

Pre-Dialysis Clinics – Can They Look Different?

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Pre-Dialysis Clinics – Can They Look Different?

Objectives:

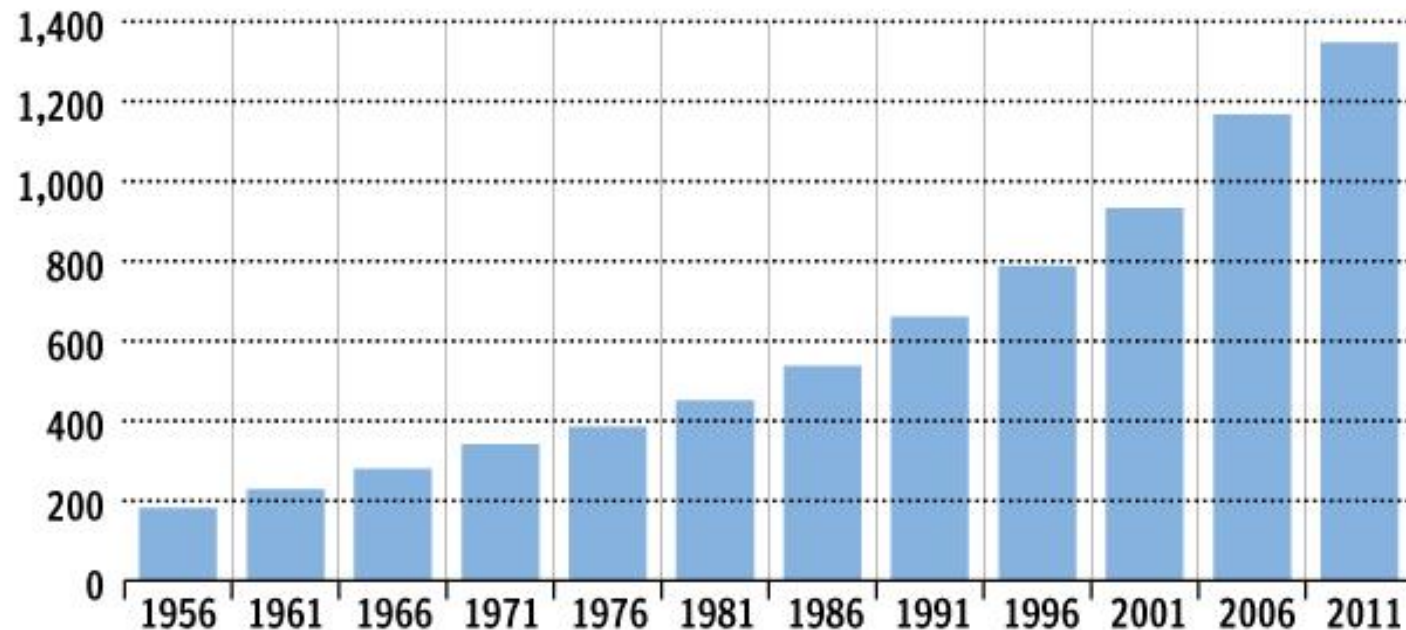
1. The Epidemic
2. Goals of Care - Pre-Dialysis CKD Patient
2. Traditional Model of Pre-Dialysis Care
3. CKD and Comprehensive CDPM

The Epidemic

The Aging Population:

