Online Appendix. Questionnaire used

Part 1:

1.1.Hospital location:

□ Beirut □Mount Lebanon □ South Lebanon □North Lebanon □Bekaa □Nabatieh

1.2.Type of hospital: □Public □Private □University

1.3.Number of beds served by the hospital:…………………………………………………………………………..

1.4.Number of ICU/CCU beds served by the hospital:……………………………………………………………….

1.6.Is there a specialty unit in your hospital?

□ Oncology □Transplantation □ Burns unit □Psychiatry □Geriatric □Other: _____

1.7.Pharmacy opening hours per day

□Monday to Friday   Number of hours per day :_____

□Saturday   Number of hours per day :_____

□Sunday   Number of hours per day :_____

1.8.Is the pharmacy open 24 hours service? □Yes   □No

1.9.Is there a pharmacist night shift services in the hospital?□Yes   □No

1.10.Is there an on-call pharmacy service?   □Yes   □No

□Chief pharmacist □Assistant pharmacist □ Clinical pharmacist □Pharmacy technician

1.11.Is your hospital affiliated to any of the following teaching programs? (ie. routine training site for students, residents, interns, or other trainees?)

□University School of Pharmacy   □Nursing School   □School of medicine

□None   □Other: _____

1.12.Is the Pharmacy Department involved in the training any of these groups?

□Undergraduate pharmacists   □Pharm.D   □ Pharmacy support staff

□None   □Other: _____

Part 2: Pharmacy staff Workforce

2.1.Pharmacist Gender:□Number of Females:…………   □Number of Males:……………….

2.2.Non-Pharmacy Staff Gender:□Number of Females:…………   □Number of Males:………………

2.3. Pharmacist qualifications

	B.S. Pharm	Pharm.D	MS	MBA	MPH	Post-graduate certificate or diploma
Chief pharmacist						
Assistant pharmacist						
Oncology pharmacist						
Research pharmacist						
Clinical pharmacist						

2.3.Non-Pharmacist staff qualifications

	Number of Non-Pharmacist staff	Specify
Diploma		
Certificate		
Other		

2.4.Age profile: Number of Pharmacist in the following age range

Under 35	35-44	45-54	55-64	65 and above

2.5.Working schedule

		Pharmacist	# Years of practice	# Non Pharmacist staff	# Years of practice
Full time	Chief:				
	Assistants:				
	Clinical:				
Part time					

2.6. Organizational chart: Chief pharmacist reports to:

□General director or CEO   □Medical director /CMO□Financial director/CFO □Other:…….

Part 3: System /Services

3.1. Which of the following services are under the control of a pharmacist?

Reviewing medication order		Selection, Purchasing and procurement of sterile medical supplies	
Disease prevention and wellness programs (smoking cessation, vaccination)		Distribution of sterile medical supplies	
Consultation on medication management and uses		Blood derivatives	
Restricted Antibiotics and Antimicrobial stewardship		Investigational drugs	
Medications selection and procurement		Purchasing diagnostic tests	
Medication dispensing		Purchasing Medical gases	
Waste management		Purchasing radiopharmaceutical products	
IV admixture hazardous medications		TPN admixture	
Compounding IV admixtures		Infection control	
Pharmacokinetic consultation		Patient care rounds	
Pharmacotherapy consults		Enteral nutrition	
Patient counseling		Other:	

3.2. Is Pharmacy documenting in the medical record? □Yes □No

3.3. How are medication orders received by the pharmacy department?

□Written physician order sent by fax or scan □A copy of a written physician order

□Computerized Physician order entry□Transcribed physician order by a nurse

3.4. How areyour clinical pharmacy services organized?

□Centralised: pharmacists visit patient care areas at least once daily

□Centralised: pharmacists visit patient care areas regularly, but not every day

□Decentralised: pharmacists spend at least 50% of their time in patient care areas

□Other: …………………………………………..

□Not applicable:…………………………………

3.5. Are there any pharmacist-led outpatient clinics in your hospital? □Yes
Specify:……………………… □No

3.6. What standards do you operate to in relation to compounding/IV preparation, if relevant?

□USP 797   □USP 800   □GMP   □Other:……………………………………………………………………

3.7.Is there a formulary in place in your hospital? □Yes   □No   □In progress

3.8.If Yes, how often is the formulary updated? □Every year □Every two years   □> every two years

3.9.Who is the governing body for formulary management and updates?

□P&T   □Chief pharmacist□General director□Other………………………………………….

3.10.Is the pharmacy department team responsible for monitoring formulary compliance?□Yes □No

3.11.Does the hospital have an external quality certification? (e.g. ISO, JCI…)

□Yes Specify:…………………………………………………………   □No   □In progress

3.12. Does your pharmacy issue any of the following educational materials?

Newsletter, how often: ……………………………………..

□Flyers/Brochures, how often: ....

□Guidelines/Charts/Protocols: ………………………………

□Other, please specify & how often: ………………………………………….

Which ones are for externalcirculation targeting the public and patients?
…………………………………………..

Part 4: Budget

4.1.Does the chief pharmacist participate in setting the yearly pharmacy budget?□Yes □No

4.2. Does the pharmacy have a continuingeducation budget for:

a) Chief Pharmacist, b) All other pharmacists, c) Pharmacy technicians

Part 5: Quality management

5.1.Does the Pharmacy participate is setting the strategic planning of the hospital? □Yes □No

5.2.Does your Pharmacy have a designated Quality champion coordinating between the Pharmacy and the Quality department?   □Yes   □No

Who?...

