



C R E D I T • V A L L E Y THE CREDIT VALLEY HOSPITAL

A 'Timely Stitch' – Promoting Patient Education in the Early Stages of CKD

The Credit Valley Hospital Experience

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interventions to promote / restore health



Inclusion Criteria



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• Early Renal Nephropathies such as:

- Diabetic Nephropathy
- Nephrosclerosis
- Glomerulonephritis
- Proteinuria (Sub-nephrotic & Nephrotic Range)
- Microalbuminuria
- PKD, SLE, Wegener's, etc.
- CKD stages 1,2 & 3
- Stage 3 if receiving active immunosuppressive therapy (Primary physician model)



Exclusion Criteria





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- Pure hypertension
- Pure renal stone disease
- Pure metabolic disorders
- Advanced CKD followed in PRI Clinic
 - transferred when serum creatinine consistently > 250 (CKD Stages 4 & 5) or GFR reflective of advanced CKD



Nephropathy Clinic



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• Off-site from hospital - adjacent medical building

- Work out of Nephrologists' office space
- Location rationale: provide service to greatest number of potential clients
- Avoids appointment burden 'two birds at one visits'
- MOH<C reimbursement Nephrology Visit: facilitates multi-D (RN, Dietician) component during visit to Nephrologist



Nephropathy Clinic cont'd



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- 6 Nephrologists
- 1-2 RNs per day
- medical secretaries
- Run 3 4 clinics almost every day (Mon-Fri)
- RN may see 80-85% of clinic patients
 - Limitations d/t staffing (FTEs) / space / simultaneous clinics & patient volumes
- RN prioritizes patients according to educational needs



Clinic Philosophy



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 Encourage shift from being passive recipient of care to becoming a willing and knowledgeable active participant

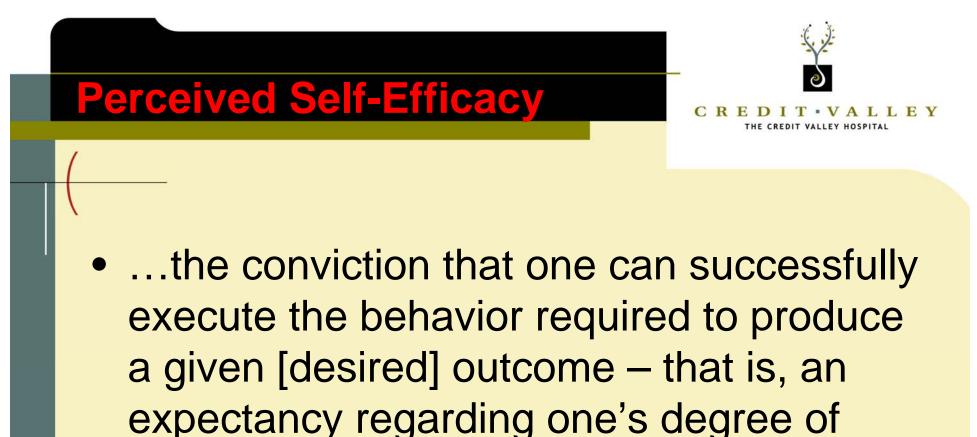
- 1 sense of control & self-efficacy over some aspects of their health/disease
- Caution: Avoid guilt/burden for things beyond the patient's control



Control CREDIT-VALLEY THE CREDIT VALLEY HOSPITAL • Participatory Control: control gained

- Participatory Control: control gained by becoming a dynamic partner
- Locus of control: perception of one's ability to influence or control his/her life
 - internal: consequences of one's own action (origins)
 - external: determined by external forces (pawns)
 - luck, fate, chance, 'powerful others' (Parker, 1984)





personal effectiveness (Bandura 1977)



Primary Focus of Patient Education



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Normal & Abnormal Kidney Function

Renal/Health Risk Factors:

- Hypertension
- Diabetes
- Dyslipidemia
 Smoking
- Stress

Obesity

- Nephrotoxic agents
- Renal Disease and related problems
 - Anemia and bone disease management



