Appendix A

System Administrator Interview Questionnaire

University of Dammam
Applied Medical Sciences College
Health Information Management and Technology Department

Hospital Characteristics:
1. Which type of hospital do you work in?
   - General hospital
   - Specialist hospital
   - University hospital
2. Where is your hospital located?
   - Urban area
   - Semi-urban area
   - Rural area
3. What is the size of your hospital?
   - Under 100 beds
   - 100–300 beds
   - Above 300 beds
4. What is the size of your information technology department?
   - Fewer than 5 full-time staff
   - 5–10 full-time staff
   - More than 10 full-time staff
5. What is the size of your medical record department?
   - Fewer than 5 full-time staff
   - 5–10 full-time staff
   - More than 10 full-time staff

I. EHR System:
6. Does your hospital use electronic health records (EHRs)?
   - Yes, all electronic
   - Yes, part paper, part electronic
   - No
7. At which stage is the implementation of your EHR system?
   - Implementation completed and the system is running
   - Implementation completed but the system is not running
   - Implementation in progress
   - Planning to acquire an EHR system in the next 12 months
   - Planning to acquire an EHR system in the next 13–24 months
   - No plans to acquire an EHR system
8. What is the brand name of the EHR system that has been implemented?
9. Does your EHR system meet certification standards?
   - Yes
   - No
   - Not applicable

10. Does your EHR system have computerized provider order entry (CPOE)?
    - Yes
    - No
    - Not applicable

II. **Prescription and Transcribing System Integration:**
    11. Is your pharmacy information system (PIS) integrated with your EHR system?
        - Yes
        - No
        - Not applicable
    12. Is your PIS integrated with your CPOE?
        - Yes
        - No
        - Not applicable
    13. Do you have a clinical decision-support (CDS) system?
        - Yes
        - No
        - **If Yes,**
        14. Does your CPOE support use of the CDS system?
            - Yes
            - No
        15. Does your PIS support use of the CDS system?
            - Yes
            - No

**System Features:**
    16. Does your PIS/CPOE have access to patient demographics?
        - Yes
        - No
    17. Does your PIS/CPOE have access to patient problem lists?
        - Yes
        - No
    18. Does your PIS/CPOE have access to patient allergy lists?
        - Yes
        - No
    19. Does your PIS/CPOE have access to patient medical histories?
        - Yes
        - No
    20. Does your PIS/CPOE have access to patient administration records?
21. Does your PIS/CPOE have access to drug formularies?
   - Yes
   - No

22. Does your PIS/CPOE have drug–drug interaction/contraindication alerts?
   - Yes
   - No

23. Does your PIS/CPOE have drug-allergy alerts?
   - Yes
   - No

24. Does your PIS/CPOE have inappropriate dosage alerts?
   - Yes
   - No

25. Does your PIS/CPOE have drug–disease/condition alerts?
   - Yes
   - No

26. Does your PIS/CPOE check for maximum dosage?
   - Yes
   - No

27. Does your PIS/CPOE support pediatric dosage?
   - Yes
   - No

28. Does your PIS/CPOE support drug-to-indications linkage?
   - Yes
   - No

29. Does your PIS/CPOE support linkage to other drug information?
   - Yes
   - No

30. Does your PIS/CPOE support age precautions?
    - Yes
    - No

31. Does your PIS/CPOE recommend therapeutic drug monitoring or lab tests?
    - Yes
    - No

32. Is your PIS linked to the pharmacy stock?
    - Yes
    - No

33. How are prescriptions orders received in the pharmacy?
    - Electronically through CPOE
    - Copy of handwritten order
    - Original handwritten order (copy stays in chart)
    - Fax
    - Digital image capture (e.g., Pyxis Connect)
Other, please specify ______________________

III. **Dispensing and administration:**

34. Does the inpatient department use traditional manual unit dose systems or robotic systems that automate the drug dispensing process?
   - Manual unit dose system
   - Robotic systems
   - Both

35. Does the robotic system use barcode technology?
   - Yes
   - No
   - Not applicable

36. Does your PIS use medication administration records (MARs)?
   - Yes
   - No

37. Does the hospital use barcode-assisted medication administration (BCMA) systems to verify patient identity and electronically check dose administration?
   - Yes
   - No

38. Does your hospital use smart infusion pumps?
   - Yes
   - No

39. How do you document medication administration?
   - Handwritten MAR
   - Computer-generated paper MAR
   - Electronic MAR
   - Using BCMA

40. Technology used in pharmacy drug distribution system:
   - Robot
   - Automated dispensing cabinets (ADCs)
   - Carousel
   - Manual distribution

IV. **Monitoring and Patient Education:**

41. Does your hospital have a computerized adverse drug event (ADE) monitor using the electronic medical records?
   - Yes
   - No

42. Does your hospital have any computerized system for patient education about drugs’ uses and precautions?
   - Yes
   - No

43. Does your system generate any of the reports below:
   a. Daily reports to control the dispensing of medication based on dispensing location. Yes/No
   b. Reports related to the required medication to be purchased. Yes/No
   c. Reports related to medication inventory. Yes/No
d. Reports related to medication prices. Yes/No

e. Reports related to annual performance of the pharmacy. Yes/No

f. Reports related to the financial status of the pharmacy. Yes/No

g. Reports related to the medication inventory at the end of the year. Yes/No

h. Other reports, please specify:

-------------------------------------------------------------------------

-------------------------------------------------------------------------