NUMBER OF PERSONS AGED OVER 80 IN CANADA

IN THOUSANDS OF PEOPLE

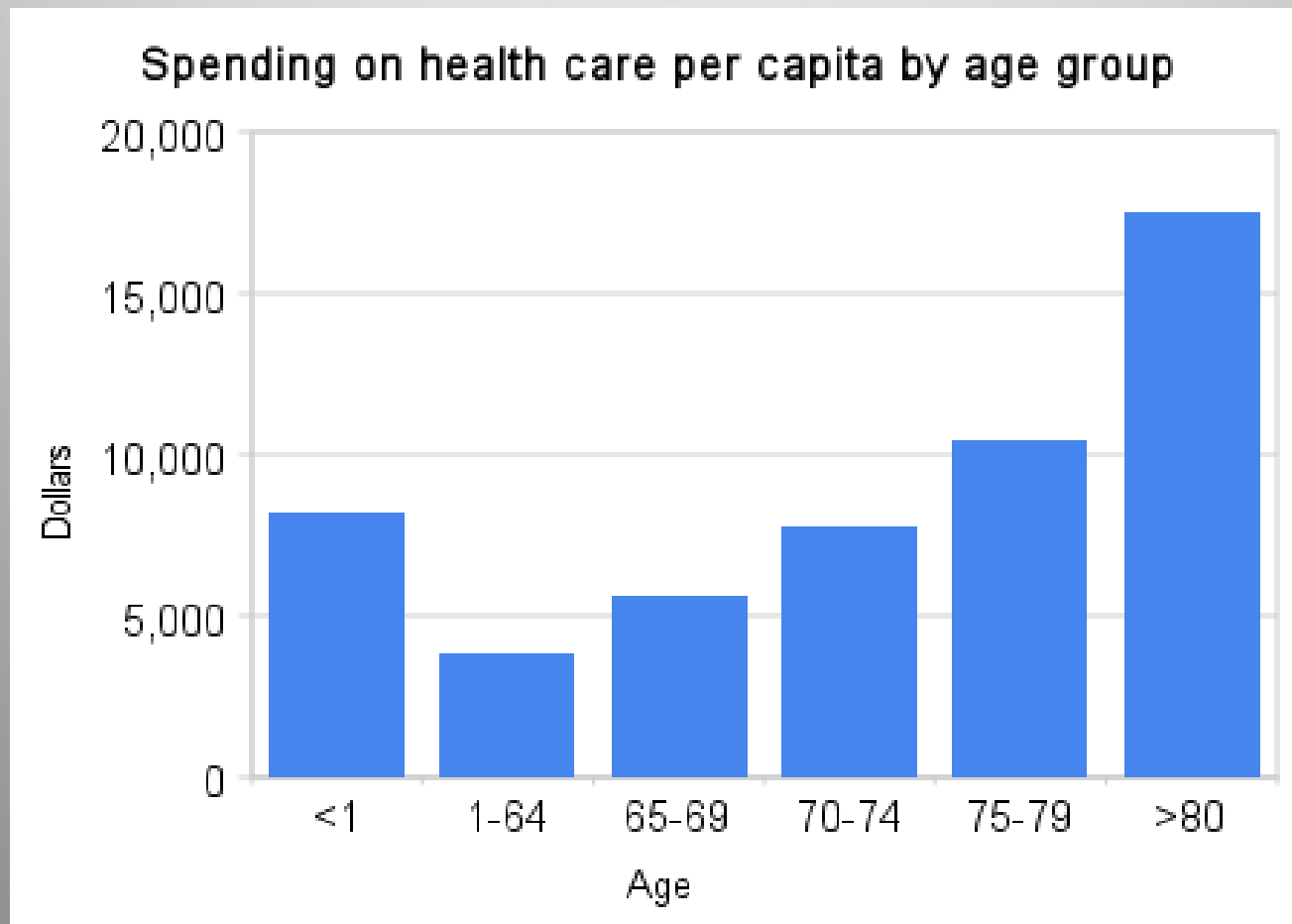


SOURCE: STATISTICS CANADA

NATIONAL POST

The Epidemic

The Aging Population:



The Epidemic

The Aging Population:

Cardiovascular disease is the leading cause of death in Canada, accounting for at least 36% of all deaths or about 80,000 people each year

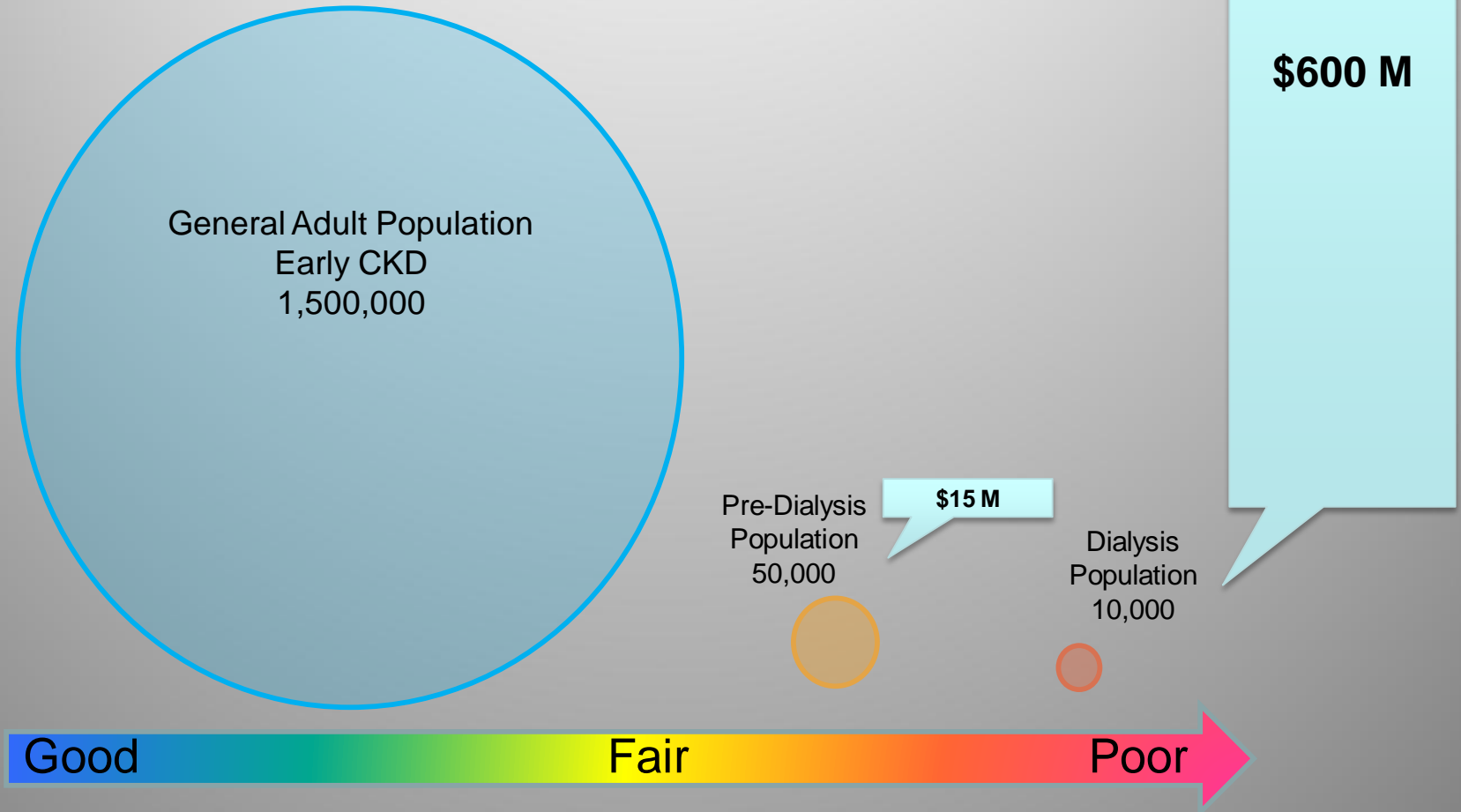
More than 450,000 Canadians were hospitalized for cardiovascular disease in 2000