Normal & Abnormal Kidney Function



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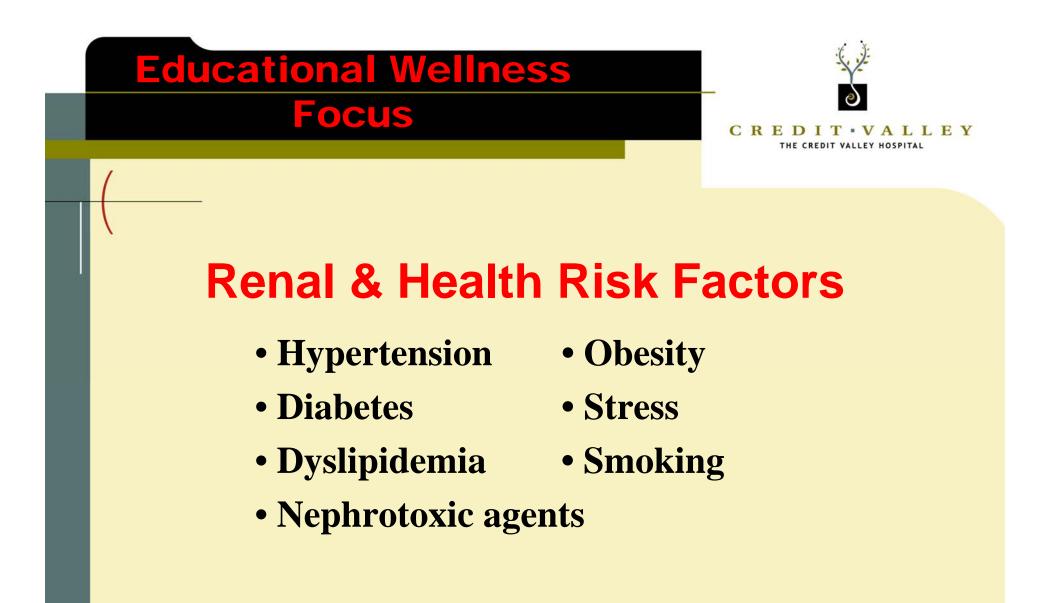
Normal

- BP control
- Fluid Balance
- Waste removal
- Electrolyte balance
- Acid base balance
- Drug excretion/metab
- Hormone production
 - Erythropoietin
 - Vitamin D
 - Renin, etc

Abnormal

- Hypertension
- Fluid retention, Edema
- 1 creat, urea, UA,
- Na / K + alteration
- \downarrow CO ₂ (Acidosis)
- Drug toxicity
- Anemia, Bone Disease, HTN







Hypertension



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Good BP Control

- target < 130/80
- if DM &/or Proteinuria >1Gm/day: target < 125/75</p>
- encourage Home BP monitoring
 - Provide handout to help purchase cuff, Rx & tools to record

