Frail	Most Frail
	2354	2413	1941
	FI <0.210	FI 0.21-0.31	FI >0.31
Age	70.1 [10.3]	72.6 [9.0]	72.7 [8.8]*
EF	54.2 [9.1]	54.2 [8.8]	54.1 [8.3]
eGFR mean	68.7 [18]	59.1 [18.3]	52.1 [17.4]*
<60 ml/min	29.6	53.9	71.8*
>60 ml/min	70.4	46.1	28.2
CV death WHF with Dapagliflozin [RR]	0.85 [0.68-1.06]	0.89 [0.74-1.08]	0.74 [0.61-0.91]

6258 patients from DELIVER study
Frail patients, older with more CKD benefits with SGLT2i

Hyperkalaemia as a barrier in CKD-HF therapy

Diagnosis	eGFR 45-59 N=71347		30-44 28020		15-39 3363		<15 1305		Dialysis 1762	
Heart failure	88.2	5896	85.9	5136	80.7	2715	66.5	309	40.7	264
Hyperkalaemia	12.1	809	14.9	896	19.2	645	31.8	148	48.8	316
Volume overload	0.6	39	0.5	30	1.8	62	4.9	23	16.8	109
Malignant HTN	0.4	24	0.1	8	0.2	8	0.2	1	0.3	

17,176 visits in 111,087 CKD patients



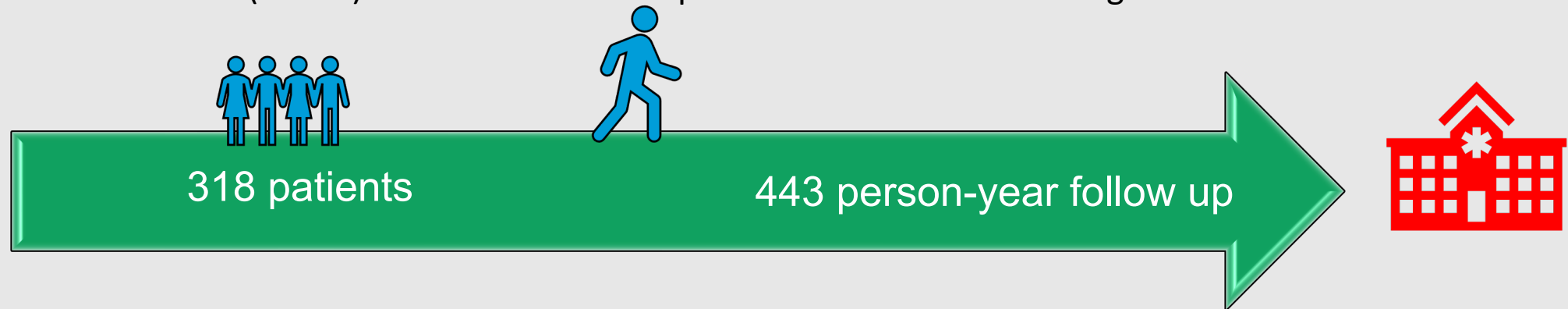
Fluid overload in CKD-HF is a common problem

667 total admissions (min 0, median 1, mean 2.1, max 14)

201 heart failure admissions (min 0, median 0, mean 0.6, max 13)

