

Customizing an Open Source Electronic Health Record System Dr. Joyce Boyd, DNP, MSEE, APRN, AGNP-C





COMMITTE

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BACKGROUND

Healthcare Delivery Innovation Project

The Mason and Partners (MAP) Clinic requires a low cost, customizable, reliable, maintainable, and sustainable EHR system that:

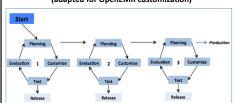
- · Provides a user-friendly interface
- · Aligns with current clinic process flows with capabilities to expand
- · Meets grant-specific reporting requirements
- Captures and stores patient information and health data securely
- · Allows data organization and control
- Provides reports for analysis, clinical decision support, and research
- Is customizable to support new services, research, and clinic processes and procedures

CLINICAL QUESTIONS

- Are minimum MAP data requirements easily entered and presentable to the user in the customized OpenEMR prototype?
- Are minimum MAP data requirements extractable for reporting purposes from the customized OpenEMR prototype database?
- 3. Are providers and staff satisfied with the customized OpenEMR prototype's ability to align with current process flow as measured by the user evaluation survey?
- 4. Do the training and education materials allow users to operate the released customized OpenEMR prototype easily and effectively?

METHODS

Align Development Model (adapted for OpenEMR customization)



International Software Testing Qualifications Board, n.d

ACKNOWLEDEMENTS & REFERENCES

Acknowledgements

Sherwin Gaddis of Open Med Practice, www.openmedpractice.com

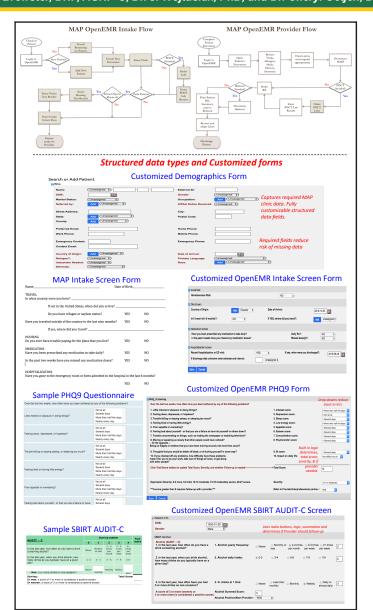
References

Reterences:

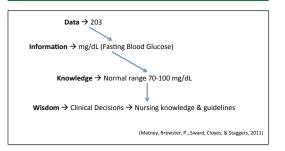
Brewster, R. R. (2014). The art of data visualization: A demonstration of possibility. (Unpublished dataral manuscript). George Mason University. Fairfax, VA

International Software Testing Qualifications Board. (n.d.). What is Agile model – advantages, disadvantages and when to use it? Retrieved from http://istopexamcertification.com what-is-agile-model-advantages-disadvantages-and-when-to-use-it/

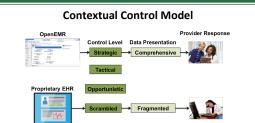
Matney, S., Brewster, P., Sward, K., Cloyes, K., & Staggers, N. (2011). Philosophical Approaches to the Nursing Informatics Data-Information-Knowledge-Wisdom Framework: Advances in Nursing Science, 34(1), 6–18. https://doi.org/10.1097/ANS.06013e3182071813



DIKW CONCEPTUAL FRAMEWORK



THEORETICAL FRAMEWORK



(original modified from Brewster, R., 2014, p. 12)

Goal: Customized OpenEMR shall have capability to collect and disseminate data to meet MAP requirements by controlling data at the strategic level

CONCLUSION & RECOMMENDATIONS

Conclusions

Customizing OpenEMR is a viable low-cost solution.

- Meets current data and clinical practice requirements
- Collects and safely provides access to high quality data
- · Supports informed clinical decisions
- Supports research and surveillance
- Trains nurses and Health Administration Policy/health informatics students
- · Advances utilization of health informatics system

Recommendations:

- Continue customization efforts for MAP clinic and SON Simulation lab.
- Solicit competent administrators/developers programming and database for high level customization.
- · Document an administration instruction set as a framework/model.
- · Utilize the Simulation Lab EHR as a model for other nursing programs
- Create customized modules to contribute to OpenEMR community
- Design data structures in alignment with other data registries for research