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STEP ONE: Define Population and Describe Current Model of Care

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Where are you in the PEPPA Framework?

- You are at the first step where you define the population and current way care is organized and provided.

Why should you begin this step?

- There is uncertainty about how well the current model of care meets the health needs of a specific patient population affected by cancer.

What do you need to move forward to complete this step?

- Commitment to providing high quality cancer services.
- Input from co-workers such as managers, health providers and support staff.
- A business case and a budget to implement activities.
- Appoint or hire a facilitator to lead healthcare planning activities.

How will this chapter help you?

- Identify indicators of the potential need for change to the current model of care.
- Identify a specific priority patient population for the focus of healthcare redesign.
- Determine the scope of the healthcare redesign process or the model of care to be examined.
- Assess readiness for change or potential barriers and facilitators to innovation.
- Use checklists and strategies to conduct a process mapping exercise in order to develop a better understanding how care is currently provided.

Step One Objectives

- Identify the specific patient population to be the focus of the healthcare service redesign process.
- Determine the scope of healthcare service redesign.
- Identify and describe when and how patients and families interact with healthcare providers and services over a specific time period or continuum of care.

Guiding Questions for Step One Activities

- I. How do I get the healthcare service redesign process started?
- II. What patient population should be a priority for healthcare service redesign and why?
- III. What is the scope of the model of care?
- IV. What are the starting and endpoints of the continuum of care?
- V. What types of health problems do patients experience across the care continuum?
- VI. When and how do patients access healthcare services to meet their health needs?

Key Messages

1. Identify indicators of uncertainty about model of care effectiveness and the need to undergo a healthcare planning process.
2. Ensure successful planned change by setting feasible limits on the scope of the healthcare planning process.
3. Develop a macro level care map to begin to identify and understand the current model of care.



Healthcare Service Redesign

I. How do I get the healthcare service redesign process started?

The starting point of the PEPPA Framework requires some recognition or feelings of uncertainty about how well the current model of care is working.

Potential need for change to the model of care may arise from:

- Anecdotal experiences or unsubstantiated perceptions about practice gaps.
- Data collected as part of ongoing quality assurance initiatives.
- Data on utilization and costs of healthcare resources.
- Other health system factors such as changes in organizational priorities, health human resources and/or funding.

Table 1 provides some examples of indicators that may warrant a review of the current model of care and for which the introduction of an advanced practice nursing (APN) role maybe beneficial.

T A B L E 1

Indicators of the potential need for change to the current model of care

- New and/or increased reports of patient dissatisfaction with care
- Suspect a reduction in patient health (i.e., increased morbidity or mortality rates)
- Increase in healthcare errors or other potential threats to patient safety
- Quality indicators do not meet organizational targets or national benchmarks
- Changes in access, use or costs of healthcare services
- Introduction of new and more complex treatments
- Changes to the supply and demand of health providers
- Healthcare provider job dissatisfaction
- Changes in the amount and/or allocation of healthcare funding

■ Identifying indicators of the need for healthcare planning

Reflective practice activities can be used to monitor and provide preliminary information about how well existing care practices, policies and services are meeting patient population health needs. This type of information can be used to justify decisions to embark on a healthcare planning process and may provide some insight into the best place to begin the process.

Build in opportunities for healthcare providers, teams and managers to engage in reflective practice activities to identify and discuss potential needs for healthcare improvement by:

- Leading a discussion at team meetings, performance reviews, organizational retreats and/or strategic planning meetings.
- Doing some brainstorming (*See the Resources Section for some examples of brainstorming strategies to help get your healthcare team thinking about patient health needs and areas for practice improvement*).
- Conducting a brief staff survey to get their input and ideas (*See Appendix B1 for a sample healthcare provider questionnaire*).

TIP

Build in opportunities for reflective practice activities as a strategy to identify needs for healthcare improvement.

II. What patient population should be a priority for healthcare service redesign and why?

It is important to set some priorities and limits on the planning process by identifying a priority patient population who may benefit the most from healthcare redesign. This patient population will be the central focus of all planning activities.

