Towards a Systematic Approach to REMS Design

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Why do we need a systematic approach to REMS design?

A systematic approach to REMS design could help us…

- Document and communicate a "rationale" for each REMS.
- Comprehensively identify and anticipate failures.
- Address complexity of drug risk management.
- Reduce unnecessary variation in REMS design and tools.
- Increase predictability of review process.

REMS Design: Future State

Establish the Scope

- Characterize the risk that the REMS is trying to address and conditions for safe use of the drug.
- Establish the likely context of use for the drug.

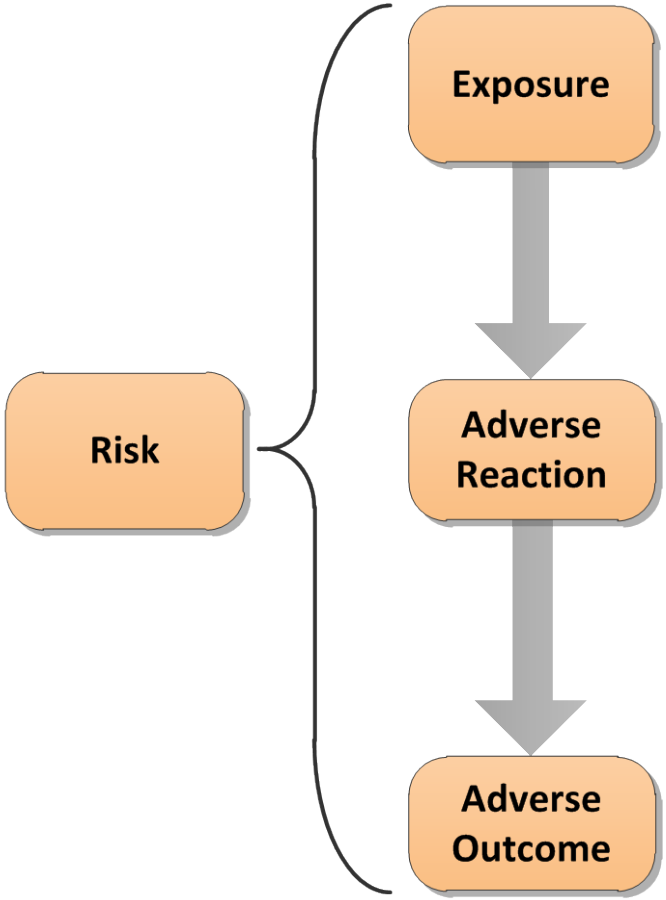
Analyze the Problem

- Identify failures in safe use that might lead to patient harm.
- Identify underlying causes of those failures.

Specify Interventions

- Specify key information / desired behaviors /process changes to address underlying causes.
- Develop interventions to convey information/ behaviors.

Characterize the risk and safe use of the drug



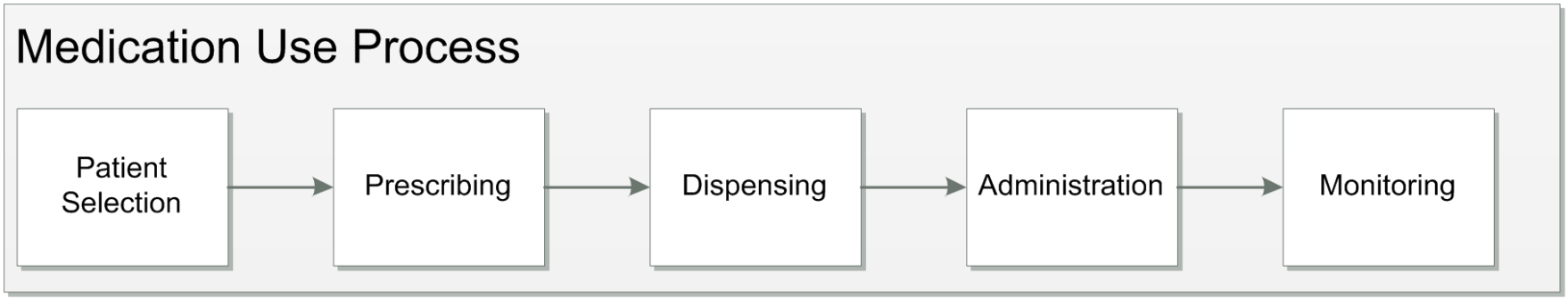
- How do patients become exposed to the risk?
- What is the relationship between exposure and the adverse reaction of concern?
- Can exposure be managed to reduce the likelihood of an adverse reaction? How?

