

Using Kanban to Improve Indonesian Health Coverage Patient Task Id at Astrini Hospital Wonogiri

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ABSTRACT

Introduction: Hospital is a complex industry organization comprises providers, therapies, physical location, technology and innovation. Digital transformation from Indonesian Health Coverage making us to give their patient excellence health service. For maintain our team to give patient best quality service excellence, we aplicated one of tool lean management such as kanban

Purpose: to see either kanban is effective way to evaluate and improve our quality service delivery

Method: We made kanban board from discussion within our team include, director, head divison, manager and staff. After we settle it, we choose which item in backlog going to in progress for first week until foruth week. we done it one by one and if there blocked that we can't achive about the item in backlog collum we will move it to blocked collumn.

Result: As lean management philosophy, we must correct our process and eliminate waste. Under supervising. from 30 October - 6 november 2023 our score just 38 -39%. after 4 weeks use kanban, our score imprvove to above 90%. We make change in our workflow and it's an effective way.

Conclusion: Kanban with kanban board is one of many tool in lean management to improve our product. They can be done in healthcare industry. Lean is recognised as a systematic approach, it will improve about efficiency and effectivity by eliminating waste and pursuing perfection with minimal resources

KEYWORDS: Lean, Kanban, Kanban Board, Quality.

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INTRODUCTION

Hospital is a complex industry organization comprises providers, therapies, physical location, technology and innovation. According to Indonesian regulation, hospital is a institution which provide individual comprehensif health service like outpatient, inpatient, and emergency patient. Comprehensif health service such as promotive, preventive, curative and rehabilitatif.

In recent years, health sector is facing challenges such as budget reductions or cost increase due to ageing process. Therefore it is necessary that healthcare management is oriented to make better use of economic, material, and human resources that allow offering a high quality service to patient.

In my country Indonesia, we have National Health Coverage for all Indonesian people called BPJS (*Badan Penyelenggaraan Jaminan Sosial*). This program adopted from social coverage and its goal is all Indonesian people can fulfill their basic needed especially for their health. This

coverage given to each person who already paid the fee or paid by government.

To improve health quality service, BPJS did some transformation. Nowadays, they are focus on digital transformation. In digital transformation, they knew all about number patient, how long they wait to see doctor, how long pharmacy waiting time each patient and anymore thorough task ID. Task ID itself is some code in hospital which is must send to BPJS for each patient and each service we give to patient. Through it, we know our team provide good quality service or not for each patient

For maintain our team to give patient best quality service excellence, we aplicated one of tool lean management such as kanban. The principle of this system contribute with concept, technology solution and process that lead efficient way, best quality and elimination the waste. we use this method because we wonder how effective if we implemented it at our hospital to achieve an efficient and effective management.

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THEORETICAL REVIEW

Hospital is a institution which provide individual comprehensif health service like outpatient, inpatient, and emergency patient. Comprehensif health service such as promotive, preventive, curative and rehabilitatif. The goal of a healthcare system is to provide quality and affordable healthcare to society. Helathier nation would enjoy the benefit of financial risk and the population will be more satisfied.

Lean is recognised as a systematic approach, it will improve about efficiency and effectivity by eliminating waste and pursuing perfection with minimal resources. The interest in lean method application in healthcare has gained significantly as important thing since 2009 when the first paper that applies lean in healthcare was published.

When implementing lean, they are many tools and technique we can use. in Lean metohodology is pinned on five tennets :

1. Spesificy value (what most value for our customer)
2. Identify the value stream
3. Make the value stream flow by restructuring process steps and eliminating non-value added steps
4. Pull, the forerunning process down the value stream signal when upstream activities can begin in order to stabilize demand on the system
5. Pusue perfection

Among of lean tools, this article will focus on kanban system. Kanban is pull approach, which allows employees to produce at a required rate as well as to control product. Manufacture like toyota has six rules of the effective application of kanban;

1. Never pass on defective products
2. Take only what is needed
3. Produce the exact quantity required
4. Level production
5. Fine-tune production
6. Stabilize and rationalise the process

According to Landry and Philippe, Kanban was first developed in 1980s as an alternative to other centralized apporaches.

Kanban boards, design for the context in which they are used, vary considerably and may show work item types. This board represents the system definition of workflow and requires the following minimum;

1. A definition of the individual units of value taht are moving through the workflow
2. A definition for when work items are started and finished within the workflow
3. A service level expectation which is a forecast of how long it should take a work item to flow from started to finished.
4. A definition of how work in progress will be controlled from strated to finished.

METHOD

I use kanban system along with kanban board and observe if it effective to improve delivery good quality product in Astrini Hospital. Parameter will be patient task ID which is sent to BPJS regulary on our daily healthcare service.

First, We made kanban board from discussion within our team include, director, head divison, manager and staff. After we settle it, we choose which item in backlog going to in progress for first week until fourth week. we done it one by one and if there blocked that we can't achive about the item in backlog collum we will move it to blocked colloumn.

