

Project Title

Shifting SKH from use of Paper Bill to Electronic Bill (eBill)

Project Lead and Members

Project members: James Chew Tee Toon, Ong Yin Woon

Supported by: Ng Mui Lim, Stacey Soh, Angela Chan, Adibah Aljaru

Organisation(s) Involved

Sengkang General Hospital

Healthcare Family Group Involved in this Project

Healthcare Administration

Applicable Specialty or Discipline

Healthcare Administrators

Project Period

Start date: 1 February 2023

Completed date: 19 June 2023

Aims

To shift SKH from using paper bills to electronic bills (eBills) to promote eco-friendliness and sustainability.

Background

In line with the national direction towards digitalization and sustainability, SKH aimed to reduce paper usage and improve efficiency by implementing eBill for Inpatient and Day Surgery from 1 February 2023. The project also sought to enhance patient convenience and reduce the risk of lost bills.

Methods

The team leveraged existing systems and developed new methods to segregate invoices based on patient status (residents and non-residents) and initiated a pilot

project. Iterative improvements were made based on feedback, and new workflows were established using tools such as Health Buddy and Postman.

Results

Bill printing volume reduced by 93.45%, saving an estimated \$22,627 annually in consumables and maintenance. Productivity increased with 390 man-hours saved per year, and Mobile Pay transactions via Health Buddy increased by 24%. The initiative was expanded to other departments by 19 June 2023.

Lessons Learnt

Regular feedback and iterative solutioning are crucial for optimizing digital transformation initiatives. Ensuring accessibility and convenience for all patient groups, including non-residents, is important for inclusive digitalization.

Conclusion

The shift to eBill was successful in reducing paper waste, enhancing efficiency, and aligning with sustainability goals. Future steps include further expansion and continued improvements in the process.

Project Category

Care & Process Redesign

Quality Improvements, Workflow Redesign, Productivity, Cost Saving, Sustainability, Paper Waste, Operational Management, Financial Management

Technology

Digital Health, Mobile Health, Digital App, Digitalisation, Digitisation

Keywords

eBill, Electronic Billing, Digital Transformation, Health Buddy, Patient Billing, Sustainability, Go-Green Initiative, Paper Waste Reduction, Mobile Pay, Healthcare Innovation, Operational Efficiency, Cost Savings, Carbon Footprint Reduction, Digital Payment Adoption

Name and Email of Project Contact Person(s)

Name: James Chew Tee Toon

Email: singaporehealthcaremanagement@singhealth.com.sg

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Singapore Healthcare
Management 2023

