



# MEDS20007 Advanced Paediatric Ultrasound

## Term 2 - 2018

Profile information current as at 29/04/2024 05:32 pm

All details in this unit profile for MEDS20007 have been officially approved by CQUniversity and represent a learning partnership between the University and you (our student). The information will not be changed unless absolutely necessary and any change will be clearly indicated by an approved correction included in the profile.

### General Information

#### Overview

This unit will enable you to gain knowledge concerning the performance of paediatric ultrasound, including cardiac assessment. You will develop the advanced knowledge and skills required to interpret the clinical signs, symptoms and diagnostic test results associated with complex pathophysiological conditions in the paediatric patient. Comparison of imaging, prognosis and treatment options will be undertaken within an ethical framework of family-centered practice and patient safety. To evaluate existing and emerging technology, diagnostic parameters and radiological interventions in paediatric ultrasound you will undertake a review of the relevant literature in an area of your choice. Please note that you will be required to have clinical access to paediatric patients in order to undertake and review a number of clinical cases.

#### Details

Career Level: *Postgraduate*

Unit Level: *Level 9*

Credit Points: 6

Student Contribution Band: 8

Fraction of Full-Time Student Load: 0.125

#### Pre-requisites or Co-requisites

There are no requisites for this unit.

Important note: Students enrolled in a subsequent unit who failed their pre-requisite unit, should drop the subsequent unit before the census date or within 10 working days of Fail grade notification. Students who do not drop the unit in this timeframe cannot later drop the unit without academic and financial liability. See details in the [Assessment Policy and Procedure \(Higher Education Coursework\)](#).

#### Offerings For Term 2 - 2018

- Distance

#### Attendance Requirements

All on-campus students are expected to attend scheduled classes – in some units, these classes are identified as a mandatory (pass/fail) component and attendance is compulsory. International students, on a student visa, must maintain a full time study load and meet both attendance and academic progress requirements in each study period (satisfactory attendance for International students is defined as maintaining at least an 80% attendance record).

#### Website

[This unit has a website, within the Moodle system, which is available two weeks before the start of term. It is important that you visit your Moodle site throughout the term. Please visit Moodle for more information.](#)

## Class and Assessment Overview

### Recommended Student Time Commitment

Each 6-credit Postgraduate unit at CQUniversity requires an overall time commitment of an average of 12.5 hours of study per week, making a total of 150 hours for the unit.

### Class Timetable

#### [Regional Campuses](#)

Bundaberg, Cairns, Emerald, Gladstone, Mackay, Rockhampton, Townsville

#### [Metropolitan Campuses](#)

Adelaide, Brisbane, Melbourne, Perth, Sydney

### Assessment Overview

#### 1. **Portfolio**

Weighting: 50%

#### 2. **Written Assessment**

Weighting: 50%

### Assessment Grading

This is a graded unit: your overall grade will be calculated from the marks or grades for each assessment task, based on the relative weightings shown in the table above. You must obtain an overall mark for the unit of at least 50%, or an overall grade of 'pass' in order to pass the unit. If any 'pass/fail' tasks are shown in the table above they must also be completed successfully ('pass' grade). You must also meet any minimum mark requirements specified for a particular assessment task, as detailed in the 'assessment task' section (note that in some instances, the minimum mark for a task may be greater than 50%). Consult the [University's Grades and Results Policy](#) for more details of interim results and final grades.

## CQUniversity Policies

**All University policies are available on the [CQUniversity Policy site](#).**

You may wish to view these policies:

- Grades and Results Policy
- Assessment Policy and Procedure (Higher Education Coursework)
- Review of Grade Procedure
- Student Academic Integrity Policy and Procedure
- Monitoring Academic Progress (MAP) Policy and Procedure – Domestic Students
- Monitoring Academic Progress (MAP) Policy and Procedure – International Students
- Student Refund and Credit Balance Policy and Procedure
- Student Feedback – Compliments and Complaints Policy and Procedure
- Information and Communications Technology Acceptable Use Policy and Procedure

This list is not an exhaustive list of all University policies. The full list of University policies are available on the [CQUniversity Policy site](#).