This kanban board will be evaluate by director, manager, head division and reviewer. We evaluate it through standing meeting only for 15 minutes everday so we just focus about the most problem will effect delivering task id to BPJS. Only reviewer can asses if the item completed or not.

Observation will be 4 weeks and it will review by head general and IT division for each progress. Observation period start from 6 November - 4 December 2023

RESULT

Kanban Board							
Reviewer	Mr. Pajar						
Standing meeting	08.15 - 08.30						
Goal	Patient task ID score is above 85						
No	Backlog	In Progress				Blocked	Finished
		Week 1	Week 2	Week 3	Week 4		
1	Review Task ID existing problem	Review Task ID existing problem				None	week 1

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2	Discuss with Third party technology sevice and internal IT staff	Discuss with Third party technology sevice and internal IT staff				None	week 1
3	Coordination to unit about hard stuff they face at field		Coordination to unit about hard stuff they face at field			None	week 2
4	Supervising registration unit		Supervising registration unit			None	week 2
5	Supervising outpatient unit			Supervising outpatient unit	Supervising outpatient unit	None	week 4
6	supervising Pharmacy			supervising Pharmacy		None	week 3
7	Fixing bug system	Fixing bug system	Fixing bug system			None	week 2
8	Make new standarized work accroding situation			Make new standarized work accroding situation		None	week 3
9	develop commitment staff through HR	develop commitment staff through HR				None	week 1

Picture 1. Kanban Board

Data Bulan Januari 2024 per tanggal 08 Januari 2024 pada pukul 08:16:40 WIB																					
Dati II	Nama FKRTL	Pemanfaatan Antrean Aplikasi Mobile JKN (%) Standart = 10										Pemanfaatan Antrean (%) Standart = 80									
		30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	25-Dec	8-Jan	30-Oct	6-Nov	13-Nov	20-Nov	27-Nov	4-Dec	11-Dec	18-Dec	25-Dec	8-Jan
Surakarta	RS PKU Muhammadiyah Sampangan	6,1	6,7	6,4	5,9	5,7	5,1	5,6	5,8	5,8	5,5	99	99	99	99	98	100	100	99	98	99
Surakarta	RS Triharsi	2,7	3,6	4,3	4,6	4,9	5,5	4,7	5,5	5,4	5,1	93	75	90	92	97	57	97	96	94	95
Surakarta	Rumkit Tk. III Slamet Riyadi	6,0	10,4	9,1	9,1	8,2	11,4	8,4	8,5	8,7	9,8	71	92	90	89	88	96	97	95	96	94
Surakarta	RS Panti Waluyo	24,3	24,3	26,9	26,2	27,0	24,7	27,2	25,7	26,6	25,8	96	96	96	96	96	96	96	96	95	93
Surakarta	RS PKU Muhammadiyah Surakarta	3,4	2,7	3,2	3,3	3,1	3,4	2,7	2,9	2,9	1,9	92	92	92	92	92	92	92	92	92	92
Surakarta	RSUD dr. Moewardi	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	88	90	91	91	91	90	90	90	90	90
Surakarta	RS Mata Solo	0,7	0,7	1,0	1,0	0,8	1,9	1,5	1,2	1,2	2,5	82	90	85	86	85	78	89	88	87	89
Surakarta	RSUP Surakarta	0,2	0,2	0,1	0,1	0,1	0,0	0,0	0,0	0,0	0,0	81	85	85	78	83	81	80	81	79	89
Surakarta	RS Kasih Ibu	21,0	21,6	22,6	21,4	21,3	26,2	24,2	23,3	22,6	21,1	85	81	85	86	85	82	87	87	87	87
Surakarta	RS dr. Oen Kandang Sapi	3,1	3,8	3,4	3,5	3,6	1,7	2,7	2,7	2,7	3,1	93	98	95	96	94	95	95	90	90	82
Surakarta	RS Hermina Solo	0,7	0,5	0,7	0,6	0,6	0,6	1,0	0,9	0,8	0,9	78	77	77	77	77	76	77	77	76	72
Surakarta	RSUD Bung Karno Surakarta	0,0	0,0	0,0	0,0	0,0	0,0	0,3	0,9	1,0	1,1	57	49	55	56	59	69	85	78	75	60
Surakarta	RS Brayat Minulya	0,9	1,1	1,1	1,0	0,9	0,6	0,9	0,8	0,7	0,2	74	85	85	86	86	85	85	86	85	49
Surakarta	RSU Islam Kustati Surakarta	0,6	2,6	3,6	3,7	4,1	3,4	12,3	11,2	12,2	0,0	9	12	12	15	26	38	63	65	61	47
Surakarta	RSJD Surakarta	0,3	3,2	4,1	4,4	4,1	6,4	8,8	9,0	8,6	12,7	58	69	62	64	63	65	66	67	67	14
Surakarta	RSUD Ibu Fatmawati Soekarno	0,6	1,2	0,7	0,7	0,7	0,0	0,0	0,0	0,0	0,0	99	99	99	99	99	47	7	4	2	0
Surakarta	RS Bhayangkara Surakarta	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0	0	0	0	0	0	0	0	0	0
Wonogiri	RSUD dr. Soediran Mangun Sumarso	0,5	0,5	0,3	0,5	0,7	2,6	1,2	1,2	1,2	1,3	71	90	92	89	95	97	98	97	97	97
Wonogiri	RS Maguan Husada	0,4	0,2	0,1	0,1	0,1	0,0	0,0	0,1	0,1	0,0	96	92	95	92	96	97	97	96	96	97
Wonogiri	RS Muhammadiyah Selogiri	0,3	0,0	0,1	0,4	0,3	0,0	0,2	0,2	0,2	0,4	95	96	86	96	94	99	96	96	96	96
Wonogiri	RSU Mulia Hati	0,2	0,1	0,2	0,1	0,2	0,0	0,1	0,1	0,1	0,3	95	95	86	56	95	92	95	95	94	96
Wonogiri	RS Astrini	0,0	0,2	0,1	0,2	0,2	0,0	0,3	0,5	0,4	0,4	38	39	48	50	54	91	93	95	96	95
Wonogiri	RSU PKU Muhammadiyah Wonogiri	0,3	0,0	0,0	0,0	0,3	0,0	0,0	0,0	0,3	0,0	86	80	85	96	95	96	90	92	92	94
Wonogiri	RS Amal Sehat Wonogiri	0,0	0,2	0,1	0,1	0,1	0,0	0,0	0,0	0,0	0,0	33	36	66	75	83	93	97	96	95	87
Wonogiri	RS Hermina Wonogiri	7,0	8,7	8,3	8,2	8,4	11,3	8,7	9,5	10,3	9,0	66	73	76	74	76	69	72	75	78	76
Wonogiri	RSU Fitri Candra Wonogiri	2,5	1,6	2,1	1,2	2,9	0,0	3,2	1,8	2,5	0,0	57	74	81	71	71	92	61	48	57	58

