

Evaluation of Hospital Information System in the management of patients covered by health insurances in the reimbursement: Case of RSSB in selected hospitals of Kigali City

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Abstract

Objective

to evaluate hospital information systems in the management of patients covered by health insurances in the reimbursement: case of RSSB in selected hospitals of Kigali city.

Methods

Cross sectional mixed method collected data at the workplace of HIS users include nurses, receptionists, cashiers and IT personnels.

Data analysis software: Stata version 15.

Results

Most the respondents were using HIS 97% (OpenClinic) in management of insured patients. They are mostly perceived HIS to assist in data completes, data transfer, Prices, duplicates and medical errors reduction. But, HIS is not assistive in eligibility checking and Alertness on expired transfer.

Conclusion

There are large number of activities users of HIS perceived to be helping in the management of insured patients in the reimbursement and some areas to improve.

Study subjects

Receptionists, cashiers, nurses, recovery officers, verification officer/ ward clerk of the health facility who uses HIS in the management of patients with health insurance provided by RSSB (CBHI and former RAMA)

Methodology

Study setting: CHUK, Polyclinique La Medicale Kigali

Study design: Cross-sectional mixed method approach

Study population: Receptionists, cashiers, nurses, recovery officers, verification officer/ ward clerk

Sample size: 147 participants

Sampling strategy: simple random sampling for quantitative approach(questionnaires) and purposive sampling for qualitative approach(in depth interview)

Conceptual framework Fig. 1

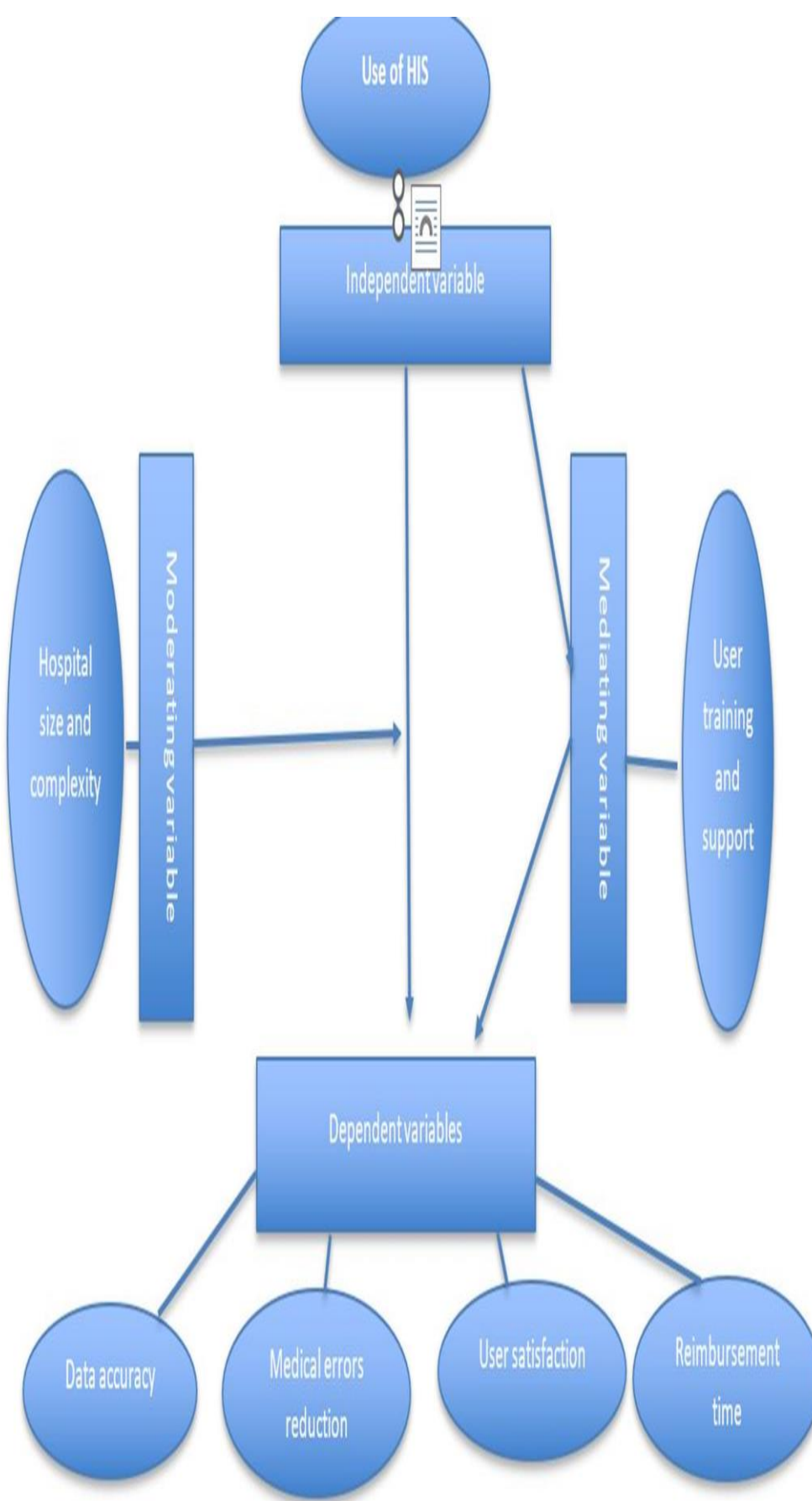


Fig 1. Conceptual framework of the study

Results

Most of the respondents showed their level of agreement on the how they perceive HIS support them in the management of the patients with health insurances in the reimbursement Fig.2.