Cardiovascular disease is the most costly disease affecting Canadians. In 1998, it was responsible for \$18.8 billion in expenditures, 11.8% of the total cost of all illness in Canada

-Canadian Institutes of Health Research (CIHR)

The Epidemic

CKD – Demographics and Cost

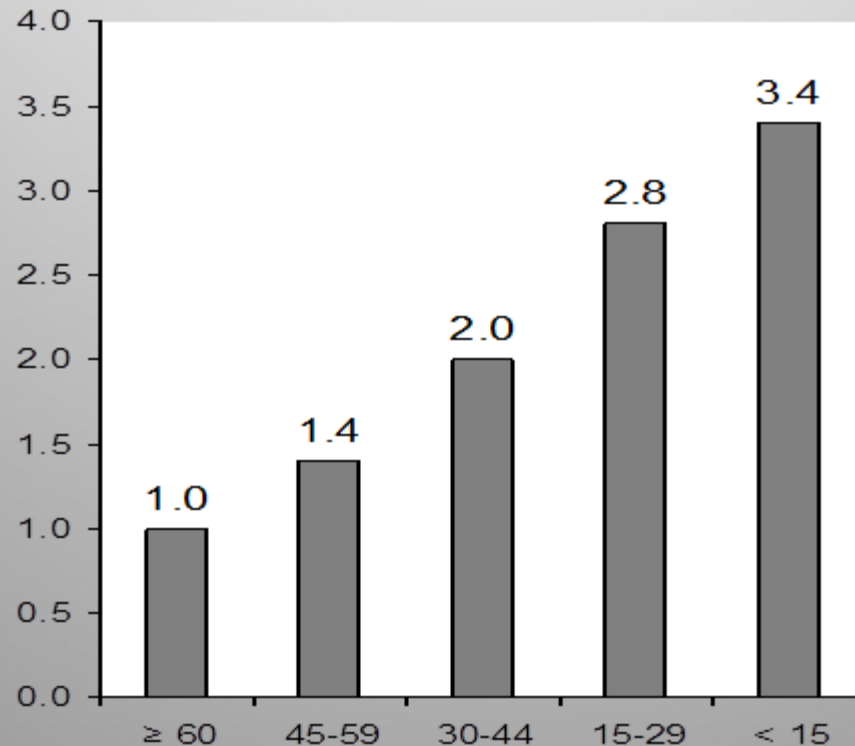


The Epidemic

CKD – Leads to increased CVD



The NEW ENGLAND
JOURNAL of MEDICINE



Adjusted* hazard ratio for CVD events

Go, et al., 2004

Goals of Care - Pre-Dialysis CKD Patient

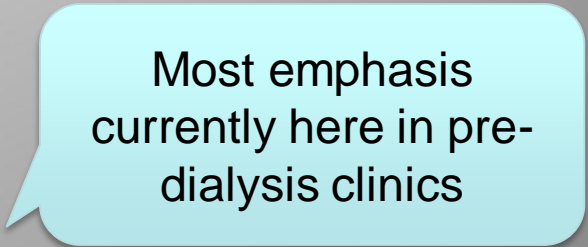
Early Identification

Risk Factor Management

Delay Progression of CKD

Prevent Morbidity and Mortality

RRT Education and Preparation



Most emphasis
currently here in pre-
dialysis clinics

Early Identification and Risk Factor Management

Chronic Kidney Disease

Vast majority of CKD cases are due to DM, HTN and vascular disease - 80% of CKD patients will die of cardiovascular disease

