Family Medicine

Theory & OSCE

V 1.0

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Theory

OSCE

Family Medicine's Seminar-Specific Objectives

Intended Learning Outcomes "ILO"

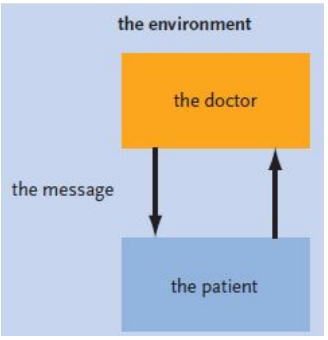
	subject
	Introduction to family medicine
1	Communication skills ● Importance ● communication skills ● children, adolescents and elderly people
2	Special communication skills with women and children + adolescent and elderly ● adult, adolescent and children ● Communicate effectively and comprehensively with both parents and children in the same setting ● setting of the clinic, communication skills, family dynamics and special examination ● comprehensive approach to female patients. social, psychological and cultural issues ● sensitive issues related to female patient examination ○ chaperon, informed consent, genital and breast examination
3	Counselling ● Define ● advantages and disadvantages ● Application ● communication skills ● stages
4	Diagnostic process + pt centered medicine ● patient-centered diagnosis ● Inductive and Hypothetico Deductive Problem-Solving ● Masquerades ● generate and rank "appropriate" diagnostic possibilities ○ headache, abdominal pain, tiredness, dizziness ● Prediagnostic interpretation (PDI) + checklists" ● Triple diagnosis ● Medical students difficulties
5	Problem oriented medical record (POMR) ● Concept ● purposes and principles ● how medical records are organized: manual & electronic ● ways of storage and security ● Contents ● SOAP format
6	Consultation ● different models ● main tasks → per Stott and Davis model, and Pendleton. ● Skills → Opening, Interviewing (history taking, physical exam), and Exposition (management).

	● Style ● reasons of failure
7	Breaking bad news +Spikes protocol
8	Evidence based medicine “EBM” ● Definition ● concepts and steps ● Classify and grade evidence (from most to least reliable ● Limitations ● EBM pyramid and studies' methodology ● formulating clinical questions → research keywords
9	Approach to geriatric Pts ● common changes → MSS, skin, CVS, RS, GI, CNS, special senses, and endocrine ● theories of ageing ● Homeostenosis ● physical office characteristics ● assess a new complex older patient ● importance of overall function, including activities of daily living (**ADLs**) and instrumental activities of daily living (**IADLs)** ● review of systems+ geriatric syndromes ● physical examination ● comprehensive problem list
10	Management plan PBL ● Principles ● RAPRIOP
11	Anticipatory Care “Preventive medicine and health promotion” ● Define, Classify, Describe ● principle and levels of prevention ● general guidelines of disease prevention according to US Preventive Task Forces, including chronic diseases and cancers ● role of family physician
12	DR-Pt relationship “DPR” and difficult pt (manipulative , angry, somatizing, grieving) ● Importance ● Brown and Pedder → three elements ● practical uses ● reasons of failing DPRs ● difficult patient → definition and types
13	Smoking cessation ● global trends in smoking and identify influencing factors ● history of smoking and the tobacco industry ● physiology behind nicotine addiction ● counseling smokers about becoming ex-smokers. ● long-term negative effects of smoking. ● modalities available for smoking cessation counseling. ● drugs available to quit smoking

Theory

Communication Skills

Communication can be defined as 'the successful passing of a message from one person to another'.



There are **five basic elements** in the communication process:

- The communicator
- the message
- the method of communicating
- the recipient
- the response

Important **principles** facilitating the communication process are:

- the **rapport** between the people involved ألفة؛ صلة توافق
    - rapport ;relationship of mutual understanding or trust & agreement between people
- the **time factor**, facilitated by devoting more time
- the **message**, which needs to be clear, correct, concise, and unambiguous in context
- the **attitudes** of both the communicator and the recipient

importance of communication skills

- BENEFITS OF **GOOD COMMUNICATION**
    - builds **trust** between patient and doctor;
    - help the patient **disclose** "Uncover" information;
    - enhances patient **satisfaction**;
    - **involves** the patient more fully in health **decision making**;
        - helps the patient make **better health decisions**;
    - leads to more **realistic** patient **expectations**;
    - produces **more effective practice**;
    - **reduces** the **risk** of **errors** and mishaps "unpredictable outcome that is unfortunate"
    - These benefits in turn **strengthen communication** between patient and doctor and can contribute to **better health outcomes** for the patient.
- IMPACT OF **POOR COMMUNICATION**
    - Decreases **confidence** and **trust** in medical care;
    - **Prevent** the patient from revealing **important information**;
    - causes significant patient **distress**;
    - Leads to the patient **not seeking** further care;
    - Leads to **misunderstandings**;
    - Leads to the **misinterpretation** of medical advice;
    - predicts negligence claims.
    - underlies most patient complaints;
    - These difficulties may lead to **poor or sub-optimal outcomes** for the patient

Different **communication skills** required during each part of the consultation

- **PRIOR** TO THE CONSULTATION
    - Doctors should strive to **reduce obstacles** to good communication.
    - In relation to the **environment**, doctors need to be mindful of the **setting**, including;
        - **physical barriers** and **potential distractions**, such as avoidable interruptions and excessive focus on the **computer screen.**

- The patient should be physically positioned to feel empowered (e.g. avoid talking down to a patient on a bed)
- Doctors should review themselves as well (e.g. dress code, sitting position, postures)
- Review of the patient's health record.
- **Guidelines** for **reception staff** who are making appointments should include enquiring whether a **standard** or **long consultation** is required, and whether the patient has any **special needs**, such as the requirement for a **carer** or **advocate**, or access to an **interpreter** or translator.
- In certain situations such as conveying **bad news**, patients may be advised to bring with them a **companion** of their choice.

TABLE 4.2 Summary of environmental factors that can adversely influence communication

Waiting room	Poor physical layout Length of waiting time
Time pressure	'Traffic' level ?busy ?noisy ?sense of urgency
Physical factors	Desk—barriers Layout inappropriate Poor record system Substandard examination couch
Privacy	Dressing/undressing Sound interruptions—telephone

- **INITIATING** THE CONSULTATION
  - Foundations of good communication → **rapport** and **active listening**.
  - **Personal introductions** are an important part of establishing rapport, as is acknowledging issues such as **appointment time delays**.
  - Evidence indicates that allowing patients to present their opening statements without interruption at the start makes it more likely that the issues of concern will be identified.
  - If the patient clearly has difficulty indicating the reason for the visit, the doctor should give some guidance by **asking specific questions** to assist the patient in describing the problem
- **DURING** THE CONSULTATION
  - active listening, Help patients express themselves & understand the information given to them
  - **ACTIVE LISTENING**
    - Listening is the single most important skill.
    - Listening is an **active process**, according to Egan, active listening is;
      - listen with ears:
      - listens with eyes and with sense of touch.
      - becoming aware of the feelings and emotions that arise because of the contact with others (emotional resonance)
      - Using the mind, heart, and imagination.

        - listens to the words of others, and to the messages that are buried in the words or encoded in all the cues that surround the words.
        - listens to the voice, the demeanour, the vocabulary, and the gestures of the other.
        - listens to the context, verbal messages and linguistic pattern, and the body movements of others.
        - listens to the sounds, and to the silences
        - Reading the body language
        - Cultural and social backgrounds
        - Silence (start) vs. talking (later)
    - Active listening is closely linked to the doctor's capacity to recognise **emotional factors** contributing to illness and distress.
    - Active listening includes:
        - making appropriate **eye contact** early in the interview;
        - asking **open-ended** questions;
        - attending to **verbal and non-verbal cues**;
        - **clarifying** the **information** provided by the patient;
        - **clarifying** the patient's **understanding** of the information provided by the doctor
- **ASSISTING THE PATIENT**
    - Greet and address the patient by his or her preferred name (and anyone else entering the room)
    - Try to make the patient feel **comfortable**
    - Try to appear 'unhurried' and **relaxed**
    - seek to understand the patient's **expectations** of the visit;
    - be **sensitive** to the **needs** and **circumstances** of the patient
        - including their beliefs, values, fears & social & cultural backgrounds
    - Encourage the asking of questions;
    - Repeat **key information**;
    - Allow for **note-taking** by the patient;
    - Ask if the patient would like another person of their choice to be present;
    - Offer an **early follow-up** appointment for further discussion;
    - Provide information in writing;
    - enlist the help of **patient support organisations** and other services;
    - Raise the idea of seeking a **second opinion**, where appropriate.
    - **Positive encouragement** may facilitate disclosure of relevant information by patients about their health.
    - One current example is the desirability of encouraging patients to discuss their use of complementary and **over-the-counter medicines**, and other **alternative therapies**.
    - Another issue often overlooked is the desirability of asking patients about other opinions they may have been given about their condition.
- **HELPING UNDERSTANDING**
    - The provision of information and advice to the patient can be facilitated by:
        - establishing what the patient wants and needs to know;
        - using plain English;
        - providing **diagrams**;

        - providing **written material**, including consumer publications (translated if necessary).
    - Written information should **not be excessive** in quantity for the patient, taking into account his or her capacity, situation, condition and diagnosis.
    - Written information should be provided to **reinforce, not replace**, an interactive **verbal** process.
    - Elicit Patient Concerns
        - The open-to-closed cone
            - Shrewdly 'diving in' and exploring the patient's initial concern.
            - determine the patient's concerns and needs.
            - more appropriate prescribing and more efficient practice.
        - Summarization
            - complete understanding of the patient's concerns
            - Reduce the chance of patient concerns being missed
    - Facilitation
        - comments or behaviors by the doctor that encourage the patient to keep talking.
        - This could include:
            - a head-nod
            - a 'hmm' at the right time
            - a 'Tell me more about that'
    - Non-verbal Communication
        - Body language
            - gestures, postures, position and distances
        - Non-verbal component comprises the majority of the impact of any communicated message
        - After noting the cues then comes confrontation:
            - Bringing these cues to the patient's attention and exploring the associated feeling further
        - considered in a cultural context
    - Confidentiality → Confidentiality is the cornerstone of any therapeutic relationship

COMMUNICATING TO FACILITATE INFORMED DECISION MAKING

- The type of information a person will require to make a decision will vary according to:
    - The individual's **needs**,
    - the nature of the **intervention**,
    - the **risks** associated with intervening or not intervening.
- **Good communication** enhances informed decision making, while poor communication increases the likelihood of dissatisfaction with unanticipated outcomes.
- Conveying the **necessary information** requires skilled communication.
- **Respect** for patient **autonomy** and the right of the patient to **accept or reject advice**, avoiding any suggestion of **coercion** "compelling by force of authority", and fostering "Helping" patient **understanding**, are all integral parts of this process.
- To enable them to participate meaningfully in decisions affecting their health care, patients need **relevant information** presented in a way that they can understand.
- It is **not possible**, however, to provide information about **every detail** of all intervention options, potential benefits or harms, and all possible outcomes.

- Be aware of risks that a particular patient would treat as significant.
- It is also **not possible** to assess **risks** with **complete certainty**, and this uncertainty should be communicated to patients.
- Where possible, information about the **benefits** and **risks** of interventions should be framed in ways which assist the patient to best understand his or her situation, and to understand the nature of risk.
- The patient should be advised of **material risks**, which are those to which a reasonable person in the patient's position is likely to attach significance, or those to which the doctor knows or ought to know the particular patient is likely to attach significance.
    - material risks; A significant potential for harm that a reasonable person would want to consider when making a decision about undergoing a medical or surgical Tx.
    - **Known risks** that reasonable people would regard as significant should be disclosed, whether an adverse outcome is **common** and the detriment **slight**, or whether an adverse outcome is **severe** though its occurrence is **rare**.

PROVIDING INFORMATION ABOUT **DIAGNOSIS**

1. The possible or likely **nature** of the **illness** or condition;
2. The **degree** of **uncertainty** of any diagnosis;
3. The **possible** need for **referral** for diagnostic confirmation or refutation"falsifying";
4. The **extent** and soundness of **medical knowledge** about the specific condition;
5. The **status** of the **patient's illness**, whether **temporary**, **chronic** or **terminal**;
6. The involvement of the patient in formulation of the ongoing care;
7. Patient's **requests** for information;
8. **sensitivity** to the patient's wishes for information;
9. **Alternative sources** of reliable information.

PROVIDING INFORMATION ABOUT **INTERVENTIONS**

1. should be conveyed in **plain language**:
2. **Description** of the intervention;
    - What will happen to the patient;
3. Whether its **critical**, **essential**, **elective** or **discretionary "تقدیری"**;
4. Whether its current accepted medical practice;
5. Whether its **conventional**, **experimental** or **innovative**;
6. Whether its part of a **clinical trial** or other research project;
7. the **degree** of **uncertainty** about the **benefit**(s) of the proposed intervention;
8. how quickly a decision about the proposed intervention needs to be made;
9. who will undertake the proposed intervention, including their status and the extent of their experience, and that of any supervising doctor, where this information is known;
10. how **long** the proposed intervention will take;
    - How long until the results of any intervention will be available;
    - How long will be needed for recuperation "Gradual healing" and/or rehabilitation;
11. what the estimated **costs** are (where known), including out-of-pocket costs;
12. what, if any, **conflicts of interest** the doctor may have, including financial ones.
13. The patient should be advised of **alternative options** including:
    - what those options are;
    - their **availability** and potential **consequences**;
    - likely short- and long-term **consequences** that may arise if they choose not to proceed with the proposed intervention or with any intervention at all.

14. The patient should be advised of proposed **follow-up arrangements** including:
    - clearly stated arrangements for providing the results of the intervention (usually an investigation);
    - feasibility and **costs** of the follow-up arrangements.
    - Complex interventions usually require the provision of detailed information, as do treatments where the patient has no physical illness, for example cosmetic surgery.

WITHHOLDING INFORMATION

- Information should not be withheld from patients.
- There are very few exceptions to this principle, but these include:
    - Situations in which a patient **expressly** directs the doctor or another person to make the decisions, and does not want the offered information.
        - Even in these situations, the doctor should give the patient **basic information** about the illness, proposed treatments and the risks involved, and be satisfied that the patient understands both their right to receive information and that this right is being waived.
        - Such decisions should be **documented**, along with the patient's **consent** to proceed **without detailed information**.
        - The patient's decision should be reviewed over time to ensure that there has been no change of mind.
    - Situations where a patient has **impaired decision-making capacity**, and the legally appropriate person requests that information not be provided either to the patient or to that person.
        - The doctor should give the legally appropriate person basic information about the illness, proposed interventions and risks involved, and be satisfied that that person understands both the right to receive information and that this right is being waived.
    - Situations where there is good reason for the doctor to believe that the **patient's physical or mental health** might be seriously **harmed** by the information.
        - Information should not be withheld simply because the patient might be disconcerted "disconcerted" or dismayed "shocked", or because the doctor finds giving particular information difficult or unpleasant.
        - The doctor needs to identify and address the concerns of family and carers about perceptions that the patient will be harmed by full disclosure.
    - Situations where there is good reason for the doctor to believe that **another person's physical or mental health** might be seriously harmed by the information.
        - ex ;include issues such as domestic violence and intra-familial child abuse.
    - Situations as outlined above may have complex **ethical**, **legal** and **privacy** considerations, and doctors are advised to seek expert advice, eg from their medical indemnity organisation.

USE OF INTERPRETERS

- **qualified interpreters**, including sign language and telephone interpreters when consulting with patients not fluent in English or those with special communication needs.
- Accredited interpreters receive formal training and are bound by ethical standards of patient confidentiality and accurate interpreting.
- Accredited sign language interpreters should be used for consultations with deaf or deaf/blind patients, at the patient's request.

    - English may be a second language for some deaf patients and relying on written notes and/or lip reading can lead to misunderstanding.
- For privacy reasons it is **inappropriate** to use **family members** or **friends** to interpret at medical consultations.
    - However, not all cultural groups welcome the use of non-family members in such circumstances, and doctors need to be aware of, and sensitive to, such a possibility.
- When using an interpreter→ address the patient directly rather than the interpreter.

USE OF PATIENT ADVOCATES

- Patient advocates can play an important role in assisting communication and patient decision making. For example, they may be involved in assisting patients with chronic illness, mental illness, intellectual disability or those from different cultural backgrounds.
- Hospitals may employ **liaison officers** as patient advocates.
    - liaison officer is a person who liaises between two organizations to communicate and coordinate their activities.
- The use of patient advocates must be **negotiated** with **each patient** as not all patients will want their involvement.

BRIEF CONSULTATIONS

- Many doctor-patient contacts are relatively **straightforward** and **brief**, and may primarily involve the provision of information and advice, or repeat prescriptions.
- This will usually mean that the exchange of information can be accomplished **simply**.
- These contacts are nevertheless **significant**, and the spirit and intent of this advice still applies.

ADVISING PATIENTS ABOUT **ADDITIONAL SOURCES OF INFORMATION**

- Many patients will have had, or will seek, access to other sources of information about their condition, including information presented on the **Internet**.
- This information will be variable in **quality**, **accuracy** and **scientific validity**.
- Doctors should be courteous “considerate ” about such material as it can alert them to the patient’s **desire** for additional information and, if possible, offer guidance as to its usefulness and relevance.
- Referral to appropriate sources of consumer information developed by the NHMRC and other organisations about different conditions and diseases is useful
- An increasing number of States and Territories and private medical insurers have also introduced telephone assistance, which patients may find informative and helpful.

Patient Education

- In most consultations, information flow often moves repeatedly back and forth between patient and doctor.
- Four techniques that will help maximize patient understanding are:
    - Signposting
    - ‘Chunk and Check’
    - Avoiding jargon
    - Using visual and physical techniques to communicate
- Signposting
    - Explicitly stating what the doctor has done and/or is about to do
    - e.g. I have finished examining you, now I would like to explain what I think the issues are
    - Signposting helps orientate and relax the patient, and makes him focus better on what the doctor is saying
- Chunk and check

    - doctor provides a chunk of information to the patient and then immediately checks the patient's understanding of it
- Avoiding Jargon
    - Impairs the patient's understanding, Can also be intimidating
- Using visual and physical techniques to communicate
    - Diagrams, Models, Patient handouts,Videos

Negotiate and Agree on a Plan

- Shared or collaborative decision making
- shared responsibility for the outcome
- mutually acceptable follow-up plan
- e.g. "This is what I would suggest, what do you think?"

CLOSING THE CONSULTATION

- Before ending the consultation, it may be useful to provide a further **opportunity** for **questions**. Patients may raise very significant issues in their parting comments.
- Let patients know in advance that closure is being planned (and why) to allow them to not feel pushed out of the room (e.g. in case of a full waiting room)
- Summarize the critical points of the consultation
- Avoid **"Doorknob presentation"** by making sure you have covered all the patient's concerns and disclosures
    - **"Doorknob presentation":** the raising of a patient concern that happens as the doctor puts his or her hand on the doorknob to allow the patient to leave the room
    - This has also been called the 'Oh, by the way doctor' syndrome in the USA
- Thank the patient with an appropriate parting statement
    - According to the patient's style and cultural issues

The dirty dozen

The following list, referred to as 'the dirty dozen', represents well-identified **blocking techniques** to effective patient communication.

Judging

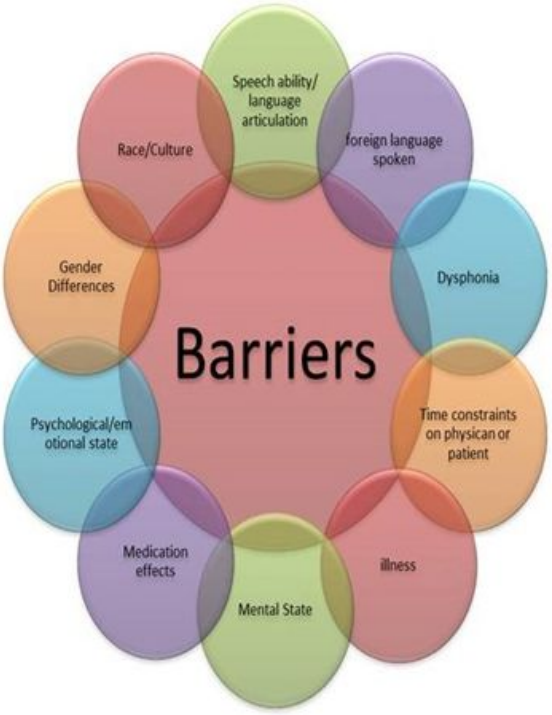
1 **Criticising**: 'You didn't bother to follow up that test'
2 **Name-calling**: 'You are becoming a worrisome drug addict'
3 **Diagnosing**: 'I can read you like a book'
4 **Praising evaluative**: 'You're a good patient—I know you can manage this …'

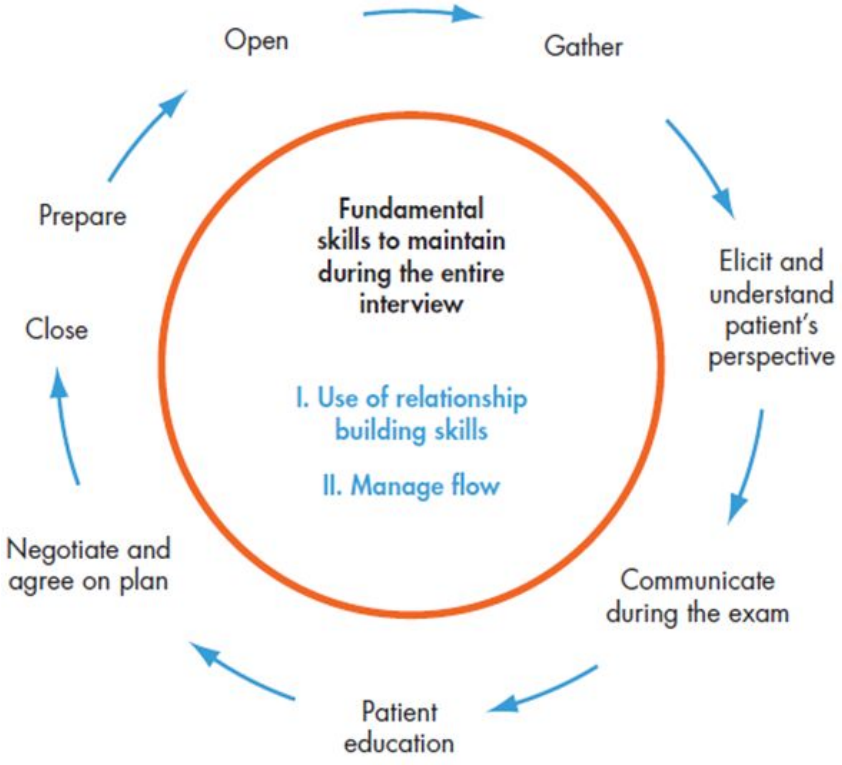
Sending solutions

5 **Ordering**: 'You must stop smoking'
6 **Threatening**: 'If you don't change, you will be dead meat in 12 months'
7 **Moralising**: 'I can't condone that sort of behaviour, it's wrong and you will pay the penalty'
8 **Excessive/inappropriate questioning**
9 **Advising/patronising**: 'When you're in Thailand, be perfectly good'

Avoiding the other's concerns

10 **Diverting/changing the subject**: 'What did you think of the election result?'
11 **Logical argument**: 'This wouldn't have happened if you …'
12 **Reassuring**: 'What are you worrying about? Hundreds of people have to face up to that"





Notes

- Patients who feel at ease and who are encouraged to talk freely are more likely to disclose the real reason for consultation
- The placebo effect → Advice reassurance and support from the doctor can have a significant effect on recovery
- Types of Dr – Pt relationship
    - Patient controlled
    - Doctor controlled
    - Patient centered

- Patient centred clinical interview
    - Doctor : history, examination , investigations → results in a diagnosis and management plan.
    - Patient : ideas , expectations , feelings → results in an understanding of patients beliefs
- Length of Consultation → Average 8 minutes
    - Makes patient centred consultation styles more difficult.
- Common doctors' mistakes
    - Doctors do more talking than listening
        - A new study found that 72% of the doctors interrupted the patient's opening statement after an average of 23 seconds. Patients who were allowed to state their concerns without interruption used only an average of 6 sec. more .
    - Doctors often ignore the pt's emotional health
    - Doctors underestimate the amount of information patients want and overestimate how much they actually give.
        - In one study of 20-minute office visits, doctors spent about 1 minute per visit informing patients but believed they were spending 9 minutes per visit doing so.
    - Doctors who can't communicate are more likely to end up in court
- What can be done?
    - Cultivate a patient - centered partnership
    - posture and body language
        - A fascinating study of time perception found that when doctors sat down during an office visit , the patients always thought the visit was longer than when the doctors remained standing , even though the length of both visits was exactly the same. Other simple gestures , such as leaning forward , have been found to help the patients relax , as well as improve satisfaction and recall.
    - open-ended questions
    - improve patient compliance, work on mutual trust
    - communicate test results to patients.
- Time is a factor in learning communication skills
    - physicians who engaged in patient-centered practice with those who did not engage in such practice. The latter took 7.8 minutes on average per consultation. Physicians who had mastered the patient-centered skills took 8.5 minutes – less than one minute longer. However, while they were learning the skills, physicians took nearly 11 minutes.
- Categories of Communication Skills
    - Process skills (how doctors say it)
    - Perceptual skills (what you are thinking & feeling)
- Doctors with good communication skills have greater job satisfaction and less work stress . Since physicians conduct some 200,000 interviews during their careers ,It is worth paying attention to what might make those interactions more satisfying .

Communication skills special ages
children, adolescent, elderly

Children

- the child is the patient but the parent is a key person in any transaction
- thorough understanding of the psychological processes through which children pass is essential so that doctors can tailor their explanations to the level of the child's understanding
- skills and behaviors when consulting with children and their parents
    - Lay out of the consulting room, toys and books and drawing materials are all important
    - Put aside time at the beginning of the consultation to build rapport
    - A genuine smile can be helpful in quickly establishing a friendly atmosphere and developing a warm, interpersonal relationship, it can be the physician's most effective weapon for breaking down resistance or apprehension in patients, especially children or young adults.
    - Listen to and involve the parents
    - Use clear and appropriate language appropriate to the child's age
    - Find out where the child is most comfortable - on the parent's knee or on the floor playing with toys particularly during the examination
    - Pay attention to proximity between you and the child - many children like you to be at their level
    - Use an unstructured, open and collaborative approach - build in play during the interview
    - Take children seriously and don't be patronizing
    - Offer support and praise
    - Reinforce confidence and responsibility
    - Be gentle and led by the child and the parent's pace
    - Most procedures are not uncomfortable if the physician exercises patience, but forced gaiety and false promises that "it won't hurt" , immediately are perceived as dishonest, and once trust is destroyed, it may never be regained by any physician.
        - Do not give false reassurances as this will result in a loss of trust.
    - Simple rewards also can make the physician's office a place of interest for the child

Adolescents

- Adolescents have a difficult time consulting their doctors. Adolescence is not a single stage of development; young people show considerable variation in psychological and physical development.
- A working knowledge of **teenage culture** is useful, especially for older doctors, and an understanding of contemporary interests and concerns.
- The common reasons for consulting include:
    - Minor illnesses which nevertheless are important to them such as acne
    - Drug and alcohol problems
    - Pregnancy and contraception
- More serious but less common problems include:
    - Diabetes mellitus, juvenile rheumatoid arthritis,

    - Sexual abuse, depression and Parasuicide
    - Eating disorders
    - Traumatic injury
- skills and behaviors when consulting with adolescents
    - Listening, building rapport, acceptance, support
    - Taking the young person seriously and being their advocate… do not be seen to be siding with the parents.
    - Tackle difficult direct questions, signposting the intent of your questions: “I need to ask you a difficult question which I ask all people of your age in this situation....can you tell me how much alcohol you drink / do you take recreational drugs?)
    - Confronting appropriately at the same time as showing care and concern
    - Showing sensitivity when interviewing the patient with a parent, negotiating when and how to ask either the patient or the **parent to leave the room**, so that each can be interviewed separately.
    - Obtain **HEADSSS** information
        - **H**ome
        - **E**ducation, **E**mployment, **E**xercise, **E**ating
        - **A**ctivities & hobbies & friends
        - **D**rug use
        - **S**exuality and Sexual activity
        - **S**uicide & depression (mental health)
        - **S**afety and risks

Elderly

- One of the biggest problems physicians face when dealing with older patients is that they are actually **more heterogeneous** than younger people.
- Their wide range of **life experiences** and **cultural backgrounds** often influence their:
    - **perception** of illness
    - **willingness** to adhere to medical regimens
    - ability to **communicate** effectively with healthcare providers
- Communication can also be hindered by the **normal aging process**, which may involve:
    - **sensory** loss
    - decline in **memory**
    - slower **processing** of information
    - **lessening** of **power** and influence over their own lives, retirement from work, and separation from family and friends.
- skills and behaviors when consulting with elderly
    - Allow **extra time** for older patients
    - Avoid distractions.
    - Sit **face to face**: some older patients have vision and hearing loss, and reading your lips may be crucial for them to receive the information correctly.
        - patient compliance with treatment recommendations is greater following encounters in which the physician is face to face with the patient
    - good **Listen**: Many of the problems associated with **noncompliance** can be reduced or eliminated simply by taking time to listen to what the patient has to say.
    - **Speak slowly**, **clearly** and **loudly**: the rate at which an older person learns is often much slower than that of a younger person.
        - Speak clearly and loudly enough for them to hear you, but do not shout.

- Use **short, simple words** and sentences: Simplifying information and speaking in a manner that can be easily understood, do not assume that patients will understand even basic medical terminology. Instead, make sure you use words that are “familiar and comfortable” to your patients.
- Stick to **one topic** at a time: Information overload can confuse patients, avoid this. Instead of providing a long, detailed explanation to a patient, try the information in outline form. This allow you to explain important information in a series of steps.
- **Simplify** and **write** down your **instructions**: in a basic, easy-to-follow format. Writing is a more permanent form of communication than speaking and provides the opportunity for the patient to later review what you have said in a less stressful environment.
- Use **charts, models and pictures:** visual aids will help patients better understand their condition and treatment. Pictures can be particularly helpful since patients can take home a copy for future reference.
- Frequently **summarize the most important points**: as you discuss the most important points with your patients, ask them to **repeat** your instructions. If after hearing what the patient has to say you conclude that he or she did not understand your instructions, simply repeating them may work, since repetition leads to greater recall. However, be aware that if patients require a second or third repeat, they may become frustrated and disregard the information altogether. An effective technique to try at that point is to rephrase the message, making it shorter and simpler.
- You may want elderly patients to **bring a family member** or **friend** in during the consultation to ensure information is understood.

Notes

- 12 million people in the US are misdiagnosed each year - in other words 1 in every 20 adult patients
- ineffective team communication is the root cause for nearly 66 percent of all medical errors
- less than half of hospitalized patients could identify their diagnoses or the names of their medications at discharge
- Even the most knowledgeable and skilled physician will have limited effectiveness if he or she is unable to develop rapport with patients.

Special Communication skills with women

Introduction:

- All medical history taking, examination, investigation and management are intensely personal matters for patients, although their **consent** to such involvement is implied by their presence in the clinic or ward.
- In **obstetric and gynecological practice** it is different as **intimate** details must be elicited; this requires tact, discretion, consideration and the maintenance of proper **confidentiality**.
- Allow **adequate time**, but it is essential to keep a **sense** of **direction** and **purpose** so that the important is quickly separated from the trivial .
- Women may have particular **expectations** of their doctors, and complying with these may not be easy!
- be aware of an expectation on the patient's part that she would be seeing a **senior person** throughout, so always be very clear about your status as a medical student or doctor in training.
- **Gynecological and obstetric cases** are usually multidimensional in nature; the reported symptoms are experienced and reported against a backdrop of core aspects of the patient's identity and femininity. So developing the necessary skills to gather and interpret the relevant information requires considerable care, insight and reflection

Gynecological History

- The usual preparations for history taking should be followed
    - courteous (respectful) **introduction**; a statement as to your status as a student or trainee.
- A careful check that you have the **correct patient** and that she understands the **language** and seemingly has **competence**.
- Potentially **sensitive questions** may be reserved for a time when the other person has been asked to leave the room, such as during the examination.
- Sometimes, it is appropriate to revisit **sensitive** issues at a future appointment which the patient may feel more confident to attend alone.
- In all consultations, you should describe the process that is about to take place and get an **agreement or verbal consent.** This will include history taking, an examination, an explanation of the findings and a discussion of a plan of action which will, of course, include an opportunity for the patient to ask any questions.
- There are different **systems** for **eliciting** a **history**: the next one shown is comprehensive and easy to learn.
- It should, of course, be adapted to the individual patient. For example, in a postmenopausal patient with a urogynaecological problem, detailed menstrual and obstetric histories contribute little. However, in a younger patient, the history may be more related to menstruation, pregnancy and its complications, and sexual activity in general.
- As a general rule, the introductory part of the history should be taken using open questions to allow a broader response.
- How to take a GYNE/OBS history?
    - 1.CC
    - 2. HPI; Hx of presenting complaint
    - 3. Menstrual history
    - 4.Other gynecological complaints
    - 5. Sexual history
    - 6. Past gynecological history
    - 7. Obstetric history

- 8. Past medical/ surgical history
- 9.Medication history
- 10.Family history
- 11. Social history

Gynecological Examination:

- Full awareness of the **privacy** of the examination is mandatory.
- Contemporary attitudes to examination insist on a **chaperone** being present during any intimate examination (**breast** or **pelvic** examination) whether the person examining is **male** or **female**.
- **General**, **abdominal** and **peripheral** examination can be carried out **without a chaperone**, although it is preferable to have one present.
- For a **new consultation**, a **general examination** is **necessary**.
- Make note of the patient's general appearance, gait, demeanor, responsiveness and general affect.
- In the context of gynecology, measurements of height and weight (giving the body mass index; BMI) and an assessment of body proportions (e.g. general or central obesity) are important.
- In '**gynecological endocrinological**' cases, the **presence** or **absence** of signs associated with **hyperandrogenemia** (hirsutes, male pattern baldness, acne, increased muscle bulk) should be documented.
- **Breast examination** is **not** part of the gynecological assessment in UK Practice UNLESS there is a specific complaint related to the breasts.

Counselling

Definition

- is " giving **advice** " that is "opinion or instruction given in directing the judgment or conduct of another "
- In clinical context counselling can be defined as:
    - 'the therapeutic process of helping a patient to explore the nature of their problem in such a way that they determine their decisions about what to do, without direct advice or reassurance from the counsellor'

Aims of counseling

- Provides emotional security and comfort .
- Promotes insight and Generates self awareness
- Facilitates confidence

Who do you think people mostly go to for counseling?

- 1. GP
- 2. Psychologists
- 3. Social workers
- 4. Marriage guidance counselors
- 5. Clergy رجال الدين

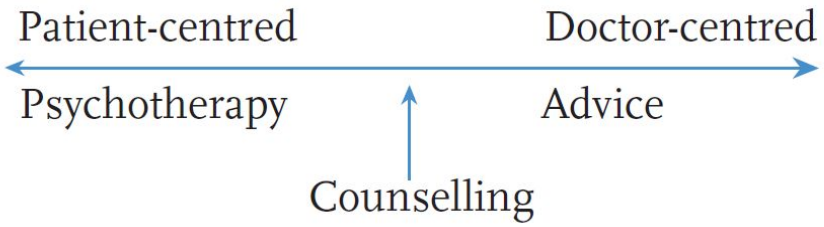
GP

- more people go to their GP for counselling than to any other group of health workers
- The GP is, therefore, ideally placed in the community to make the most significant contribution to fill the community's needs in this area.
- Because:
    - They have the opportunity to observe and understands patients and their environment .
    - They are ideally placed to treat the **whole patient** .
    - They can provide **treatment** in comfortable and familiar surroundings including the doctor's room and the patient home .
    - They are skilled at working as a member of a professional team and directing patients to more expert members of the **team** as necessary .
    - They fit comfortably into **continuing patient care** with appropriate **follow up** treatment programs
    - have an intimate knowledge of the family and the family dynamics
- To be an effective counsellor the GP must prepare for this role, HOW?
    - **First** by making a commitment to its importance
    - **Then** by acquiring ,attending workshops and discussing cases with colleague who are skilled in counselling .

