Improve Administrative Management of Nursing Manpower
Leveraging on Available Data Resources and Interactive Visualisation Tool

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INTRODUCTION

KKH's Division of Nursing manages approximately 1,950 staff strength. When new staff is recruited, and staff moves within and/or out of the Division, several administrative steps are required to update the nursing database so that information can be used to plan and manage manpower allocation and distribution.

This project aims to:
- Reduce duplication and time spent in updating administrative processes by leveraging on available Human Resource data source.
- Create interactive visual charts for sharing and/or viewing of information without the need to access a separate database.
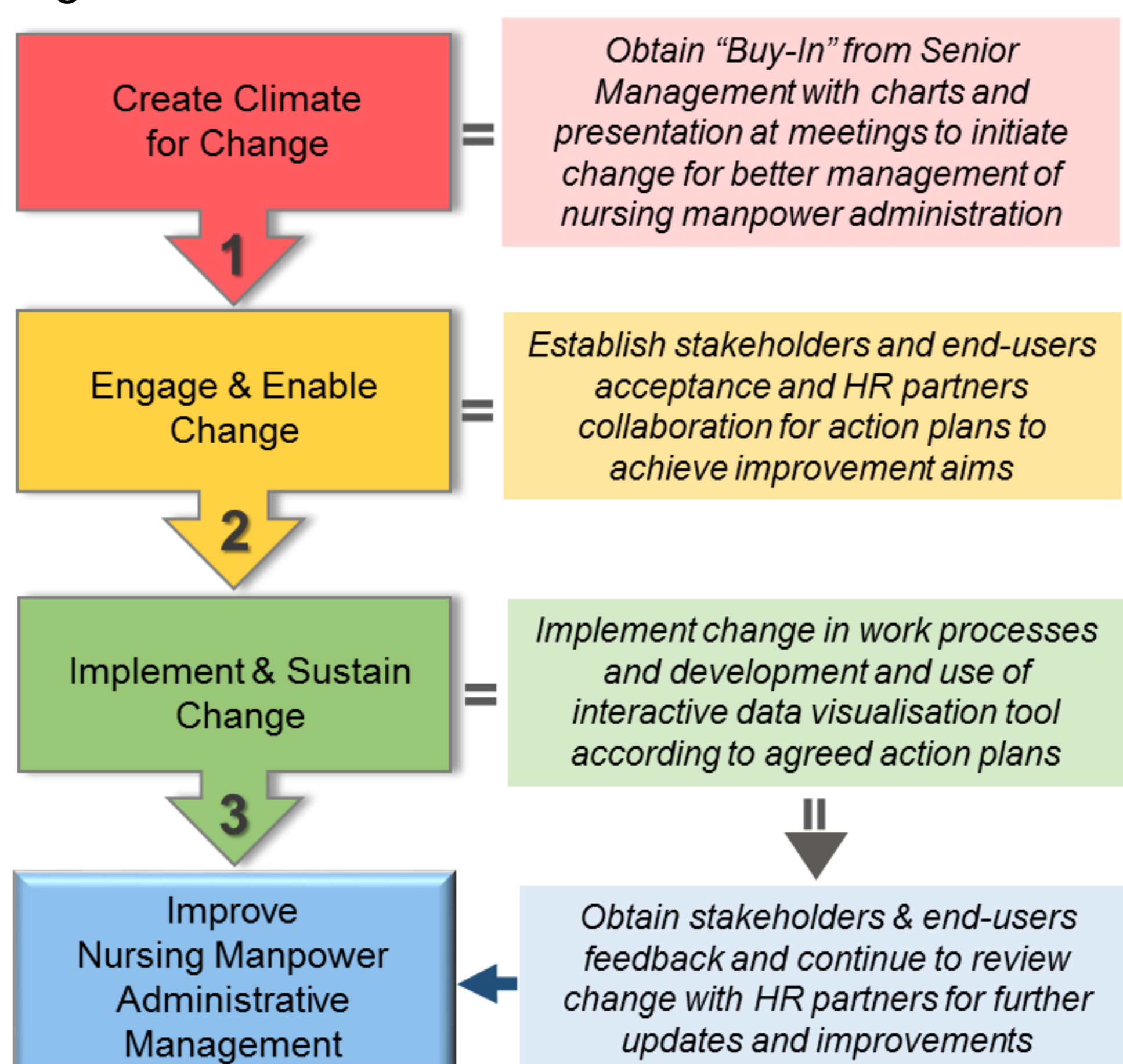
AREAS FOR IMPROVEMENT

There is a need to identify and eliminate existing duplication in work processes and reduce manual tasks. A more efficient system of information and data provision should be made available to support manpower needs. Areas identified for change and improvement are:

- Duplication of work process in information gathering using paper forms and record entry, checking and uploads in existing database.
- Interruptions in other department workflow activities involving additional coordination and arrangements.
- Manpower information and data presented to Senior Nursing Personnel only at meetings on powerpoint slides. Any data or charts required will be provided only upon request.
- Man-hours incurred in manpower details, data and record tracking, monitoring and monthly status reporting.