## Previous Student Feedback

### Feedback, Recommendations and Responses

Every unit is reviewed for enhancement each year. At the most recent review, the following staff and student feedback items were identified and recommendations were made.

#### Feedback from Feedback

##### **Feedback**

It covered a wide range of clinical areas prompting further learning.

##### **Recommendation**

More clinical case discussions and real life scenarios included

#### Feedback from Feedback

##### **Feedback**

Tutorials / power point presentations and recorded lectures are good resources.

##### **Recommendation**

Keep up the lectures and make them more clinically relevant and exciting

#### Feedback from Feedback

##### **Feedback**

Assessment 2 portfolio seemed equally or more involved than Assessment 3. Consider the individual assessment percentages in respect to the overall unit assessment percentage.

##### **Recommendation**

Assessment 2 will be made shorter and simpler in proportion to assessment 3 in the next offering to justify lesser weightage.

#### Feedback from Feedback

##### **Feedback**

Compatibility issues with Echo videos when Windows 10 is used to download

##### **Recommendation**

This is an ongoing issue and ITD has been contacted. Maybe youtube videos can be used instead of echo and will be trialed in next offering

## Unit Learning Outcomes

### **On successful completion of this unit, you will be able to:**

1. Differentiate the clinical appearance, aetiology and outcomes of advanced ultrasound assessment of paediatric and congenital disease, including echocardiographic views of the paediatric heart.
2. Evaluate the physiology, pathophysiology and pharmacological factors relevant to diagnostic and therapeutic procedures in the paediatric patient.
3. Evaluate and present information concerning existing and emerging technology, diagnostic parameters and radiological interventions in a chosen area of paediatric ultrasound based on a review of relevant literature.
4. Apply practical skills and critical thinking to advanced clinical assessment and reporting of the paediatric patient.

This masters unit does not lead to entry into the sonography profession. It is for advanced practice by qualified practitioners. As such it does not require external accreditation but we will be seeking approval for the course from the accrediting body, the ASAR.

## Alignment of Learning Outcomes, Assessment and Graduate Attributes

|   |  |  |  |  |  |
|---|--|--|--|--|--|
|  N/A Level |  Introductory Level |  Intermediate Level |  Graduate Level |  Professional Level |  Advanced Level |
|---|--|--|--|--|--|

### Alignment of Assessment Tasks to Learning Outcomes

| Assessment Tasks             | Learning Outcomes |   |   |   |
|------------------------------|-------------------|---|---|---|
|                              | 1                 | 2 | 3 | 4 |
| 1 - Portfolio - 50%          | •                 | • |   | • |
| 2 - Written Assessment - 50% | •                 | • | • |   |

### Alignment of Graduate Attributes to Learning Outcomes

| Graduate Attributes                                | Learning Outcomes |   |   |   |
|--|-------------------|---|---|---|
|  | 1                 | 2 | 3 | 4 |
| 1 - Knowledge                                      | ○                 | ○ | ○ | ○ |
| 2 - Communication                                  | ○                 | ○ | ○ | ○ |
| 3 - Cognitive, technical and creative skills       | ○                 | ○ | ○ | ○ |
| 4 - Research                                       |                   | ○ | ○ |   |
| 5 - Self-management                                |                   |   |   | ○ |
| 6 - Ethical and Professional Responsibility        |                   |   | ○ | ○ |
| 7 - Leadership                                     |                   |   |   |   |
| 8 - Aboriginal and Torres Strait Islander Cultures |                   |   |   |   |

### Alignment of Assessment Tasks to Graduate Attributes

| Assessment Tasks             | Graduate Attributes |   |   |   |   |   |   |   |
|------------------------------|---------------------|---|---|---|---|---|---|---|
|                              | 1                   | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 - Portfolio - 50%          | ○                   | ○ | ○ |   | ○ | ○ |   |   |
| 2 - Written Assessment - 50% | ○                   | ○ | ○ | ○ |   | ○ |   |   |

