

Institute for Human Caring EHR Optimization Toolkit

1. Top Ten Best Practices for Serious Illness Care in the EHR
 - a. Top Design Principles
 - i. Checklist of practices
 - b. Slide deck
2. Institute for Human Caring Webinar recording
3. Making an Informatics Pitch slide deck

Top Design Principles for Serious Illness Care Informatics

One of the core goals at the Providence Institute for Human Caring (IHC) is catalyzing culture and behavior change to improve whole-person and serious illness care. We have repeatedly seen that the use and design of the electronic health record (EHR) can be a powerful tool for these changes. However, there remain significant obstacles in EHR optimization in these domains: information technology (IT) departments often lack understanding regarding the significance of creating custom solutions, while clinicians often lack buy-in to advocate for these changes. After a series of interviews and listening sessions with health care professionals across California, we also identified a common theme of clinicians desiring workflow improvement solutions which are already present in the software.

In response, the IHC has developed a series of design principles for clinicians, executives, and analysts to implement for optimizing serious illness care. These principles were described in a national webinar hosted by the ICH and freely available on our website.

The general format of presentation for these principles is to provide a general summary and specific example of each, as well as a specific example we have implemented at Providence, as well as some additional tips and resources. For each example, we also suggested a general sense of the time commitment involved and potential value to the clinician, patient population, or system (see general example of the framework in appendix A).

Top Design Principles (Please see appendix B for full set of slides)

Principle 1: What color should a DNR be?

General Principle: The more important it is, the easier it should be to find

Summary: Consider highlighting or placing important information in banners and static columns

Example: Code status in the Epic Story board, which highlights yellow if DNR

Time: Technical time is low (hours to days), but governance and obtaining consensus may take considerable time depending on your institution

Additional tips and thoughts:

- Remember that no matter where you place a piece of information, there will be some who struggle to find it.
- Education is key and patience is a must.

Principle 2: Customize vs Standardize

General Principle: Find a balance between standard tools and custom solutions

Summary: Standardized workflows and tools are easier to maintain, train, and report on but aren't always the easiest UI to use

Example: Personalize your EHR workspace, create user/department auto texts ("dotphrases")

Time: Minimal for most (hours)

Additional tips and thoughts:

- Consider a repository of standard and custom tools for clinicians to play with and choose from.

- It is also often possible to “steal” auto text or other personalizations from other users.

Principle 3: Sometimes the trip IS about the destination

General Principle: Create single sources of truth whenever possible

Summary: Healthcare information is disparate and heterogeneous, so it is important to group related information

Example: Providence’s Advance Care Planning summary page

Details: We created a custom page grouping information on code status, presence of a POLST, presence of an Advance Directive, and Goals of Care documentation on one page that can be accessed by one click from anywhere in the patient’s chart (see appendix C for an example)

Time: Moderate (weeks to months)

Additional tips and thoughts:

- Pair with analysts who are familiar with building report or summary pages, working with external documents, and/or scanning procedures at your institution

Principle 4: Maximize your strengths (use your IDT)

General Principle: The interdisciplinary nature of serious illness care does not have to be compromised for EHR efficiency

Summary: Serious illness care is complex and unique. EHR solutions can highlight this.

Example: Shared notes

Details: Many of our inpatient palliative care teams utilize shared note functionality, so that interdisciplinary team members all contribute to one document, rather than each writing a separate note

Time: Low to moderate (days to weeks)

Additional tips and thoughts:

- Discuss billing/coding and productivity measures as part of implementation.
- Consider alternatives such as note tagging, episodes of care, or patient registries

Principle 5: Always mind your gaps

General Principle: Serious illness providers are often in a unique position to oversee transitions of care

Summary: Be conscious and thoughtful about transitions of care, including goal-aligned medication reconciliation and follow-up strategies

Example: After visit summary and discharge instruction integrations

Details: A current optimization undergoing build is a solution to auto-populate patients’ after visit summary or discharge instructions with Palliative Care recommendations and follow-up planning

Time: Moderate (few to many months) depending on governance

Additional tips and thoughts:

- Examine ways to automate this work whenever possible.
- Discuss with your informatics teams on discharge navigator or checklist options

Principle 6: Clinical Decision Support* alerts can encourage culture change

**For the Epic EHR, these are often Best Practice alerts (BPAs), for Oracle Cerner they are often Discern alerts*

General Principle: Used carefully, alerts are a powerful tool, but you can't BPA your way to great medical care

