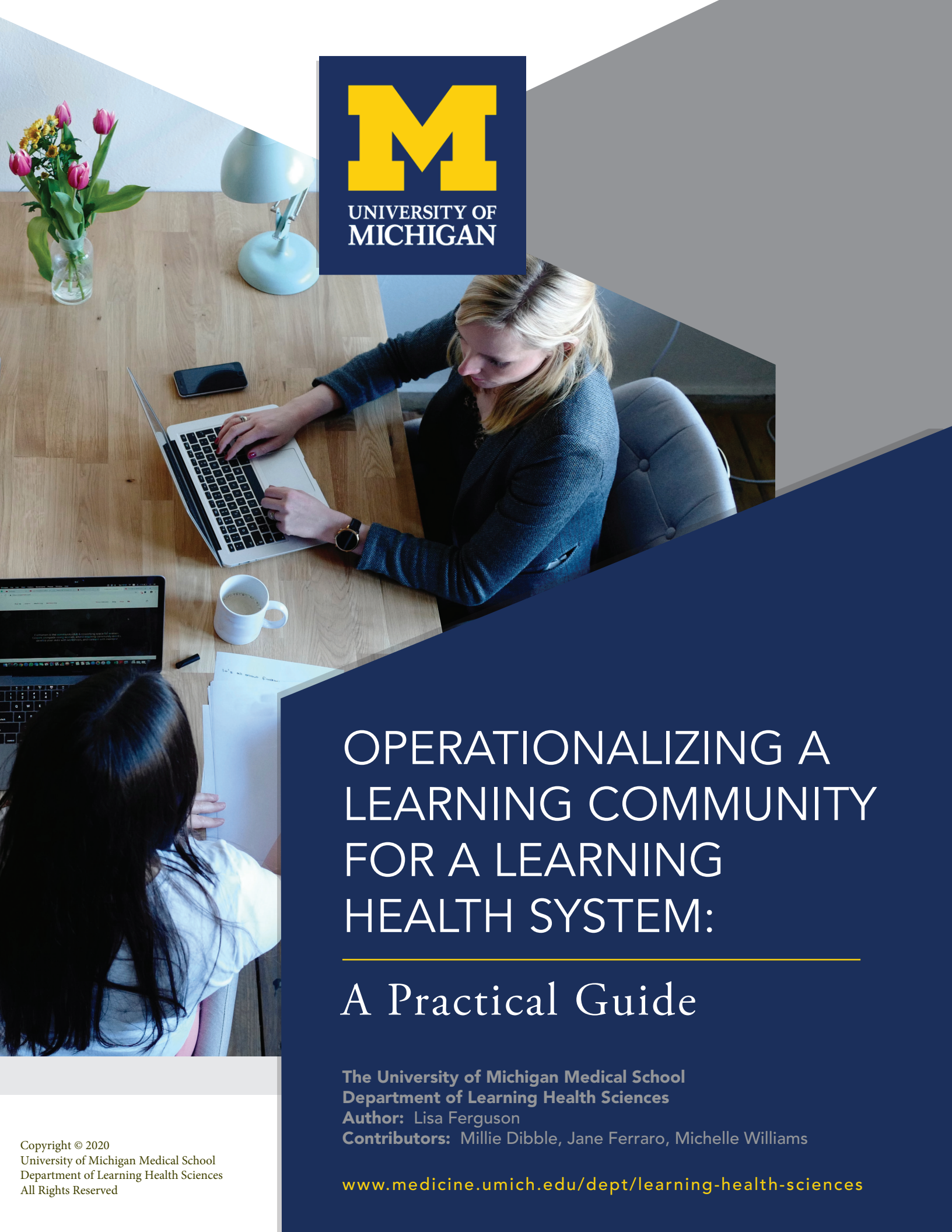




UNIVERSITY OF
MICHIGAN



OPERATIONALIZING A LEARNING COMMUNITY FOR A LEARNING HEALTH SYSTEM:

A Practical Guide

The University of Michigan Medical School
Department of Learning Health Sciences

Author: Lisa Ferguson

Contributors: Millie Dibble, Jane Ferraro, Michelle Williams

www.medicine.umich.edu/dept/learning-health-sciences

TABLE OF CONTENTS

Using This Guide	3
Learning Health System (LHS) Overview	4
LHS Project Approach	5
LHS Learning Community: An Overview	8
Operationalizing the LHS Learning Community: A Phased Approach	9
Plan	9
Initiate	23
Implement	38
Sustain	48
Additional Information and Reference Materials	54

USING THIS GUIDE

This guide is intended as a practical resource that can be used when forming and operationalizing a learning community as part of a learning health system. It was initially developed by contributors from the University of Michigan Department of Learning Health Sciences during the 2019 calendar year based on different experiences with planning and operationalizing LHS learning communities and should be. This guide is intended to be used as a starting point for those interested in forming an LHS learning community. Information and concepts included in this guide can be tailored and modified for use as needed. This guide will continue to be expanded upon as more is learned through future experiences with forming and maintaining learning communities as part of Learning Health System projects. We also envision this guide to eventually become a component of a larger toolkit that can be used for operationalizing entire LHS projects.

Included in this guide are detailed descriptions of activities, best practices, challenges and approaches as well as sample tools, templates and resources for operationalizing a learning community for a Learning Health System. For reference and ease of use, this information has been segmented into a framework that represents a phased approach to operationalizing the learning community. As such, the materials in this guide have been organized by policy, technology, process and people components that correspond to each operational phase. The phases are outlined below:

- **Plan** – initial planning activities and tasks that are undertaken prior to starting a learning community
- **Initiate** – activities and tasks involved in initiating a learning community
- **Implement** – activities and tasks involved in operationalizing a learning community
- **Sustain** – activities and tasks involved in sustaining (or re-engaging) a learning community

LEARNING HEALTH SYSTEM (LHS) OVERVIEW

The Learning Health System (LHS) is an ideal-state system in which a multi-stakeholder learning community that possesses a shared interest in solving a particular health-related problem utilizes system infrastructure to undertake a cyclical process to improve performance and health.

The LHS is a Collaborative Socio-technical System that is all-inclusive, trusted, decentralized and reciprocal (Friedman, 2019). The LHS approach, described as a learning health cycle, is focused on capturing data from clinical encounters and other health-related events (practice to data: P2D), analyzing the data to generate new knowledge (data to knowledge: D2K), and then applying this knowledge to continuously inform and improve health decision making and practice (knowledge to practice: K2P). The lessons of improved performance from each are used to inform and refine the next cycle of gathering data (P2D), which initiates the next iteration. Successive iterations of the cycle aim to continue to identify best practices and improve outcomes. These learning cycles (Figure 1) are undertaken by collaborative learning communities. The formation of learning communities is a key differentiator of the LHS approach from other quality improvement methods. (Nwaru, Bright, et. al., 2017)



LHS PROJECT APPROACH

While this guide's primary purpose is to focus on the aspects of forming, implementing and maintaining an LHS Learning Community, this section first provides some overarching information about Learning Health System projects in general.

PROJECT FRAMEWORK

The Learning Health System has been written about for several years, yet it is still emerging from a practical, operational and implementation perspective. To start, how do you know if you have an LHS project, and as such, if a learning community should be formed? To help answer this, when embarking on a potential project, it might be helpful to first evaluate it against one or more LHS frameworks or criteria that will help to identify the project as an LHS project.

A few articles from recent literature about LHS frameworks, components, elements, etc. are listed in the Additional Information and Reference Materials section at the end of this guide.

There are also many other helpful references and information about key aspects of Learning Health Systems including publications available through resources such as the Agency for Healthcare Research and Quality (AHRQ) (<https://www.ahrq.gov/>), the National Academies of Health (<http://www.nationalacademies.org/hmd/>) and the Learning Health Systems Journal (<https://onlinelibrary.wiley.com/journal/23796146>).

While there are many components that comprise an LHS project, there are key elements of the work to be sure to address up front include funding, availability and accessibility to required data and sustainability. All of these can represent barriers, risks, challenges and even show stoppers for the project, so it is never too early to start planning for them.

PROJECT FUNDING

Before starting an LHS project, work should be done up front to identify funding source(s) for the work. Is there a grant that will cover all or a portion of the project work? Will there be cost-sharing among organizations for the effort? Will the work not be funded at all with an expectation of in-kind contributions? These are important considerations that should be fully outlined and made transparent at the outset of an LHS project, and is something that should be shared with the learning community, once formed.

PROJECT DATA

Before starting an LHS project, be sure to understand what data might be needed. Is data available? Accessible? How will it be obtained, analyzed and measured? Does it need to be reported? How and to whom? Without the availability of data and the ability to measure it, it will be extremely difficult to determine what knowledge has been learned, and what impact any potential interventions have had.

PROJECT SUSTAINABILITY

Even as you are planning an LHS project, it is not too soon to be thinking about a sustainability plan. Later in this guide there is more information about factors relative to sustaining an LHS learning community, but there should also be a larger sustainability plan that addresses the entire project, not just the learning community itself.

* —> **Best Practice Tips:**

1. **Check the box: An LHS checklist.** After evaluating LHS literature, use an assessment tool to compare your proposed LHS project against in order to help validate the presence of key LHS components. This tool, or checklist, should include LHS core 'elements' as obtained from the literature. The tool can be developed using EXCEL or other software and can be used to help with aspects of project planning, and is also something that can be continually updated and shared with others.

* —> **Challenges:**

1. **Defining a Learning Health System.** Particularly in the healthcare setting where many are used to hearing about or participating in Quality Improvement projects, Continuous Improvement projects, general 'Best Practice' implementation projects, etc., there may be confusion around what an LHS project is and how this work may be similar or different from these other types of projects. As a result, this may cause project delays and ineffective stakeholder engagement.

Be prepared for this challenge by:

- Being aware of this as a potential issue
- Proactively preparing to address this issue by:
 - o Preparing a Project Checklist or Evaluation Tool which includes applicable elements and criteria specific to an LHS
 - o Ensuring that all presentations and meetings, particularly at the beginning of the project, include this as a topic or agenda item to help facilitate understanding throughout the learning community

* —> **Sample Tools, Templates and Resources:**

1. **Learning Health System "Elements" Assessment Tool (pg 7).** This tool was developed in 2017 by the Implementation and Process workgroup of the University of Michigan LHS Collaboratory (dlhs-umi.ch/lhs-collaboratory). This is an EXCEL spreadsheet that can be used as a tool/checklist with which to evaluate the presence of key LHS elements for a proposed project.

