

ENQUIRY 1

1.0 INTRODUCTION TO EVIDENCE FOR PRACTICE

- **Evidence-based practice;**
 - Requires professionals to make decisions about practice that are supported by the best available evidence
 - Promotes an attitude of inquiry

- two key principles underpin evidence-based health practice
 1. Decisions about practice should be supported by the best available relevant evidence, along with professional expertise, consideration of the clinical circumstances and setting, and should take into account the rights, values and preferences of patients, clients and consumers
 - Best research evidence; valid and clinically relevant research
 - Professional and clinical expertise; skills and past experience
 - Information from the practice context; setting and availability of resources, space and time. Also patient's other conditions (health-related)
 - Client's values and circumstances; preferences, concerns and expectations of each patient must be integrated into clinical decisions to serve the patient
 2. To maintain its currency, evidence-based practice requires ongoing professional development

- Model of evidence-based practice;
 1. **Ask** an answerable practice-related question
 2. **Acquire** relevant evidence to answer the practice-related question
 3. **Appraise** the acquired evidence
 4. **Apply** the appraised evidence to practice
 5. **Assess** your own performance in executing steps 1-4, and set learning goals to enhance future performance

- Steps for systematic investigation when researching;
 - Conducting a review of relevant literature
 - Formulating a research question
 - Deciding on a method for addressing the research question
 - Using the method to collect data
 - Analysing the data
 - Interpreting the data in terms of the answer to the research question

- **Types of Primary research studies;**
 - Where journal articles have made their own data and own research
 - Will 'cherry pick'; only pick the articles that support their argument. Unlike Secondary research studies which get all sorts of articles.
 - **Quantitative**
 - Analysing relationships
 - Involve measurements of characteristics of study participants, which are relevant to addressing the research question
 - **Qualitative**
 - A research approach which emphasises words rather than numbers
 - What we see/ observe
 - Generation of theories

- Is often better placed than quantitative research to provide in-depth understanding of phenomena
- **Types of secondary research studies;**
 - Where people quote other articles
 - Will cram all articles together and look at the positives and negatives
 - **Systematic reviews;**
 - Attempts to collate all empirical evidence that fits pre-specified eligibility criteria in order to answer a specific research question. The key characteristics of a systematic review are;
 - Clearly defined question with inclusion and exclusion of criteria
 - Rigorous and systematic search of the literature
 - Critical appraisal of included studies
 - Data extraction and management
 - Analysis and interpretation of result
 - May include a **meta-analysis** (a quantitative method used to synthesise and summarise results). **Meta-synthesis** is used for the synthesis of qualitative research.
 - **Narrative reviews;**
 - The review is conducted in a story-telling fashion
 - Narrative reviews are 2 kinds;
 - Those where the review constitutes the entirety of the paper
 - Those which are only part of the paper
 - Can have bias
 - **Clinical guidelines;**
 - Guides health professionals in how to deal with specified clinical conditions
 - These guidelines can range from simple protocols to high quality evidence based guidelines
 - These guidelines translate research into recommendations for practice and help health professionals make better decisions about their clients' care
- Factors that affect the quality of research
 - **Internal validity;** in quantitative research it relates to degree of certainty that we can have about the correctness of conclusions drawn from the study's findings
 - the methods obtaining a measurement must provide the same result every time it is performed for it to be deemed reliable
 - **External validity;** which relates to the degree to which the study's findings can be generalised beyond just those people involved in the study
 - The results can't be generalised beyond the small group of people in the study otherwise the real value of the findings is limited
 - If the group of people in the study is both large in number and representative of the population, then this is said to afford a high level of external validity
 - **Methodological rigour;** relates to the trustworthiness of qualitative research

3.0 ASKING QU TO GUIDE SEARCH FOR EVIDENCE

- **Background questions;**
 - General knowledge about a condition
 - Helps understand a condition, assessment or procedure better
 - Eg. What areas of the brain are involved in complex problem solving? What causes stroke? How is sound transmitted through the ear?
- **Foreground questions;**
 - Specific knowledge about managing a patient's specific circumstances
 - Address specific knowledge that will inform clinical decisions and actions
 - Eg. Is early intensive treatment targeting communication effective for adult stroke patients?
 - 5 main types of practice-related foreground questions;
 - **Effectiveness questions;** eg. Is bed rest more effective than exercise in proving the mobility of adult who had a stroke?
 - **Prevention question;** eg. Does reducing high BP to normal levels prevent strokes in adults?
 - **Assessment questions;** eg. Is picture naming an effective method of assessing the language function of an adult who had a stroke?
 - **Description questions;** eg. In comparing adult females who are smokers vs non-smokes which group is more likely to have had at least one parent who smoked?
 - **Risk questions;** eg. Are 'mini strokes' in elderly people a risk factor for a more severe stroke in a future?
- **PICO questions;**
 - **P = Patient's problem and population**
 - How could you describe a group of people with a similar problem to your client?
 - How would you describe the client to another student/ colleague
 - What are the important characteristics of this patient?
 - Primary problem
 - Patient's main concern or complaint
 - Disease or health status
 - Age, sex, previous ailments, current medications
 - Should these characteristics be considered as i search for evidence?
 - **I = Intervention**
 - What you plan to do
 - The factor of interest
 - Use of a specific test, treatment, medication, product or procedure
 - **C = Comparison**
 - Main alternative you are considering
 - Is the only optional component in the PICO question
 - Eg. Comparing a new treatment technique (the intervention) with the treatment technique you are currently using (the comparison)
 - "Is bed rest more effective than exercise in improving the mobility of adult stroke patients?" the comparison is 'exercise'
 - **O = Outcome**
 - It specifies the result(s) of what you plan to accomplish, improve or affect and should be measurable.
 - Outcomes may consist of;
 - Relieving or eliminating specific symptoms

- Improving or maintaining function
- Preventing specific conditions

Population and Problem (P)	What you might do—Intervention (I)	Alternate course of action-Comparison (C)	What you want to accomplish—Outcome (O)	
Effectiveness	In people who have had a stroke	Is home based rehabilitation as effective as	Hospital based rehabilitation	In improving ability to perform self-care activities?
Prevention	If high school teachers who are at risk for vocal nodules	Undertake seminars on vocal hygiene	Or seminars on stress reduction techniques	Will they show a reduced incidence of nodules?
Assessment	In older community- living people	Does the Mini-Mental State Examination		Accurately detect the presence of cognitive impairment?
Description	What proportion of professional footballers	Who have previously suffered a lower back injury		Suffer subsequent hamstring injuries
Risk	In pre-school aged children	Is a family history of stuttering		A risk factor for stuttering?