Types of counseling

- Patient-centered
- Doctor-centered
- Counseling should be a combination of doctor centered (directive behavior or advice) and patient centered (psychotherapy) .
- Counseling as an activity in general practice can be represented by a moving point between these two extremes .
- **PATIENT centered** approach: Counsellor is a facilitator, patient can realize their own solutions for their problems

    - There is evidence that the use of non-directive counselling techniques leads to more accurate diagnosis and therefore to more appropriate management and an improved outcome
- **DOCTOR centered** approach: more applicable for patients who are so confused that their ability to reflect usefully is inaccessible .



Features of counseling

- **educational** process where patient learn new activity
- change and **developmental** process for the patient
- cooperative **solving problem** process → often moving a patient from a 'stuck state'.
- it's **goal directed** activity
- it's a **sensitive** response to problem within a caring relationship

Counselling models

- The PLISSIT model
    - P is for **permission** giving
    - LI is for **limited information**
    - SS is for **specific suggestion**
    - IT is for **intensive therapy**
    - Limited information → pt is supplied with limited and specific information on the topics of discussion. Because there is a significant amount of information available, dr must learn what topics the pt wishes to discuss.
    - Intensive therapy → refer the pt to other mental and medical health professionals that can help deal with the deeper, underlying issues & concerns being expressed.
- Colagiuri and Craig model
    - Developed for teaching contraceptive, abortion and sterilisation counselling.

advantages

- leads to more accurate diagnosis
- encourages patients to attain understanding and personal growth themselves

disadvantages

- Time consuming process

A problem-solving approach (Stages)

- 1. **Listen** :to the problem of first presentation
- 2. **Define** the problem, if possible in behavioral terms
- 3. Establish a **contract** for counselling, with an agreed number of visits initially
- 4.Define **short-term** and **long-term goals** for action
- 5.Decide on one option—**'experimental action**'.
- 6.Build an **action program** with the patient 'homework between visits'
- 7.**Evaluate** progress
- 8.Continue action or select another option

- 9.Evaluate progress.
- 10.**Terminate** or **refer**.

Communication skills, Basics of counselling and psychotherapy

- The emphasis here is more on:
    - Facilitation, clarification, confrontation, silence, paraphrasing, reflection , summary
    - Allow expressions of emotion
    - Offer supportive comments
    - NOT ON QUESTIONING
- Observe lack of congruence
- Make intelligent guesses to prompt patient to continue.
- Don't reassure too soon.
- A fundamental feature of counselling is **reflective listening** to direct patients to think about and then resolve their problems.
- Understand pt feelings → hostility, anger, insecurity,seduction, fear, manipulation
- Explore possible feelings of insecurity and allow free expression of such feelings
- Ask key searching questions, such as:
    - What do you think deep down is the cause of your problem?
    - How do you think your problem should be treated?
- Don't say to the patient 'I'm counselling you' or 'I'm giving you psychotherapy'—make it a natural communication process
- Do not try to rush patients into achieving a happy ending
- Wherever possible, make therapy non authoritarian and non-directional

AVOID

- Telling patients what they must do\ offering solutions .
- Giving advice based on your own personal experiences and beliefs
- Bringing up problems that the patient does not produce voluntarily

What counselling is not

- Giving information
- Giving advice
- Being judgmental
- Imposing one's own values , behavior and practices

Key Rules

- Patient must leave feeling **better**
- Provide **insight** into their illness and/or behavior
- Address any feeling of **guilt** (people must feel okay or forgiven)

Patients unlikely to benefit

- **psychotic** patients
- patients who have had an **unrewarding experience** with psychiatrists
- patients with little **awareness** or **language** to express emotional difficulty
- patients who do not believe doctors can treat **psychosocial** problems
- patients with chronic **psychosomatic** tendencies

Applications of counselling in clinical practice

- any crisis situation → breaking bad news
- bereavement or grief
- terminal illness/palliative care or chronic pain or severe illness

- marital problems or family problems
- sexual dysfunction
- infertility
- anxiety and stress or depression
- intellectual handicap in a child
- sexual abuse/child abuse
- domestic violence

Cognitive behavior therapy

- Cognitions are thoughts, beliefs or perceptions.
- **Cognitive behavior therapy (CBT)** involves the process of knowing or identifying, understanding or having insight into these thought processes
- The therapy then aims to change behavior
- in all forms, especially social anxiety disorder and phobias—in all of which CBT has proved to be better than placebo

Crisis management

- **Emotion expression**
    - Talk things over with friends
- Consider your problems one at a time
- Focus on things as they are **now** —at this **moment**
- Act firmly and promptly to **solve** a **problem**
- **Occupy** yourself and your mind as much as possible
- Try not to nurse grudges or blame other people
- Set aside some time every day for **physical relaxation**
- Stick to your **daily routine** as much as possible
- Consult your family doctor when you need help.

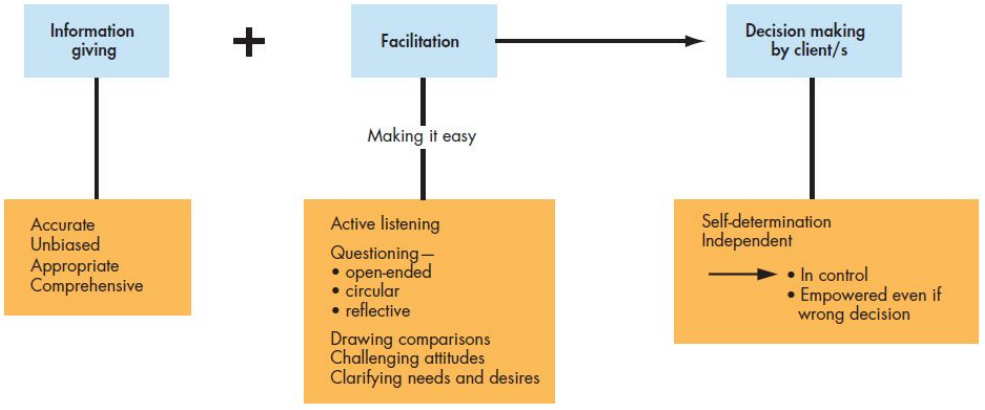


FIGURE 5.1 Medical counselling model

Stages of counseling

- Build rapport
- Assessment and analysis of problem
- Supportive counseling
- Planning and initiation
- Implementation Of planning
- Terminology and follow up

Diagnostic process & Pt centered medicine

Objectives

- Identifying how to reach a **patient-centered medicine**.
- To differentiate between **inductive** and **hypothetico deductive** methods of problem solving.
- To **generate** and **rank** “appropriate” diagnostic **possibilities** for common complaints.
- To apply **prediagnostic interpretation** and “**checklists**” in generating diagnostic hypothesis.
- To know the **difficulties** that **medical students** face in making diagnoses.
- To recognize the “**Triple diagnosis**”.

Diagnosis

- **Identification** of a condition, disease, disorder, or problem by **systematic analysis** of the background or **history**, **examination** of the signs or symptoms, **evaluation** of the research or test results, and **investigation** of the assumed or probable causes.
- Effective prognosis is not possible without effective diagnosis
- A patient consults an orthopedist because of knee pain. The surgeon determines that no operation is indicated and refers her to a rheumatologist, who finds no systemic inflammatory disease and refers her to a physiatrist, who sends her to a physical therapist, who administers the actual treatment. Each clinician has executed his or her craft with impeccable “highest standards” authority and skill, but the patient has become a shuttlecock “كره الريشه” . Probably a hassled, frustrated, and maybe bankrupt shuttlecock

Hippocratic oath

- I will remember that there is **art** to medicine as well as **science**, and that warmth, sympathy, and understanding may outweigh the surgeon's knife or the chemist's drug.

Difference between **patient centered** diagnosis and **disease based** diagnosis

- **Closed** questions vs **open** questions
- Giving the patient **time** to talk about all his problems
- Avoid situation where patient and doctors have **different agendas ;** tension headache vs anemia
- Will allow the skilled doctor to educate his patient *ex; antibiotic*

How to reach **patient centered diagnosis**

- Patient-centered communication is based on a **moral philosophy** that calls for physicians to expand upon the biomedical approach to care by
- helping patients **feel understood** through inquiry into patients’ **needs**, **perspectives**, and **expectations**
- Attending to the **psychosocial** context; and expanding **patients’ involvement** in **understanding** their illnesses and in **decisions** that affect their health.
- **Good communication skills,** empathy and shared understanding may make the practice of medicine more patient centred

Evidence-based medicine and **patient centered medicine** are not contradictory but **complementary** movements.

- It is not possible to practice patient-centered medicine that is not based on evidence, nor is it possible to practice evidence-based medicine at a distance from the individual patient

- Example
    - A GP is seeing a 58-year-old man who is known to be hypertensive and a smoker. The receptionist has already documented that he is coming in with a problem of **chest pain**. The GP makes an automatic assumption that the pain is most likely to be angina pectoris, because that is probably the most serious cause and the one that the patient is likely to be most worried about, and therefore starts taking the history with the specific purpose of confirming or refuting that diagnosis.
    - disease based
        - GP: I gather you've had some chest pain?
            - Patient: Yes, it's been quite bad.
        - GP: Is it in the middle of your chest?
            - Patient: Yes.
        - GP: And does it travel to your left arm?
            - Patient: Yes – and to my shoulder.
        - GP: Does it come on when you walk?
            - Patient: Yes.
        - GP: And is it relieved by rest?
            - Patient: Yes
        - GP: I'm afraid I think this is angina and I will need to refer you to a heart specialist
    - patient centered
        - GP: Tell me why you have come to see me today.
            - Patient: Well – I have been having some chest pain.
        - GP: Tell me more about what it's like.
            - Patient: It's in the centre of my chest and tends to go to my left arm. Sometimes it comes on when I've been walking
        - GP: Tell me more about that.
            - Patient: Sometimes it comes when I am walking and sometimes when I'm sitting down at home after a long walk.
        - GP: If the pain comes on when you are walking, what do you do?
            - Patient: I usually slow down, but if I'm in a hurry I can walk on with the pain.
        - GP: I am a little worried that this might be angina but some things suggest it might not be, so I am going to refer you to a heart specialist to make sure it isn't angina

The concept of **diagnostic triads**

- The diagnostic model for a presenting problem
    - What is the **probability** diagnosis?
    - What **serious** disorders must not be missed?
    - What conditions are often **missed** (the **pitfalls**)?
    - Could this patient have one of the **'masquerades,**masks' in medical practice?
    - Is this patient trying to tell me something else?
    - Novelty or Treatable diseases

PROMPT

- Each of the above six questions will be expanded. An excellent acronym on this theme, **'PROMPT'**, was devised by a reader, Dr Kelly Teagle:
- **P** probability

- **R** red flag
- **O** often missed
- **M** masquerades
- **P** patient wants to
- **T** tell me something

Things are not always **CUT** and **DRIED**

- **C** connective tissue disorders
- **U** UTIs, particularly in very old and very young
- **T** thyroid disease
- AND
- **D** depression
- **R** remember to rule out serious and rare causes
- **I** iatrogenic causes
- **E** emotional needs
- **D** diabetes

The **probability** diagnosis

- The probability diagnosis is based on the doctor's perspective and experience with regard to **prevalence**, **incidence** and the natural **history** of disease.
- GPs acquire first-hand epidemiological knowledge about the patterns of illness apparent in individuals and in the community

What **serious disorders** must not be missed?

- Diagnostic triads "DxT" for life-threatening conditions (examples)
- DxT: fever + rigors + hypotension = septicaemia
- DxT: fever + vomiting + headache = meningitis
- DxT: fatigue + dizziness ± syncope = cardiac arrhythmia
- DxT: fever + drooling + stridor (child) = epiglottitis
- DxT: headache + vomiting + altered consciousness = subarachnoid haemorrhage (SAH)
- DxT: abdominal pain + amenorrhoea + abnormal vaginal bleeding = ectopic pregnancy
- DxT: fatigue + dyspnoea on exertion + dizziness = cardiomyopathy

Red flags

- weight loss, vomiting, altered cognition, fever >38ºC, dizziness, and/or syncope and pallor.

Pitfalls

- Abscess (hidden)
- Addison disease
- Allergies
- Candida infection
- Chronic fatigue syndrome
- Coeliac disease
- Domestic abuse, including child abuse
- Drugs
- Endometriosis
- Faecal impaction
- Foreign bodies

Masquerades

The seven primary masquerades

1. Depression
2. Diabetes mellitus
3. Drugs ; iatrogenic self-abuse — alcohol — narcotics — nicotine — others
4. Anaemia
5. Thyroid and other endocrine disorders
    a. hyperthyroidism, hypothyroidism, Addison disease
6. Spinal dysfunction
7. Urinary tract infection (UTI)

Is the **patient trying** to tell me something?

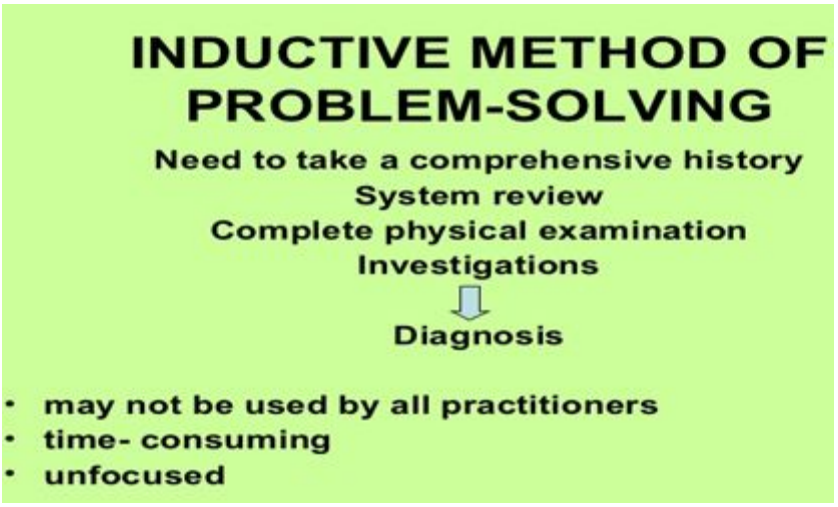
Low back pain: diagnostic strategy model Q

- Probability diagnosis
    - Vertebral dysfunction especially facet joint and disc, **Musculoligamentous strain/sprain** , Spondylosis (degenerative OA)
- Serious disorders not to be missed
    - Cardiovascular: ruptured aortic aneurysm , retroperitoneal haemorrhage,anticoagulants
    - Neoplasia: myeloma , metastases
    - Severe infections: vertebral osteomyelitis, epidural abscess, septic discitis , tuberculosis, pelvic abscess/PID
    - Osteoporotic compression fracture, Cauda equina compression
- Pitfalls (often missed)
    - Spondyloarthropathies: ankylosing spondylitis ,reactive arthritis, psoriasis, bowel inflammation, Sacroiliac dysfunction
    - Spondylolisthesis
    - Claudication: vascular , neurogenic
    - Paget disease
    - Prostatitis
    - Endometriosis
- Seven masquerades checklist
    - Depression, Diabetes, Drugs, Anaemia, Thyroid disorder, Spinal dysfunction, UTI
- Is this patient trying to tell me something?
    - Quite likely. Consider lifestyle, stress, work problems, malingering, conversion reaction

Inductive Vs. **deductive** problem solving

Inductive	Deductive
• Starts with facts and details and moves to a general conclusion. • Observation → pattern → hypothesis → Theory • “Bottom-up” logic (more specific → general)	• Starts with a conclusion and then explains the facts and details. • Theory → hypothesis → observation → confirmation • “top-down” logic (general → more specific)

- **Hypothetico Deductive** problem solving By **educated guessing** and **testing Multiple** hypothesis-guided, **problem oriented** enquiry
- **Inductive** or **traditional** method → Full history: presenting complaint, systematic enquiry, previous medical history, drugs, social/family Complete physical examination investigations



Generating and **ranking** appropriate diagnostic possibilities

- There Are four principal factors which influence the generation and ranking of appropriate diagnostic possibilities:
  - Probability.
  - Seriousness.
  - Treatability.
  - Rarity and Novelty.

Probability:

- the most important → make an estimate of the likely cause, or causes, of the patient's symptoms.
  - “What is the most likely cause or causes of my patient symptoms?”
- It is further influenced by two inter-related factors:
  - 1)Crude frequency of occurrence of the particular condition suspected.
  - 2)The complex interaction of patient and symptom variables

Seriousness:

- Particular consideration should be given to the possibility that a life threatening or seriously incapacitating condition may be responsible for presenting symptoms.
- Example : malignant melanoma

Treatability:

- The more amenable to treat a potential underlying cause for presenting symptom is, the more likely it is to be included as a diagnostic possibility and the higher its ranking is likely to be.
- For example, hypothyroidism is an uncommon cause of tiredness but should not be overlooked as it can be easily corrected.

Novelty: (especially if there is previous personal experience)

- Very rare,but memorable,conditions are disproportionately likely to be included in a potential list of causes
- When faced with the practical problem of generating appropriate differential diagnosis, you should aim to produce a list with two distinct categories.
    - The first → contain most likely causes.
    - The second → include the less likely but important to consider possibilities.
- Ex → Pheochromocytoma is a cause of hypertension
- Missing the diagnosis of temporal arteritis resulting in blindness of the unfortunate patient, is likely to lead to subsequent overdiagnosis of such a condition.

Important to note that :

- When faced with the practical problem of generating appropriate DDx you should aim to produce a list with 2 distinctive categories:
- 1) It should contain:
    - Most likely causes/ usually up to 5 possibilities
- 2) Should encompass the less likely but important to consider possibilities,encompassing the serious and treatable categories/ this should consist of one or two possibilities only.

Keep in mind

- Uncommon manifestations of common conditions are more common than common manifestations of uncommon diseases.
- Simple conditions are caused by simple problems.
- Diverse symptoms and signs are commonly caused by a single disease or entity.
- If all else fails, refer to books, journals or consult colleagues.

Difficulties that **medical students** face in making diagnoses

- Poor communication.
- Improper history taking and physical examination.
- Uncooperative patient.
- Lack of experience.
- Maintaining a focus on a particular diagnosis

Some common errors

- Unwarranted fixation on a hypothesis
    - This is one of the commonest
    - Focusing on a particular hypothesis,twisting all data in an attempt to fit it,ignoring competing hypothesis or data that seemed to deny or rule out the Dx at hand
- Premature closure of hypothesis generation
    - This occur when, prior to considering a number of appropriate diagnostic hypothesis,the student settles on one possibility and ceases to search any further,other perhaps more important facets of the whole.
- To avoid making this mistake the student should try to include all appropriate diagnostic hypothesis, bearing in mind the factors of probability,seriousness and treatability.
- Rule out syndrome:
    - This is the converse of the above
    - The problem here is that the student construct a multiplicity of diagnostic hypothesis. This is usually a consequence of poorly focused history taking
    - In order to pursue all the identified diagnostic hypothesis these students and doctors have to perform unfocused physical examinations and an inordinate number of laboratory tests as they resort to increasingly expensive hospital based

technological interventions helping to push our health care establishments ever closer to bankruptcy!!!

Triple diagnosis

- In generating diagnostic hypothesis, it is essential to think in **physical**, **social** and **psychological** terms.
- This is not to suggest that all disease have physical, social and psychological components in equal measures, it's just a reminder that the three aspects should always be considered.

Notes

- diagnosis is usually a statement of probability rather than certainty and often regarded as provisional until supported by the subsequent course of the case or the response to specific treatment.
- Use of time as an aid to diagnosis
    - All clinicians adopt a "wait and see" approach as a deliberate diagnostic strategy.
    - The rationale for use of time is to separate out, in the most economic manner, those patients with a high probability of disease from those with a low probability.
    - One study confirmed the efficacy of such policy since 72% of patients who had originally been undiagnosed did not need to return to their doctor mainly because of spontaneous remission of symptoms.

Problem oriented medical record (POMR)

OBJECTIVES

- DEFINITION “Concept”
- PURPOSES AND PRINCIPLES
- SECURITY AND STORAGE
- EMR
- CONTENTS OF MEDICAL RECORDS
- how medical records are organized: manual & electronic
- ways of storage and security
- SOAP format

INTRODUCTION

- Medical records → Source oriented, Problem oriented
- History
    - In the late 1960s Dr. Lawrence Weed created the concept of the POMR: the Problem Oriented Medical Record, and the corresponding concept of SOAP
    - he developed a method which reorganized the structure of the medical record from being divided into the different sources for patient records (x-rays, prescriptions, physician notes) to one structured around a well-defined list of a patient’s medical problems

Definition of POMR :

- The medical record is a powerful tool that allows the treating physician to track the patient’s medical history and identify problems or patterns that may help determine the course of health care.

Why do we need medical records?

- Medical records improve:
    - **Quality** of care – by providing a detailed description of patients’ health status and a rationale for treatment decisions.
    - **Continuity** of care – **team** coordination; It allows other health care providers to access quickly and understand the patient’s past and current health status.
    - **Assessment** of care – external reviews, billing, self-assessment
    - **Evidence** of care – **legal** administrative matters
- Purpose
    - Professionalism + Legal obligations
    - An assisting tool in record-keeping practices
    - Efficiency (time + cost) → Economic benefits
    - Research
    - Teaching and learning/Medical education
    - Communication

Principles

- Good medical record-keeping is part of providing the best quality medical care.
- **Accurate** and **complete documentation** in the medical record that is in keeping with the **requirements** of this **policy** is essential in facilitating and **enhancing communication** in collaborative patient care models

Organization

- Chronological and Systematic→ according to date , or/& systemic (medicine, surgery, or other subspecialties)

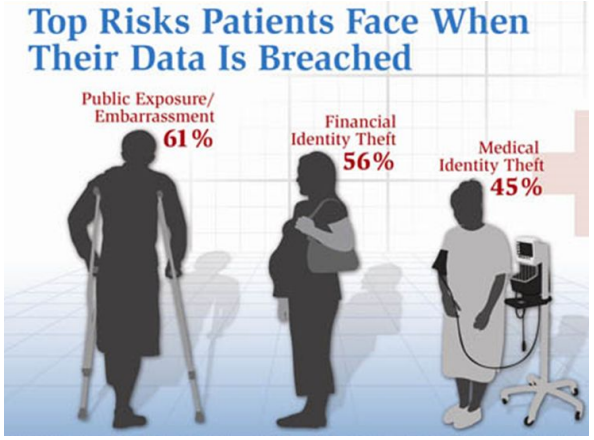
- Thorough
    - Every encounter, all information
- Legible → Easily read
- Documentation of the Patient Encounter
- Collection, Use, and Disclosure of Information

Security

- Record of who has accessed an EMR " electronic medical record" and what additions or edits they have made to the record over time.
- Must be **strongly encrypted.**
- Physicians must be aware of all others (including non-medical staff, such as administrative, maintenance, or technical staff) who can access their records or their EMR system and what functions they are able to perform.
- All personal health information contained on an EMR, external storage media, or a mobile device must be strongly encrypted.
- **EMAILS** ARE **NOT SECURE**!!!
- If a breach occurs, physicians are required to notify the patient and seek advice from the proper authority.

Storage

- must be stored in a safe and secure environment to ensure **physical** and **logical** integrity and confidentiality
- **Restricted access** areas or locked filing cabinets to protect against loss of information & damage
- Electronic records must be **backed-up** on a routine basis and back-up copies stored in a physically secure environment separate from where the original data are normally stored.
- Physicians must develop records management protocols to regulate who may gain **access** to records and what they may do according to their role, responsibilities, and the authority they have
- Protocols must ensure that patient records, in electronic or paper form, are readily **available** and **producible** when legitimate use is required, and that reasonable steps have been taken to ensure they are **protected** from **theft**, **loss** and **unauthorized** use or disclosure, including copying, modification or disposal.
- What is reasonable in terms of records management protocols will **depend** on the **threats** and risks to which the information is exposed, the **sensitivity** of the information, and the **extent** to which it can be linked to an identifiable individual.
- All identifiable personal health information accessed and/or stored on mobile devices (even temporarily) must be de-identified or strongly encrypted.



Electronic Medical Records

- Transitioning from Paper to Electronic Records
    - Scanning Documents
    - Networking
- Definition
    - digital version of a paper chart that contains all of a patient's medical history from one practice. An EMR is mostly used by providers for diagnosis and treatment
- Advantages
    - Providing **accurate**, **up-to-date**, and **complete** information about patients at the point of care
    - Enabling **quick access** to patient records for more coordinated, efficient care
    - **Securely** sharing electronic information with patients and other clinicians
    - Helping providers more **effectively** diagnose patients, **reduce** medical **errors**, and provide **safer** care
    - Improving patient and provider **interaction** and **communication**, as well as health care convenience
    - **Reducing costs** through decreased paperwork, improved safety, reduced duplication of testing, and improved health.
- Disadvantages
    - Much Skill Required
    - Minimal Error Could Mean Big Loss
- Transitioning from Paper to Electronic Records
    - Ensure that patient care and appropriate record-keeping practices continue **without interruption** and that patients' personal health information is protected.
    - Ensure the **integrity** of the **data** that have been converted into electronic form
        - This includes :- verifying that documents have been properly scanned and that the entire patient record is intact upon conversion, including all attached notes and handwritten comments.
    - Physicians should establish **specific procedures** for converting files and document these procedures in writing.
    - The original **paper** records may be **destroyed**
    - Appropriate **safeguards** are used to ensure **reliability** of digital copies
    - A **quality assurance** process is established, followed, and documented (e.g., comparing scanned copies to originals to ensure that they have been accurately converted)
    - **Scanned** copies are saved in "**read-only**" format
- Retention, access & transfer of medical records
    - Physicians are obligated to retain the original medical record themselves and only transfer copies to others.
    - Retaining medical records
        - The Regulation requires that physicians keep medical records for the following time periods:
            - **Adult** patients: records must be kept for **10 years** from the date of the last entry in the record.
            - Patients who are **children**: records must be kept until **10** years after the day on which the patient reached or would have reached the age of **18 years**.
            - Physician ceases to practice Medicin

        - records must be retained for the periods outlined above unless:
            - **Complete custody** and **control** of the records has been transferred to another person who is legally authorized to hold them.
            - Each patient has been **notified** that records will be **destroyed two years** after the **notification** and that they may obtain the records or have them transferred to another physician within the two years.
- Patient Requests Transfer
    - If a **patient requests** that a physician transfer his or her records, the transfer should take place in a timely fashion in order to facilitate continuity of care.
    - Physicians may charge patients a **reasonable fee** for making a record of personal health information, or part of it, available.
    - Physicians are also encouraged to document records transfer arrangements in a **written agreement.** Such an agreement should address, among other things:
        - The **location** of the records
        - The **requirement** of the **receiving physician** to notify the transferring physician if the records are moved to a different location or transferred to a different physician;
        - The **transferring physician's right** of access to the records in the event of a civil claim or College complaint
        - The **patients' right** of access to the records
        - The length of **time** for which the records must be retained;
        - The **obligation** to protect the **confidentiality** of the records; and
        - The **destruction** of the records.
- Physician Ceases to Practise
    - When a physician ceases to practise medicine (either because they no longer maintain their **certificate** of registration or due to **death**) two options are available for the records :
        - They may be **transferred**
        - They may be **retained** for the periods set out above. In all cases, the physician will continue to be the custodian of the records until complete custody and control passes to another person or entity that is legally authorized to hold them.
- Medical Records in a **Group Practice** or **Employment Setting**
    - **Dissolution** of a Group Practice
        - Physicians in a group practice setting must have an agreement that establishes responsibility for maintaining and transferring patient records upon dissolution.
    - The agreement should address such items as:
        - The method for division of medical records upon termination of the practice arrangement. The agreement should specify a **method** of identifying who should have ongoing custody of the medical records.
        - **Reasonable access** to the content of the medical records to allow each physician to prepare **medico-legal reports**, defend legal actions, or respond to an investigation.

General principles for **contents** of medical records

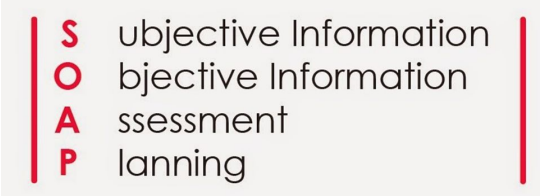
- The record must tell the story of the patient's health care condition and allow other health-care providers to read and understand the patient's health concerns or problems.
- The **Cumulative Patient Profile (CPP)**
    - The "cumulative patient profile," which **separates pertinent information** in the history from the continually updated information on short-term problems, can prevent repetitive history-taking and can make information easily accessible to busy physicians.
    - must be maintained in each patient's family practice chart which contains a brief summary of essential information.
    - The information in a CPP could include elements of the following:
        - **Patient identification** (name, address, phone number, OHIP number);
        - **Personal and family data** (occupation, life events, habits, family medical history);
        - **Past medical history** (past serious illnesses, operations, accidents, genetic history);
        - **Risk factors**;
        - **Allergies** and **drug reactions**;
        - **Ongoing health conditions** (problems, diagnoses, date of onset);
        - Health **maintenance** (annual exams, immunizations, disease surveillance, e.g., mammogram, colonoscopy, bone density);
        - **Long-term management** (current medication, dosage, frequency;)
        - Major **investigations**;
        - Date the CPP was **last updated;**
        - **Contact person** in case of emergencies.

Clinical notes

- Clinical notes are notes that are made contemporaneously with a physician-patient encounter.
- A good clinical note benefits patient care by encouraging accurate and comprehensive records, assisting in the organization of reports, and facilitating rapid and easy retrieval of information from the record.
- Clinical notes must capture all relevant information from a patient
- One of the most widely recommended methods for documenting a patient encounter is the Subjective Objective Assessment Plan (SOAP) format.

SOAP

- The SOAP note (an acronym for subjective, objective, assessment, and plan) is a method of documentation employed by health care providers to write out notes in a patient's chart, along with other common formats, such as the admission note. Documenting patient encounters in the medical record is an integral part of practice workflow starting with patient appointment scheduling, to writing out notes, to medical billing.



- Subjective component
    - initially the patient's chief complaint, or CC

    - If this is the first time a physician is seeing a patient, the physician will take a history of present illness, or HPI.
    - Pertinent medical history, surgical history, family history, and social history, along with current medications, smoking status, drug/alcohol/caffeine use, level of physical activity and allergies, are also recorded.
    - Whether this is a new concern or an ongoing/recurring problem;
    - Changes in the patient's progress or health status since the last visit;
- Objective component
    - Information that the healthcare provider observes or measures from the patient's current presentation, such as:
        - Vital signs and measurements, such as weight.
        - Findings from physical examinations, including basic systems of cardiac and respiratory, the affected systems, possible involvement of other systems, pertinent normal findings and abnormalities.
        - Positive physical findings;
        - Significant negative physical findings as they relate to the problem;
        - Results from laboratory and other diagnostic tests already completed.
        - Review of consultation reports, if available;
- Assessment
    - A **medical diagnosis** for the purpose of the medical visit on the given date of the note written is a quick summary of the patient with **main symptoms/diagnosis** including a **differential diagnosis**, a list of other possible diagnoses usually in order of most likely to least likely.
    - Possible and likely etiologies of the patient's problem.
    - It is the **patient's progress** since the last visit, and **overall progress** towards the patient's goal from the physician's perspective.
    - The assessment will identify what the drug related/induced problem is likely to be and the reasoning/evidence behind it.
    - This will include etiology and risk factors, assessments of the need for therapy, current therapy, and therapy options.
    - When used in a problem-oriented medical record (POMR), relevant problem numbers or headings are included as subheadings in the assessment.
- Plan
    - The plan is what the health care provider will do to treat the patient's concerns—such as ordering further labs, radiological work up, referrals given, procedures performed, medications given and education provided.
    - The plan will also include **goals** of **therapy** and **patient-specific drug** and **disease-state** monitoring parameters.
    - A note of what was discussed or advised with the patient as well as timings for further review or follow-up are generally included.
    - Tests or procedures ordered and explanation of significant complications, if relevant
    - Consultation requests including the reason for the referral, if relevant.
        - Consultation requests should include:
            - Reasons for referral;
            - Urgency of the consultation;
            - Relevant medical history;
            - Current medications;
            - All relevant test and procedure results.

    - Follow-up and future considerations
    - Specific concerns regarding the patient, including any decision by the patient not to follow the physician's recommendations
    - Often the Assessment and Plan sections are grouped together.
- Ex
    - A very rough example follows for a patient being reviewed following an appendectomy. This example resembles a surgical SOAP note; medical notes tend to be more detailed, especially in the subjective and objective sections.
    - Surgery Service, Dr. Jones
        - S: No further Chest Pain or Shortness of Breath. "Feeling better today." Patient reports headache.
        - O: Afebrile, P 84, R 16, BP 130/82. No acute distress.
            - Neck no JVD, Lungs clear
            - Cor RRR
            - Abd Bowel sounds present, mild RLQ tenderness, less than yesterday. Wounds look clean.
            - Ext without edema
        - A: Patient is a 37-year-old man on postoperative day 2 for laparoscopic appendectomy. Recovering well.
        - P: Advance diet. Continue to monitor labs. Follow-up with Cardiology within three days of discharge for stress testing as an outpatient. Prepare for discharge home tomorrow morning
            - The plan itself includes various components:
            - Diagnostic component: continue to monitor labs
            - Therapeutic component: advance diet
            - Referrals: follow up with Cardiology within three days of discharge for stress testing as an out-patient.
            - Patient education component: that is progressing well
            - Disposition component: discharge to home in the morning

Patient Declining Treatment or Missing Appointment

- **Telephone** Conversations and **Emails** where health information about the patient is collected and exchanged must be recorded in the medical record in the same way as any other physician-patient encounter

Consultation

The skills of general practice

- A successful outcome to the medical consultation depends on a whole array of skills required by the GP. ‘consulting skills’
- Include: clinical skills, diagnostic skills, management skills, communication skills, educative skills, therapeutic skills, manual skills and counselling skills

Definition of Consultation

- Is a **formalised interaction** between doctor and patient in settings that may vary from a clearly defined task such as suturing a simple wound to the complexities of vague illness.
- objectives of the consultation :
    - determine the exact **reason** for the **presentation**
    - achieve a **good therapeutic outcome** for the patient
    - develop a **strong doctor–patient relationship**

Models of the consultation

- 1- Pendleton and colleagues
- 2- Stott and Davis
- There are others , Some are **task oriented** ,**behaviour oriented process** or **outcome based** , some incorporate a **temporal framework** and some are based on the **doctor patient relationship** (some are pt centred some are dr centred) , or the patient perspective of illness. Many incorporate more than one

Pendleton and colleagues model (key tasks to the consultation)

- 1. To define the **reason** for the patient’s attendance, including:
    - the nature and history of problems
    - their etiology
    - the patient’s ideas, concerns and expectations
    - the effect of the problems
- 2 To consider **other issues** → continuing problems, risk factors
- 3 To choose, with the patient, an **appropriate action** for each problem
- 4.To achieve a **shared understanding** of the problems with the pt.
- 5.To involve the patient in the management and encourage him or her to accept appropriate responsibility
- 6.To use **time** and **resources efficiently** and **appropriately**:
    - in the consultation ,in the long term
- 7.To establish or maintain a **relationship** with the patient that helps to achieve the other tasks

Stott & Davis

- outlined four areas which can be explored each time a patient consults:
    - Presenting problems, continuing problems, health seeking behavior, health promotion
- what is the meaning of “Modification of help-seeking behaviour”?
    - Not wasting resources – making better use
    - Empowering patients – encouraging self- reliance and reducing dependency
    - Controlling demands on the system
    - An example might be to suggest that someone who repeatedly presents

TABLE 3.1 The potential in each primary care consultation

A	B
Management of presenting problems	Modification of health-seeking behaviour
C	**D**
Management of continuing problems	Opportunistic health promotion

within 24 hours of the onset of a sore throat might consider self medication for future episodes

Phases of the consultation

- Establishment of **rapport**
- **Diagnostic** phase:
    - the history
    - the physical and mental examination
    - investigations
- **Management** phase
    - explanation and education
    - prescribing medication
    - Follow-up

Establishing rapport and empathy

- Greet the patient with a friendly interested manner.
- Treat the patient with respect and courtesy
- Greet the patient by his or her **preferred name.**
- **Shake hands** if appropriate.
- Make the patient feel **comfortable**.
- Be **relaxed**.
- Be well **briefed** about **prior consultations**
- **Focus** firmly on the patient.
- **Listen** carefully and appropriately.
- Make appropriate reassuring gestures.
- Start with: 'What would you like to tell me?' or 'How can I help you?'
  كيف بقدر اساعدك
- Although rapport building occurs throughout **all phases** of the consultation, the initial encounter with the patient sets the foundation for the relationship during the consultation. It is good policy to walk into the waiting room and call the patient by the most appropriate name. Valuable clinical information can be gleaned by observing the patient's affect, movements and walking. It is also most appropriate to quickly familiarise oneself with the patient's notes from well-kept records, preferably before seeing the patient

Diagnostic phase

The history

- 1 the patient's stated reason for attending
- 2 why the patient is attending today, or at this particular time in the course of this illness
- 3 a list of problems or supplementary symptoms
- 4 any other initially unspoken or hidden reason for attending (e.g. the fear of cancer)

A good approach include:

- Commence by eliciting the presenting complaint → CC
- Permit an **uninterrupted** history.
- Use appropriate language (**simple questions**).
- Use **specific questions** to clarify the presenting complaint.
- Write **notes** or use the **keyboard** to record information (**maintain eye contact**).
- Enquire about general symptoms. (important; 'red flags' for serious, life-threatening disorders)

- Relevant systems review.
- A historical checklist (PMHx + PSH , drug Hx and sensitivities, FHx, psychosocial history and preventive care history).
- Give feedback to the patient about your understanding of the problems and agenda, and correct any misconceptions.