## Textbooks and Resources

### Textbooks

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#### Supplementary

##### **A Practical Guide to Fetal Echocardiography: Normal and Abnormal Hearts**

Edition: 3rd (2016)

Authors: Alfred Z. Abuhamad, Rabih Chaoui

Wolters Kluwer

Philadelphia , PA , USA

ISBN: 978-1451176056

Binding: Paperback

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#### Supplementary

##### **Paediatric Ultrasound A Practical Guide**

Edition: 1st (2013)

Authors: Allison Holly

Allison Holley Consulting

Sydney , NSW , Australia

ISBN: 9780987526021

Binding: Paperback

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#### Supplementary

##### **Pediatric Ultrasound - How, Why and When**

Edition: 2nd (2010)

Authors: Rose De Bruyn

Churchill Livingstone Elsevier

Sydney , NSW , Australia

ISBN: 978-0443069178

Binding: Paperback

#### Additional Textbook Information

These textbooks are highly recommended, but not essential. \*\*Allison Holley's text can be ordered direct from her website\*\*\*

### IT Resources

#### **You will need access to the following IT resources:**

- CQUniversity Student Email
- Internet
- Unit Website (Moodle)
- Webcam and Microphone

## Referencing Style

All submissions for this unit must use the referencing style: [Vancouver](#)

For further information, see the Assessment Tasks.

## Teaching Contacts

**Aamer Aziz** Unit Coordinator

[a.aziz@cqu.edu.au](mailto:a.aziz@cqu.edu.au)

## Schedule

### Week 1 - Welcome and basics - 09 Jul 2018

| Module/Topic   | Chapter                           | Events and Submissions/Topic  |
|--|-----------------------------------|---|
| <b>Welcome</b> to paediatric sonography.   |                                   |   |
| <b>Basics and general issues.</b><br>Appointments, waiting area, examination.  |                                   | <b>Case 1</b> posted online on Monday 09/07/18 9:00 am AEST   |
| <b>Special procedures and equipment.</b><br>Choosing equipment, Doppler, occupational injuries, image recording, new applications, safety. | Lectures and notes on Moodle site | <b>Quiz 1</b> opens on Friday 13/07/18 at 9:00 am and will be open till Friday 05/10/18 5:00 pm AEST. The quiz is for testing your own knowledge and is non-assessable. |

### Week 2 - Urinary Tract - 16 Jul 2018

| Module/Topic  | Chapter                           | Events and Submissions/Topic   |
|---|-----------------------------------|--|
| <b>The Urinary Tract:</b><br>Embryology / Anomalies, Prenatal renal pelvis dilatation, UTI, Cystic kidneys, "Bright" kidney, Calculi / nephrocalcinosis, Hypertension, Trauma, Tumours. | Lectures and notes on Moodle site | <b>Zoom Tutorial</b> - Wednesday 18/07/2018 - 7:00 pm AEST - one hour duration<br>(the Zoom tutorials will discuss the case from the previous week, current week's topics and any other topic or questions)<br><br>Discuss the topic for your written assessment with unit coordinator |

### Week 3 - Hepatobiliary - 23 Jul 2018

| Module/Topic  | Chapter                           | Events and Submissions/Topic   |
|---|-----------------------------------|--|
| <b>The Liver:</b> Liver embryology/anatomy, Neonatal liver, Cystic dilatation of biliary system, Diffuse abnormalities, Focal lesions, Gallbladder / bile ducts |                                   | <b>Case 2</b> posted online on Monday 23/7/18 9:00 am AEST   |
| <b>Spleen:</b> Normal spleen, congenital variants, splenomegaly, small spleen, focal lesions, trauma.   | Lectures and notes on Moodle site | <b>Quiz 2</b> on Friday 27/7/18 at 9:00 am and will be open till Friday 05/10/18 5:00 pm AEST. The quiz is for testing your own knowledge and is non-assessable. |
| <b>Pancreas:</b> Congenital anomalies, cystic fibrosis, diffuse conditions, focal lesions.  |                                   |  |

