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A Comparison of Indonesian Hospital Pharmacy Practice and Global Standards Using the Basel Statements Self-Assessment Tool

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INTRODUCTION

The Basel Statements define best practice in hospital pharmacy. They were published by the International Pharmaceutical Federation (FIP) covering all areas of medication management and use in hospitals, from procurement to monitoring of patient response. There are 65 statements grouped into 7 themes which provide suitable benchmarks for hospital pharmacy practices globally.

The FIP Hospital Pharmacy Section provides an online tool called Basel Statement Self-Assessment to facilitate pharmacists around the world to compare and evaluate their practice against the Basel Statements. The tool also helps hospital pharmacists to create prioritized improvement plans based on the feasibility and the impact of the improvement.

AIM

This study was intended to compare the current practice of Indonesian hospital pharmacy with the Basel Statements, identify key factors of the gaps, and develop recommendations to close the gaps.

METHOD

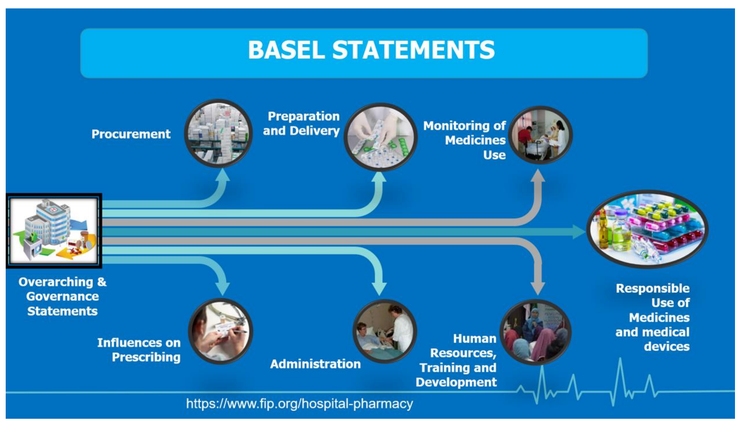
Pharmacists working in hospitals in Indonesia were invited to complete the online Basel Statement Self-Assessment (https://fiphsa.com) in August 2023. An Indonesian translation was provided to facilitate comprehension and complete the survey. The survey consists of 3 sections: demographic information (15 questions), pharmacist involvement in the multidisciplinary care of patients (12 questions), and activities for which pharmacists are responsible (6 questions). The questionnaires cover all 65 Basel Statements. One hospital was only represented by one respondent who filled out the survey officially on behalf of the hospital. Response data from Indonesian hospital pharmacists were taken from the system. An in-depth analysis was performed to identify key factors of the gaps and then a recommendation of methods to close the gaps was presented.

CONCLUSIONS

1. The wide gaps between the Indonesian Hospital Pharmacy Practice and the Basel Statements should be improved by involving stakeholders which include the Ministry of Health, the Indonesian Hospital Pharmacists Association, Association of Indonesian Pharmacy Higher Education, Board of Directors at every hospital, and the individual hospital pharmacists.

2. Competency and empowerment of hospital pharmacists should be promoted. The use of information technology should be optimized to improve the quality and safety of the services.

RESULTS



Twenty-three hospitals completed the survey (17 academic medical centers; and 6 community hospitals) with an overall score of 37.7% meaning that there is a wide gap between the current practice and the Basel standards.

Only 26.92% respondents are involved as an integral part of the multidisciplinary team responsible for therapeutic decision making in all patient care areas.