TABLE 3.2 Important general questions

Fatigue, tiredness or malaise
Fever, sweating, shakes
Weight change, especially loss
Pain or discomfort anywhere
Any unusual lumps or bumps
Any unusual bleeding

Good qs ex.:

- **Why** have you come to see me **today**?
- Do you have any particular **concern** about your health?
- That really interests me—tell me more—it seems important.
- Where would you put your real **feelings** between 0 and 100%?
- What is it that's really **upsetting** or bothering you?
- What do you really think deep down is the cause of your problem?
- Are you basically satisfied with your life?
- Is there anything that I haven't asked you and that you should tell me about?
- Tell me about things at **home**.
- Tell me about things at **work**.
- Do you experience any **bullying**?
- Are you **afraid** that something **bad** is going to happen to you?
- Is your **relationship** with any particular loved one/ person causing you stress? (This may lead to information about sensitive issues such as domestic violence or sexual problems.)
- Is there anything in your life that you would like to change?
- I'm concerned about what you are not telling me.

Basic interviewing techniques

- 1- Questions (open-ended)
- 2- silence and listening
- 3- Facilitation (by using gestures, manner, or words)
- 4- Confrontation(Examples are: 'You look sad', 'You seem frightened')
- 5- Support and reassurance
- 6- Summarizing

Open ended questions

- **Open-ended** questions and **direct** questions are very useful at appropriate times, while other questions are very **restrictive**. Examples, using pain as the 'problem', are:
    - Open-ended question: 'Tell me about the pain.'
    - Direct question: 'Where is the pain?'
    - Closed question: 'Is the pain severe?'

- The open-ended question is essential in **initiating** the interview. A question such as ‘What kind of problem have you been having?’ says to the patient ‘I’m interested in anything you may feel is important enough for you to tell me’.
- The open-ended question gives the patient an opportunity to take **temporary control** of the consultation and to outline problems and concerns.

listening and silence

- Silence is a mean of **encouraging communication.** while the patient is communicating freely, the doctor’s behaviour of choice is an **interested**, **attentive** and **relaxed** silence.
- An **attentive facial expression** and **posture** tells the patient non-verbally that he or she has an interested listener

Facilitation

- Facilitation **encourages communication** by using **manner**, **gesture** or **words** that do not specify the kind of information that is being sought.
- A common mode of facilitation is the **nod** of the **head**, conveying ‘I’m **listening’**, ‘I **understand** what you are saying’ or ‘**Go on**’

Confrontation

- When one senses that the patient is not speaking freely or clearly, the technique of confrontation may be used whereby the interviewer describes to the patient something striking about his or her verbal or non-verbal behaviour. Examples are: ‘You look sad’, ‘You seem frightened’,

Support and reassurance

- create an atmosphere in which the patient is encouraged to communicate.
- Examples → : ‘I understand’ or ‘That must be very upsetting

Summarizing

- Summarising what the patient has said can keep the patient on **track** and help you to check the **accuracy** of the information by providing the patient with the opportunity to revise any misunderstandings, for example, ‘If I’ve understood you correctly you have told me ‘.

Physical examination

- If a diagnostic hypothesis based on the history is being tested, the examination may be confined to **one system**
- However, **other regions**, systems or a general examination may be undertaken for **medicolegal** or **preventive** reasons.
- Generally, the examination is conducted in relative **silence**, with the doctor instructing the patient what to do.

Investigations

- It is often necessary to arrange for **special tests** to assist in the diagnostic process or to monitor the progress of certain illnesses or response to treatment.
- The informed consent of patients must be obtained. .
- A collaborative decision for or against certain tests may be negotiated.
- questions a clinician should ask before requesting an investigation (according to Richard Asher)
    - **Why** am I ordering this test?
    - **What** am I going to look for in the **result**?
    - If I find it, will it affect my **diagnosis**?
    - How will this affect my **management** of the case?
    - Will this ultimately **benefit** the patient?

Management phase

- may immediately follow the information-gathering interview, or it may take place on review, after diagnostic tests or referral. .
- At least two people concerned in management: the **doctor** and the **patient**.
- Management includes: **immediate** care, **prevention** and **long-term** care.

Objectives of the management phase of the consultation

1. To make use of the **doctor–patient relationship** in therapy
2. To **involve** the **patient** as far as possible in the management of his or her own problem
3. To **educate** the patient about the illness
4. To promote rational **prescribing**
5. To achieve **compliance** in therapy
6. To emphasize **preventive** opportunities
7. To provide appropriate **reassurance**
8. To encourage continuity of **ongoing care**

The sequence of the management interview

- Tell the patient the diagnosis
- Establish the patient's **knowledge** of the Diagnosis
- Establish the patient's **attitude** to the diagnosis and management
- **Educate** the patient about diagnosis

Develop a management plan for the presenting problem

- Develop precise instructions using three headings:
    - **Immediate**: always included, even if no action is proposed
    - **Long term:** for chronic, long-term or recurrent illnesses
    - **Preventive**: sometimes specific measures apply
        - often patient education is the method required

style of Consultation

- information **Giving** :Telling people what is planned.
- Information **Gathering** : Offering options, listening to and acting on feedback
- Deciding together

Causes of failure of consultation

- **Patient** factors
    - 1- Hearing or linguistic difficulties
    - 2- Upset patients
    - 3- Psychiatric illness
    - 4- Loss of faith in the doctor (poor reputation, adverse incident etc)
- **Doctor** factors
    - 1- **Attitudes** → a doctor centred consulter, angry, defensive, 'over caring'.
    - 2- **Skills** → poor consultation or clinical skills
    - 3- Lack of **knowledge**
- **Patient – doctor** factors
    - 1- Cultural issues
    - 2- Failure to identify the patients fears, beliefs or expectations.
    - 3- Failure to generate a management plan appropriate to the pts circumstances.
- **Practice** factors
    - 1- Pressure of time
    - 2- Poor systems (e.g. telephone access, appointments).
    - 3- Unnecessary interruptions – telephone, staff, patients.
    - 4- Physical factors - lay out of the room, lighting, extraneous noise

Breaking Bad News

Contents

- Definition,Objectives,Basic Guidelines,Coping with Patient Stress,Management
- Examples & Difficult Situations,Methods of Delivering Bad News
- Patient Response To Reaction,Do's and Don'ts

Intro

- **What** is breaking bad news?
    - "Bad news" are any news that drastically and **negatively** alters the patient's view of her or his Future.
    - Examples: Cancer, fetal death, diabetes, RA, failure of treatment, recurrence of the disease
- It might simply be a diagnosis that comes at an inopportune time, such as unstable angina requiring angioplasty during the week of a daughter's wedding, or it may be a diagnosis that is incompatible with one's employment, such as a coarse tremor developing in a cardiovascular surgeon
- **Why** Is it important?
    - A **Frequent** but **Stressful** Task
    - Patients Want the **Truth**
    - **Ethical** and **Legal** Imperatives
    - **Clinical** Outcomes
- Basic **guidelines**
    - **Plan** the consultation, check **facts**, set aside ample "plentiful" time.
    - Meet in an **appropriate room** with **privacy** and **no interruption**.
    - Ask the patient if they would like **company** (e.g. a relative or friend).
    - Make good **eye contact** and be alert for **non-verbal** responses.
    - Use **simple**, understandable **language**.
    - Be **honest** and **diplomatically** to the point (don't cover up the issue).
    - Allow time, silence, tears or anger.
    - Avoid **inappropriate** methods and **don't** give precise predictions about **life expectancy**
- BAD NEWS NEVER HAD GOOD TIMING
- A skill that can be taught and improved
- If we do it badly, the patients or family members may never forgive us; if we do it well, they may never forget us

Coping with **patient responses**

- The responses cover a wide range—stunned silence, disbelief, acute distress, anger, extreme guilt.
    - Be prepared for any of these responses.
- Appropriate training using **simulated** patients, **video** replays and **skilled feedback** improves communication skills.
- Give permission and **encouragement** for reactions,such as crying and screaming.
- Have a **box** of **tissues** available.
- A **comforting hand** on the shoulder or arm or holding a hand is an acceptable comfort zone.
- Offer a cup of **tea** or a cool drink if available.
- Ask the patients or relatives how they feel, what they would like to do and if they want you to contact anyone

Management

1- Tell the patient the **diagnosis**
2- Establish the patient's **knowledge** of the Diagnosis
3- Establish the patient's **attitude** to the diagnosis and management
4- **Educate** the patient about diagnosis
5- Develop a **management plan** for the presenting problem
6- Explore other **preventive** opportunities
7- **Reinforce** the information
8- Provide **take-away** information
9- **Evaluate** the consultation
10- Arrange **follow-up**

Examples

- Life threatening illness. (e.g.: Cancer, HIV)
- Congenital anomalies & mental retardation in children.(e.g. Down, Cerebral palsy)
- Degenerative conditions. (e.g.: Alzheimer, Dementia)
- End organ failure. (e.g. Heart failure, Kidney failure)
- Death
- Other Situations
    - Disease recurrence / spread of disease.
    - Irreversible side effects.
    - Issue of palliative care and resuscitation.

Why is it **difficult**?

- The **Patient's** Perspective
    - Patients often have **vivid memories** of receiving bad news.
    - Serious illnesses may reduce **quality** of life.
- The **Physician's** Perspective
    - Fear of **upsetting** the patient's family roles or structure.
    - Fear of causing **pain** / being **blamed** / fear of **therapeutic failure** / **emotional reaction**.
    - Lack of **time** / **training** in breaking bad news.

To **Whom** the BBN to be Given?

- Certain **legal** and **ethical guidelines** in clinical practice make it difficult to withhold important and personal information.
- It is **good practice** first to discuss these situations with a **colleague** or within a **multidisciplinary** health care team.
- There are some specific situations in which you may need to consider whether to give bad news. → psychotic or child
    - If a patient is deemed to be **psychotic**, and presumably may not understand what has happened, there may be reason to withhold bad news.
    - When treating a **child**, one usually confers with the parent or chaperone before breaking bad news.

When Should Bad News be Given?

- You can try **gradually** to break the news; this in turn gives the patient and relatives **time** to **adjust**.
- On the other hand, withholding the news may deny them the opportunity to face up to it and begin to make the necessary adjustments in their personal lives.
- In some situations, it can actually be hazardous to withhold bad news until a later stage.
    - e.g. If the patient has an **infectious** disease or **condition** (e.g. hepatitis C, or HIV infection), he or she can inadvertently infect someone else, or be denied the benefits of early medical information if not fully informed of this condition.

What Do Patients Want?

- For themselves
    - More **time** to talk
    - To **express themselves** and show feelings
- From the doctor
    - More information, caring, hopefulness, confidence
    - A familiar face.

Methods of Delivering Bad News

- **ABCDE** approach - Rabow and McPhee
- **SPIKES** approach – Baile and Buckman
- **SAAIQ** emergency approach – Pakistan
- **Breaks** approach – IJPC
- **SAD NEWS** approach - Canada

ABCDE Approach

- **A**dvance preparation.
- **B**uild therapeutic environment \ relationship
- **C**ommunicate well.
- **D**eal with patient and family reactions.
- **E**ncourage and validate emotions.

SPIKES Approach – A Six-Step Protocol for Delivering Bad News

- **S**etting up in privacy & listening + skills
- **P**erceptions of the patient.
- **I**nvitation to break news.
- **K**nowledge.
- **E**motions (explore + empathize)
- **S**trategy.

SAAIQ Approach –

- **S**et the scene as soon as possible.
- **A**ssess the understanding of the attendant.
- **A**lert them that I have bad news.
- **I**nform in clear, understandable words.
- **Q**uickly repeat summary of the situation.

BREAKS Approach - **B**ackground, **R**apport, **E**xplore, **A**nnounce”declare”, **K**indling”encourage emotions”, **S**ummarize

SAD NEWS Approach - **S**et up & **S**it down, **A**sk, **D**on't tell, **D**eliver the news, **N**o fancy lingo, **e**xpect permit & respond to emotion, **W**ait, **S**upport & **S**ummarise

Practical approaches to BBN

SPIKES	ABCDE	BREAKS
Setting and Listening Skills **P**atient Perception **I**nvitation to Give Information **K**nowledge **E**xplore Emotions & Empathize **S**trategy and Summarize	**A-** Advance Preparation **B-** Build environment/ relationship **C-** Communicate well **D-** Deal with reactions **E-** Encourage & validate emotions	**B** – Background **R** – Rapport **E** – Explore **A** – Announce **K** – Kindling **S** – Summarize

SPIKES Approach

Setting the environment

- Provide **privacy**.
- **Introduce** self.
- Determine who else should be present.
- Ensure **no interruptions**.
- Provide **comfortable** space.
- Create **welcoming** environment
- خصوصية,قدم نفسك, رحب بالمريض, بدون مقاطعات

Perception

- Ask what he already knows about the medical condition or what he suspects.
- Listen to level of comprehensions.
- Accept denial but do not confront "مواجهة" at this stage.
- Ex
    - "Could you tell me what happened so far?"
    - "Do have any idea what the problem could be?"
    - "Is there is anything you have been worried about?"
    - في أمر معين انت قلق بشأنه ؟ , عندك اي فكره عن المشكله ؟

Invitation - Information

- Ask patient if s/he wishes to know the details of the medical condition and/or treatment.
- Accept patient's right not to know.
- Offer to answer questions later if s/he wishes.
- Ex
    - "I do have the results today, would you like to explain it to you now?"
    - "Would you prefer if a family member/friend is present?"
    - معي الفحوصات, حاب احكيلك عنهم ؟ , حاب يكون معك صديقك أو حدا من العيله ؟

Knowledge

- Deliver the message

    - Use plain language لغة بسيطة
    - Be mindful of body language
    - Get to the point
    - Give information in small chunks
    - Pause
    - Wait for reaction
- Use “teach back” to verify that message was received
- Ex
    - "As you know, we took a biopsy and, unfortunately the results are not as we hoped"
    - PAUSE & WAIT
    - "I'm afraid / unfortunately / I'm sorry to tell you it is a tumor"
- UNCLEAR
    - "Your mother has had a severe IC bleed. She is in the ICU and has been intubated and ventilated.
    - Neurosurgery has placed a ventriculostomy to reduce the pressure in her brain. We do not anticipate a good prognosis.”
- CLEAR
    - "Your mother has had a severe stroke. She is in the intensive care unit and has been placed on life support.
    - The brain surgeons have inserted a tube to reduce the pressure in her brain. We do not think she will survive."

Emotions and Empathy

- Be prepared for patient’s and family’s emotional response.
- Anticipate fear, anger, sadness, denial, guilt.
- Be mindful of your own response.
- Comfort the patient.
- Ex
    - "I can see this news was a huge shock"
    - "You appear very anxious"
    - "So you've told me the that your biggest worries are telling your children and losing your hair?"
    - "How are you feeling about hearing the news?"
    - "You're very quit, can I ask what's going through your mind?"
    - "What's upsetting you the most?"

Strategy and **S**ummary

- Summarize concerns
- Agree on a plan
- Ask how they are left feeling
- لخص المعلومات وقم بوضع خطة علاجية

Response to Reaction

If pt **Cries**

- Allow some **time** to **cry**.
- Could say, “I can see you are very upset”.
- Could **touch** the patient appropriately.
- After a few moments you should continue talking even if patient continue to cry.

If pt **Angry**

- Defensive or irritation with patient are **unhelpful**.
- Acknowledge patient's position and avoid talking about it.

If pt **refuses** to accept diagnosis

- Explore **reasons** for patient's denial.
- Appreciate that there is an **information gap** and try to **educate** the patient.
- Check that patient has a **clear understanding** of the problem.
- **Empathize** with patient.
- Get **family members** involved if appropriate.
- Give **time** to adjust to new information.

Do Not's in the BBN

- *Do not* start giving information until it is required
- *Do not* hit and run
- *Do not* leave the dirty job for someone else (your patient, your responsibility), unless necessary (examples?)
- *Do not* share information (e.g. to relatives), unless appropriate and after consent
- *Do not* assume (mis)understanding
- *Do not* lie (really? ;)
- *Do not* give false hopes (science cannot always do miracles)
- *Do not* use terms such as "there is nothing more we can do for you"
- *Do not* abandon patients after session

What not to say

- *"I know exactly how you feel."*

Sweeping statements that are not grounded in personal or professional experiences are hard to believe.

TABLE 5.4 Breaking bad news for unexpected death: recommended actions during the interview

Allow
Time
Opportunities to react
Silence
Touching
Free expression of emotions
Questions
Viewing of a dead or injured body
Avoid
Rushing
Bluntness
Withholding the truth
Platitudes
Protecting own inadequacies
Euphemisms
The notion 'nothing more can be done'
Using medical jargon
Meeting anger with anger
Leaving the patient or loved one without a follow-on contact

platitude → العبارة المبتذلة. Bluntness → بصراحة بخشونة؛ بلا مراعاة, euphemisms → تَلْطِيف التَّعْبِير عَن شَيْء بَغِيض

Evidence based medicine "EBM"

Definition

- the **explicit**, **judicious** and **conscientious** use of **current best available evidence** in making decisions about the care of individual patients
- means using the current best evidence in decision-making in medicine in conjunction (together) with expertise of the decision-makers and expectations and values of the patients/people
- Explicit " stated clearly and in detail"
- judicious " done with good judgement "
- conscientious "accurate, correct"

EBM has **one goal**, **two** fundamental **principles**, **three components**, and **four steps**.

- One **goal**: Improve quality of clinical care;
- Two **principles**: (1) Hierarchy of evidence and (2) Insufficiency of evidence alone in decision-making;
- Three **components**: Triple **Es** (Evidence, Expertise and Expectations of patients);
- Four **steps**: Four **As** (Ask, Acquire, Assess and Apply)

Principles of EBM

- (a) Hierarchy of evidence :
    - It says that evidence available in any clinical decision making can be arranged in **order** of **strength** based on likelihood of **freedom from error.**
    - For example, for treatment decisions, **meta-analyses** of **well conducted large randomized trials** may be the strongest evidence, followed in sequence by **large multi-centric randomized trials**, meta-analyses of well conducted **small randomized trials**, **single-centre randomized trials**, **observational** studies, clinical **experience** or basic science research.

On many occasions, we make a decision on the basis of physiologic or pathophysiologic rationale.

- clinical studies are necessary to determine the benefit –risk profile.
- Decisions based solely on physiologic rationale may cause more harm than good.

experts' advice without reference to adequate search and evaluation of evidence may be simply wrong.

1	Evidence obtained from a systematic review of all relevant randomised trials.
2	Evidence obtained from at least one properly designed randomised controlled trial.
3	Evidence from well-controlled trials that are not randomised, or well-designed cohort or case–control studies, or multiple time series (with and without the intervention).
4	Opinions of respected authorities; based on clinical experience; descriptive studies; or reports of expert committees.

- B) Insufficiency of evidence alone
    - The second fundamental principle of EBM is that evidence alone is never sufficient for decision-making. It has to be integrated with **clinical expertise** and **patients' expectations** and **values**.
    - This principle gives rise to considerations of components of EBM

Components of EBM

- The other two Es required for decision-making:
- (a) Expertise of the decision-makers
- (b) Expectations and values of the patients/people

Example 1 "Expertise"

- A 28-year-old man is admitted to the intensive care unit with ascending paralysis and respiratory distress. The resident makes a diagnosis of Guillain– Barré syndrome (GBS) and starts to discuss evidence-based approaches to treat him.
- The consultant comes, takes history and suspects dumb rabies. It becomes clear that the patient had a dog bite 3 months ago and received only partial immunization
- Further investigation confirmed the suspicion of dumb rabies, and the patient was shifted to Infectious Diseases Hospital for further treatment. The whole discussion on GBS was irrelevant.
- This example illustrates the role of **expertise** in practicing EBM.
- If the diagnosis is wrong, all the EBM discussion is superfluous.

Example 2 "Expectations, values and circumstances of the patients/people"

- (a) The diagnosis of motor neuron disease (amyotrophic lateral sclerosis) requires certain level of expertise and experience. Once the diagnosis is made, one can look for evidence in favor of certain treatments like riluzole. It turns out that there is definitive evidence from RCTs and meta analysis indicating that riluzole can prolong tracheostomy – free life for 3 months if taken regularly (usually for years). The cost of riluzole treatment is prohibitive "very high prices". In view of the high cost and risk of hepatotoxicity (and the need to pay out of pocket in India), many neurologists and their patients do not use this.
    - Patients do not consider it 'worth it'; however, some patients who can easily afford to take riluzole for the treatment of this condition are prescribed with this drug.
- (b) There is a consistent evidence to show that alcohol in moderation is protective against heart attacks and stroke. However, in Islam, alcohol is forbidden. It would be unacceptable to discuss alcohol intake in moderation with a Muslim even if he has many risk factors for heart attack and stroke.

Does providing evidence based care improve outcomes for patients?

- **No** such **evidence** is **available** from randomized trials because no investigative team or research granting agency has yet overcome the problems of sample size, contamination, blinding and long term follow up which such a trial requires.
- Moreover, there are **ethical concerns** with such a trial: is withholding access to evidence from the control clinicians ethical?
- On the other hand, **population-based "outcomes research"** has repeatedly documented that those patients who do receive evidence-based therapies have better outcomes than those who don't.
    - Population-based cohort studies are a specific category of epidemiology studies in which a defined population is followed up and observed longitudinally to assess exposure and outcome relationships
- Drawbacks "limitations"
    - The need to develop new skills in **searching** and **critical appraisal** can be daunting "discouraging"

    - Busy clinicians have limited time to master and apply these new skills, and the resources required for instant access to evidence are often woefully inadequate in clinical settings.
    - Evidence that EBM works→ has been late and slow to come.
- On the other hand, there are some "**pseudo limitations**" that arose from misunderstandings of the definition of EBM: that it denigrates “minimizes “ **clinical expertise**, is limited to clinical research, ignores patients' values and preference, or promotes a cookbook approach to medicine.

Steps in Practicing EBM

- The main (but not the only) objective of EBM is the application of the **right** and **complete** information by health-care professionals in decision-making.
- To meet this objective, four key steps (4 As) are necessary:
    - (a) **Ask** for the required information by formulating your **question**. → ‘PICO
    - (b) **Acquire** (find) the information by **searching** resources.
    - (c) **Assess** or appraise the **relevance**, **quality** and **importance** of the information.
    - (d) **Apply** the information in your **practice** or patient.
- Ex → Do antibiotics help children with colds?
    - Does amoxicillin reduce facial pain in teenagers (13-18) with microbiologically-proven maxillary sinusitis?

Step 1: **Asking** for the Required Information in the Form of a **Question**

- specify the following in your clinical questions → **‘PICO’**
    - (a) **P**atient population: type of patients
    - (b) **I**ntervention (new): the new approach or strategy of treatment
    - (c) **C**omparison: the control intervention
    - (d) **O**utcomes: clinically meaningful outcomes that are important for the patients

Step 2: **Acquiring** (Searching for) the Evidence

Step 3: **Assessment** or Critical Appraisal of the Papers

- (a) Relevance
- (b) Validity
- (c) Consistency
- (d) Importance or significance of results

Unfortunately, you cannot rely 100% on papers written in even the most prestigious journals.

- Is the study valid (Systematic errors as a result of selection bias, information bias, quantitative aspects of diagnosis and treatment)
- what are the results of the study
- will the results help me in looking after my patients

There are four issues in the **critical appraisal:**

- **Relevance**
    - refers to the extent to which the research paper **matches** your information need.
    - Comparing the **research question** in the paper with your **clinical question** would help you to determine the relevance of the paper.
    - Once again,PICO format of the question would make it easy to take the decision. Many a times, you may find a match between the population and/or intervention, but

the outcomes are different. Unless you find another paper with the desired outcomes,it may be advisable to proceed with the paper

- **Validity**
  - refers to the extent to which the results are **free** from **bias**. Biases are mainly of three types “In all types of studies, you must look for these biases”
    - 1. Selection bias
    - 2. Measurement bias
    - 3. Bias in analysis
  - All kinds of studies need to be assessed for the above biases, while assessing validity.
  - **Selection bias** is the bias introduced by the selection of individuals, groups or data for analysis in such a way that proper randomization is not achieved, thereby ensuring that the sample obtained is not representative of the population intended to be analyzed.
  - **Measurement bias** results from poorly (inaccurate) measuring the outcome you are measuring. For example:
    - The survey interviewers asking about deaths were poorly trained and included deaths which occurred before the time period of interest.
    - This would lead to an overestimate of the mortality rate because deaths which should not be included are included.
  - If a bias is present, you should ask the next question – so what? Does it affect the internal validity or external validity?
  - what these terms mean?
    - **Internal validity** is concerned with the question: Are the results correct for the subjects in the study? This is the primary or first question for any study
      - Internal validity refers to how well an experiment is done, especially whether it avoids confounding (more than one possible independent variable [cause] acting at the same time). The less chance for confounding in a study, the higher its internal validity is.
    - **External validity** asks the question: To which population are the results of the study applicable or generalizable?
      - the extent to which the results of a study can be generalized to other situations and to other people.
      - External validity is judged in terms of time, place and person.
      - Can the results be extrapolated to the current or future time, to different geographical region or settings and to patients outside the study?
- **Consistency**
  - Consistency may be **internal** or **external**.
  - refers to the extent to which the research results are **similar** across **different analyses** in the study “internal” and are in **agreement** with evidence outside the study “external”
- **Significance** of the information (results)
  - This needs to be evaluated in the light of the type of paper. For therapy (treatment) and diagnosis (test) paper, you need to ask:
    - 1. How did the new treatment or test perform in the study? Were the results **statistically significant** and **clinically important**?
    - 2. What information can you take from the study to your practice/patient?

Step 4: **Applying** the Results to Your Patient

- Having found that the information in the paper is **relevant**, **valid**, **consistent** and **important**, the question is whether the test or treatment will be useful for your patient/practice.
- You need to determine (or best guess) your patient's disease probability or risk of adverse outcome and then consider how these will change with the application of the new test or treatment. Whether this change is worth the risk and cost of the new interventions?
- What does your patient think about the benefits and risks associated with the new test or treatment?
- These considerations would help you to apply (or not to apply) the results of the paper and take a decision.
- A practice which is based on these considerations is aptly called **"evidence-based clinical practice"**

Summary

- Goal of EBM → Improve health of people through high-quality health care
- Principles of EBM
    - Evidence has a hierarchy
    - Evidence alone is not enough
- Components of EBM (3 Es)
    - Evidence
    - Expertise
    - Expectations
- Steps of EBM (4 As)
    - Ask, acquire, assess, apply

Evidence-Based

- Evidence-Based Medicine (EBM)
- Evidence-Based Practice (EBP)
- Evidence-Based Clinical Practice (EBCP)
- Evidence-Based Health Care (EBHC)
- Evidence-Based Nursing (EBN)

- **Clinical expertise:** the clinician's cumulated experience, education, and clinical skills
- **Patient values:** The patient brings to the encounter his or her own personal and unique concerns, expectations, and values.
- **Best Research Evidence**: usually found in clinically relevant research that has been conducted using sound methodology

Types of Studies

- Case series and Case Reports
- Case control studies
- Cohort studies
- Randomized, controlled clinical trials
- Systematic Reviews
- Meta-analysis

- **Case series** and **Case reports**
  - Collections of reports on the treatment of **individual patients** or a report on a **single patient**.
  - **No control groups** with which to compare outcomes, so **limited** statistical **validity**.
- **Case control studies**
  - Patients with a **specific condition** compared with people **without** the **condition**.
  - Researcher looks back to identify **factors** or **exposures** possibly associated with the condition, often relying on **medical records** and **patient recall**.
  - Less reliable because showing a statistical relationship does not mean that one factor necessarily caused the other.
  - Starts with patients who already have the **outcome** and looks **backwards** to possible exposures or factors
- **Cohort studies**
  - Take a large population who are already taking a particular treatment or have an exposure, follow them **forward** over time, and then compare for outcomes with a similar group that has not been affected by the treatment or exposure.
  - **Observational** and not as reliable as randomized controlled studies, since the two groups may differ in ways other than in the variable under study.
  - Starts with the **exposure** and follows patients forward to an outcome.
- **Randomized, controlled clinical trials**
  - Carefully **planned** projects that introduce a **treatment** or **exposure** to study its **effect** on patients.
  - Include **methodologies** that **reduce** the potential for **bias** (**randomization** and **blinding**) and allow for **comparison** between intervention and control groups.
  - Is an experiment and can provide sound evidence of **cause** and **effect**.
  - Randomly assigns exposures and then follows patients forward to an outcome.
- **Systematic Reviews**
  - Usually focus on a clinical topic and answer a specific question.
  - An extensive literature search → identify studies with sound methodology.
  - The studies are reviewed, assessed, and the results summarized according to the **predetermined criteria** of the review question.
- **Meta-analysis**
  - Thoroughly examines a number of valid studies on a topic & combines the results using accepted statistical methodology to report results as if it were one large study.
  - The Cochrane Collaboration has done a lot of work in the areas of systematic reviews and meta-analysis.

Levels of evidence

- **Grading systems** for assessing the quality of evidence. An example that put forth by the U.S. Preventive Services Task Force (USPSTF):
- **Level I**: Evidence obtained from at least one properly designed **randomized controlled trial "RCT"**

- **Level II-1**: Evidence obtained from well-designed **controlled trials without randomization**.
- **Level II-2**: Evidence obtained from **well-designed cohort or case-control** analytic studies, preferably from more than one center or research group.
- **Level II-3**: Evidence obtained from **multiple time series** designs **with** or **without** the **intervention**.

- **Level III**: **Opinions** of respected authorities, based on clinical **experience**, **descriptive** studies, or reports of expert committees.

Categories of recommendations

- In guidelines and other publications, **recommendation** for a clinical service is classified by the balance of **risk versus benefit** of the service and the level of evidence on which this information is based. The U.S. Preventive Services Task Force uses:
- **Level A**: Good scientific evidence suggests that the benefits of the clinical service substantially outweigh the potential risks. Clinicians should discuss the service with eligible patients. ⇒ benefits **>>>** risks, offer the service
- **Level B**: At least fair scientific evidence suggests that the benefits of the clinical service outweighs the potential risks. Clinicians should discuss the service with eligible patients.
    - ⇒ benefits **>** risks, offer the service
- **Level C**: At least fair scientific evidence suggests that there are benefits provided by the clinical service, but the balance between benefits and risks are too close for making general recommendations. Clinicians need not offer it unless there are individual considerations.
    - ⇒ benefits >= risks, offer the service for individual considerations
- **Level D**: At least fair scientific evidence suggests that the risks of the clinical service outweighs potential benefits. Clinicians should not routinely offer the service to asymptomatic patients.
    - ⇒ risks > benefits, don't offer the service to asymptomatic patients.
- **Level I**: Scientific evidence is lacking, of poor quality, or conflicting, such that the risk versus benefit balance cannot be assessed. Clinicians should help patients understand the uncertainty surrounding the clinical service.
    - cannot be assessed, if offered the pt should understand the uncertainty of evidence

Grade	Definition	Suggestion for practice
Level A	benefits >>> risks	offer the service
Level B	benefits > risks	offer the service
Level C	benefits >= risks	offer the service for individual considerations
Level D	Risks > benefits	don't offer the service to asymptomatic patients.
Level I	cannot be assessed	if offered the pt should understand the uncertainty of evidence

Geriatric Patients

Introduction

- Extensive changes from birth to adulthood, no or little change in adulthood, decline in late old age
- biologic aging → genetic factors + environmental exposures
- Recently, it has become evident that stereotypes of aging as an irreversible process of decline and loss are not correct.
- The central goal should be “an increase in years of healthy life with a full range of functional capacity at each stage of life”

USUAL VERSUS SUCCESSFUL AGING

- **Usual** aging → collective set of diseases and impairments that characterize aging for many of the elderly.
- **successful** aging → Genetic factors, lifestyle, and societal investments in a safe and healthful environment
- Successful (healthy) aging: refers to a process by which deleterious effects are minimized, preserving function until senescence makes continued life impossible.
- The concept of successful aging is that aging is not necessarily accompanied by debilitating disease and disability.
- For example, the elderly may be able to avoid the complications of vascular disease, even while the circulatory system continues to age, by controlling blood glucose levels and body fat percentage.

ORGAN SYSTEM CHANGES WITH AGING

Skin changes:

- Most visible signs of aging → changes in **skin** & **hair**.
- manifestations like **Wrinkling**, **sagging** of subcutaneous support, hair **loss** and **graying**, and a variety of benign and malignant skin conditions **increase** with frequency as individuals age.
- Many such changes occur more rapidly in **fair skinned** persons and are accelerated by **sun exposure**.
- **Microscopic** changes visible in aged skin include:
    - **Epidermal** thinning.
    - Degeneration of the elastic fibers providing **dermal** support.
    - Thickening of collagen fibers in the dermis (often with pseudo scar formation).
    - Reduction in the numbers of **sweat** and **sebaceous** glands.
    - Reduction in skin flow because of diminished vascularity.

