

# Integrating a Longitudinal Systems and Safety Science Thread Into a Four Year Medical School Curriculum

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## Background

- Health system science (HSS) is the “third pillar” of medical education; but this has created a current gap in medical school curriculum
- How to distinguish between a QC/PS objective vs appropriate practice?
- There is a difference between teaching our students to:
  - Understand high quality and safe healthcare delivery **systems**
  - Provide high quality and safe **individual care**

## Methods

- A curriculum development team comprised of medical school dean, systems safety experts, clinicians and resource personnel met over a two year period to determine educational objectives
- Completed a keyword curriculum mapping exercise
- Reached consensus on two broad curricular goals:
  - 1) **Comprehending the language of systems safety and being fluent in its use**
  - 2) **Recognizing the science of systems safety through exploration of human error and individual and team performance limitations**

## Curriculum Development Principles & Process



Multiple Stakeholders



“Building the Airplane While It’s Flying”



MUST BE

- Evidence Based
- Applicable to Medical Students
- Fit Within Current Time Limits
- Integrate Within Current Objectives

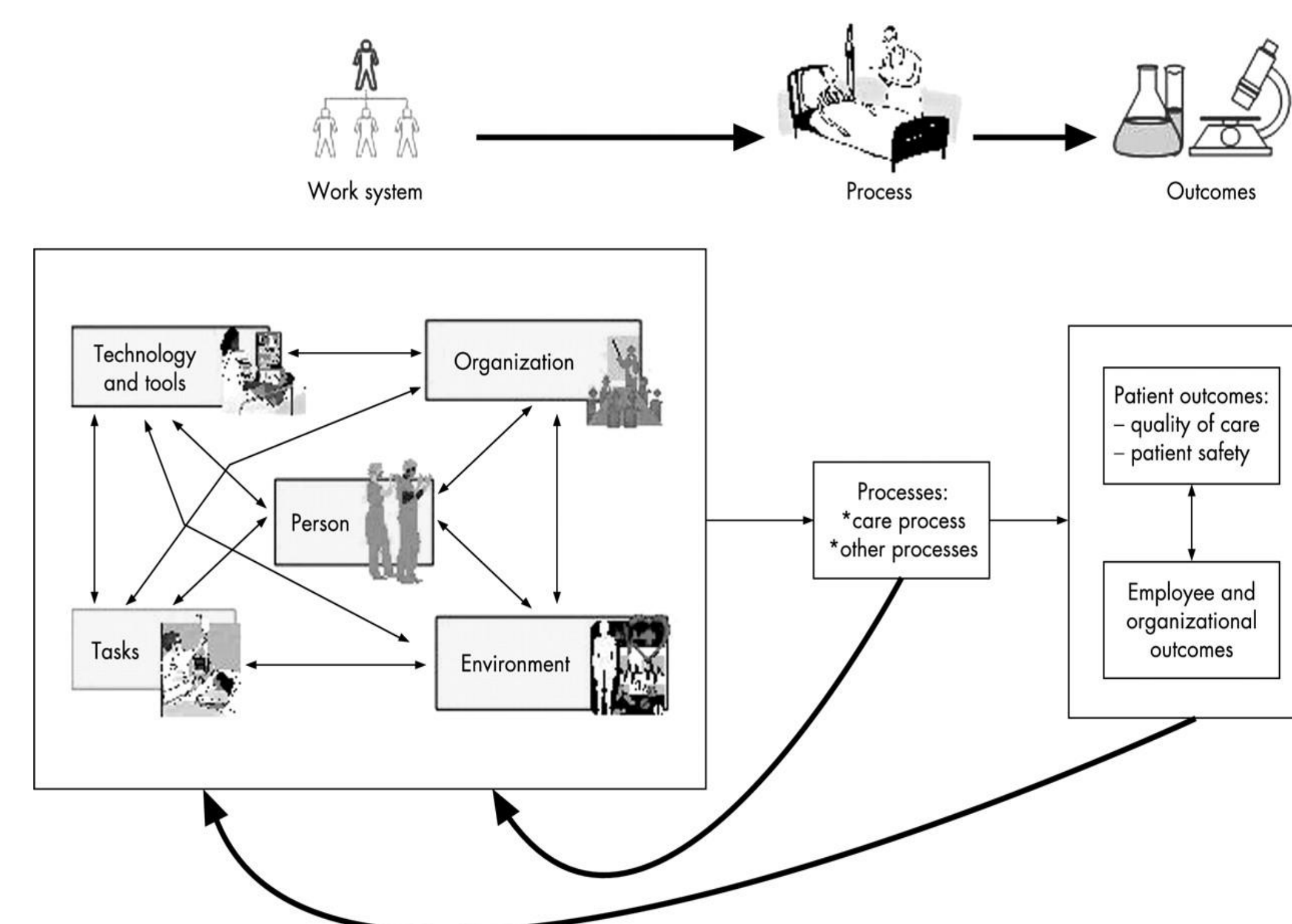


Across All Blocks & Curricular Years

## Results

- Integration of PS objectives into problem-based learning cases in years one and two
- Re-design of M2 interprofessional education (IPE) Block V to include assessment of team performance, leadership in clinical settings
- Further integration of human factors concepts into research, IPE domains
- Further integration of classroom/small group learning into core third year clerkships (e.g., required quality project in Psychiatry, Domain Day)
- Created new fourth year elective
- Ongoing efforts to increase faculty development on this topic

## SEIPS Model



Carayon P, Schoofs Hundt A, Karsh BT, et al. Work System Design for Patient Safety: The SEIPS Model. *Quality and Safety in Health Care* 2006;15 Suppl 1:i50–i58

## Challenges

- What are current best practices?
- Who are your faculty?
- Influence on clinical rotation content is limited; role of “hidden curriculum”
- Topic is imperative to clinical practice, but is not imperative to passing USMLE Steps One or Two

## References

- Gonzalo JD et al. New Educator Roles for Health Systems Science: Implications of New Physician Competencies for US Medical School Faculty. *Academic Medicine* 2019; 94 (4): 501-506.
- Vivekananda-Schmidt, P. and Sanders, J. Developing and Implementing a Patient Safety Curriculum. *Clinical Teacher* 2016; 13: 91-97.



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