Sample LHS Elements Assessment Tool



Spreadsheet Element Name	Description	High-Level Definition
Project Name	Name of the project	
Problem of Interest	Focus area for the problem	Vetted by learning community/key stakeholders
Outcomes	Clear Objectives (Consensus)	Does the effort have clear objectives?
Value Propositions	Clear Value Proposition	Is the value proposition provided clear and compelling?
Outcome Measurement	Outcome Measurement	Are there effective outcome measures?
Feedback to Practice	Feedback to Practice - Effective Learning Adaptation	Is there an effective path to inform ongoing practice based on the effort's outcomes?
Stakeholder Support	Stakeholder Support	Is there strong support from stakeholders -- clients, practitioners, funders, general public? Are all stakeholders represented? Is there a learning community?
Scale	Appropriate Scale	Does the project inform efforts to be undertaken at different scales (practice, care organization, local, state, national, global, etc.)
Effective Leadership	Effective Leadership	Does the effort have effective and robust leadership structure in terms of influence, sustainability, etc.?
Effective Governance	Effective Governance	Does the effort have effective and sustainable governance?
Adequate Funding	Adequate Funding/ Viable Business Model	Is the effort adequately funded?
Learning Health Initiatives	Linkage to other Learning Health Systems Initiatives - Learning from them - Providing guidance to them - Discovering intellectual connections	Does the effort contribute to the development of the broader Learning Health System?

Sample LHS Elements Assessment Tool cont'd.



Spreadsheet Element Name	Description	High-Level Definition
Infrastructure	Infrastructure - Data capture - Analysis - Output to clients	Does the effort include useful and reusable infrastructure?
Sustainability	Sustainability plan	Is there a plan to move from research/pilot to full operations?
Strength of Actions	Strong, intermediate or weak action plans	Use quality primary analysis categories to determine strong, intermediate or weak action plans
Policy	Develop related policies and procedures	Education/Error proofing; encouraging people to "act better"

LHS LEARNING COMMUNITY: AN OVERVIEW

WHAT IS A LEARNING COMMUNITY?

Forming a learning community is one of the first steps, if not the first step of starting an LHS Project. A learning community allows people with shared values and a common purpose to organize for projects that address problems of mutual interest (Forrest, Margolis, et. al., 2014). Effective learning communities are comprised of multiple stakeholders and are all-inclusive, collaborative, creative and practical in approaching a health problem of interest. Learning communities connect people who are interested in learning and working across boundaries and who are accountable to a common agenda, metrics, and outcomes. The learning community enables participants to share results and learn from each other, thereby improving their ability to achieve significant progress toward addressing a problem of interest.

KEY CHARACTERISTICS OF A LEARNING COMMUNITY

- Pursues a shared goal or problem
- Driven by “passion” to achieve the goal
- Not top-down; has a leader that is a facilitator
- Multi-stakeholder, collaborative and practical
- Shares results and learns from each other
- Continuous
- Accountable
- Employs strategies that are “co produced”; progress comes from the whole community
- Ensures no one dominates

BENEFITS OF A LEARNING COMMUNITY

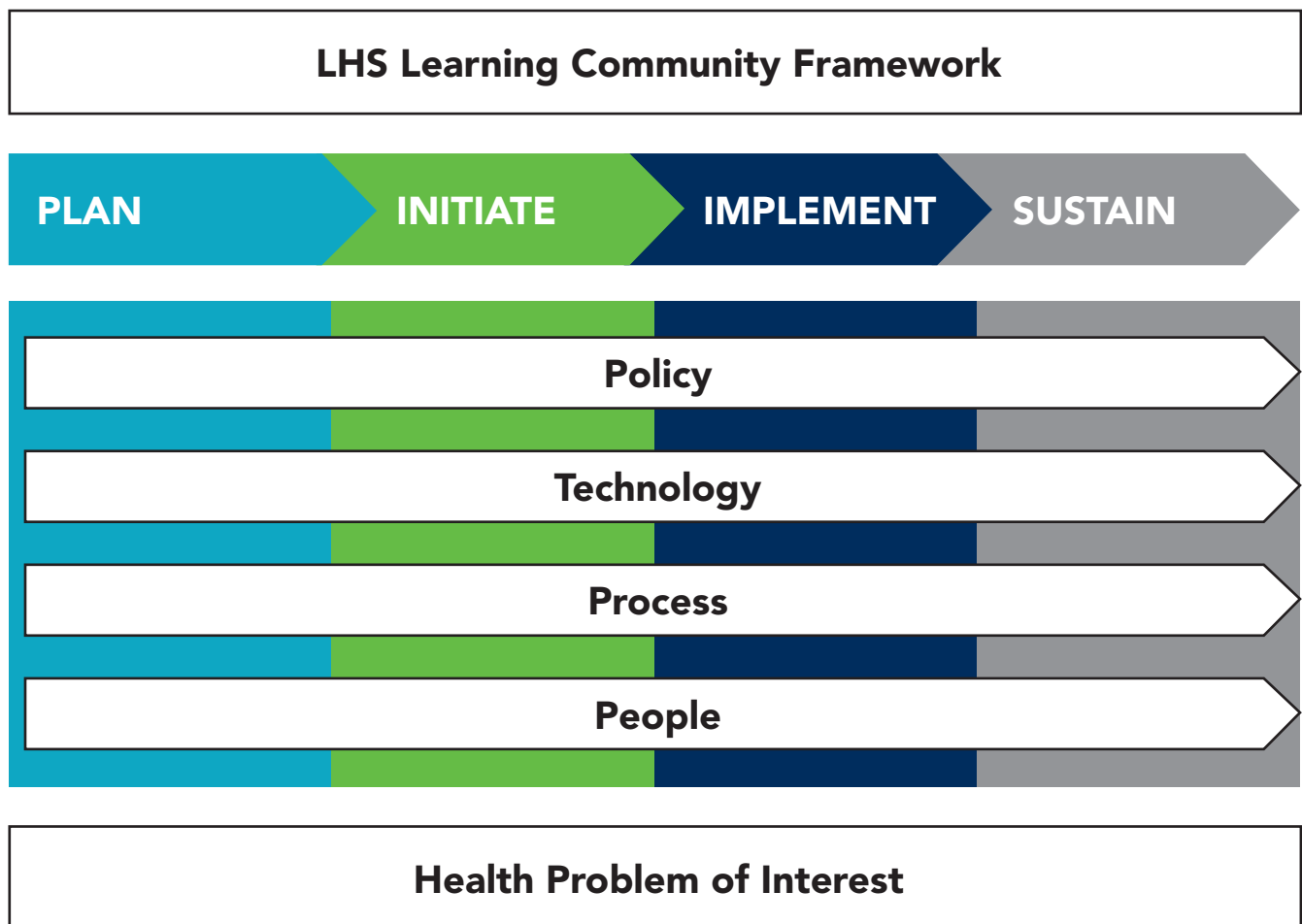
1. Creates shared values and a common vision around a problem of interest
2. Enables a structure for addressing a problem of interest across multiple learning cycles
3. Fosters relationships among multiple stakeholders that are passionate in their pursuit of a common purpose
4. Increases buy-in around the problem of interest
5. Provides the opportunity to develop a 360°, multi-stakeholder view of all aspects of a problem of interest
6. Offers access to a variety of resources needed to address a problem of interest
7. Facilitates solutions that are not mandated from the top-down
8. Creates an environment where strategies can be “co-produced”
9. Maintains continuity and supports sustainability efforts across multiple learning cycles

Best Practice Tips: ←—————★

1. *Defining an LHS learning community.*
Information about what a learning community is and the characteristics and benefits of a learning community can be very helpful throughout the PLAN and INITIATE phases of forming a learning community. Specifically, this information is helpful for:
 - Socializing the idea of starting a learning community
 - Informing various presentation materials (e.g. Kick-Off Meeting presentation)
 - Supplementing learning community documentation (e.g. Charter)

OPERATIONALIZING THE LEARNING COMMUNITY: A PHASED-APPROACH

The process of forming, implementing, operationalizing and sustaining a learning community is comprised of many activities and tasks across policy, process, technology and people. For purposes of visualizing this work and for ease of execution, this guide breaks down these activities and tasks into phases: Plan, Initiate, Implement and Sustain. Each phase is described in detail in the following sections, and includes sample templates and artifacts that are applicable to each.



PLAN

The **PLAN** phase of operationalizing a learning community essentially begins when talk turns seriously to the idea of starting a Learning Health System project around a problem (or problems) of interest.

Generally, there is a core group of key stakeholders that have decided to partner to address a problem(s) of interest and who are usually also responsible for conducting the planning work described in this guide.

LHS Learning Community Framework

PLAN

- Policy**
- Develop learning community structure and governance •
- Technology**
- Assess data needs for problem(s) of interest •
- Process**
- Outline funding plans for learning community •
 - Define problem(s) of interest •
 - Conduct pre-project survey/questionnaire •
- People**
- Determine appropriate stakeholders for Learning Community •

IDENTIFYING A PROBLEM OF INTEREST

A problem of interest has typically already been identified at the outset of a Learning Health System project. The problem of interest may be fully formed at this time, or, there may still be some more work, information gathering, or discussion needed in order to flesh out the problem. At a minimum, there is generally at least an idea of what will be addressed with the problem(s) of interest ultimately representing the key area(s) on which the learning community will focus their efforts.

The learning community will not only provide a broader perspective on the context of the proposed issue, but may also bring forth ideas of related – or even different - problems that should also be considered and addressed. These additional ideas may turn out to be of greater interest, or, be of higher priority to the collective learning community than the originally-identified problem(s) of interest. As a result, it is helpful to get a sense of what the learning community's interests are and ensure that all stakeholders are represented as part of the learning community before settling on a problem of interest.

IDENTIFYING A PROBLEM OF INTEREST (*cont'd.*)

One way to help learning communities surface a pertinent problem(s) of interest, is to have members of the learning community complete a Problem of Interest Prompt Form. This form can be submitted anonymously, or, can include the respondent's name. Regardless, the information gathered via this form can be synthesized and presented to the entire learning community for discussion.

Another method for surfacing a problem of interest is to present one such problem for review and open discussion at the initial kick-off meeting for the learning community.

Yet another, more complex method of surfacing a problem of interest may be to conduct a current state/future state analysis. This approach involves additional time and resources up front, however, the identified gap(s) between the current state and the envisioned future state may yield specific problem(s), and the process may also result in the emergence of potential interventions.

* —> **Best Practice Tips:**

- 1. Stakeholder engagement.** Encourage the participation and input of all stakeholders in the learning community to help determine the problem of interest. Ensure that each individual member of the learning community has an equal say in determining what the group will work on. If there is a tendency toward hierarchical or power imbalances within the group, having individuals provide input toward the problem of interest anonymously may be a good approach.
- 2. Learning community evaluation.** Think ahead about any surveys you may want to conduct, or questionnaires that you may want to administer. Conducting project surveys before the project starts, during the project and after the project are very helpful ways of not only collecting data about the problem of interest, but also to assess the learning community itself and to obtain feedback on how things can be improved for future projects. Thinking about these types of things in advance helps avoid missed opportunities for evaluation, assessment and capturing lessons learned.
- 3. Learning community sustainability.** How long will the learning community be in place? What are sustainability components to be considered (e.g. funding, stakeholder engagement, problem(s) of interest, etc.)? It is not too soon at this time to be thinking about how a learning community will be sustained for the long-term.
- 4. Unsuitable problem(s) of interest.** Not all problem(s) of interest are appropriate for a learning community. For example, if there is a problem that requires immediate attention/intervention, then this is most likely a problem that would not be addressed by a learning community. Rather, it would be handled through existing management and operational channels.