An estimated 2.6 million Canadians have kidney disease, or are at risk

In 2009, there were nearly 38,000 Canadians on renal replacement therapy – more than triple the number in 1990

2.2 billion dollars spent yearly on dialysis in Canada

Early Identification and Risk Factor Management

Vascular Disease

Vascular disease affects virtually every organ system across numerous medical specialties (cardiac, renal, cerebral, peripheral)

Risk factors are multiple – HTN, DM, Dyslipidemia, Smoking, Obesity - and common in our society

Early intervention strategies to prevent and manage risk factors and early chronic disease can have a profound impact on patient outcomes (MAU, Glycemic control, BP targets, Statin studies) – the evidence is overwhelming

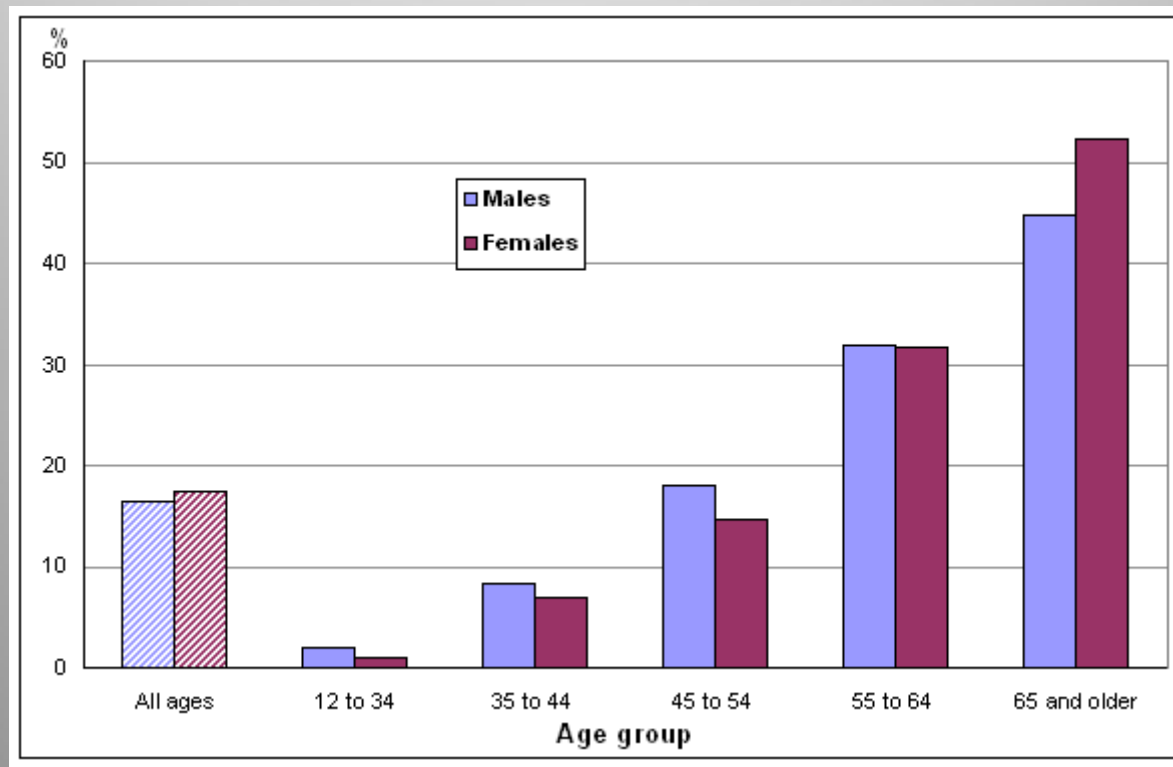
Patients currently must go to multiple different sites for care that tends to be very inter-related

Early Identification and Risk Factor Management

Hypertension

Percentage diagnosed with high blood pressure in Canada – 2009

Source: Canadian Community Health Survey, 2009.



Early Identification and Risk Factor Management

Hypertension

The management of hypertension is all about global risk management and vascular protection

- CHEP 2010

Hypertension is a significant risk factor for:

- cerebrovascular disease
- coronary artery disease
- congestive heart failure
- renal failure
- peripheral vascular disease
- dementia
- atrial fibrillation
- erectile dysfunction

Early Identification and Risk Factor Management

Benefits of Treating Hypertension

Younger than 60 (reducing BP 10/5-6 mmHg)

- reduces the risk of stroke by **42%**
- reduces the risk of coronary event by **14%**

Older than 60 (reducing BP 15/6 mmHg)

- reduces overall mortality by **15%**
- reduces cardiovascular mortality by **36%**
- reduces incidence of stroke by **35%**
- reduces coronary artery disease by **18%**

Older than 60 with isolated systolic hypertension – treating to target

- 42% reduction in the risk of stroke
- 26% reduction in the risk of coronary events