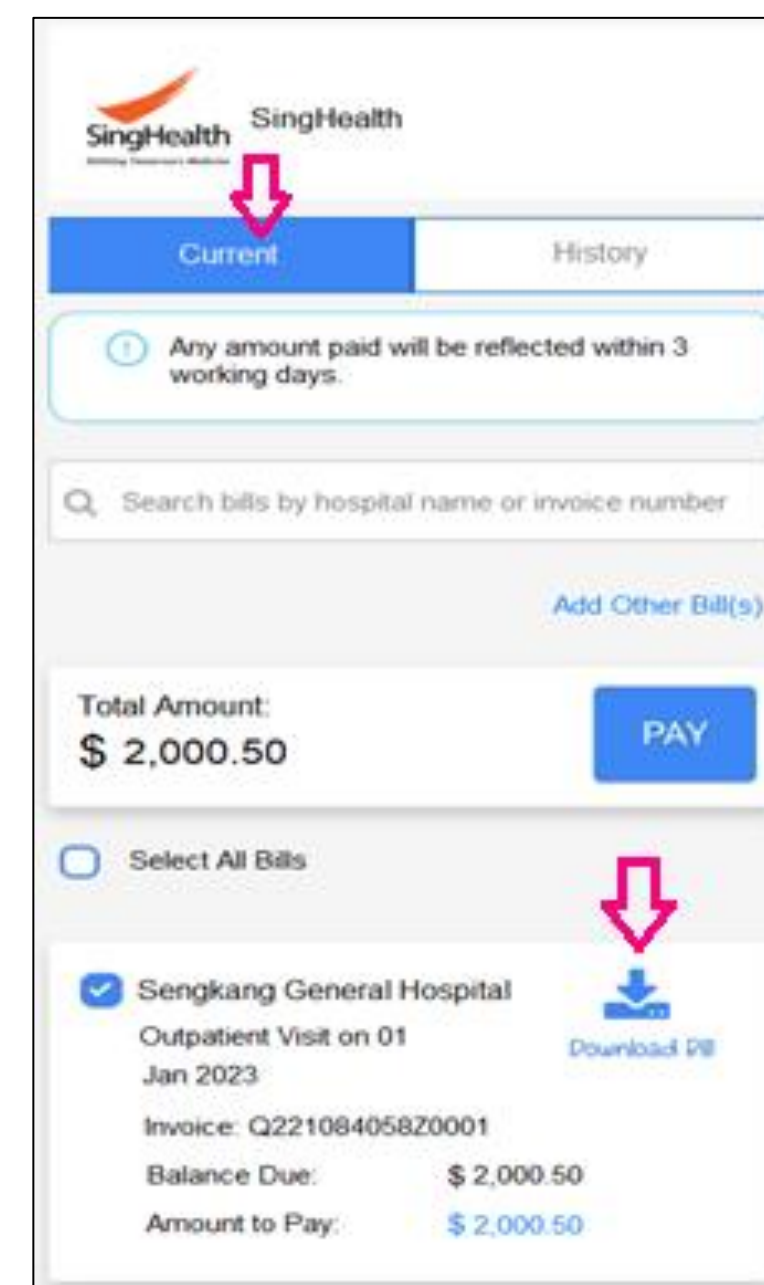
INTRODUCTION

What is eBill?

eBill here refers to how patient view their digital invoice conveniently and no longer receive hardcopy bills after their discharge.

How are bills shown in Health Buddy?

Patient with SingPass access can conveniently view and retrieve their bills (outstanding and fully paid) in Health Buddy.



James Chew Tee Toon, SKH
Ong Yin Woon, SKH



Sengkang
General Hospital
SingHealth

Strongly Supported by/with their team:

Ng Mui Lim (SKH BO HOD) , Stacey Soh (Inflight FC and Customer Liaison) , Angela Chan (Patient Account Receivables) , Adibah Aljaru (Claims & Billing)

Opportunity

Effective from 1 Jan 2023, Health Buddy increases the availability period of fully paid bills from 185 days to 1 year. As the healthcare industry is rapidly moving towards digitalization and together with the usage of Health Buddy application, Sengkang General Hospital Business Office (SKH BO) embarked eBill for Inpatient and Day Surgery on 1 Feb 2023 to achieve “Go-Green” for sustainability.

METHODOLOGY

SKH BO leveraged on an existing system OMS-500 (Document Output Management System) and developed new ways to segregate invoices in accordance with patient residential status (More details, refer to Step 4 below).

The assumption here is that foreign, non-residents and long-term visit pass holders might not be accessible to Health Buddy via Sing Pass. Thus, to be empathetic towards patients’ needs, 2 groups of bills were formed:

- “Print” for Foreigners and Non-Residents
- “No print” for Singaporeans and Permanent Residents

1. Empathize

- a. Understand current process via stakeholders
- b. Identify opportunities to streamline billing workflow towards eBill