Summary: Best practice advisories, clinical decision support, and AI tools are only as good as clinicians' ability to integrate those data and recommendations

Example: POLST and code status advisory alert

Details: Providence has a BPA alerting an admitting provider when entering an initial code status of Full Code if the patient has an active electronic POLST on file with a DNR status identified

Time: Moderate (months)

Additional tips and thoughts:

- When designing or modifying an alert, consider your audience carefully
- Set appropriate triggers, lock-out times, and (more rather than less) exclusions

Principle 7: Use it or lose it

General Principle: Familiarizing clinicians with the EHR is essential

Summary: Providing clinicians with adequate onboarding and continuing education is likely the single most important factor in increase satisfaction and engagement

Example: Onboarding hospice providers with checklists and at-the-elbow support

Details: Incoming Hospice providers are directed to a select team of informatics specialists during their orientation who provide education and support in addition to the standard virtual training modules. They have a checklist of knowledge related to hospice care (for example, billing/coding related to home visits), and plan 3- and 6-month follow-up meetings

Time: Moderate to high (many months to plan and execute)

Additional tips and thoughts:

- Encourage providers to take institution and/or vendor provided education
- Cross-train when possible (don't completely silo inpatient and outpatient)
- Normalize wanting to be proficient in the EHR

Principle 8: Show your work!

General Principle: If you don't define your success, someone else will

Summary: It is increasingly important to measure, track, and report on quality and productivity metrics

Example: Building a custom report*

**For the Epic EHR, the main end-user available reporting tool is Reporting Workbench (RWB)*

Detail: I was approached by the Chaplain department of one hospital because they wished to start having more conversations with patients who did not already have an Advance Directive. I created a new RWB report using admitted patients at their hospital without an Advance Directive using Providence's custom definition that could be run daily

Time: Minimal for a simple/single report (hours), but can get more complicated quickly

Additional tips and thoughts:

- Before designing a custom report, clarify your data definitions (how do you define what team or unit a patient is on, whether a specialty has been consulted, length of stay, etc.)
- Keep in mind processing time and resources (don't create a report that stalls your system due to data processing volume)
- Critically evaluate how you capture data: discretely (checkboxes, lists) versus narrative free-text, so that you can measure what you want
- Programs must move beyond basic productivity metrics to tell the stories of impactful and quality-driven serious illness care

Principle 9: Informatics projects can be a lot like delirium

General Principle: Build for the problem you have but don't be afraid to change the solution or realize it's a different problem

Summary: Expect some waxing and waning deliberation, the need to monitor closely for the foreseeable future, and that what you try first may not end up being the best solution

Example: Providence's Desired Level of Medical Care workflow

Details: Several years ago, Providence identified the need to replace "partial DNR" code status with a more robust and safe way of clarifying a patient's desired treatments when they had elected a DNR but were not clinically dead. This Desired Level of Medical Care (DLMC) information was originally created as a note-based workflow, but providers gave feedback indicating that writing an additional note was burdensome. Therefore, we implemented an updated process, transitioning to an order-based workflow, which significantly increased use (see appendix D for an example).

Time: High (many months to years)

Additional tips and thoughts:

Don't be afraid to stop or adjust a project if it is not addressing your needs

Always remember your cutover strategies

When designing projects, identify metrics of success to measure after completion

Principle 10: Build your community

General Principle: The more we silo medicine and informatics, the less they will be able to meet our needs

Summary: Informatics can be a black box to many clinicians, but partners exist and want to help

Example: Institutions often have informatics workgroups or clinical-decision support advisory councils who desire clinicians' expertise

Time: Minimal (a few hours a month) to join a workgroup; Very High (over a career) if this becomes a passion

Additional tips and thoughts:

- Consider poweruser/super user classes to meet others with similar interests
- Attend informatics conferences
- Utilize your EHR vendor's community resources*

**For the Epic EHR, these include the Epic UserWeb and Epic Earth*

Appendix A: General Framework for Design Principles

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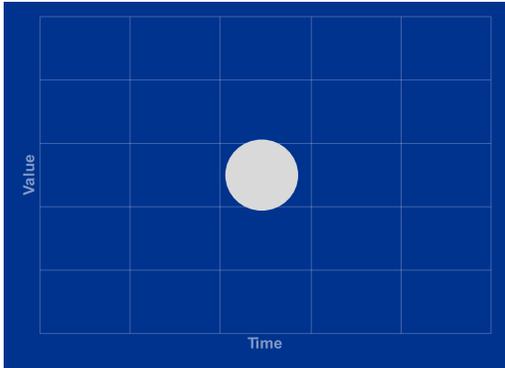
Summary:	Example:
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Time Investment 