Aging and the Heart

The heart of aging patient at **rest**	The heart under **beta adrenergic stimuli**
● No alterations of systolic function ● preserved ejection fraction and stroke volume. ● The resting heart rate is unchanged or only minimally reduced with aging ● cardiac output is also preserved.	● Aging alters cardiac responsiveness to β adrenergic stimuli. ● heart rate and myocardial contractility are definitely **blunted** in elderly subjects. ● The heart of the elderly behaves like a younger heart subjected to **beta blocker** treatment.

- Often impaired cardiac performance also results from various combinations of subclinical cardiovascular or non cardiovascular illnesses, for example, thyroid dysfunction, diabetes, and borderline hypertension.

Aging and the **lung** :

- decline in forced expiratory volume (FEV)
- Reduced forced expiratory vital capacity (FVC).
    - Forced expiratory volume (FEV) → measures how much air a person can exhale during a forced breath. The amount of air exhaled may be measured during the first (FEV1), second (FEV2), and/or third seconds (FEV3) of the forced breath. Forced vital capacity (FVC) is the total amount of air exhaled during the FEV test.
- increase in residual volume.
- Causes
    - reduced elasticity.
    - decreased lung mass
    - chest wall stiffness
    - Airway ciliary action and the cough are less effective.
        - increasing the risk for pulmonary infection
    - decreased respiratory muscle strength

Aging and the **kidneys**

- Creatinine clearance declines at a rate of 10 ml per decade.
- This decline is highly variable within older subgroups.
- Changes include :decreased sodium excretion and conservation, decreased concentrating capacity.
- Note: The use of medications with primary renal excretion requires caution in the very old.

Aging and the **Gastrointestinal** System changes:

- Decrease in **acid** production.
- Decrease in the **colonic contractions** leading to **constipation**.
- Decrease in **liver size** and liver **blood flow.**
- **CYP3A** activity may be **reduced** by up to 50% in some older adults → changes in drug metabolism.

Aging and the Musculoskeletal System

- Without regular physical exercise, usual aging will result in a loss of muscle fibers and a **decrease** in **muscle mass**.
- Decreasing **bone mass** occurs in both men and women.
- **Osteoarthritis** is associated with age. And by age 40 years, many adults have osteoarthritic changes visible in radiographs of the cervical spine.

Aging and the Endocrine System

- **Postprandial glucose** tolerance is **impaired** with age
- **Nocturnal growth hormone** peaks are lost.
- **Decrease** in dehydroepiandrosterone (**DHEA**)
    - endogenous steroid hormone → body hair development
- Aging of women starts with **slow decreases** of **ovarian steroid** production, followed by unexpected and almost **complete termination** of **sex hormone** production at **menopause**.
- Men **do not experience** universal **absolute gonadal failure**.
    - Testicular androgen production **declines gradually**, with significant individual variability along with the aging course.
    - There are multiple factors influencing testosterone levels in elderly men: genetics, environment, and socioeconomic state (diet, hygiene).

    - Older men will experience a prolonged refractory period for erections.

Aging and the Immune System

- Decline in cell-mediated immunity.
- The **thymus** gland **atrophies** with a loss of thymic hormones.
- ⇒ more nonresponders to vaccines and decreased delayed-type hypersensitivity.
- Decreased production of antibodies to specific antigens by B cells

Aging and the **Nervous System**

- Small decrease in **brain mass** with age, with an associated loss of neurons.
- Normal aging is associated with scattered **neurofibrillary tangles** and **senile plaques**, but in smaller numbers than seen in Alzheimer's disease.
- There is some slowing of **central processing** and **reaction time**, resulting in more difficulty **recalling facts**
- In the peripheral nervous system, there is a **decrease invibratory sensation**, especially in the **feet**
- Changes in **autonomic** regulation result in a decrease in **sweat** production, resulting in an **increased** core **temperature** required to start sweating.

Sensory Changes

- Vision
    - **Presbyopia**
        - gradual loss of lens elasticity→ The ability of the lens to accommodate for near-vision gradually diminishes.
        - Most common age-related eye problem
- HEARING
    - **presbycusis**
        - Hearing loss is the third most common chronic condition in older adults.
        - **High-frequency** hearing loss (presbycusis) is the most common form in this population, which lead to **interpret speech**, which can lead to **communication difficulties**
- SMELL & THIRST
    - **Smell** detection **decreases** by **50**%, resulting in changes in taste as well.
    - Older adults retain the taste of **sweetness** but report a decline in the detection of **saltiness**.
    - There is a **decrease** in the recognition of **thirst**.

Physical office characteristics that address the special needs of older patients.

PRE VISIT PREPARATION

- successful office assessment requires **pre visit** preparation, a proper **office** focus, excellent **medical records**, attention to aspects of care that are different in older patients, and **follow up** visits to finish incomplete business.
- First visit
    - It is unreasonable to expect to do everything on the first visit. Instead, a reasonable expectation of the **first visit** is to establish a **relationship** with the patient, fully understand the **priorities** for care, and develop a plan for **follow-up** visits.
- If medical records couldn't be found patient can do a **pre-visit Questionnaire.**

- Appropriate pre visit preparation like the **collection** of **essential information** and reduce frustration for patient, family, and health care provider alike.
- Use of an **electronic medical record (EMR)** is now considered essential to quality medical care of older patients.
- Insist that your patients or their families bring their **medications** with them for each visit, not just the first visit.

PROPER **OFFICE** FOCUS

- clinical setting for older patients will take their special needs into consideration.
- This would include **office design** and **construction**, **patient flow** to allow for transportation and mobility devices, and attention to specific physical and physiologic characteristics of these patients.
- Consideration → **parking ease** of entry, **wheelchair** access, and **interior** design.
- Once inside your office, **pleasant personnel** will make a favorable impression and put the patient at ease.
- **Examination room size** will need to be adequate to accommodate a third person in addition to the patient and physician, as many older patients are accompanied by spouses, their children, or caregivers, whose input and assistance is often helpful.
- **Scheduling** should allow for patients to be seen at the time of their appointment. It is reasonable to expect patients to arrive 15 minutes before their appointment time If the patient cannot be seen within 20 minutes of their appointment, they should be given an explanation and estimation of when they will be seen.
- Finally, adequate time should be allowed for the **initial visit**. Most patients will require a full 50 minutes to complete the first visit, and often this will still not be enough time.
- **Scheduling new patient** appointments early in the **morning** or first thing in the **afternoon** will often allow **uninterrupted** time. In any case, protected time needs to be planned to meet the goals of the first visit: establishing a **relationship** with the patient, understanding the **priorities** for care, and developing a **plan** for **follow-up** visits.
- **Exterior** and access
    - Well-lit parking and sidewalks, Oversized parking spaces, Handicapped spaces for parking
    - Minimize grade changes
    - Easy access and proximity
    - Wheelchair accessible
    - Proper sidewalk maintenance, Covered walkway/driveway for inclement weather
    - Automatic doors
    - Signage with large letters and numbers
- **Interior**
    - Simple “way-finding” and **patient traffic flow**
    - Signage with large letters and numbers
    - Use of **color change** to mark borders (e.g., between wall and floor)
    - Adequate **lighting** (i.e., brighter than usual)
    - **Sound**-absorbent materials to dampen noise
        - Minimal background noise (including little or no background music)
    - **Temperature** is warm and stable throughout the facility
    - **Waiting area** large enough to accommodate wheelchairs, walkers, and family members
    - Halls and ramps free of clutter
    - **Rails** along hallway walls

    - **Levers** instead of door knobs
    - **Bathrooms** that are wheelchair accessible and equipped with grab bars, raised toilet seats, and wheelchair-accessible sinks
- **Examination** Room
    - **Entrance** wide enough to accommodate wheelchairs, walkers, and gurneys
    - **Large** enough to accommodate family members (i.e., one or more extra chairs)
    - **Electric examination** tables (that can be raised and lowered)
    - **Computer** located in a convenient place for physician use

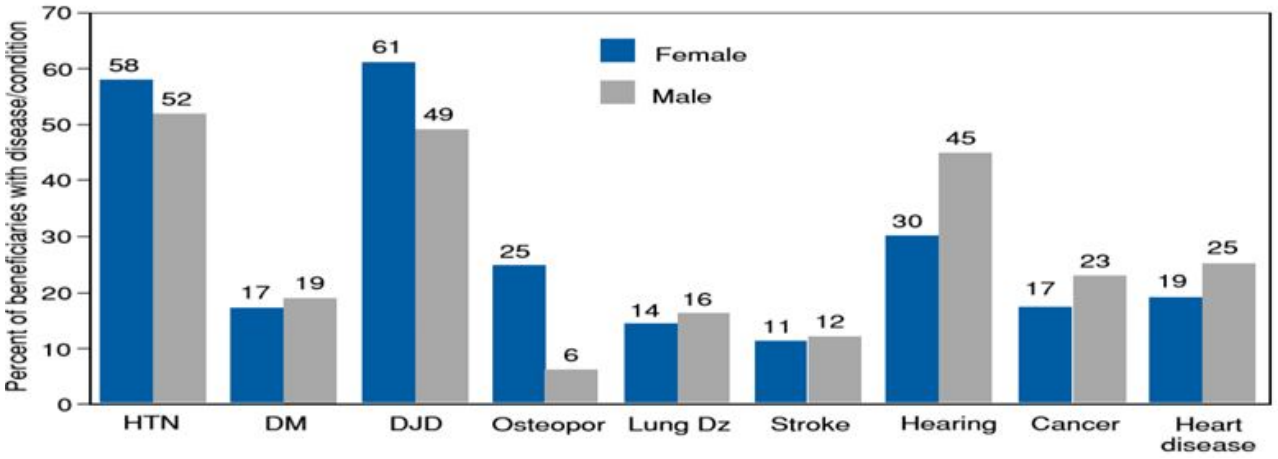
The Interview & History

- Usually the vast majority of diagnoses and their associated assessment and plan are derived from a comprehensive **history**
- Major domains in the **initial assessment**
    - Physical health
    - Functional abilities
    - Mental health
    - Economic resources
    - Social support
- Components of the history of old patients
    - HPI+PMH+PSH+DH+FH+SH+ROS
    - HPI → History of current problems
    - PMH+PSH → Past medical history , Past surgical history
    - DH → Medication review
    - FH +SH → Family history , Social history
        - Caregiver status
    - ROS → Review of symptoms and systems, including geriatric syndromes
    - Specialty physicians currently involved in care
    - **Functional** history: activities of daily living (**ADLs**) and instrumental activities of daily living (**IADLs**)
    - Current use of community resources
- Patients with **hearing impairment** use lip reading to facilitate their understanding of what is said. Therefore, the physician should ask which **side** is best for hearing and sit **face-to-face** to enhance eye contact.
- Although **family members** can be extremely important in providing additional information and in assisting in the implementation of your diagnostic and treatment plans, the presence of another person in the examination may not be what the patient prefers
- Medications should be reviewed on the first and every subsequent visit

ASPECTS OF DISEASE PRESENTATION UNIQUE TO OLDER PATIENTS

- Several aspects of disease presentation are characteristic of **geriatric medicine :**
    - **Multiple** medical conditions
    - The **vague**,ill-defined presentation of disease
    - Geriatric syndrome: the **frequent** occurrence of certain syndromes as presenting symptoms
    - **Exclusive** disease entities to the older population.
- Multiple medical conditions
    - The typical older patient usually has several medical conditions, such as arthritis, lung, and heart disease
    - This will have a great impact on the:

- health of the patients and their quality of life
- Quality and care management
- Costs of care



  - HTN,DM, DJD “Degenerative joint disease”,osteoporosis, lung disease, stroke, hearing, CA, heart disease.
  - More in females → HTN, DJD,**osteoporosis**
  - More males → DM, lung disease, stroke, **hearing**, **CA**, **heart** disease.

Co-morbidity vs. multimorbidity

- Comorbidity
  - A group of morbidities in a single patient with one morbidity being the **dominant**/most prominent
- Multimorbidity
  - A group of morbidities in a single patient **without** a **dominant** morbidity

Vague, ill-defined symptoms

- It is not uncommon for older patients to present with vague, often puzzling symptoms such as “weakness,” “not feeling right,” or “losing energy.”
- While such symptoms in older patients are **nonspecific** and **difficult** to interpret, they often represent new functional deficits that reflect a new illness or condition.
- These symptoms may be the only manifestation of classic conditions with more typical signs and symptoms in younger patients (e.g., pneumonia, worsening heart failure, urinary tract infection).

Geriatric Syndromes

- Some collections of symptoms are so **common** that they have been labeled geriatric syndromes, and they are usually caused by multiple pathologies in multiple organ systems
- Classic Geriatric Syndromes:
  - Poor nutrition or feeding impairment
  - MSS → Falls and gait abnormalities , Weight loss
  - CNS → Dementia , Delirium ,Behavioral changes , Dizziness , Sleep disorders
  - UGS → Urinary incontinence

Exclusive disease entities

- Certain disease entities occur almost exclusively in older patients, for example:
  - MSS → Osteoporosis, Hip fracture, Polymyalgia rheumatica and/or temporal arteritis,Pressure sores
  - CNS → Alzheimer’s disease, Stroke, Parkinson’s disease,

    - Eye → Macular degeneration,
    - UGS → Sexual dysfunction, Gonadal failure in men
- These geriatric-specific conditions are common.
- The ongoing long-term management is done by the primary care provider, even though it may involve the use of specialists at a certain point; such as in hip fracture.

Assessment of **cognitive status**

- Special area of emphasis and concern in geriatrics, because:
    - **Common** in the old population
    - Easily **overlooked** by the health care provider
    - patients are often **oblivious** "forgetful" to their deficits

Mental status testing

- Cognitive screening test can be:
    - **Informal** (eg: clock drawing test or set test) which are used for rapid screening
        - Informal screening tests require the patient to execute complex mental tasks which are very sensitive to executive dysfunction & early dementing illness
    - **Formal** (eg: mini-mental state examination (MMSE))
- Clock drawing test
    - The patient is requested to draw a **clock face** with numbers on a blank piece of paper, and to place the large hand and small hand at the time indicated by the examiner (usually **10 past 11**)
    - This test examines: language comprehension,attention, visuospatial ability, motor execution, and numerical ability
- Mini-cog test
    - A test used for **rapid** assessment of cognitive status.
    - It has two components:
        - 3 item recall test: you tell the patient 3 items and after a short period of time you ask the patient to recall them.
        - Clock drawing test
- Set test /category fluency test
    - To administer the set test, the older person is asked to name as many items as they can in each of four sets or categories. The four sets are **fruits**, **animals**, **colors**, and **towns**.
    - It is particularly helpful in assessing patients with **low formal education** levels that the mini-mental state examination (MMSE) can not reliably be used to test
    - **Red flags** for the set test:
        - Score less than **15** out of 40 (marks for each set)
        - the inability to **stay on track** with the correct category
        - Naming **fewer** than **10** objects in a minute
        - **Repeating** objects early in the naming process.
        - Another red flag for possible cognitive impairment is a **patient's poor performance** on the **instrumental activities of daily living (IADL**)
- Formal screening tests
    - For patients with concerning signs or symptoms of **cognitive impairment** or whose screening test is **worrisome**, there are several assessment tools available for use in more formal cognitive screening.
    - The most frequently used and validated mental status screening instrument is the MMSE
    - Mini-mental state examination (MMSE)

- Tests **cognitive** function
- provides a convenient **score** for assessment and later comparison
- Advantages to the MMSE include requiring no specialized equipment or training for administration, and has both validity and reliability for the diagnosis and longitudinal assessment of Alzheimer's disease. Due to its short administration period and ease of use, it is useful for cognitive assessment in the clinician's office space or at the bedside
- 30-point questionnaire , takes between 5 and 10 minutes
- Any score greater than or equal to 24 points (out of 30) indicates a normal cognition. Below this, scores can indicate severe (≤9 points), moderate (10–18 points) or mild (19–23 points) cognitive impairment
- Test features
    - The MMSE test includes simple questions and problems in a number of areas: the time and place of the test, repeating lists of words, arithmetic such as the serial sevens, language use and comprehension, and basic motor skills. For example, one question, derived from the older Bender-Gestalt Test, asks to copy a drawing of two pentagons (shown on the right or above)
    - The test can be customized (for example, for use on patients that are blind or partially immobilized.)

Category	Possible points	Description
Orientation to **time**	**5**	From broadest to most narrow. Orientation to time has been correlated with future decline.
Orientation to **place**	**5**	From broadest to most narrow. This is sometimes narrowed down to streets and sometimes to floor
Registration	**3**	Repeating named prompts
Attention and calculation	**5**	**Serial sevens**, or spelling "world" backwards. It has been suggested that serial sevens may be more appropriate in a population where English is not the first language.
Recall	**3**	Registration recall
Language	2	Naming a pencil and a watch
Repetition	1	Speaking back a phrase
Complex commands	**6**	Varies. Can involve drawing figure shown.

- **Drawbacks** of the MMSE
    - It requires some **experience**.
    - It can elicit a **negative** reaction among patients who object to being “tested.”
    - Its **cutoff** (23 of 30 correct) misses many patients with **mild cognitive** impairment and early dementia.
    - The score interpretation must be **adjusted** for educational level (by lowering the cutoff as much as **four** points for persons with less than a **12th-grade** education, and **six** points for those with less than an **8th grade** education.)
    - Cutoff
        - More than 12th-grade → 23

        - Less 12th-grade → 19
        - Less than 8th grade → 17
    - Administration may be difficult in the face of severe **visual** or **hearing impairment**.
    - Patients who do not give it their full effort (especially **depressed** patients) may be improperly labeled as impaired
- In many situations, patients will present with worrying behavioral, cognitive, or functional changes that are suggestive of early dementing illness but the screening tests mentioned earlier will not be conclusive. For these patients, referral for formal **neuropsychological testing** is very helpful and is indicated.

Screening Tool: The Mini-Mental State Examination (MMSE)

Patient _____ Examiner _____ Date _____

Maximum	Score	
		Orientation
5		• What is the (year) (season) (date) (day) (month)?
5		• Where are we (state) (country) (town) (hospital) (floor)?
		Registration
3		• Name 3 objects: 1 second to say each. Then ask the patient all 3 after you have said them. Give 1 point for each correct answer. Then repeat until he/she learns all 3. Count trials and record. Trials _____
		Attention and Calculation
5		• Serial 7's. 1 point for each correct answer. Stop after 5 answers. Alternatively spell "world" backward.
		Recall
3		• Ask for the 3 objects repeated above. Give 1 point for each correct answer.
		Language
2		• Name a pencil and watch.
1		• Repeat the following "No ifs, ands or buts."
3		• Follow a 3-stage command: "Take a paper in your hand, fold it in half and put it on the floor."
1		• Read and obey the following CLOSE YOUR EYES.
1		• Write a sentence.
1		• Copy the design shown. 

_____ **Total Score**

ASSESS level of consciousness along a continuum _____
Alert Drowsy Stupor Coma

Assessment of the functional status

- Functional ability is critical in maintenance of **independence** and **quality** of life
- **Importance** of the functional status
    - **Functional loss** is a final common pathway for many clinical problems in older patients
    - **Change** in functional status is an important **presenting symptom** in older patients
    - Being aware of patient function helps with the **prioritization** of problems and establishment of the **goals** of therapy
    - **Loss** of **independence** in one or more key functions often signals the need for involvement of other members of the health care team, such as physical therapists and occupational therapists.
    - Because of its importance, preserving and nurturing functional status is at the core of quality geriatric medicine
- ADL vs. IADL
    - Activities of daily living (**ADL**)

        - Used to describe **basic** self-care skills.
        - **Core** tasks of everyday life
            - Eating, dressing, grooming, and bathing
        - There are a number of different assessment instruments that evaluate these functions, and the **physical self-maintenance scale (PSMS)** is one of them
    - Instrumental activities of daily living (**IADLs**)
        - More **complicated**, higher-level, tasks required for independent living
            - Such as preparing meals, managing finances, shopping, doing housework, and using the telephone.
        - The **functional activities questionnaire (FAQ)** is one of several recommended IADL instruments
    - IADLS and the assessment of cognitive status
        - Patients with **early** cognitive impairment will often manifest themselves first with difficulties in **IADLs**
        - Many times in early dementing illness, a patient's MMSE will be in the normal range, but their new difficulty in IADLs will alone be enough to establish the diagnosis of serious degenerative brain disease.

Tests

	Test
Activities of daily living (ADL)	physical self-maintenance scale (PSMS)
Instrumental activities of daily living (IADLs)	functional activities questionnaire (FAQ)
Mental status testing	
cognitive function "formal"	Mini-mental state examination (MMSE) neuropsychological testing
cognitive function "informal"	Clock drawing test Mini-cog test "rapid" Set test /category fluency test
Hearing deficits	whisper test or an audio scope equipped with tone testing.

Social and family history

- The **majority** of older pts will have a period of **dependency** in their later years, & knowing the family resources available to provide support is critical to providing optimal care.
- additional social assessment of the old patient:
    - Content of an average day
    - Suitability and safety of the home
    - Availability, attitude, and health of caregivers and neighbors
    - Availability of emergency help
    - Services received and/or needed
    - Transportation needs
    - Financial status
    - Occupational history and interests

SYNDROMES & REVIEW OF SYSTEMS IN GERIATRIC POPULATION

Geriatric syndromes

- Some collections of symptoms are so common that they have been labeled geriatric syndromes; such as: mental status changes, urinary incontinence, falls, and dizziness.
- The development of a geriatric syndrome represents the **loss** of **specific functional capacities** caused by **multiple pathologies** in **multiple organ** systems.
- These syndromes commonly occur in older patients and now have defined evidence-based approaches to assessment and treatment.
- The **first step** in treatment is **recognition** that one of these syndromes exists and then initiation of the appropriate approach.
- Geriatric syndromes can be integrated in the **review of systems**, if desired, but they must often be explicitly sought for in the overall evaluation.
- Review of Systems
    - The review of systems goes beyond the history of present illnesses and past history and uses direct questions to ensure that all systems are adequately covered.
    - This review is particularly important in examining older patients because of the large number of **hidden illnesses** and **geriatric syndromes** that are often **not mentioned** owing to embarrassment, ignorance that something can be done, or fear of a negative impression.
    - For a new patient appointment, the review of systems can often be highly productive in setting **priorities** for care and follow-up visits.
    - A **well-structured** systems review is a way to ensure that all necessary background information is covered, and the review should include a thorough documentation of health maintenance activities in the past.
    - For example, in reviewing the eye history, the time of the last eye examination is important to note because of the high incidence of eye disease in older patients.
    - One challenge is that the exact details of these measures are often not well remembered, and old medical records are invaluable in tracing the details.
- Geriatric-Specific Topics to Include in a Review of Systems
    - General
        - Weight change,appetite , Sleep quality,Depression,Hearing loss,Alcoholism,Falls
    - Neurologic
        - Confusion,Memory loss
    - Musculoskeletal
        - Prior fractures.Range of motion of joints,Pain
    - Genitourinary
        - Incontinence,Sexuality,Nocturia

Physical examination

- The conduct of the history taking has already given you considerable opportunity and cues to the issues regarding the physical examination.
- The astute “smart” clinician catalogs these findings as they reveal themselves.

- The **general appearance** of the patient, quality and loudness of the voice, and robustness of the hand-shake are clues.
- Observing the patient **walk** to the examining room and/or transfer from a chair to the examining table gives additional information on functional ability.
- Once the patient is comfortable , start with ?
    - **VITAL SIGNS**
        - They are important indicators of well-being, especially in the older patient.
        - Note :- always recheck the elevated readings.
- Q. how to measure the blood pressure?
    - The patient must be supine & blood pressure should be taken 10 minutes after rest.
    - In standing position , wait 3 minutes then measure the blood pressure.
- Note:- **orthostatic hypotension** defined as a drop of 20 mm Hg in systolic blood pressure, which rises rapidly with advancing age and is a common finding in those over the age of 85.
    - This reflects a patient's **baroreceptor sensitivity** and also provides information about why a patient may be dizzy or unsteady (two common geriatric complaints).
- Important Specific Physical Examination Findings to Note in Older Patients:-
    - Eyes → Cataracts, Retinal abnormalities, Visual acuity
    - Ears → Hearing evaluation, Removal of wax if necessary
    - Head and neck→ Premalignant and malignant skin lesions (usually seen in the most sun-exposed area), Thyroid evaluation, Elevated neck veins, Auscultation of the carotids, Range of motion of the cervical spine
    - Chest→ Kyphosis and/or scoliosis,Dry crackles in the lung bases
    - CVS → Regularity of rhythm, Presence of an S4, Atrial and ventricular ectopy, Systolic murmurs are common, Arterial pulses in extremities (especially legs and feet)
    - Nervous system → Balance and cerebellar testing
    - MSS → Motor asymmetry, Range of motion of each major joint, Fine finger movement, strength, muscle tone, and bulk.
- **Vision** and **hearing** screening are important, given the high prevalence of impaired vision and hearing among older patients. These conditions lead to subsequent functional loss.
- Visual impairment was predictive of mortality over 10 years, and combined impairment had the highest risk of 10-year functional decline.
- **Annual** eye examinations by **eye specialists** should be encouraged, owing to the high incidence of silent diseases such as glaucoma and macular degeneration.
- Hearing deficits are more readily discernible and can be assessed by using the **whisper test** or an **audio scope** equipped with **tone testing**.
- During the head, ears, eyes, nose and throat examination, visual acuity and visual fields should be checked for deficits.
- Visual assessment becomes particularly important if the patient has a problem with falls or if there are questions regarding driving abilities.
- The oral examination is a useful portion of the geriatric exam because it can give clues to unexplained weight loss (for example, if dentition is poor) or give a potential explanation for falls (if mucous membranes are dry, demonstrating dehydration and possible orthostasis.)
- don't forget to :
    - 1-check the condition of teeth and gums .
    - 2- remove dentures if present .
- The chest can be difficult to examine because the rib cage is often fixed owing to the changes of aging.

- **Diaphragmatic breathing** plays a much more important role in respiratory function in older patients for this reason. Breath sounds may be more difficult to hear, and often dry crackles can be heard at the bases that do not imply serious pathology.
- Note :- always monitor the gait of the patient by the simple get up and go test, then record the time needed.
    - Examine the gait for step length, arm swing, and base width. Be sure to note unsteadiness, favoring of one side versus the other, or staggering during a turn.
- It is not unusual for the blood pressure to be elevated when a new patient is seen in a strange environment; so elevated readings should be rechecked.
- A pain scale should be included as part of the vital sign intake because pain, similar to other parts of the review of systems, may be viewed as expected by an elderly patient.
- CVS
    - A split second heart sound, with inspiration increasing the split, is a normal finding in older patients.
    - An **S4** heart sound is common among older patients without cardiac disease, but an **S3** is always suggestive of congestive heart failure.
    - Another common cardiac finding is the presence of **systolic** murmurs in many older patients.
    - Benign murmurs in older patients will typically be an **ejection** type murmur that is soft (grade 2/6 or less) and heard best at the base and possibly at the apex.
        - These murmurs probably represent turbulence over sclerotic aortic valves.
    - If the murmur is concerning, some patients may merit further evaluation with an electrocardiograph (**ECG**) and **echocardiography**. Because left ventricular enlargement has a serious prognosis, careful physical examination for cardiac size is important and, if found, warrants further diagnostic studies.
    - Check Arterial pulses in extremities (especially legs and feet).
- UGS
    - Examine for stress incontinence by locating the urethral meatus and asking a patient to cough. Leakage of urine with cough is positive for **stress incontinence**.
    - Also, one should evaluate for signs of **cystocele** as possible contributors to urinary incontinence.
    - In addition, **vulvar malignancies** are not uncommon and palpable ovaries in an older woman are always pathologic.
    - A **rectal exam** is helpful if there is concern for bowel incontinence (assessment of sphincter tone and perirectal hygiene).
    - Additionally, checking for occult blood can explain anemia, or uncover an impaction that points to the etiology of fecal soiling.
    - In a male with urinary symptoms consistent with benign prostatic hyperplasia (urgency, frequency, nocturia, etc.), a rectal exam can give clues to prostate size and more worrisome symptoms of malignancy such as nodules.
    - Because hyperplasia limited to the vicinity of the urethra (median lobe hypertrophy) can impair urine flow significantly, a gland that feels normal on palpation does not rule out benign prostatic hyperplasia as the cause.
- MSS
    - Assess for manual dexterity or clumsiness with rapid alternating movements.
    - observe for signs of osteoporosis (for example, kyphosis) and examine specific joints of complaint.
    - examine lower extremities for :

        - 1-hygiene
        - 2-condition of toenails
        - 3-presence of edema .
- Skin examination
    - Skin examination in older adults can often be overlooked; however, skin is an important source of pathology.
    - Evaluate closely for skin tears and early signs of pressure ulceration in at-risk patients (for example, patients with poor mobility).
    - In particular, examine areas of increased pressure (sacrum and heels) for signs of ulceration.
    - Also evaluate for bruising patterns as possible indicators of multiple falls or eldery abuse.
    - Monitor lesions for growth, color change, and border irregularity as signs of malignancy.
- Breast and Abdomen examination
    - 1-Liver edge below the right costal margin
    - 2-Palpable enlarged aorta
    - 3-Abdominal bruit
    - 4-Rectal examination that reveals fecal impaction
    - Remember that breast cancer can occur in the very old.

Common Neurological changes in older patients .
* Percentages in patients above 85 years old.

- Cranial nerve function: eye signs
    - 1-Unequal pupils (11%)
    - 2-Diminished reaction to light and near reflex (9%).
- Auditory
    - 1-Hearing loss for higher tones
- Olfactory
    - 1-Diminished olfactory sensitivity
- Extrapyramidal function :
    - 1-Abnormal gait (20%)
    - 2-Increased rigidity and tone in the legs (22%)
    - 3-Flexion posture
    - 4-Diminished reaction time
    - 5-Decreased arm swing (30%)
- Motor
    - 1-Tremor (17%)
    - 2-Increased muscle tone in legs (22%)
    - 3-Diminished muscle strength in legs and arms (5%)
    - 4-Spontaneous movement decrease (14%)
- Sensory
    - 1-Diminished vibratory sense distally (21%)
    - 2-Proprioception preserved
    - 3- Mild increase in threshold for light touch, pain, and temperature
- Reflexes
    - 1-Diminished or absent ankle jerks (15%)
    - 2-Romberg abnormal (14%)

- Pathologic reflexes present
    - 1-Snout (32%)
    - 2-Grasp (28%)
    - 3-Root (13%)
- When testing cranial nerves, observe for signs of facial droop or tongue deviation that may be indicative of prior stroke.
- Loss of sense of smell (cranial nerve 1) may occur early in Alzheimer's disease, although this is nonspecific.
- Primitive reflexes, such as the glabellar, snout, or rooting reflex, indicate evidence of brain dysfunction, although they are not specific to location.
- Stereognosis and graphesthesia test cortical integration (the ability to integrate multiple areas of input) as well as sensation.

At the conclusion of the initial visit, it is important to review your goals for this visit:

1. Establishing a **relationship** with the patient (and family if necessary)
2. Fully understanding the **priorities** of care.
3. Developing a **plan** for follow-up visits.

ORDERING LABORATORY WORK:

- There are NO evidence-based protocols for deciding appropriate laboratory studies in older patients. What each individual patient requires will depend to a great extent on the laboratory history included in prior medical records and the comorbid conditions that accompany each patient.

ATTENTION TO THE CAREGIVER

- Older patients often require the assistance of a caregiver, and that person will often attend clinic visits with your patient.
- Caregivers can often provide important clues to subtle changes or problems with medications.
- The role of caregiving has **negative psychological** effects and can result in anger, depression, anxiety, and frustration. Maintaining caregiver health, therefore, is important to the stability of the care setting in preventing institutionalization. The assessment of the patient, therefore, extends in many cases to the caregiver.

USE OF THE HEALTH CARE TEAM

- Geriatrics by its very nature is **multidisciplinary**, and good geriatric care is team care.
- Your **clinic nursing staff** will play a critical role in collecting and assessing patients and their caregivers. Indeed, your **office staff** will often be the first to alert you to a change in a patient. Other important team members include home health nurses, physical and occupational therapists, and hospice personnel.
- **Communicating** with these professionals will enhance the care you provide and will often provide insights from home visits that are not available to you.
- **Medicare benefits** are generous for care provided in these areas, and pts often benefit from early intervention.
- **Consultation** with one of these disciplines should be obtained if there is a remote chance your patient will benefit from their skill and assessment.

SUBSEQUENT OFFICE VISITS

- It is rare that a new older patient with their multiple medical problems and medication issues will not need some kind of **follow-up** soon after their first visit to establish care.
- **EMRs** excel in this regard for a number of reasons. Every prescription ever written can be easily tracked. Problem lists and medication lists can be added to each clinical encounter. Relevant past medical and social history can be reviewed and added at a click of a button.

TRANSITIONAL CARE USE BY OLDER PATIENTS

- **Transitional care** is defined “as a set of actions designed to ensure the coordination and continuity of health care as patients transfer between locations or different levels of care within the same location.”
- Examples:-
    - 1) assisted-living facilities
    - 2) nursing homes
    - 3) inpatient rehabilitation centers
    - 4) Home health
- **Recommendations** to improve the quality of transitional care
    - 1. Clinical professionals must prepare patients and their caregivers to receive care in the next setting and actively involve them in decisions related to the formulation and execution of the transitional care plan.
    - 2. **Bidirectional** communication between clinical professionals is essential to ensuring high-quality transitional care.
    - 3. **Policies** should be developed that promote high-quality transitional care.
    - 4. **Education** in transitional care should be provided to all health care professionals involved in the transfer of patients across settings.

ASSESSMENT IN THE HOME,HOSPITAL, AND NURSING HOME

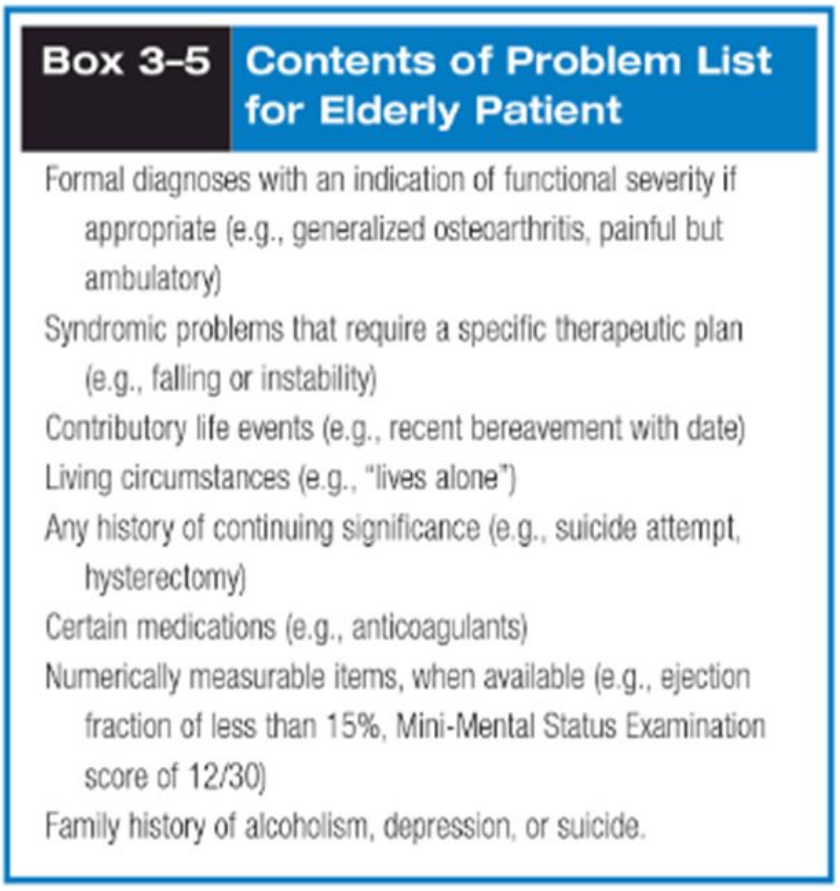
- While patients seen in the hospital, nursing home, or at home have unique care settings with very different characteristics, assessment of the same five domains of care is required.
- Unlike hospitals and nursing homes, which tend to have standardized staff and procedures, home care is always unique.
- Often the patient is surrounded by concerned and attentive family, and home is the environment that the patient prefers.
- But in addition to careful coordination with home health care professionals, the primary care provider needs to instruct and encourage the family caregivers.