* —> Challenges:

1. *Lack of appropriate data.* When deciding on the problem(s) of interest to address, circle back to any pre-planning thinking that was done around data when the LHS project began. Has anything changed? Is there still a plan in place to ensure the availability of, and accessibility to, the appropriate data? There needs to be a quantitative method for confirming that the problem exists currently, and also methods available to measure progress against the problem as interventions are implemented. This all requires data.

Be prepared for this challenge by:

- Being aware of this as a potential issue
- Pro-actively preparing to address this issue by:
 - Conducting an initial investigation into whether there is data available to support the problem of interest the learning community is trying to address
 - Presenting existing data to support the problem of interest – this could be done as early as during the initial kick-off meeting for the learning community
 - Identifying how and when data measurements will be obtained and communicated to the learning community

* —> Sample Tools, Templates and Resources:

1. *Problem of Interest Prompt Form (pg. 18).* This is a form that can be used for eliciting feedback from the learning community about a problem of interest.
2. *LHS MM Collaboration Form (pg. 19).* This is a tool that was developed by the University of Michigan Department of Learning Health Sciences (DLHS) LHS Michigan Medicine (MM) Team. The tool was developed initially using WORD, and was eventually incorporated into the DLHS website as an intake form for MM departments who were interested in partnering with DLHS on projects to put learning health system principles into practice. The information on this form can be used as a type of “checklist” to assist with planning for both the project in general, and, for the learning community.

FORMING A LEARNING COMMUNITY

The impetus to form a learning community is often prompted by a core group of key stakeholders that already have an idea of what problem of interest they would like to focus on. As such, an important first task at the beginning of a Learning Health System project is to form a learning community around the problem of interest. More detailed information about important things to consider when forming a learning community are outlined next.

Identifying Key Stakeholders

To begin identifying key stakeholders that will eventually comprise the learning community, first generate a list of people who are directly involved or related to the problem(s) of interest, those who may be tangentially related, interested or drawn to the problem(s) of interest, and those who are in positions of knowledge and who are within the unit, department, area or group for the problem(s) being considered.

Identifying Key Stakeholders (cont'd.)

It is extremely important to include individuals who have various roles so that a full, 360-degree picture of the problem(s) can be represented within the learning community. For example, in clinical areas, it might be easy to assume that physicians are the key personnel that would be part of a learning community that is addressing a health problem of interest. However, unintentionally leaving out other key stakeholders would be problematic to the full functioning and impact of the learning community. As a result, in this case, it is important to consider including not only physicians, but also medical assistants, nurses, medical technicians, patient educators, patients themselves, and any others who would be able to enable a learning community to have a full picture of the problem(s) of interest.

* —> Best Practice Tips:

1. **"Hidden" stakeholders.** Don't forget to think of stakeholders that may not be as obvious to the problem(s) of interest. Some examples include payer representatives, individuals from the IT department, the quality department, domain experts and representatives of institutional data warehouses.
2. **Dissemination of the stakeholder list.** Once a list of potential stakeholders is started, be sure to circulate it far and wide to confirm that you aren't missing key perspectives as part of the learning community. In fact, it may be useful to hold one or more initial meetings with identified stakeholders to generate consensus that the list is complete, and/or to help generate a list of additional stakeholders who may be relevant to the problem(s) of interest.

Patient Stakeholders and the Learning Community

Ideally, it is best to have patients (caregivers or family members) as part of a learning community whenever possible, especially one that is being formed around a health-related problem of interest. These individuals are invaluable in bringing first-hand knowledge to the table about a particular problem of interest and also serve to galvanize the learning community by being a source of passion around a problem of interest.

There are however, some instances when having a patient (caregiver or family member) as part of the learning community may not be appropriate, or, may be appropriate at a later point - - just not at the initial formation of the learning community.

Things to evaluate when considering patients (caregivers or family members) as part of a learning community:

- Sensitivity of topic/problem(s) of interest
- Patient time and availability
- Required medical and/or domain knowledge

* —> Best Practice Tips:

1. **Engaging patients** Patients, caregivers and/or family members for inclusion in a learning community can be found through a number of sources including: Physician referrals, contacting the Office of Patient Experience (or similar) at a health system, and contacting patient advocacy groups, agencies, non-profit organizations or networks specific to a particular health condition.

Number of Learning Communities

It may be the case that multiple learning communities will need to be formed. Evaluation of whether there is one learning community or multiple learning communities may be dependent upon criteria such as:

- The complexity of the problem(s) of interest
- The number of problem(s) of interest
- Locations of key stakeholders, or, where the work is performed
- Who performs the work
- Availability of learning community members

Learning Community Structure

Once all key stakeholders have been identified, it is important to consider how the learning community will be structured and to plan accordingly.

The Learning Community is multi-faceted and includes several components that need to function jointly to provide strategy, management, administration and operational oversight of the Learning Community. **One structure that works well for learning communities is multi-tiered and consists of the following levels: 1) The Learning Community at Large; 2) A Core Leadership (Planning) team; 3) Individual workgroups.** Each of these levels is described in more detail, below.

Learning Community

- Members of a Learning Community include all relevant stakeholders for a specific problem of interest.
- The functions of the learning community include the following:
 - Allow the opportunity to share stakeholder perspectives with each other
 - Request input from the entire stakeholder community regarding proposed interventions, solutions, next steps, etc.
 - Provide the opportunity for collective creativity and innovation
 - Allow discussion around the problem of interest
 - Assess overall progress
 - Identify roles and responsibilities
 - Identify and implement interventions
 - Identify risks, challenges and mitigation plans
 - Report and celebrate successes
 - Administer budget and finances
 - Identify and solicit funding
 - Understand and incorporate compliance and regulatory items
 - Prepare for sustainability
- Meetings of the entire learning community are recommended every 4-6 weeks, with the flexibility to change frequency as needed.

Core Leadership Team

- The Core Leadership Team (or, could also be called Coordinating Committee or Planning Committee) is generally a smaller team (<10) of individuals representing a subset of the larger learning community. This team can be comprised of individuals with various roles such as:
 - Key leaders (e.g. faculty leads, clinical leads, etc.)
 - Project Manager
 - Administrative Assistant
 - Data Lead
 - Quality Representative
 - Patient Advisor
- The functions of the Core Leadership Team include:
 - Providing direction and approach for the learning community
 - Providing management and administration functions for the learning community
 - Raising, discussing and mitigating risks
 - Identifying and engaging required resources
 - Facilitating supportive and shared leadership
 - Ensuring appropriate documentation is created, stored and made accessible
- Meetings of the Core Leadership Team are recommended every 1-2 weeks, with the flexibility to change frequency as needed.

Working Groups

- Working groups within a learning community are smaller teams (<10) of individuals representing a subset of the larger membership. This team is generally comprised of the following roles:
 - Subject matter/domain experts
 - Data lead
 - Project Manager
 - Others as needed
- The purpose of the working group is to dive more deeply into a specific aspect, or a specific intervention related to the problem of interest being addressed. The working group is generally tasked with doing the actual work related to interventions that have been approved by the larger learning community and bringing updates back to the learning community.
- Meetings of the working groups occur on an as-needed basis.

LEARNING COMMUNITY STRUCTURE - SUMMARY

Component	Membership	Purpose	Meeting Frequency
Learning Community	All relevant stakeholders	Facilitates information-sharing, decision-making, idea generation, etc.	Monthly
Core Leadership Team	Subset of larger learning community	Provides management and administration	Weekly Bi-Weekly
Working Group	Subset of larger learning community	Works on specific tasks or interventions	As Needed

* —> Best Practice Tips:

1. **Learning community roster.** Once all stakeholders have been identified, create a roster for the learning community. Items to include on this list in addition to names are: titles, locations, email addresses and designations in regard to their role in the learning community (e.g. Core Leadership Team). This document will be helpful in informing and/or creating things like email distribution lists, providing access to shared document repositories, and will help continually ensure that the learning community includes all appropriate stakeholders.

* —> Challenges:

1. **Learning community roster maintenance.** Keeping the learning community roster up-to-date as people join and leave can be a forgotten task. Be prepared for this challenge by:

- Assigning this task to two members of the learning community (primary and back-up) so that there is always someone that knows this responsibility is part of their role. This is generally someone who resides on the Core Leadership Team (or equivalent).
- Ensuring that there is a regular review of the roster – this timeframe can be something that's documented as part of the learning community charter.

* —> Sample Tools, Templates and Resources:

1. **Learning Community Comprehensive Stakeholder List (pg. 21).** This lists all members of the learning community.

Sample Problem of Interest Prompt Form

LEARNING COMMUNITY PROBLEM OF INTEREST WORKSHEET



PURPOSE: To help members of a learning community articulate potential problems of interest that can be collaboratively addressed.

1) What are the greatest opportunities for improvement within your unit?

2) In your daily work, what processes create the biggest inefficiencies, or barriers to getting your work done?

Name (Optional): _____

Role (Optional): _____

Sample LHS MM Collaboration Form

LHS MM COLLABORATION



Description - Describe the problem of interest	
Request Date	
Department/ Affiliation	
Contact Name/ Phone/ Email	
Timeline for completion	
Primary Objectives	
Nature of Initiative - e.g. Research, Quality, etc.?	
Planned Intervention(s), if any	
Priorities - How important is this and why?	
LHS MM Contact(s) - Are you already working with someone in the department or do you know who you would like to work with?	
Resources - What resources do you have available to do this work?	
Optional - Items below this line are optional. Please fill out as much as you are able, but we do not expect you to be able to fill out everything to completion at this stage.	
Data - e.g. quality, fitness for use, access, analytics and storage requirements	
Success Measures - e.g. goals, metrics/criteria, tracking	
Stakeholders - e.g. to be identified and engaged, community involved	
Related Projects - e.g. those with similar goals, resources, teams	

Sample LHS MM Collaboration Form

LHS MM COLLABORATION CONT'D.