- What is the adverse reaction (ADR) of concern?
- Can it be prevented, detected, or treated? How?
- What risk factors affect the likelihood of an ADR?
- Can they be prevented, detected, or treated? How?

- What are adverse outcomes that can result and how likely/severe are they?
- What factors affect their likelihood/severity?
- Can they be prevented, detected, or treated? How?

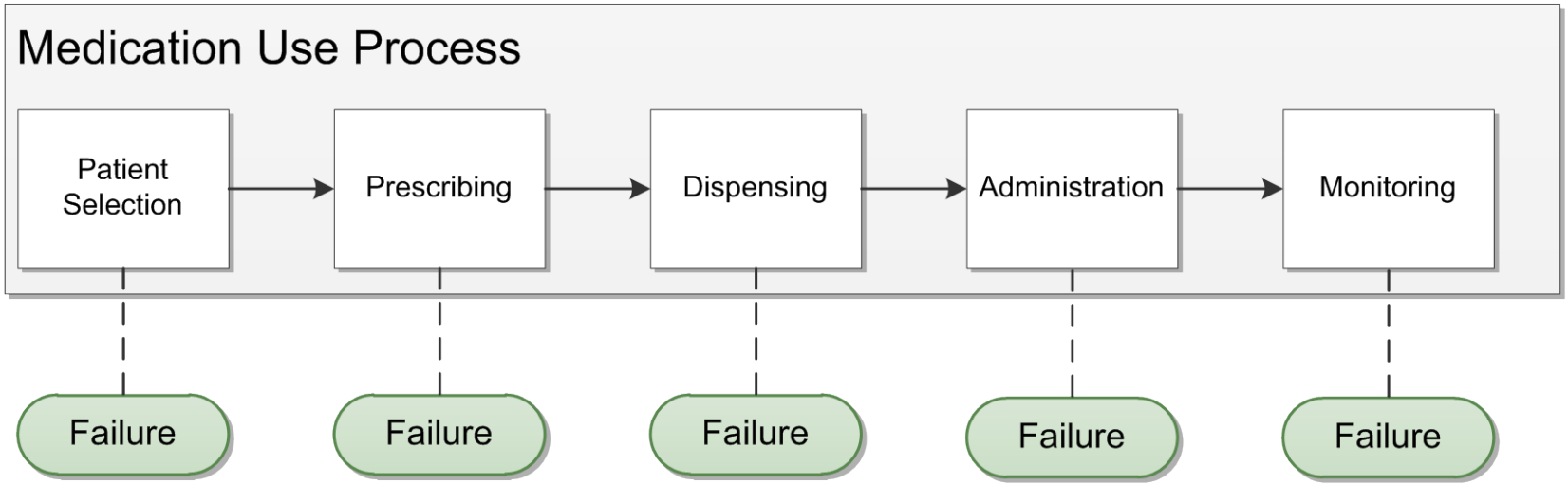
Establish the context of use

- Which patient populations that are likely to use the drug?
- In which healthcare settings is the drug likely to be prescribed?
- Which stakeholders will be involved in the patient's care?
- What is the process by which the patient is treated?