A comprehensive assessment involving the five domains is again essential: mental health, physical health, functional abilities, social supports, and economic resources.

Multiplicity of Problems + comprehensive problem list.

- Frequently an older individuals management is complicated by several ongoing chronic condition and their medical treatment , together with superimposed acute illness or illnesses
- The primary care clinician should be ideally positioned to be the coordinator when multiple systems are impaired; this may involve coordinating the efforts of several organ specialist, often on an ongoing basis.
- To set priorities, the primary clinician must, over the first one or two visits to the office, evolve a comprehensive problem list.

- This list should include not only formal diagnoses, but also broader symptom complexes that don't fall into traditional diagnostic categories (such as falling or instability) but that nonetheless require a management plan in and of themselves .
    - Medications
    - Family Hx + social Hx
- The problem list must also include contributory **psychosocial** features (e.g., recent bereavement),factors in the living circumstances (e.g., lives alone) , and any special characteristics that may be crucial to the patient and his or her illness management .
- A **well- organized**, current problem list can ensure a **coordinated** approach. Such a problem list also aids **communication** at times of transition from one clinic site to another .



Box 3–5 Contents of Problem List for Elderly Patient

Formal diagnoses with an indication of functional severity if appropriate (e.g., generalized osteoarthritis, painful but ambulatory)

Syndromic problems that require a specific therapeutic plan (e.g., falling or instability)

Contributory life events (e.g., recent bereavement with date)

Living circumstances (e.g., "lives alone")

Any history of continuing significance (e.g., suicide attempt, hysterectomy)

Certain medications (e.g., anticoagulants)

Numerically measurable items, when available (e.g., ejection fraction of less than 15%, Mini-Mental Status Examination score of 12/30)

Family history of alcoholism, depression, or suicide.

Theories of Aging

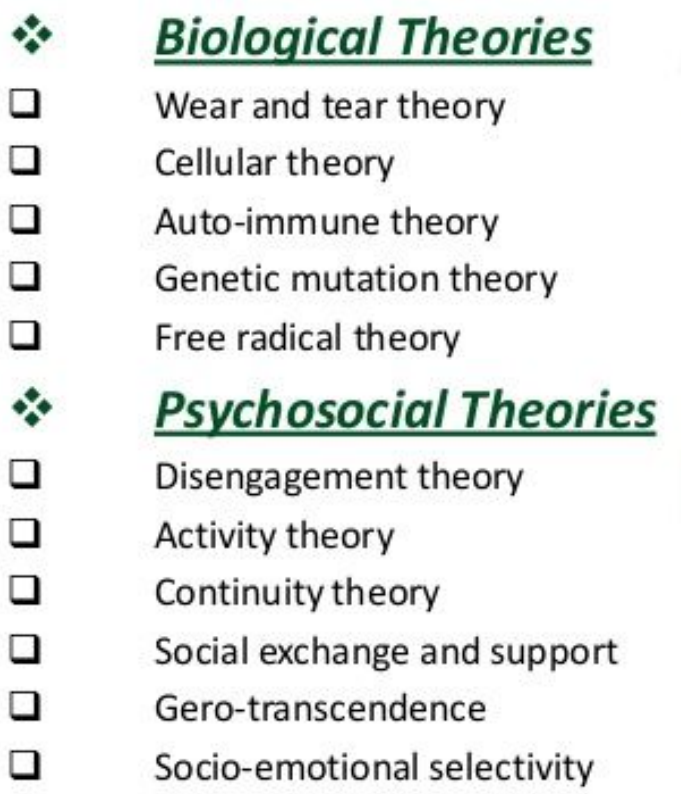
Psychosocial

- Disengagement Theory
    - inevitable process in which many of the relationships between a person and other members of society are severed & those remaining are altered in quality.
    - Withdrawal may be initiated by the aging person or by society, and may be partial or total.
    - It was observed that older people are less involved with life than they were as younger adults.
- Activity Theory
    - person's self-concept is related to the roles held by that person i.e. retiring may not be so harmful if the person actively maintains other roles, such as familial roles, recreational roles, volunteer & community roles.

    - To maintain a positive sense of self the person must substitute new roles for those that are lost because of age. And studies show that the type of activity does matter, just as it does with younger people.

Biological

- Autoimmunity: The idea that ageing results from an increase in autoantibodies that attack the body's tissues. A number of diseases associated with ageing, such as atrophic gastritis and Hashimoto's thyroiditis, are probably autoimmune in this way.
- Free Radical Theory
    - Damage by free radicals, or more generally reactive oxygen species or oxidative stress, create damage that may give rise to the symptoms we recognise as ageing.
- Cross-linkage: The idea that ageing results from accumulation of cross-linked compounds that interfere with normal cell function. also referred to as the Glycosylation Theory of Aging. In this theory it is the binding of glucose (simple sugars) to protein, (a process that occurs under the presence of oxygen) that causes various problems.
- Wear-and-tear theory
- Accumulation of errors: The idea that ageing results from chance events that escape proofreading mechanisms, which gradually damages the genetic code.
- Accumulation of waste
- Genetic instability
- DNA damage theory of ageing: DNA damage is thought to be the common basis of both cancer and ageing, and it has been argued that intrinsic causes of DNA damage are the most important drivers of ageing

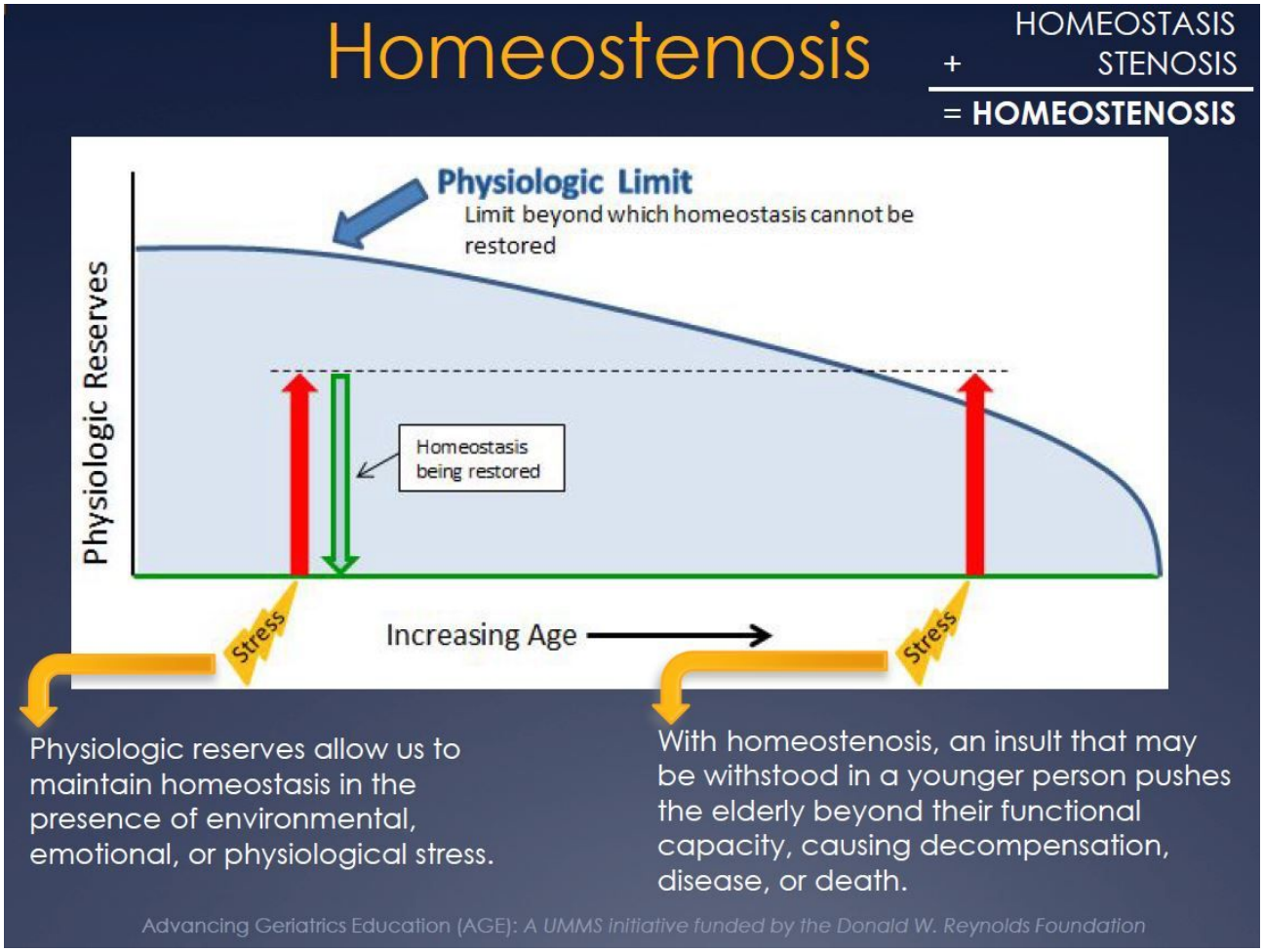


- Activity Theory (Havighurst, 1961)
  - ***Engaged*** in mental and physical activities
  - Community/family/profession
- Continuity (Atchley, 1971)
  - Carry forward positive habits, relationships, regardless of advancing age
- Can social beings successfully age without solid social connections?

Telomere Hypothesis

- Shortens with each replication of the chromosome
- Replication at a fixed rate may indicate that the telomere is the "clock" that determines the lifespan of any given cell
- Dolly's fate

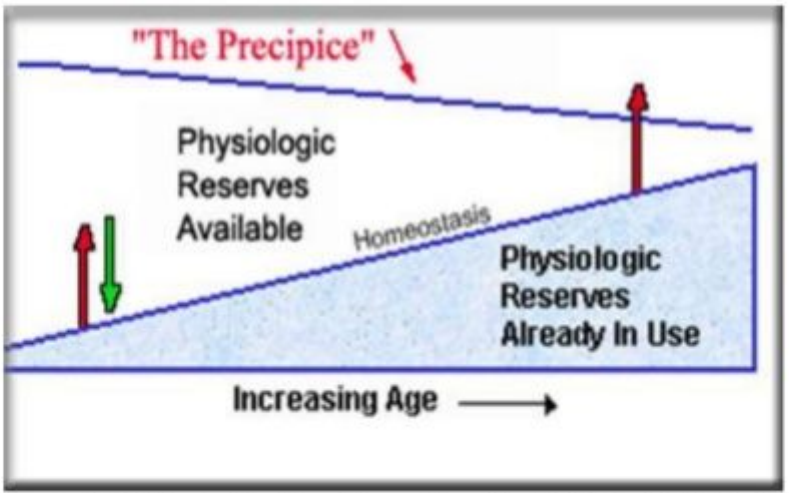
Homeostenosis



- This graph shows the process of homeostenosis as a function of aging. Stenosis refers to the narrowing of a structure. In this case, it is used to signify an encroachment on function, illustrated above by the progressively smaller area under the “physiologic limit” curve, with increasing age.
- When the body is subjected to stress, it uses physiologic reserves to maintain homeostasis. The greater the stress, the more physiologic reserves are engaged.
- With age, the physiologic reserves of each organ system diminish. As a result, an insult, easily buffered by the young organ, may push the older organ’s ability to maintain homeostasis beyond the “physiologic limit,” leading to an acute injury or disease state.
- In the context of the aging heart, the lightning bolt represents exertion. Exercise increases the oxygen demand of the body. Functional reserve allows the heart to respond by increasing cardiac output (CO) accordingly. In the older heart, loss of cardiac functional reserve limits the extent to which the heart can augment CO in response to exertion. This can predispose the heart and other organ systems to disease as a result of an inadequate blood supply.
- Note the sharp decline in physiologic reserve on the right side of the graph. This illustrates the drop-off in reserves that occur in the very end stages of life. This is one explanation for why it is common for very elderly individuals to be “frail”, susceptible to more disease and injury, and less able to recover from such states.

Homeostasis, Homeostenosis and Reserve Capacity

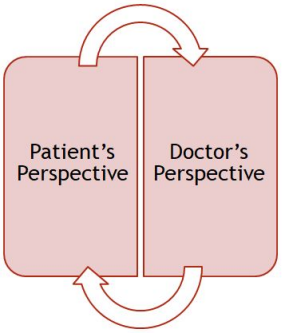
-Reduced capacity to maintain homeostasis during stress
-Decompensation under a variety of mild perturbations- homeostenosis.



Management plan -Planning Patient Management

Patient Management in General Practice

- The principles of patient management:
    - Reaching a **shared understanding** of the **problem** with the **patient**
    - **Negotiate** the management plan
    - Give the patient the **responsibility** for the problem



1. SHARED UNDERSTANDING OF THE PROBLEM
    - To achieve this:
        - **Bilateral** understanding of the problem
        - For a full understanding of the patient's problem
            - The doctor must first identify the patient's I.C.E.
                - Ideas, Concerns , Expectations
    - Then make the **'triple diagnosis**'
        - How does the problem affect the patient from the following aspects:
            - Biological , Social , Psychological
2. NEGOTIATE THE MANAGEMENT PLAN
3. GIVE THE PATIENT RESPONSIBILITY FOR THE PROBLEM
    - The key word here is **negotiate**.
    - Decided in a **two-way** process between the doctor & the patient.
    - Present **options** for treatment→ **prescription** or **referral**, or **both**.
        - **Objectively** explain what each prescribed treatment would involve; i.e. risks & side effects.
        - Identify what the patient wants from their treatment (I.C.E).
        - The patient must be empowered and encouraged to decide upon a management plan which suits them best.
    - Achieving "patient responsibility"
        - In this way, the patient can be given responsibility for their problem, or at least offered the opportunity.
        - Indeed, some patients would prefer that the doctor makes all the decisions **unilaterally**.
            - Avoid this. Persist to fully involve the patient in their own care.
        - Crucial for **legal matters**

RAP-RIOP

These points should be worked through in **order**, and to achieve this we should use the **RAP-RIOP** acronym:

- **R**eassurance & explanation,
- **A**dvice,
- **P**rescription,
- **R**eferral,
- **I**nvestigations,
- **O**bservation,
- **P**revention.

1. **Reassurance** and/or explanation “R&E “
    - First, **COMMUNICATION** skills and **TRUST** are necessary
    - The need of reassurance may be the **main reason** for the patient presenting to the doctor.
    - **Inappropriate reassurance** damage and **loss** of **trust**
    - ALWAYS explain but Reassure WHEN APPROPRIATE
    - **Communication**
        - explaining the problem in terms that the patient understand is critical.
        - the doctor must take into account: **social** class , **ethnic** background, **education** and **intelligence**.
    - **Trust**
        - Reassurance carries more weight if there is a strong bond between the doctor and his patient.
        - **Continuity** of care and **repeated** consultation will leads to develop a relationship of mutual trust and respect between the doctor and the patient.

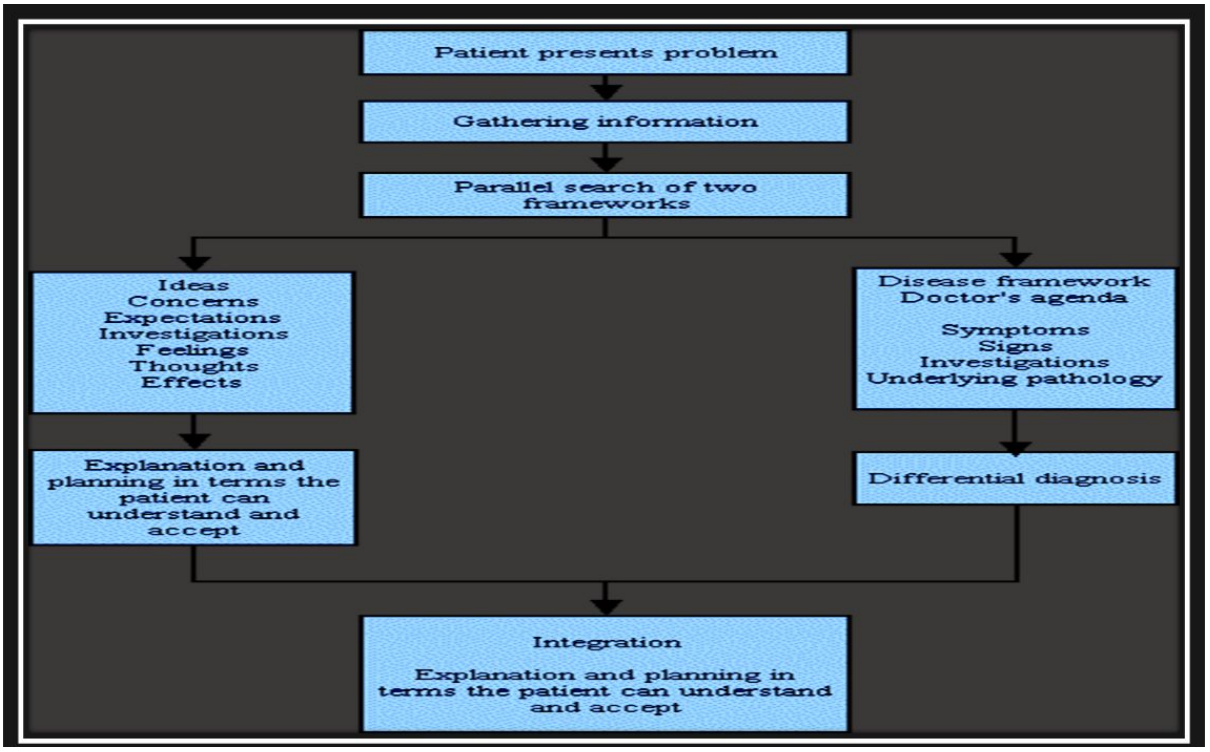
2. **Advice**
    - Reasonable and applicable in the patient’s circumstances and lifestyle.
    - Together → 1. R&E 2. Advice are perhaps the most common forms of treatment needed.
3. **Prescription**
    - The decision, whether to prescribe or not, must take into account **patient’s expectation** and **autonomy**.
    - The clinical aims of prescribing can be
        - Therapeutic , Tactical , Both
    - **Therapeutic**: Preventive / Curative / Symptomatic
    - **Tactical**:
        - to gain time
        - to maintain contact with patient,
        - to relieve the doctor anxiety and as trial of treatment.
    - Don’t prescribe when it doubt of your intended prescription.

4. **Referral**
    - **To**:
        - A specialist doctor, a senior colleague.
        - Other member of primary health care team.
        - Help agencies (elderly, alcoholic, drug abuse, etc.)
        - Hospital consultant as inpatient or outpatient
    - **Why** to refer a patient from a clinic to a hospital??
        - to obtain specialist treatment e.g. surgery or dialysis
        - to obtain specialist opinion on diagnosis or management of difficult problem.
        - when in need for certain tools/facilities e.g. endoscopy or physiotherapy
        - for a poorly compliant patient, for reinforcement of advice
5. **Investigation**
    - **Why**
        - to **confirm** or to make more precise **diagnosis**
        - to **exclude** unlikely but important and treatable disease.
        - to **screen** asymptomatic patient
        - to **reassure** an anxious patient.
    - Investigations should be considered in term of their **cost-benefit** and their **risks**,

- and should be performed only when their results will directly assist in the diagnosis or have effect on subsequent management.
- Factors
    - 1. clinical findings (history and physical examination)
    - 2. doctor's temperament and attitude
    - 3. doctor patient relationship
    - 4. organizational factors such as availability of services.

6. **Observation** (follow up)
- Follow up implies **continuing observation**, as encouraged by the doctor and agreed by the patient.
- Observation implies that the doctor can monitor a patient's **clinical progress** and take an appropriate action.
- Follow-up is an integral part of general practitioner's role and can apply on all 3 types of morbidity (minor & self limited \\ acute life threatening condition) .
- For minor or self-limited conditions no formal follow up is required
        - Advise the patient to return if there is no improvement within a set period of time, or in case of worsening in his condition.
    - Acute, major, life-threatening conditions such as MI require follow up after discharge.

7. **Prevention**
- Screen + Modify risk factors ⇒ Health promotion
    - Thus disease prevention
- Leading to a decrease in population morbidity and death rate



Anticipatory Care “Preventive medicine and health promotion”

Objectives

- Define anticipatory care
- Classify
- Describe the concept of
- Discuss the levels of prevention
- USPSTF general guidelines of cancers and chronic diseases prevention
- role of family physician

Anticipatory care

- Quality healthcare for individuals includes :
    - 1. appropriate treatment for **current** illness .
    - 2. appropriate **preventive** care to decrease health decline.
- Definitions
    - Promoting and maintaining health or preventing illness.
    - It is concerned with **removal** or **reduction** of **risks** ; early **diagnosis** ; early **treatment** ; **limitation** of **complications** , including those of iatrogenic origin .
    - All measures which promote good health and prevent or delay the onset of diseases or their complications.
- Aims to
    - enhancing patient **outcomes** and **quality** of life improvement .
    - Increase life **expectancy**
    - promoting of advances in cancer care , reducing social and economic barriers in Cancer care .
    - Reduce the burden of **premature disability** .
- Tools of Anticipatory Care
    - **Immunization** : vaccination (basic diseases such as : diphtheria , tetanus , polio , whooping cough , measles ,mumps , rubella) should be prevented .
    - **screening** : is not only to detect disease at its earliest stage , but also to find individuals at risk or those with established disease who are not receiving adequate care .
    - **Behavioral counselling** (lifestyle changes) .
    - **Chemoprevention** : folate , aspirin .

WHO defines Health as :

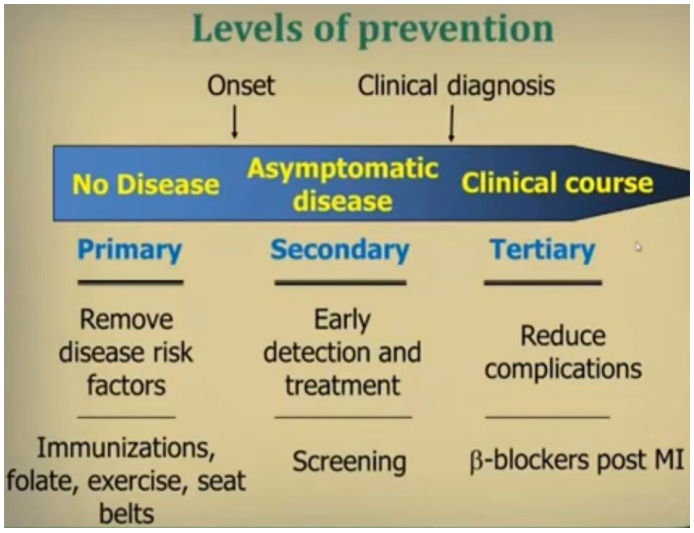
- “State of complete physical, mental, and social well being, and not merely the absence of disease "

Health promotion

- Is the **motivation** and encouragement of **individuals** and the **community** to see good health as a **desirable state** that should be **maintained** by the adoption of healthy practices.
- It is also the process of helping people obtain their **optimal health** , at the physical , psychological , environmental level .
- Health promotion activities are **non-clinical life choices**, for example, eating nutritious meals and exercising daily, that both prevent disease and create a sense of overall well-being.
- **Preventing disease** and **creating overall well-being**, **prolongs** our life **expectancy**.
- Health-promotional activities do not target a specific disease or condition but rather promote health and well-being on a very **general level** .

Levels of Preventions :

- 1. **Primary** – prevent **risk factor** .
- 2. **Secondary** – prevent **subclinical** illness from advancing → early detection and Tx
- 3. **Tertiary** – prevent **clinical illness** from advancing → reduce complications



Disease Prevention

- **Primary** prevention
  - aims to prevent altogether the development of a disease process.
  - **most effective.**
  - Ex → Health education, Prophylaxis
- **Secondary** prevention
  - early diagnosis, at a **pre-symptomatic** stage, followed by effective treatment.
  - Ex →Screening, Case finding
- **Tertiary** prevention
  - detecting established and incurable disease with a view to minimize its harmful effects through appropriate treatment and rehabilitation.
  - The form of prevention physicians are **most familiar** with.
  - Ex → Monitoring , Rehabilitation

Examples

- Primary prevention Techniques
  - 1- Health education, Behavioral counseling , lifestyle changes
    - provide people with information, in the hope that they will modify their behavior, ex: education about smoking related diseases.
  - 2- Prophylaxis
    - an active medical intervention to protect from disease, ex: vaccination, immunization..etc
- Secondary prevention Techniques
  - 1- Screening
    - systematic attempts to detect disease in an population of apparently healthy people
    - Wilson's criteria for screening tests
      - The condition should be an **important & common health problem**.
      - The natural **history** of the condition should be **understood**.
      - There should be a **recognizable** latent or early **symptomatic stage.**
      - There should be a **test** that is **easy** to perform and interpret,safe, **acceptable**, **accurate**, **reliable**, **sensitive** and **specific**.

- There should be an **accepted treatment** recognized for the disease.
    - Treatment should be more **effective** if started **early**.
    - There should be a policy on **whom** should be treated.
- Diagnosis and treatment should be **cost-effective.**

The condition
Understood, clearly defined, and important
Prevalence
Reasonably well known
The diagnosis—testing
Reasonable cutoff values
Valid and reliable
Safe
Effective treatment
Effects outcome and natural course
The overall policy
Cost effective
Facilities for diagnosis

- 2- Case finding
    - undertaken by the physician on a patient presenting for another condition.
        - Ex: taking blood pressure for a patient presenting with hemorrhoids
    - Case-finding should be a **continuous process**.

- Tertiary prevention Techniques
    - **Monitoring** of the patient with an established disease to prevent or minimize complications
        - Ex: - prevention of end-organ damage in hypertensive/diabetic patients
    - Rehabilitation
        - **Rehabilitation** of stroke patients

Role of family physician in prevention

- Doctors are not “health policemen” !
- but they are supposed to provide patients with appropriate information and advice and to enable them to choose paths of actions for themselves. (**Patients cured care**).
- Family Practice is the ideal setting for delivery of effective anticipatory care at all levels
    - 1. **Frequent contacts** between patient and doctor over many years:

- patient/doctor contacts 3-4 times per year.
- more than 10% of contacts at home (UK)
- more than 80% of patient consult GP at least 1per year
- more than 90% of patients consult GP at least 1 per 5 years
- one million face-face consultation per day in U.K.
- around 78% of patient remains with same doctor ≥ 5 years
- around42% of patient remains with same doctor ≥ 20 years
- minority of patient remains with same doctor for life.

    - 2. Responsibility for a **defined population**
        - around 98% of population is registered with GP (UK) have chronic disease risk factors

- 3. Contribution of the primary care team:
  - The family Physician is supported by other members of health team
- 4. The power of patient – doctor relationships:
  - The better the relationship, the more likely the patient will comply with advice of a doctor regarding prevention and treatment.

USPSTF general guidelines of cancers and chronic diseases prevention

- Created in 1984, the U.S. Preventive Services Task Force is an **independent**, **volunteer** panel of **national experts** in **prevention** and **evidence-based** medicine.
- The Task Force works to improve the health of all Americans by making evidence-based recommendations about clinical preventive services such as **screenings**, **counseling** services, and **preventive** medications.
- All recommendations are published on Task Force's Web site &/or in peer-reviewed journal.
- An asterisk (*) in this presentation mean that the topic is in the process of being updated (cervical, breast, colon CA, lipid disorders)

Grade	Definition	Suggestions for Practice
A	The USPSTF recommends the service. There is high certainty that the net benefit is substantial.	Offer or provide this service.
B	The USPSTF recommends the service. There is high certainty that the net benefit is moderate or there is moderate certainty that the net benefit is moderate to substantial.	Offer or provide this service.
C	The USPSTF recommends selectively offering or providing this service to individual patients based on professional judgment and patient preferences. There is at least moderate certainty that the net benefit is small.	Offer or provide this service for selected patients depending on individual circumstances.
D	The USPSTF recommends against the service. There is moderate or high certainty that the service has no net benefit or that the harms outweigh the benefits.	Discourage the use of this service.
I Statement	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of the service. Evidence is lacking, of poor quality, or conflicting, and the balance of benefits and harms cannot be determined.	Read the clinical considerations section of USPSTF Recommendation Statement. If the service is offered, patients should understand the uncertainty about the balance of benefits and harms.

Grade	Definition	Suggestion for practice
Level A	benefits >>> risks	offer the service
Level B	benefits > risks	offer the service
Level C	benefits >= risks	offer the service for individual considerations
Level D	Risks > benefits	don't offer the service to asymptomatic patients.
Level I	cannot be assessed	if offered the pt should understand the uncertainty of evidence

Screening for lung cancer December 2013*

Population	Recommendation	Grade (What's This?)
Adults Aged 55-80, with a History of Smoking	The USPSTF recommends annual screening for lung cancer with low-dose computed tomography (LDCT) in adults aged 55 to 80 years who have a 30 pack-year smoking history and currently smoke or have quit within the past 15 years. Screening should be discontinued once a person has not smoked for 15 years or develops a health problem that substantially limits life expectancy or the ability or willingness to have curative lung surgery.	B

- 55-80, smoker (in last 15 years) → annual LDCT
- What is LDCT
    - New multi-detector CT scanners generate high-resolution imaging with radiation exposure significantly less than for diagnostic chest CT scanning. Low-dose CT (LDCT) refers to a non-contrast study obtained with a multi-detector CT scanner during a single maximal inspiratory breath-hold with a scanning time under 25 seconds.
    - The overall average effective dose of low-dose CT used in the National Lung Screening Trial was 2 mSv, compared with 7 mSv for a standard-dose diagnostic chest CT examination

Screening for breast cancer 2016*

Population	Recommendation	Grade (What's This?)
Women aged 50 to 74 years	The USPSTF recommends biennial screening mammography for women aged 50 to 74 years.	B
Women aged 40 to 49 years	The decision to start screening mammography in women prior to age 50 years should be an individual one. Women who place a higher value on the potential benefit than the potential harms may choose to begin biennial screening between the ages of 40 and 49 years. • For women who are at average risk for breast cancer, most of the benefit of mammography results from biennial screening during ages 50 to 74 years. Of all of the age groups, women aged 60 to 69 years are most likely to avoid breast cancer death through mammography screening. While screening mammography in women aged 40 to 49 years may reduce the risk for breast cancer death, the number of deaths averted is smaller than that in older women and the number of false-positive results and unnecessary biopsies is larger. The balance of benefits and harms is likely to improve as women move from their early to late 40s. • In addition to false-positive results and unnecessary biopsies, all women undergoing regular screening mammography are at risk for the diagnosis and treatment of noninvasive and invasive breast cancer that would otherwise not have become a threat to their health, or even apparent, during their lifetime (known as "overdiagnosis"). Beginning mammography screening at a younger age and screening more frequently may increase the risk for overdiagnosis and subsequent overtreatment. • Women with a parent, sibling, or child with breast cancer are at higher risk for breast cancer and thus may benefit more than average-risk women from beginning screening in their 40s. Go to the Clinical Considerations section for information on implementation of the C recommendation.	C

- 40-49

    - Individual decision
    - If there is family Hx → q2 years mammography
- 50-74 → q2 years mammography
- Biennial → q2 years
- Women >75 years, all women, dense breasts → Level I, cannot be assessed

Women aged 75 years or older	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening mammography in women aged 75 years or older.	I
All women	The USPSTF concludes that the current evidence is insufficient to assess the benefits and harms of digital breast tomosynthesis (DBT) as a primary screening method for breast cancer.	I
Women with dense breasts	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of adjunctive screening for breast cancer using breast ultrasonography, magnetic resonance imaging, DBT, or other methods in women identified to have dense breasts on an otherwise negative screening mammogram.	I

- These recommendations apply to asymptomatic women aged 40 years or older who do not have pre existing breast cancer or a previously diagnosed high-risk breast lesion and who are not at high risk for breast cancer because of a known underlying genetic mutation (such as a BRCA1 or BRCA2 gene mutation or other familial breast cancer syndrome) or a history of chest radiation at a young age.

Screening for cervical cancer Mar 2012*

Population	Recommendation	Grade (What's This?)
Women 21 to 65 (Pap Smear) or 30-65 (in combo with HPV testing)	The USPSTF recommends screening for cervical cancer in women age 21 to 65 years with cytology (Pap smear) every 3 years or, for women age 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and human papillomavirus (HPV) testing every 5 years. See the Clinical Considerations for discussion of cytology method, HPV testing, and screening interval.	A
Women younger than 30 years, HPV testing	The USPSTF recommends against screening for cervical cancer with HPV testing, alone or in combination with cytology, in women younger than age 30 years.	D
Women younger than 21	The USPSTF recommends against screening for cervical cancer in women younger than age 21 years.	D
Women Older than 65, who have had adequate prior screening	The USPSTF recommends against screening for cervical cancer in women older than age 65 years who have had adequate prior screening and are not otherwise at high risk for cervical cancer. See the Clinical Considerations for discussion of adequacy of prior screening and risk factors.	D
Women who have had a hysterectomy	The USPSTF recommends against screening for cervical cancer in women who have had a hysterectomy with removal of the cervix and who do not have a history of a high-grade precancerous lesion (cervical intraepithelial neoplasia [CIN] grade 2 or 3) or cervical cancer.	D

- 21-65 years
    - Cytology q3 years

    - Or if 30-65 years → Cytology + HPV testing → q5 years
- If <21 → no screening
- If >65 + adequate prior screening + no high risk → no screening
- Hysterectomy + removal of cervix → no screening

- This recommendation statement applies to women who have a cervix, **regardless of sexual history.**
- This recommendation statement does not apply to women who have received a diagnosis of a high-grade precancerous cervical lesion or cervical cancer, women with in utero exposure to diethylstilbestrol, or women who are immunocompromised (such as those who are HIV positive).

Screening for colorectal cancer 2016*

Population	Recommendation	Grade (What's This?)
Adults aged 50 to 75 years	The USPSTF recommends screening for colorectal cancer starting at age 50 years and continuing until age 75 years. The risks and benefits of different screening methods vary. See the Clinical Considerations section and the Table for details about screening strategies.	A
Adults aged 76 to 85 years	The decision to screen for colorectal cancer in adults aged 76 to 85 years should be an individual one, taking into account the patient's overall health and prior screening history. • Adults in this age group who have never been screened for colorectal cancer are more likely to benefit. • Screening would be most appropriate among adults who 1) are healthy enough to undergo treatment if colorectal cancer is detected and 2) do not have comorbid conditions that would significantly limit their life expectancy.	C

POPULATION	ADULTS AGED 50 TO 75 YEARS	ADULTS AGED 76 TO 85 YEARS
RECOMMENDATION	SCREEN FOR COLORECTAL CANCER STARTING AT AGE 50 YEARS. GRADE: A	THE DECISION TO SCREEN FOR COLORECTAL CANCER IS AN INDIVIDUAL ONE. GRADE: C

- 50-75 years → start at 50

- 76-85 years → Individual decision → consider if never screened, healthy with no comorbidities
- Stool based
    - guaiac based fecal occult blood or fecal immunological test → Q1 year
- Direct visualization
    - Colonoscopy → Q 10 years
    - CT colonography or flexible sigmoidoscopy → Q 5 years
- Or flexible sigmoidoscopy Q 5 years with fecal occult blood testing Q 3 years

Stool-Based Tests

Screening Method	Frequency
gFOBT	Every year
FIT	Every year
FIT-DNA	Every 1 or 3 years

*Although a serology test to detect methylated SEPT9 DNA was included in the systematic evidence review, this screening method currently has limited evidence evaluating its use. It is therefore not included in this table.