227 (71.4%) had at least one hospital admission for any reason

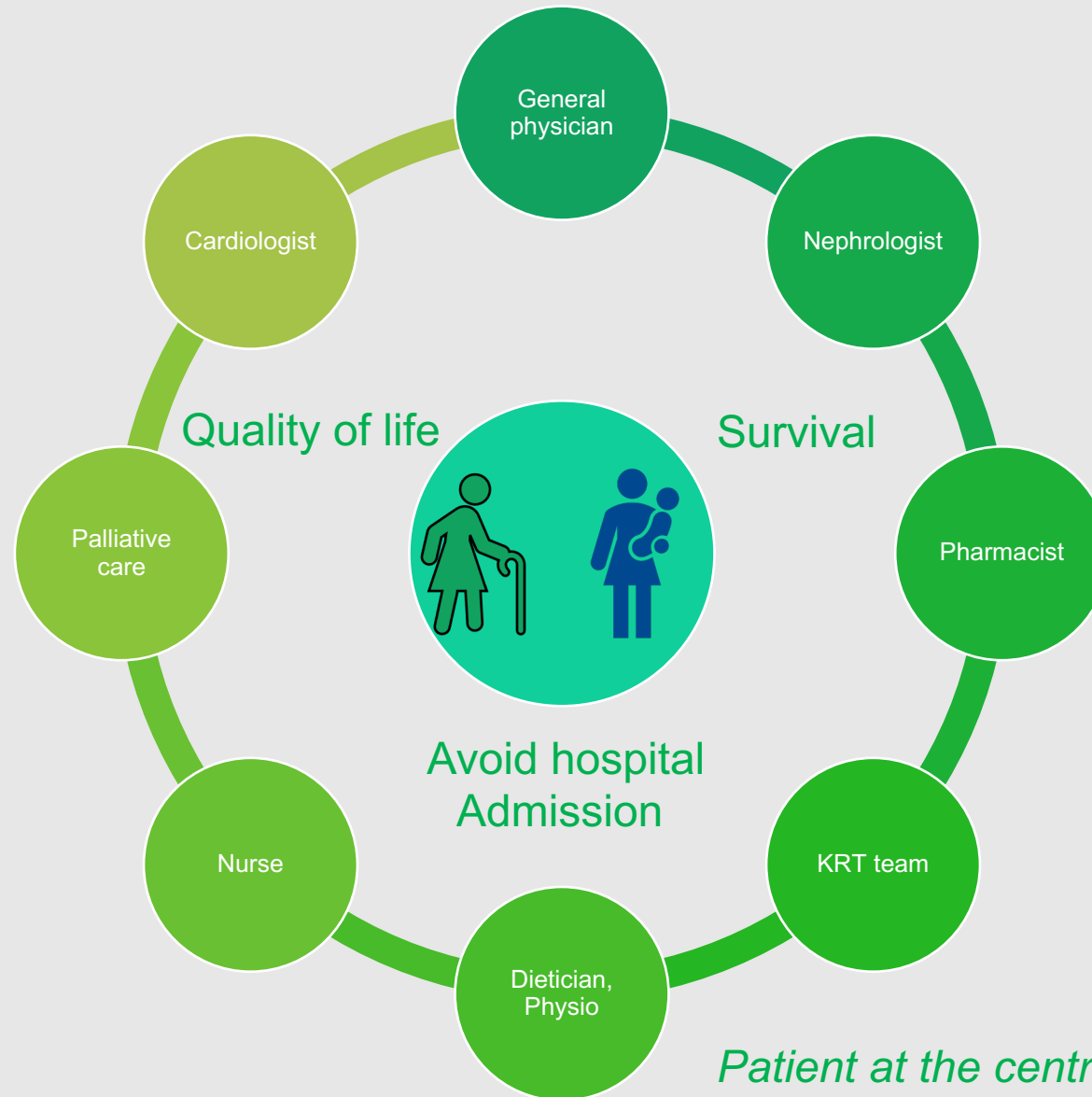
110 (34.6%) had at least one hospital admission for worsening HF



HFrEF compared to HFpEF (IRR 1.29, 95% CI 1.07, 1.55) and diuretic use (IRR 1.25, 95% CI 1.03, 1.52) were associated with more admissions

