Questionnaire on the Current Status of Pharmaceutical Literacy among Clinicians During Continuing Medical Education

Dear Clinician,

Greetings!

"Pharmaceutical literacy" for clinicians during continuing medical education refers to the pharmaceutical knowledge, skills, and attitudes that clinicians should possess in their clinical practice to meet the needs of clinical treatment. This survey is conducted to investigate the current status of pharmaceutical literacy among clinicians in China. Your responses are of great significance to our research. This questionnaire will take approximately 20 minutes to complete, and there are no right or wrong answers. Please respond based on your actual situation. Thank you sincerely for your support and cooperation! We wish you a pleasant life!

This survey is anonymous, and all your responses will be kept strictly confidential. The survey results will only be used for academic research and will not be used for any commercial purposes.

Research Team on Clinicians' Pharmaceutical Literacy

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Part 1: Basic Information

1.Name of your medical institution: _____

2.Gender:

A. Male

B. Female

3.Professional title:

A. Attending Physician

B. Associate Chief Physician

C. Chief Physician

3.Is there a clinical pharmacist assigned to your department/team?

A. Yes

B. No

4.Does your medical institution have systems and measures for rational drug use?

A. Yes

B. No

5.Does your hospital regularly provide training on pharmaceutical knowledge or skills?

A. Yes

B. No

Part 2: Subjective Self-Assessment of Clinicians' Pharmaceutical Literacy

Dimension 1: Pharmaceutical Theoretical Knowledge

Please rate your level of agreement with the following statements (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree):

1.In clinical practice, my pharmaceutical basic knowledge (e.g., pharmacokinetics, pharmacodynamics) can help me determine drug dosage and administration time.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

2.In clinical practice, my clinical medication knowledge (e.g., pharmacological effects, clinical applications, and adverse reactions of different drugs) can help me select appropriate drugs for patients.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

3.In clinical practice, my knowledge of drug-related laws and regulations (e.g., Measures for the Administration of Prescriptions, Measures for the Clinical Application of Antibacterial Drugs) can help me ensure patient medication safety, improve medical quality, and protect

patient rights and interests.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

4.In clinical practice, I hope to receive more training on pharmaceutical theoretical knowledge.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

Dimension 2: Medication Monitoring Ability

Please rate your level of agreement with the following statements (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree):

1.In clinical practice, my current medication monitoring ability can help me identify, manage, and report adverse drug reactions in a timely manner.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

2.In clinical practice, I can follow clinical guidelines to monitor patients' efficacy indicators (e.g., blood pressure, blood glucose, blood routine) to evaluate drug efficacy.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

3.In clinical practice, I can focus on monitoring the therapeutic effects and adverse reactions of high-alert drugs (e.g., digoxin, insulin preparations, heparin) in patients.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

5.In clinical practice, I can focus on monitoring the therapeutic effects and adverse reactions of drugs in special populations (e.g., elderly patients, pregnant and lactating patients, neonatal patients).

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

6.In clinical practice, I can focus on monitoring the therapeutic effects and adverse reactions of drugs in high-risk patients prone to drug-drug interactions.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

7.In clinical practice, I hope to receive more training to improve my medication monitoring ability.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

Dimension 3: Collaborative Ability with Clinical Pharmacists

Please rate your level of agreement with the following statements (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree):

1.In clinical practice, I collaborate with clinical pharmacists in diagnosis and treatment, including participation in ward rounds and consultations.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

2.In clinical practice, I work with clinical pharmacists to complete drug selection, intervene in irrational drug use in a timely manner, and supervise the management of special drugs.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

3.In clinical practice, I can carry out patient medication guidance and education based on drug information, consultation services, and pharmaceutical care provided by clinical pharmacists.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

4.In clinical practice, I conduct clinical research with clinical pharmacists.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

5.In clinical practice, I encounter difficulties in collaborating with clinical pharmacists.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

6.In clinical practice, my current pharmaceutical knowledge can meet the needs of collaboration with clinical pharmacists.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

7.In clinical practice, I hope to strengthen collaboration between clinicians and clinical pharmacists through pharmaceutical education and related training.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