<p>Ongoing Collaborations - e.g. those that might be working on similar areas</p>	
<p>Patient Engagement - e.g. plan for patient engagement</p>	
<p>Target Users/Audience - e.g. roles and priorities to be served by new/revised intervention or solution</p>	
<p>Evaluation Design</p>	
<p>Technology Requirements - e.g. platform, application(s) dependencies including enterprise systems, database licensing or specific tools/ applications (may involve Office of Tech Transfer (OTT))</p>	
<p>Constraints - e.g. in terms of budget, scope and timing</p>	
<p>Maintenance and Support - e.g. for technology, performance tracking, success metrics, etc.</p>	
<p>Ethical, Legal and Social Issues - e.g. regulatory, compliance, etc.</p>	
<p>Other Considerations - e.g. staffing or skill set needs, sustainability requirements. etc.</p>	
<p>Next Steps</p>	

Sample Learning Community Comprehensive Stakeholder List

	Site 1	Site 2	Site 3	Site 4
Endoscopy Technician	Name 1, Name 2		Name	Name
LPN	Name		Name	
RN	Name 1, Name 2, Name 3		Name 1, Name 2	Name 1, Name 2
Nurses Education Coordinator			Name	
Nurse Manager	Name	Name	Name	Name
Nurse Supervisor		Name	Name	
Int-Med Project Consultant	Name			
Dept of LHS	Name 1, Name 2, Name 3			
MCIT	Name			
MDs	Name 1, Name 2, Name 3, Name 4, Name 5, Name 6, Name 7			
Call Center Clerk	Name			
Call Center Supervisor	Name			
MA Patient Instructor Taubman Pod D Gastroenterology	Name			

Email Distribution List =

Project Repository =

UM GI - LC Coordinating Team				
Name	Name	Name	Name	Name

INITIATE

The **INITIATE** Phase of operationalizing a learning community can be considered to begin once a comprehensive stakeholder list has been developed for the learning community, a basic structure for the learning community has been developed and the group is ready to come together for the first time.

Please note that the activities and tasks in the PLAN and INITIATE phases may overlap with one another, however, the INITIATE phase involves work that is more focused on commencing the learning community and getting it off the ground.

LHS Learning Community Framework

INITIATE

Policy

- Develop learning community Mission and Charter •

Technology

- Deploy technology to support learning community •
- Continue to pursue data requirements for problem(s) of interest •

Process

- Establish learning community infrastructure components •

People

- Socialize LHS approach and learning community concepts •
- Conduct kick-off meeting •

KICKOFF MEETING

Once all appropriate stakeholders have been identified, the learning community can be brought together for a “kick-off” meeting. The purpose of the kick-off meeting is to successfully initiate the learning community and as such, the focus of the meeting should be primarily about instantiating a solid foundation for working together. This first meeting establishes initial impressions for all stakeholders and is key to a successful launch of the community. Professionalism, organization, inclusion, comradery and friendliness are key components of the learning community kick-off meeting.

KICKOFF MEETING *CONT'D.*

Considerations for scheduling the kick-off meeting (as well as subsequent meetings) include the following:

- **Timing and Location** - Schedule the kick-off meeting for a time and place when as many of the Learning Community stakeholders are able to attend as possible. Be sure to issue availability polls in advance before choosing a meeting date and time. It may be that more than one kick-off meeting will need to be scheduled with identical agendas. Ensure that there are remote participation options available for the meeting.
- **Agenda** – Below is a list of potential agenda topics for a Learning Community kick-off meeting. These can be tailored based on the needs of the stakeholders and the community overall. Some communities may not know one another well, so there will need to be a lot of focus on getting to know each other. Other communities may already have a fairly good idea about the problem of interest they want to focus on; while some may need to work on developing their problem of interest.
 - a. Introductions
 - b. Team-building/ice-breaker activity
 - c. Overview of the Learning Health System (LHS) approach
 - d. Overview of Learning Communities and their function in an LHS
 - e. Overview/background on department(s) represented by the community
 - f. Discussion of potential problem(s) of interest – or – activities intended to generate problems of interest
 - g. Introduction of Learning Community core/coordinating team; request volunteers
 - h. Develop Learning Community Charter and Mission Statement
 - i. Identify timeframe for next meeting and ongoing meeting cadence
 - j. Review of next steps/action items

Allow for at least 90 minutes for the kick-off meeting. Subsequent meetings can be reduced in time, but for the first meeting, and to allow for comprehensive introductions and discussion, more time will be needed.

KICKOFF MEETING *CONT'D.*

- o **Meeting Materials** – Beyond the agenda, you will want to think about the need for additional meeting materials such as:
 - a. Sign-in sheet – include a pre-printed list of all members of the learning community; members can check-off their name upon arrival.
 - b. Pens and paper – include pens and paper so members can jot down ideas, suggestions or questions.
 - c. AV equipment – most rooms have built-in equipment, but if not, be sure to bring a projector, microphones, speaker phones, etc.
 - d. Flip chart and markers – if there is going to be brainstorming or other discussion requiring the capture of key points, consider bringing a flip chart and markers.
 - e. PowerPoint presentation – generally there are slides used to facilitate meetings; make sure presentations are quality checked in advance and ready at least the day before the meeting.
 - f. Roles and responsibilities – ensure that key roles and responsibilities are identified up front: 1) Who is presenting; if there are multiple presenters, designate who is presenting which section and how the handoffs will occur; 2) Who is taking notes? Someone should be designated to capture notes and action items; 3) Who is setting up the equipment? 4) Who is monitoring the sign-in sheet?
 - g. Refreshments – having food, particularly at the kick-off meeting, helps create a collaborative, comfortable environment for members. If there is food, ensure that there is something available to accommodate all dietary requirements and that someone is responsible for cleaning up after the meeting.

Learning Community Mission Statement

Upon forming, one of the first tasks a learning community might undertake, is to develop a mission statement to help guide their work. While optional, creating a mission statement focuses and directs the learning community by providing them with a shared understanding of purpose. The process of developing a mission statement also provides the learning community with the opportunity to create cohesion by working on something collectively, without having the added complexity that may be involved in future work.

Learning Community Charter

A learning community may also develop a charter document which provides a preliminary delineation of roles and responsibilities, outlines the objectives for the learning community, provides a framework for operating the learning community and identifies the main stakeholders. The charter serves as a reference of authority for the ongoing execution and future of the community.

Learning Community Infrastructure

Once a learning community is formed, it's essential to ensure that there is an appropriate infrastructure in place to support its functioning and to promote inclusivity and accessibility for the entire learning community. Below is a list of learning community infrastructure elements:

Email Distribution Lists

Establish appropriate email distribution lists for the learning community as needed:

- Learning Community
- Core Leadership Team
- Working Groups

Ensure that there is an established process for adding and removing learning community members as needed. Typically, this function is handled by the Core Leadership Team.

Meeting Rooms and Locations

Where will learning community meetings be held? Often, especially in a healthcare setting, conference room availability is at a premium. Ensure that rooms are booked in advance to accommodate the size of the meeting, the appropriate length of time for the meeting, and that they have the appropriate AV equipment to allow for presentations, remote participation, etc. Booking the meeting room at 15-30 min. in advance of the meeting start time is a good practice to allow adequate time to set-up equipment.

If meetings can be set on a regular cadence, book rooms well in advance. Ensure that meeting room locations are included in all meeting calendar invitations as well as on the agenda. Typically, this function is handled by the Core Leadership Team.

Remote Participation

Learning community members may not all be located in the same physical space. Ensure participation from all members by thinking about this in advance. Consider using remote participation options such as WebEx, Blue Jeans, etc. to connect members of the learning community. While encouraging in-person participation, have remote participation as an option for all meetings. Make certain that the remote participation links are included in all meeting calendar invitations as well as on the agenda. Typically, this function is handled by the Core Leadership Team.

Website, Collaboration Space and Document Repository

The learning community may have a need for a website where they will provide information about the learning community that can be accessed by the community members and others. This could include things such as upcoming meetings, announcements, project progress updates, learning community member names, etc. Consider what platform might be used to develop a web presence; possibilities include Google Sites, WordPress, and others. Is there a need to purchase a domain name? Also consider who will create the site and maintain it? Typically, the creation and maintenance of a learning community website is the function of the Core Leadership Team.

Separate from a website, the learning community may also wish to instantiate a Collaboration Space, or Commons. This space might include blog posts, sharing of articles and news, updates regarding project progress, detailed work efforts and associated documentation, requests for collaboration among learning community members, etc. Consider what platform might be appropriate for this; possibilities include SharePoint, Confluence, iMeet Central, Canvas, etc. Also consider who will create this space and maintain it? Typically, the administration of a shared space is the function of the Core Leadership Team, however, the space would be available for all learning community members to access and share information.

Document Repository

If the learning community does not have a website and/or a collaboration space, they require, at a minimum, a shared document repository. Consider what platforms could be used for this, and ensure that whatever is chosen is accessible by all learning community members. Possibilities include Google Docs, Box, SharePoint, etc. Do not consider using things such as a departmental shared drive for this function because if there are learning community members from outside a department, they would not have access to the shared drive. Also, some institutions do not allow access to Google applications due to security reasons, so that might not be an option either.

Having a shared document repository allows learning community members to store presentations, meeting agendas and minutes, project deliverables and timelines and other documents that need to be accessible to all members as reference.

There could also be multiple repositories in use. One might be for the entire learning community, there might be another for just the Core Leadership Team, and there could be other 'working areas' that are specific to workgroups addressing interventions.

Typically, the administration of the document repositories is the function of the Core Leadership Team, however, a space designated for the whole learning community would be available for all members to access, edit and view information.

Newsletters

Depending on the learning community, they may wish to develop newsletters or other regular communications to their members, as well as for conducting marketing and/or outreach activities. Consider platforms for creating electronic mailings including MailChimp, Constant Contact, sendinblue, etc. Typically, the creation and mailing of newsletters or other communications is the function of the Core Leadership Team. If there is not already someone on the team that has the skills and can handle the responsibility for creating and sending these materials, maybe there is a resource that can be shared from another area, or, if students are available, this could be a function performed by a student with final QA and approval by the Core Leadership Team.

Data Storage and Sharing

A primary component of LHS project work includes gathering and analyzing data. Be sure that there is a solution identified and ready that will accommodate the safe storage and sharing of data. The solution should be secure, HIPAA compliant and allow access to those who need it. Since a learning community may span multiple organizations, each organization may have specific IT, security and compliance requirements that must be met in order to utilize a specific solution. Be sure that there is enough time and proactive planning built into an LHS project to accommodate the data storage and sharing needs of the learning community.

Project Deliverables, Tasks and Timeline Tracking

Project deliverables, tasks and timeline tracking is essential to the operations of the learning community to ensure forward progress. All of these things may also need to be tracked at various levels. For example, the Core Leadership Team may have deliverables and tasks that are different from the Workgroup deliverables and tasks which may then be different still from the tasks of the larger learning community. Generally, the Core Leadership Team is responsible for tracking key tasks, dates and the responsible party for all levels of the learning community, although there may be members of specific workgroups that agree to track this information for their workgroup activities.

Depending upon the needs of the learning community and the complexity of the interventions being implemented, project tracking can be done using simple tools, or, more robust tools.