Scale: + to +++++

- +: Small, less than a week of time
- ++: Medium, likely several months
- ++++: Large time investment, many months with revisions anticipated

Suggested Informatics Resources and Tips 



General Principle to Keep in Mind:

Appendix B: Top Ten Best Practices for Serious Illness Care in the EHR

1. What color should a DNR be?

Summary: Consider highlighting or placing important information in banners and static columns

Example: Highlight code status, Advance Directive, POLST, and/or healthcare surrogate

Time Investment

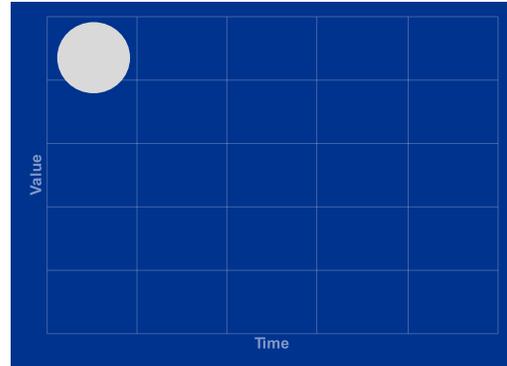


Technical: +
Governance: +++++

Suggested Informatics Resources and Tips



Analysts familiar with orders
Inpatient and outpatient (and home if relevant)
Important to include ED and Surgical specialties



General Principle to Keep in Mind: The more important it is, the easier it should be to find

2. Customize vs standardize

Summary: Standardized workflows and tools are easier to maintain, train, and report on but aren't always the easiest UI to use

Example: Personalizing your workspace, Epic suite of SmartTools; integrated Goals of Care (iGOC)

Time Investment

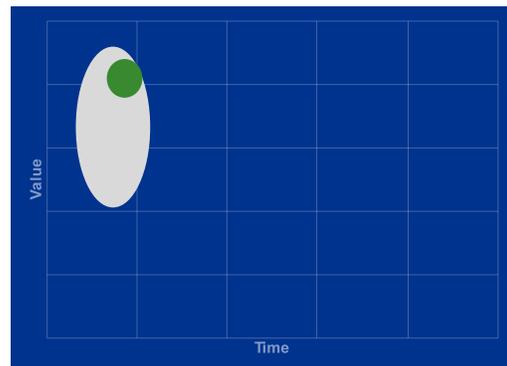


Personalization: +
Simple SmartPhrase: +
Rule-based note template: +++
iGOC: ++ to +++

Suggested Informatics Resources and Tips



Empower your users to create custom solutions themselves when possible
Consider a repository of standard and custom tools for clinicians to play with and choose from



General Principle to Keep in Mind: Find a balance like you do between pain control and drowsiness with opioids

3. Sometimes the trip IS about the destination

Summary: Healthcare information is disparate and heterogeneous, so it is important to group related information

Example: Advance Care Planning summary

Time Investment



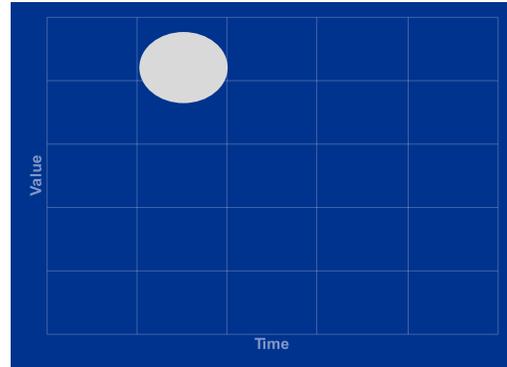
++ to +++

Suggested Informatics Resources and Tips



Analysts familiar with report or summary pages, external documents, and/or scanning procedures

Depending on build, test your logic carefully



General Principle to Keep in Mind: Create single sources of truth whenever possible

4. Maximize your strengths (think like Voltron)

Summary: Serious illness care is complex and unique. EHR solutions can highlight this

Example: Shared notes

Time Investment



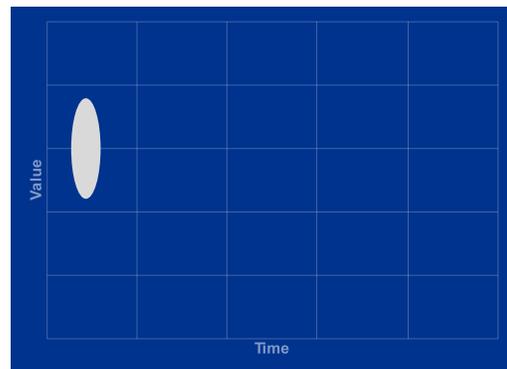
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Suggested Informatics Resources and Tips



