TRI-REGIONAL DIALYSIS SYMPOSIUM

May 3rd, 2008

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

The Credit Valley Hospital Experience

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Clinic Focus

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- Health & Wellness promotion
- Patient education regarding
  - lifestyle modifications & medical interventions to promote / restore health

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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 **immuno-suppressive therapy** (Primary physician model)

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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

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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

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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

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Clinic Philosophy

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- Encourage **shift** from being passive recipient of care to becoming a willing and knowledgeable **active participant**
  - ↑ **sense of control** & **self-efficacy** over some aspects of their health/disease

- ***Caution:*** Avoid guilt/burden for things beyond the patient's control

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Control

- **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)

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Perceived Self-Efficacy

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- …the conviction that one can successfully execute the behavior required to produce a given [desired] outcome – that is, an expectancy regarding one's degree of personal effectiveness (Bandura 1977)

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Primary Focus of Patient Education

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- **Normal & Abnormal Kidney Function**
- **Renal/Health Risk Factors:**
  - Hypertension
  - Diabetes
  - Dyslipidemia
  - Nephrotoxic agents
  - Obesity
  - Stress
  - Smoking
- **Renal Disease and related problems**
  - Anemia and bone disease management

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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
- ↑ creat, urea, UA,
- Na / K^+ alteration
- ↓ CO_2 (Acidosis)
- Drug toxicity
- Anemia, Bone Disease, HTN

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Educational Wellness Focus

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Renal & Health Risk Factors

- Hypertension
- Diabetes
- Dyslipidemia
- Nephrotoxic agents
- Obesity
- Stress
- Smoking

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Hypertension

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- **Good BP Control**
  - target < 130/80
  - if DM &/or Proteinuria >1Gm/day: target < 125/75
  - 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

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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

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Diabetes Management cont'd

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- **Optimal Lipid Control & ↓ Cardiovascular Risk Factors**
  - ♥ LDL < 2.0* (formerly 2.5)
  - ♥ Chol/HDL Ratio < 4
  - ♥ TG < 2
  - ♥ smoking cessation
  - ♥ weight control
  - ♥ diet / medication management

* Canadian Cardiovascular Society Recommendations 2006 (High Risk)

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Dyslipidemia

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- **Potential Modifiable component**
  - ♥ ↑ exercise / physical activity
  - ♥ ↓ dietary fats especially saturated & trans FA
  - ♥ ↑ fiber (unless precluded by special diet)
  - ♥ control or ↓ weight
  - ♥ limit sugar & alcohol (TG)
  - ♥ DM: BS control can ⇒ ↓ TG
- **Non-modifiable component** - drug therapy

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Weight Control

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- **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
  - – ↑ exercise / physical activity

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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
    - ⇒ ↑ 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

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Avoiding Exposure to Nephrotoxic Agents

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- Avoid **NSAIDs** such as
    - Ibuprofen -Advil, Motrin
    - Celebrex
    - Vioxx
    - Mobicox
    - Indomethacin
    - Large doses of ASA

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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 **self-help tools/information handouts**

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Educational Material

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Dietitian Support

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- **Renal Dietitian** - .2 FTE
  - Group classes - family members welcome
    - Booklet for patient/ family
  - Individual sessions - based on need (vegan, severe nephrotic syndrome)

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A Typical Case Study

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- A 55 yr. old female has returned to the clinic for the second visit with diagnosis of **Diabetic Nephropathy**.
- She has had **Type II diabetes** for 15 years and has a history of **borderline hypertension**.

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Case Study Clinic Assessment

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During your assessment you gather the following information:

- **Wt**: 76.1 kg ↑ 2.5 kg (since visit 2 months ago)
  Ht. 151 cm **BMI:** 32.8
- **BP sitting:** 145/80 **BP standing:** 140/84
- **Home Bloods Sugar Monitor:** she tests once a week always @ 7 am. Usually her tests are between 7 – 8
- **Edema:** 2+ pitting in both lower limbs

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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.

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Lab Values

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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}:	0.091		(< 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 protein:	3.6	g/L	(< .18)
creatinine clearance:	2.5	ml/s	(1.24 – 2.08)

* DM targets

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Case Study – Your Mission should you choose to accept it

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- Based on your critical analysis of this case study identify:
  - **2 or 3 key problem areas** requiring further assessment
  - An appropriate **teaching plan** targeting these problems. Elaborate on your teaching plan from a **health and wellness** prospective.

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Lab Values – a Second LOOK

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			Normal Range
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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

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Lab Values in Review

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HbAIC:	**0.091**		(< 0.07 - 0.075) *
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* DM targets

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In Summary - Our Goals are to:

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- to provide **timely** patient education - the earlier the better!
- Encourage a shift from patients being passive recipients (pawns) of medical care to becoming **active participants** (origins)
- Nurture **progressive enabling** of patients towards health and wellness through their willing and **knowledgeable** participation in their treatment plan

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She’s finally done!

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THANKS FOR YOUR ATTENTION

Any Questions?

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