# CLINICAL AUDIT BASICS

The ultimate objective of clinical auditing is to improve the quality of care and outcomes by measuring current practice against best practice and implementing changes.

* Identify the standards against which the audit will be conducted
* Data collection of current practice
* Comparison of current practice against the standard

## Clinical audit cycle: It’s a simple process

Plan: topic selection Do: data collection

Study: analyse data, compare results to standards, consider changes to enhance quality, summarise in report

Act: discuss improvement options and how to apply them, plan monitoring impact of these changes, sustaining improvements

## Audit Golden Rules

* Keep it simple
* Plan it
* Avoid unnecessary data
* Re-audit

## Audit data

* Quickly gathered
* Rapid cycle
* Identifies problems, get baselines, compare actual performance against standards, measure improvements

## PLAN

Planning your QI audit

1. Define the question to be answered and the standard for comparison
   * Source of standards or guidelines: Professional directions, Research, Benchmarks, Guidelines
   * Questions to assist with prioritising audit topics:
     + Is the topic concerned of high cost, volume or risk to staff or users?
     + Is there evidence of wide variation in clinical practice?
     + Is good evidence available to inform audit standards (for example, systematic reviews or national clinical guidelines)?
     + Is the problem measurable against relevant standards?
     + Is auditing the problem likely to improve healthcare outcomes as well as process improvements?
       - Is there evidence of a (serious) quality problem (for example, service user complaints or high complication rates, adverse outcomes, or poor symptom control)?
       - Is the topic of key professional or clinical interest?
       - Are reliable sources of data readily available for data collection purposes?
       - Can data be collected within a reasonable time period?
       - Is the problem concerned amenable to change?
       - Is the topic pertinent to national or local initiatives or priorities?
       - Does the topic lend itself to the audit process, or is a different process more appropriate (for example, root cause analysis, activity analysis or workload analysis)?
       - How much scope is there for improvement, and what are the potential benefits of undertaking this audit? Adapted from Ashmore, Ruthven, and Hazelwood (2011a).
2. Define study group and timeframe, including which health professional/s and patients, choose sample size, e.g., 20, inclusion and exclusion criteria, exceptions, timeframe.

Selection criteria:

* + Inclusion criteria: Identify the target population to whom the clinical guideline applies.
  + Exclusion criteria: Define areas outside the scope of the clinical guideline.
  + Exceptions: Consensus on exceptions should be agreed before the start of the audit.
    - Example: The criterion involves treatment with a specific medication.
  + Possible exceptions:
    - There is a contra-indication to the medication.
    - Treatment had to be stopped due to side effects of medication.
    - Patient choice – the patient declines this course of treatment.

1. Consent to access the data is confirmed
2. Use closed questions, pertinent
3. Unambiguous
4. Objective, measurable criteria (e.g., Hb < 120 or not, BMI <25 or not, Rx prescribed or not)
5. Logical data collection sequence (easier, faster)
6. Retrospective (fast) or prospective (slower, risk of performance bias)
7. How identified? E.g., disease register or prescriptions log?
8. Type e.g., elective/emergency, new/return patient
9. Where is the data
10. Who will collect the data?
11. Confidentiality, log entry not patient identifiers
12. Test the data collection tool on a few cases, amend if necessary, before going full scale

## DO

* + Create data collection tool, paper based or electronic e.g., excel spreadsheet, relevant questions, or chart
  + Delegate data collection tasks
  + Collection of relevant data about current practice in order to facilitate comparison.

## STUDY

Data analysis: Convert a collection of facts (data) into useful information in order to identify

the level of compliance with the agreed standard. E.g., % compliance with clinical audit standard Drawing conclusions: explain why standards weren’t met

* + Consider process mapping
  + Five why’s, keep asking why until root cause identified
  + Cause and effect analysis

Presentation of results: to generate reflection or discussion, stimulate and support action planning.

