

Development of a Smart Pump framework to guide health services on their implementation and maintenance

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Introduction

Smart pumps are increasingly used in healthcare settings as a standard of care for reducing infusion related medication errors. The features of smart pump dose error reduction software (DERS) include a medication library with profiles of care areas and soft and hard limits for medication doses, concentrations and/or rates. Implementation of smart pumps requires many resources and stakeholder engagement to cover operational, financial, information technology and clinical considerations. There are currently no Victorian or Tasmanian state-wide frameworks or a sample medication library which can assist health services to implement smart pumps.

Objective

To outline the development of a framework to guide health services to implement and maintain smart pumps with DERS.

Evaluation

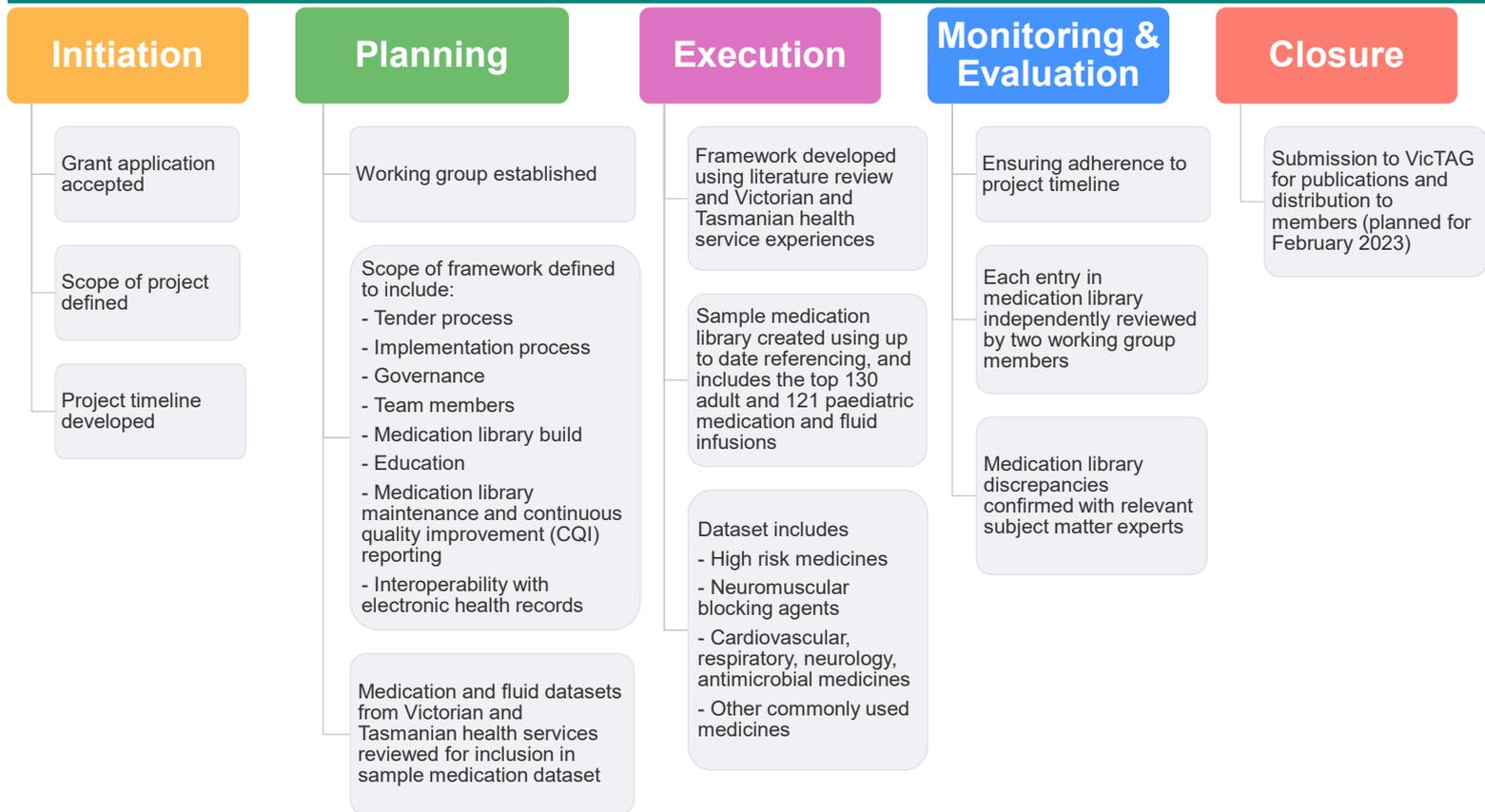


Figure 2: Detailed phases of Smart Pump framework development

Discussion

The working group was successful in developing the key elements of a framework and sample medication library dataset. This publication will assist members of the Victorian Therapeutics Advisory Group (VicTAG) to successfully implement and maintain smart pumps in their organisation. The sample medication dataset with medication limits are up to date as of 2022, and will require individual organisation review of limits.

Action

- A Victorian Therapeutic Advisory Group (VicTAG) grant was awarded to Monash Health to create a smart pump framework and sample adult and paediatric medication library.
- A working group was established including pharmacy and nursing personnel from Victorian and Tasmanian health service members of the VicTAG.
- The five phases of project management was used to ensure project goals were defined and 12 month project timeline was met, refer to Figure 1 and 2.



Figure 1. Phases of Smart Pump framework development

The authors would like to acknowledge VicTAG and the working group. December 2022 email: madonna.khreish@monashhealth.org