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INTRODUCTION

Postpartum haemorrhage (PPH) is a leading cause of maternal mortality, accounting for approximately 20% of maternal deaths in Malaysia. To address this issue, our project aimed to develop a comprehensive and user-friendly PPH kit to ensure that primary care clinics, especially in rural areas such as Felda Bersia, are well-equipped for PPH emergencies.

METHODOLOGY

A thorough needs assessment was conducted, gathering input from 3 family medicine specialists, 2 medical officers and 9 nurses from health clinics in Hulu Perak. Focus groups and surveys provided detailed feedback on the essential components and practical usability of the PPH kit. Based on this input, the kit was designed with critical supplies and medications. Additionally, a step-by-step guide for managing PPH was created. Training sessions ensured all healthcare providers were proficient with the kit.

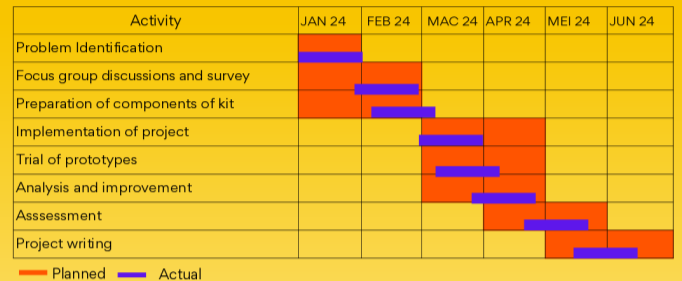


Fig. 1: Gantt Chart of Project

RESULTS



Fig 2: Prototype 1



Fig 3: Prototype 2



Fig 4.1: Prototype 3 - final PPH kit



Equipment/ Medication			
1	Infusion set	17	Foley catheter 14F
2	Normal saline	18	Lubricant
3	18G cannula	19	Water for injection
4	20G cannula	20	Catgut 3/0
5	5cc syringe	21	Yellow specimen tube
6	10cc syringe	22	Purple specimen tube
7	21G needle	23	Tranexamic acid 100mg/5ML
8	23G needle	24	Syntocinon
9	Sterile gloves size 6.5	25	Swabs
10	Sterile gloves size 7.0	26	Gauze
11	Surgical mask	27	Gamgee
12	Vaginal speculum	28	Pad
13	Disposable dressing	29	PER-PAT 301 lab form
14	Urine bag	30	PPH monitoring form
15	Foley catheter 20F	31	Referral form
16	Foley catheter 16F		

Fig 4.2 : Contents of PPH Kit



Fig 5 : QR code & references

Direct testing of the kit on actual cases was not feasible due to absence of cases. Instead, it was tested through case simulations.

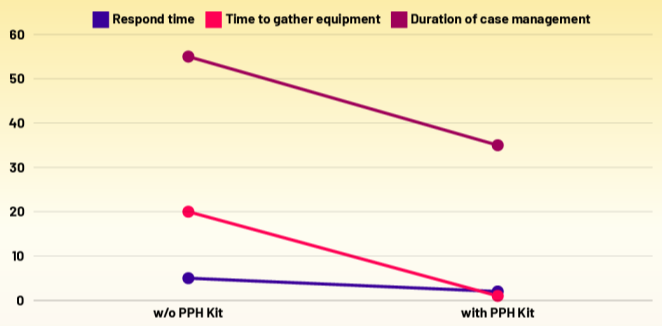


Fig 8: Response Time

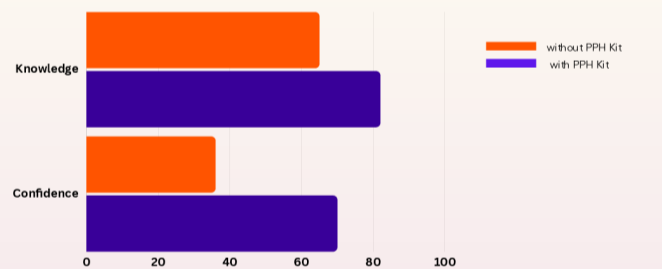


Fig 8: HCWs PPH management knowledge & confidence



Fig 6: Front & side view



Fig 7: Side & back view on motorbike

The introduction of the kit reduced response times for managing PPH. Before its implementation, delays were common due to the time required to gather necessary equipment. The kit enables immediate access to all essential tools and medications, improving both response efficiency and maternal safety. Healthcare staff felt more confident and equipped to handle emergencies swiftly, enhancing their job satisfaction. The kit's design also simplifies maintenance and ensures readiness for future use.

DISCUSSION & CONCLUSION



The PPH kit showcases the success of co-production in effectively addressing emergencies and improving maternal care in Felda Bersia. This collaborative approach has proven both practical and impactful. Moving forward, efforts will focus on continuous refinement of the kit based on user feedback and expanding its distribution to other rural areas. By engaging more communities and enhancing the kit, we aim to create a sustainable model that can improve maternal health outcomes in resource-limited settings.



References: 1. Handbook of Obstetrics Guideline, Ministry of Health Malaysia, Medical Development Division, 2024 2. Training Manual on Management of Post Partum Hemorrhage, Ministry of Health Malaysia, Family Health Division, 2016
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