The study of patients' behavior in relation to prescribed therapy is a fairly new area of research. Several factors stimulated the development of this area:

• the new paradigm of doctor-patient interaction, the transition from a paternalistic model to a partnership

• the awareness of the active role of the patient played a role

•significant damage to health resources can be caused by ignoring medical appointments.

- In medicine, compliance refers to the fact that a patient follows the advice of the doctor, and takes the prescribed drugs in right doses.

- Non-compliance is the complete opposite from compliance. Non-compliance in medicine taking is a long-standing problem in all therapeutic areas, including the treatment of cancer. There is strong evidence that, despite the introduction of new medicines which have fewer side effects and are more simple to use, many people still do not take them as prescribed - even have life-threatening consequences. Adherence to therapies is a primary factor of treatment success. Failure to adherence is a serious problem which not only affects the patient but also the health care system. Medication non adherence in patients leads to worsening of disease, death and increased health care costs.

There are several types of non-compliance:

- The first type in which doctor write prescription but patient does not taking drugs.
- A second type in which patients decide to stop taking a medication after starting it.
- A third type of non adherence is known as non conforming, this type includes a variety of ways in which medication are not taken as prescribed, this behavior can range from skipping doses, to taking medications at incorrect times or at incorrect doses, to even taking more than prescribed. Approximately half of this non-adherence is intentional, the other part is because patients don't know they are not taking the medication as prescribed, or the regimen is just too complicated.

- The consequence of non adherence is waste of medication, disease progression, reduced functional abilities, a lower quality of life, increased use of medical resources such as nursing homes, hospital visits and hospital admissions. Non-adherence is a very common phenomenon in all patients with drug taking behavior.

- poor provider-patient communication
- inadequate knowledge about a drug and its use
- not being convinced of theneed for treatment
- fear of adverse effects of the drug
- long term drug regimens
- complex regimens that require numerous medications with varying dosing schedules cost and access barriers.

Barriers to the effective use of medicines specifically include:

Patient Noncompliance

Written By:
Antonio Chirumbolo, OD
and Lauren van Oeveren

It has also been observed that patient non adherence varies between and within individuals, as well as across time, recommended behaviors and diseases. In children, adherence to drug therapy is affected due to their dependence on an adult care giver. The literature concerning adherence reports in elderly patients reports that compliance rates range roughly from 38%- 57% with an average rate of less than 45%. One major factor that influences adherence is the patient's ability to read and understand medication instructions.

Methods to measure adherence:

The methods available for measuring adherence can be broken down into direct and indirect methods of measurement. Direct approaches are one of the most accurate methods of measuring adherence but are expensive

Indirect methods include patient questionnaires, patient self reports, pill counts, rates of prescription refills, assessment of patient's clinical response, electronic medication monitors, measurement of physiologic markers, as well as patient diaries. Each method has its own advantages and disadvantages and no method is considered as the gold standard.

Assessing children's adherence can be done by asking the help of a care giver (school nurse or teacher). Among the various methods questioning the patient, patient diaries and assessment of clinical response are all methods that are relatively easy to use, but questioning the patient can be susceptible to misrepresentation and tends to result in the health care provider overestimating the patient's adherence.

Pill counts i.e. counting the number of pills that remain in the patient's medication bottles or vials is a common method to measure adherence. Though this method is simple, it has many disadvantages that the patients can switch medicines between bottles and may even discard pills before hospital visits in order to appear to be following the regimen. Furthermore, this method does not provide information on dose timing and drug holidays,

where the medication has to be omitted on 3 or more sequential days, both of which help to determine clinical outcomes.

Electronic monitors capable of recording and stamping the time of opening bottles, dispensing drops (eye drops) or activating canister (metered dose inhaler for asthma) can also give a measure of adherence. The disadvantage with this method is that the measure of adherence is not accurate as the patients may open the container and not take the medication, take the wrong amount of medication or take multiple doses out of the container at the same time (or place multiple doses in another container)

Methods to improve medication adherence

1 Level of prescribing: Introduce a collaborative approach with the patient at the level of prescribing. Whenever possible, involve patients in decision making regarding their medications so that they have a sense of ownership and they are partners in the treatme. Use the most possible simplified regimen based on patient characteristics at the first level of drug use.

2 Communicating with the patient: Explain key information when prescribing/ dispensing a medicine. Inform the common side effects and those that patient should necessarily know (Patients would be more worried and lead to non adherence due to side effects that was not cautioned to them in advance by health care professionals)

Conclusion

Combining medication reviews with other forms of timely and appropriate support for patients and carers better and more cost-effective use of medicines.

Thanks for your attention