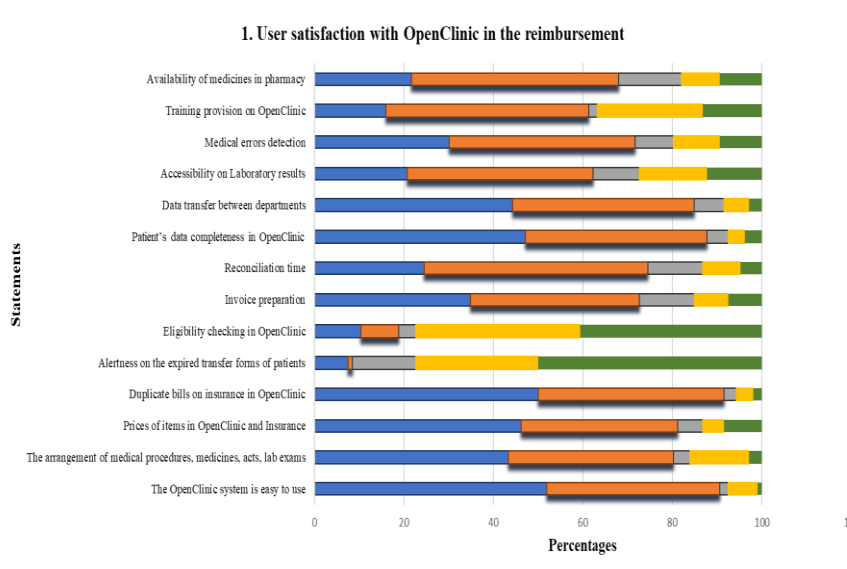


Fig.2. User satisfaction with OpenClinic in the reimbursement..

Respondents perceived that they are different source of medical errors that can impact reimbursement of the health facilities.

Fig.3

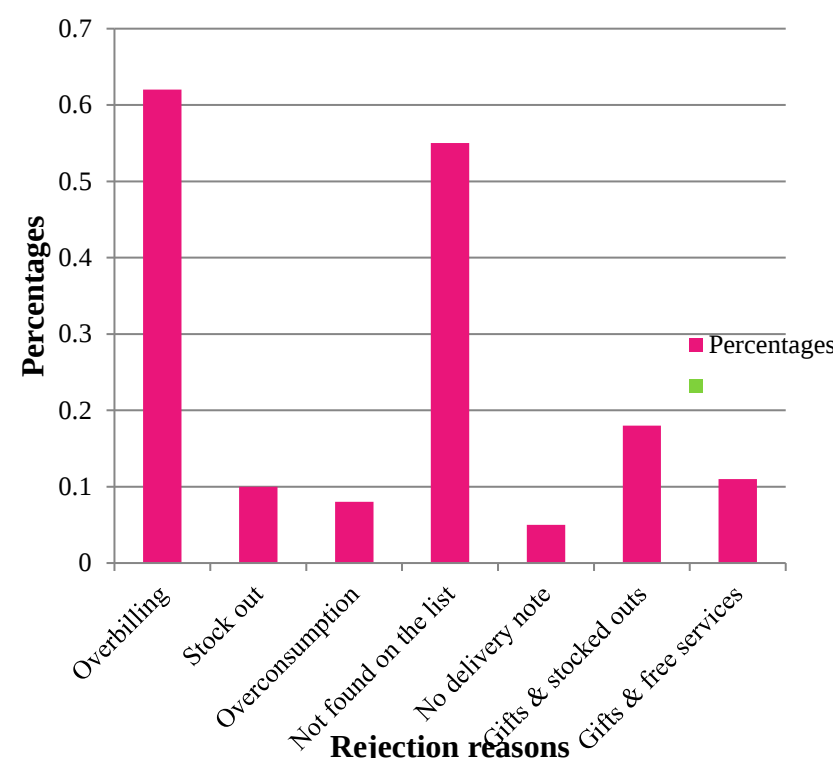


Fig 3.. Participants perceptions on the source of medical errors .

