Obstetric Triage Decision Aid:
A standardised approach to care in the Maternity Assessment Unit and Emergency Department

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Triage

• Process to assess a patient’s clinical urgency for treatment
• Widely implemented in emergency departments to address access to care, wait times, and resource allocation
• Worldwide various triage scales
• Australasian Triage Scale- used Australian ED’s
Australasian triage scale (ATS)

<table>
<thead>
<tr>
<th>Triage Category</th>
<th>Descriptor</th>
<th>Time to be seen</th>
<th>Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Immediate</td>
<td></td>
<td>100%</td>
</tr>
<tr>
<td>2</td>
<td>Emergency</td>
<td>10 minutes</td>
<td>80%</td>
</tr>
<tr>
<td>3</td>
<td>Urgent</td>
<td>30 minutes</td>
<td>75%</td>
</tr>
<tr>
<td>4</td>
<td>Semi-urgent</td>
<td>60 minutes</td>
<td>70%</td>
</tr>
<tr>
<td>5</td>
<td>Non-urgent</td>
<td>120 minutes</td>
<td>70%</td>
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</tbody>
</table>

The ATS is used as a clinical indicator, benchmarking tool and funding mechanism (FitzGerald et al., 2010)
Triage by ED nurses on maternity presentations

- Consistency of triage score allocation by ED nurses (Gerdzt et al., 2009)
  - Australian sample of ED nurses (n=42)
  - Mean of 10 years of experience performing triage
  - Poor agreement on allocated triage category for maternity scenarios

- Recommended that descriptors for urgency in pregnancy-related presentations be developed and integrated into the existing ATS guideline
Triage of maternity presentations to ED

- Obstetric presentations often excluded from triage studies (Gräff et al., 2014)
- Nurse education in Australia contains no mandatory maternity education
- Childbearing population more complex
  - Older
  - More obese
  - More co morbidities
- Closure of many rural maternity services
  - Lack of available midwives/obstetric staff
Midwives capacity to conduct triage

- The focus of midwifery is healthy, well childbearing women
- Not all midwives are nurses
- The concept of ‘triage’ is not included in midwifery education
- Midwives have limited scope to assess clinical urgency across the spectrum of potential illness
Obstetric triage: What is out there?

- Early focus of ‘obstetric triage’ was on maternity assessment and evaluation of labour
  - Latent (go home) or active (admit)
- Blurring of the concept of triage and comprehensive assessment
- Commonplace for pre-viability (<20-24 wks) to attend the general ED and for women in later pregnancy to attend the maternity area
- The quest for the best acuity tool specific to obstetric triage is evolving
Obstetric triage tools

Canada
- Obstetric Triage Acuity Scale (Smithson et al., 2013)

USA
- Obstetric Triage Acuity Scale (Paisley et al., 2011)
- Association of Women’s Health, Obstetric and Neonatal Nurses (AWHONN) Maternal Fetal Triage Index (Ruhl et al., 2015)

England
- Birmingham Symptom Specific Obstetric Triage Symptom (Kenyon et al., 2017)

Switzerland
- Swiss Emergency Triage Scale (Viet-Ruben et al., 2017)
### OBCU Obstetrical Triage Acuity Scale (OTAS)

<table>
<thead>
<tr>
<th>OTAS</th>
<th>Level 1 (Resuscitative)</th>
<th>Level 2 (Emergent)</th>
<th>Level 3 (Urgent)</th>
<th>Level 4 (Less Urgent)</th>
<th>Level 5 (Non-Urgent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Time to Secondary</td>
<td>Immediate</td>
<td>≤ 15 minutes</td>
<td>≤ 30 minutes</td>
<td>≤ 60 minutes</td>
<td>≤ 120 minutes (2 hours)</td>
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<tr>
<td>Health Care Provider</td>
<td></td>
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<tr>
<td>Re-assessment</td>
<td>Continuous Nursing Care</td>
<td>Every 15 minutes</td>
<td>Every 15 minutes</td>
<td>Every 30 minutes</td>
<td>Every 50 minutes</td>
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<tr>
<td>Labour/Fluid</td>
<td>Imminent birth</td>
<td>Suspected preterm</td>
<td>Signs of early</td>
<td>Discomforts of</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>labour/PPROM &lt; 37 weeks</td>
<td>active labour &gt;</td>
<td>pregnancy</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>weeks</td>
<td>37 weeks</td>
<td></td>
<td></td>
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<tr>
<td>Bleeding</td>
<td>Active vaginal bleeding with/without abdominal pain</td>
<td>Bleeding associated with cramping (&gt; spotting) &lt; 37 weeks</td>
<td>Bleeding associated with cramping (&gt; spotting) &gt; 37 weeks</td>
<td>Spotting</td>
<td></td>
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<tr>
<td>Hypertension</td>
<td>Seizure activity</td>
<td>Hypertension &gt; 160/110 and/or headache, visual disturbance, RUG pain</td>
<td>Mild Hypertension &gt; 140/90 with/without associated signs and symptoms</td>
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<tr>
<td>Fetal Assessment</td>
<td>Abnormal FHR tracing, abnormal BPP, abnormal dopplers, Decreased fetal movement</td>
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<tr>
<td>Other</td>
<td>Acute onset severe abdominal pain, Altered level of consciousness, Cord prolapse, Severe respiratory distress, Suspected sepsis</td>
<td>Major trauma, Shortness of breath, Unplanned and unattended birth</td>
<td>Abdominal/back pain greater than expected in pregnancy, Frank pain/hematia, Nausea/vomiting and/or diarrhea with suspected dehydration</td>
<td>Ongoing assessment from outpatient clinic (for hypertension, blood work), Minor trauma (minor MVC/fall), Nausea/vomiting and/or diarrhea, Signs of infection (ie. dysuria, cough, fever, chills)</td>
<td>Anything that does not seem to pose threat to mother or fetus, Cervical ripening, Outpatient placenta previa protocol, Pre-booked visits (ie. Rh and progesterone injections, NST), Assessment for version, Rashes</td>
</tr>
</tbody>
</table>
Obstetric triage tools