SOFTWARE PLATFORMS AND FUNCTIONS - SUMMARY

Functional Requirement	Software (Examples)
Email Distribution Lists	Outlook, Google
Collaborative Sharing Space/Commons	iMeet Central, Confluence, SharePoint, Canvas
Project Document Sharing Repository	Google Docs, Box, SharePoint
Website	WordPress, Google Sites
Remote Conferencing	WebEx, Blue Jeans, Zoom
Calendar Scheduling (Meeting Invitations)	Outlook, Google
Room Scheduling	ScheduOn (may be site specific)
Availability Polling	Survey Monkey, Doodle
Data Storage (Secure, HIPAA Compliant)	Box
Newsletters, Mailings	MailChimp, Constant Contact
Surveys and Questionnaires	Qualtrics, Survey Monkey, Google Forms
Project, Deliverables, Timeline and Task Tracking	EXCEL, MS Project, Trello

* —> Best Practice Tips:

- 1. Socializing LHS concepts.** Prior to the initial kick-off meeting, it might be helpful to socialize the concepts of the LHS and/or the learning community with key stakeholder groups. With limited time available at the kick-off meeting, doing legwork to communicate with key stakeholders in advance could help limit questions from the members at the kick-off meeting related to what an LHS is, or, what the function of a learning community is. This socialization could be done by attending and/or presenting at regular departmental staff or faculty meetings where key stakeholders would already be present.
- 2. Evaluate required roles and responsibilities.** If the Core Leadership team is lacking expertise to handle responsibilities such as creating and maintaining a website, or a shared collaboration space, or, for creating newsletters and other mailings, look into using sharing resources from another projects or other areas, or, if students are available, these functions could be performed by a student. If someone outside the Core Leadership Team does this work, all design, content, etc. should receive final QA and approval by the Core Leadership Team.
- 3. Stakeholder conflicts.** When scheduling learning community meetings, be sure to avoid choosing dates/times that may conflict with other standing events and meetings that already exist for learning community members (e.g. Grand Rounds, All Staff Meetings, etc.).
- 4. Sustainability considerations.** When creating infrastructure for the learning community operations, be mindful of sustainability plans. Try to create lasting infrastructure components that are aligned with the long-term sustainability plans of both the project and of the learning community.

* —> Challenges:

- 1. Physical location.** Learning community members may be physically separated by different locations. Be prepared for this challenge by:
 - Employing a reliable remote participation platform for all meetings
 - Having instructions for accessing the meeting remotely included in all physical locations, included in the calendar invitation and as part of the agenda document
 - Test AV equipment in all meeting locations
 - Assign one member of the Core Leadership Team to go to each location for all meetings. That individual can then ensure that meeting room and remote connections are available and ready to go at each location. This also helps with promoting inclusivity across the learning community.
- 2. Time constraints.** Learning community members often have limited time, particularly in the healthcare setting where often times, clinicians are part of the community. Be prepared for this challenge by:
 - Choosing meeting times that either start early in the morning (e.g. 7 a.m.), or, are held over lunch (e.g. 11-1 p.m.).
 - Doing as much pre-work as possible in advance of the learning community meetings. Have clear, crisp meeting agendas that allow effective use of the meeting time. Clearly outline goals and objectives of the meeting in advance and communicate this to the members. Send out materials and preparation work in advance of community meetings so that members can read and be prepared for the meeting discussion. Include maps, directions and other logistics information when sending out meeting reminders to help members get to the meetings on time. Ensure that someone is facilitating the meetings and keeping the discussion on track. Generally, this work falls on the Core Leadership Team.

* —> Sample Tools, Templates and Resources:

- 1. Learning community mission statement (pg. 29).** From the University of Michigan Gastroenterology Learning Community (GI-LC)
- 2. Learning community kick-off meeting agenda (pg. 30).** From the University of Michigan Gastroenterology Learning Community (GI-LC)
- 3. Learning community charter document (pg. 32).** From the University of Michigan Gastroenterology Learning Community (GI-LC)
- 4. Learning community website.** <https://ohca.med.umich.edu/> From the Out-of-Hospital Cardiac Arrest (OHCA) Learning Community.
- 5. Learning community newsletter (pg. 36).** From the Out-of-Hospital Cardiac Arrest (OHCA) Learning Community.

Sample Learning Community Mission Statement

“To provide a structure for an interdisciplinary team to unify around problems of interest and learn about them by linking data to knowledge and knowledge to practice to rapidly and continuously improve quality.”

Sample Kick-Off Meeting Agendas

SAMPLE 1



10 min	Introductions
10 min	Framework for Learning Community
15 min	Developing Learning Community Charter/Mission Statement
20 min	Defining Scope and Problem of Interest
5 min	Closing & Take-Aways

SAMPLE 2



Agenda Topic	Time
Introductions <ul style="list-style-type: none"> Name How long you've been in the department/at MM Title Favorite hobby/pastime 	10 min
<Department> Overview <ul style="list-style-type: none"> Services provided Typical workflow processes 	10 min
DLHS Overview <ul style="list-style-type: none"> Structure and focus of the department Focus on LKS Division 	10 min
Learning Health System Overview <ul style="list-style-type: none"> Learning Cycle (3-4 months) focused on a single problem of interest Importance of the Learning Community 	15 min
Open Discussion <ul style="list-style-type: none"> Problem of interest (individual exercise) Formation of the Learning Community 	40 min
Closing & Take-Aways	10 min

Sample Kick-Off Meeting Agendas (cont'd)

SAMPLE 3



Agenda Topic	Time
Welcome and Introductions	5 min
Patient Story	10 min
Learning Community Focus: <Problem of Interest> - what does the data tell us?	10 min
Stakeholder Perspectives Panel Key aspects to consider and address with this pilot project	15 min + 5 min Q&A
The learning health system approach: Forming a learning community	10 min + 5 min Q&A
Small group discussions: Where are the greatest opportunities for improvement?	15 min 10 min
Closing remarks and next steps: • Collect and review small-group results • Invite attendees to follow-up meeting	5 min

Sample Learning Community Charter Document

THE UNIVERSITY OF MICHIGAN GASTROENTEROLOGY LEARNING COMMUNITY CHARTER

GOALS, KEY AIMS AND APPROACH

The UM GI - LC will work towards consensus among the members regarding desired problems of interest to be explored, project scope, overall goals, alternatives and interventions.

The learning approach for the GI – LC will encompass:

- Interdisciplinary teams
- Challenging problems of interest
- Broader than a single “project”
- Problem(s) that the community cares about
- Readily available data
- Rapid cycles of data gathering

The GI – LC will aim to provide value through understandable, measurable outcomes in order to determine if something has improved. The GI – LC will also look for ways to visually represent progress against these measures.

The GI – LC will align our work with the University of Michigan Health System (UMHS) strategic priorities consisting of:

- Safety
- Quality
- Timeliness
- Financial stewardship
- People

The GI – LC will strive to have members learn new methodologies, tools and tips.

PERFORMANCE CRITERIA

The UM GI - LC will be considered a success if:

- A community group is established and remains intact
- Awareness of the learning health cycle, and opportunities among UM community has been raised
- Continuous learning becomes ingrained in the culture
- Opportunities to improve are identified
- Solutions and interventions are implemented quickly that improve patient care and create the ideal patient experience which includes, but is not limited to:
 - o Reducing patient wait time
 - o Expert care administered quickly and efficiently
 - o Minimizing patient burden
- The physician and employee experience is also affected positively by improving the patient experience and working to solve their issues
- Knowledge gained is actionable
- Community members obtain new skills

TERMS OF MEMBERSHIP

Members agree to volunteer for the UM GI - LC. A list of current members can be found in **Appendix A**.

Sample Learning Community Charter Document (cont'd)

THE UNIVERSITY OF MICHIGAN GASTROENTEROLOGY LEARNING COMMUNITY CHARTER

OPERATING GUIDELINES

Convening of Meetings

- Meetings will be held at the date/time chosen by the UM GI - LC members through a process of assessing schedules and availability of all members.
- It is anticipated that initially, there will be monthly meetings. It is at the group's discretion to decide to meet less frequently in the future.
- UM GI - LC members will be informed of meetings through a calendar invitation at least four weeks prior to the meeting.

Communication

- Meetings will be communicated via calendar invitations.
- Project documents, notices, agendas and minutes will be posted in the project repository (TBD).
- Email: A group email distribution list for the UM GI – LC has been established and can be used for communication (GI.Learning.Community@umich.edu). This distribution list must be maintained on a regular basis (e.g. quarterly) to ensure that the members remain current.

Conduct of meetings

- Meetings will be open to all UM GI - LC members and special guests, as appropriate.
- Meetings will be facilitated by members of the GI – LC Coordinating Team.
- Meetings will be held jointly to include GI – LC representatives from each GI site: UH MPU, East Ann Arbor, Northville and Livonia.
- GI – LC members will not travel from site to site for the meetings.
- It is the responsibility of the GI – LC Coordinating Team to schedule all meeting room locations via Schedulon or other methods as appropriate.
- Meeting locations and participants will be connected by the use of remote conferencing via Blue Jeans.
- Informed alternates are acceptable and encouraged if a particular UM GI - LC member cannot attend.
- Meetings will end with a clear understanding of expectations and assignments for next steps.
- Meeting minutes will be generated within 72 hours of each meeting and will be stored in the project repository. A link to the minutes will be sent to all UM GI – LC members.
- Meeting agendas and minutes will be the responsibility of the GI – LC Coordinating team based on input and recommendations from the larger GI – LC membership.
- Meetings are expected to be one hour and will not exceed one hour.
- Meeting agendas will be clearly marked with the time allocation for each topic, and will be adhered to during the meetings.

Sample Learning Community Charter Document (cont'd)

THE UNIVERSITY OF MICHIGAN GASTROENTEROLOGY LEARNING COMMUNITY CHARTER

OPERATING GUIDELINES CONT'D.

Conduct of meetings cont'd.

- The UM GI - LC Coordinating Team will keep a record of meeting attendees, key issues raised, and actions required. Comments from individual members will generally not be attributed and a verbatim record of the meeting will not be prepared.
- The previous meeting minutes and a meeting agenda will be forwarded to members of the UM GI - LC at least one week before the next meeting. Any changes to the record of the past meetings shall be in writing and forwarded to the GI – LC Coordinating Team prior to the next meeting.

Meeting Ground Rules

- Speak one at a time – refrain from interrupting others.
- Ensure that all members who wish to have an opportunity to speak are afforded a chance to do so.
- Maintain a respectful stance towards all participants.
- Listen to other points of view and try to understand other interests.
- Share information openly, promptly, and respectfully.
- Remain flexible and open-minded, and actively participate in meetings.

ROLES AND RESPONSIBILITIES

The UM GI - LC is an interdisciplinary, collaborative workgroup comprised of members representing the various UM GI sites.

The UM GI – LC Coordinating Team is comprised of a sub-set of the group, and will be responsible for administrative and organizing activities.

UM GI - LC members agree to:

- Provide specific UM expertise, including identifying emerging issues;
- Review project and research-related documentation and comment promptly if asked;
- Attend all meetings possible and prepare appropriately;
- Complete all pre-work prior to each meeting as/if necessary;
- Relay information to their constituents after each meeting and gather information/feedback from their constituents as practicable before each meeting;
- Articulate and reflect the interests that group members bring to the table;
- Maintain a focus on solutions that benefit the entire area/problem of interest;
- Agree to participate in ad hoc groups that may be formed to work on specific tasks and deliverables.

Sample Learning Community Charter Document (cont'd)

THE UNIVERSITY OF MICHIGAN GASTROENTEROLOGY LEARNING COMMUNITY CHARTER

ROLES AND RESPONSIBILITIES CONT'D.