Dimension 4: Medication Guidance Ability

Please rate your level of agreement with the following statements (1=Strongly Disagree, 2=Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree):

1.In clinical practice, I proactively inquire about patients' medication history and previous drug treatment status before initiating drug therapy.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

2.In clinical practice, I explain the drug treatment plan to patients, including drug information and dosage, when formulating the plan.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

3.In clinical practice, I ask about patients' thoughts and feelings during treatment, and inform them about the drug treatment status, including drug efficacy, occurrence of adverse reactions, and corresponding management measures.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

4.In clinical practice, I provide medication guidance to patients before discharge, including drug usage, dosage, and precautions, to improve patients' medication adherence.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

5.In clinical practice, my current medication guidance ability can help me address patients' questions related to drug treatment.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

6.In clinical practice, I hope to receive more training to improve my medication guidance ability.

A. Strongly Disagree

B. Disagree

C. Neutral

D. Agree

E. Strongly Agree

Dimension 5: Self-Learning Ability of Pharmaceutical Knowledge

Please select the most appropriate option for the following questions:

1.In clinical practice, how many times do you participate in pharmaceutical knowledge training provided by the hospital pharmacy department or professional committees per month on average?

A. More than 10 times

B. 6-10 times

C. 3-5 times

D. 1-2 times

E. 0 times

2.In clinical practice, how many times do you browse medical and health websites to learn pharmaceutical knowledge per month on average?

A. More than 10 times

B. 6-10 times

C. 3-5 times

D. 1-2 times

E. 0 times

3.In clinical practice, how many times do you refer to pharmaceutical professional books, clinical medication guidelines, and drug instructions per month on average?

A. More than 10 times

B. 6-10 times

C. 3-5 times

D. 1-2 times

E. 0 times

4.In clinical practice, how many times do you search literature to learn pharmaceutical knowledge per month on average?

A. More than 10 times

B. 6-10 times

C. 3-5 times

D. 1-2 times

E. 0 times

5.In clinical practice, how many continuing medical education activities related to pharmaceutical knowledge and skills do you participate in per year on average?

A. More than 10 times

B. 6-10 times

C. 3-5 times

D. 1-2 times

E. 0 times

Part 3: Objective Assessment of Clinicians' Pharmaceutical Literacy

Dimension 1: Pharmaceutical Theoretical Knowledge

Please select the correct answer for the following questions:

1.Which of the following statements about the selectivity of drug action is incorrect?

A. Sometimes related to drug dosage

B. Related to the chemical structure of the drug itself

C. Drugs with high selectivity have strong tissue affinity

D. Drugs with high selectivity have more side effects

E. Selectivity is the basis for drug classification

2.Which of the following is not an adverse drug reaction?

A. Inhibitory effect

B. Side effect

C. Toxic reaction

D. Allergic reaction

E. Teratogenic effect

3.Which of the following statements about the dose-effect relationship is correct?

A. The dose-effect relationship refers to the correlation between drug dose and effect within a certain dose range

B. The dose-effect relationship can be represented by a dose-effect curve or concentration-effect curve

C. When the logarithm of drug dose or concentration is used as the abscissa, the resulting rectangular hyperbola is called the dose-effect curve

D. A certain dose is required for a drug to produce an effect, and the effect increases with the increase of dose within a certain range

E. The increase in effect is not unlimited

4.The definition of a partial agonist is a drug that:

A. Has high affinity and high intrinsic activity for receptors

B. Has high affinity but no intrinsic activity for receptors

C. Has high affinity and low intrinsic activity for receptors

D. Has low affinity and no intrinsic activity for receptors

E. Has low affinity and high intrinsic activity for receptors

5.Drug-drug interactions affecting absorption do not include:

A. Changes in gastrointestinal pH

B. Physicochemical properties

C. Changes in gastric emptying

D. Adsorption

E. Plasma protein binding rate

6.Which of the following descriptions of first-order kinetics is incorrect?

A. Refers to the transport rate of a drug in a compartment or site being proportional to the first power of the amount or concentration of the drug in that compartment or site

B. Has the characteristics of active transport

C. Drug transport shows exponential decay

D. The half-life is constant

E. The area under the plasma concentration-time curve is proportional to the single dose administered

7.Which of the following understandings of half-life is incorrect?