Early Identification and Risk Factor Management

Diabetes and Metabolic

It is estimated that 40 per cent of Canadians with living with diabetes will develop long term complications

Canadian adults living with diabetes are twice as likely to die prematurely than non-diabetics

For people living with type 2 diabetes, life expectancy may be shortened by five to 10 years

Every year, diabetes is a contributing factor in the deaths of some 41,500 Canadians

Early Identification and Risk Factor Management

Diabetes and Metabolic

Diabetes affects more than 800,000 people, or 8.73 per cent of Ontario's population

Approximately 80 per cent of people living with diabetes will die as a result of heart disease or stroke

The financial burden for people living with diabetes is two to three times higher than it is for those without diabetes with direct costs for medications and supplies between \$1,000 and \$15,000 a year

The Canadian Diabetes Association estimates that diabetes and its complications cost the Canadian healthcare system approximately \$13.2 billion every year

- CDA, MOHLTC, Public Health Agency of Canada

Goals of Care - Pre-Dialysis CKD Patient

Early Identification

Risk Factor Management

Delay Progression of CKD

Prevent Morbidity and Mortality

RRT Education and Preparation

Focus needs to shift here more to affect positive outcomes for patients and funding agencies

Still important but to have to do this should be considered a failure!!

Goals of Care - Pre-Dialysis CKD Patient

Increase access to care

Limit Costs of Care of the CKD patient

Shift Care to the Community

Promote Uptake of Home Therapies

Co-ordinate care across providers

Shift to Patient Centred Care

Traditional Model of Pre-Dialysis Care

Regional Hospital Program Based

Multi-Disciplinary – models vary

Cost – pre-dialysis bundles and RRT costs

Parking

Access

Compliance to visits

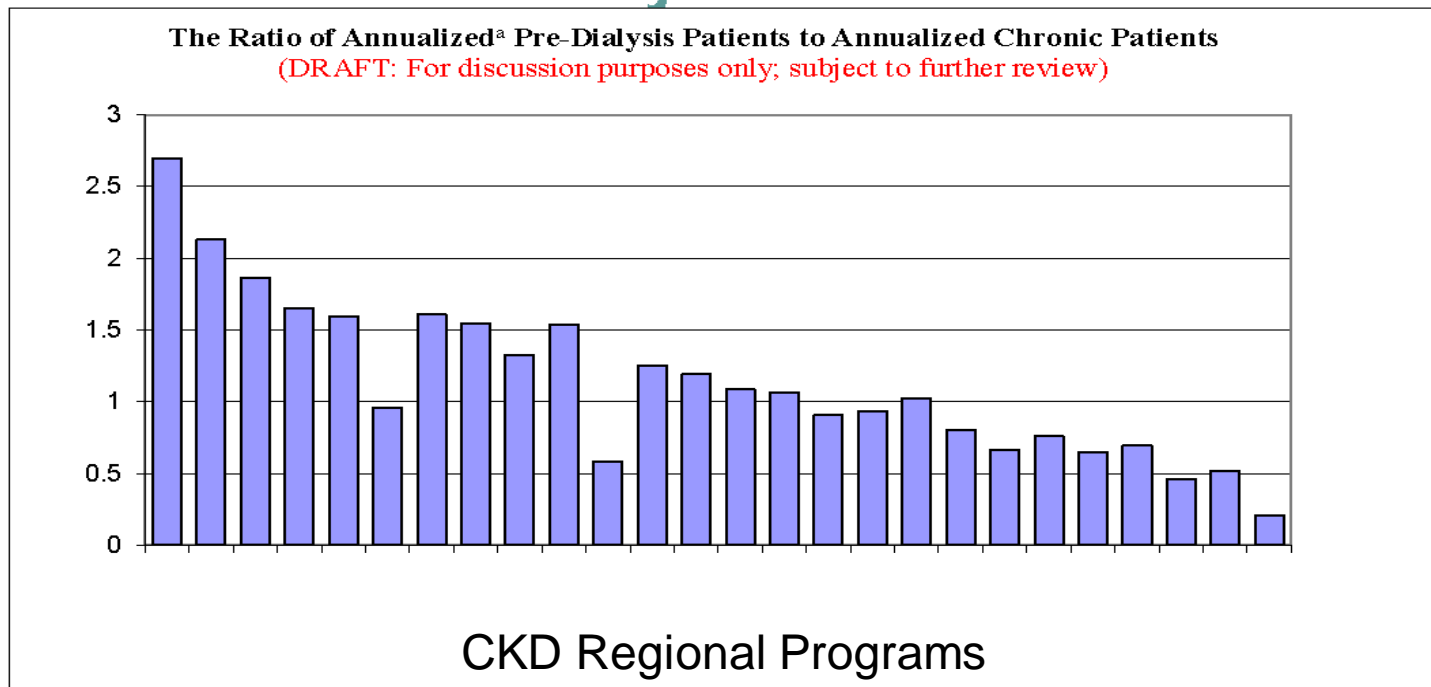
Distance

Outcomes – renal and cardiovascular

Patient Satisfaction vs Preference

Traditional Model of Pre-Dialysis Care

Annualized Pre-Dialysis Patients in Ontario



Notes:

Data Source: FY 2013/14 Reimbursement File as at Q3 (forecasted to year end). Pre-dialysis patients correspond to patients in 'Bundle A' of the file.

