CLINICAL GUIDELINE FOR MANAGEMENT OF GALLSTONES PATHOLOGY IN ADULTS

1. Aim/Purpose of this Guideline
   This guideline is for the management of gallstones pathology in adults. It has been benchmarked against national guidelines to provide a detailed guidance of clinical management of gallstones pathology in line with best practice guidelines. This guideline applies to all healthcare professionals involved in the treatment of gallstones pathology.

2. The Guidance
   The following pathway should be followed.
Suspected Gallstones

- **Y**
  - Ultrasound + LFTs + Amylase
    - **Y**
      - Amylase ≥3 x normal
        - **N**
          - Bile duct dilated AND/OR LFTs deranged
            - **N**
              - Pain >24 hours AND/OR raised inflammatory markers
                - **N**
                  - See BILIARY COLIC management pathway

- **N**
  - See SUSPECTED BILE DUCT STONE management pathway

**YES**

- **See PANCREATITIS guidelines**

**YES**

- **See SUSPECTED BILE DUCT STONE management pathway**

**YES**

- **See ACUTE CHOLECYSTITIS guidelines**

**YES**

- **See ACUTE CHOLECYSTITIS guidelines**
A) **SUSPECTED BILE DUCT STONE – Management Pathway**

**Normal LFTs**
- Non-dilated bile ducts
  - MINIMAL risk of CBD stones
  - Laparoscopic cholecystectomy (+/- OTC)

**History of abnormal LFTs**
- Non-dilated bile ducts
  - LOW risk of CBD stones
  - Laparoscopic cholecystectomy & OTC (MRCP - see indications below in section 2)
  - CBD stone(s)
    - Secure cystic duct
    - Bile duct exploration (See indications below)
    - Post-op ERCP

**Abnormal LFTs**
- Dilated bile ducts
  - MRCP if not fit for surgery or OTC not available
  - CBD stone(s)
    - Pre-op ERCP
    - Lap chole +/- OTC
  - No CBD stone(s)

**If fevers/rigors see CHOLANGITIS guidelines**
- Laparoscopic cholecystectomy & OTC

**Key**
- LFT  Liver function tests
- CBD  Common bile duct
- OTC  Intraoperative On-Table Cholangiogram
- USS  Ultrasound Scan
- ERCP  Endoscopic Retrograde Cholangio-Pancreatography
B) BILIARY COLIC – Management Pathway

**Diagnosis**
- RUQ pain +/- sweating, vomiting
- Night time pain
- Precipitated by fatty meals
- +/- Jaundice

**Detailed History & Examination**
- History of gallstones
- Medication and drug intake
- Recent intervention (e.g. ERCP / stent)
- History of biliary stricture / malignancy
- Co-morbidities (respiratory, cardiac, diabetes, high BMI)

**Investigations**
- A) FBC, U+Es, LFTs, amylase, CRP
- B) Upper abdominal ultrasound – inpatient or outpatient

**Management**
- Patient should be discharged with simple analgesia
- Advise a low fat diet
- Offer laparoscopic cholecystectomy or upper GI surgery outpatient review pending patient or surgeon decision to operate
- If surgery declined or not appropriate, refer back to GP with advice on low fat diet.
3. Specific Guidelines Regarding Management

3.1 Ownership – Patients admitted acutely with gallstone related disease should be managed by the acute GI surgery team UNLESS a definite diagnosis of acute cholangitis is made, in which case they should be admitted under medical gastroenterology.

3.2 Imaging

   o **Gold standard first line investigation is USS abdomen**
   
   o **MRCP indications:**
     - **Persistent** LFT derangement and/or CBD dilation on ultrasound where intraoperative cholangiogram not available and bile duct stone suspected.
     - As above where surgery not being considered or patient not fit for surgery.
     - Suspected biliary stricture

   o **On table cholangiogram indications:**
     - History of abnormal LFTs and/or dilated bile ducts

3.3 Biliary Drainage (ERCP +/- Percutaneous Transhepatic Cholangiography)

   o **Indications include:**
     - Common bile duct stone with jaundice where surgery not suitable
     - Common bile duct stone without jaundice where surgery not suitable
     - Suspected or definite acute cholangitis
     - Previous cholecystectomy with retained stone

3.4 On-table Cholangiogram / Intra-Operative Ultrasound

   o Either procedure, determined by surgeon preference, should be performed on all patients undergoing cholecystectomy with persistent or transient:
     - Normal LFTs and dilated bile ducts,
     - Abnormal LFTs and normal bile ducts or
     - Abnormal LFTs and dilated bile ducts