A. The time required for the plasma concentration of a drug to decrease by half

B. For drugs eliminated by zero-order kinetics, the half-life is independent of the amount of drug in the body

C. The elimination half-life is commonly used in clinical practice to reflect the rate of drug elimination

D. For drugs with linear pharmacokinetic characteristics, the half-life does not change with drug dosage form or administration method

E. After a single dose administration, most of the drug in the body is eliminated after 5 half-lives

8.The main mechanism of action of glucocorticoids in the treatment of bronchial asthma is:

A. Agonizing β2 receptors on bronchial smooth muscle cell membranes

B. Stabilizing mast cell membranes and preventing the release of allergic mediators

C. Inhibiting tissue damage and inflammatory processes caused by antigen-antibody reactions

D. Directly dilating bronchial smooth muscle

E. Significantly increasing intracellular cAMP content

9.Which of the following statements about proton pump inhibitors (PPIs) is correct?

A. The short half-life determines the short acid-inhibiting time of the drug

B. Usually stable in alkaline conditions

C. Omeprazole has fewer drug-drug interactions than other varieties

D. Once-daily oral administration is recommended before breakfast

E. Liver drug enzymes involved in PPI metabolism are CYP2C19

10.When the detection rate of methicillin-resistant staphylococci is high, which of the following antibacterial drugs can be selected for infection prevention in surgeries involving implantation of artificial materials (e.g., artificial heart valve replacement, permanent cardiac pacemaker implantation, artificial joint replacement)?

A. Vancomycin or norvancomycin

B. Clindamycin

C. Aminoglycosides

D. Cefazolin

E. Latamoxef

11.Which of the following is a specific adverse reaction of cyclophosphamide?

A. Interstitial pneumonia

B. Hemorrhagic cystitis

C. Hepatotoxicity

D. Nephrotoxicity

E. Myelosuppression

12.Which of the following does not require a mandatory specified proprietary logo in drug instructions and labels?

A. Radioactive drugs

B. Narcotic drugs

C. Compound preparations containing special drugs

D. Topical drugs

E. Toxic drugs for medical use

13.Which of the following stages in clinical drug evaluation is incorrect?

A. Phase I clinical trial

B. Phase II clinical trial

C. Phase III clinical trial

D. Phase IV clinical trial

E. Phase V clinical trial

14.Which of the following prescription forms is incorrect in clinical practice?

A. Ordinary prescription paper is white with no label in the upper right corner

B. Prescription paper for class II psychotropic drugs is white with "Psychotropic II" labeled in the upper right corner

C. Pediatric prescription paper is light green with "Pediatric" labeled in the upper right corner

D. Narcotic drug prescription paper is light red with "Narcotic" labeled in the upper right corner

E. Emergency prescription paper is light yellow with "Emergency" labeled in the upper right corner

15.According to the Measures for the Clinical Application of Antibacterial Drugs, antibacterial drugs that have been proven safe and effective through long-term clinical application and have a relatively large impact on bacterial resistance belong to which category?

A. Non-restricted use

B. Prohibited use

C. Restricted use

D. Special use

E. Other

Dimension 2: Medication Monitoring Ability

Please select the correct answer for the following questions:

1.According to the Measures for the Reporting and Monitoring of Adverse Drug Reactions, an adverse drug event refers to an unintended harmful reaction related to the purpose of medication that occurs when a qualified drug is used under normal usage and dosage?

A. Correct

B. Incorrect

2.Which of the following principles for reporting adverse drug reactions is correct in clinical practice?

A. Report whenever in doubt

B. Report immediately upon discovery

C. Report whenever in doubt, but only after the causal relationship is initially confirmed

D. Report whenever in doubt, and it is better to report after the causal relationship is initially confirmed

E. Report whenever in doubt, and the reporter does not need to wait for the confirmation of the causal relationship before reporting

3.If the occurrence time of an adverse reaction is not closely related to medication time, the clinical manifestations are inconsistent with the known adverse reactions of the drug, and the progression of the original disease may also have similar clinical manifestations, the causality assessment of the adverse drug reaction is:

A. Definitely related

B. Very likely related

C. Possibly related

D. Possibly unrelated

4.Which of the following does not belong to the "three time points" in the "description of adverse drug reaction process" when reporting adverse reactions?