5.3.Is there an annual Quality Improvement Plan(QIP) targeting the strategic direction and the goals of the hospital?   □Yes □No

5.4.If yes, does your QIP use SMART objectives and relevant KPIs for continuous improvement of the pharmacy department?   □Yes   □No

5.5.How often is your QIP monitored? ……………………………………………………….

Part 6: Interprofessional relationships

6.1.Do hospital leaders support the role of pharmacists in patient care?□Yes □No □Partly

6.2.Which, of the following multidisciplinary teams or committees include(s) a pharmacist or other representative of the pharmacy department?

□Antimicrobial stewardship □P&T□Ethics/research□Infection control □Quality improvement

□Health and safety□Medication safety □Risk management □None

□Other: _____

6.3.Which of the previously mentioned committeesis chaired by chief pharmacist?………………….

6.4.Is there collaboration between the hospital pharmacy and the attending physician for patients following discharge? □Planned discharge services □Nominated community pharmacy □None

6.5.Does the pharmacy perform medication reconciliation?

□ upon admission □Upon transfer □Upon discharge □Not applicable

□Yes, for all patients □Yes, for high risk patient's □For ER patients

6.6.Does the pharmacy collaborates with other hospital pharmacies for patient care?

□Yes, occasional □Yes, routinely □No

Part 7: Technology

7.1. Which of the following computer support technology is available in your pharmacy department?

Computer systems	Available
Intranet	
Internet	
Online medicines information and resources	
Integrated clinical decision support tool e.g Drug interaction,Drug information database, Medication errors reporting software, Patient profile	

7.2.Computer technology in your department serves for :

□Receiving and processing physician orders□Billing and invoicing□Stock control and distribution

□Interdepartmental Communication□Research and use of databases□Patient follow-up

□Screening drug interaction□Patient medication profiling□Drug Information

□Dosage calculation□Preparing financial report □Data analysis

□Electronic health record □Medication errors reporting reports

□Intervention reporting system

Part 8: Continuing education

The value that your employer places on your participation in continuing education	No interest High Interest 1 2 3 4 5
Your interest in/value of continuing education	No interest High Interest 1 2 3 4 5
Continuing education affects the way you practice	Strongly disagree Strongly Agree 1 2 3 4 5
Continuing education helps increase your knowledge	Strongly disagree Strongly Agree 1 2 3 4 5
Please indicate any certifications for specialty practice or disease management that you have obtained	Answer:
Are you practicing in the discipline of your certification?	Yes No
Do you belong to any professional organizations?	Yes No
What type of continuing education have you used in the past?	Live in-person DVD/Video/audio Computer/Internet based Printed materials Interactive workshop Journals Webinar Textbooks/reference books Medical search engines Others :please specify:
What type of continuing education would you prefer to use in the future?	Live in-person DVD/Video/audio Computer/Internet based Printed CE materials Interactive workshop Journals Textbooks/reference books Medical search engines Others : please specify:

8.1.Please rate why you used the types of CE indicated above:

Low or no cost	Strongly disagree Strongly agree 1 2 3 4 5
Interested in /motivated to learn about topic regardless of the venue	Strongly disagree Strongly agree 1 2 3 4 5
Networking and socializing opportunities	Strongly disagree Strongly agree 1 2 3 4 5
Offered during a conference or event already attending	Strongly disagree Strongly agree 1 2 3 4 5
Effective advertising	Strongly disagree Strongly agree 1 2 3 4 5
Easily accessed print or online material	Strongly disagree Strongly agree 1 2 3 4 5

8.2.Rate your level of satisfaction with the types of CE you have participated in

Live in-person	Highly dissatisfied Highly satisfied 1 2 3 4 5
Computer/Internet based	Highly dissatisfied Highly satisfied 1 2 3 4 5
Interactive workshop	Highly dissatisfied Highly satisfied 1 2 3 4 5
DVD/Video/audio	Highly dissatisfied Highly satisfied 1 2 3 4 5
Printed materials	Highly dissatisfied Highly satisfied 1 2 3 4 5
Journals publications	Highly dissatisfied Highly satisfied 1 2 3 4 5
Medical search engines	Highly dissatisfied Highly satisfied 1 2 3 4 5
Authorship textbooks/reference books	Highly dissatisfied Highly satisfied 1 2 3 4 5

8.3.What are the reasons that prevent (or has prevented) you from attending live CE?

□Cost   □Timing of talk □Family commitment   □Work responsibilities
□Interest in the topic   □Easier to receive print/electronic material
□Distance Travel   □Others:…………………………………………………

8.4.Rate your level of interest in continuing education that covers

Innovations in disease management	No interest High interest 1 2 3 4 5
Humanities or psychology topic	No interest High interest 1 2 3 4 5
Innovations in Pharmacy practice	No interest High interest 1 2 3 4 5
Innovations in drug press	No interest High interest 1 2 3 4 5
Results in skill development	No interest High interest 1 2 3 4 5
Pharmacy management concepts	No interest High interest 1 2 3 4 5

Do you have any suggestion for further CE subjects: (Please specify):