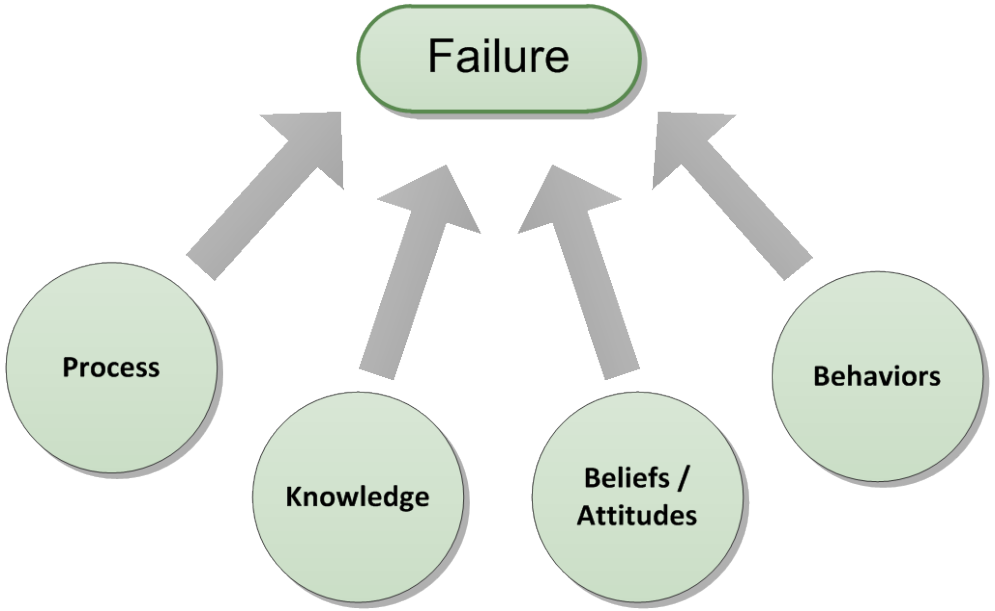
Identify possible failures

- What are the potential failures that could lead to unsafe use and patient harm?
- Where in the medication use process could these failures occur?