UM GI – LC Coordinating Team agrees to:

- Keep UM GI - LC members informed of progress;
- Provide administrative support and documentation to support recommendations;
- Produce ****Draft**** and/or final materials and reports;
- Provide early notification of UM GI - LC meetings and provide advance notification for review and comment on reports and other documents;
- Facilitate meetings necessary to inform and engage the community;
- Establish project repository;
- Maintain GI – LC group email distribution list;
- Manage logistics for meetings; and
- Explain the reasons when deviations are taken from UM GI - LC recommendations.

COMMUNICATION

UM GI - LC members will be informed of meetings through email, at least four weeks prior to the meeting.

Meeting agendas will be sent at least 48 hours in advance of the meeting, and meeting notes will be sent within 72 hours.

Project documents, notices and other collateral will be posted in the project repository (TBD).

All GI – LC members can be reached through a group distribution email: GI.Learning.Community@umich.edu

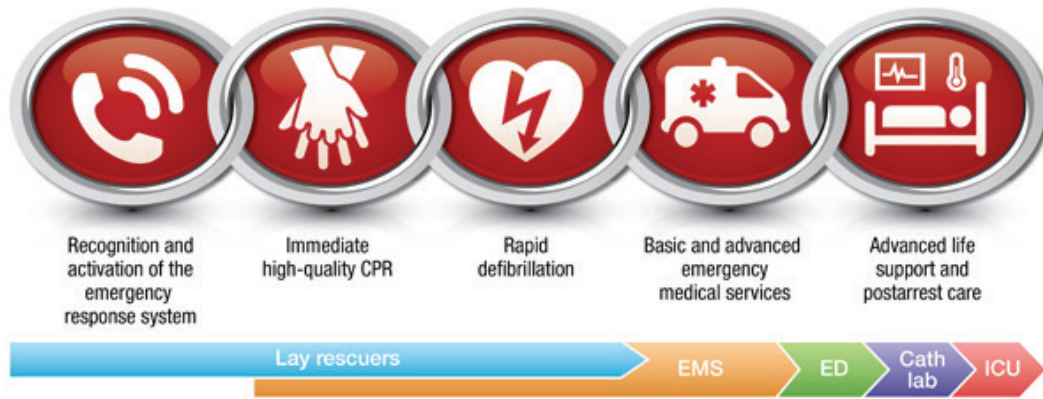
DECISION MAKING

The UM GI - LC is a decision-making workgroup. Members will strive to reach agreement by consensus at a level that indicates that all partners are willing to live with the proposed action. Partners will strive to work expeditiously and try to avoid revisiting decisions once made.

CHARTER UPDATES

Each September, the GI – LC Coordinating team will produce the subsequent calendar year's charter, which will be reviewed and approved by the UM GI - LC members.

Sample Learning Community Newsletter



"Chain of Survival" *Image credit: American Heart Association, CPR.heart.org*

OVERVIEW AND HIGHLIGHTS

Survivor story

In the summer of 2019, all the stars aligned for OHCA survivor, James Stoupe. James does not remember what happened, but his wife Jacquelyn recounted it was the quick thinking of a contractor who immediately called 911 and the skill of two bystanders who knew CPR, that saved her husband's life. Coupled with a fast response from the nearby Ann Arbor fire department, James was in the University of Michigan catheter lab within 17 minutes of his cardiac arrest collapse near the side of the road.

Out-of-Hospital Cardiac Arrest (OHCA) Learning Health Community

December 18, 2019 Meeting

Thank you to everyone who participated in the December OHCA Learning Health Community meeting! We value the community's input and look forward to continuing the conversation.

The **IMPLEMENT** Phase of operationalizing a learning community can be considered to begin once the learning community is formed and the kick-off meeting has occurred.

IMPLEMENT

Please note that the activities and tasks in the INITIATE and IMPLEMENT phases may overlap with one another. The IMPLEMENT phase is focused on the ongoing work of the learning community including the implementation and rollout of interventions to address the problem(s) of interest and represents the major work efforts of the learning community.

LHS Learning Community Framework

IMPLEMENT

Policy

- Allow others to access learning community •
- Approve planned interventions for problem of interest •
 - Develop intervention-specific policies as needed •

Technology

- Ongoing data capture, analysis and measurement for problem(s) of interest •

Process

- Interventions identified and implemented to address problem(s) of interest •
 - Workgroups formed and operational •
 - Project deliverables, tasks and timeline tracked •

People

- Learning community meetings ongoing and occur at regular intervals •
- Communications in place to keep learning community informed/engaged •

Learning Community Meetings

Following the kick-off meeting, learning community meetings should now be occurring on a regular cadence. The primary goals of these meetings include:

- Facilitating engagement, teamwork and a sense of comradery
- Providing ongoing data updates
- Sharing workgroup progress related to specific interventions
- Obtaining consensus and approval for planned interventions
- Identifying risks and mitigation plans
- Tapping into the multi-stakeholder expertise of the learning community

Do not be surprised if others outside the learning community ask to attend and/or present at learning community meetings. It is sometimes difficult – especially with clinicians – to get them all together in one place at one time, so others may want to take advantage of this. When others hear about an existing learning community, they may want to leverage the expertise of the multi-stakeholder group for other initiatives not related to the problem(s) of interest. It's up to the learning community to decide if they want to accept these types of requests, and if so, what form that this will take. The learning community may want to address this policy within their charter document, or, through some other mechanism.

In between regular learning community meetings, be sure to use newsletters and other forms of interim communication methods to keep community members engaged. If there is a need to continually add members to the learning community, this type of communication can serve outreach purposes as well.

Workgroup Meetings

While it is the learning community's responsibility - as an entity - to address a problem of interest by implementing various interventions, it is not possible for the entire learning community as a whole to do specific tasks. To facilitate getting the work done to move an intervention forward, workgroups must be formed. These workgroups consist of a small group of volunteers from the larger learning community who have an interest and/or expertise related to the intervention that has been proposed.

Workgroups can be formed around certain thematic areas specific to the problem(s) of interest, or, they can be formed around types of work (e.g. data analysis, communication and rollout, etc.).

Workgroup members generate ideas and suggestions for interventions that are brought forth to the larger community for discussion and consensus. Workgroup members also take responsibility for completing actual tasks and activities in order to advance the work, and bringing forth any potential risks to the larger community for discussion and awareness.

Workgroup members generate ideas and suggestions for interventions that are brought forth to the larger community for discussion and consensus. Workgroup members also take responsibility for completing actual tasks and activities in order to advance the work, and also for highlighting any potential risks to the larger community.

Interventions

The most significant body of work for the learning community will be to identify, develop, implement and evaluate interventions to address the problem(s) of interest.

The learning community should keep detailed information about each intervention in the shared document repository. Intervention-related information includes:

- Data captured to assess the intervention “before” and “after” implementation
- Documentation of current state processes and post-intervention processes
- Description of the proposed intervention
- Implementation timeline for proposed intervention
- Communication plan for proposed intervention
- Consensus and endorsement documentation from the learning community that demonstrates approval for the proposed intervention
- Intervention-specific policies or governance requirements

Remember to also keep a list of interventions that were proposed, but not pursued or implemented. This information can help to inform possible activities for future learning cycles.

Implementation and Rollout

Be sure to have a documented implementation and rollout plan for all planned interventions. This plan should include a description of the planned intervention, how the communication about an intervention will occur, associated dates and timeframes, and, who is responsible for each stage of the communication related to an intervention. This plan is generally developed by the workgroups, but should be shared with and vetted through the larger learning community.

Data Capture and Measurement

As mentioned at the outset of this guide, data is essential for gaining knowledge and determining the impact of an intervention that has been implemented. The learning community should have a plan around data and measurement of each intervention including:

- What type of data is being captured?
- What is the source of the data (e.g. EHR System? Survey Results? Data Warehouse?)
- How the data is being captured?
- Where the data will be stored?
- Who has access to the data?
- The process for analyzing and/or massaging the data (if needed) including the responsibility (who) for analyzing the data?
- How will the data be measured?
- How will the data be reported?
- When will the data be reported?
- How will the data be evaluated?
- Determining an endpoint for data capture

* —> **Best Practice Tips:**

1. **Previous interventions.** Often, a learning community will embark on addressing a problem of interest that may have involved previous interventions that were implemented by key stakeholders. It's important to understand what has been done previously for many reasons including:

- Avoiding ill-will from key learning community stakeholders who may feel slighted that their previous work is being discarded
- Ensuring that effort is not wasted on repeating interventions that were tried and failed
- Identifying key learnings from previous interventions

As a result, the learning community may want to develop an inventory of interventions that were implemented previously, particularly if related to the problem(s) of interest being addressed by the learning community.

2. **Facilitating communication.** The work of the learning community will involve communicating and working with others inside and/or outside an organization as interventions are implemented. To facilitate communications with others, and to help them understand the learning community and its purpose, a one-page "flyer" can be very useful. This flyer can be sent in advance of a meeting with others by means of introduction and can be very effective in reducing the time spent explaining to others what the learning community is about. That way, the conversation can move quickly toward what is needed from a group, department or organization that you may be meeting with.

* —> **Challenges:**

1. **Power and hierarchy (e.g. MDs, etc.) issues.** As in all spaces, it is important to be mindful of the diversity of people who take part in a learning community, including aspects of racial, gender, ethnic, religious, and ability diversity. In addition to preventing discrimination and promoting an inclusive environment, it is important to consider the power structure that may exist in the workplace. Although in an ideal world, we may want all people to be able to contribute equally, we know this is not the reality.

