

HIT Implementation Planning for Quality and Safety

Unit 8c : Go-Live Support Strategies

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Objectives

At the end of this segment, the student will be able to:

- Assess the quality implications of “big bang” versus “staggered” approaches to activation.
- Discuss go-live support strategies that minimize risk.

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Implementation Strategies The Big Bang



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Implementation Strategies Staggered (Phased)

Phase 1

Phase 2

Phase 3

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Implementation Strategies Differences

<p>Big Bang</p> <ul style="list-style-type: none"> • Fast implementation • Short-lived anxiety • Quicker ROI • Shorter timeframe • Maintain momentum • Less hybrid systems • High risk, high anxiety • Large scope • Greater resource needs 	<p>Incremental</p> <ul style="list-style-type: none"> • Less likely to erupt • Less anxiety • Greater manageability of incremental units • Slower • Longer time for ROI • Higher training costs • Potential for stagnancy
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Implementation Contextual Implementation Model

- Implementations: ongoing, iterative
- Three contextual levels of differences

Organizational context

Clinical Unit context

Individual context

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Implementation Contextual Implementation Model

Organizational Context

- Organizational culture
- Resources
- IT experience
- Size and location
- Implementation life cycle stage
- Mission & strategic plan
- Organizational structures
- Roles of clinicians (doctors, nurses)
- Leadership

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Implementation Contextual Implementation Model

Clinical Unit Context

- Team culture
- Unit leadership
- IT experiences
- Clinical profile of unit
- Size
- User attitudes regarding use of IT

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Implementation Contextual Implementation Model

Individual Context

- Diverse ways of working
- Diverse ways of thinking
- Diverse ways of communicating
- Diverse ways of collaborating
- Computer literacy
- Keyboard skills

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Complex Systems

- Diverse interactions and self-organization are critical
- A certain level of noise, creativity, and exploration should be expected for learning, changing, and adapting
- Effective structures are essential

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Complex Systems Structures: Health System

Strategic Oversight Team	Centralized Matrix Leadership	Nested expert teams
Hospital oversight teams	Project management teams	Centralized trainers

Scott K. et al (2009)

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Complex Systems Structures: Nested Teams

Operational teams	<ul style="list-style-type: none"> • Operations-oriented • Standardize operational processes/patient safety practices
Clinical discipline teams	<ul style="list-style-type: none"> • Membership of a single professional discipline • Addresses professional standards

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Complex Systems Structures: Nested Teams

Clinical
consensus
Teams

- Multi-disciplinary
- Standardize practices related to specific patient populations or problems

Problem-oriented ad hoc teams

- Short-term, rapid action
- Addresses specific problems or interests

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Implementation Support

- External consultants
 - Implementation specialists
 - Trainers
- Internal consultants
 - Super-users/coaches/mentors
 - Support Pools

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Implementation Support External Consultants

- Have expertise in use of the particular software application
- Have experience on go-live teams in a wide variety of settings
- Often lack knowledge of specific organizational policies and workflows
- More costly than using internal consultants

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Implementation Support Internal Consultants

- Clinical personnel, usually nurses
- Have training and knowledge beyond the usual end-user for the given software application
- Link the clinical world with the IT world
- Have a variety of titles: super-users, coaches, mentors
- Informal or formal roles

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Implementation Support Internal Consultants

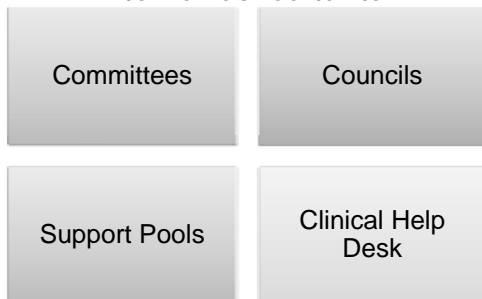
- Serve as champions for the new system
- Promote adoption
- Assist with/reinforce training
- Assist with developing policies and procedures, including downtime
- Liaison between clinical and IT staff
- Perform competency testing
- Provide quality oversight

