**Supplementary Content**

**For Clinicians (1-24,156)**

1. Where is your institutions located?

1. Which level of your institutions is?
2. Primary (A, B, C)
3. Secondary (A)
4. Secondary (B)
5. Secondary (C)
6. Tertiary (A)
7. Tertiary (B)
8. Tertiary (C)
9. Tertiary (Special level)
10. Which type your institution is?
11. General Hospital
12. Specialized Hospital
13. What is your occupation?
14. TDM pharmacists
15. Laboratory physician
16. Clinical doctors
17. Other:

5. Which department are you in? (Open-ended questions)

6. Which projects are you looking forward to carry out for TDM?

1. Immunosuppressants / rheumatic immune drugs
2. Anti-infective drugs
3. Central Nervous System Agents (antiepileptics, antipsychotics)
4. Narcotic/analgesic Drugs
5. Antitumor Drugs
6. Cardiovascular System
7. Poison/Pesticide
8. Others:

7-16 are specific drugs that want to carry out TDM (multiple choice questions), as shown in the table below.

|  |  |
| --- | --- |
| **Drug Category** | **Specific Drugs For Choice** |
| Immunosuppressants / Rheumatic immune drugs | Everolimus |
| Adalimumab |
| Infliximab |
| Mycophenolic Acid |
| Corticosteroids  Others |
| Anti-infective Drugs | β-Lactamaseinhibitors |
| * Fluconazole |
| Gentamicin |
| * Amikacin |
| * Teicoplanin |
| * Tobramycin |
| * Ribavirin |
| Others |
| Narcotic/Analgesic Drugs | Paracetamol |
| * Ibuprofen |
| Salicylates |
| Lidocaine |
| Ketamine |
| * Fentanyl |
| Morphine |
| * Oxycodone |
| * Others |
| Antitumor Drugs | Azathioprine |
| platinum |
| Nilotinib |
| * Imatinib |
| * Irinotecan |
| Paclitaxel |
| Others |
| Antidepressants | Citalopram |
| * Venlafaxine |
| Fluvoxamine |
| * Sertraline |
| Duloxetine |
| * Fluoxetine |
| Paroxetine |
| * Trazodone |
| Mirtazapine |
| Others |
| Antischizophrenic Drugs | Olanzapine |
| Clozapine |
| Haloperidol |
| Aripiprazole |
| Perphenazine |
| Tiapride |
| Sulpride |
| Ziprasidone |
| Risperidone |
| Others |
| Antiepileptic Drugs | Valproic acid |
| Phenytoin sodium |
| Carbamazepine |
| Oxcarbazepine |
| Lamotrigine |
| Topiramate |
| Levetiracetam |
| Others |
| Sedative Hypnotic Drugs | Alprazolam |
| Estazolam |
| Midazolam |
| Zopiclone |
| Others |
| Anti Senile Dementia Drug | Memantine |
| Donepezil |
| Rivastigmine |
| Others |
| Poison/Pesticide | * Tetramine |
| Paraquat |

17. What particular samples are you eager to develop for TDM? (Multiple choice)

1. Breast milk
2. Cerebrospinal fluid
3. Saliva
4. Cord blood

18. Do you think TDM has significance in guiding doctors in medication and dose adjustment?

1. Yes.
2. Uncertainty
3. No.

19. What is your expectations for individualized medicine guidance services?

1. Test report can be issued within 10 hours
2. Test report can be issued within 24 hours

20. When would you like us to provide TDM service？

1. Working days (Monday to Friday between 8:00 am and 6:00 pm)
2. Every day (Monday to Sunday between 8:00 am and 6:00 pm)
3. All day time

21. In your opinion, which department should provide TDM service?

1. Clinical laboratory
2. Pharmacy
3. Each department are acceptable

22. What do you think are the main reasons for the inconsistency between TDM results and clinic treatment? (Multiple choice)

1. Inaccurate medication time
2. Inaccurate sampling time of nurses
3. Improper storage and transportation of specimens
4. Laboratory measurement inaccuracy

23. Can you get medication guidance and interpretation from clinical pharmacists in your daily diagnosis and treatment?

1. Yes
2. No

24. What role do you want clinical pharmacists to play in participating in therapeutic drug monitoring? (Multiple choice)