Direct Visualization Tests

Screening Method	Frequency
Colonoscopy	Every 10 years
CT Colonography	Every 5 years
Flexible Sigmoidoscopy	Every 5 years
Flexible Sigmoidoscopy w FIT	Flexible Sigmoidoscopy every 10 years plus FIT every year

JAMA. 2016;315(23):2564-2575. doi:10.1001/jama.2016.5989

gFOBT → guaiac based fecal occult blood
FIT → fecal immunological test

- Intervals for recommended screening strategies:
    - Annual screening with high-sensitivity fecal occult blood testing
    - Sigmoidoscopy every 5 years, with high-sensitivity fecal occult blood testing every 3 years
    - Screening colonoscopy every 10 years

Screening for prostate CA May 2012

Population	Recommendation	Grade (What's This?)
Men, Screening with PSA	The U.S. Preventive Services Task Force (USPSTF) recommends against prostate-specific antigen (PSA)-based screening for prostate cancer.	D

prostate CA in men with PSA (prostate specific antigen) → dont screen

Screening for HTN in adults October 2015

Population	Recommendation	Grade (What's This?)
Adults aged 18 years or older	The USPSTF recommends screening for high blood pressure in adults aged 18 years or older. The USPSTF recommends obtaining measurements outside of the clinical setting for diagnostic confirmation before starting treatment (see the Clinical Considerations section).	A

HTN

- > 18 years
    - Measurement at and outside the clinic

Screening for depression in adults January 2016

Population	Recommendation	Grade (What's This?)
General adult population, including pregnant and postpartum women	The USPSTF recommends screening for depression in the general adult population, including pregnant and postpartum women. Screening should be implemented with adequate systems in place to ensure accurate diagnosis, effective treatment, and appropriate follow-up.	B

General adults + Pregnant + postpartum women → should be done , implemented in adequate system in place (Dx+ Tx + Follow up)

Screening for type 2 DM in adults October 2015

Population	Recommendation	Grade (What's This?)
Adults aged 40 to 70 years who are overweight or obese	The USPSTF recommends screening for abnormal blood glucose as part of cardiovascular risk assessment in adults aged 40 to 70 years who are overweight or obese. Clinicians should offer or refer patients with abnormal blood glucose to intensive behavioral counseling interventions to promote a healthful diet and physical activity.	B

DM II → if 40-70 + overweight or obese → should be done ⇒ if abnormal → counselling

- Done with Fasting plasma glucose (FPG) or 2-hour post-load plasma or HbA1c
    - DM if FPG ≥ 126 mg/dL + confirmation (repeat test in separate day.
- Q 3 years
- Tests that have been used to screen for diabetes:
    - *Fasting plasma glucose (FPG).
    - *2-hour post-load plasma.
    - *Hemoglobin A1c (HbA1c)
- The American Diabetes Association (ADA) recommends screening with FPG, defines diabetes as FPG ≥ 126 mg/dL, and recommends confirmation with a repeated screening test on a separate day.
- Screening Intervals
  The optimal screening interval is not known. The ADA, on the basis of expert opinion, recommends an interval of every 3 years.

Screening for Thyroid disorders in adults October 2015

Population	Recommendation	Grade (What's This?)
Nonpregnant, asymptomatic adults	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for thyroid dysfunction in nonpregnant, asymptomatic adults.	I

Thyroid disorders → evidence cannot be assessed

Screening for Osteoporosis disorders in adults January 2011

Population	Recommendation	Grade (What's This?)
Women, 65 and Older	The USPSTF recommends screening for osteoporosis in women aged 65 years and older and in younger women whose fracture risk is equal to or greater than that of a 65-year-old white woman who has no additional risk factors.	B
Men	The USPSTF concludes that the current evidence is insufficient to assess the balance of benefits and harms of screening for osteoporosis in men.	I

Osteoporosis

- Men → evidence cannot be assessed

- Women → if > 65 or in white women <65 with risk of fracture
- Use dual-energy x-ray absorptiometry (DXA) of the hip and lumbar spine
- Prevention with → Ca+2, vit D, wt bearing exercise, bisphosphonates, parathyroid hormone, raloxifene, and estrogen.
- The most commonly used tests are dual-energy x-ray absorptiometry (DXA) of the hip and lumbar spine and quantitative ultrasonography of the calcaneus.
- In addition to adequate calcium and vitamin D intake and weight-bearing exercise, multiple U.S. Food and Drug Administration–approved therapies reduce fracture risk in women with low bone mineral density and no previous fractures, including bisphosphonates, parathyroid hormone, raloxifene, and estrogen.
- The choice of treatment should take into account the patient's clinical situation.

Dyslipidemia: screening
- Blood tests on HDL and LDL levels
- High cholesterol increases risk of CVD
- Preventions:
    - 1- Lower cholesterol through diet 2- Statins

Abdominal Aortic Aneurysm: Screening
- The USPSTF recommends one-time screening for abdominal aortic aneurysm (AAA) with ultrasonography in men ages 65 to 75 years who have ever smoked.

Hepatitis B infection
- The USPSTF recommends screening for hepatitis B virus (HBV) infection in persons at high risk for infection.

HIV testing
- The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years
- The USPSTF recommends that clinicians screen all pregnant women for HIV

Obesity
- The USPSTF recommends screening all adults for obesity. Clinicians should offer or refer patients with a body mass index (BMI) of 30 kg/m2 or higher to intensive, multicomponent behavioral interventions.

Summary

Disease	Screening
lung cancer	● 55-80, smoker (in last 15 years) → annual LDCT
breast cancer	● 40-49 ○ Individual decision ○ If there is family Hx → q2 years mammography ● 50-74 → q2 years mammography ● Women >75 years, all women, dense breasts → Level I, cannot be assessed

cervical cancer	● 21-65 years ○ Cytology q3 years ○ Or if 30-65 years → Cytology + HPV testing → q5 years ● If <21 → no screening ● If >65 + adequate prior screening + no high risk → no screening ● Hysterectomy + removal of cervix → no screening
colorectal cancer	● 50-75 years → start at 50 ● 76-85 years → Individual decision → consider if never screened, healthy with no comorbidities ● Stool based ○ guaiac based fecal occult blood or fecal immunological test → Q1 year ● Direct visualization ○ Colonoscopy → Q 10 years ○ CT colonography or flexible sigmoidoscopy → Q 5 years ● Or flexible sigmoidoscopy Q 5 years with fecal occult blood testing Q 3 years
prostate CA	prostate CA in men with PSA (prostate specific antigen) → dont screen
HTN	● > 18 years ○ Measurement at and outside the clinic
depression	General adults + Pregnant + postpartum women → should be done , implemented in adequate system in place (Dx+ Tx + Follow up)
DM II	● if 40-70 + overweight or obese → should be done ⇒ if abnormal → counselling ● Done with Fasting plasma glucose (FPG) or 2-hour post-load plasma or HbA1c ○ DM if FPG ≥ 126 mg/dL + confirmation (repeat test in separate day. ● Q 3 years
Thyroid disorders	evidence cannot be assessed
Osteoporosis	● Men → evidence cannot be assessed ● Women → if > 65 or in white women <65 with risk of fracture ● Use dual-energy x-ray absorptiometry (DXA) of the hip and lumbar spine ● Prevention with → Ca+2, vit D, wt bearing exercise, bisphosphonates, parathyroid hormone, raloxifene, and estrogen.
Dyslipidemia	● Blood tests on HDL and LDL levels ● Preventions: ○ 1- Lower cholesterol through diet 2- Statins
Abdominal Aortic Aneurysm	● 65-75 years, men, if ever smoked → one time Abdominal US

Hepatitis B infection	● Only at high risk pts
HIV	● adolescents and adults aged 15 to 65 years ● all pregnant women
Obesity	● all adults ● (BMI) of 30 kg/m2 or higher → intensive, multicomponent behavioral interventions

Taking aspirin: preventive medicine

- The USPSTF recommends initiating low-dose aspirin use for the primary prevention of cardiovascular disease (**CVD**) and colorectal cancer (**CRC**) in adults aged **50 to 59** years who have a 10% or greater 10-year CVD risk, are not at increased risk for bleeding, have a life expectancy of at least 10 years, and are willing to take low-dose aspirin daily for at least 10 years.

Statins in primary prevention of CVD in adults

- The USPSTF recommends that adults without a history of cardiovascular disease (CVD) (ie, symptomatic coronary artery disease or ischemic stroke) use a low- to moderate-dose statin for the prevention of CVD events and mortality when all of the following criteria are met:
    - 1) they are aged 40 to 75 years;
    - 2) they have 1 or more CVD risk factors (ie, dyslipidemia, diabetes, hypertension, or smoking);
    - 3) they have a calculated 10-year risk of a cardiovascular event of 10% or greater.
- Identification of dyslipidemia and calculation of 10-year CVD event risk requires universal lipids screening in adults aged 40 to 75 years

DR-Pt relationship “DPR”

Intro

- The **doctor patient relationship** is a subject of an extensive literature which provides insights from psychodynamic , behavioral , sociological Perspectives
- at best the DPR should be one of trust ,mutual respect and empathy

The **importance** of doctor patient relationship in general practice :

- the doctor-patient relationship is neither a luxury nor an optional extra, but an integral component of clinical method and practice, whether in hospital or general practice.

Elements of DPR as per brown and pedder :

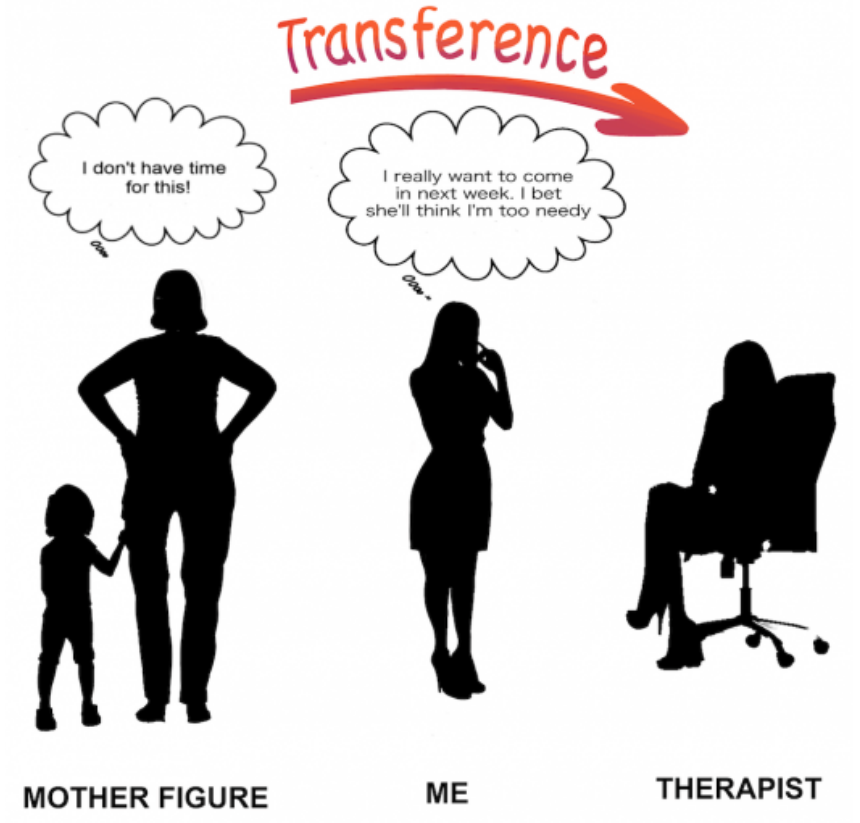
- 1 therapeutic or working alliance
- 2 transference
- 3 countertransference

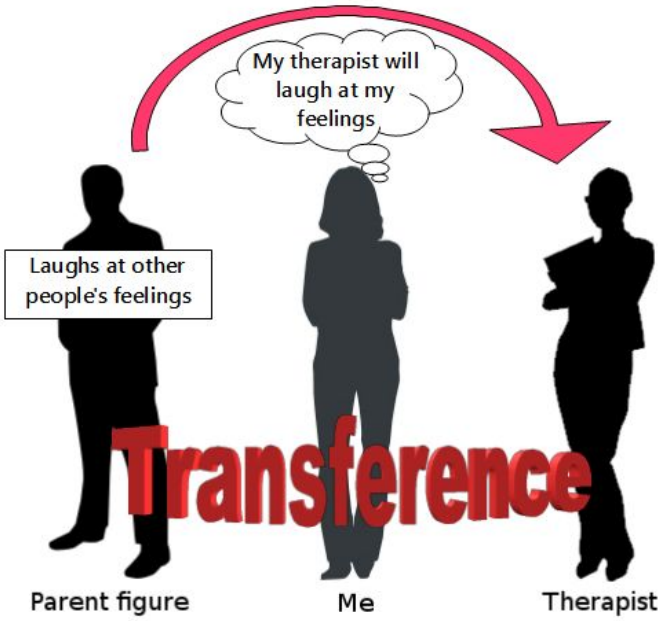
The **therapeutic alliance**

- refers to the good working relationship
- characterized by friendliness, courtesy and reliability.
- Described as establishing a good rapport with the patient

Transference

- refers to a phenomenon readily ascribed to **psychotherapy**
- in general terms occurs when we respond to a new relationship according to patterns from the past. (similar past experiences)
- (psychoanalysis) the process whereby emotions are passed on or displaced from one person to another; during psychoanalysis the displacement of feelings toward others (usually the parents) is onto the analyst





Countertransference

- The psychoanalyst's displacement of emotion onto the patient or more generally the psychoanalyst's emotional involvement in the therapeutic interaction
- refers to the feelings which the doctor has towards his patients.
- Most doctors are aware of the profound feeling of depression which can be generated within themselves when talking to a depressed patient.

The Practical Uses of the Doctor-Patient Relationship

- Diagnosis
- Whole person medicine
- Compliance

#The significance of the intimate personal relationship between physician and patient cannot be too strongly emphasised, for in an extraordinarily large number of cases, both diagnosis and treatment depend directly upon it

Diagnosis

- existing 'cues'
- patient confide “Reveal” more readily in his doctor
- E.g. somatic symptoms when under stress

Whole-person medicine assists in the formation of DPR

- A clinical history almost always extends beyond the symptoms of the disease.
- The existence of a good doctor-patient -relationship will heighten the doctor's awareness of the interplay and relative importance of social, psychological and physical factors.
- This allows an optimum balance to be struck between treating the illness and tailoring the management to suit the particular circumstances of the individual patient.

Compliance

- an average of 50% of patients do not take their prescribed treatment or reject their doctor's advice about changes of lifestyle
    - Due to :
        - 1-human characteristics

        - 2-more likely : inadequate or misleading information from the doctor (accurate information , motivation and execution)
    - This applies to → change of behavior, health education or the taking of a drug

characteristic which sets it (DPR) apart from hospital-based medicine

- Accessibility of the doctor.
- autonomy of the patient.
- Personal, comprehensive and continuing care.
- Intimacy

Characteristics that foster a good relationship

- empathy
- Sympathy
- Honesty

The reasons of failing DPRs

- Assumption
- detachment
- anxiety
- Deterioration of Doctors' Communication Skills
- Non Disclosure of Information

Assumption

- The doctor-patient relationship cannot be considered in isolation from other social influences, but is part of a **continuum of experiences.**
- Both doctor and patient bring to the consultation their own set of attitudes and beliefs, prejudices and expectations. These will be influenced by factors as social class, age, ethnic origin, social and educational background and past experiences

Detachment

- It is difficult to have a close relationship with a person or family without getting involved to some extent with their problems.
- a degree of **detachment** may be **necessary** for appropriate diagnosis and management.
- It is important to remain **emotionally free** so as to be able to withdraw the self when (one's) services are no longer pertinent.
- particularly important when caring for the chronically sick or the dying

Anxiety

- **Too close** a relationship with a patient may have the effect of increasing anxiety in the problem-solving process and may **impair Judgement**
- The doctor may not feel able to tolerate uncertainty or to use time as a diagnostic tool instead he may do inappropriate referral or investigations

Deterioration of Doctors' Communication Skills

- the emotional and physical brutality of medical training suppresses empathy, substitutes techniques and procedures for talk, and may even result in mockery of patients

Non Disclosure of Information

- **Miscommunication** is a potential pitfall, especially in terms of patients' understanding of their prognosis, purpose of care, expectations, and involvement in treatment.

- These important factors may affect the choices patients make regarding their treatment which have an influence on the disease

The main problems of dysfunctional DPR

- Frequent attendance
- Dependence

Frequent attendance

- These are the familiar recurring names in the appointment book
- Those whom no medicine is effective , or who cured of one illness rapidly develop another
- More commonly due to a bad DPR and its consequences.

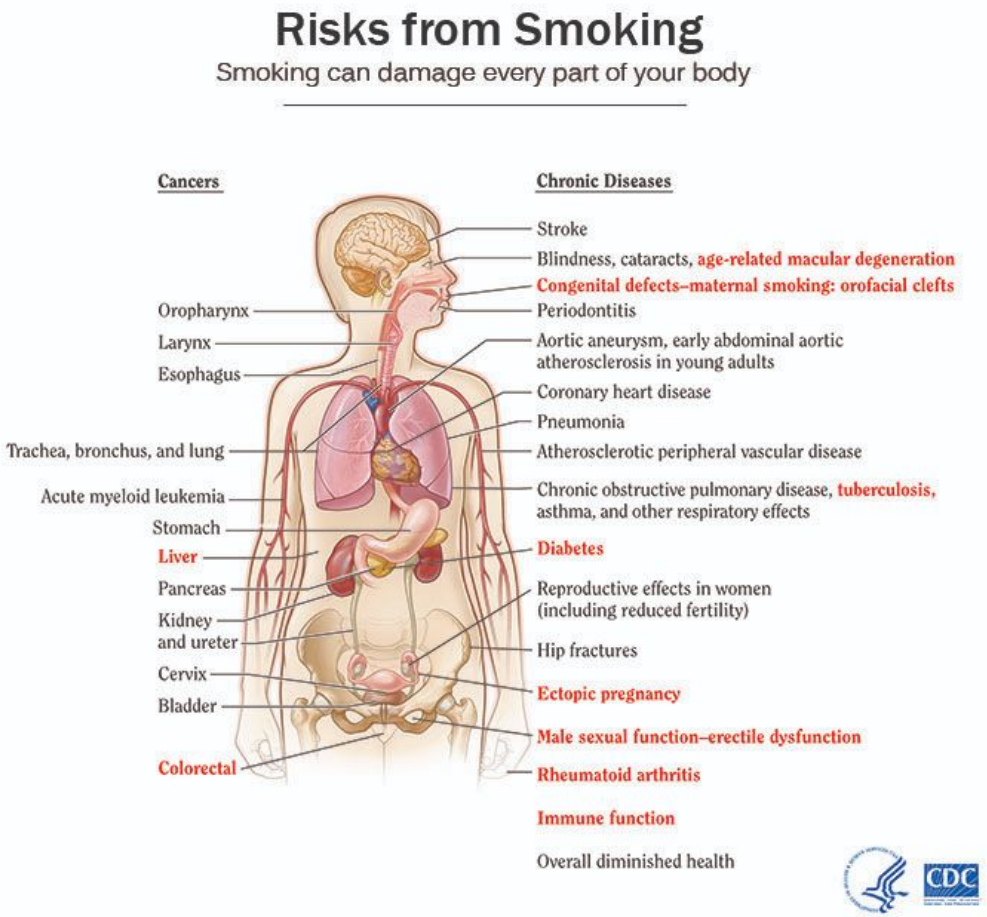
Dependence

- The **long-term nature** of the DPR in primary care makes this problem for the general practitioner
- in many instances it may be **temporary** to encourage the pt toward **independence**
- the doctor can however creates dependence by unnecessary F/U consultations , home visits.
- **Involve** your patient in his own management to **decrease dependence**

Smoking Cessation

Intro

- Cigarette smoking is a major **modifiable** health **risk factor** in the United States, significantly contributing to deaths from **cancer**, **cardiovascular**, **pulmonary** and many other diseases.
- Smoking-related illnesses lead to 443,000 premature deaths and almost $100 billion in lost productivity each year
- One in five American adults still smoke regularly (22 percent of men, 17.5 percent of women)
- Smoking causes about 80% (or 8 out of 10) of all deaths from chronic obstructive pulmonary disease (COPD).
- smoking causes about 90% (or 9 out of 10) of all lung cancer deaths
- Tobacco use kills 6 million people a year - that's one person every six seconds.
- If left unchecked, this number could rise to 8 million a year by 2030.
- Smoking cessation is **difficult**, with the average smoker attempting to quit **five times** before permanent success. However, smoking cessation results in considerable **health benefits**.
- Primary care physicians have many opportunities to counsel patients about smoking cessation
- Physicians should address smoking cessation with all patients who use tobacco, even though intensive group and individual psychological counseling are effective in helping smokers achieve abstinence, most smokers are not interested in participating in these types of interventions, thus, the Five A's counseling strategy has been created



Five A's Counseling Strategy

The five A's framework (**ask**, **advise**, **assess**, **assist**, **arrange**) has been developed to allow physicians to incorporate smoking cessation counseling into busy clinical practices.

- **ASK**
  - Adding smoking status as a vital sign to all patients' charts which increases the likelihood that physicians will address tobacco use as a risk behavior with smokers and provide them with cessation-related advice.
- **ADVISE**
  - Even brief physician advice may prompt an additional **1-3%** of patients to attempt cessation and improve quit rates compared with patients who receive no advice
- **ASSESS**
  - Patients' **motivation** to quit smoking should be assessed at every visit. Patients not yet willing to quit should receive a **motivational intervention**
- **ASSIST** (OR **REFER**)
  - Asking patients who are willing to quit to set a quit date can prompt change, and physicians should help patients anticipate **obstacles** to cessation.
  - Nicotine **withdrawal** symptoms, **depression**, and **weight gain** are specific areas in which patients may benefit from clinical guidance.
- **ARRANGE** FOR FOLLOW-UP
  - Patients should be contacted around the time of their quit date to be congratulated on their (presumed) abstinence. Contacting patients at least **four** more **times** to support their smoking-cessation attempts increases abstinence rates

Assessing the patient's **behavioral changes**

- Behavioral change can be conceptualized into **five progressive stages:**
  - **Precontemplation**: No intention to take action within the predictable future
  - **Contemplation**: Considering change within the next six months
  - **Preparation**: Planning to take action within the next month
  - **Action**: Actively changing (first six months of new behavior)
  - **Maintenance**: More than six months since behavior change
- **Confrontational interactions** with patients ambivalent "uncertain" about behavior change are **ineffective**.
- **Motivational interventions**, by contrast, explore a patient's ambivalence to smoking cessation in an empathetic, questioning manner, which respects the patient's autonomy and builds self-efficacy
- The Agency for Healthcare Research and Quality has identified several components of discussion to enhance patients' motivation to stop smoking. These components are called the **five R's**

The five R's

- **Relevance**: Encourage the patient to identify **reasons** to stop smoking that are personally relevant
- **Risks**: Advise the patient of the **harmful effects** of continued smoking, both to the **patient** and to **others**, incorporating aspects of the personal and family history whenever possible
- **Rewards**: Ask the patient to identify the **benefits** of smoking cessation
- **Roadblocks**: Explore the **barriers** to cessation that the patient may encounter
- **Repeat**: Include aspects of the five R's in **each clinical contact** with unmotivated smokers

- Patients who are unable to quit or who relapse should be **reassessed**.
- **Pharmacologic therapies** and additional behavioral counseling should be considered, and patients should be encouraged to set a new quit date

Medications

- Medications are used to assist smoking cessation by either:
    - substitute the source of nicotine → NICOTINE REPLACEMENT THERAPIES
    - or mimicking its function → NICOTINIC RECEPTOR AGONIST

First-Line Therapies for Smoking Cessation in Adults

NICOTINE REPLACEMENT THERAPIES "NRT"

- They are used to:
    - 1- relieve **cravings** for nicotine
    - 2-reduce nicotine **withdrawal** symptoms
- Available in slow-release skin patches and in more rapidly acting forms (i.e., chewing gum, nasal spray, inhalers, and lozenges "قرص مص للحلق")

Nicotine gum (Nicorette)

- OTC
- FDA pregnancy category C.
- May delay weight gain.
- Side effects: Gastrointestinal distress; mouth or throat irritation.
- Dosage:
    - 2mg/piece for light smokers
    - 4mg/ piece for heavy smokers
    - Maximal dose 24 piece/day.

Nicotine lozenge (Nicorette)

- OTC
- FDA pregnancy category D
- May delay weight gain
- should be taken one at a time and dissolved in the mouth, not chewed or swallowed
- Side effects: Nausea, heartburn, headache
- Dosage:
    - Light smokers: 2 mg
    - Heavy smokers: 4 mg
    - Maximum: 20 lozenges per day
- contains 25 percent more nicotine than gum.

Nicotine inhaler (Nicotrol)

- Prescription
- FDA pregnancy category D
- Side effects: Mouth or throat irritation (MC,40%), coughing (32 %), rhinitis (23 %)
- Dosage:
    - 6 to 16 cartridges "container" per day; each cartridge delivers 4 mg of nicotine, over 80 inhalations.

Nasal spray (Nicotrol NS)

- Prescription
- FDA pregnancy category D

- Side effects: Moderate to severe nasal irritation within the first two days (94 %) that often continues throughout use.
- Dose:
    - One dose consists of two 0.5-mg sprays
    - Initial dosage is one or two doses per hour Minimum → of 8 doses per day
    - Maximum: 40 doses per day (five doses per hour)

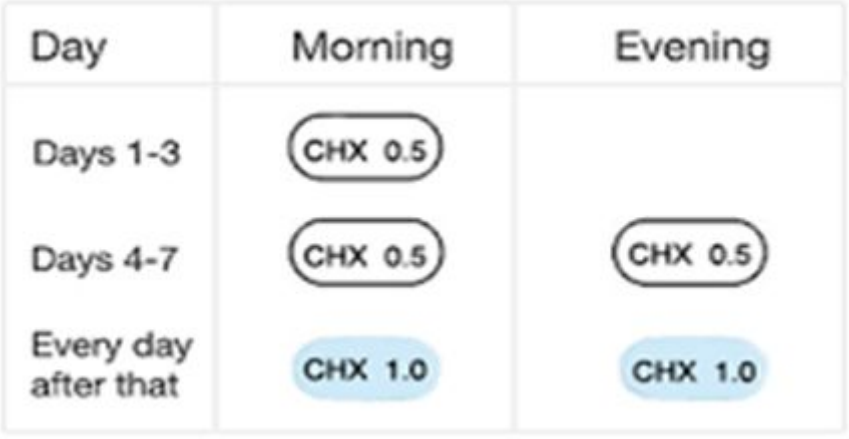
Nicotine patch

- OTC
- FDA pregnancy category D
- Side effects: Skin reactions (up to 50 percent), headaches, insomnia
- site of patch should be changed daily
- Dose:
    - Light smokers or those weighing less than 45 kg: 10 to 14 mg per day ID
    - Heavy smokers: 21 mg per day ID “intradermal”
- Heavy smokers should be encouraged to use higher dosages of an NRT or try a “patch plus” method, using the nicotine patch to provide a base level of slowly delivered nicotine and adding a more rapidly acting NRT to control breakthrough cravings.

NICOTINIC RECEPTOR AGONIST

Varenicline (Chantix)

- Selective α4β2 nicotinic receptor partial agonist.
- reduces **cravings** and **withdrawal** symptoms while blocking the binding of smoked nicotine.
- increases the chances of a successful quit attempt **2-3X** compared with no pharmacologic assistance.
- **Varenicline** was superior to bupropion in promoting abstinence.
- Increased risk of **coronary events**!
- Prescription
- **Should not** be combined with a **NRT**
- FDA pregnancy **category C**
- **Side effects:** Headache, nausea (dose related), insomnia, abnormal dreams, flatulence
- **FDA boxed warning**: May cause serious **neuropsychiatric** symptoms in patients.
- Begin therapy one week before quit date and continue for 12 weeks; an additional 12 weeks can be added if quit attempt is successful to increase chances of long-term abstinence



BUPROPION

- an antidepressant.
- Prescription
- FDA pregnancy **category C**
- Can be used with **NRT**
- **Side effects:** Insomnia (40 %), dry mouth (10 %)
- **Contraindicated**: history of seizure disorder or an eating disorder, and in those who have used a monoamine oxidase inhibitor in the past 14 days
- **FDA boxed warning**: May increase **suicidality** in patients with depression
- Dosing:
    - 150 mg in the morning for three days, then increased to 150 mg twice per day
    - Begin therapy one to two weeks before the quit date, continue until 12 weeks to six months after the quit date

2nd line treatment

- **Clonidine** (Catapres) and **nortriptyline** (TCA, Pamelor) also have demonstrated effectiveness in clinical trials for smoking cessation, and they may be used if first-line medications are contraindicated or ineffective

Drug	OTC or prescription	Preg category	weight gain	SE	Dosage
Nicotine gum (Nicorette)	OTC	C	delay weight gain.	GI, mouth or throat irritation.	2 mg for light, 4 for heavy smokers
Nicotine lozenge (Nicorette)	OTC	D	delay	Nausea, heartburn, headache	2 mg for light, 4 for heavy smokers
Nicotine inhaler (Nicotrol)	Prescription	D		Mouth or throat irritation , coughing, rhinitis	6- 16 cartridges per day
Nasal spray (Nicotrol NS)	Prescription	D		nasal irritation (continues throughout use)	Initial dosage is 1-2 doses /hour Minimum → of 8 doses per day
Nicotine patch	OTC	D		Skin reactions , HA, insomnia	14 mg light,21 for heavy smokers
Varenicline (Chantix)	Prescription	C		HA, nausea (dose related), insomnia, abnormal dreams, flatulence neuropsychiatric	Not combined with NRT
BUPROPION	Prescription	C		Insomnia , dry mouth , suicidality	Can be used with NRT

Clonidine					
nortriptyline					

Complementary and Alternative Therapies to Assist in Smoking Cessation

- Acupuncture
- Exercise
- Hypnotherapy
- Internet-based interventions (e.g., http://www.smokefree.gov)
- Telephone quitlines

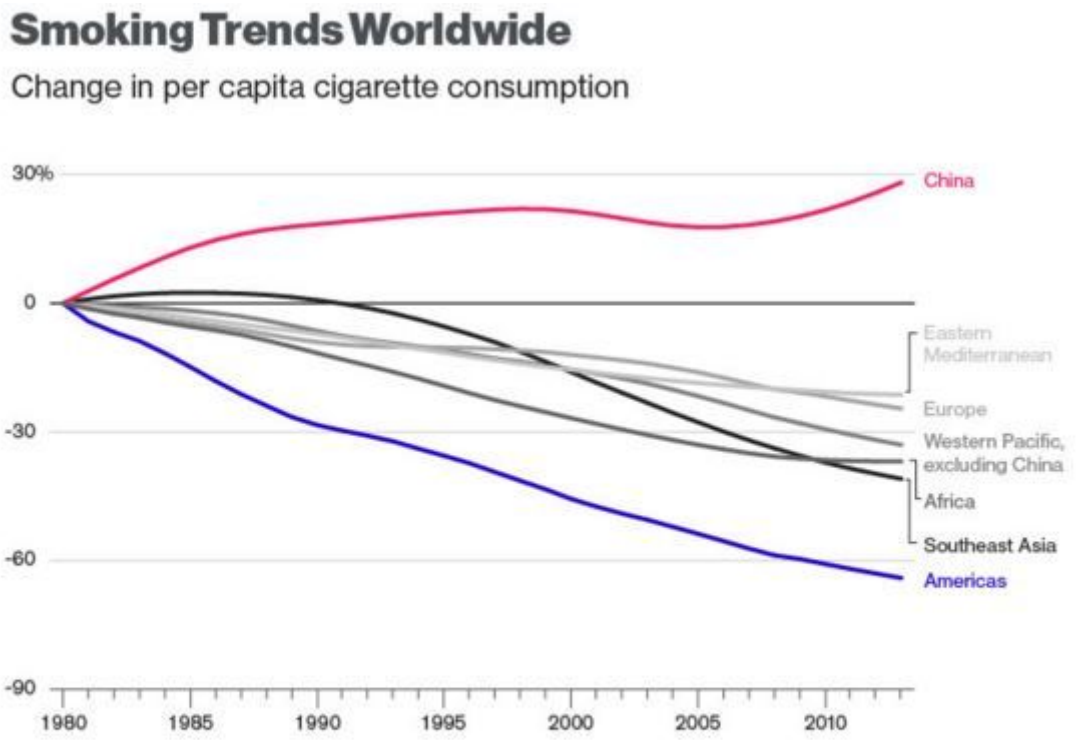
Special populations

- PREGNANT WOMEN
    - Tobacco is a known carcinogen and teratogen that can harm a developing fetus.
    - Women who quit smoking before pregnancy or in early pregnancy significantly reduce the risk of adverse outcomes, including preterm birth, low birth weight, and infant mortality.
    - Smoking cessation therapies also carry risks in pregnant women. Using NRTs during the early stages of pregnancy may increase the risk of birth defects, according to a study of 77,000 pregnant Danish women
- Patients with Cardiovascular disease
    - Data indicate that the benefits of NRTs for smoking cessation outweigh the risks of the therapies.
    - However, NRTs may have the potential to trigger **cardiac events** in the immediate **postmyocardial infarction period**, in patients with serious cardiac **arrhythmias**, and in patients with serious or worsening **angina pectoris**.
    - So, How to manage?
        - Start with a **low** initial **dosage**
        - more frequent **monitoring** of **side effects**
        - **alternative** therapies (behavioral interventions)
- ADOLESCENTS
    - 90% of adult smokers began smoking as adolescents or preadolescents.
    - The U.S. PSTF found insufficient evidence to recommend tobacco screening or interventions in adolescents; however, physicians may intervene with adolescent smokers using motivation-enhancing strategies such as the five A's and the five R's.