### Week 4 - Abdomen and gut - 30 Jul 2018

| Module/Topic  | Chapter                           | Events and Submissions/Topic   |
|---|-----------------------------------|--|
| <b>The Abdomen and Bowel including duodenum.</b><br>Developmental abnormalities/embryology, body wall defects, GORD, HPS, stomach conditions, malrotation, duplication, intussusception, appendix, bowel wall thickening, anorectal anomalies, cystic masses.<br>Mesentery, omentum and peritoneum. | Lectures and notes on Moodle site | <b>Zoom Tutorial</b> - Wednesday 01/08/2018 - 7:00 pm AEST - one hour duration |

### Week 5 - Female Reproductive System - 06 Aug 2018

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

**The Female Reproductive System:**

Embryology, normal appearances, congenital abnormalities, neonatal masses, ambiguous genitalia, ovarian cysts.

Precocious puberty, isolated premature thelarche, adrenarchy, puberty delay, menstrual dysfunction  
Ovarian neoplasms.

Lectures and notes on Moodle site

**Case 3** posted online on Monday 06/08/18 9:00 am AEST

**Quiz 3** on Friday 10/08/18 at 9:00 am and will be open till Friday 05/10/18 5:00 pm AEST. The quiz is for testing your own knowledge and is non-assessable.

**Vacation Week - 13 Aug 2018****Module/Topic****Chapter****Events and Submissions/Topic**

Enjoy the brief vacation week - but don't forget to keep working.

**Week 6 - The Scrotum - 20 Aug 2018****Module/Topic****Chapter****Events and Submissions/Topic****The Scrotum and Testes:**

Embryology. Congenital anomalies, cryptorchidism, hernias and hydroceles, varicocele.

Painful scrotum: torsion, epididymo-orchitis, appendicular torsion.

Microlithiasis

Tumours

Extratesticular masses

Trauma

Lectures and notes on Moodle site

**Zoom Tutorial** - Wednesday

22/08/2018 - 7:00 pm AEST - one hour duration

**Week 7 - The Spine - 27 Aug 2018****Module/Topic****Chapter****Events and Submissions/Topic****The Neck and Spine:**

**Thyroid gland:** anatomy, embryology, congenital anomalies, diffuse enlargement, malignancy. Parathyroid glands. Neck masses: thyroglossal cyst, branchial cleft anomaly, cystic hygroma, torticollis, lymphadenopathy, thymus, parotid.

**Spine:** anatomy/embryology, dysraphism, sacral pit, dorsal dermal sinus, diastematomyelia, lipoma, tight filum terminale, meningocele, caudal regression, trauma.

Lectures and notes on Moodle site

**Case 4** posted online on Monday 27/08/18 9:00 am AEST

**Quiz 4** on Friday 31/08/18 at 9:00 am and will be open till Friday 05/10/18 5:00 pm AEST. The quiz is for testing your own knowledge and is non-assessable.

**Week 8 - The Brain - 03 Sep 2018****Module/Topic****Chapter****Events and Submissions/Topic****The Brain:**

Measurements, normal anatomy/embryology, intracranial hemorrhage, periventricular leukomalacia, congenital cystic abnormalities, trauma, hydrocephalous, vascular abnormalities.

Lectures and notes on Moodle site

**Zoom Tutorial** - Wednesday

05/09/2018 - 7:00 pm AEST - one hour duration

**Week 9 - MSK - 10 Sep 2018****Module/Topic****Chapter****Events and Submissions/Topic**

**The Musculoskeletal System:**

Developmental dysplasia of hip, Graf technique.

Osteomyelitis.

Transient synovitis

Tendon abnormalities

Soft tissue masses.

Lectures and notes on Moodle site

**Case 5** posted online on Monday 10/09/18 9:00 am AEST

**Quiz 5** on Friday 14/09/18 at 9:00 am and will be open till Friday 05/10/18 5:00 pm AEST. The quiz is for testing your own knowledge and is non-assessable.