Modifiable Risk Factors for HTN

- smoking
- sodium intake
- weight

- stress
- alcohol intake
- exercise/physical activity



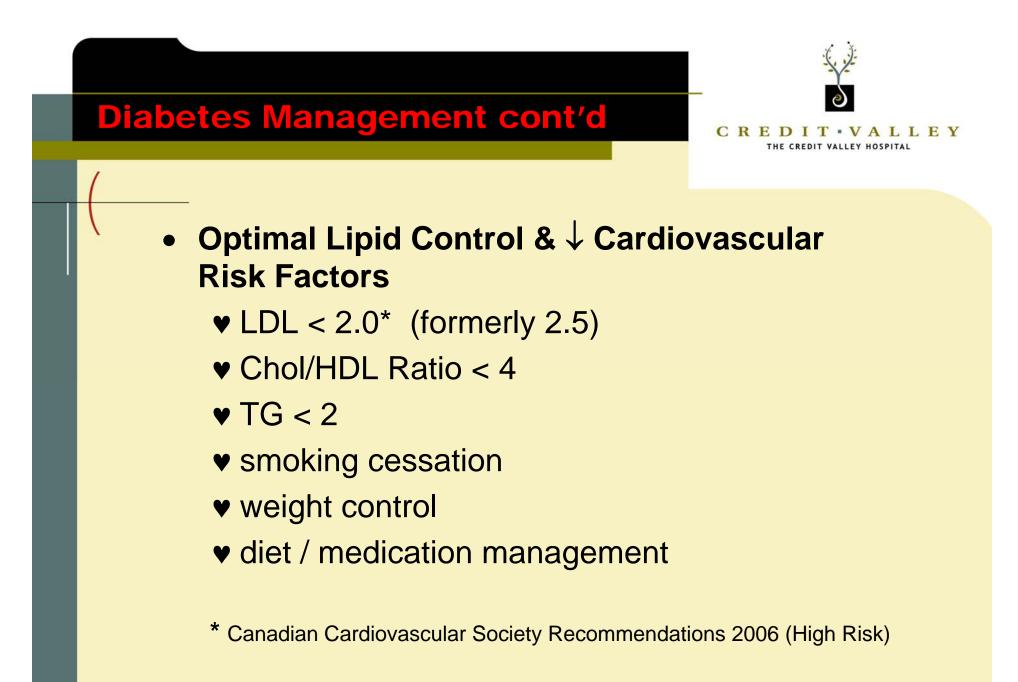
Diabetes Management



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- Optimal Glycemic Control
 - ♦ Hgb A_{1C} level 0.07 0.075 (consistently > 0.8 ♥ DEC referral)
 - Regular home glucose monitoring
- Optimal BP control target < 125/75
 - may require multiple drug therapy
- MAU/Proteinuria monitoring / control
- ACE/ARB renal protective effect & ↓ MAU/PU







Dyslipidemia



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Potential Modifiable component

- \downarrow dietary fats especially saturated & trans FA
- \uparrow fiber (unless precluded by special diet)
- control or \downarrow weight
- limit sugar & alcohol (TG)
- DM: BS control can $\Rightarrow \downarrow$ TG

Non-modifiable component - drug therapy





- Role of obesity in BP control and Renal pathology (FSGS & Glomerulomegaly)
- Strategies for Weight Control / Loss
 - portion control / balanced diet
 - avoid fad diets sensible eating (Canada's Food Guide)
 - eat at regular intervals recognize emotional triggers
 - $-\uparrow$ exercise / physical activity



Stress Management



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• Role of stress management in influencing health (BP, weight, alcohol intake, lipids, DM)

Strategies to manage stress

- recognize signs of stress & identify 'real' cause
- talk with support network of family and friends
- be physically active / develop hobbies
- practice relaxation techniques
- Reframe one's perspective
 - \Rightarrow \uparrow humour, downsize mountains to molehills, focus on positive
- Seek assistance for problems EAP, time management, anxiety &/or anger management, effective communication workshops; assertiveness training; elder care support



Avoiding Exposure to Nephrotoxic Agents





Avoid NSAIDs such as

- Ibuprofen -Advil, Motrin
- Celebrex
- Vioxx
- Mobicox
- Indomethacin
- Large doses of ASA



Other Clinic Education



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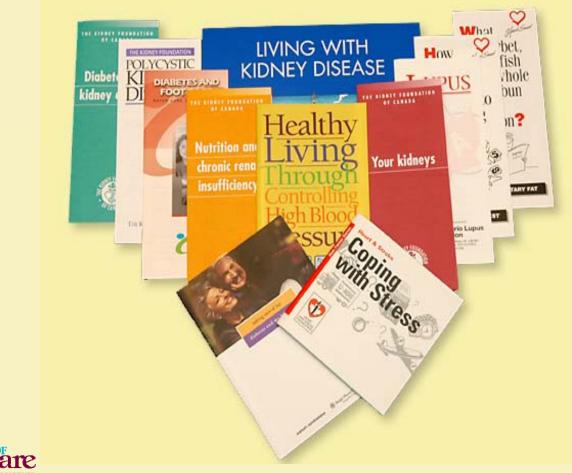
- Medications very important!
- Renal Disease & related problems
 - Anemia management -
 - Eprex / Aranesp teaching
 - Prevention of bone disease
- Augment clinic education with selfhelp tools/information handouts