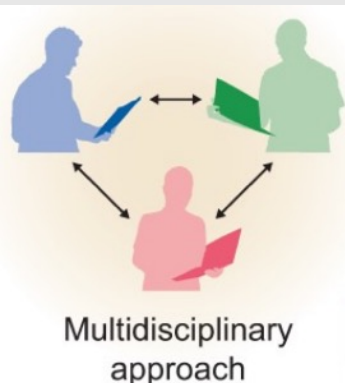
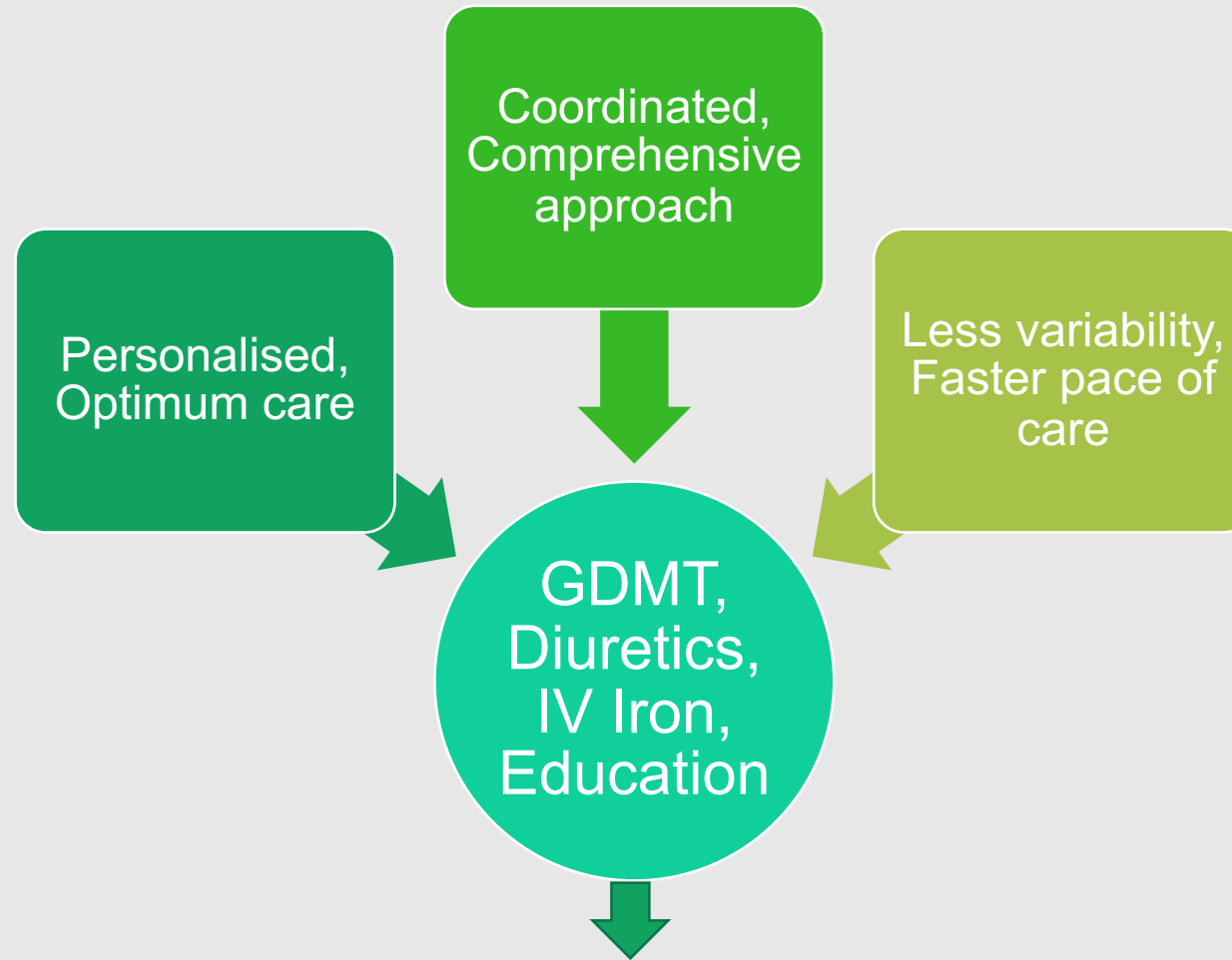
Higher eGFR (IRR 0.99, 95% CI 0.98, 0.99) and ACEi/ARB use (IRR 0.55, 95% CI 0.46, 0.65) were associated with fewer hospital admissions

CKD-HF patient care; who provides? expectations?