**Portfolio** Due: Week 9 Friday (14 Sept 2018) 5:00 pm AEST

**Week 10 - Interventional US - 17 Sep 2018**

| Module/Topic   | Chapter                           | Events and Submissions/Topic   |
|--|-----------------------------------|--|
| <b>Paediatric interventional ultrasound:</b><br>Anesthesia<br>Venous access<br>Biopsy: renal, liver, others<br>Aspiration and drainage<br>Sclerotherapy<br>Urological intervention | Lectures and notes on Moodle site | <b>Zoom Tutorial</b> - Wednesday 19/09/2018 - 7:00 pm AEST - one hour duration |

**Week 11 - Echocardiography - 24 Sep 2018**

| Module/Topic  | Chapter                           | Events and Submissions/Topic   |
|---|-----------------------------------|--|
| <b>Paediatric Echocardiography:</b><br>Hypoplastic Left Heart Syndrome (HLHS), Pulmonary Atresia (PA), Tetralogy of Fallot (ToF), Total Anomalous Pulmonary Venous Return (TAPVR), Transposition of Great Arteries (ToA), Tricuspid Atresia (TA), Truncus Arteriosus/Common Arterial Trunk (CAT), Coarctation of Aorta (CoA). | Lectures and notes on Moodle site | <p><b>Case 6</b> posted online on Monday 24/09/18 9:00 am AEST</p> <p><b>Quiz 6</b> on Friday 28/09/18 at 9:00 am and will be open till Friday 05/10/18 5:00 pm AEST. The quiz is for testing your own knowledge and is non-assessable.</p> <p><b>Written Assessment</b> Due: Week 11 Friday (28 Sept 2018) 5:00 pm AEST</p> |

**Week 12 - Echocardiography - 01 Oct 2018**

| Module/Topic   | Chapter                           | Events and Submissions/Topic   |
|--|-----------------------------------|--|
| <b>Paediatric Echocardiography:</b><br>Anesthesia, Double Outlet Right Ventricle (DORV), Ebstein's Anomaly (EA), Single Ventricle and Hypoplastic Right Heart Syndrome (SV&HRHS), Interrupted Aortic Arch. | Lectures and notes on Moodle site | <b>Zoom Tutorial</b> - Wednesday 03/10/2018 - 7:00 pm AEST - one hour duration |

**Review/Exam Week - 08 Oct 2018**

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|

**Exam Week - 15 Oct 2018**

| Module/Topic | Chapter | Events and Submissions/Topic |
|--------------|---------|------------------------------|
|--------------|---------|------------------------------|



## Term Specific Information

Access to the internet is required to undertake this unit, as unit materials, tutorials and updates will be provided via Moodle, email and Zoom tutorials. You may need a camera and microphone to participate in the Zoom online sessions. Weekly resources will include access to relevant websites, activities, and readings. To give yourself the best chance of success with this unit please ensure that you undertake all the readings and activities. There will be Zoom tutorials on alternate Wednesdays from week 2 onwards. These will be posted on the Moodle site with sufficient notice. A discussion on the previous week's case, current week's content and any other question/problem will be undertaken. They are not compulsory to attend but are highly recommended. These will be recorded and available for later view.

Throughout the unit, there will be 6 cases posted on the Moodle site - followed by a formative quiz about that case. You can attempt these quizzes anytime until Week 12 Friday (05/10/18) 5:00 pm. These are for your own practice and interest. They are not compulsory and not an assessable part of the unit.

The staff teaching in this unit are:

**Dr. Aamer Aziz** is the unit coordinator for the MEDS20007 unit. He is located on the Mackay QLD campus. The best way to contact Aamer is by email at [a.aziz@cqu.edu.au](mailto:a.aziz@cqu.edu.au), Aamer's CQU telephone number is 07 4940 7478. Aamer's office hours are 9 to 5 Monday to Friday but he is often in labs, so please use email whenever possible or leave a message on the phone.