1. To provide valuable suggestions for the adjustment of clinical medication plan
2. Rational interpretation of determination results by using pharmaceutical professional knowledge
3. Assist doctors to formulate follow-up monitoring plan
4. The monitoring scheme is designed in advance
5. Promote accurate determination in laboratory
6. Assist nurses to take accurate samples on time
7. Guide the reasonable storage and transportation of samples
8. Assist in observing the adjusted clinical response of patients
9. Make sure the patient takes the medicine on time
10. Launch new monitoring projects

156. Please fill in your name and contact information.

**For Pharmacist(1-4, 25-156)**

1. Where is your institutions located?

1. Which level of your institutions is?
2. Primary (A, B, C)
3. Secondary (A)
4. Secondary (B)
5. Secondary (C)
6. Tertiary (A)
7. Tertiary (B)
8. Tertiary (C)
9. Tertiary (Special level)
10. Which type your institutions is?
11. General Hospital
12. Specialized Hospital
13. What is your occupation?
14. TDM pharmacists
15. Laboratory physician
16. Clinical doctors
17. Other

25. How many instruments do you have for determination of drug plasma concentration?

1. ≤2
2. 3-5
3. ≥6

26. How many TDM projects do you normally carry out?

1. ≤5
2. 6-15
3. 16-25
4. ≥25

27. Annual sample size of TDM carried out by your institution?

1. <100 cases per year
2. 100-1000 cases per year
3. 1000-3000 cases per year
4. >3000 cases per year

28. What TDM instruments do your institution have? (Multiple choice)

1. HPLC
2. GC
3. LC-MS
4. GC-MS
5. 2D-LC
6. Immunization
7. Others:

29. What is the sample test time in your TDM room?

1. Only working days
2. Working days and Weekends

30. Which department completes TDM work in your institution？

1. Pharmacy department
2. Clinical laboratory
3. Pharmacy, laboratory or other departments

31. Is there any report interpretation of TDM results in your company?

1. Yes
2. No

32. What medications do you plan to monitor in the latest year？

33. Which drugs will not be monitored for the latest year？

34. What is the reason for not carrying out TDM for the above drugs?

35. Do you think therapeutic drug monitoring is meaningful in guiding doctors to use drugs and adjust doses?

1. Yes.
2. Uncertainty
3. No.

36. What do you think should be done to improve doctors' recognition of TDM?

1. Clinical pharmacists do well in clinical departments for publicity and education
2. Interpret TDM results
3. When TDM intervention on clinical medication achieved good results

37. How to improve the reliability of TDM results in your opinion?

1. Develop TDM sampling time Brochure
2. Timely determination of samples
3. Calibrate instruments and equipment regularly
4. The accompanying QC samples shall be measured before each sample measurement

38-155 are for the development of TDM specific drugs, Detection methods, Concentration range and Charges. (When the answer to "Whether to carry out the following projects" is No, the three questions of detection method, concentration and charging was skipped automatically.)

|  |  |  |  |
| --- | --- | --- | --- |
| Is TDM carried out for the following drugs(Yes OR No) | Detection method (choice question) | Concentration range | Charge(choice question) |
| Imipenem  vancomycin  linezolid  Teicoplanin  Sulfamethoxazole  Trimethoprim  Fluconazole  Voriconazole  Itraconazole  Tacrolimus  Ciclosporin  Hydroxychloroquine  Sirolimus  Leflunomide  Olanzapine  Clozapine  Valproic Acid  Carbamazepine  Phenytoin sodium  Oxcarbazepine  Levetiracetam  Theophylline  Digoxin  Rapamycin  Methotrexate  Busulfan  Paraquat | HPLC  GC  LC-MS  GC-MS  2D-LC  Immunization  Other: | (depending on the specific drug) | ＜¥100  ¥100-200  ＞¥200 |
| Other drugs for TDM monitoring： | | | |
| Anti Infective Drugs  Antidepressants Drugs  Antipsychotic Drugs  Antiepileptic Drugs  Anti Senile Dementia Drug  Sedative Hypnotic Drugs | | | |

( “Detection method” is choice questions, the options of each question include HPLC, GC, LC-MS, GC-MS, 2D-LC, Immunization and Other. “Charge” is choice questions, the options of each question include ＜¥100, ¥100-200,＞¥200＝

156. Please fill in your name and contact information.