Picture 2. Astrini Hospital Assesmen Task IDt From BPJS

As we see the picture above, our score not achieve BPJS standard before. from 30 October - 6 november 2023 we just get 38 -39%. We start kanban at 6 november 2023 and it stil didn't achieve standard score however score starting going up when we supervising and observed directly each unit. We still get struggle until week 3 when we make some modified standarized work at outpatient unit. We found it the defect

when we observe and supervising directly process at outpatient unit.

We change the flow and standard operational procedure at that time and then, in week 4 until now we already achieved more than standard score (above 90%). One by one backlog we finished it at proper pace and still we continue the new standarize working flow until now.

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DISCUSSION

BPJS making task id patient to evaluate is there any under quality service delivery at hospital. they are 7 task id hospital must sent to BPJS system. Each task id they can see waiting time for each service, like ;

- Task ID 1 --> online registration patient make check in / re - registration at hospital
- Task ID 2 --> waiting time until registration complete
- Task ID 3 --> time from complete registration until they called by nurse to initial assesment
- Task ID 4 --> time from nurse assesment until patient see the doctor
- Task ID 5 --> time from complete examination doctor until they given recipe by doctor
- Task ID 6 --> time from patient give receipe to pharmacy and waiting for their medicine
- Task ID 7 --> time from pharmacy complete patient medicine and give to them correctly

We must sent this 7 task ID correctly and it can't accepted if we sent randomly. With this task id, BPJS can make assesment about our hospital. Like example before 6 November they are only 38% compelete we sent to them. it can meaning our flow at hospital not good and BPJS patient get service underperform at our hospital

As lean management philosophy, we must correct our process and eliminate waste. Under supervising, we found that patient get that many patient not received their control schedule at outpatient unit so it impact to our achivement about task ID. Beside that, some patient get initial assesment from nurses after they see physician.

Kanban with kanban board is a tool we use to improve our achivement. With this tool we can examine what is root cause make our service delivery underperform especially health service. We detect our defect, and then we change the standarize work like when patien get receipe, physician assistant must give patient document to outpatient adminsitration, so they can double check if patient need control schedule to see their doctor. And we change our flow, patient will get mark if they already get initial assesment at outpatient nurse station. If the physical assistant didn't see it, patient must be bring back to nurse station.

CONCLUSION

Kanban with kanban board is one of many tool in lean management to improve our product. They can be done in healthcare industry. Lean is recognised as a systematic approach, it will improve about efficiency and effectivity by eliminating waste and pursuing perfection with minimal resources.

We use them to improve our working flow, to find the defect and how to improve our quality service to BPJS patient. Using this tool save us from many cost like wasting time and wasting other resource (ex; added some staff), and we can done with spesific improvement.

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