The following are the percentage of the implementation of Basel Statements according to the area of practice:

Procurement

ACTIVITIES	%
Procurement of strong quality assurance medicines (#20)	100
Ensuring a transparent process of procurement of medicines and health products, in line with best practices and national legislation (#20)	100
Procurement of standard concentrations of high-risk medicines, including electrolytes (#22)	61.54
A reliable information system for procurement that provides accurate, timely, and accessible information (#23)	61.54

Influence on Prescribing

ACTIVITIES	%
A Formulary system (local, regional, and/or national) (#24)	96.15
Serving on the hospital Pharmacy and Therapeutics Committee (#25)	100.00
Policies addressing off-label use (#25)	34.62
Educating prescribers on the access to and evidence for optimal and appropriate use of medicines (#26)	57.69
Transferring patient medicines information as patients move between and within sectors of care (#28)	88.46

Preparation and Delivery

ACTIVITIES	%
Storage, preparation, dispensing, and distribution of all medicines, including investigational medicines (#30)	96.15
Ensuring proper dispensing of all medicines (#30)	88.46
Determining which medicines are included in ward stock (#32)	80.77
Ensuring quality compounding of injectable admixtures and non-commercially available formulations (#33)	92.31
Pharmacist managed preparation of hazardous medicines, including cytotoxics (#34)	76.92
Automated prescription filling (#35)	38.46
Unit dose distribution (#35)	88.46
A bar coding system or other machine scannable codes at administration (#35)	15.38
Policies addressing the use of medicines brought into the hospital by patients (#36)	96.15
Policies addressing the use of herbal and dietary supplements (#36)	42.31
System for tracing medicines dispensed by the pharmacy (#37)	76.92
Storage of concentrated electrolyte products outside of patient wards (#38)	88.46

Administration

ACTIVITIES	%
Education/training on **the use of the medicine** for all health care professionals responsible for administering injectable medicines and/or chemotherapy (#44)	88.46
Education/training on **the hazards involved with the medicine** for all health care professionals responsible for administering injectable medicines and/or chemotherapy (#44)	92.31
Education/training **on the necessary precautions with the medicine** for all health care professionals responsible for administering injectable medicines and/or chemotherapy (#44)	84.62
Ensuring patient's medication allergies, drug interactions, contraindications and past adverse events are accurately recorded and evaluated prior to medicine administration (#41)	84.62
Packaging of medicines (#42)	100.00
Labeling of medicines (#42)	100.00
Policies and strategies to prevent wrong route errors (eg. Enteral feeding catheters, labeling of intravenous tubing near the insertion site) (#46)	38.46
Labeling Individual patient medicines with at least two patient identifiers (example: patient name and date of birth), name of medicine, route, and dose (#43)	100.00
Appropriate and current information resources to ensure safe preparation and administration (#40)	69.23
Independent checking of chemotherapy doses against the original prescription by a pharmacist and one additional health care professional at the point of care prior to administration (#45)	65.38
Utilization of the observation method at drug administration to detect errors and identify potential areas for improvement (#47)	46.15

Monitoring

ACTIVITIES	%
Reporting system for Defective medicines (#49)	92.31
Reporting system for Adverse drug reactions (#50)	88.46
Reporting system for Medication errors (#51)	92.31
Safe medication use (#52)	96.15
Appropriate medication use (#52)	100.00
Cost-effective medication use (#52)	88.46
Data collected and trended against internal benchmarks and/or best practices in other institutions (#52)	26.92
Review of hospital medication practices by an external quality assessment accreditation program (#53)	80.77
Trigger tools for adverse drug events and optimal medicines use (#55)	46.15

Human Resources, Training and Development

ACTIVITIES	%
A human resource information system that contains basic data for planning, training, appraising, and supporting the workforce	50

Key Factors of the gaps

A. not yet incorporated in MoH Regulation and/or Hospital Accreditation Standards

B. were already incorporated in MoH Regulation and/or Hospital Accreditation Standards, but lack of hospital management support

C. Lack of empowerment of human resources/competency

D. Lack of facilities, technology

Areas for Improvement

Activities	A	B	C	D
Clinical pharmacy (patient monitoring, patient education, documentation)		■	■	
Member of clinical team for therapeutic decision making		■	■	
Transcription process elimination		■		■
Involvement in design, development, implementation, maintenance of CDSS & Informatics		■	■	■
Active involvement in research to improve medication use and human resource needs in hospital pharmacy	■			

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