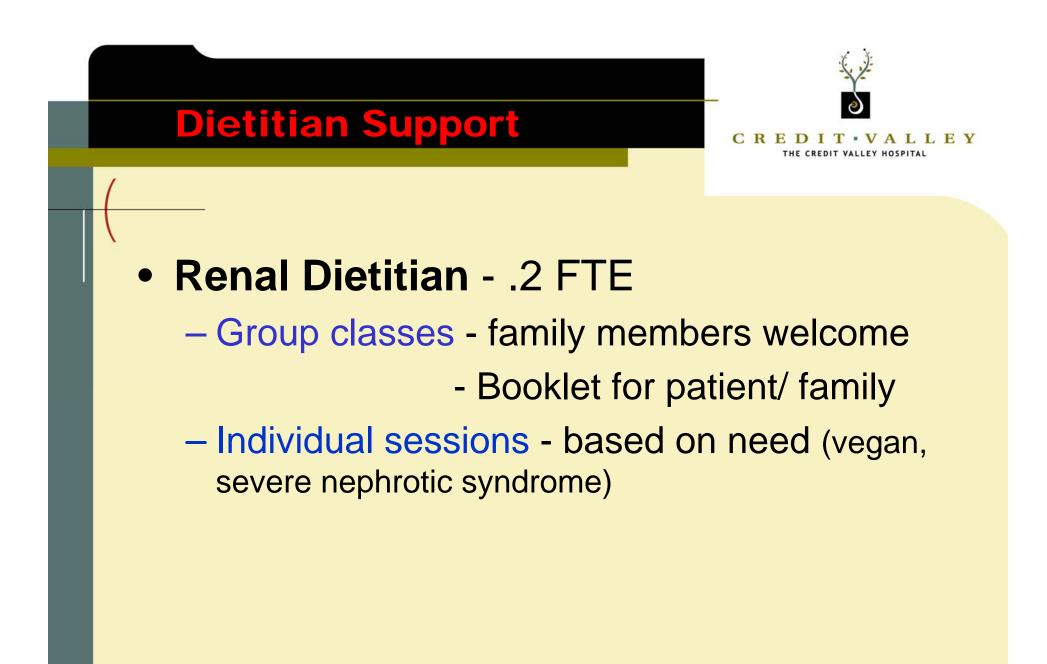
Educational Material



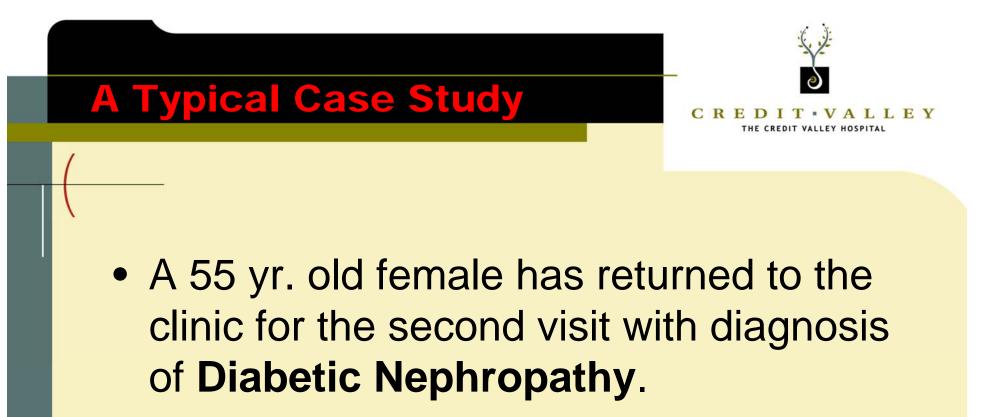
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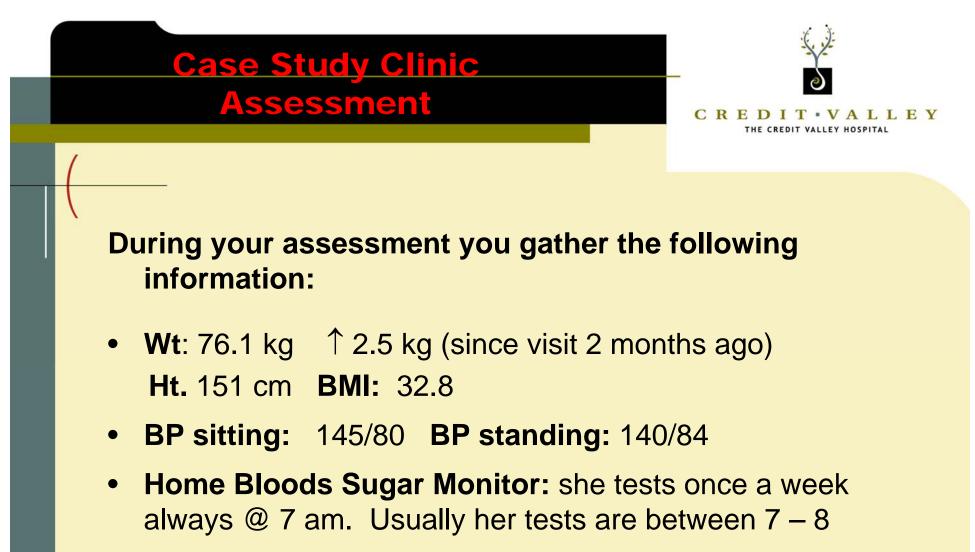