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Implementation Support Internal Consultants



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Implementation Factors the Affect Success

- It is not possible to designate a single implementation strategy that works in all settings
- End user support (or lack thereof) is a significant factor in both successful (and failed) implementations
- Long-term attention to end user training and support is the key to data quality

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Implementation Factors the Affect Success

- There should be skilled resource people:
 - Present on the unit
 - Able to provide quick help
 - Serve as a driving force for change
 - Responsible for training

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Summary

- No best way to implement HIT
- Contextual factors are important for implementation planning
- End-user education and support are critical to success
- Long-term training and support drive quality.

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References

- Andre B, Ringdal GI, Loge JH, Rannestad T, Kassa S. The importance of key personnel and active management for successful implementation of computer-based technology in palliative care: results from a qualitative study. *Comput Inform Nurs.* 2008 Jul-Aug;26(4):183-189
- Bahensky JA, Ward MM, Nyarko K, Li P. HIT implementation in critical access hospitals: extent of implementation and business strategies supporting IT use. *J Med Syst;* 2009 Dec 2.
- Bridges W, Bridges S. *Managing Transitions. Making the Most of Change.* 3rd edition. Philadelphia, PA: DaCapo Press. 2009
- Callen J, Braithwaite J, Westbrook JI. Contextual implementation model for assisting clinical information system implementations. *J Am Med Inform Assoc.* 2008 Mar-Apr;15(2): 255-262
- Chin HL. The reality of EMR implementation: lessons from the field. *The Permanente J.* 2004 Fall;8(4):1:7 Available from: <http://xnet.kp.org/permanentejournal/fall04/reality.html>
- Dave M, Garets D. Vendors with mature enterprise architectures lead the market. Washington, DC: The Advisory Board Company, July 9, 2010.

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References

- Ford EW, Menachemi N, Huerta TR, Yu F. Hospital IT adoption strategies associated with implementation success: implications for achieving meaningful use. *J Healthc Manag.* 2010 May-Jun;55(3):175-88; discussion 188-9.
- Glaser J. Implementing electronic health records: 10 factors for success. *Health Finance Manage.* 2009 Jan;63(1):50-2, 54.
- Gruber D, Cummings GG, Leblanc L, Smith DL. Factors influencing outcomes of clinical information systems implementation: a systematic review. *Comput Inform Nurs.* 2009 May-Jun;27(3):151-163
- Lorenzi NM, Kouroubali A, Detmer DE, Bloomrosen M. How to successfully select and implement electronic health records (EHR) in small ambulatory practice settings. *BCM Med Inform Decis Mak.* 2009 Feb 23:9-15.
- McNeive JE. Super users have great value in your organization. *Comput Inform Nurs.* 2009 May-Jun;27(3):136-9.
- Mickan S, Rodger S. Characteristics of effective teams: a literature review. *Aust Health Rev* 2000;23(3):201-208.

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References

- Mickan SM, Rodger SA. Effective health care teams: a model of six characteristics developed from shared perceptions. *J Interprof Care.* 2005 Aug;19(4):358-70.
- Sargeant J, Loney E, Murphy G. Effective interprofessional teams: "contact is not enough" to build teams. *J Contin Educ Health Prof.* 2008 Fall;28(4):228-234.
- Scott K, Van Norman J. Managing the complexity of a systemwide electronic medical record design and implementation: lessons for nurse leaders. *Nurs Adm Q* 2009 Apr-Jun;33(2):109-115
- Terry A, Thorpe CF, Giles G, Brown JB, Harris SB, Reid GJ, Thind A, Stewart M. Implementing electronic health records. Key factors in primary care. *Can Fam Physician.* 2008 May;54(7):730-736.
- Owens K. EMR implementation: big bang or a phased approach? *J Med Pract Manage.* 2008 Mar-Apr;23(5):279-81.
- Whittenburg L. Analysis of nursing workflow documentation in the electronic health record. *J Healthc Inf Manag.* 2010 Summer;24(3):71-5.

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