METHODOLOGY

The methodology involve concepts adapted from Kotter's change model. It broadly embraces 3 main phases which are, to create a climate for change, engage and enable change, and implement and sustain change.

Create Climate for Change 1 = Obtain "Buy-In" from Senior Management with charts and presentation at meetings to initiate change for better management of nursing manpower administration

Engage & Enable Change 2 = Establish stakeholders and end-users acceptance and HR partners collaboration for action plans to achieve improvement aims

Implement & Sustain Change 3 = Implement change in work processes and development and use of interactive data visualisation tool according to agreed action plans

Improve Nursing Manpower Administrative Management ← Obtain stakeholders & end-users feedback and continue to review change with HR partners for further updates and improvements

Stepping Through the Door of Change

Revision of work processes coupled with improved technology and software application and appropriate resources are the action steps to effect change.

CHANGES to Process + Technology + Management = Improvement
1 2 3 NEW

RESULTS

Streamline Work Processes

Status	Division	Step 1	Step 2	Step 3	Step 4	Step 5	Time Spent	Process Steps
BEFORE	Nursing	Obtain new hires information from completed paper forms	Coordinate and schedule photo taking with NDU	Take photos of new hires for database records	Input new hires details and upload photos in database	Details/ data records check and prepare monthly status report & charts	70 hours per year (100 new hires)	5 steps
	Human Resource	New hires information entered in HRIS system	New hires photos taken by Human Resource	New hires photos uploaded to e-Directory	New hires details entered in HRIS system	Human Resource manpower summary reports & tableau charts provided		

Status	Division			0.5 Step			New Time	Process Steps
AFTER	Nursing	Process steps eliminated !			Minimal new hires details entered in database	Process step eliminated !	4 hours per year (100 new hires)	0.5 steps
	Human Resource	New hires information entered in HRIS system	New hires photos taken by Human Resource	New hires photos uploaded to e-Directory	New hires details entered in HRIS system	Human Resource manpower summary reports & tableau charts provided		

✓	Total Time Saved Per Year	66 hours / year
	No. of Process Steps Eliminated	4.5 steps

Improve Information & Data Availability

Division of Nursing collaborates with Human Resource to develop an Interactive Visualization Data Platform using Tableau desktop to present the manpower information so that data can be searched and presented down to unit level.

Tableau Desktop

Features of Interactive Visualisation Data Tool
- ❖ Easy to understand visual formats
- ❖ Clearer information communication
- ❖ Grabs immediate attention
- ❖ Interactive functionality for comparisons
- ❖ Pinpoint patterns, trends and gaps
- ❖ In-depth drill-down details

Visual Interactive data charts easily accessible on desktop

Enhance Manpower Reporting & Planning

The interactive visual data charts are made available to all senior nursing personnel for better manpower planning. Data includes staff demographics such as nationality, age profile, service years and employee category groups. Comparisons of staffing and workload data with drill-downs to individual units and staff designation levels are also provided.

Uses of Interactive Charts for Manpower Planning
- ❖ Provide overview of manpower status
- ❖ Manage recruitment needs
- ❖ Monitor attrition trends
- ❖ Facilitate staffing allocation and distribution
- ❖ Support job rotation planning and staff placements

CONCLUSION

This change implementation has improved work processes by eliminating duplication and redundancy. Man hours saved from entering the duplicated data has resulted in time saved where our Senior Executive has expanded her job scope to provide administrative coverage for APN's office and additional projects.

Future Works – PHASE II

We will continue to collaborate with our Human Resource partners and users to enhance the system and processes. The future phase of improvement aims to tap on advance technological capabilities to provide predictive and real time information for analysis and decision-making in managing nursing manpower.

Improve System / Process /Technology 2018
Predictive Data 2019
Real-Time Data 2020