 She has had Type II diabetes for 15 years and has a history of borderline hypertension.





• Edema: 2+ pitting in both lower limbs



Case Study Medications



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• You review her medications with her as follows:

- Diabeta 2.5 mg BID po
- Metformin 500 mg BID po
- She was on Altace 5 mg OD but stopped it after her last visit to her family doctor as he said her blood pressure was fine for a woman her age.



Lab Values



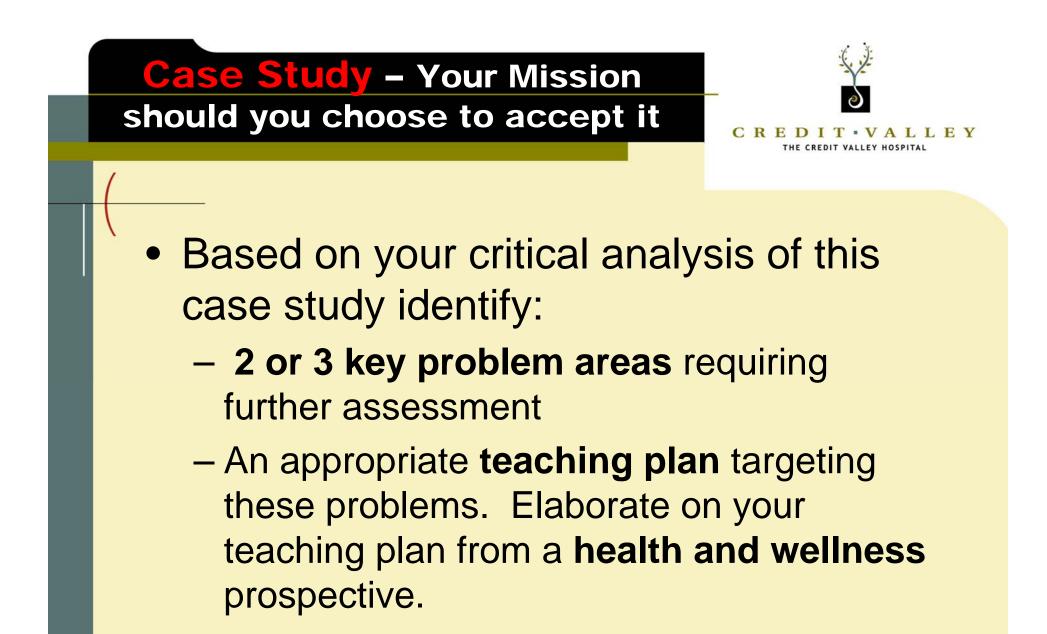
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Normal Range