3.5 Laparoscopic Cholecystectomy & Bile Duct Exploration

   o **Indications include:**
     - Dilated CBD >8mm
     - Fit for surgery
     - Surgeon expertise and theatre availability
     - No concurrent cholecystitis, cholangitis or pancreatitis
     - Failed ERCP in presence of above indications

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3.6 Laparoscopic Cholecystectomy for Biliary Colic

- Patients with symptomatic gallstones can be discharged once pain controlled on a low fat diet and with outpatient review or elective surgery planned with an upper GI surgeon.

3.7 References

- AUGIS. Pathway for the management of acute gallstone diseases. AUGIS 2015
- NICE. Gallstone disease: diagnosis and initial management. 2014 (CG188)
4. Monitoring compliance and effectiveness

<table>
<thead>
<tr>
<th>Element to be monitored</th>
<th>All</th>
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<tbody>
<tr>
<td>Lead</td>
<td>Mr Michael Clarke</td>
</tr>
<tr>
<td>Tool</td>
<td>Patient documentation and Rolling audit</td>
</tr>
<tr>
<td>Frequency</td>
<td>Adult gallstones pathology patients who are reviewed by specialist teams. Audit 6 monthly</td>
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<tr>
<td>Reporting arrangements</td>
<td>Involved specialties governance committees. Repeated non-compliance to be reported via Datix</td>
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</tbody>
</table>
| Acting on recommendations and Lead(s) | Hospital Working Group  
Michael Clarke (Consultant upper GI surgeon) - Chair  
Mohamed Abdelrahman (ST3 General Surgery)  
Ian Finlay (Consultant upper GI surgeon)  
Hyder Hussaini (Consultant gastroenterologist)  
Bill Stableforth (Consultant gastroenterologist)  
Madeline Strugnell (Consultant radiologist)  
Dushyant Shetty (Consultant radiologist)  
John Hancock (Consultant interventional radiologist)  
Mike Spivey (Consultant in Intensive Care) |
| Change in practice and lessons to be shared | Required changes to practice will be identified and actioned within 6 months. A lead member of the team will be identified to take each change forward where appropriate. Lessons learned or changes to practice will be shared with all stakeholders. |

5. Equality and Diversity

5.1. This document complies with the Royal Cornwall Hospitals NHS Trust service Equality and Diversity statement which can be found in the 'Equality, Diversity & Human Rights Policy' or the Equality and Diversity website.

5.2. Equality Impact Assessment

The Initial Equality Impact Assessment Screening Form is at Appendix 2.
## Appendix 1. Governance Information

<table>
<thead>
<tr>
<th>Document Title</th>
<th>Clinical Guideline for Management of Gallstones Pathology in Adults</th>
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<tbody>
<tr>
<td>Date Issued/Approved:</td>
<td>23/02/2016</td>
</tr>
<tr>
<td>Date Valid From:</td>
<td>23/02/2016</td>
</tr>
<tr>
<td>Date Valid To:</td>
<td>23/02/2019</td>
</tr>
</tbody>
</table>
| Directorate / Department responsible (author/owner): | Mr Michael Clarke (Consultant Upper GI and Bariatric Surgeon)  
Mr Mohamed Abdelrahman (Upper GI Spr) |
| Contact details: | Mr Michael Clarke (01872 252373) |
| Brief summary of contents | This guideline is for the management of gallstones pathology in adults. This guideline applies to all healthcare professionals involved in the treatment of gallstones pathology. |
| Suggested Keywords: | Gallstones, biliary colic, CBD stone. |
| Target Audience | RCHT  
PCH  
CFT  
KCCG |
| Executive Director responsible for Policy: | Medical Director |
| Date revised: | None |
| This document replaces (exact title of previous version): | Nil |
| Approval route (names of committees)/consultation: | Hospital working group  
Michael Clarke (Consultant upper GI surgeon)  
Ian Finlay (Consultant upper GI surgeon)  
Hyder Hussaini (Consultant gastroenterologist)  
Bill Stableforth (Consultant gastroenterologist)  
Madeline Strugnell (Consultant radiologist)  
Dushyant Shetty (Consultant radiologist)  
John Hancock (Consultant interventional radiologist)  
Mike Spivey (Consultant in Intensive Care)  
Divisional Governance Committee |
| Divisional Manager confirming approval processes | Divisional Director  
Duncan Bliss |
| Name and Post Title of additional signatories | Not required |
| Name and Signature of Divisional/Directorate Governance Lead confirming approval by specialty and divisional management meetings | {Original Copy Signed} |
| Signature of Executive Director giving approval | {Original Copy Signed} |
| Publication Location (refer to Policy on Policies – Approvals and Ratification): | Internet & Intranet  
√ Intranet Only |
| Document Library Folder/Sub Folder | Clinical / General Surgery |
| Links to key external standards | None |
| Related Documents: | Nil |
| Training Need Identified? | No |
## Version Control Table