**Ms Allison Holley:** Allison Holley is an accredited medical sonographer with a Masters of Applied Science in Medical Ultrasound. She currently works for Queensland X-ray, Brisbane, as a paediatric specialist sonographer. Prior to this, she was the Sonographer in Charge at the Mater Hospital Complex in Brisbane which includes the Mater Children's Hospital. Allison was a founding member of the ASA Paediatric SIG group and is on the ASA editorial review committee for paediatrics. Allison has published 2 books and several articles on paediatric ultrasound. She is the author of the paediatric ultrasound textbook "Paediatric Ultrasound A Practical Guide" for which she was awarded an ASUM Award of Excellence in 2013. Allison has been a senior faculty member of the Australian Institute of Ultrasound and a sessional lecturer for QUT.

**Mr Christopher Kramer:** Chris Kramer BA, ACS, RDCS, FASE, is an advanced cardiac sonographer and program director for the School of Diagnostic Medical Sonography at Aurora St. Luke's Health Care in Milwaukee, Wisconsin, USA. He is active in the American Society of Echocardiography as a member of the Sonographer Counsel, Board member of the Joint Review Committee on Education in Diagnostic Medical Sonography and is a team member on the American Registry of Diagnostic Medical Sonography writing and mentoring group. Chris has been in the field of echocardiography for the past 12 years, with interests in sonography education, quality, and new technology.

## Assessment Tasks

### 1 Portfolio

#### Assessment Type

Portfolio

#### Task Description

As a general sonographer, especially if you work with children, paediatric imaging is a very important aspect of your practice. There are many aspects of imaging the children which are different from adult imaging. Children present with varied symptomatology than adults. The incidence and prevalence of diseases are also very different from the adult population. It is imperative that you consider the differences in paediatric imaging. This assessment item gives you required knowledge to appreciate various paediatric specific pathologies by collecting few representative case studies.

This assessment item is a collection of paediatric cases that you come across in your everyday practice. The aim of this assessment is for you to collect clinically interesting cases and to reflect upon the role of ultrasound in their management. It enables you to differentiate the clinical appearance, aetiology, and outcomes of advanced ultrasound assessment of paediatric and congenital disease in terms of physiology, pathophysiology and pharmacological factors relevant to diagnostic and therapeutic procedures. You can then apply practical skills and critical thinking to advanced clinical assessment and reporting of the paediatric patient. This assessment item will not only enhance your knowledge, communication, cognitive, technical and creative skills but will also help in strengthening your self-management, ethical and professional responsibilities.

The portfolio is a collection of 4 case reports. You are to choose 4 interesting cases from your routine ultrasound practice showing some pathology. If you do not have access to paediatric patients you can source the case and images from any other source as long as you acknowledge the source. Each case report should address the following:

- Brief history and presentation of the patient with the clinical question asked.
- Discussion of other imaging and non-imaging investigations completed at the time of writing this assessment and pre-test diagnosis (with the degree of confidence).
- Details of ultrasound examination performed.
- Discussion of findings of ultrasound and post-test diagnosis and discussion on comparison with pre-test diagnosis.
- Discussion on the further management of the patient.
- At least 5 references are to be cited.

Each case report should be short and to the point and not more than 1500 words (excluding the reference list).

Relevant images (completely anonymized) are to be included. These images should be your own. You can use images from other sources, even the internet, but they **MUST** be properly referenced.

### **Assessment Due Date**

Week 9 Friday (14 Sept 2018) 5:00 pm AEST

### **Return Date to Students**

Week 11 Friday (28 Sept 2018)

Collaborated marks and feedback will be provided to the students within 2 weeks.

### **Weighting**

50%

### **Assessment Criteria**

Each case report will be assessed by considering each of the following: (Detailed marking rubric is available on Moodle site).