Take steps to ensure that all people in the learning community feel empowered to participate fully so that the LHS project benefits from the shared contributions and full expertise of the multi-stakeholder community. Be prepared for this challenge by proactively:

- Creating ground-rules as part of the learning community charter document that address this situation
- Identifying strategies for addressing these situations should they occur, in the moment. These strategies may include:
 - Designating someone from the Core Leadership team to intervene, tactfully, in meetings when this occurs by redirecting the conversation back to the learning community member who was trying to contribute
 - Designating someone from the Core Leadership team to intervene, tactfully, in private, with someone who may be using undue influence and creating a hierarchical environment

*** —> Challenges (cont'd):**

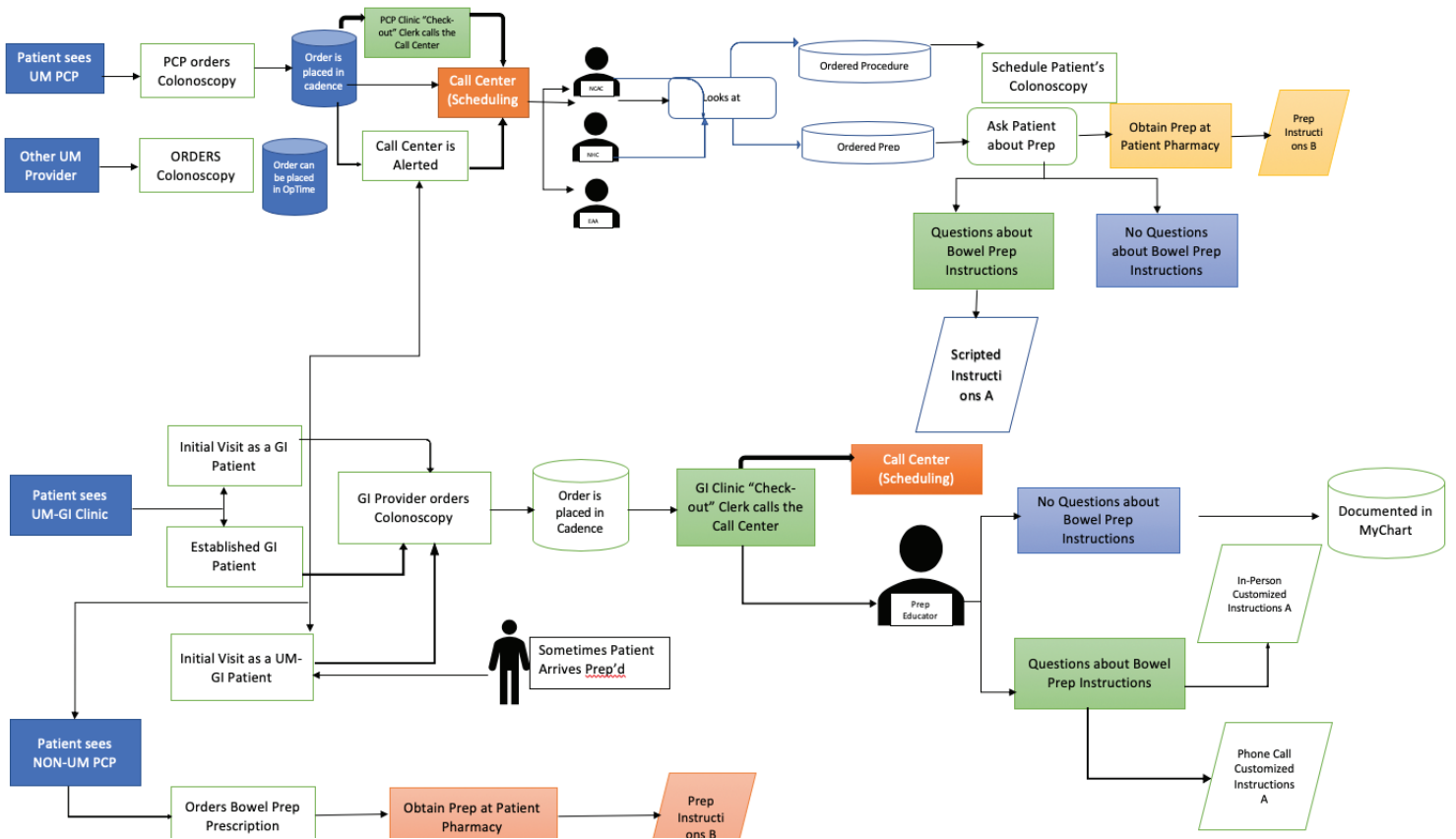
- o Use first names (e.g. no "Dr.", etc.) for all learning community members in conversations, in meeting notes, on name tags, etc.

Often, this hierarchy situation is addressed indirectly by the work of the workgroups. Workgroup members may feel more at ease in a smaller workgroup setting, and feel empowered to participate fully. Then when ideas are brought forth to the larger learning community, they are represented as "workgroup" suggestions rather than the idea of one individual.

*** —> Sample Tools, Templates and Resources:**

1. **Process Mapping Document (pg. 42).** From the University of Michigan Gastroenterology Learning Community (GI-LC). Used to document current process to help with implementing new interventions.
2. **Intervention Tracking Log (pg. 43).** From the University of Michigan Gastroenterology Learning Community (GI-LC). Used to document previous interventions and additional interventions implemented by the learning community.
3. **Key Contact List (pg. 44).** From the University of Michigan Gastroenterology Learning Community (GI-LC). Used to track contacts within the organization for key functional areas: Compliance, Ambulatory Care
4. **Intervention Rollout Communication Plan (pg. 45).** From the University of Michigan Gastroenterology Learning Community (GI-LC). Used to document and communicate intervention rollout communication plan including process owners/responsible parties.
5. **Learning Community Flyer (pg. 46).** From the University of Michigan Gastroenterology Learning Community (GI-LC). Used as an artifact to introduce the Learning Community and its purpose in a brief, concise format.

Sample Process Mapping Document



Sample Key Contact List

Dept/Unit	Sub-Unit	Specialty / Role	Name	Email/Link	Phone	Notes
Compliance						
Ambulatory Care Operations Committee						
Nursing Informatics						
EHR						

Sample Intervention Roll-Out Communication Plan

COMMUNICATION CHAIN FOR INTERVENTION PACKAGE IMPLEMENTATION

Communication to Groups	Platform	Process Owners
Communication to Ambulatory Care Nurse Managers	Email & Meeting	
Communication to Ambulatory Care Administrators	Email	
Communication to CALL CENTER Staff and Supervisors	Email & Meeting	
Communication to Patient Service Assistants and MPU Pod D Educators	Email & Meeting	
Communication to GI-Faculty and other Providers involved	Email & Meeting	
MiChart Patient Education	Email	
Learning Health System (LHS) Division of Learning Health Sciences	Meeting	

Sample Learning Community Flyer

GASTROENTEROLOGY LEARNING COMMUNITY (GI-LC)



OVERVIEW

- What is the GI-LC?

The GI-LC is a collaborative learning community joining members of the Gastroenterology (GI) Division in the Department of Internal Medicine and the Division of Learning Knowledge Systems in the Department of Learning Health Sciences. The GI-LC has thirty-five members from all four endoscopy sites at Michigan Medicine; University Hospital, East Ann Arbor, Livonia, and Northville.

- Problem of Interest

Colonoscopy is a very common procedure at Michigan Medicine with rates of bowel prep inadequacy ranging from 10-12%. When patients show up for their procedure inadequately prepped it creates many issues for the patients, their families, physicians and staff.

- Mission

To provide a structure for an interdisciplinary team to unify around problems of interest and learn about them by linking data to knowledge to practice to rapidly and continuously improve quality.

TEAM

Photo

(Name/Credentials)
(Department Name)
(Email Address)

Photo

(Name/Credentials)
(Department Name)
(Email Address)

Photo

(Name/Credentials)
(Department Name)
(Email Address)

Physician Members:

(Name/Credentials)
(Name/Credentials)
(Name/Credentials)
(Name/Credentials)
(Name/Credentials)
(Name/Credentials)
(Name/Credentials)

Photo

(Name/Credentials)
(Department Name)
(Email Address)

Photo

(Name/Credentials)
(Department Name)
(Email Address)

Photo

(Name/Credentials)
(Department Name)
(Email Address)

Core Team:

(Name/Credentials)
(Name/Credentials)
(Name/Credentials)

A grey arrow pointing to the right with the word "SUSTAIN" written in white, bold, uppercase letters inside it.

SUSTAIN

The SUSTAIN Phase of operationalizing a learning community can, by far, be the most challenging phase since it is focused on the future direction of the learning community and its related work.

While this guide presents SUSTAIN as the 'final' phase of operationalizing a learning community, sustainability planning is something that can be started before or during the PLAN phase and can continue throughout each phase along the way.

Execution of the sustainability plan is most likely to occur following the implementation of one or more interventions related to a problem(s) of interest being addressed by the LHS learning community. The aim of learning community sustainability is to assure that the community will be supported and kept up long enough to meet the community's goals around a problem(s) of interest.

As mentioned earlier in this guide, thinking about sustainability at the start of the LHS project, and as you PLAN and INITIATE a learning community, should be extremely helpful when you get to this phase of operationalizing the learning community. The learning community infrastructure, for example, that was established early on in the PLAN and/or INITIATE phases, should be comprised of elements that can withstand the passage of time. For example, did the learning community instantiate tools and platforms that are current and will continue to be maintained and supported? Will the sources the learning community chose for data be valid on an ongoing basis? Is the governance structure of the learning community sustainable over time?

Ideally, the learning community infrastructure should be such that the learning community can start, function, go on hiatus, and then resume again as/if needed around a new problem of interest.

LHS Learning Community Framework

SUSTAIN

Policy

- Learning community status decisions: e.g. stops, goes on hiatus, continues? •
 - Ongoing learning community governance and structure •
 - Funding decisions •

Technology

- Ongoing or new data requirements •

Process

- Learning community evaluation and lessons learned •
- Additional learning cycles for current problem(s) of interest? •
 - Address new problem(s) of interest? •

People

- Ongoing learning community engagement •

Learning Community Evaluation

Following the implementation of an initial set of interventions for a problem(s) of interest, or, at the end of an LHS learning cycle, it may be helpful to conduct a survey of the learning community membership. This provides an opportunity to assess various aspects of the operations and functions of the learning community and to capture lessons learned for future improvements. This type of data also provides insights into how well the learning community did their work. Additionally, as mentioned during the PLAN stage, if a similar evaluation was conducted up front when the learning community was first formed, the results of the two surveys - one conducted at the outset of the formation of the learning community and one conducted at the end of an LHS cycle - can provide information about how the learning community thought they would perform, vs. how they actually performed.

Sustainability Plan

There are many examples in the literature that list key components of sustainability plans that can be applied to LHS learning community sustainability. Some of these articles are listed at the end of this guide in the Additional Information and Reference Materials section. If sustainability components are not identified, thoroughly thought through and planned for, the learning community may be at risk for dissolving before it's time and/or the important work of the community may stall or end prematurely.

Key components to consider for a sustainability plan include:

- Vision/mission of the learning community.
- Funding sources or in-kind contributions.
- Resource roles, responsibilities, availability and required time commitment.
- Data access and availability considerations.
- Ongoing learning community/stakeholder engagement activities.

Discussion and decisions to be made include:

- Will the learning community continue once the initial problem(s) of interest have been addressed? Will the learning community be on hiatus? If so, for how long? Will the learning community cease to be altogether?
- Will the learning community structure need to change for sustainability purposes?
- Will the learning community need additional resources, including funding, to sustain it?

Sample Tools, Templates and Resources:

1. *Learning Community Interview Guide (pg. 50)*. From the University of Michigan Gastroenterology Learning Community (GI-LC). Used to conduct a survey of the learning community membership to identify improvements.
2. *Lessons Learned Document (pg. 51)*. From the University of Michigan Mobilizing Computable Biomedical Knowledge Conference Planning Team. Used to document lessons learned from the MCBK Conference (this same format can be applied to Lessons Learned from learning community work).
3. *Learning Community Project Report (pg. 52)*. From the University of Michigan Gastroenterology Learning Community (GI-LC). Used to document the entire project for future reference, as input into project presentations, etc.