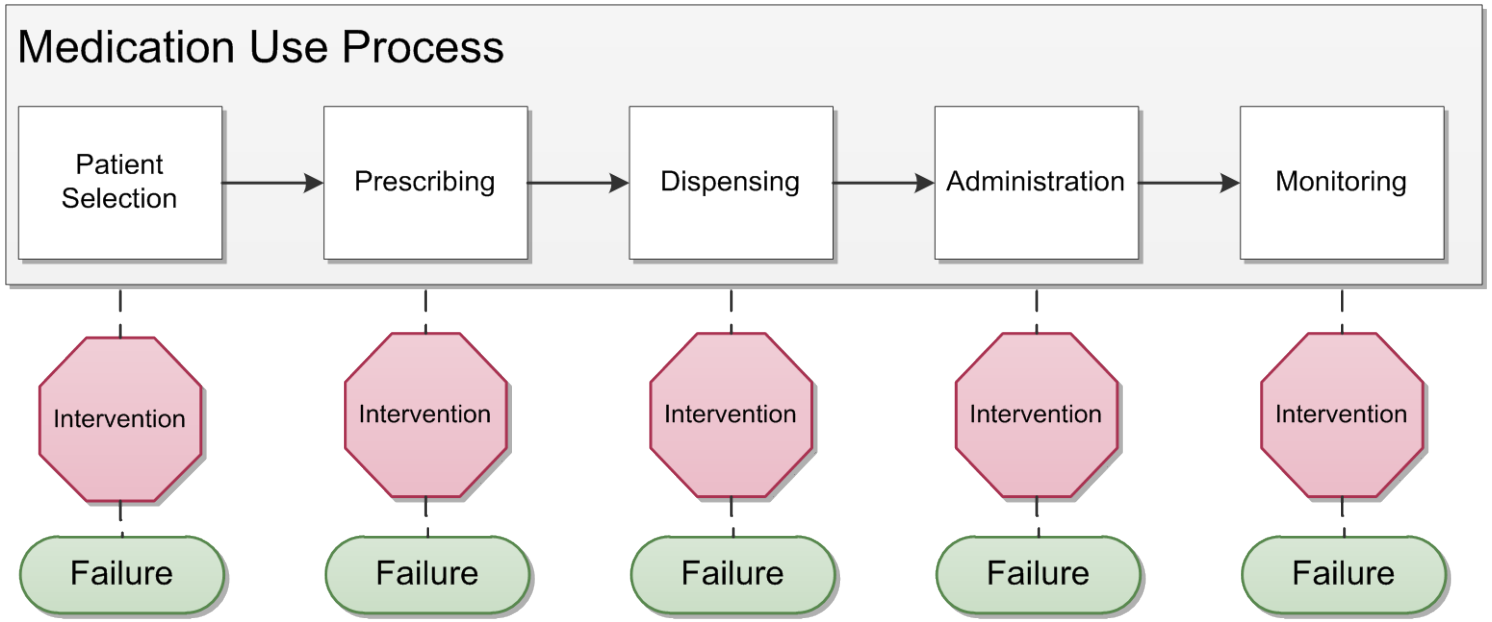
Identify underlying causes of failure

- How does the medication use process contribute to the failure?
- How do the knowledge, attitudes, beliefs, and behaviors of stakeholders contribute to the failure?

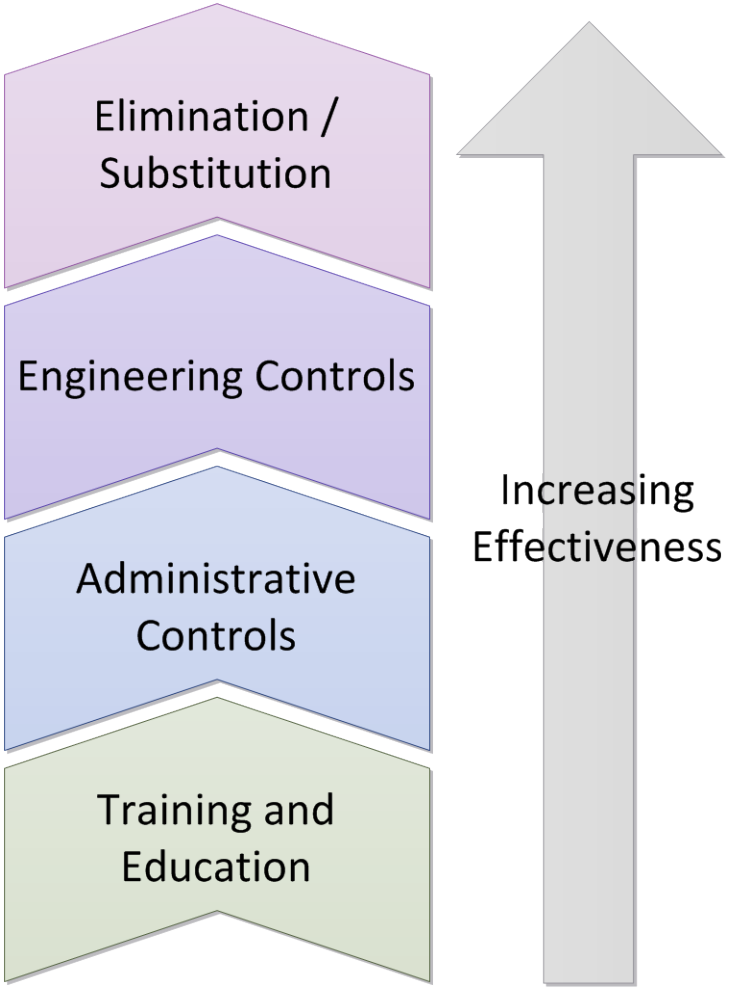


Identify key information, desired behaviors, interventions

- What information, behavior changes, or process changes are needed to address the underlying causes of failure?
- What interventions can effectively convey information and implement changes?