^a Annualized Patients as at Q3= Total Number of Days of Pre-Dialysis between April 2013 and December 2013/ 365 days (this number is forecasted to year end)

Traditional Model of Pre-Dialysis Care

Low Home Therapy rates

High Crash Start rates

Suboptimal Body Access rates

High death rates and rates of CVD and hospitalizations

Maybe it's time to think outside of the box!!



CKD and Comprehensive CDPM

The Need:

To increase access to comprehensive CKD and CDPM management in community based settings

The Rationale:

Wellness model – community vs hospital

Enhanced access - attendance and compliance

Reduced cost

Attention to factors leading to CVD, ER visits, hospitalizations

Increase uptake of home therapies

CKD and Comprehensive CDPM

Only survivors cost the system money!!!

Health Care Costs

63 year old male, retired accountant – Diabetes, Hypertension, PVD, CKD, Dyslipidemia presents to ER with chest pain and SOB – January 2010

	<u>Cost (\$)</u>
Myocardial Infarction	10, 000
Coronary Angiogram	10, 000
Coronary Bypass Surgery	10, 000
Dialysis	50, 000
Amputation	50, 000
Stroke	<u>50, 000</u>
Total Acute Care Costs 2010	180,000

Remember...
this is ONE
patient!

CKD and Comprehensive CDPM

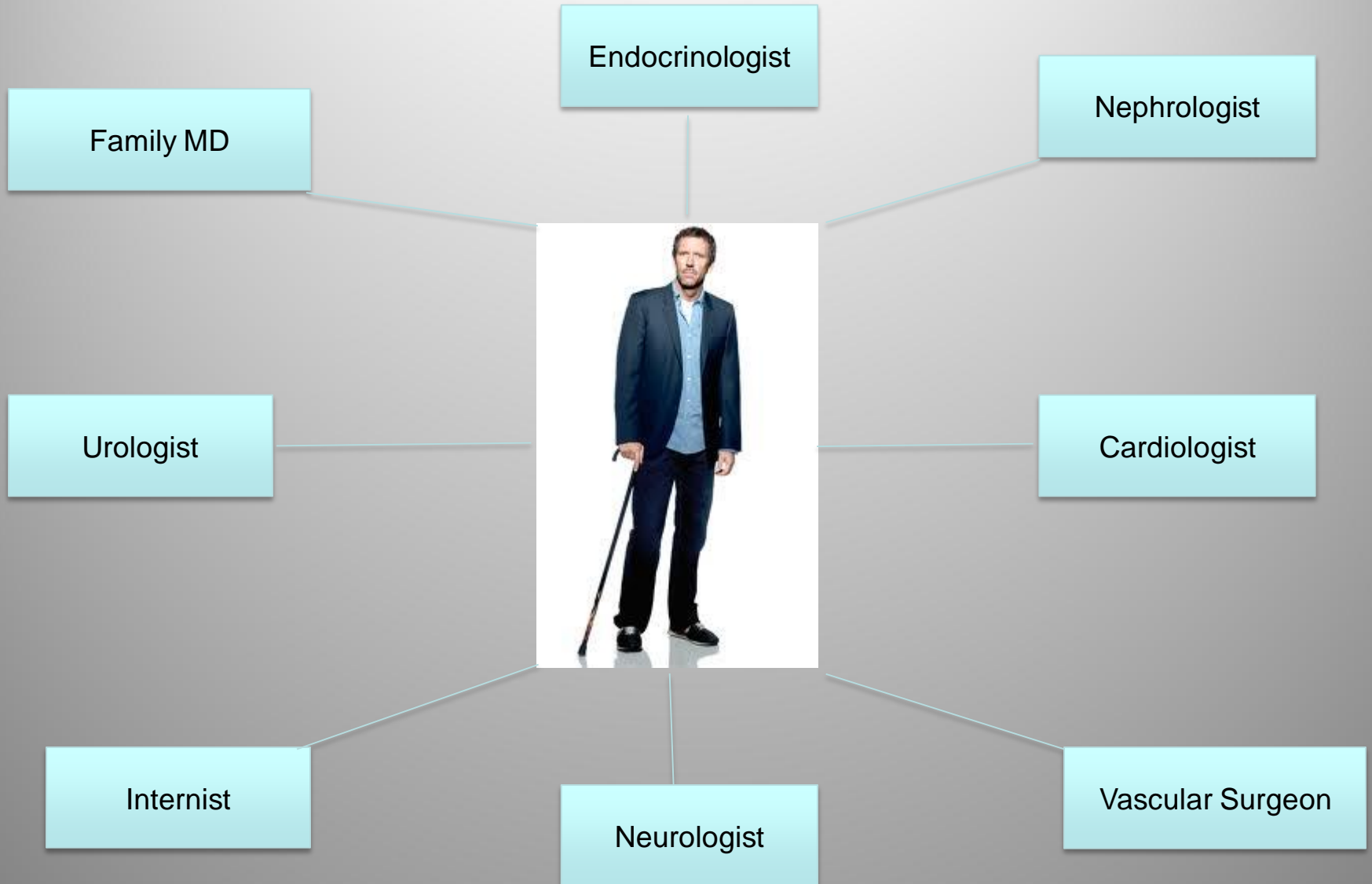
Traditionally lacking in CKD pre-dialysis clinics