TIP

Patient populations who may benefit the most from healthcare service redesign are those who:

- + Present in high volume
- + Share common characteristics or concerns
- + Have predictable patterns of health service use
- + Are likely to require care for which there are evidence-based standards¹

There are many benefits to developing APN roles for a specific patient population:

- A patient focus enables the development and evaluation of a package of APN interventions designed to meet specific health needs.^{2,3}
- A focused patient population may also help to develop APN expertise and role confidence and prevent role strain.⁴⁻⁶
- APN roles focused on meeting the health needs of a specific patient population are more likely to achieve successful role implementation due to improved role clarity.⁴⁻⁶

Strategies for defining a priority patient population

There are no hard and fast rules for determining which patient populations with cancer will benefit the most from the introduction of an APN role.

Research on the Transition Model demonstrates that APN roles designed to address the unmet health needs of high risk, high volume, high cost patient populations have significant impact on patient health outcomes, use of appropriate health services and the quality and cost of healthcare.^{2,7,8} This model has focused on the APN role in promoting the early transition of hospitalized patients to home and outpatient care.

There is no consensus regarding the definitions for high risk, high volume and high cost populations of patients with cancer. The Transition Model has been applied to evaluate an APN role providing home care for elderly post-surgical patients with cancer following discharge from hospital.⁹ Patients randomized to the APN group were less likely to require hospital re-admission, had improved levels of function and quality of life, and had fewer deaths at one year compared to those receiving standard care. Examples of other potential high risk populations are found in Table 2.

T A B L E 2

Examples of potential high risk populations

High risk populations of patients with cancer could include those at risk for developing:

- Primary cancers;
- Recurrent or metastatic disease;
- Second cancers;
- Severe or serious treatment side effects, disease complications or psychosocial problems;
- Life threatening complications and cancer-related death; or
- Those at risk for misdiagnosis, mistreatment or inadequate access to appropriate healthcare services.

In terms of high incidence or high volume populations, 55% of all new cancer cases in women and men are due to breast, prostate, lung and colorectal cancers.¹⁰ In addition, over 42% of new cancer cases and 60% of cancer-related deaths occur in people over the age of 70 years.¹⁰

However, incidence alone may not be an accurate predictor of high volume use of cancer services. Many less common cancers can be associated with significant morbidity and increased use of health services. Cancer survivors can also experience multiple health challenges following successful curative therapy that may require extensive rehabilitative and supportive care services.

Patients with aggressive, advanced and recurrent cancers are also likely to receive more intensive, complex, multi-modal and long-term therapies. These patients may also experience greater physical and psychological morbidity and have higher healthcare costs associated with more frequent and lengthy disease surveillance and greater use of healthcare services for treatment, supportive and palliative care.

TIP

Gather information or seek input from patients, providers and managers to justify and support the selection of the patient population and model of care through interviews, focus groups or surveys.

Appendix B1 provides a sample questionnaire developed to survey healthcare providers about their perceptions of a priority patient population and the current model of care.

III. What is the scope of the model of care?

The scope of the model of care is determined by setting some organizational and geographic boundaries for healthcare delivery.

The model of care could be defined by health services provided by a:

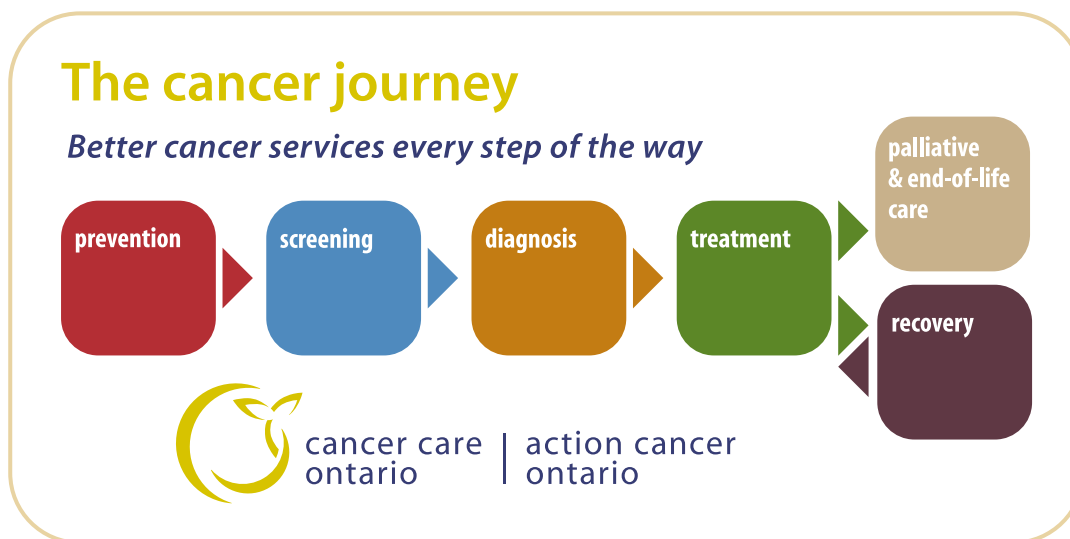
- Healthcare team within an organization,
- Program involving a number of healthcare teams within an organization,
- Team or program that works in more than one organization,
- Team or program that works across a number of practice settings (i.e., hospital, ambulatory care, home care, long-term care), or
- Team or program with local, regional, provincial or national responsibilities for care delivery.

IV. What are the starting and endpoints of the continuum of care for the healthcare delivery?

The scope of the model of care is also determined by identifying the stage of the cancer continuum or cancer journey that is most relevant to the priority patient population. These stages include:

- Cancer prevention and screening,
- Diagnosis,
- Treatment,
- Recovery including ongoing surveillance and survivorship care,
- Treatment for recurrence, and
- Palliation and end-of-life care.

Figure 1 The cancer continuum or the cancer journey



Cancer Care Ontario. (2008). *The cancer journey*. Toronto: Author. Retrieved January 18, 2009 from <http://www.cancercare.on.ca/english/home/pccs/careoverview/cancercontrol/>

■ *Strategies for defining the scope of the model of care*

Implementing change within large and/or complex models of care is more challenging due to the:

- Impact on a greater number of stakeholders;
- Potential difficulties in achieving consensus decisions; and
- Increased time and resources required to promote acceptance, adherence, and integration to practice changes.¹¹

Increase the likelihood that recommended changes, including the introduction of an APN role will be adopted by narrowing the scope of the model of care and setting limits on the:

- Number of teams, programs, and/or organizations involved;
- Geographic locations of health services delivery; and
- Number of stages of the cancer continuum.

The successful implementation of smaller but more feasible initiatives will also create a positive environment and provide the foundation for continued or future role expansion.

Table 3 provides a checklist of patient and healthcare factors to consider when defining the priority patient population and scope of the model of care.

TIP

Ensure successful implementation of the new model of care and APN role

- + Set realistic limits and make this a manageable and feasible process
- + Start small, with plans to further expand the model of care in the future
- + Limit the scope of the model of care under review to:
 - A team or program within one organization
 - One city or region
 - One stage of the cancer continuum or cancer journey

■ *Assess readiness for healthcare planning and to implement change*

Table 4 provides a checklist of other factors that may affect the feasibility of the redesign process and ability to implement any planned changes to the current model of care. This checklist outlines potential barriers and facilitators to planned change that are important to consider when making decisions to undergo a healthcare planning process.¹¹⁻¹⁴

Barriers to successful change include:

- Poor inter-professional team function,
- Change fatigue and/or competition with other change initiatives,
- Hierarchical organizational structures,
- Lack of administrative support, and
- Perceptions that change will be too complex to implement.