				Normal Range
•	Hg:	135	g/L	(115 –165)
•	Creatinine:	58	umol/L	(60 - 115)
•	Urea:	2.4	mmol/L	(2.5 - 6.4)
•	Potassium:	5.1	mmol/L	(3.5 - 5.1)
•	HbA _{IC} :	0.09	91	(< 0.07 - 0.075) *
•	Albumin	29	g/L	(37 – 51)
•	Cholesterol	: 6.5	mmol/L	(< 5.2)
•	LDL:	4.7	mmol/L	(< 2.0) *
•	HDL:	0.7	mmol/L	(.77 – 1.68)
•	TG:	5.6	mmol/L	(< 2.0) *
•	24 hr urine	protei	n: 3.6 g/L	(< .18)
•	creatinine c	learar	nce: 2.5 ml/s	(1.24 – 2.08) *

* DM targets

Lifetime of Care





Lab Values – a Second LOOK



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			Normal Range
• Hg:	135	g/L	(115 –165)
Creatinine:	58	umol/L	(60 - 115)
• Urea:	2.4	mmol/L	(2.5 - 6.4)
Potassium:	5.1	mmol/L	(3.5 - 5.1)
• HbA _{IC} :	0.0	91	(< 0.07 - 0.075) *
Albumin	29	g/L	(37 – 51)
Cholesterol	: 6.5	mmol/L	(< 5.2)
• LDL:	4.7	mmol/L	(< 2.0) *
• HDL:	0.7	mmol/L	(.77 – 1.68)
• TG:	5.6	mmol/L	(< 2.0) *
• 24 hr urine	protei	n: 3.6 g/L	(< .18)

• creatinine clearance: 2.5 ml/s (1.24 – 2.08)

* DM targets

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Mission Complete: Educational Areas to Possibly Target



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Glycemic Control

- BP Control
- Role of Altace in BP, PU, & Renal Protection
- Potassium restriction with Altace
- Lipid Control



Lab Values in Review



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•	Hg:	135	g/L
•	Creatinine:	58	umol/L
•	Urea:	2.4	mmol/L
•	Potassium:	5.1	mmol/L
•	HbAIC:	0.09	1
•	Albumin	29	g/L
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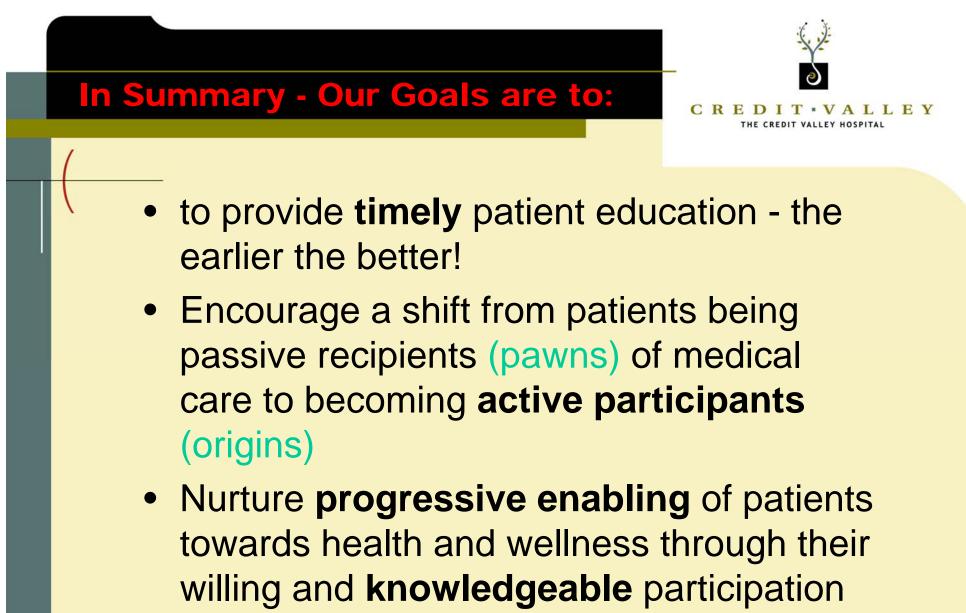
• creatinine clearance: 2.5 ml/s

Normal Range (115 - 165)(60 - 115)(2.5 - 6.4)(3.5 - 5.1)(< 0.07 - 0.075) * (37 - 51)(< 5.2) (<2.0)* (.77 - 1.68)(< 2.0) * (< .18)

(1.24 - 2.08)

* DM targets

Lifetime of Care



in their treatment plan