- Have you presented the case history adequately enough to raise a clinical suspicion or narrow differential diagnosis? Can you differentiate the clinical appearance, aetiology, and outcomes of advanced ultrasound assessment of paediatric and congenital disease?
- Have you included enough relevant detail? Can you evaluate the physiology, pathophysiology and pharmacological factors relevant to diagnostic and therapeutic procedures in the paediatric patient?
- Have you demonstrated your rationale, including all working out?
- Does your rationale indicate that you understand the topic? Can you apply practical skills and critical thinking to advanced clinical assessment and reporting of the paediatric patient?
- Have you adequate support from references?
- Is your spelling, grammar and use of vocabulary exemplary?
- Have you kept to the word limit?
- Have you included images of a reasonable quality?

You need a minimum of 50% to pass this assessment.

### **Referencing Style**

- [Vancouver](#)

### **Submission**

Online

### **Learning Outcomes Assessed**

- Differentiate the clinical appearance, aetiology and outcomes of advanced ultrasound assessment of paediatric and congenital disease, including echocardiographic views of the paediatric heart.
- Evaluate the physiology, pathophysiology and pharmacological factors relevant to diagnostic and therapeutic procedures in the paediatric patient.
- Apply practical skills and critical thinking to advanced clinical assessment and reporting of the paediatric patient.

### **Graduate Attributes**

- Knowledge
- Communication
- Cognitive, technical and creative skills

- Self-management
- Ethical and Professional Responsibility

## 2 Written Assessment

### Assessment Type

Written Assessment

### Task Description

Paediatric imaging is rapidly changing with advancement in technology and a better understanding of paediatric pathologies. As a sonographer, paediatric imaging is a significant part of your practice. Awareness of changing spectrum of imaging technologies and protocols is essential to provide a specialised service that is efficient, modern and keeps up with the current trends.

This assessment item requires you to write a detailed report on a clinically relevant topic with the aim to discuss the role of imaging, particularly the new technologies in ultrasound. It requires a detailed description of the clinical appearance, aetiology, and outcomes of advanced ultrasound assessment of paediatric and congenital disease, with evaluation of the physiological, pathophysiological and pharmacological factors relevant to diagnostic and therapeutic procedures. The emphasis is on evaluating existing and emerging technology, diagnostic parameters and radiological interventions, especially paediatric ultrasound, based on a review of relevant literature. This assessment will not only enhance your knowledge, communication, cognitive, technical and creative skills but also improve your research capability and ethical and professional responsibilities.

You are to select one topic that interests you clinically, in consultation with the unit coordinator. A decision as to your topic must be concluded, with unit coordinator agreement, by the end of week 2.

Discuss the topic under the following headings:

- Unstructured abstract (200 words)
- A well-stated aim of the assessment. You can use Problem/Patient/Population, Intervention/Indicator, Comparison, Outcome, and Time (PICOT) to construct the aims.
- An introduction that includes the typical presentation, aetiology, and epidemiology of the case, with pathophysiology.
- Discuss existing and emerging diagnostic technologies, parameters and radiological interventions in paediatric ultrasound in reference to the topic. Evaluate their role and discuss the advantages and disadvantages of these procedures.
- Conclude by giving your recommendations.
- You can use tables, figures and graphs to support your discussion.
- You can use ultrasound images that must be your own (completely and properly anonymized). If you do not have your own images you can use the images from any other source (imaging or online) but you MUST properly reference the source.
- You will perform an exhaustive literature search that supports your arguments.

The word limit is 3000 (it excludes the abstract, tables, figures, diagrams and reference list)

Further information about the assessment is provided on the Moodle site and will be discussed in Zoom tutorial sessions.

### Assessment Due Date

Week 11 Friday (28 Sept 2018) 5:00 pm AEST

### Return Date to Students

Review/Exam Week Monday (8 Oct 2018)

Feedback and aggregate score will be provided to the students within 2 weeks.

### Weighting

50%

### Minimum mark or grade

50%

### Assessment Criteria

The assessment will be marked based on: (The detailed marking rubric is available on the moodle).

- Differentiate the clinical appearance, aetiology, and outcomes of advanced ultrasound assessment of paediatric and congenital disease, including echocardiographic views of the paediatric heart.
- Evaluate and present information concerning existing and emerging technologies, diagnostic parameters and radiological interventions in a chosen area of paediatric ultrasound based on an extensive review of relevant literature.