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<th>Date</th>
<th>Version No</th>
<th>Summary of Changes</th>
<th>Changes Made by (Name and Job Title)</th>
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<td>V1.0</td>
<td>Draft for consultation</td>
<td>Michael Clarke – Consultant Upper GI and Bariatric Surgeon</td>
</tr>
<tr>
<td>23 Feb 16</td>
<td>V2.0</td>
<td>Approved for implementation</td>
<td>Michael Clarke – Consultant Upper GI and Bariatric Surgeon</td>
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All or part of this document can be released under the Freedom of Information Act 2000

This document is to be retained for 10 years from the date of expiry.

This document is only valid on the day of printing

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Appendix 2. Initial Equality Impact Assessment Form

| Name of Service, strategy, policy or project to be assessed (hereafter referred to as policy) : Clinical Management of Gallstones Pathology in Adults |
| Directorate and service area: General Surgery | Is this a new or existing Policy? New |
| Name of individual completing assessment: Mr Michael Clarke | Telephone: 01872252373 |

1. Policy Aim*  
Who is the strategy / policy/proposal/service function aimed at?  
To provide detailed guidance on the clinical management of acute cholangitis in line with best practice guidelines.

2. Policy Objectives*  
- To provide a consistent approach to the management of gallstones pathology at RCHT sites.  
- To maintain patient safety and improve outcomes for patients experiencing gallstones pathology whilst inpatients at RCH sites

3. Policy – intended Outcomes*  
- Consistent management of gallstones pathology at RCHT sites.  
- Prompt and safe management of gallstones pathology and follow up care.

4. *How will you measure the outcome?  
- Audit  
- Datix Reporting  
- Review of nursing/medical documentation as required

5. Who is intended to benefit from the policy?  
All patients who experience gallstones pathology in hospital at RCHT sites.

6a) Is consultation required with the workforce, equality groups, local interest groups etc. around this policy?  
Yes

b) If yes, have these *groups been consulted?  
Yes

C). Please list any groups who have been consulted about this procedure.  
General surgery team (Audit meeting). Consultants (Radiology, Gastroenterology, Microbiology, Intensive care)
7. The Impact
Please complete the following table.

Are there concerns that the policy could have differential impact on:

<table>
<thead>
<tr>
<th>Equality Strands:</th>
<th>Yes</th>
<th>No</th>
<th>Rationale for Assessment / Existing Evidence</th>
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<tbody>
<tr>
<td>Age</td>
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<td>Sex (male, female, transgender / gender reassignment)</td>
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<td>Race / Ethnic communities / groups</td>
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<tr>
<td>Disability - Learning disability, physical disability, sensory impairment and mental health problems</td>
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<td>Religion / other beliefs</td>
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<td>Marriage and civil partnership</td>
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<td>Pregnancy and maternity</td>
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<td>Sexual Orientation, Bisexual, Gay, heterosexual, Lesbian</td>
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You will need to continue to a full Equality Impact Assessment if the following have been highlighted:
- You have ticked “Yes” in any column above and
- No consultation or evidence of there being consultation - this excludes any policies which have been identified as not requiring consultation. or
- Major service redesign or development

8. Please indicate if a full equality analysis is recommended. No

9. If you are not recommending a Full Impact assessment please explain why.

Signature of policy developer / lead manager / director
Michael Clarke, Consultant Upper GI and Bariatric Surgeon
Date of completion and submission 23rd February 2016

Names and signatures of members carrying out the Screening Assessment
1.
2.

Keep one copy and send a copy to the Human Rights, Equality and Inclusion Lead,
c/o Royal Cornwall Hospitals NHS Trust, Human Resources Department, Knowledge Spa, Truro, Cornwall, TR1 3HD

A summary of the results will be published on the Trust’s web site.

Signed ________________
Date ________________