Sample Learning Community Interview Guide

GI-LC INTERVIEW GUIDE



Interviewee: _____ **Title:** _____ **Affiliation:** _____

Additional GI-LC Committees: _____ GI-LC Coordinating Team _____

GI-LC Core Team (working group) _____

1) In what areas has the GI-LC been successful? What have those successes looked like?

- a. Probe: In creating a community?
- b. Probe: In creating improved outcomes?
- c. Probe: In using continuous learning?

2) What challenges do you see for the GI-LC going forward?

- a. Probe: In community?
- b. Probe: In improved outcomes?
- c. Probe: In continuous learning?

3) What do you see as the next steps for the GI-LC?

- a. Probe: In community?
- b. Probe: In improved outcomes?
- c. Probe: In continuous learning?

Sample Lessons Learned Document

LEARNING COMMUNITY LESSONS LEARNED



TABLE OF CONTENTS

INTRODUCTION	3
LESSONS LEARNED APPROACH	3
LESSONS LEARNED - DETAILS	3
LEARNING COMMUNITY SHARED REPOSITORY	4

Introduction

This lessons learned document describes what did not go well related to the planning and execution of the _____ Learning Community along with suggestions to avoid sub-optimal outcomes in the future. This document also describes what went well in an effort to repeat successful outcomes. This document will be referenced by the Learning Community to inform future activities and will be stored in the Learning Community shared repository.

Lessons Learned Approach

The lessons learned from the _____ Learning Community have been compiled from activity and experiences of forming and operationalizing the Learning Community. Lessons learned were also gathered from the learning community core leadership team, the at-large learning community and workgroup members through in-person interviews and surveys. The lessons learned are to be used as reference for future learning community activities and should contain an adequate level of detail so that others reviewing this material may have enough information on which to help base planning for future activities. The lessons learned in this document are categorized by Learning Community activities by phase. These phases are:

- Planning
- Initiation
- Implementation
- Sustainability

Lessons Learned - Details

The following chart lists the lessons learned related to the formation and operationalization of the _____ Learning Community. These lessons are categorized by phase and descriptions, impacts, and recommendations are provided for consideration for the future. It is important to note that not only failures or shortcomings are included but successes as well.

Category	Issue Name	Problem/Success	Impact	Recommendation(s)
Planning				
Initiation				
Implementation				
Sustainability				

Learning Community Shared Repository

The _____ Learning Community shared repository is located here _____ and contains historical information from all previous Learning Community activities, including lessons learned.

Sample Learning Community Project Report

LEARNING COMMUNITY PROJECT REPORT



Date: MM/DD/YYYY

Commissioned by: _____

Prepared by: _____

Table of Contents

Executive Summary

Introduction

Stakeholder Interviews

Forming the GI-LC

GI-LC Mission & Charter

- Mission
- Charter

Project Timeline

GI-LC Team Members and Roles

- Site-Member Team Meetings
- Coordinating Team Meetings
- Core Team Meetings
- Additional Meetings

Bowel Preparation Adequacy

Interventions and Projects

- Boston Bowel Preparation Scale
- Patient Communication Package
- Patient Survey
- Partnership with Anticoagulation Management Project
- Data Mart (in-progress)
- Patient Educational Video (in-progress)
- Translations of Updated Preps (in-progress)

Successes, Challenges, and the Future: Interviewee Perspectives

- Successes
 - Successes: Interviewee Viewpoints
 - Criteria for Success
- Challenges
 - Challenges: Interviewee Viewpoints
 - Cultural Challenges
 - Sustainability Challenges
- Evaluating Progress So Far
 - Comparing Criteria for Success to Successes and Challenges

The Future

- The Future: Interviewee Viewpoints
- Knowledge Grid

Conclusion

Appendices

- I: Acknowledgements
- II: Stakeholder Interviews
- III: GI-LC Members
- IV: Bowel Prep Adequacy Data
- V: Coordinating Team Roles
- VI: Charter

* **The content of this guide will continue to be updated based on more experiences with LHS learning communities.**

APPENDIX A – REFERENCE MATERIALS

Elements/Framework of an LHS

- Friedman, C. P., J. C. Rubin, and K. J. Sullivan. "Toward an information infrastructure for global health improvement." *Yearbook of medical informatics* 26.01 (2017): 16-23.
- Kraft, Sally, et al. "Building the learning health system: describing an organizational infrastructure to support continuous learning." *Learning Health Systems* 1.4 (2017): e10034.
- McLachlan, Scott, et al. "The Heimdall Framework for Supporting Characterisation of Learning Health Systems." *J Innov Health Inform* (2018).
- Menear, Matthew, et al. "A framework for value-creating learning health systems." *Health research policy and systems* 17.1 (2019): 79.
- Psek, Wayne A., et al. "Operationalizing the learning health care system in an integrated delivery system." *Egems* 3.1 (2015).

Data Collection, Accessibility

- Krumholz HM, Terry SF, Waldstreicher J. Data Acquisition, Curation, and Use for a Continuously Learning Health System. *JAMA*. 2016;316(16):1669–1670. doi:10.1001/jama.2016.12537

Interventions: Rapid Evidence Review

- Khangura, Sara, et al. "Rapid review: an emerging approach to evidence synthesis in health technology assessment." *International journal of technology assessment in health care* 30.1 (2014): 20-27. <https://www.cambridge.org/core/journals/international-journal-of-technology-assessment-in-health-care/article/rapid-review-an-emerging-approach-to-evidence-synthesis-in-health-technology-assessment/11B54AE04F21C14C20FB4F1730CDD709>
- Harker, Julie, and Jos Kleijnen. "What is a rapid review? A methodological exploration of rapid reviews in Health Technology Assessments." *International Journal of Evidence Based Healthcare* 10.4 (2012): 397-410. https://journals.lww.com/ijebh/Fulltext/2012/12000/What_is_a_rapid_review__A_methodological.11.aspx
- Neal, Jennifer Watling, et al. "Expediting the analysis of qualitative data in evaluation: A procedure for the rapid identification of themes from audio recordings (RITA)." *American Journal of Evaluation* 36.1 (2015): 118-132. <https://journals.sagepub.com/doi/10.1177/1098214014536601>
- Fitch, Kathryn, et al. The RAND/UCLA appropriateness method user's manual. No. RAND/MR-1269-DG-XII/RE. RAND CORP SANTA MONICA CA, 2001. <https://apps.dtic.mil/docs/citations/ADA393235>
- Gough, David, James Thomas, and Sandy Oliver. "Clarifying differences between review designs and methods." *Systematic reviews* 1.1 (2012): 28. <https://systematicreviewsjournal.biomedcentral.com/articles/10.1186/2046-4053-1-28>
- Dibble, Emily R., et al. "A Rapid Process for Identifying and Prioritizing Technology-Based Tools for Health System Implementation." *JMIR cancer* 4.2 (2018): e11195. <https://cancer.jmir.org/2018/2/e11195/>

APPENDIX A – REFERENCE MATERIALS

Collaboration and Community Involvement

- Jull, Janet et al. "Community-based participatory research and integrated knowledge translation: advancing the co-creation of knowledge." *Implementation science: IS* vol. 12,1 150. 19 Dec. 2017, doi:10.1186/s13012-017-0696-3 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5735911/>
- D. Stewart, R. Wilson, P. Selby, J. Darbyshire, Patient and public involvement, *Annals of Oncology*, Volume 22, Issue Suppl_7, November 2011, Pages vii54–vii56, <https://doi.org/10.1093/annonc/mdr427> https://academic.oup.com/annonc/article/22/Suppl_7/vii54/214564
- Fjeldstad, Øystein D., et al. "The architecture of collaboration." *Strategic management journal* 33.6 (2012): 734-750.
- Seid, Michael, et al. "Organizing for collaboration: An actor oriented architecture in ImproveCareNow." *Learning Health Systems* 4.1 (2020): e10205.

Quality Improvement Frameworks

- Parchman, Michael, et al. "Taking Action on Overuse: Implementing an Action-Planning Framework to Engage Providers." *Journal of Patient-Centered Research and Reviews* 4.3 (2017): 157. <https://takingactiononoveruse.org/>

Sustainability

- A Sustainability Guide for Healthy Communities. Centers for Disease Control. Retrieved from: https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram/pdf/sustainability_guide.pdf
- Kilbourne, Amy M., et al. "Quality Enhancement Research Initiative Implementation Roadmap: Toward Sustainability of Evidence-based Practices in a Learning Health System." *Medical care* 57.10 Suppl 3 (2019): S286.
- Macy, Lauren. Having Trouble Holding the Gains? Plan for Sustainability. Institute for Healthcare Improvement. Retrieved from: http://www.ihl.org/communities/blogs/having-trouble-holding-the-gains-plan-for-sustainability?utm_source=IHI_TW&utm_medium=Feature&utm_campaign=2020_TW_Test&utm_content=Gains_Sustainability_Post&_hsenc=p2ANqtz--A1Ns5dyebWLjqiyakkK3q2SBtKovyuX1fHAR5dfpM2RSP2apieMih7iXCuzKdaotdXJuzRyrWNatvRhDxm5CsaqWyyw&_hsmi=83102086
- Strategies for the Long-Term Sustainability of an Initiative: An Overview. Community Tool Box. University of Kansas. Retrieved from: <https://ctb.ku.edu/en/table-of-contents/sustain/long-term-sustainability/overview/main>

ⁱNwaru, Bright I., et al. "Can learning health systems help organisations deliver personalised care?." *BMC medicine* 15.1 (2017): 177.

ⁱⁱUniversity of Michigan Department of Learning Health Sciences website. Retrieved from <https://medicine.umich.edu/dept/lhs/explore-learning-health-sciences/our-approach>

ⁱⁱⁱUniversity of Michigan LHS Collaboratory Implementation and Process workgroup members: Jack (John) Billi, Bruce Chaffee, Jeff Cowall, Laura Damschroder, Lisa Ferguson, Amanda Fore, Van Harrison, Yun Jiang, Lynn Johnson, Kyle Kerbawy, Greta Krapohl, Zachary Landis-Lewis, Fusen Li, George Meng, Michelle Moniz, Romesh Nalliah, Sun Young Park, Paresh Patel, Gretchen Piatt, Peter Polverini, Anne Sales, Rajiv Saran, Audrey Schmidt, Lee Schroeder, Jacob Seagull, Wei Shi, Karandeep Singh, Shawna Smith, Jacob Solomon, Doug Van Houweling, Lilia Verchinina, Michele Wichorek, Melissa Zochowski

^{iv}Forrest, C. B., Margolis, P., Seid, M., & Colletti, R. B. (2014). PEDSnet: How A prototype pediatric learning health system is being expanded into A national network. *Health Affairs*, 33(7), 1171-7. Retrieved from <http://proxy.lib.umich.edu/login?url=https://search-proquest-com.proxy.lib.umich.edu/docview/1545346500?accountid=14667>

^vThe University of Michigan Gastroenterology Learning Community Mission Statement, 11/22/16

^{vi}The University of Michigan Gastroenterology Learning Community Charter, 11/22/16