2. Define and Ideate

- a. Finalize objective and approach planning

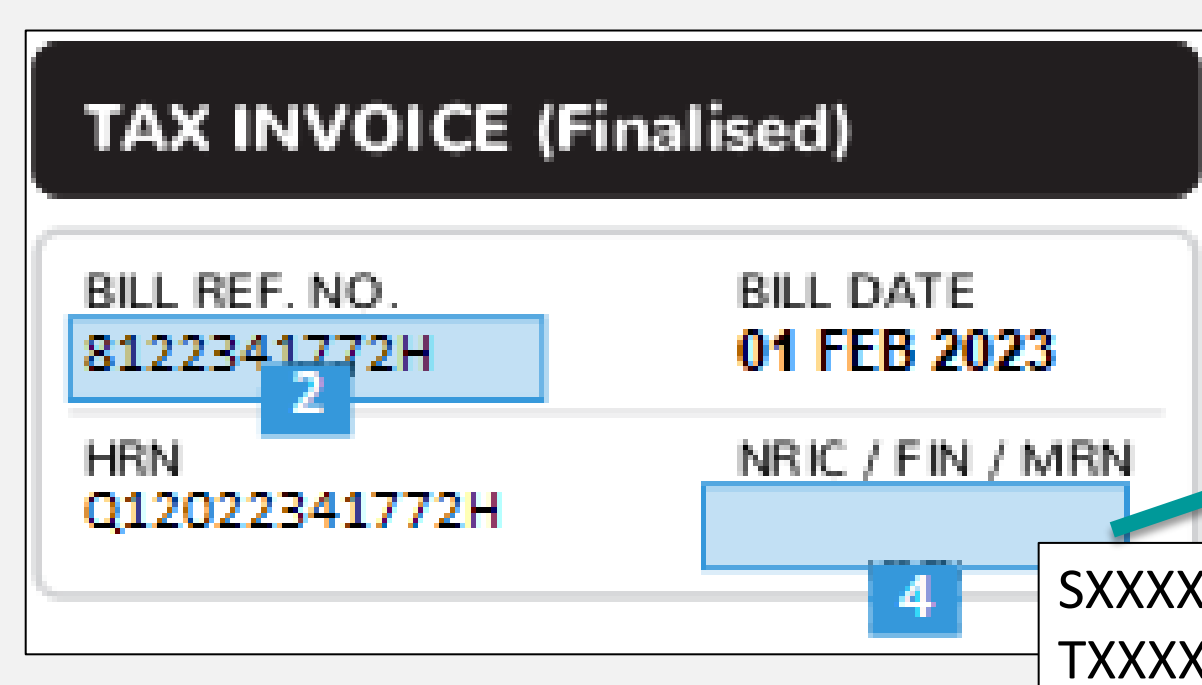
3. Prototype

- a. Create and revise action plan – Segregate bills into 2 groups; “print” and “no print” groups
- b. Design solution

Innovate via
Design Thinking

4. Build

- a. Validation check – Ensure accurate filter of bills for the 2 groups



In OMS-500,
create a new
zone at NRIC
position on bill

OMS-500 scan the
zone to segregate
bills into 2 groups
and sort the bills
into respective
output folders

5. Test

- a. Executed 3 rounds of test on 5-10 sample volume and performed pilot test on 100 sample volume. Verify results.

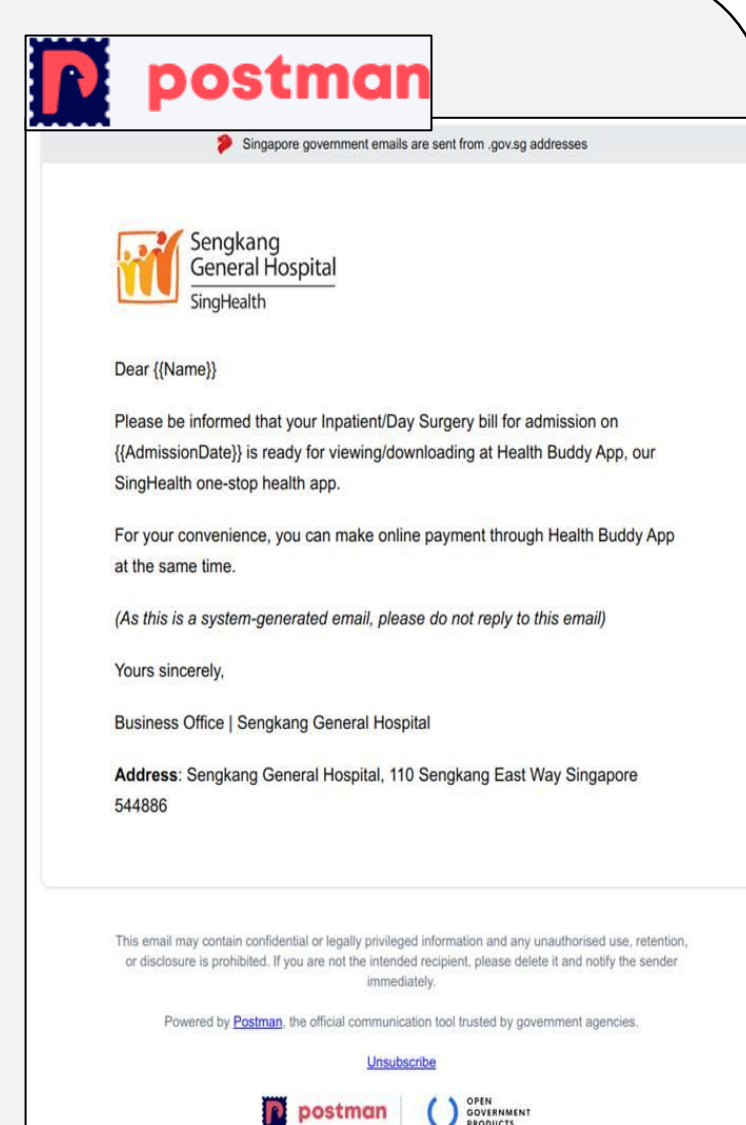
6. Sustain

- a. Iterative solutioning to make process better
 - Patient who does not require to pay will not receive a bill reminder (sent to patient only if there is an outstanding amount).
 - Making use of discharge report in SAP (having patient’s email address) and Postman (An Open Government Product Tool developed by GovTech), BO will send a customized email once patient’s eBill is ready to be retrieved from Health Buddy
- b. The team improves from feedback and innovate beyond current
 - Due to next-of-kin passed away, family was unable to view bill(s) via Health Buddy

