All care is taken to ensure that the information in this handbook is correct at the time of going to print.

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OBJECTIVES OF ATTACHMENT

During this attachment, a student is expected to understand:
- The clinical presentation of renal disease, e.g., proteinuria, hypertension, haematuria and uraemia.
- Normal regulation of body water and sodium by the RAAS and ADH and how abnormalities give rise to changes in water and sodium homeostasis.
- Normal values of electrolytes in blood and urine and the clinical sequelae of a derangement in these.
- A basic understanding of the following conditions:
  a. Acute kidney injury (pre-renal, post renal or intrinsic renal)
  b. Chronic kidney disease, focusing on diabetic nephropathy
  c. Glomerulonephritis: nephrotic / nephritic syndrome
  d. Myeloma and the kidney
- The management of acute and chronic renal failure, including preparation for dialysis.
- Impact of renal failure on drug handling.

Be able to:
- Take a full and appropriate current and past medical history.
- Construct a synopsis or problem list based on the clinical assessment of a patient.
- Discuss the range of clinical investigations available and understand how they may be used to inform the differential diagnosis.
- Palpate a renal transplant and native kidney.

<table>
<thead>
<tr>
<th>Ten clinical pearls you should endeavour to do when attached the nephrology service:</th>
<th>1. Feel and auscultate an arteriovenous fistula</th>
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<tbody>
<tr>
<td></td>
<td>2. Observe use of a tunnelled haemodialysis catheter</td>
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<td>3. Palpate a transplant kidney</td>
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<td>4. Assess the volume status of at least 5 patients</td>
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<td>5. Perform a urinalysis</td>
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<td>6. Witness a patient being attached to a haemodialysis machine</td>
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<td>7. Witness a peritoneal dialysis exchange</td>
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<td>8. Assess and present a patient presenting with acute kidney injury</td>
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<td>9. Meet with the anaemia nurse to get an introduction to erythropoietin prescribing</td>
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<td>10. Present a case at Monday teaching rounds</td>
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Teaching structure: 3rd Medical year clinical medicine attachments

Early clinical training is delivered by means of the clinical skills lab and rotations through various medical and surgical specialties for a period of 4 weeks each. In general, 2-3 students will be attached to the Nephrology service at any one time. Your immediate point of contact and mentor during the attachment will be the consult registrar, who manages the inpatient consult service with
a senior house officer. This ensures that your primary exposure is to new inpatient and emergency department referrals with kidney disease. One of the nephrology consultants (Dr Peter Lavin, Dr Catherine Wall, Prof George Mellotte and Prof Mark Little) will be running the on-call service each week and they will have overall responsibility for your teaching during the attachment. You will be expected to present one such case each week at the **Monday morning acid base / electrolyte / kidney disease teaching rounds (see below)**. In addition, you will have the opportunity to attend a range of nephrology outpatient clinics and the haemodialysis unit.

### Acid base / electrolyte / kidney disease teaching rounds

- **Location**: Renal nurses office, dialysis unit, each Monday at 11.30 am for 1 hour
- **Attendees**: All 3rd meds attached to renal, any 5th med attached to renal, interns and SHOs of renal firm
- **NCHD Coordinator**: Consult registrar
- **Consultant Coordinator**: Rotates, usually the consultant on call

1-2 cases to be prepared weekly, 1 covering an acid base or electrolyte disorder referred to the renal team (consult service or inpatient service) and 1 dealing with a kidney disorder (acute kidney injury / glomerular disease / etc). If there is also a final medical year student attached to the service, they should share the case presentations. Cases are to be chosen in discussion with the consult registrar / renal registrar on Osborne Ward no later than the previous Friday afternoon. On the first Monday of the attachment, cases will need to be prepared on Monday morning.

The presentation should include a relevant brief history and results of preliminary investigations. The case should be presented as a diagnostic challenge with information withheld to allow for discussion around potential diagnosis / differentials / further diagnostics and interpretation of same. You will need an up to date medication list for the patient including drugs taken prior to admission / OTCs and drugs discontinued. This list should not be presented until the facilitator questions you regarding drug therapy. One person should present each case and the consultant will review the data and bring the group through the diagnostic process by asking for their input as well as requesting results of further investigations / medications etc. It is therefore essential that not all results are presented at the outset, rather a summary of the problem.

It is not necessary to present these cases electronically – but a typed synopsis of the case to be discussed will be useful for the group. The consultant will use the white board / flip chart to annotate.

**Case example 1**

You are asked to see a 51 year old man with a serum potassium of 6.7mmol/l and sodium of 129mmol/l. He has newly diagnosed inoperable pancreatic neuroendocrine tumour. His creatinine has risen from 60 to 160 over the last 10 days. Can you please see and advise on the likely cause of the above as well as recommend appropriate treatment?

**Case example 2**

You are consulted on a 72 year old woman with worsening leg swelling for the last 3 weeks. The initial working diagnosis was of CCF but her ECHO is normal and BNP is <500. She has a creatinine of 110umol/l and urine dip reveals 2+ protein. She is anaemic with a Hb of 9.7g/dl. Can you please see and advise?
Proposed attachment timetable:

Point of contact: Consult Registrar, pager 3689
Report to the Consult Registrar every Monday and throughout the rotation for direction

Teaching, attendance/tasks during rotation
- Present to Intern
- Present to Registrar
- Present at Monday teaching meeting (Renal nurses office, dialysis unit)
- Present at Tuesday lunchtime MDT meeting (Osborne ward)
- Observe 1 Wednesday Clinic
- Observe 1 Friday Clinic
- Attend On Call with Team

Find out from the consult registrar when the team is on call and organise to do a few hours with the team in the ED

Week 1
Monday: Report to consult registrar, Wards, – teaching meeting
Tuesday: Wards – Present case to Intern, attend lunchtime MDT meeting
Wednesday: Observe transplant clinic
Thursday: Wards
Friday: Wards

Week 2
Monday: Report to consult registrar, Wards, – Present case at teaching meeting
Tuesday: Wards – present case to Intern, attend lunchtime MDT meeting
Wednesday: Wards
Thursday: Wards & present to Registrar
Friday: Wards

Week 3
Monday: Report to consult registrar, Wards – teaching meeting
Tuesday: Wards, attend lunchtime MDT meeting
Wednesday: Wards, Present case to Intern
Thursday: Attend team meeting, Wards
Friday: Attend clinic, wards

Week 4
Monday: Report to consult registrar, Present case at teaching meeting
Tuesday: Wards – Present case to Intern, attend lunchtime MDT meeting
Wednesday: Wards
Thursday: Wards & present to registrar
Friday: Wards, present to consult registrar for sign off
Reading List and Websites

Comprehensive Clinical Nephrology, 2nd edition. ISBN 0723432589 · Mosby · Published July 2003

http://www.renal.org/
http://www.kdigo.org/