May be as important as RRT preparation to patient outcomes

Patient fatigue with multiple appointments

Co-ordination often suboptimal

CKD and Comprehensive CDPM



CKD and Comprehensive CDPM

Multiple Visits

Inaccessible Files

Discontinued
preventative therapy

Duplicate Labs
and Imaging

Increased ER
visits

Poly-pharmacy

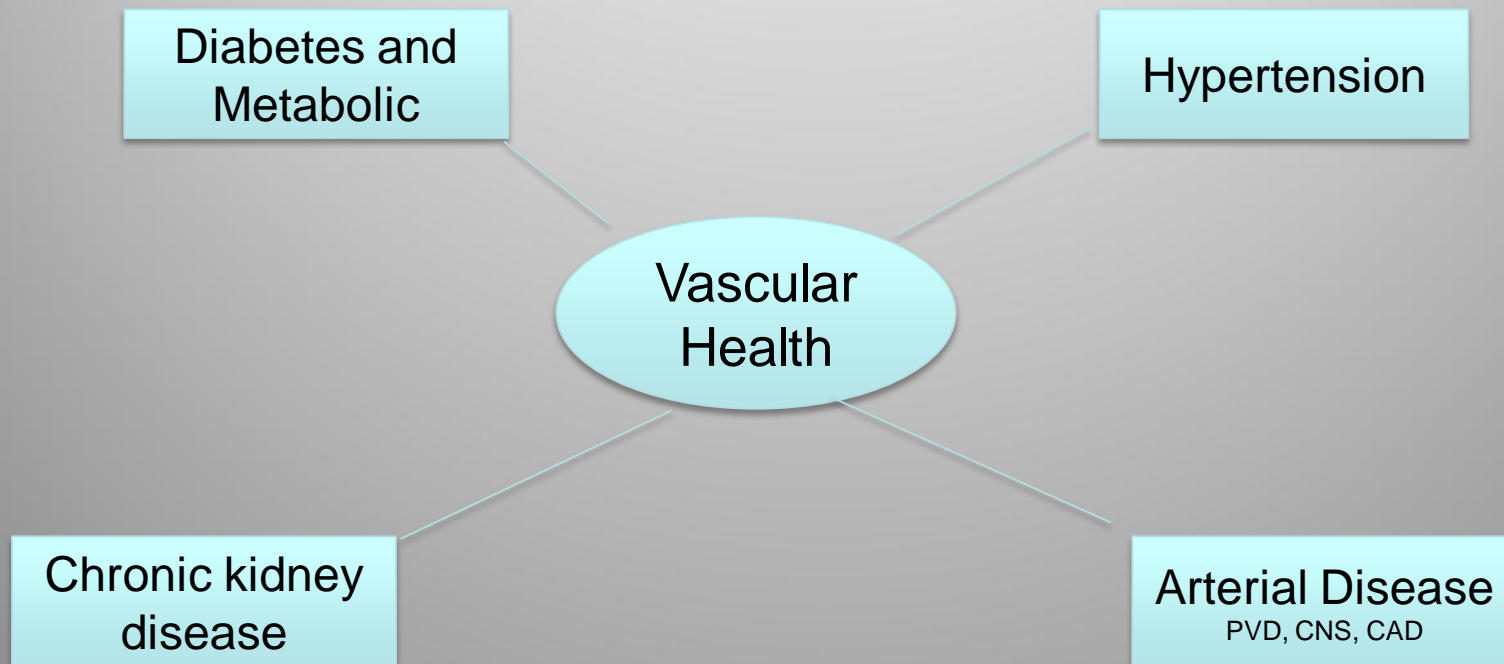
Increased Wait
Times

Increased acute
complications

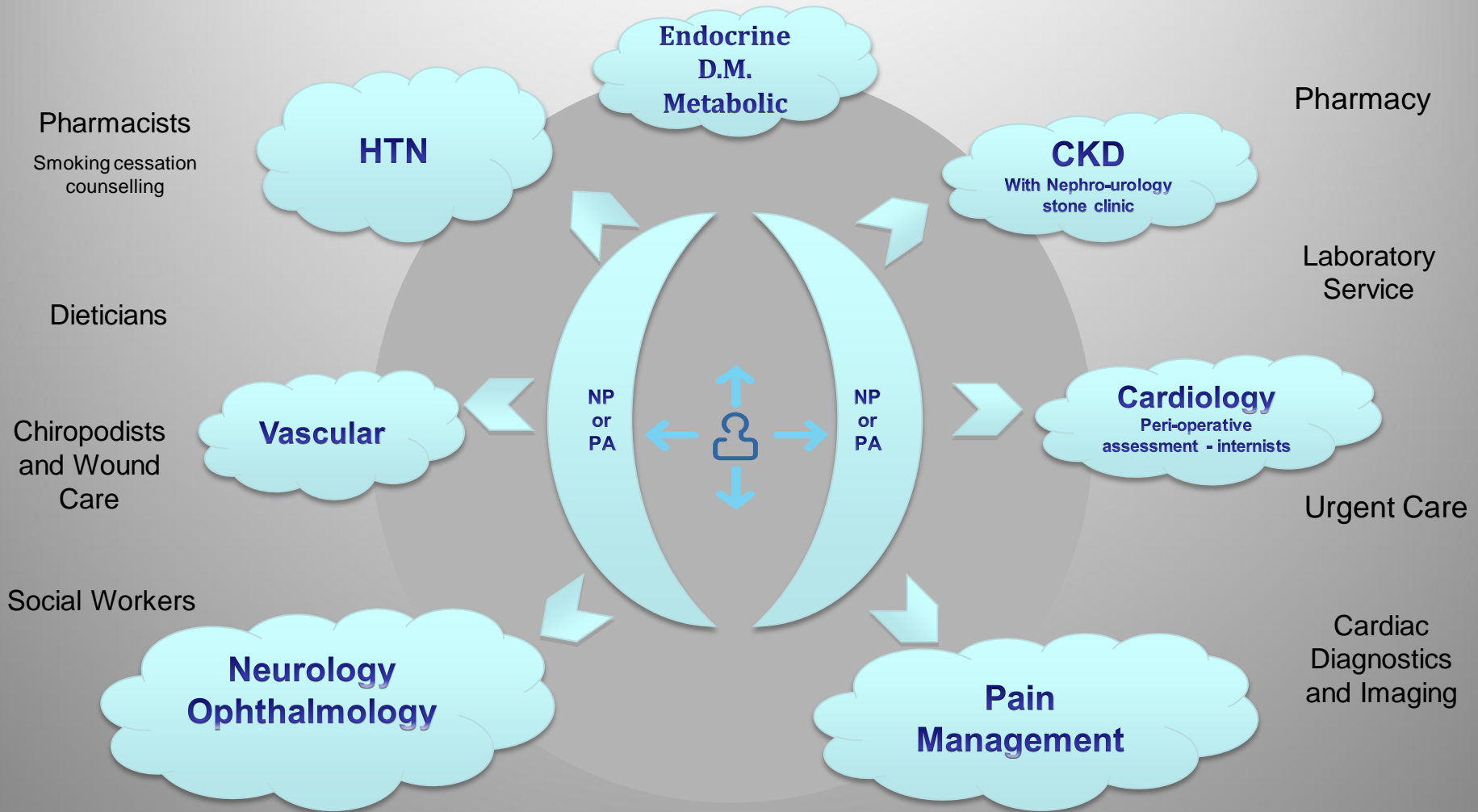


CKD and Comprehensive CDPM

Cornerstones of Care:



CKD and Comprehensive CDPM



CKD and Comprehensive CDPM

Cardiac and Diagnostic Imaging

On-site availability of xray, U/S, and cardiac diagnostics to enhance timely care and management

Laboratory Support

On-site and automatically incorporated into EMR for patient and physician convenience and to reduce duplication

Pharmacy Support

On-site for medication review and reduce medication errors as well as for special drug program access (EPO)

CKD and Comprehensive CDPM

Urgent Care Component

Expanded hours and increased access for sub-acute issues

EMR captures issues and changes in therapy

Co-ordinated care with treating specialists

ER can triage to urgent care centre as appropriate – Reduced strain on ER Dept.

CKD and Comprehensive CDPM

Multi-Disciplinary Services

Essential for providing comprehensive services:

Nurse practitioners/Physician Assistants

Dietitians

Pharmacists

Social Workers

Enterostomal Therapy

Chiropodists

CCAC – PT/OT/nursing

CKD and Comprehensive CDPM

Electronic Medical Record

Co-ordinated care without duplication of tests, consultations

Avoids medication errors

Interdisciplinary communication enhanced for higher quality care

Research opportunities due to uniform database

CKD and Comprehensive CDPM

Advantages

Single EMR – enhanced information sharing

Better co-operation of specialists in care mapping

Less medication errors and adverse drug interactions

Improved adherence to preventative care therapies

Improved Access to timely care

Improved compliance

Promote Wellness – not illness

Prevention of Acute and Chronic Disease

Reduced wait times

Parking Availability

One stop Shopping – single site for allied health care professionals and services

Extended Hours of Operation

Community presence

Research and Teaching opportunities – single data based with enhanced collaboration

CKD and Comprehensive CDPM