Influencing factors for smoking

- Family and role models Smoking
- Peer Pressure
    - Economic status, educational level and family history are significant factors that determine the level of peer pressure and the consequences of such pressures.
- Advertising and Media
- Sociodemographic factors (gender, and race/ethnicity)
- **Environmental** factors (acceptability and availability of tobacco products, interpersonal variables, perceived environmental variables);
- **Behavioral** factors (academic achievement, problem behaviors, influence of peer groups);
- **Personal** factors (knowledge of the long-term health consequences of using tobacco, functional meanings of tobacco use, subjective expected utility of tobacco use, variables related to self-esteem, and personality);

Global trends in smoking



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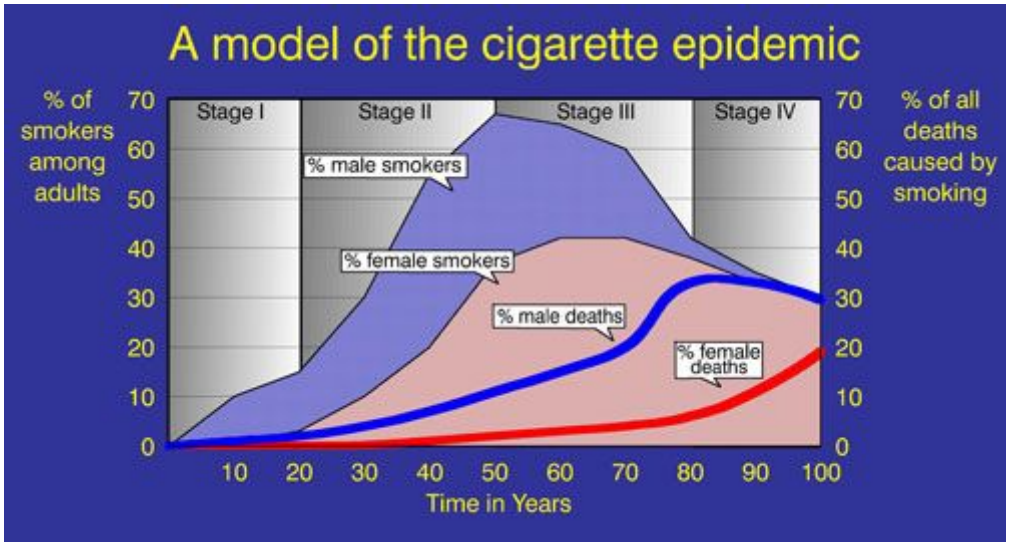
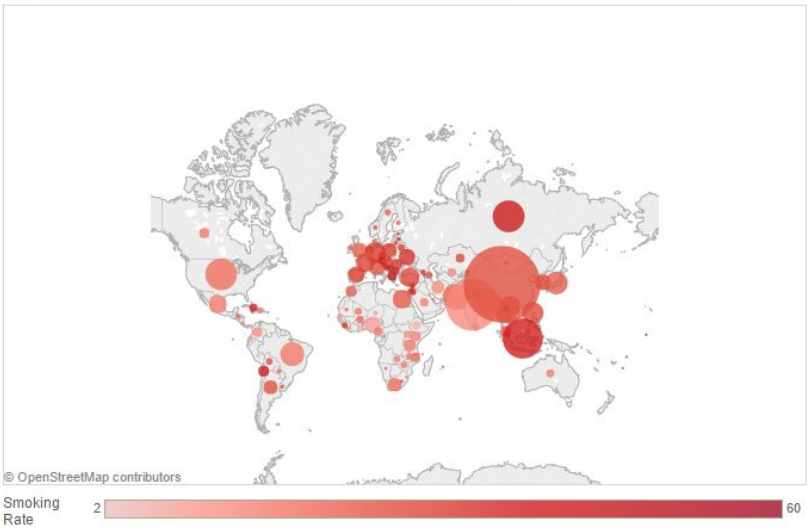


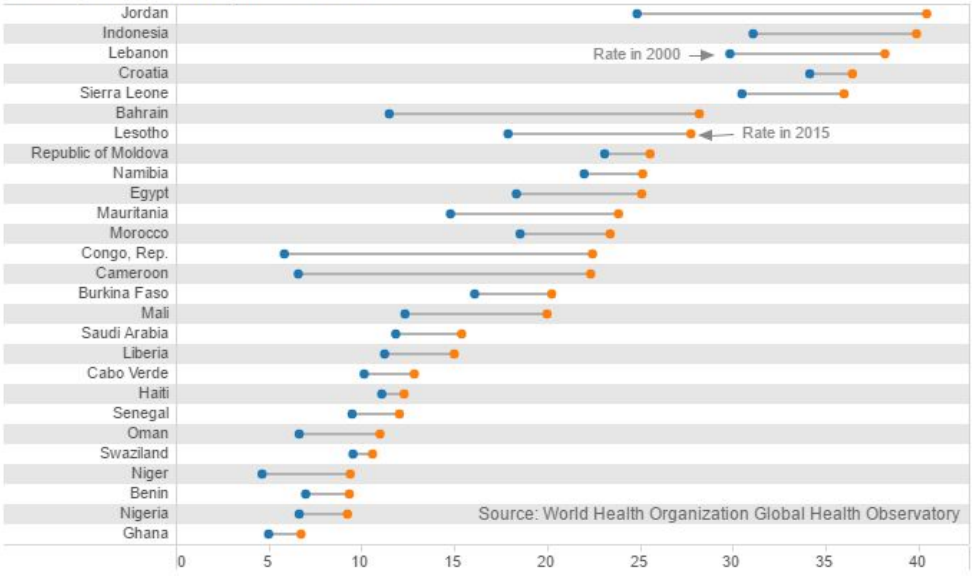
Over a Billion People Smoke Worldwide

Size = number of smokers in 2012. Darker color = higher smoking rates.



Where Did Smoking Rates Rise Between 2000 and 2015?

Percentage of population aged 15+ who smoke



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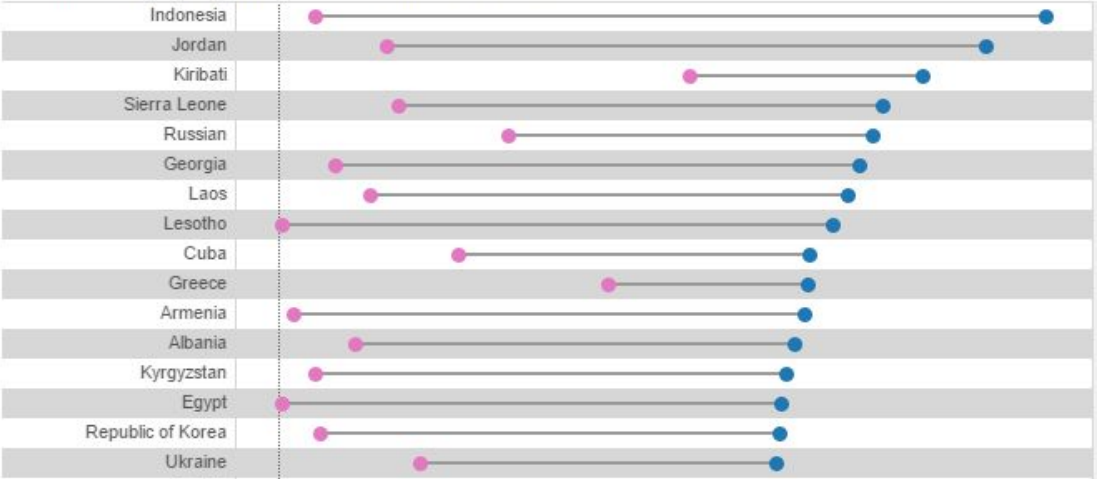
How Do Smoking Rates Vary Between Men and Women?

Percentage of population aged 15+ who smoke in 2015



history of smoking and the tobacco industry

- Tobacco is an agricultural commodity product, similar in economic terms to agricultural foodstuffs: the price is in part determined by crop yields, which vary depending on local weather conditions.
- Laws around the world now often have some restrictions on smoking, but almost 6 trillion cigarettes are still produced each year, representing over a 12% increase since the year 2000.
- China accounts for over 40% of current world production.
- Tobacco is often heavily taxed to gain revenues for governments and as an incentive for people not to smoke
- Tobacco has a long history from its usages in the early Americas. Increasingly popular with the arrival of Spain to America, which introduced tobacco to the Europeans by whom it was heavily traded. Following the industrial revolution, cigarettes were becoming popularized in the New World as well as Europe, which fostered yet another unparalleled increase in growth. This remained so until scientific studies in mid 20th century demonstrated the negative health effects of tobacco smoking including lung and throat cancer.

physiology behind nicotine addiction “dependence

- Nicotine dependence develops over time as a person continues to smoke. The risk for the development of dependence and how long it takes to become dependent differs from person to person; there is not a clear consensus on how long it takes for dependence to develop.
- Nicotine dependence results in daily, heavy usage of cigarettes and produces withdrawal symptoms such as urges to smoke, negative moods, and difficulty concentrating, when the person stops smoking. These withdrawal symptoms are so unpleasant that smokers very frequently return to smoking
- The risk for developing dependence is related to how much nicotine is in a product and how fast it can get to the user’s brain.
- Smoke from products like cigarettes and hookah is absorbed in the lungs and then nicotine gets to the brain in about 6 seconds
- Cigarettes and hookah also have large amounts of nicotine in them, and therefore people who use them have a higher risk of developing dependence.
- Products where nicotine is absorbed into the blood through the mouth (e.g., snus, chewing tobacco), and therefore takes longer to get to the brain, have lower dependence risk.
- Nicotine replacement medications like the nicotine patch, nicotine lozenges, and nicotine gum have minimal to no dependence risk because they do not contain nearly as much nicotine as tobacco products and they don’t get into the brain very quickly. This is why nicotine replacement medications are safe
- Biomolecular mechanism
    - Nicotine binds with nicotinic receptors in the brain and releases a variety of neurotransmitters, including dopamine, which, in turn, produce the pleasurable effects associated with smoking. With repeated exposure to nicotine, the number of binding sites on nicotinic receptors in the brain increases. When these receptors are not occupied by nicotine, they are believed to produce withdrawal symptoms.

    - There are genetic risk factors for developing dependence. For instance, genetic markers for a specific type of nicotinic receptor (the α5-α3-β4 nicotine receptors) have been linked to increased risk for dependence.
- Psychosocial
    - Through various conditioning mechanisms (operant and cue/classical), smoking comes to be associated with different mood and cognitive states as well as external contexts and cues
    - For instance, the act of repeatedly smoking a cigarette conditions the smoker to expect specific results via operant conditioning. This would include smoking because s/he expects to experience the buzz or high associated with cigarette use (i.e., positive reinforcement) as well as smoking to reduce negative affect or alleviate cravings (i.e., negative reinforcement). In other words, smokers come to rely on smoking to cope with negative moods or to help them feel good and enjoy something even more.
    - Repeated exposure to nicotine within specific contexts also produces cue conditioning (via classical conditioning), whereby a smoker in a specific context (e.g., after a meal, after an argument, at a certain place in the house) comes to associate that context with smoking. In this case, exposure to a cue, such as seeing someone smoking, could elicit a craving and lead someone to smoke a cigarette.

Health benefits of cessation

- Within 20 minutes after quitting, blood pressure and heart rate decrease
- Within 12 hours, carbon monoxide levels in the blood decrease to normal
- Within 48 hours, nerve endings and sense of smell and taste both start recovering
- Within 3 months, circulation and lung function improve
- Within 9 months, there are decreases in cough and shortness of breath
- Within 1 year, the risk of coronary heart disease is cut in half
- Within 5 years, the risk of stroke falls to the same as a non-smoker, and the risks of many cancers (mouth, throat, esophagus, bladder, cervix) decrease significantly
- Within 10 years, the risk of dying from lung cancer is cut in half, and the risks of larynx and pancreas cancers decrease
- Within 15 years, the risk of coronary heart disease drops to the level of a non-smoker; lowered risk for developing COPD (chronic obstructive pulmonary disease)

There is no significant difference in quit rates between smokers who quit by gradual reduction or abrupt cessation as measured by abstinence from smoking of at least six months from the quit day, suggesting that people who want to quit can choose between these two methods
encourage smokers to create a quit plan, including setting a quit date, which helps them anticipate and plan ahead for smoking challenges. A quit plan can improve a smoker's chance of a successful quit

Miscellaneous

Names of scientists (different names mentioned throughout the dossier)

- Problem oriented medical record (POMR) → Lawrence Weed
- SPIKES approach → Baile and Buckman
- Models of the consultation
    - 1- Pendleton and colleagues
    - 2- Stott and Davis
- Wilson's criteria for screening tests
- Elements of DPR → per brown and pedder
- Management of the Difficult Patient → "Professor Aldrich's strategy"

Outline For Patient-Centered Case Presentation

- In patient-centered case presentation, you need to present patient's profile followed by the chief complaint.
- After that you have to present your Pre-Diagnostic Interpretation (PDI) of that specific chief complaint, then take further hx to reach your final DDx list, based on probability, seriousness, treatability and novelty.
- After that, you need to explore illness behavior and patient-centered-medicine views explaining your patient's ideas, concerns, expectations, and possible effects of the problem.
- At last, you need to come up with a specific management plan as summarized by the acronym RAPRIOP.

An example of illness behavior:
Mr. Naser is a 42-year-old teacher. He has chest pain.

➢ **Possible ideas**
- ☐ He may think it is from his heart
- ☐ He may think it could be a result of heavy meal
- ☐ He may think it could be (bad eye) or (black magic)
- ☐ He may think it could be trauma

➢ **Possible concerns**
- ☐ His main concern could be his work
- ☐ His main concern could be his image as a distinguished teacher
- ☐ He might be worried his fitness
- ☐ He might be worried about his family, what will happen to them if he died

➢ **Possible expectations**
- ☐ His main expectation could be just explanation and reassurance
- ☐ He may expect ECG or X-Ray or cardiac catheterization
- ☐ He may expect referral for more reassurance
- ☐ He may expect medical report or just a sick leave

➢ **Possible effects of the problem**
- ☐ This problem may affect him physically and prevent him from doing his daily activities
- ☐ It may affect him socially and make him isolated
- ☐ It may affect him psychologically and make him anxious and depressed

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Cognitive skills in history taking (Hypothetico-deductive method) Patient's Interview

Chief Complaint

Duration	File information

The differential diagnosis is based on

1. Probability
2. Seriousness
3. Treatability
4. Novelty

(At least seven differential diagnoses arranged from most likely to the least likely).

♦ History

Taking a proper history is the single most important step. An ideal history must cover all of the following:

a. **SOCRATES (for all complaints)**
   - **S**ite (can be ignored in certain situations such as dizziness)
   - **O**nset
   - **T**iming,Duration, Frequency
   - **C**haracter
   - **R**adiation
   - **E**xacerbation and Relieving factors
   - **S**everity
   - **A**ssociated symptoms:pertinent clues for each one of probability, seriousness, treatability and novelty.

b. 4 Ds:

√ Disease

Previous similar attacks: including Dx and Mx

Past medical/surgical history

√ Drugs

For the current disease
Any other drugs/Herbs
Allergy
Vaccines
Addiction

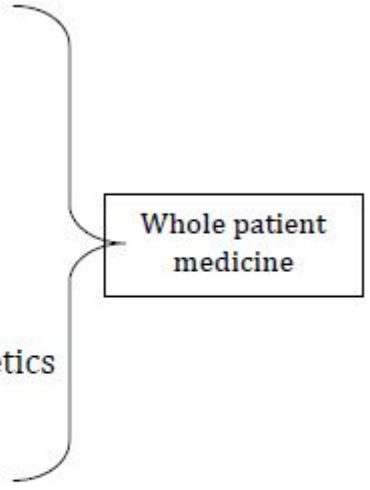
√ Diet

Appetite
Any specific diet
Current weight and significant changes
Certain diseases; celiac…
Hydration

√Dokhan(Smoking)

Marital status

Level of education
Job
Alcohol consumption
Financial status
Insurance
Psychological status
Sexual activity
Social history
Family history and genetics
Life cycle:
(teenage until menopause)



c. Patient centered medicine

➔ABC

- Anxiety
- Beliefs
- Concerns

➔FEFI

- Function
- Expectations (Cause of the problem AND management)
- Feelings
- Ideas

Why the patient is coming *today*? (An essential question in each consultation**)**

♦**Physical Examination**

- **General appearance**; mouth breathing, paleness, jaundiced, distressed…
- **Vital signs**

ℵ Temperature
ℵ Respiratory rate
ℵHeart rate
ℵ Blood pressure

- **Focused physical examination**: related to the DDx list

♦**Management plan: RAPRIOP acronym.**

Reassurance
Advice
Prescription
Referral
Investigations
Observation
Prevention

♦Patient- doctor interaction: explaining the DDx; the cause, course and available management options, and sharing all these info with the patient.

Noting that all of the above is taking into consideration patient's concerns and worries.

This is the ideal approach to general practice patients

OSCE

Past OSCE Stations

Past OSCE Stations 2017 -2018

- 1st rotation
  - 1-History taking and management for **headache**
  - 2-history taking and management for **abdominal pain**. What's your DDx
- 2nd rotation:
  - 1-hx of **Low back pain** and give 5 DDx
  - 2-**Breaking bad news** for women with a breast lump and biopsy result was malignancy .
- 3rd rotation:
  - 1-Hx of generalized **abdominal pain** of 2 years → IBS
  - 2-Geriatric pt with DM HTN come for refill with his son , How to make him satisfy that his father got a good treatment,**counseling**?
- Last rotation
  - Hx of **joint pain** → Rheumatoid arthritis
  - Hx of **Headache** → Headache induced by the use of combined oral contraceptives.

Past OSCE Stations 2015

- Doctor hana:
  - A 70 y/o male patient with **low back pain**: take history ... Prostate cancer mets to spine. On physical exam: look for low sphincter tone, fecal soiling, neuro lower limb exam
- Dr.Lana
  - A 19 y/o female patient with **low back pain:** takes history, what's your DDx, and what's management (RAP RIOP)
- Dr.Lana
  - What are the parts of **consultation**?
- Dr farihan
  - 67 y/o male with skin lesion on the facial bone in the upper cheek, under the right eye.. on examination : Fleshy nodule, translucent surface , adjacent telangiectasia.. Rest of examination was normal. Pt Came to you asking for antibiotics, what to do? you wouldn't give him antibiotics since he probably has basal cell carcinoma, you have to take biopsy
- Dr nada
  - **Dizziness** in 18 year old male and 15 year old female how do u approach each case

Breaking Bad News

Basic **guidelines**

- **Plan** the consultation, check **facts**, set aside ample “plentiful” time.
- Meet in an **appropriate room** with **privacy** and **no interruption**.
- Ask the patient if they would like **company** (e.g. a relative or friend).
- Make good **eye contact** and be alert for **non-verbal** responses.
- Use **simple**, understandable **language**.
- Be **honest** and **diplomatically** to the point (don’t cover up the issue).
- Allow time, silence, tears or anger.
- Avoid **inappropriate** methods and **don’t** give precise predictions about **life expectancy**

Coping with **patient responses**

- Give permission and **encouragement** for reactions,such as crying and screaming.
- Have a **box** of **tissues** available.
- A **comforting hand** on the shoulder or arm or holding a hand is an acceptable comfort zone.
- Offer a cup of **tea** or a cool drink if available.
- Ask the patients or relatives how they feel, what they would like to do and if they want you to contact anyone

Management

1- Tell the patient the **diagnosis**
2- Establish the patient’s **knowledge** of the Diagnosis
3- Establish the patient’s **attitude** to the diagnosis and management
4- **Educate** the patient about diagnosis
5- Develop a **management plan** for the presenting problem
6- Explore other **preventive** opportunities
7- **Reinforce** the information
8- Provide **take-away** information
9- **Evaluate** the consultation
10- Arrange **follow-up**

SPIKES Approach

Setting the environment

- Provide **privacy**.
- **Introduce** self.
- Determine who else should be present.
- Ensure **no interruptions**.
- Provide **comfortable** space.
- Create **welcoming** environment
- خصوصية,قدم نفسك, رحب بالمريض, بدون مقاطعات

Perception

- Ask what he already knows about the medical condition or what he suspects.
- Listen to level of comprehensions.
- Accept denial but do not confront “مواجهة” at this stage.
- Ex
    - "Could you tell me what happened so far?"
    - "Do have any idea what the problem could be?"
    - "Is there is anything you have been worried about?"
    - في أمر معين انت قلق بشأنه ؟ , عندك اي فكره عن المشكله ؟

Invitation - Information

- Ask patient if s/he wishes to know the details of the medical condition and/or treatment.
- Accept patient's right not to know.
- Offer to answer questions later if s/he wishes.
- Ex
    - "I do have the results today, would you like to explain it to you now?"
    - "Would you prefer if a family member/friend is present?"
    - معي الفحوصات, حاب احكيلك عنهم ؟ , حاب يكون معك صديقك أو حدا من العيله ؟

Knowledge

- Deliver the message
    - Use plain language لغة بسيطة
    - Be mindful of body language
    - Get to the point
    - Give information in small chunks
    - Pause
    - Wait for reaction
- "Unfortunately, I have some bad news to tell you..."
- use easily understood language, be direct
- Use "teach back" to verify that message was received
- Ex
    - "As you know, we took a biopsy and, unfortunately the results are not as we hoped"
    - PAUSE & WAIT
    - "I'm afraid / unfortunately / I'm sorry to tell you it is a tumor"
- UNCLEAR
    - "Your mother has had a severe IC bleed. She is in the ICU and has been intubated and ventilated.
    - Neurosurgery has placed a ventriculostomy to reduce the pressure in her brain. We do not anticipate a good prognosis."
- CLEAR
    - "Your mother has had a severe stroke. She is in the intensive care unit and has been placed on life support.
    - The brain surgeons have inserted a tube to reduce the pressure in her brain. We do not think she will survive."

Emotions and Empathy

- Be prepared for patient's and family's emotional response.
- Anticipate fear, anger, sadness, denial, guilt.
- Be mindful of your own response.
- Comfort the patient.
- Ex
    - "I can see this news was a huge shock"
    - "You appear very anxious"
    - "So you've told me the that your biggest worries are telling your children and losing your hair?"
    - "How are you feeling about hearing the news?"
    - "You're very quit, can I ask what's going through your mind?"
    - "What's upsetting you the most?"

Strategy and **S**ummary

- Summarize concerns
- Agree on a plan
- Ask how they are left feeling
- لخص المعلومات وقم بوضع خطة علاجية

Response to Reaction

If pt **Cries**

- Allow some **time** to **cry**.
- Could say, “I can see you are very upset”.
- Could **touch** the patient appropriately.
- After a few moments you should continue talking even if patient continue to cry.

If pt **Angry**

- Defensive or irritation with patient are **unhelpful**.
- Acknowledge patient’s position and avoid talking about it.

If pt **refuses** to accept diagnosis

- Explore **reasons** for patient’s denial.
- Appreciate that there is an **information gap** and try to **educate** the patient.
- Check that patient has a **clear understanding** of the problem.
- **Empathize** with patient.
- Get **family members** involved if appropriate.
- Give **time** to adjust to new information.

TABLE 5.4 Breaking bad news for unexpected death: recommended actions during the interview

Allow
Time
Opportunities to react
Silence
Touching
Free expression of emotions
Questions
Viewing of a dead or injured body
Avoid
Rushing
Bluntness
Withholding the truth
Platitudes
Protecting own inadequacies
Euphemisms
The notion ‘nothing more can be done’
Using medical jargon
Meeting anger with anger
Leaving the patient or loved one without a follow-on contact

platitude → العبارة المبتذلة. Bluntness → بصراحة بخشونة؛ بلا مراعاة, euphemisms → تَلْطِيف التَّعْبِير عَن شَيْء بَغِيض

https://www.youtube.com/watch?v=HEMc259fF_0 → Delivering Bad News
https://www.youtube.com/watch?v=csGaG7ylEz4 → كيفية إيصال الأخبار السيئة للمريض : تبليغ الأخبار الطبية السيئة

Anticipatory Care “Preventive medicine and health promotion” - Screening

Disease	Screening
Lung cancer	● 55-80 years, smoker (in last 15 years) → annual LDCT
breast cancer	● 40-49 years ○ Individual decision ○ If there is family Hx → q2 years mammography ● 50-74 → q2 years mammography ● Women >75 years, all women, dense breasts → Level I, cannot be assessed
cervical cancer	● 21-65 years ○ Cytology q3 years ○ Or if 30-65 years → Cytology + HPV testing → q5 years ● If <21 → no screening ● If >65 + adequate prior screening + no high risk → no screening ● Hysterectomy + removal of cervix → no screening
colorectal cancer	● 50-75 years → start at 50 ● 76-85 years → Individual decision → consider if never screened, healthy with no comorbidities ● Stool based ○ guaiac based fecal occult blood or fecal immunological test → Q1 year ● Direct visualization ○ Colonoscopy → Q 10 years ○ CT colonography or flexible sigmoidoscopy → Q 5 years ● Or flexible sigmoidoscopy Q 5 years with fecal occult blood testing Q 3 years
prostate CA	prostate CA in men with PSA (prostate specific antigen) → dont screen
HTN	● > 18 years ○ Measurement at and outside the clinic
depression	General adults + Pregnant + postpartum women → should be done , implemented in adequate system in place (Dx+ Tx + Follow up)
DM II	● if 40-70 + overweight or obese → should be done ⇒ if abnormal → counselling ● Done with Fasting plasma glucose (FPG) or 2-hour post-load plasma or HbA1c ○ DM if FPG ≥ 126 mg/dL + confirmation (repeat test in separate day. ● Q 3 years

Thyroid disorders	evidence cannot be assessed
Osteoporosis	● Men → evidence cannot be assessed ● Women → if > 65 or in white women <65 with risk of fracture ● Use dual-energy x-ray absorptiometry (DXA) of the hip and lumbar spine ● Prevention with → Ca+2, vit D, wt bearing exercise, bisphosphonates, parathyroid hormone, raloxifene, and estrogen.
Dyslipidemia	● Blood tests on HDL and LDL levels ● Preventions: ○ 1- Lower cholesterol through diet 2- Statins
Abdominal Aortic Aneurysm	● 65-75 years, men, if ever smoked → one time Abdominal US
Hepatitis B infection	● Only at high risk pts
HIV	● adolescents and adults aged 15 to 65 years ● all pregnant women
Obesity	● all adults ● (BMI) of 30 kg/m2 or higher → intensive, multicomponent behavioral interventions

Taking aspirin: preventive medicine

- The USPSTF recommends initiating low-dose aspirin use for the primary prevention of cardiovascular disease (**CVD**) and colorectal cancer (**CRC**) in adults aged **50 to 59** years who have a 10% or greater 10-year CVD risk, are not at increased risk for bleeding, have a life expectancy of at least 10 years, and are willing to take low-dose aspirin daily for at least 10 years.

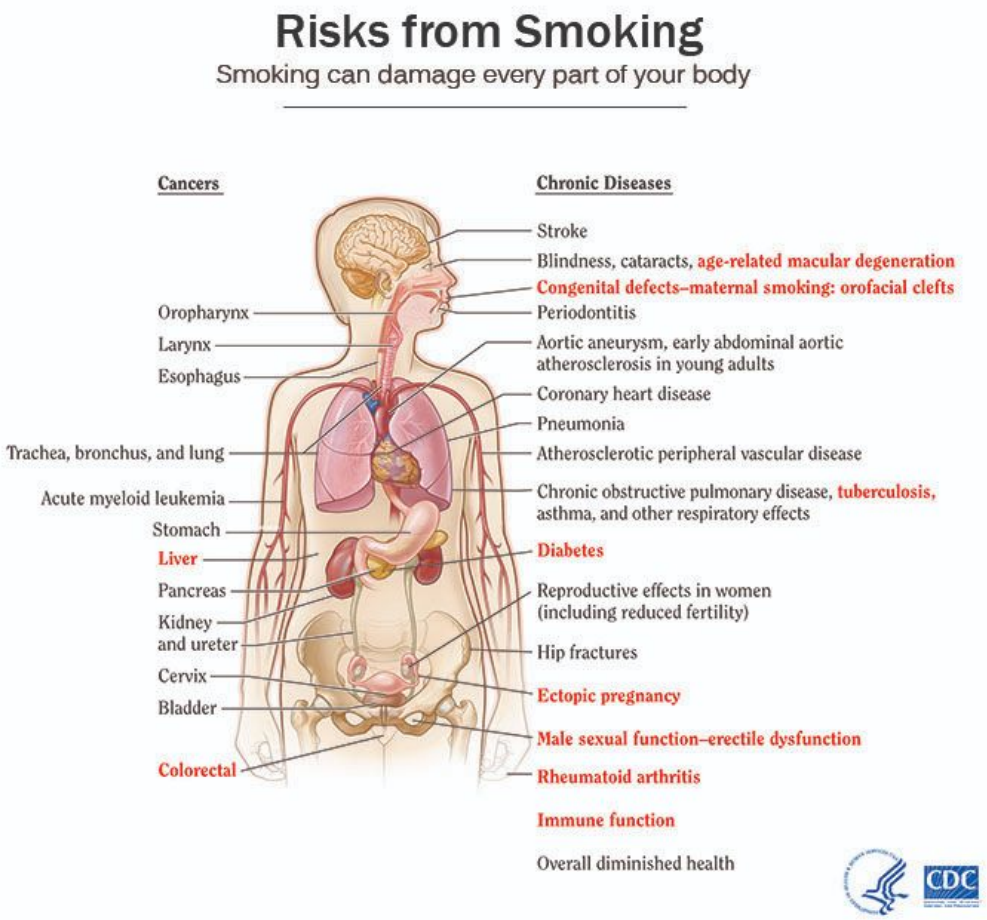
Statins in primary prevention of CVD in adults

- The USPSTF recommends that adults without a history of cardiovascular disease (CVD) (ie, symptomatic coronary artery disease or ischemic stroke) use a low- to moderate-dose statin for the prevention of CVD events and mortality when all of the following criteria are met:
  - 1) Aged 40 to 75 years;
  - 2) they have 1 or more CVD risk factors (ie, dyslipidemia, diabetes, hypertension, or smoking);
  - 3) they have a calculated 10-year risk of a cardiovascular event of 10% or greater.
- Identification of dyslipidemia and calculation of 10-year CVD event risk requires universal lipids screening in adults aged 40 to 75 years

Smoking Cessation

Intro

- Cigarette smoking is a major **modifiable** health **risk factor** in the United States, significantly contributing to deaths from **cancer**, **cardiovascular**, **pulmonary** and many other diseases.
- Smoking causes about 80% (or 8 out of 10) of all deaths from chronic obstructive pulmonary disease (COPD).
- smoking causes about 90% (or 9 out of 10) of all lung cancer deaths
- Tobacco use kills 6 million people a year - that's one person every six seconds.
- Smoking cessation is **difficult**, with the average smoker attempting to quit **five times** before permanent success. However, smoking cessation results in considerable **health benefits**.



https://www.youtube.com/watch?v=yzWfgjXsgr4 → The 5As in Practice - Role Play of a Brief Intervention

Five A's Counseling Strategy

The five A's framework (**ask**, **advise**, **assess**, **assist**, **arrange**) for smoking cessation counseling. Take permission to talk about smoking, is the pt comfortable talking about ?

- **ASK**
  - Ask if smoker (how much pack year), duration ?
  - Ask if interested in or thinking of smoking cessation
- **ADVISE**

    - Do you think smoking is good or bad for health ?
    - Do you know the bad effect of smoking on your health?
        - Would you like me to tell you ?
    - Smoking cessation will be the best thing to improve your health
- **ASSESS**
    - Is quitting smoking in the next 30 days is something realistic to you ?
    - Patients not yet willing to quit should receive a **motivational intervention**
- **ASSIST** (OR **REFER**)
    - Asking patients who are willing to quit to set a quit date can prompt change, and physicians should help patients anticipate **obstacles** to cessation.
    - Nicotine **withdrawal** symptoms, **depression**, and **weight gain** are specific areas in which patients may benefit from clinical guidance.
- **ARRANGE** FOR FOLLOW-UP
    - Patients should be contacted around the time of their quit date to be congratulated on their (presumed) abstinence. Contacting patients at least **four** more **times** to support their smoking-cessation attempts increases abstinence rates

Assessing the patient's **behavioral changes**

- Behavioral change can be conceptualized into **five progressive stages:**
    - **Precontemplation**: No intention to take action within the predictable future
    - **Contemplation**: Considering change within the next six months
    - **Preparation**: Planning to take action within the next month
    - **Action**: Actively changing (first six months of new behavior)
    - **Maintenance**: More than six months since behavior change
- **Confrontational interactions** with patients ambivalent "uncertain" about behavior change are **ineffective**.
- **Motivational interventions**, by contrast, explore a patient's ambivalence to smoking cessation in an empathetic, questioning manner, which respects the patient's autonomy and builds self-efficacy
- The Agency for Healthcare Research and Quality has identified several components of discussion to enhance patients' motivation to stop smoking. These components are called the **five R's**

The five R's

- **Relevance**: Encourage the patient to identify **reasons** to stop smoking that are personally relevant
- **Risks**: Advise the patient of the **harmful effects** of continued smoking, both to the **patient** and to **others**, incorporating aspects of the personal and family history whenever possible
- **Rewards**: Ask the patient to identify the **benefits** of smoking cessation
- **Roadblocks**: Explore the **barriers** to cessation that the patient may encounter
- **Repeat**: Include aspects of the five R's in **each clinical contact** with unmotivated smokers
    - Patients who are unable to quit or who relapse should be **reassessed**.
- **Pharmacologic therapies** and additional behavioral counseling should be considered, and patients should be encouraged to set a new quit date

Medications

- Medications are used to assist smoking cessation by either:
    - substitute the source of nicotine → NICOTINE REPLACEMENT THERAPIES

- or mimicking its function → NICOTINIC RECEPTOR AGONIST

First-Line Therapies for Smoking Cessation in Adults
NICOTINE REPLACEMENT THERAPIES "NRT"

- They are used to:
  - 1- relieve **cravings** for nicotine
  - 2-reduce nicotine **withdrawal** symptoms
- Available in slow-release skin patches and in more rapidly acting forms (i.e., chewing gum, nasal spray, inhalers, and lozenges "قرص مص للحلق")

Nicotine gum (Nicorette)
Nicotine lozenge (Nicorette)
Nicotine inhaler (Nicotrol)
Nasal spray (Nicotrol NS)
Nicotine patch

- Heavy smokers should be encouraged to use higher dosages of an NRT or try a "patch plus" method, using the nicotine patch to provide a base level of slowly delivered nicotine and adding a more rapidly acting NRT to control breakthrough cravings.

NICOTINIC RECEPTOR AGONIST
Varenicline (Chantix)
BUPROPION

- Dosing:
  - 150 mg in the morning for three days, then increased to 150 mg twice per day
  - Begin therapy one to two weeks before the quit date, continue until 12 weeks to six months after the quit date

2nd line treatment

- **Clonidine** (Catapres) and **nortriptyline** (TCA, Pamelor) also have demonstrated effectiveness in clinical trials for smoking cessation, and they may be used if first-line medications are contraindicated or ineffective

Complementary and Alternative Therapies to Assist in Smoking Cessation

- Acupuncture
- Exercise
- Hypnotherapy
- Internet-based interventions (e.g., http://www.smokefree.gov)
- Telephone quitlines

Special populations

- PREGNANT WOMEN
  - Tobacco is a known carcinogen and teratogen that can harm a developing fetus.
  - Women who quit smoking before pregnancy or in early pregnancy significantly reduce the risk of adverse outcomes, including preterm birth, low birth weight, and infant mortality.
  - Smoking cessation therapies also carry risks in pregnant women. Using NRTs during the early stages of pregnancy may increase the risk of birth defects, according to a study of 77,000 pregnant Danish women

- Patients with Cardiovascular disease
    - Data indicate that the benefits of NRTs for smoking cessation outweigh the risks of the therapies.
    - However, NRTs may have the potential to trigger **cardiac events** in the immediate **postmyocardial infarction period**, in patients with serious cardiac **arrhythmias**, and in patients with serious or worsening **angina pectoris**.
    - So, How to manage?
        - Start with a **low** initial **dosage**
        - more frequent **monitoring** of **side effects**
        - **alternative** therapies (behavioral interventions)
- ADOLESCENTS
    - 90% of adult smokers began smoking as adolescents or preadolescents.
    - The U.S. PSTF found insufficient evidence to recommend tobacco screening or interventions in adolescents; however, physicians may intervene with adolescent smokers using motivation-enhancing strategies such as the five A's and the five R's.