* + Identify areas for improvement
  + Causes
  + Needed improvements
  + Information why some cases don’t meet standards

# ACT

Possible QI activities after audit: Improve, Increase, Enhance, Ensure, Change Changes: follow SMART approach

* + Specific (explicit statements, not open to interpretation).
  + Measurable.
  + Achievable (of a level of acceptable performance agreed with stakeholder).
  + Relevant (related to important aspects of care).
  + Theoretically sound or timely (evidence based).

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| **Specific** | **Measurable** | **Attainable** | **Relevant** | **Time-limited** |
| Action items | Responsibility, Indicators of success | Resource allocation | Why action is relevant to goals | Start & review dates |
| e.g., Measure absolute CVD risk in all patients with hypertension | e.g., Responsibility – all doctors and nurses.  e.g., Indicators of success - Absolute CVD risk score documented in all records of  patients with hypertension | e.g., Educate all doctors and RNs on calculating absolute CVD risk, using Heart Foundation absolute CVD risk calculator in software | e.g., Estimate overall CVD risk to better risk stratify patients with hypertension and to improvement treatment efforts | e.g., Start 2 weeks from now, review 10 weeks from now |

## Change Management Considerations

* + Consider local barriers to change
  + What needs to change?
  + How will this be achieved?
  + Who will do what?
  + When will the changes start?
  + How will it be monitored?
  + When will it be reassessed?

# CLINICAL AUDIT SUGGESTIONS

Clinical audits are best devised by the medical practitioners who will apply the results of the findings in their own practices to improve quality. Therefore, it is encouraged for ACRRM members to plan and undertake their own audits, to best suit their own practices and circumstances and challenges. Below are lists of ideas to help prompt audit planning, but they are by no means required or exclusive lists of audit suggestions.

If you have any questions about planning or undertaking an audit for ACRRM CPD purposes, please don’t hesitate to contact ACRRM.

Clinical Audits can relate to ACRRM curriculum areas and Educational Domains. Below is a list for your reference.

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| Please visit the Curriculum page on ACRRM website for full explanation of Curriculum Area(s) and Educational Domain(s): [www.acrrm.org.au/curriculum](http://www.acrrm.org.au/curriculum) | **Provide medical care in the ambulatory and community setting** | **Provide medical care in the hospital setting** | **Respond to medical emergencies** | **Apply a population health approach** | **Address the health needs**  **of culturally diverse and disadvantaged groups** | **Practise medicine with an**  **ethical, intellectual and professional framework** | **Practise medicine in the rural and remote context** |
| **Aboriginal People & Torres Strait Islander Health** |  |  |  |  |  |  |  |
| **Adult Internal Medicine** |  |  |  |  |  |  |  |
| **Aged Care** |  |  |  |  |  |  |  |
| **Anaesthetics** |  |  |  |  |  |  |  |
| **Business and Professional Management** |  |  |  |  |  |  |  |
| **Child and Adolescent Health** |  |  |  |  |  |  |  |
| **Dermatology** |  |  |  |  |  |  |  |
| **Information Management and Information Technology** |  |  |  |  |  |  |  |
| **Mental Health** |  |  |  |  |  |  |  |
| **Musculoskeletal Medicine** |  |  |  |  |  |  |  |
| **Obstetrics/Women’s Health** |  |  |  |  |  |  |  |
| **Ophthalmology** |  |  |  |  |  |  |  |
| **Oral Health** |  |  |  |  |  |  |  |
| **Palliative Care** |  |  |  |  |  |  |  |
| **Radiology** |  |  |  |  |  |  |  |

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| **Rehabilitation** |  |  |  |  |  |  |  |
| **Research and Teaching** |  |  |  |  |  |  |  |
| **Surgery** |  |  |  |  |  |  |  |

## Ideas for General Practice Audits

* + What % of patients seen by me in the last 12 months have recorded?
    - Allergies
    - Smoking status
    - Vaccination recorded
    - Recalls in place
    - Family history recorded
    - Past history recorded
    - Social history recorded
    - Biometrics recorded
  + What % of patients 18 years or older and seen by me in the last 12 months have had their

… recorded?