- Evaluate the physiology, pathophysiology and pharmacological factors relevant to diagnostic and therapeutic procedures in the paediatric patient.

You must ask yourself the following:

- Is the introduction to the case engaging to the audience with a clearly stated aim?
- Is the description of the case clear and concise whilst giving all the relevant background information?
- Have you critically reflected upon and evaluated the imaging and non-imaging investigations in this case?
- Does the analysis of the case demonstrate academic rigour, depth, and insight?
- Have you done an exhaustive literature search about the current/emerging technologies and new imaging methods in ultrasound available that can be used in the case to advantage?
- Is the conclusion concise and clear in its evaluation and summary of the significance of the communication pitfalls and in its vision for your performance development?
- Are the grammar and spellings up to the standard? Is the sentence structure and language used is scientific and easily understandable?

This assessment must be submitted with all identifying factors removed. Identifying factors include such things as patient name, date of birth and clinical site name for example.

You must achieve a mark of 50% to pass this assessment.

Further details are available on the Moodle page along with detailed marking criteria.

### **Referencing Style**

- [Vancouver](#)

### **Submission**

Online

### **Learning Outcomes Assessed**

- Differentiate the clinical appearance, aetiology and outcomes of advanced ultrasound assessment of paediatric and congenital disease, including echocardiographic views of the paediatric heart.
- Evaluate the physiology, pathophysiology and pharmacological factors relevant to diagnostic and therapeutic procedures in the paediatric patient.
- Evaluate and present information concerning existing and emerging technology, diagnostic parameters and radiological interventions in a chosen area of paediatric ultrasound based on a review of relevant literature.

### **Graduate Attributes**

- Knowledge
- Communication
- Cognitive, technical and creative skills
- Research
- Ethical and Professional Responsibility

## Academic Integrity Statement

As a CQUniversity student you are expected to act honestly in all aspects of your academic work.

Any assessable work undertaken or submitted for review or assessment must be your own work. Assessable work is any type of work you do to meet the assessment requirements in the unit, including draft work submitted for review and feedback and final work to be assessed.

When you use the ideas, words or data of others in your assessment, you must thoroughly and clearly acknowledge the source of this information by using the correct referencing style for your unit. Using others' work without proper acknowledgement may be considered a form of intellectual dishonesty.

Participating honestly, respectfully, responsibly, and fairly in your university study ensures the CQUniversity qualification you earn will be valued as a true indication of your individual academic achievement and will continue to receive the respect and recognition it deserves.

As a student, you are responsible for reading and following CQUniversity's policies, including the [Student Academic Integrity Policy and Procedure](#). This policy sets out CQUniversity's expectations of you to act with integrity, examples of academic integrity breaches to avoid, the processes used to address alleged breaches of academic integrity, and potential penalties.

### What is a breach of academic integrity?

A breach of academic integrity includes but is not limited to plagiarism, self-plagiarism, collusion, cheating, contract cheating, and academic misconduct. The Student Academic Integrity Policy and Procedure defines what these terms mean and gives examples.

### Why is academic integrity important?

A breach of academic integrity may result in one or more penalties, including suspension or even expulsion from the University. It can also have negative implications for student visas and future enrolment at CQUniversity or elsewhere. Students who engage in contract cheating also risk being blackmailed by contract cheating services.

### Where can I get assistance?

For academic advice and guidance, the [Academic Learning Centre \(ALC\)](#) can support you in becoming confident in completing assessments with integrity and of high standard.

### What can you do to act with integrity?



#### Be Honest

If your assessment task is done by someone else, it would be dishonest of you to claim it as your own



#### Seek Help

If you are not sure about how to cite or reference in essays, reports etc, then seek help from your lecturer, the library or the Academic Learning Centre (ALC)



#### Produce Original Work

Originality comes from your ability to read widely, think critically, and apply your gained knowledge to address a question or problem