Factors that facilitate change include:

- Alignment of the patient population and model of care with healthcare team, organization, and/or government priorities;
- Availability of new or re-alignment of existing resources to support the healthcare planning process and implementation of change;
- Availability of evidence-based or standardized care practices; and
- Perceived impact or the extent to which it is believed that change will lead to improved functioning of the healthcare team and to positive, important and substantive outcomes for patients, health providers, the organization, and/or the health system.^{12,13}

TIP

Ensure successful implementation of the new model of care and APN role

- + Assess team and organizational readiness for change

In addition to Table 4, here are some additional tools to assess readiness for change:

- ABARIS Consulting Inc. (2001). *Organizational Change Readiness Assessment Scale*. 17 item scale found at www.abarisconsulting.com
- Anderson, N. & West, M. (1994). *Team Climate Inventory*. Berkshire: NFER-NELSON Publishing Co. Ltd. (Short form = 14 item scale). Can be obtained from ASE Psychometric Tests at www.ase-solutions.co.uk
- Lehman, W., Greener, J., & Simpson, D. (2002). *Assessing organizational readiness for change*. *Journal of Substance Abuse*, 22, 197-209. Contact for ORC Scale (115 items): w.lehman@tcu.edu

Checklist: Define the patient population and scope of the care model

Objective 1: Identify the specific cancer patient population to be the focus of the healthcare redesign process



Population at high risk for unmet health needs related to:

- Developing a primary, secondary, recurrent or advanced cancer
- Severe treatment side effects and/or disease complications
- Life threatening complications due to treatment and/or disease
- Severe psychological and social complications
- Poor quality of life
- Misdiagnosis or under diagnosis
- Inadequate access to appropriate healthcare services
- Inadequate social supports

High volume populations related to:

- High incidence cancers: breast, prostate, lung and colorectal
- High use of health services to manage disease/treatment side effects
- Require long-term follow-up and/or rehabilitative care

High cost populations requiring:

- Intensive, complex and/or multi-modal therapies
- Long-term adjuvant therapy
- Frequent or prolonged hospitalizations and/or readmissions
- Use of multiple inpatient, outpatient and homecare services

Objective 2: Determine the scope of healthcare service redesign

Establish parameters on the model of care

- Determine scope of responsibilities for healthcare delivery:
 - Specific healthcare team
 - Internal and external to the organization (i.e., involves other healthcare agencies)
 - Inpatient, outpatient, community, and home care
 - Local, regional, provincial or national
- Determine the stage or stages of the cancer continuum
 - Cancer prevention and/or screening
 - Diagnosis
 - Treatment
 - Post treatment follow-up, surveillance and survivorship
 - Recurrence
 - Palliation and end-of-life care

Vertical column of horizontal lines for checklist tracking, starting with a checkmark at the top.

Checklist: Assess barriers and facilitators to innovation and change

Factors affecting the introduction of change

Facilitators

- Strong team function
- The healthcare team is receptive to change
- Previous organizational and/or team success in implementing change
- Positive work environment
- Organization commitment to education
- Strong administrative support
- New funding or re-alignment of existing funds to support change
- Sufficient practical resources (e.g., technology, time, expertise and evidence-based guidelines or standardized care practices) are available to support change
- Patient population and/or model of care is aligned with team priorities, the organization’s mission, values and strategic plan, and/or government policy priorities
- The potential benefits (for patients, providers, organization) are likely to outweigh the costs (time, resources) for implementing change (i.e., new model of care and APN role)
- The likelihood of successful APN role implementation is thought to be high

Barriers

- Poor team function
- Lack of inter-professional organizational structures (e.g., documentation)
- Poor administrative support
- Lack of sufficient practical resources to implement change (e.g., time, technology, expertise)
- Uncertainty about allocation of new or existing funds to support change
- Uncertainty about other impending organizational change
- Competition with other change initiatives for time and resources
- The patient population and/or model of care is not well aligned with team priorities, the organization’s mission, values and strategic plan; and/or government policy priorities
- The potential benefits (for patients, providers, organization) are not likely to outweigh the costs (time, resources) for implementing change (i.e., new model of care and APN role)
- Complex changes will be required to achieve important benefits
- The likelihood of successful APN role implementation is thought to be low



V.