Patient at the centre of care with their own priorities

Objectives of interdisciplinary care



Interdisciplinary clinic protocols

Referral criterion

eGFR<30 ml/min/1.73m²
OR eGFR 30-60 with uACR>30 mg/mmol,
OR eGFR 30-60 and declining eGFR excluding AKI
Potassium >5.4 mmol/L due to RAASi
May need dialysis or renal transplantation
Needs RAASi maximisation
Refractory congestion despite two diuretics

Plan of management

Control symptoms of breathlessness, oedema, tiredness
Achieve decongestion with minimal oedema, clear chest, normal JVP, target weight, use loop diuretic ± metolazone
Maximise ARNI/ACEi/ARB in HF eg Entresto 24/26 to 49/51, 97/103 mg BD
Maximise β-blocker bisoprolol 10 mg aim pulse<65bpm in sinus, 70-80bpm in AF
Maximise MRA e.g. eplerenone 12.5 to 50 mg OD start if potassium <5.0
Dapagliflozin/empagliflozin 10 mg OD
Intravenous iron if ferritin <200, [<300 with TSAT<20%] Hb <140
Finerenone in DKD 10mg to 20mg OD, start if potassium <5.0
Anticoagulation of AF apixaban 2.5 mg BD if eGFR>15
Consider semaglutide if BMI>30 Wegovy 0.25 to 2.4 mg sc weekly
Control hypertension BP<140/90 (ideally lower)
Six monthly eGFR, uACR, yearly echo after 3-6 months on GDMT to monitor improvement prior to discharge, then to be implemented in primary care

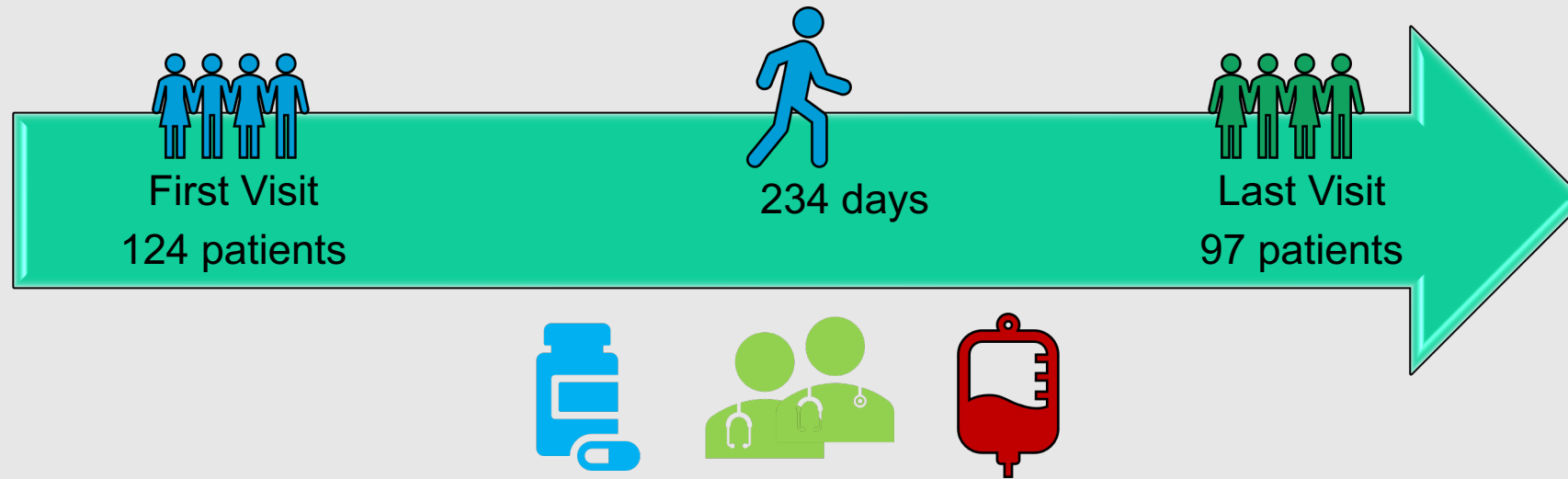
What needs monitoring

Symptoms: breathlessness, oedema, tiredness, urinary symptoms; QOL
Signs BP, Pulse, Chest clear, Oedema minimal Weight ±2 kg of target weight, BMI<27.5
Laboratory: eGFR, uACR, Na, K, Haemoglobin >100, Ferritin, TSAT, NT-proBNP