• To date, the majority of obstetric triage tools:
  o Focus on maternity complications and the assessment of labour
  o Are paper-based
  o Are not aligned with performance indicators

• The OTDA is the only tool that:
  o Incorporates a decision aid
  o Is a generic tool equally applicable to both ED and maternity areas
  o Has the capacity to generate patient flow data and performance indicators
COMMITTEE OPINION

Hospital-Based Triage of Obstetric Patients (2016)

• “Although labor and delivery units frequently serve as emergency units for pregnant women, the appropriate structure, location, timing, and timeliness for hospital-based triage evaluations of obstetric patients are not always clear.”

• Recommendations
  o Hospital-based obstetric units are urged to collaborate with emergency departments and hospital ancillary services, as well as emergency response systems outside of the hospital, to establish guidelines for triage of pregnant women
  o Obstetric triage acuity tools may improve quality and efficiency of care and guide resource use
Obstetric triage tools

• Different processes, standards and system performance measures exist for presentations to ED and maternity
• Increasing focus on ‘obstetric triage’ – though meaning of the term varies

Current knowledge gap on:
• ‘timely access to care’ for unscheduled maternity presentations
  o No routine measure of the burden of unscheduled presentations
  o ED literature – accurate, reliable triage is lacking
  o Maternity literature – evolving issue; triage tools assist with improving access to care
The OTDA

Background:

- MHW ED specialist ED
- Required to triage pregnant and post partum women
- Application of ATS difficult
- In 2012, started developing OTDA using complaint codes in EDIS
- Standardised approach in MHW ED
  - Structured targeted questioning
  - ATS category generated based on the targeted questioning responses
The project

• Implement the OTDA into Werribee Mercy Hospital
  o General ED
  o Maternity Assessment Unit

• Conduct a validation study of the OTDA
10 Complaint Codes

- Abdominal pain in pregnancy at 20 weeks’ or more gestation (including labour)
- Chest pain or respiratory problems in pregnancy
- Headache in pregnancy at 20 weeks’ or more gestation
- Pain and bleeding less than 14 weeks’ gestation
- Post-partum problems
- Per vaginal loss 20 weeks’ or more (bleeding or ruptured membranes)
- Reduced fetal movements/concerns for fetal wellbeing > 24 weeks’ gestation
- Trauma in pregnancy/ minor blunt abdominal
- Unwell in pregnancy less than 20 weeks’ gestation
- Unwell in pregnancy at 20 or more weeks’ gestation
Project Overview

- Steering group
- Local implementation team
- Expert consensus group
- Staff survey –competence & confidence to triage
Pre observational audit ED & MAU

- Clinical audit
- ED process mapping
- MAU process mapping
Change to MAU process
CHANGES TO THE ED TRIAGE

• Identify patient is pregnant first

• Use complaint field next

• Follow the OTDA
Pre implementation

- Redesign of MAU
- Policies and procedures
- Education and training

Implementation

- One on one training
- Feedback
- Monitoring and auditing
Was the OTDA used?

Was the OTDA valid?

Did staff feel more confident & competent?

The results slides have been excluded as publication is in progress
Post-implementation audit

- 7 August – 5 November 2017
- Extracted from EDIS in ED and MAU

Total number of presentations (n=3026)
- ED (n=718)
- MAU (n=2308)

Number of presentations on which data analyses were conducted (n=2829)
- ED (n=708)
- MAU (n=2121)

Excluded (n=197)
- Neonates
- Postpartum > 42 days
- No belief the woman was pregnant
- Mental health presentations
- Planned presentations for non-urgent reasons
Type of complaint
ED only
(OTDA used n=515)
• About 1/3 of cases were ≥ 20 weeks
Type of complaint

MAU only
(OTDA used n=1976)
Summary

• OTDA is a valid tool for triage of pregnant and post partum women
• Reduction in waiting times for women who presented unscheduled to the hospital with a problem in pregnancy
• Improved data on patient volume and flow which enabled us to better match organisation resources
• OTDA tool use in ED was associated with a reduction in ‘under-triage’, a known clinical risk
• Effective change was achieved through physical demonstration, clinical support and data feedback
What's Next

- **Opportunity scaling in Victorian Maternity services and ED**
- **Forum – ED & Maternity sector, BCV & SCV**
- **Submission to publish**

Next : Evaluation of OTDA for outcome measures
Acknowledgements

- Dr Wendy Pollock - slides
- Professor Susan McDonald
- OTDA Steering committee
- Local implementation team
- Midwives and Nurses at WMH
- BCV