* + - BP
    - Weight
    - BMI
    - Waistline
  + What % of patients 18 years or older and seen by me in the last 12 months who are on any antihypertensive (except for non-hypertensive reasons e.g., migraine prophylaxis, PTSD treatment, rate control alone) have had CVS risk calculation recorded?
  + What % of patients 18 years and older and seen by me in the last 12 months who have diabetes are on an antiplatelet or anticoagulant (unless specifically contraindicated)?
  + What % of children aged 5 years or younger are up to date for age with their vaccinations (unless contraindicated)?
  + What % of patients aged 40 to 49yo have had an ausdrisk screen done (excluding those already diagnosed as diabetic)?
  + What percentage of available appointments in the last 3 months are unused because:
    - Unbooked
    - DNA
    - DNW
  + What % of type 2 diabetic patients seen in the last 12 months by me have HbA1c < or = to 54?
  + What % of patients aged 18 or older and seen by me in the last 12 months and diagnosed with hypertension are treated to Australian Heart Foundation guideline BP targets?
  + What % of patients aged 18 or older and seen by me in the last 12 months and diagnosed with hypertension are treated to Australian Heart Foundation guideline lipid targets?
  + What % of patients aged 18 or older and seen by me in the last 12 months and diagnosed with diabetes are treated to Australian Heart Foundation guideline lipid targets?
  + What % of patients aged 18 or older and seen by me in the last 12 months and diagnosed with chronic kidney disease are treated to Australian Heart Foundation guideline BP targets?
  + What % of patients aged 18 or older and seen by me in the last 12 months and diagnosed with hypertension are prescribed any oral or rectal nonsteroidal anti-inflammatory medication?
  + What % of referrals to specialists specifically ask a clinical question?
  + What % of consultations in the last 8 weeks had a coded diagnosis for every presentation?
  + What % of the last 50 antibiotic prescriptions were consistent with therapeutic guidelines best practice (contraindications excluded)?

These types of GP audit questions can use clinical software data extraction tools or search functions. The data acquisition can be done by authorised staff.

This can be retrospective or prospective. Twenty to fifty cases may be sufficient to highlight results or trends. The data analysis, results and subsequent action plan must involve the ACRRM member, and can include others such as practice team members, GP peers or specialists, primary health network advisors etc.

## Ideas for Emergency Department Audits

* + What % of discharges home from ED had a:
    - Coded diagnosis?
    - Letter for the GP at time of discharge?
    - Included specific symptom control instructions to the patient/carer?
    - What % of the last 20 pain presentations received analgesia within 30 minutes or arrival?
    - What % of the last 20 nausea/vomiting presentations aged 18 or over received antiemetics within 30 minutes of arrival?
    - What % of the last 20 allergy reaction presentations received antihistamines, steroids or adrenaline within 30 minutes of arrival?
    - What % of the last 20 female presentations aged 15 to 50-year-old who had abdominal pain had a pregnancy test (excluding hysterectomy cases)?

For other suggestions consider [https://www.rcem.ac.uk/docs/QI%20+%20Clinical%20Audit/RCEM%20Feverish%20Child%20nation](https://www.rcem.ac.uk/docs/QI%20%2B%20Clinical%20Audit/RCEM%20Feverish%20Child%20national%20report%20(July%202019).pdf) [al%20report%20(July%202019).pdf](https://www.rcem.ac.uk/docs/QI%20%2B%20Clinical%20Audit/RCEM%20Feverish%20Child%20national%20report%20(July%202019).pdf)

Other broad topic areas include:

## Patient management

* + Triage, pre-arrival preparation
  + Primary, secondary, and tertiary assessment
  + Informed consent
  + rational investigations/interventions
  + Procedural techniques
  + Resuscitation
  + Neonatal, paediatric, adult, geriatric care
  + Clinical and situational awareness
  + Response to change in patient status
  + Rational use of medications
  + management plan, admit, discharge, follow up
  + Ethical care of the patient