In OMS-500, create a
new zone at Name
position on bill

Update logic for OMS-500
to scan and capture the
word “THE FAMILY OF”

Successfully
segregate and
sort the
deceased cases

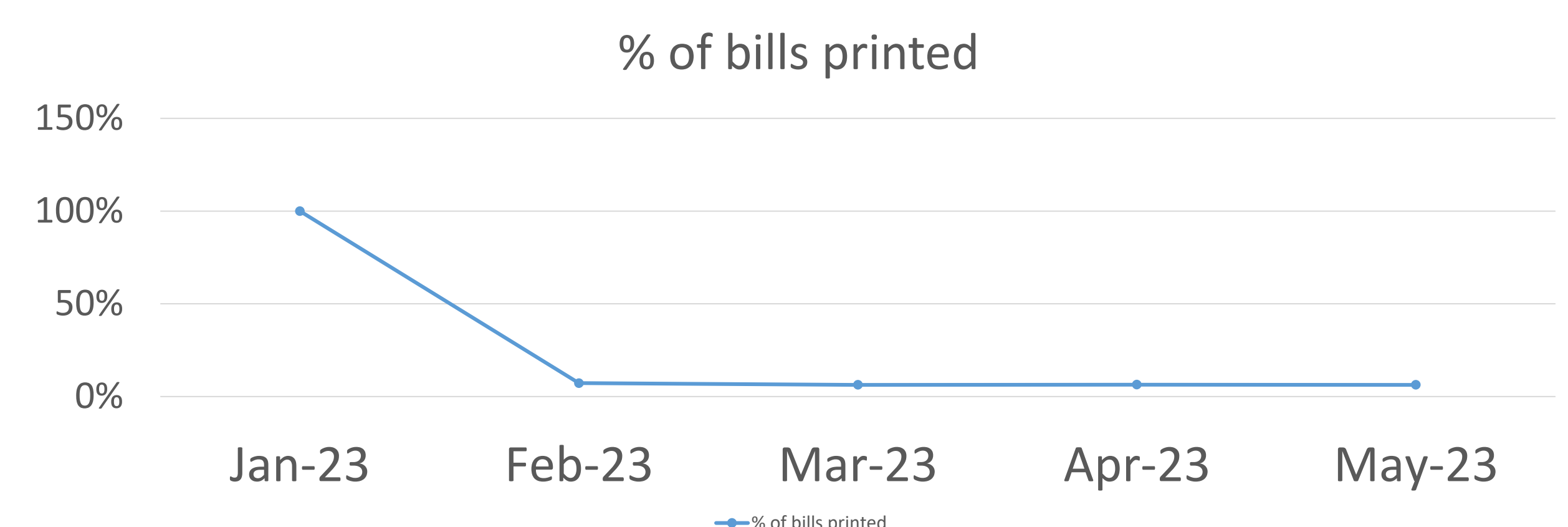


RESULT

✓ **Volume of bill printing had greatly reduced from 100% (Jan reference) to 6.55% (average of 4 months) from Feb 2023 to May 2023**

✓ **With the decreased in bill printing, cost of consumables and maintenance is estimated to reduce by \$22,627 annually**

- Consumables consists of Postage, Envelope, Toner and Paper
- Lower priced maintenance plan was opted due to lower reliance of mail sealer machine



- ✓ **Increase** productivity and operational efficiency
- ✓ **Promote Joy@Work** with workflow streamlined
- ✓ **390 man-hours saved per year** in sorting and enveloping
- ✓ Having Mobile Pay feature in Health Buddy, patient able to securely pay their bill(s) which resulted **Mobile Pay** transactions for SKH **increases about 24%** from Feb 2023 to Mar 2023.



CONCLUSION

- By adopting the initiative of shifting to eBill, it helps to reduce paper waste and carbon footprints by promoting eco-friendliness and sustainability.
- Patients or next-of-kin conveniently receive their electronic final bills via Health Buddy in a promptly and secured manner which aids in mitigating PDPA risks for lost mail with hardcopy bills.
- With eBills, SKH staff experienced Joy@Work with the operational workflows streamlined and open to opportunities on automation.
- Lastly, with the successful launch for SKH Inpatient and Day Surgery, SKH Emergency Department and Specialist Outpatient Clinics had jointly onboarded eBill on 19 June 2023.