A. Occurrence time of the adverse drug reaction/event

B. End time of the adverse drug reaction/event

C. Medication time

D. Duration of the adverse drug reaction/event

5.Individual case reports of adverse drug reactions should be submitted within the specified time limits. Serious adverse reactions must be reported as soon as possible and no later than ( ) days after the information is obtained, while non-serious adverse reactions should be reported no later than ( ) days after the information is obtained. Follow-up reports should be submitted according to the same time limits as individual case reports. The starting date for the reporting

period is the date the holder first becomes aware of the individual adverse drug reaction and meets the minimum reporting requirements.

A. 7; 15

B. 7; 30

C. 15; 30

D. 30; 30

6.In your opinion, medication errors are categorized into:

A. Four layers and 9 levels

B. Three layers and 9 levels

C. Two layers and 10 levels

D. Five layers and 10 levels

7.The concept of pharmacovigilance is defined as:

A. Researching the safety of drugs

B. An academic discussion

C. Understanding the patterns of drug-induced harm to reduce and eliminate such harm, ensuring medication safety

D. The science and activities relating to the detection, assessment, understanding, and prevention of adverse effects or any other drug-related problems

E. Evaluating the risk/benefit ratio of medication use

8.Under which of the following circumstances is it NOT necessary to monitor blood drug concentration?

A. Drugs with a narrow therapeutic index and high toxicity

B. Drugs with linear kinetic characteristics

C. Drugs that easily accumulate in the body and cause toxic reactions

D. Drugs prone to abnormal reactions during combined medication

E. Drugs with significant individual variations

9.Regarding efficacy monitoring and dosing regimens, which of the following management approaches do you consider incorrect?

A. Measured blood drug concentration is within the effective range and clinically effective; no adjustment of the dosing regimen is required.

B. Measured blood drug concentration is within the effective range and clinically ineffective; no adjustment of the dosing regimen is required.

C. Measured blood drug concentration is below the effective range and efficacy is poor; adjustment of the dosing regimen is required.

D. Measured blood drug concentration is below the effective range but clinically effective; no adjustment of the dosing regimen is temporarily required.

E. Measured blood drug concentration is within the effective range but toxic side effects occur; adjustment of the dosing regimen is required.

10.The primary purpose of conducting Therapeutic Drug Monitoring (TDM) is:

A. To monitor the blood drug concentration of drugs with a narrow therapeutic range to obtain the optimal therapeutic dose and formulate individual dosing regimens

B. To manage adverse reactions

C. To calculate pharmacokinetic parameters for new drugs

D. To explore pharmacodynamics

E. To evaluate the safety of new drugs

Dimension 3: Collaborative Ability with Clinical Pharmacists

Please select the correct answer for the following questions:

1.According to the Regulations on the Administration of Pharmaceutical Affairs in Medical Institutions, what is the minimum number of clinical pharmacists required in a secondary hospital?

A. 5 persons

B. 3 persons

C. 8 persons

D. 2 persons

2.According to the Regulations on the Administration of Pharmaceutical Affairs in Medical Institutions, what is the minimum number of clinical pharmacists required in a tertiary hospital?

A. 5 persons

B. 3 persons

C. 8 persons

D. 2 persons

3.The percentage of pharmaceutical professional and technical personnel in a medical institution should not be less than ( ) of the total healthcare professional and technical personnel in the institution.

A. 2%

B. 5%

C. 8%

D. 10%

4.Medical institutions should establish clinical treatment teams composed of physicians, clinical pharmacists, and nurses to carry out work related to rational drug use. Clinical pharmacists should participate in clinical drug therapy on a full-time basis, provide medication education to patients, and guide patients in the safe use of drugs.

A. Correct

B. Incorrect

5.After discovering adverse drug reactions, medication errors, or drug injury events, the clinical departments of medical institutions should actively treat the patients, immediately report to the pharmacy department, and ensure proper observation and documentation.

A. Correct

B. Incorrect