## Communication

* + Focused history and management options and prognosis discussion with patient
  + Relationship with patients and their families/carers
  + Respectful and culturally appropriate communication with patient
  + Follow up care instructions and safety netting
  + Patient education, preventive, and health promotion where appropriate
  + Negotiating patient concerns, values, and wishes
  + Communication with medical and nursing assistants
  + Communication with wards, outpatients, other departments, and theatre team

## Teamwork/ Collaboration

* + Plan of care agreed with colleagues where relevant
  + Communication of management plan to all team members
  + Negotiation with other staff to optimise patient care, as required
  + Cooperation with team and requesting assistance from others
  + Clear delegation of tasks
  + Responsiveness to questions or suggestions

## List Management

* + Case allocation and prioritisation
  + Manages multiple patients in an organised and efficient manner
  + Management of ED & hospital resources and cost/utility implications
  + Vigilance
  + Handover of patient care

## Patient Safety

* + Adherence to agreed standards and guidelines, including participation in WHO Surgical Safety Checklist
  + Risk minimisation (practices to reduce patient harm)

## Ideas for Anaesthetics Audits

* + What % of patients have a temperature >36 C on arrival in PACU?
    - Goal >95%. Method: RN checks 20 random pts/month
  + Is the hospital intubation checklist used for every intubation outside theatre?
    - Goal = 100%, =for reduced complications. Method = direct observation and prospective reporting
  + What % of anaesthetic patients receive antibiotic prophylaxis as per hospital protocol? Goal

= >95%

* + What % of anaesthetic patients receive thromboprophylaxis as per hospital protocol? Goal =

>95%

* + What % of diabetic anaesthetic patients have BSL checked as per hospital protocol? Goal =

>95%

* + What % of paediatric patients have post-operative vomiting risk assessment and prophylaxis if ≥2 risk factors
  + What % of patients who received Non-depolarising neuromuscular blocking agents show signs of residual neuromuscular blockage in PACU as measured by TOFR <0.9? (Goal = 0%)
  + What % of epidural analgesias during labour failed? (failure to site, abandoned, persistent pain @ 30 minutes, patchy or unilateral block, accidental dural puncture)
  + What % of patients have severe pain on PACU arrival? (goal < 10%)
  + What is the average time for a febrile infant to be first seen by the medical officer?

For other suggestions consider

<http://www.anzca.edu.au/documents/paediatric-pov-prophylaxis-clinical-audit-guide-v1.pdf> <http://www.anzca.edu.au/documents/epidural-analgesia-clinical-audit-guide-v1-2014.pdf>

Other broad topic areas include:

## Patient management

* + Preoperative assessment
  + Additional investigations/interventions
  + Selection of anaesthetic technique
  + Case preparation
  + Use of monitoring devices
  + Clinical and situational awareness
  + Response to change in patient status
  + Postoperative management plan
  + Ethical care of the patient

## Communication

* + Management of consent process
  + Relationship with patients and their families/carers
  + Negotiating patient concerns, values and wishes
  + Communication with anaesthetic assistant
  + Communication with theatre team

## Teamwork/ Collaboration

* + Plan of care agreed with surgeon
  + Communication of anaesthetic management plan to all team members
  + Negotiation with other staff to optimise patient care, as required
  + Cooperation with team and requesting assistance from others
  + Clear delegation of tasks
  + Responsiveness to questions or suggestions

## List Management

* + Case allocation and prioritisation
  + Operating list organisation and efficiency
  + Management of theatre resources and cost/utility implications
  + Vigilance
  + Handover of patient care

## Patient Safety

* + Adherence to agreed standards and guidelines, including participation in WHO Surgical Safety Checklist
  + Risk minimisation (practices to reduce patient harm)

## Ideas for Obstetrics and Gynaecology Audits

* + What is your caesarean section rate?
  + What is your induction of labour rate?
  + What % of cases receive steroids before preterm delivery?
  + What are the outcomes of your breech presentations?
  + What % of patients receive prophylactic antibiotics according to your hospital protocol?
  + PPH
  + VBAC rates
  + Smoking cessation Other broad topic areas include:

## Patient management

* + Antenatal, intrapartum, and **preoperative** assessment
  + Informed consent
  + Additional investigations/interventions
  + Selection of delivery or surgical method
  + Case preparation
  + Intrapartum and intraoperative management and technique
  + Clinical and situational awareness
  + Response to change in patient status
  + Neonatal care and resuscitation
  + Preoperative history and management options and prognosis discussion with patient
  + Relationship with patients and their families/carers
  + Post-partum and post-operative communication with and education of patient
  + Follow up care instructions and safety netting
  + Postoperative management plan
  + Ethical care of the patient

## Communication

* + Preoperative history and management options and prognosis discussion with patient
  + Relationship with patients and their families/carers
  + Post-partum and post-operative communication with and education of patient
  + Follow up care instructions and safety netting
  + Negotiating patient concerns, values and wishes
  + Communication with medical and midwifery assistants
  + Communication with birth suite and theatre team

## Teamwork/ Collaboration

* + Plan of care agreed with anaesthetist and paediatrician where relevant
  + Communication of management plan to all team members
  + Negotiation with other staff to optimise patient care, as required
  + Cooperation with team and requesting assistance from others
  + Clear delegation of tasks
  + Responsiveness to questions or suggestions

## List Management

* + Case allocation and prioritisation
  + Operating list organisation and efficiency
  + Management of theatre resources and cost/utility implications
  + Vigilance
  + Handover of patient care

## Patient Safety

* + Adherence to agreed standards and guidelines, including participation in WHO Surgical Safety Checklist
  + Risk minimisation (practices to reduce patient harm)

## Ideas for Surgical Clinical Audits

* + Patient satisfaction questionnaire e.g. How well did your post-operative pain control work?
  + Were you satisfied with my pre-operative explanation of your condition?
  + Surgical events rates monitoring e.g.
    - What is your rate of visceral incidents? (e.g., bladder or bowel perforation)
    - What is your rate of vascular injury?
    - What % of your patients needed red cell transfusion?
    - What % of your laparoscopic cases were converted to open? E.g., laparoscopic to laparotomy
    - What % of your cases stayed in hospital >7 days?
    - What % of your cases had unplanned readmissions < 30 days from first operation?
    - What % of your cases had unplanned return to theatre < 30 days from first operation?
    - What % of your cases had unplanned ICU admission?
    - What % of your cases had a thromboembolic event within 3 months of the first operation?
    - How many of your cases died within 30 days of the first operation?

Other broad topic areas include:

## Patient management

* + Preoperative assessment
  + Informed consent
  + Additional investigations/interventions
  + Selection of surgical approach $ technique
  + Case preparation
  + Intraoperative management and technique
  + Clinical and situational awareness
  + Response to change in patient status
  + Postoperative management plan
  + Ethical care of the patient

## Communication

* + Preoperative history and management options and prognosis discussion with patient
  + Relationship with patients and their families/carers
  + Post-operative communication with and education of patient
  + Follow up care instructions and safety netting
  + Negotiating patient concerns, values, and wishes
  + Communication with a surgical assistant
  + Communication with theatre team

## Teamwork/ Collaboration

* + Plan of care agreed with anaesthetist
  + Communication of surgical management plan to all team members
  + Negotiation with other staff to optimise patient care, as required
  + Cooperation with team and requesting assistance from others
  + Clear delegation of tasks
  + Responsiveness to questions or suggestions

## List Management

* + Case allocation and prioritisation
  + Operating list organisation and efficiency
  + Management of theatre resources and cost/utility implications
  + Vigilance
  + Handover of patient care

## Patient Safety

* + Adherence to agreed standards and guidelines, including participation in WHO Surgical Safety Checklist
  + Risk minimisation (practices to reduce patient harm) Please use ‘Clinical audit CPD claim form’ for claiming CPD hours