Health benefits of cessation

- Within 20 minutes after quitting, blood pressure and heart rate decrease
- Within 12 hours, carbon monoxide levels in the blood decrease to normal
- Within 48 hours, nerve endings and sense of smell and taste both start recovering
- Within 3 months, circulation and lung function improve
- Within 9 months, there are decreases in cough and shortness of breath
- Within 1 year, the risk of coronary heart disease is cut in half
- Within 5 years, the risk of stroke falls to the same as a non-smoker, and the risks of many cancers (mouth, throat, esophagus, bladder, cervix) decrease significantly
- Within 10 years, the risk of dying from lung cancer is cut in half, and the risks of larynx and pancreas cancers decrease
- Within 15 years, the risk of coronary heart disease drops to the level of a non-smoker; lowered risk for developing COPD (chronic obstructive pulmonary disease)

There is no significant difference in quit rates between smokers who quit by gradual reduction or abrupt cessation as measured by abstinence from smoking of at least six months from the quit day, suggesting that people who want to quit can choose between these two methods

encourage smokers to create a quit plan, including setting a quit date, which helps them anticipate and plan ahead for smoking challenges. A quit plan can improve a smoker’s chance of a successful quit

Cognitive skills in history taking (Hypothetico-deductive method)
Patient's Interview

1. IPPH → introduction, permission, privacy and hand hygiene
    a. Assure well led and warm room
2. PP
3. CC + duration
4. HPI
    a. a. SOCRATES (for all complaints)
        i. Site (can be ignored in certain situations such as dizziness)
        ii. PC.DOT → Onset, Timing,Duration, Frequency
        iii. Character
        iv. Radiation
        v. Exacerbation and Relieving factors
        vi. Severity
        vii. Associated symptoms:pertinent clues for each one of probability, seriousness, treatability and novelty
5. 4 Ds:
    a. Disease
        i. Previous similar attacks: including Dx and Mx
        ii. Past medical/surgical history
    b. Drugs
        i. For the current disease
        ii. Any other drugs/Herbs
        iii. Vaccines
        iv. Allergy
        v. Addiction
    c. Diet
        i. Any specific diet
        ii. Appetite
        iii. Current weight and significant changes
        iv. Certain diseases; celiac
        v. Hydration
    d. Dokhan(Smoking) ⇒ Whole patient medicine
        i. Family history and genetics
            1. Life cycle: (teenage until menopause)
        ii. Social history
            1. Marital status
            2. Level of education
                a. Job
                    i. Financial status
                    ii. Insurance
            3. Sexual activity
            4. Alcohol consumption, smoking
        iii. Psychological status
6. Patient centered medicine
    a. ABC

i. Anxiety
    1. في أمر معين انت قلق بشأنه ؟ , عندك اي فكره عن المشكله ؟
ii. Beliefs
    1. شو باعتقادك سبب المشكله, شو تصورك عن المرض أو الحالة
iii. Concerns
    1. "What's worrying you most about your problems / symptoms"
    2. في أي مخاوف أو أسئلة عن الحالة
    3. شو اكتر اشي مخوفك من اعراضك
    4. "Many people who come to see me with these symptoms are often worried about cancer/other serious disease, does the same apply to you"

b. FIFE
i. Function → IMPACT ON QUALITY OF LIFE
    1. شو تأثير المرض على حياتك, عملك, حياتك العائليه, دراستك
    2. شو تأثير المرض على أهدافك المستقبلية
ii. Ideas
    1. Have you had any thoughts as to what might be causing these problems
    2. عندك أفكار أو تصورات عن شو سبب المشكلة ؟
iii. Feelings
    1. "Do you have any specific fears or worries right now?"
iv. Expectations (Cause of the problem AND management)
    1. شو تصورك عن العلاج؟ أو شو حاب نعملك فحص أو علاج ؟ أو شو حاب تعرف ؟

c. Why the patient is coming today? (An essential question in each consultation)

Physical Examination:

1. IPPH → introduction, permission, privacy and hand hygiene
    a. Assure well led and warm room
2. General Observations: Pale/cyanotic/flushed/distressed
    a. Cachectic/other
    b. Conscious,oriented to Time place and person
    c. Not in pain or distress
3. VS
    a. Temp
    b. RR
    c. HR, BP (Rt, Lt, supine,Sitting, Standing)
    d. wt,Ht, BMI
    e. Pulse oxy
    f. Pupil size, equality and rxn to light
4. Focused physical examination: related to the DDx list
    a. MSS + Skin
    b. Neurological Examination:
    c. Head and Neck:
    d. Chest → RS, CVS
    e. Breast
    f. Abdominal
    g. Gait

Management plan: RAP-RIOP acronym.

- Reassurance
- Advice
- Prescription
- Referral
- Investigations
- Observation
- Prevention

Patient- doctor interaction: explaining the DDx; the cause, course and available management options, and sharing all these info with the patient.

Notes

- The differential diagnosis is based on
    - Probability
    - Seriousness
    - Treatability
    - Novelty شَيْء مستجد
- (At least seven differential diagnoses arranged from most likely to the least likely).
- Noting that all of the above is taking into consideration patient's concerns and worries.

Comprehensive Geriatric Assessment

1. IPPH → introduction, permission, privacy and hand hygiene
    a. Assure well led and warm room
2. CC + duration
3. HPI
4. ROS
    a. General
        i. FNW → fever, night sweats, weight loss
            1. Appetite
        ii. Fatigue and Weakness
        iii. Pain: site/severity/control/meds
        iv. Sleep: insomnia (early-late), sleep disorders
            1. مشاكل في نوم ,اول ما تنام ولا بنص الليل , متى بتنام ؟ ومتى تصحى؟
            2. بتنام كتير بالنهار ؟ في تعب اثناء النهار ؟
    b. Skin
        i. Rash, any enlarging moles
        ii. طفح جلدي أو تغيرات في الجلد أو تغير في الشامات
    c. MSS
        i. Gait/ Falls for the last year, fractures
        ii. Joint pain, or swelling or range of motion limitation
    d. CNS
        i. HA
        ii. Mood, change in personality
        iii. Limbs weakness/numbness/tremor رعشة
        iv. Memory Impairment: Insight // concentration
        v. Diplopia/Dysarthria/Dysphagia → عُسْرُ التَّلَفُّظ أو رؤية مزدوجة أو صعوبة في الأكل
        vi. Dizziness, no balance , Lightheadedness , Vertigo, syncope
            1. دوخة, دوار , فقدان للوعي
    e. Sensory
        i. Hearing
            1. Changes, tinnitus ,Hearing-aid مشاكل في السمع,طنين
        ii. Vision
            1. Vision-cataract Sx/ Glaucoma مشاكل في النظر أو في القراءة
        iii. Taste and smell → changes
        iv. Skin sensation→ vibration, proprioception, pain
            1. الألم أو الاهتزاز أو اسْتِقْبالُ الحِسِّ العَميق
    f. RS
        i. SOB
        ii. Cough (dry or productive)
            1. Sputum → color, amount, smell, solid material, blood
        iii. Hemoptysis
    g. CVS
        i. Chest pain → SOCRATES
        ii. Palpitation
        iii. Orthopnea and PND → عكم مخده بتنام,بتصحى من النوم مخنوق
        iv. LL edema, sacral edema, periorbital edema
            1. انتفاخ في القدمين أو أسفل الظهر أو حول العينين

h. GI
    i. Appetite, dysphagia, odynophagia , dentures
    ii. Heartburn
    iii. N/V, D/C, abdominal pain
        1. Number of bowel motions, recent change
    iv. Stool
        1. Change on color or shape, consistency
        2. Blood or mucus
        3. Incontinence
i. UGS
    i. Bladder/Incontinence
    ii. FUN → freq, urgency, nocturia
    iii. Obstructive Sx
        1. Hesitancy , straining, Poor stream
        2. Intermittency (flow increase and decrease)
        3. Interruption (flow starts and stops)
        4. Dribbling
        5. Sensation of incomplete urination
    iv. Hematuria
        1. Color , Painful ?
    v. Dysuria

5. PMH
    a. HTN,Dyslipidemia, DM (OHA/Insulin)
    b. Cancer
    c. MSS → Arthritis (OA, RA) , Osteoporosis
    d. CNS → Parkinson's, dementia , Stroke/TIA سكتة دماغية
    e. Endocrine → Thyroid مشاكل في الغدة الدرقية
    f. RS → COPD, asthma ربو ,الانسداد الرئوي المزمن
    g. CVS → CAD/stents/CHF \ AFib/ Pacemaker
        i. جلطة قلبية أو قسطرة
        ii. قصور القلب
    h. GI → IBD, IBS
    i. UGS → Benign prostatic hyperplasia (BPH) تضخم البروستات الحميد
6. Past Psychiatric History
    a. Depression, Dementia, Delirium اكتئاب أو هَذَيان أو عته الشيخوخة
    b. Psychosis
7. PSH
    a. Cholecystectomy/appendectomy الزائدة أو المرارة
    b. CABG/ PCI/Stent
        i. Coronary artery bypass graft , Percutaneous Coronary Intervention
    c. TURP → Transurethral resection of the prostate
    d. Hip fracture/ Joint replacement
8. DH
    a. Dose, freq, compliance , Administration, Understanding Meds
    b. Vaccines لِقاحُ
        i. Pneumococcal vaccine: المُكَوَّاراتِ الرِّئَوِيَّة
        ii. Influenza
        iii. Zoster vaccine: جدري الماء النطاقي الحزام الناري

iv. Td vaccine: لِقاحُ الكُزاز

c. Non Prescription and Herbals and Vitamins
   i. فيتامينات أو أعشاب أو أدوية بغير وصفه
d. Allergies/Reactions to Medications

9. Functional Status (self-report) → Independent,Supervised,Assisted,Dependent
   a. ADLs “Activities of daily living”
      i. Ambulation, Transfers/Stairs
      ii. Toileting, Bathing
      iii. Dressing
      iv. Feeding
      v. Praying
   b. IADLs “Instrumental activities of daily living“
      i. Housework → Cooking, Laundry
      ii. Driving,Shopping
      iii. Banking/finance
      iv. Medications
   c. AADLs “Advanced Activities of Daily Living“
      i. Out and about, Housebound, Bed-bound
10. Home Environment
   a. Living Arrangement: apartment/house With Whom:
      i. Which floor ?
   b. stairs into house, stairs in the house, elevator
   c. location of bathrooms
11. Home Safety Issues
   a. leaves stove on/ water running
   b. Wandering
12. Assistive Devices أدوات معينة
   a. Walker, Cane,Wheelchair عكاز , كرسي متحرك
   b. bathroom
      i. Commode/ raised toilet seat مقعدة
      ii. bath grab bars
      iii. bath seat
13. FH
   a. Dementia/depression/psychotic illness/PD/CVA
14. SH
   a. Birthplace:
   b. Marital status:
   c. Education:
   d. Work History:
   e. Finance:
      i. Will/POA”power of attorney” تفويض
   f. Hobbies/Leisure:
   g. Smoking (pack.year):
   h. Alcohol

Mental Status Examination

1. Tests
    a. Mini-cog test: (/5)
    b. Clock Drawing Test: (/3)
    c. Geriatric Depression Scale (GDS): (/15)
2. Appearance
3. Affect
4. Speech: Word finding difficulty/aphasia/Dysarthria
5. Hallucinations/delusions
6. Acquired knowledge
7. Judgment
8. Insight

Physical Examination:

1. IPPH → introduction, permission, privacy and hand hygiene
    a. Assure well led and warm room
2. General Observations: Pale/cyanotic/flushed/distressed
    a. Cachectic/other
    b. Conscious,oriented to Time place and person
    c. Not in pain or distress
3. VS
    a. Temp
    b. RR
    c. HR, BP (Rt, Lt, supine,Sitting, Standing)
    d. wt,Ht, BMI
    e. Pulse oxy
    f. Pupil size, equality and rxn to light
4. MSS + Skin
5. Neurological Examination:
6. Head and Neck:
7. Chest → RS, CVS
8. Breast
9. Abdominal
10. Gait

Investigation

- CBC
- KFT ,LFT,TFT
    - TFT → “TSH, T4”
    - KFT → serum Cr, Cr clearance, Electrolytes
    - LFT → INR, aPTT, albumin, bilirubin (direct and indirect), AST,ALT
- Endocrine
    - HbA1c, Blood sugar
    - PTH, PO4, Ca
    - B12
- Imaging
    - CXR, abdominal x-ray
    - Neuroimaging: CT/MRI

Low back pain

History:

- SOCRATES
- Site: ask the patient to point to the exact place.
- onset (moving furniture, bending/twisting, trauma), timing (disturbs sleep);
- Quality
- Duration: it can be acute on top of chronic.
    - sudden (Muscle spasm , Renal Colic , Ligaments strain or rupture)
    - gradual (Disc prolapse, Bone mets, inflammation, tumors, infections, ankylosing spondylitis , canal stenosis.)
- Frequency.
- Its relation to walking and movement (to determine if it's mechanical or inflammatory). Pain at rest, decreases with motion → inflammatory pain.
    - Increase with motion → mechanical
- Aggravating and relieving factors are very important
- Associated symptoms (fever, weight loss. Think of malignancy esp mets from the lung or breast) \\ stiffness (muscle spasm or musculoskeletal And Infections as Osteomyelitis or epidural abscess) \\ constitutional symptoms, incontinence, focal muscle weakness
- History of trauma (fracture) , history of cancer
- Recent heavy exercise
- Ask about previous episodes (recurrent)
- Patient's hobbies. → (Patients' hobby may indicates MRI from the 1st visit)
- recurrent UTis, diabetes, renal stones, IV drug use, smoking

Differentials:

In young adults:

- Disc prolapse
- Spondylolisthesis (mechanical pain, related to change in position)
- Muscle spasm (acute/ sudden pain that decreases with time but it's constant and related to the use of the muscle affected)

In old age:

- Osteoporotic fracture
- Metastasis (tumor pain is usually chronic and constant)

Also think of spinal vs non-spinal causes of low back pain as pancreatitis and ureteral stones can cause such pain.

Radiculopathy: nerve root compression → sharp well localized, in dermatological pattern pain, reaches below knees (except for L2, L3 roots usually above the knees.).

Referred pain: not localized, Not below knees, dull aching → transmitted through C-fibers

Physical Exam:
Key Physical Exam

- Vital signs; neurologic exam (especially of L4-SI nerve roots); straight leg raise test; back palpation and range of motion (although rarly of diagnostic utility); hip exam (can refer pain to the back); examine gait; consider rectal exam

Investigations

- X Ray only to show bone, if we think of fractures.
- MRI to see disc prolapse. But this can be seen even if no symptoms were present (asymptomatic with disc prolapse on MRI), in 35% in the lumbar area and 20% in the "cervical area" neck region.

Management:

- **NSAIDS**: Either COX1 or COX2, but keep in mind that COX 1 has GI side effects while COX2 has cardiac side effects.
- **Skeletal muscle relaxants**
- **Topical creams (NSAIDS)**
- **Cold compressors**, for acute pain as they work as pain killers and reach deep in the tissue
- **Hot compressors**, for chronic pain
- **Rest** is useful in the acute phase (first 2-3 days)
- **LIFE STYLE MODIFICATIONS**! especially if recurrent attacks of pain → exercise, changing the chair used at work, increase muscle strength, avoid carrying heavy objects.

- Lower back pain is usually self limiting, it takes about 6 weeks for it to disappear. If it was recurrent with no new symptoms, it needs physiotherapy.
- If the pain continues for more than 6 weeks → ask the pt for follow up
- If the patient return back to you after 6 weeks and still has the same complain, what should you do for him ?
    - Again do history and physical examination.
    - If the symptoms and signs are the same to those in the first visit, we try the previous treatment (NSAIDs and muscle relaxants) and we add physiotherapy.
    - After we try this, if the patient return back again with the same complain we should do further investigations like MRI and blood test.

Presentation	*Differential*	*Workup*
■ 45 yo F presents with low back pain that radiates to the lateral aspect of her left foot. The straight leg raise is positive. The patient is unable to tiptoe.	**Disk herniation** Lumbar muscle strain Tumor in the vertebral canal	XR—L-spine MRI—L-spine
■ 45 yo F presents with low back pain that started after she cleaned her house. The pain does not radiate, and there is no sensory deficit or weakness in her legs. Paraspinal muscle tenderness and spasm are also noted.	**Lumbar muscle strain** Disk herniation Vertebral compression fracture	XR—L-spine MRI—L-spine
■ 45 yo M presents with pain in the lower back and legs during prolonged standing and walking. The pain is relieved by sitting and leaning forward (eg, pushing a grocery cart).	**Lumbar spinal stenosis** Lumbar muscle strain Tumor in the vertebral canal Peripheral vascular disease	MRI—L-spine (preferred) XR—L-spine CT—L-spine Ankle-brachial index

ABDOMINAL PAIN

Most likely the Dx will be Irritable bowel syndrome (IBS)

Hx

- SOCRATES
- Location, quality, intensity, duration, radiation, timing (relation to meals or menstruation);
- associated symptoms (constitutional. GI, cardiac, pulmonary, renal, pelvic);
    - Oral ulcers
    - Dysphagia,odynophagia
    - dyspepsia and heartburn
    - N\V ,D\C
    - FNW → fever ,night sweats , weight loss
    - Hematemesis ,rectal bleeding,melena
    - Malabsorption symptoms
        - Abdominal distension, borborygmi, cramps and undigested food in the stool
        - Malaise, lethargy, peripheral neuropathy and symptoms of (vitamin or mineral def.)
    - Anal symptoms
        - Anal pain on defecation .
        - Straining
        - Tenesmus;Sensation of incomplete evacuation
        - Urgency
        - Incontinence
    - Arthralgia?
    - Stool characteristics (color ,smell,shape,amount ,consistency)
    - Wt loss
        - How much ,duration
        - planned or unplanned
        - Psychiatric illness→ anorexia nervosa, bulimia ,alcoholism
    - Infection
        - FNW → fever “chills ,rigors” ,night sweats , weight loss
        - Cough
        - Dysuria
        - Recent travel or sick contact
        - Sexual activity
        - Drug misuse
    - Hx of malignancy

- exacerbating and alleviating factors; history of similar symptoms;
- history of abdominal surgeries, trauma, gallstones, renal stones, atherosclerotic vascular disease;
- medications (eg,NSAIDs, corticosteroids); alcohol and drug use;
- domestic violence, stress/anxiety, sexual history, pregnancy history.

Key Physical Exam

- Vital signs; heart and lung exams; abdominal exam, including tenderness, guarding, rebound, Murphy sign, psoas and obturator signs, and CVA percussion; bowel sounds, aortic bruits; rectal exam; pelvic exam (women).

Presentation	*Differential*	*Workup*
■ 45 yo M presents with sudden onset of colicky right-sided flank pain that radiates to the testicles, accompanied by nausea, vomiting, hematuria, and CVA tenderness.	**Nephrolithiasis** Renal cell carcinoma Pyelonephritis GI etiology (eg, appendicitis)	UA, urine culture and sensitivity, urine cytology BUN/Cr CT—abdomen U/S—renal KUB IVP Blood culture
■ 41 yo obese F presents with RUQ abdominal pain that radiates to the right scapula and is associated with nausea, vomiting, and a fever of 101.5°F. The pain started after she ate fatty food. She has had similar but less intense episodes that lasted a few hours. Exam reveals a positive Murphy sign.	**Acute cholecystitis** Choledocholithiasis Hepatitis Ascending cholangitis Peptic ulcer disease Fitz-Hugh–Curtis syndrome Acute subhepatic appendicitis	CBC AST/ALT/bilirubin/alkaline phosphatase U/S—abdomen CT—abdomen Blood culture
■ 35 yo M presents with burning epigastric pain that starts 2 to 3 hours after meals. The pain is relieved by food and antacids.	**Peptic ulcer disease** Gastritis GERD Cholecystitis Chronic pancreatitis Mesenteric ischemia	Rectal exam, stool for occult blood Amylase, lipase, lactate AST/ALT/bilirubin/alkaline phosphatase Upper endoscopy (including *H pylori* testing) Upper GI series

Presentation	*Differential*	*Workup*
■ 20 yo M presents with severe RLQ abdominal pain, nausea, and vomiting. His discomfort started yesterday as a vague pain around the umbilicus. As the pain worsened, it became sharp and migrated to the RLQ. McBurney and psoas signs are positive.	**Acute appendicitis** Gastroenteritis Diverticulitis Crohn disease Nephrolithiasis Volvulus or other intestinal obstruction Perforation Acute cholecystitis	CBC Electrolytes CT—abdomen AXR U/S—abdomen Blood culture
■ 30 yo F presents with periumbilical pain for 6 months. The pain never awakens her from sleep. It is relieved by defecation and worsens when she is upset. She has alternating constipation and diarrhea but no nausea, vomiting, weight loss, or anorexia.	**Irritable bowel syndrome** Crohn disease Celiac disease Chronic pancreatitis GI parasitic infection (amebiasis, giardiasis) Endometriosis	Rectal exam, stool for occult blood Pelvic exam Urine hCG CBC Electrolytes Colonoscopy CT—abdomen/pelvis Stool for ova and parasitology, *Entamoeba histolytica* antigen
■ 24 yo F presents with bilateral lower abdominal pain that started with the first day of her menstrual period. The pain is associated with fever and a thick, greenish-yellow vaginal discharge. She has had unprotected sex with multiple sexual partners.	**Pelvic inflammatory disease** Endometriosis Dysmenorrhea Vaginitis Cystitis Spontaneous abortion Pyelonephritis	Pelvic exam Urine hCG Cervical cultures CBC ESR UA, urine culture U/S—pelvis

Dizziness

Key Hx

- Clarify the dizziness, lightheadedness versus vertigo (sensation of movement),± auditory symptoms (hearing loss,tinnitus), onset, duration of episodes, context (occurs with positioning, following head trauma), intensity {confined to bed), aggravating factors (head movement, standing); other associated symptoms {visual disturbance, URI, ear pain or discharge, nausea, palpitations, chest pain, loss of consciousness, falls); neck pain or injury; medications; history of atherosclerotic vascular disease.

Key Physical Exam

- Vital signs {including orthostatics); complete neurologic exam, including Romberg test, nystagmus, Dix Hallpike maneuver, extraocular movements, gait, hearing, and Weber and Rinne tests; ENT exam; cardiovascular exam.

Mnemonic: 4D-3E-2F-2H

Hx

4D

1. **D**efine “Dizziness”:
    a. Room is spinning/rocking/somersaulting – Vertigo
    b. Feel like “going to faint” – Near-syncope
    c. “Going to fall” or “Unsteady on feet” – Disequilibrium
    d. Feel like they’ve or are “left their body” or “floating/swimming” – Psychophysiologic dizziness
2. **D**uration of each episode:
    a. Seconds: BPPV
    b. Minutes: TIA or Vertebro-basilar insufficiency
    c. Hours: Meniere’s disease and Migraines
    d. Continuous for days: Labyrinthitis, Vestibular neuronitis
3. **D**iplopia, **D**ysarthria, **D**ysphagia, Gait abnormalities or orther focal neurologic complaints – Central cause of vertigo
4. **D**ysrhythmia symptoms – Chest pain, Shortness of breath or Palpitations

3E

5. **E**xacerbation:
    a. With head turning, lying down, or rolling over in bed – vertigo
    b. Change in head position – BPPV
    c. Loud sounds – “Tullio phenomenon” (Perilymph fistula or Meniere’s disease)
    d. With standing from sitting/reclining position – orthostatic hypotension
    e. Walking or standing compared with sitting or lying – disequilibrium
    f. Stress – psychogenic vertigo
6. **E**yes:
    a. Vertigo that decreases with visual fixation (more with eyes closed) – vestibular (peripheral) origin
    b. Vertigo that doesn’t lessen with visual fixation (same with eyes open or closed) – central origin
7. **E**ars:
    a. Hearing loss: Cerumen impaction, Otitis media, Cerebellopontine angle tumors
    b. Tinnitus: Meniere’s disease, Acoustic neuroma, Medication toxicity

2F

8. Febrile viral illness: Recent viral illness – Labyrinthitis or Vestibular neuronitis
9. Food association: Caffeine and lactate may precipitate panic attacks

2H

10. Head trauma in past: BPPV
11. Headache: Migraine or Vertebrobasilar insufficiency

Examination

- Eyes for Nystagmus
    - Vestibular origin:
        - Fast component – beats towards the side of lesion
        - Inhibited by visual fixation
        - Direction of nystagmus doesn't change with the direction of gaze
        - Nystagmus is fatigable
    - Central origin:
        - Nystagmus is not inhibited by visual fixation
        - Nystagmus changes direction with the change in direction of gaze
        - Nystagmus is not fatigable
- Ears
    - External auditory canal: vesicles (Ramsay-hunt syndrome), cerumen, cholesteatoma
    - Tympanic membrane: signs of otitis media
    - Hearing: unilateral hearing loss in labyrinthitis, cerumen impaction, meniere's disease or acoustic neuroma
- Neurologic Examination
    - Cranial nerves, Cerebellar signs
    - Romberg's sign:
        - **Sensory** ataxia: Patient loses balance when eyes are closed (removal of visual compensation)
        - **Cerebellar** ataxia: Patient loses balance on standing regardless of eyes being open or closed
    - Gait
- Clinical Tests
    - 1. **Orthostatic hypotension**: fall in systolic blood pressure of at least 15–20 mmHg within 2 minutes of standing upright.
    - 2. **Hallpike** test
    - 3. **Head thrust/impulse test**: The patient's head is quickly rotated about 15° to the side while the patient fixates on the examiner's nose. With unilateral peripheral vestibular loss (like labyrinthitis or vestibular neuritis), the eyes cannot maintain focus, and a saccade (quick rotation of the eyes from one fixation point to another) will occur bringing the eyes back to the examiner's nose.
    - 4. Hennebert's test: Reproduction of symptoms on pneumatic otoscopy
        - True positive – perilymphatic fistula
        - False positive – meniere's disease and otosyphilis
    - Other examinations must not be missed:
        - Vital signs
        - Cardiovascular examination

Presentation	*Differential*	*Workup*
■ 35 yo F presents with intermittent episodes of vertigo, tinnitus, nausea, and hearing loss within the past week. Examination is normal.	**Ménière disease** Benign positional vertigo Labyrinthitis Vestibular neuronitis Acoustic neuroma	Dix-Hallpike maneuver Audiometry Electronystagmography CBC VDRL/RPR (syphilis is a cause of Ménière disease) MRI—brain
■ 55 yo F c/o dizziness for the past day upon standing. She feels faint and has severe diarrhea that started 2 days ago. She takes furosemide for hypertension. On examination, she feels dizzy upon standing.	**Orthostatic hypotension due to dehydration** (diarrhea, diuretic use) Vertebrobasilar insufficiency Cardiac arrhythmias Vestibular neuronitis Labyrinthitis Benign positional vertigo	Orthostatic vital signs Rectal examination CBC Urea, electrolytes ECG Stool for occult blood Stool leukocytes
■ 44 yo F c/o episodes of dizziness on moving her head to the left. She feels that the room is spinning around her head. Dix-Hallpike maneuver reproduces the symptoms and elicits nystagmus.	**Benign positional vertigo** Ménière disease Vestibular neuronitis Labyrinthitis Acoustic neuroma	Audiometry Electronystagmograph MRI—brain

Headache

1. SOCRATES :
    a. Site: “uni or bi” lateral ? , symmetrical , frontal ,temporal , behind the eye ?
    b. Onset +PC DOT (progression, course, duration, onset, timing) +Frequency: gradual or sudden ,progression (increase or decrease or constant) and course (time & state of pt btw each attack), duration ,
    At morning ,at night , wake pt from sleep,
    After or during stress ? ,late nights or early rises ?
    c. Character : pressure ,band ,throbbing
    d. Radiation : to neck or scalp ?
    e. Associated :
        i. FNW → fever,night sweats,wt loss
        ii. autonomic disturbance :N\V , abdominal pain ,facial flushing,conjunctival injection, lacrimation and nasal discharge or congestion.
        iii. Horner’s syndrome: miosis partial ptosis,apparent anhidrosis , with or without enophthalmos (inset eyeball).
        iv. Aura (visual, sensory, or motor) :
            1. Visual :hemianopia (loss of half the visual field) or scotoma (small areas of visual loss) ,fortification spectra(seeing zigzag lines).
            2. unilateral sensory or motor symptoms (e.g. hemiplegic migraine).
        v. Photophobia and phonophobia + nuchal rigidity
        vi. Nausea and vomiting (morning or persistent)
        vii. Recent change in behavior or personality or educational performance
        viii. Recent dental surgery
        ix. jaw claudication
    f. Exacerbating and relieving factors+ triggers : food”chocolate,cheese , caffeine” ,sounds , light , stress “emotional or social problem at home or at school”,relaxation , menstruation , head or neck trauma”, alcohol or drug abuse or analgesic overuse. Increase with lying down or straining or coughing
    g. alleviating factors (rest, medications);
    h. patient and family history of headache; history of trauma.
2. Other medical condition that can cause “or associated with “ H\A
    a. Visual acuity – refractive errors \Visual field defects – craniopharyngioma \ Squint
    b. Sinus tenderness – for sinusitis
    c. Pain on chewing – temporomandibular joint malocclusion
    d. Blood pressure – for hypertension
    e. Torticollis
    f. Ataxia

Key Physical Exam

- Vital signs; inspection and palpation of entire head and neck; ENT inspection; complete neurologic exam (including funduscopic exam) and examination for meningeal signs for an acute headache

Presentation	Differential	Workup
■ 21 yo F presents with several episodes of throbbing left temporal pain that last for 2 to 3 hours. Before onset, she sees flashes of light in her right visual field and feels weakness and numbness on the right side of her body for a few minutes. Her headaches are often associated with nausea and vomiting and she feels bothered by light. She has a family history of migraine.	**Hemiplegic migraine (migraine with motor aura)** Tension headache Cluster headache TIA Partial seizures Pseudotumor cerebri CNS vasculitis Focal seizure (occipito-parietal) Intracranial neoplasm	MRI—brain CT—head CBC ESR
■ 26 yo M presents with severe right temporal headaches associated with ipsilateral rhinorrhea, eye tearing, and redness. Episodes have occurred at the same time every night for the past week and last for 45 minutes.	**Cluster headache** Migraine Trigeminal neuralgia Intracranial neoplasm Tension headache	MRI—brain CT—head CBC ESR
■ 30 yo F presents with 1 week of frontal headache, fever, and nasal discharge, the headache worsens when she bends forward. There is pain on palpation of the frontal and maxillary sinuses. She has a history of allergies.	**Acute sinusitis** Migraine Tension headache Cerebral abscess Meningitis Intracranial neoplasm	CBC XR—sinus CT—sinus
■ 50 yo F presents with recurrent episodes of bilateral squeezing headaches that occur 3 to 4 times a week, typically toward the end of her workday. She is experiencing significant stress in her life and recently decreased her intake of caffeine. Neurological examination is normal.	**Tension headache** Migraine Caffeine or analgesic withdrawal Depression Intracranial neoplasm Cluster headache Pseudotumor cerebri	CBC Electrolytes ESR MRI—brain LP—CSF analysis MRI—brain

Joint Pain

PP:age,gender
CC:Joints pain or swelling or redness .duration?

HPI:

1. Joint pain (SOCRATES)
    a. Site → distribution (mono,oligo,poly),symmetrical or asymmetrical ,large or small joints , lower or upper limbs
    - Is the pain migratory or persistent?
    b. Onset and hx of time “DOT.PC”
        i. Onset → gradual or sudden
        ii. Duration (more or less than 6 months , how many joints involved in the first 6 months)
        iii. Timing → at morning,at rest\exertion
        iv. course:increasing ,decreasing,constant
        v. Pattern:intermittent ,continuous
    c. Character
    d. Radiation
    e. Associated symptoms
        i. Early morning stiffness (for 30 mins) ,stiffness after periods of rest
        ii. Limitation of joint movement
        iii. Swelling,redness,hotness ,loss of fxn
        iv. refusal to move the joint or weight bear
        v. intermittent limp
    f. Exacerbating and relieving factors
        i. Exacerbated (worsening) by rest or inactivity
        ii. Relieved by movement and analgesia +NSAIDS
    g. Severity
2. Constitutional symptoms **(FNW)**
    a. **F**ever ,chills ,rigors
    b. **N**ight sweats
    c. **W**t loss ,anorexia
    d. fatigue

3. ROS
    a. Skin
        i. Rashes (malar rash on cheeks) or salmon-pink macular rash ,photosensitivity,ulcers,raynaud's
        ii. Alopecia
    b. MSS
        i. Proximal muscle weakness (pt can't stand up, can't brush hair (put arm on head)
        ii. Bone pain
    c. CNS
        i. EYES → redness or sicca
        ii. HA , seizures
    d. Endocrine

e. RS → dyspnea,pleuritic chest pain,dry cough
f. CVS → chest pain
g. GI→ mouth ulcers(painless?),sicca , abdominal distension (hepatosplenomegaly)
h. US→ hematuria or frothy urine, genital ulceration, dysuria
i. Hematological → anemia (fatigue, فقر دم),coagulopathy (thrombosis in LL and brain), leukopenia (التهابات) , lymphadenopathy
j. Obstetric → history of abortion ,symptoms increase after preg

4. Risk factors “recent”
    a. Recent Diarrhea or sexual contact → reactive arthritis
    b. Recent intercurrent illness, dehydration or surgery→ crystal-induced arthritis
    c. Recent Prodromal illness → viral arthritis
    d. Recent trauma
    e. Recent travel

PMH:

- DM.HTN.DLP
- family history of rheumatic disease
- Paget disease of bone ,malignancy (bone ,or bone mets)
- Kidney stones and interstitial nephritis (in gout)
- primary hyperparathyroidism→ pseudogout

DH:

- Diuretics → can induce gout
- Chemotherapy → gout
- NSAID and steroids

FH:

- Of same disease
- arthritis and autoimmunity

SH:

1. diet
2. Smoking,alcohol?
3. Residence ? ,which floor ?
4. Occupation →athletes ?
5. Travel hx and sick contact
6. Sexual hx and drug misuse

#Diet → red meat and seafood can induce gout
Sexual activity → septic arthritis

Investigation

1. Joint aspiration→ gram stain and culture (sepsis)
2. Blood tests
    a. inflammatory markers→ ESR,CRP
    b. CBC (neutrophils) +viral serology

c. Rheumatoid factor,Antinuclear factor “ANF”
d. blood cultures → septic arthritis, osteomyelitis or rheumatic fever

3. If gonorrhea is suspected in sexually active (adolescent)patients, obtain pelvic, urethral, throat and rectal cultures as well
4. Imaging
   a. USS → for synovitis ,detect joint effusions
   b. X-ray
   c. MRI→ best test for suspected osteomyelitis
5. Renal biopsy in lupus nephritis

■ 28 yo F presents with pain in the interphalangeal joints of her hands accompanied by hair loss and a rash on her face.	**Systemic lupus erythematosus (SLE)** Rheumatoid arthritis Psoriatic arthritis Parvovirus B19 infection	ANA, anti-dsDNA, anti-Sm, ESR, C3, C4, antiphospholipid antibodies RF, anti-CCP ESR, CRP CBC XR—hands UA, urine sediment Antibody titers for parvovirus B19
■ 28 yo F presents with pain in the metacarpophalangeal joints of both hands. Her left knee is also painful and red. She has morning joint stiffness that lasts for an hour. Her mother had rheumatoid arthritis.	**Rheumatoid arthritis** SLE Disseminated gonorrhea Arthritis associated with inflammatory bowel disease	XR—hands, left knee ANA, anti-dsDNA, ESR, RF, anti-CCP CBC Cervical culture Arthrocentesis and synovial fluid analysis
■ 56 yo obese F presents with right knee stiffness and pain that increases with movement. Her symptoms have gradually worsened over the past 10 years. She has noticed swelling and deformity of the joint and is having difficulty walking.	**Osteoarthritis** Pseudogout Gout Meniscal or ligament damage	XR—knee CBC ESR Knee arthrocentesis and synovial fluid analysis (cell count, Gram stain, culture, crystals) Uric acid MRI—knee
■ 65 yo M presents with pain in the heel of the right foot that is most notable with his first few steps and then improves as he continues walking. He has no known trauma.	**Plantar fasciitis** Heel fracture Splinter/foreign body	XR—heel Bone scan—foot