Who can be transferred back to primary care

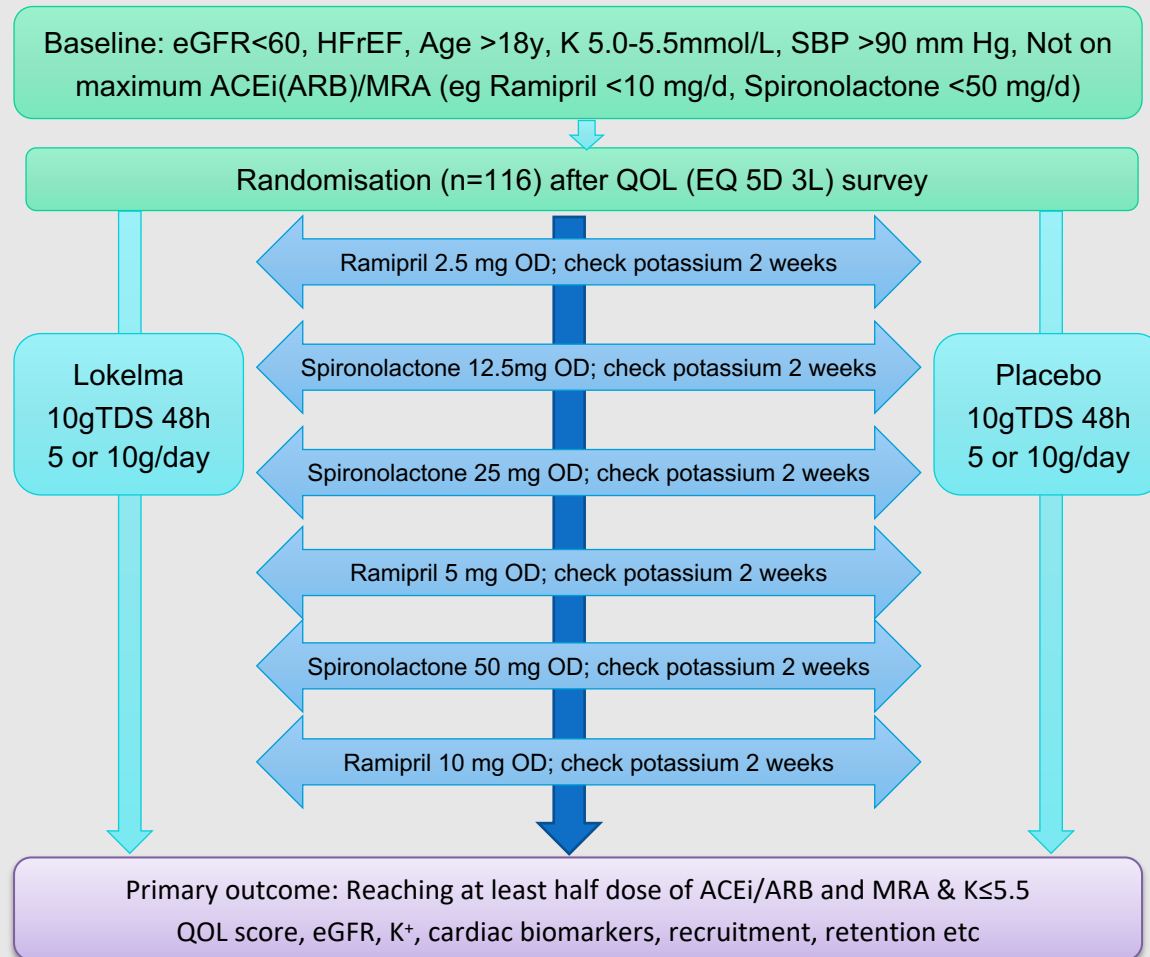
Established cause of CKD and HF and Clinically stable with
Maximally tolerated ARNI/ACEi/ARB, SGLT2i and betablocker with HR and BP control
Ferritin>200, Tsat >20%, Hb>100
Decongested, close to target weight with minimal oedema
Long term cardiac and renal plan agreed (Need for CRT/ICD, transplant, dialysis, anticoagulation)