Discuss billing and productivity measures as part of implementation

Consider using alternatives such as note tagging, episodes of care, or registries



General Principle to Keep in Mind: The interdisciplinary nature of serious illness care does not have to be compromised for EHR efficiency

5. Always mind your gaps

Summary: Be conscious and thoughtful about transitions of care

Example: After visit summary and discharge instruction integrations

Time Investment



To create AVS integration:
+ to ++

To create custom AVS
integration: ++ to +++

Governance: ++++

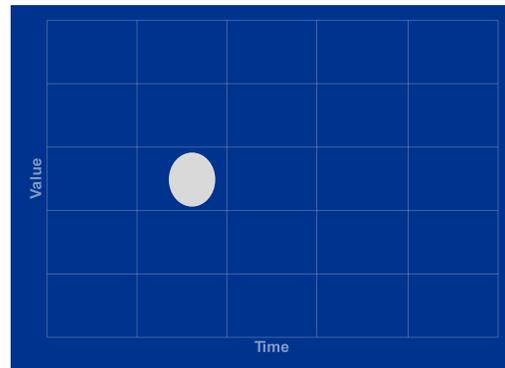
Suggested Informatics Resources and Tips



Discuss ways to automate this work whenever possible

Check with your informatics team regarding discharge checklists and navigators

General Principle to Keep in Mind: Serious illness providers are often in a unique position to oversee transitions of care



Top 10 Best Practices for Serious Illness care in the EHR

6. BPAs can encourage culture change

Summary: Best practice advisories, clinical decision support, and AI tools are only as good as clinicians' ability to integrate those data and recommendations

Example: POLST and code status advisory alert

Time Investment



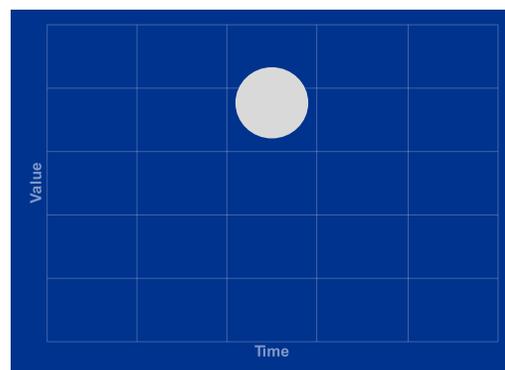
+++

Suggested Informatics Resources and Tips



Think about audience, lockout times, and exclusions when designing alerts or decisionsupport tools

General Principle to Keep in Mind: You can't BPA your way to great medical care



Top 10 Best Practices for Serious Illness care in the EHR

7. Use it or lose it

Summary: Providing clinicians with adequate onboarding and continuing education has been reliably shown to significantly increase satisfaction

Example: Onboarding hospice provider checklist and at-the-elbow support

Time Investment



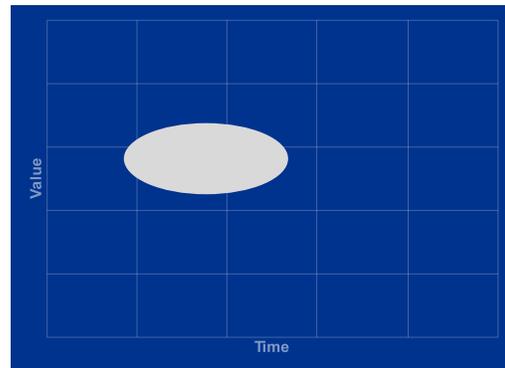
++ to ++++

Suggested Informatics Resources and Tips



Encourage providers to take institution or vendor provided education
Crosstrain wherever possible

General Principle to Keep in Mind: Balance frequency and importance of education and communication regarding changes



8. Show your work!

Summary: It is increasingly important to measure, track, and report on quality and productivity metrics