The clinical pathways of patients with health insurances starts from the reception for registration and insurance management and ends at the physician who discharge a patient. Fig. 4

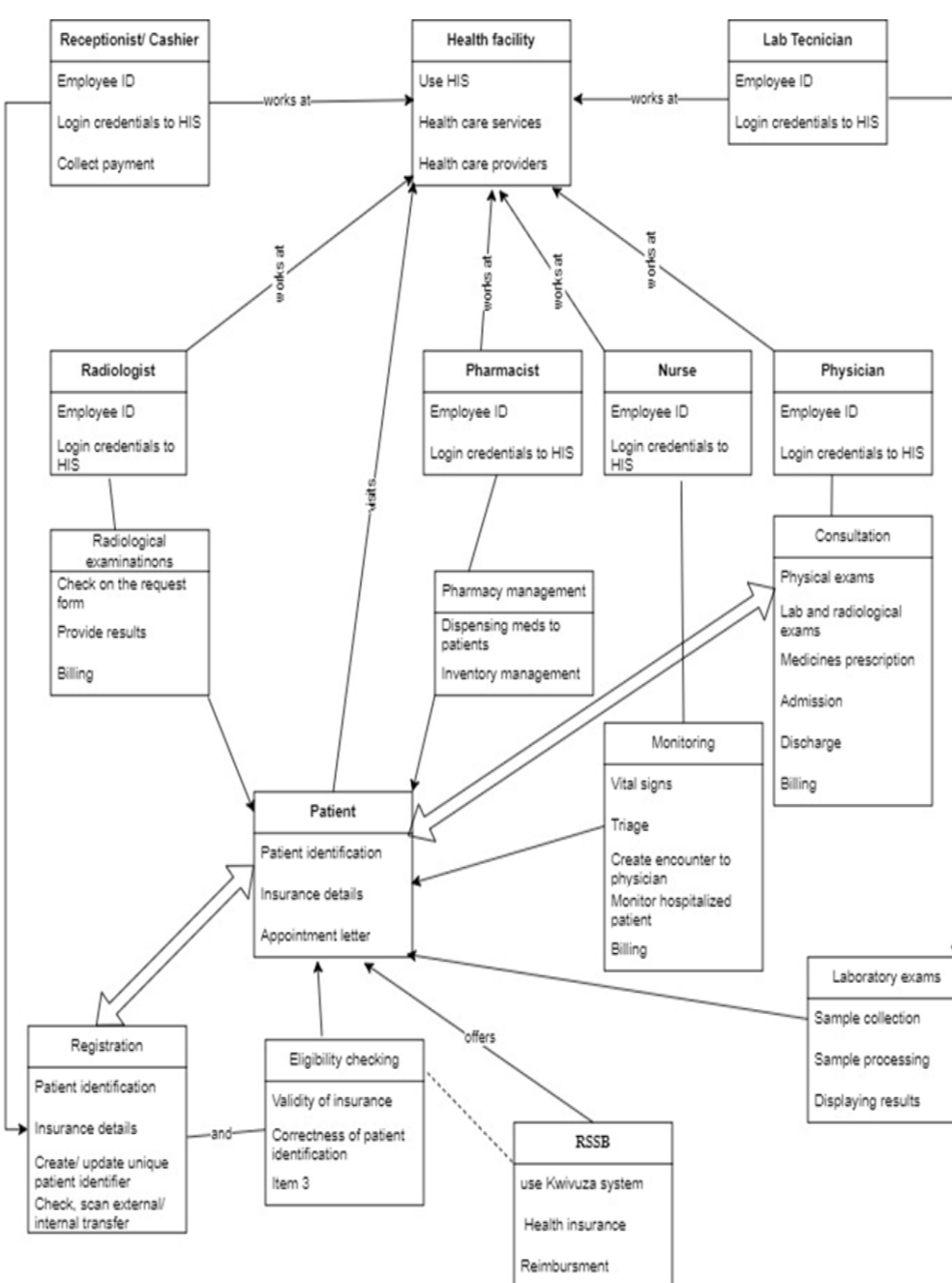


Fig.4: Clinical pathways of patients with health insurances.

Conclusion

Participants perceived that HIS assist them in different health care services given to the patients with health insurances and revealed other two services not assisted by HIS.. They highlighted that trainings are needed to all health care providers for better management of patient with health insurances to have effect on the reimbursement.

HIS are assistive in the following:

- The arrangement of items in OpenClinic
- Prices of items on insurance
- Duplication
- Data completeness and data transfer
- Medical errors detection
- Availability of medicines in pharmacy

But, participants perceived that HIS is not assistive in the following:

- Eligibility checking
- Alertness on the expired transfer of the patients.

Recommendations

Highlighted are the areas for improvement for HIS to have impact in the reimbursement of the health facility who cared for patients with health insurances.

- Reinforce training on the use of HIS among the end users.
- analyze workflow of insurance management in HIS to identify inefficiencies.
- Use of electronic forms available in the systems including referral forms, request forms that meet MoH and WHO standards.
- Design and add smart error detection tools and checks to the HIS so that you can identify and fix mistakes before they impact reimbursement
- Interoperability of HIS with RSSB system and RMS system
- For the future research, it is recommended to evaluate the system use of other institutions in relations with health facilities. Those include RSSB on Kivuzi system and RMS for e-LMIS.
- I would suggest to use middleware solutions whereas, a system that can support communication with the other systems used in health facilities, and RSSB

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