Benefits of interdisciplinary care at St George's



	FIRST VISIT	LAST VISIT	p value
Dual RAASi	13%	20%	0.03
Iron deficiency	57%	27%	0.002
Ferritin	67	185	0.001
Haemoglobin	86	101	0.100

RAASi maximisation in CKD-HF



104 patients randomised with interdisciplinary study

At-home management of fluid overload

Managing fluid overload with subcutaneous furosemide – collaboration cardiologist nephrologist hospital-at-home team

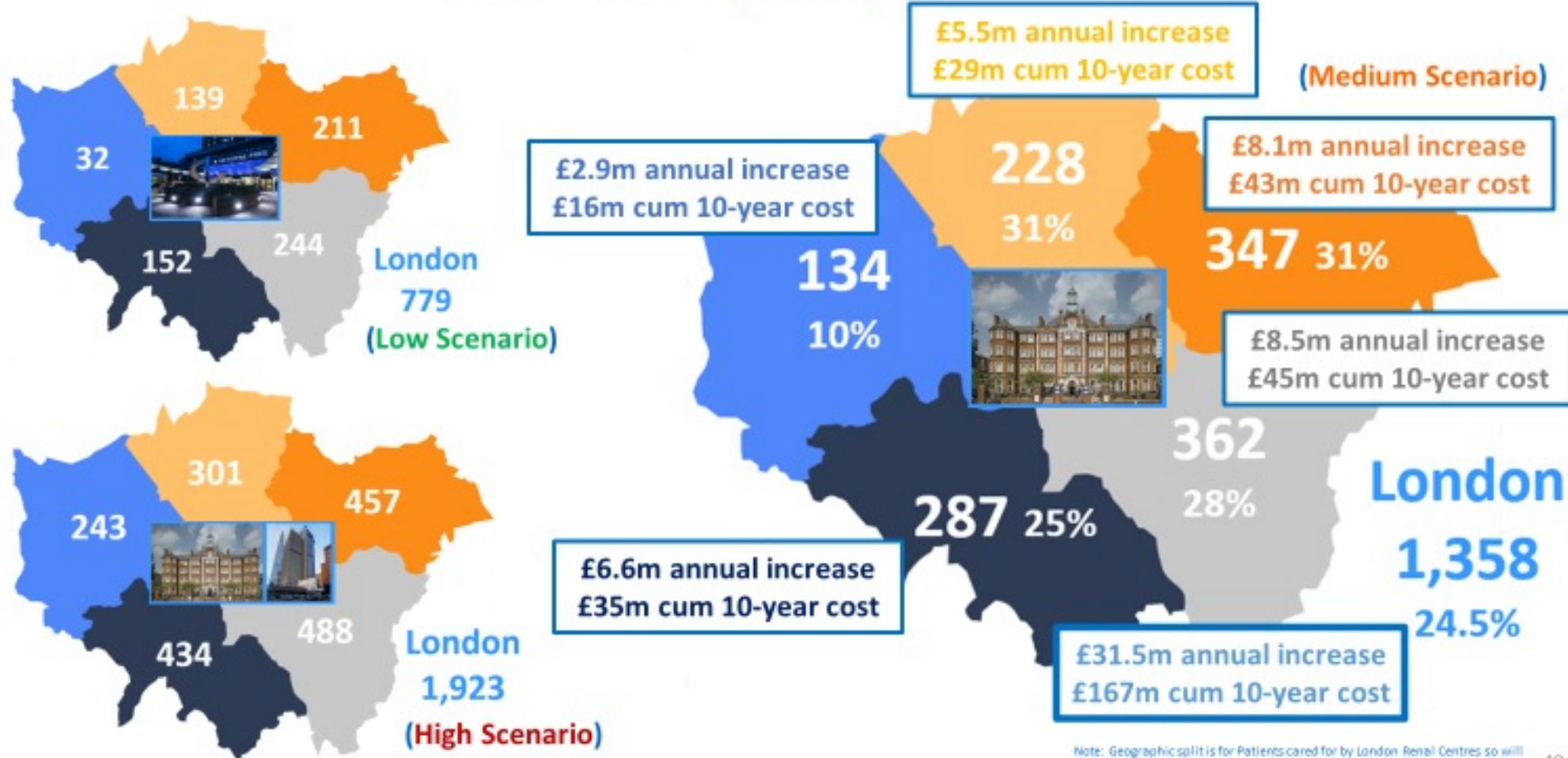
	Baseline						Results								
	Age	Ethnicity	Gender	LVEF (%)	Baseline eGFR (ml/min/1.73 ²)	Baseline oral loop diuretic dose (mg)*	Baseline K (mmol/L)	End eGFR (ml/min/1.73 ²)	End K (mmol/L)	Weight change (kg)	Received oral K+	A/E during 5-day period	Admission during 5-day period	30-day hospital admission	30-day mortality
1	84	White British	Male	50	25	200	4.7	27	3.9	-4.4	0	1**	0	0	0
2	60	Other	Male	39	49	80	4.9	62	3.1	-8.2	1	1***	0	1	0
3	86	Mixed	Male	35	40	120	4.3	37	4.8	-0.6	0	0	0	0	0
4	89	Other	Female	55	20	60	4.6	23	3.5	-1	0	0	0	0	0
5	85	Other	Male	40	20	120	3.4	18	4.2	1.8	1	0	0	1	1
6	73	Black or Black British	Female	30		120		42	3.6	-1.6	1	0	0	0	0
7	78	Black or Black British	Male	50	35	200	4.8	34	4.1	-4.8	0	0	0	0	0
8	88	Other	Female	25	48	120	4.4	42	4.1	-0.6	1	0	0	0	0
9	73	White British	Female	60	13	240	4.3	15	4.1	0.2	1	0	0	1	0