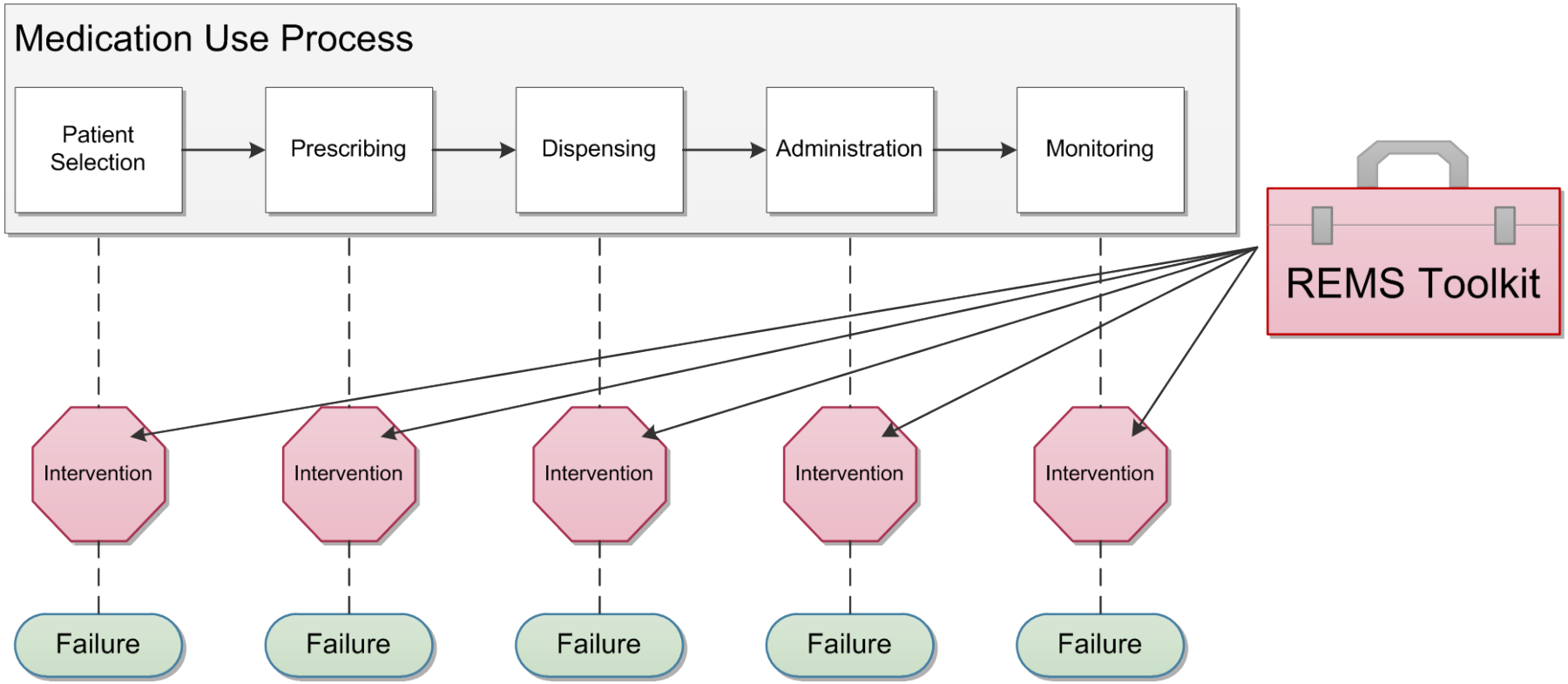
Develop tools



- When is it possible to use engineering or administrative controls?
- How do we balance tool "intensity" against access and burden considerations?

Use tools from a standard REMS "toolkit"

- What tools can we use from our REMS toolkit?
- How should they be customized to the individual REMS?



Practical Considerations

An effective approach should…

1. Work within the regulatory review process
   - Build an evidence base that permits informed decision-making
   - Consider time/resource and regulatory constraints
2. Focus on what's most important
   - Prioritize most important failures, root causes
   - Prioritize most effective/feasible interventions
3. Streamline to enhance efficiency
   - Share tools across programs
     (e.g., for similar risks, failures, and/or contexts of use)
   - Re-use analysis across programs
4. Design with evaluation in mind