Example: Build custom reports, use discrete data where it makes sense

Time Investment



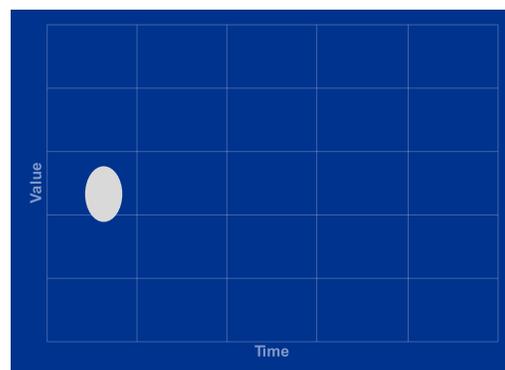
Custom report of patients 65+ at once hospital without Advance Directive, not seen by chaplaincy: ++

Suggested Informatics Resources and Tips



Discuss how presence/absence of various properties are defined (Advance Directive, POLST form, Palliative Care inpatient vs outpatient consult)

General Principle to Keep in Mind: If you don't define your success, someone else will



9. Informatics projects can be a lot like delirium

Summary: You should expect some waxing and waning deliberation, the need to monitor closely for the foreseeable future, and that what you try first may not end up being the best solution

Example: Changing Providence's Desired Level of Medical Care to better align with provider workflow

Time Investment



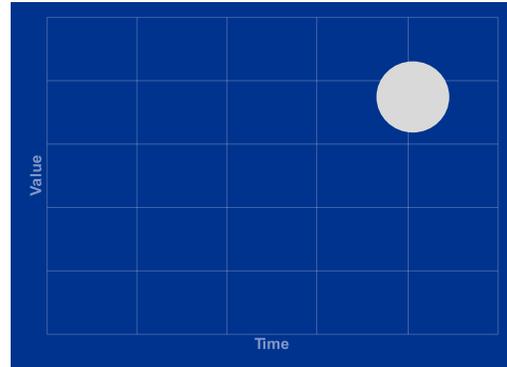
Changing DLMC workflow: +++
Total DLMC project: +++++

Suggested Informatics Resources and Tips



Analysts proficient with rules and logic build
Always remember your cutover strategies

General Principle to Keep in Mind: Build for the problem you have but don't be afraid to change the solution or realize it's a different problem



Top 10 Best Practices for Serious Illness care in the EHR

10. Build your community

Summary: Informatics can be a black box to many clinicians, but partners exist and want to help

Example: This webinar!

Time Investment



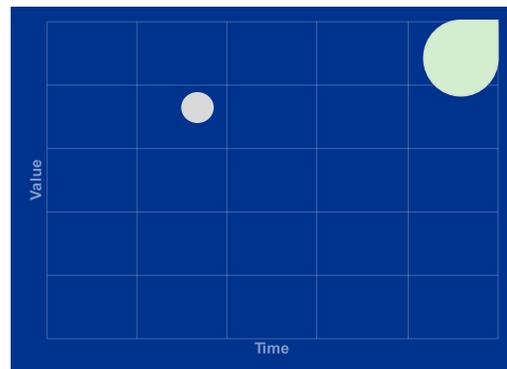
For you: +
For us: Priceless

Suggested Informatics Resources and Tips



Ask your informatics teams if there are clinical decision pathway workgroups and join ones of interest
Take superuser/PowerUser classes if available
For Epic: UserWeb, Earth

General Principle to Keep in Mind: The more we silo medicine and informatics, the less they will be able to meet our needs



Top 10 Best Practices for Serious Illness care in the EHR

Appendix C: Example of Providence's custom Advance Care Planning summary page

Code Status Full/DNR <i>Date</i> <i>Additional detail:</i>	POLST Yes/No <i>Date</i> <i>Additional detail:</i>	Advance Directive Yes/No <i>Date</i> <i>Additional detail:</i>	Goals of Care <i>Date</i> <i>Additional detail:</i>
Code Status History			
POLST			
Advance Directive			
Goals of Care Notes			

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Appendix D: Desired Level of Medical Care orders

Desired Level of Medical Care

Intubation and Mechanical Ventilation	<input type="button" value="No"/>	<input type="button" value="Yes"/>	<input type="button" value="Not Addressed"/>
Noninvasive Ventilation	<input type="button" value="No"/>	<input type="button" value="Yes"/>	<input type="button" value="Not Addressed"/>
ICU Level of Care	<input type="button" value="No"/>	<input type="button" value="Yes"/>	<input type="button" value="Not Addressed"/>
Permanent Artificial Nutrition	<input type="button" value="No"/>	<input type="button" value="Yes"/>	<input type="button" value="Not Addressed"/>
Desired Level of Medical Care Discussed with:	<input type="button" value="Patient"/>	<input type="button" value="Parent of Minor"/>	<input type="button" value="Patient Representative"/>

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