New Project: CRM Clinic

Renal demand growth (baseline 2020)

Forecast – Extra ICHD patients by 2030



Note: Geographic split is for Patients cared for by London Renal Centres so will include some out of area patients e.g. SWL includes Surrey Heartlands patients.



Preventing onset

Preventing progression

Preventing deterioration

Managing end of life

1 Optimise the prevention, detection and management of CKD in the community

2

- a) Integrated cardio-renal-metabolic MDT approach for multi-comorbid patients
- b) Supportive Care
- c) Discharge planning for complex patients

3

People and community engagement, activation and empowerment

Cardio-renal-metabolic MDT for multi-comorbid patients

CKD, diabetes, HF +/- obesity

Patient identification

Patients with chronic kidney disease, diabetes are at highest risk for hospital admission with heart failure

Management plan

The personalised management plan will be designed by a MDT team including a cardiologist, nephrologist, diabetologist, pharmacist and primary care physician. The management plan will include SGLT2i inhibitors, beta blockers, ACEi/ARB, mineralocorticoid receptor antagonist, intravenous iron together with plan for hypertension and diabetes control as per NICE guidance. Once the management plan is set the implementation will involve a pharmacist and nurse in the community with regular blood pressure monitoring and weight monitoring.

Management plan for fluid overload:

If the patient's weight increases >5 kg over 1-4 weeks – they will be offered home treatment with subcutaneous furosemide, another pilot project initiated by SW London Innovations Fund to prevent hospital admission.

Proposal:

- 1 PA weekly Cardiologist
- 1 PA weekly Diabetologist
- 1 PA weekly Nephrologist
- 1 PA weekly Geriatrician
- 1 PA weekly GP
- Pharmacy supervisor 0.2 WTE Band 7/8
- Nurse 0.5 WTE Band 7
- 0.4 WTE admin B5

Outcomes/impact:

- % increase in the number of patients with max RAASI
- % increase in the number of patients on RAASI and SGLT2i
- Documented care plan, including ACP where appropriate
- Reduction in hospital admissions
- Reduction in progression to end stage renal disease
- Improved patient experience
- Reduced outpatient attendances
- Reduced ED attendances
- Improved collaboration between specialties and 1/2 care

Thank you for listening..