What types of health problems do patients experience across the care continuum?

VI.

When and how do patients access healthcare services to meet their health needs?

Questions V and VI focus on mapping out the model of care or how patients and families enter the healthcare system and interact with healthcare providers and health services over a specific continuum of care.

TIP

A key change principle for improving cancer care is to understand the patient journey¹⁵

■ *What is care mapping?*

Care mapping provides a visual representation or illustration of the patient journey within a defined model and continuum of care.

In Step One, the purposes for care mapping are to:

- Begin developing an understanding of patient health needs and the model of care.
- Prepare for Step Two by identifying relevant stakeholders who are directly or indirectly involved in the model of care.

■ *The benefits of care mapping*

When done as a group exercise with a range of people who represent different roles involved in the patient journey, care mapping can:

- Promote team member understanding of each other's roles,
- Foster team cohesion and create interest in the healthcare planning process,
- Help to identify and understand the complexity of the patient journey and care delivery processes from various perspectives,
- Identify strengths and weaknesses of the current model of care from various perspectives, and
- Generate good ideas about where to start in the healthcare planning process.^{1,15,16}

■ Process or care mapping - group exercise

Process mapping is done in two stages to capture macro and micro levels of information.^{17,18}

In Step One, the *purpose is to understand what happens to the patient* and mapping is done at a high or macro level. Figure 2 provides an example of a macro level care map.

Once stakeholders have been recruited for participation in Step Two, the process map can be further developed at the micro level to *confirm that all major stops in the patient journey have been identified and to determine more detailed processes at each stop and potential gaps in care.*

Figure 3 provides an example of a mirco level care map.

Care Mapping Planning Checklist*

- From your analysis in Table 3, identify a specific and priority patient population to be the focus of this exercise.
- Determine what you want to know from the exercise and the extent to which details (i.e., macro or micro) about the model of care will be examined.
- Estimate the amount of time you will need to conduct the exercise (at least 2 to 3 hours).
- Arrange for a large enough room to accommodate interaction among participants and order food and refreshments.
- Consider the need for an external facilitator to lead the process.
- Bring together a group of 6 to 8 people who are knowledgeable about the patient population and model of care from a wide variety of perspectives to participate in this exercise.
- Consider the need to meet with and/or provide reading materials to participants to prepare them for the exercise.
- Gather supplies and equipment such as large and small Post-it® Notes in various colours and shapes, coloured marker pens, painter's tape and large rolls of brown Kraft®/Butcher's paper.
- Consider using an icebreaker exercise to get the group started, especially if some participants do not know one another.

TIP

For planning a group care mapping exercise

- + Ensure that a broad range of perspectives are considered by including a wide range of stakeholders internal and external to your organization such as various healthcare providers, middle and senior managers, volunteers and clerical and support staff.
- + Capture patient experiences and viewpoints by including a patient, family member and/or a patient advocate.
- + Bring the care map to “life” and make the exercise fun by using photographs and pictures of places, people and equipment.

■ Process or care mapping steps*

- a. Generate a list of common health problems experienced by this patient population.
- b. On the roll of paper provided and using different coloured markers for each feature, “map out” the following characteristics of a patient’s journey as a result of these health problems:
 - Where the patient first enters the health system (journey beginning).
 - Where the patient exists the health system (journey end).
 - Identify all the other “destinations” or stops in the healthcare system that patients experience between the beginning and end of their journey.
 - Identify the types of health needs patients may experience at each destination.
 - In addition to health providers, identify other stakeholders who may be directly or indirectly involved in the delivery of healthcare services at each stop.
- c. Involve the group in analyzing the care map.

For macro level care maps, consider the following questions to guide the analysis:

- Have all important patient health needs, destination stops and stakeholders been identified?
- To what extent are viewpoints of patients and a variety of stakeholders represented in the care map?
- What have participants learned from the care map?
- What surprising features about the model of care were identified?
- What important information is not provided from the care map?

TIP

For macro level care maps focus on major stops in the patient journey^{17,19}

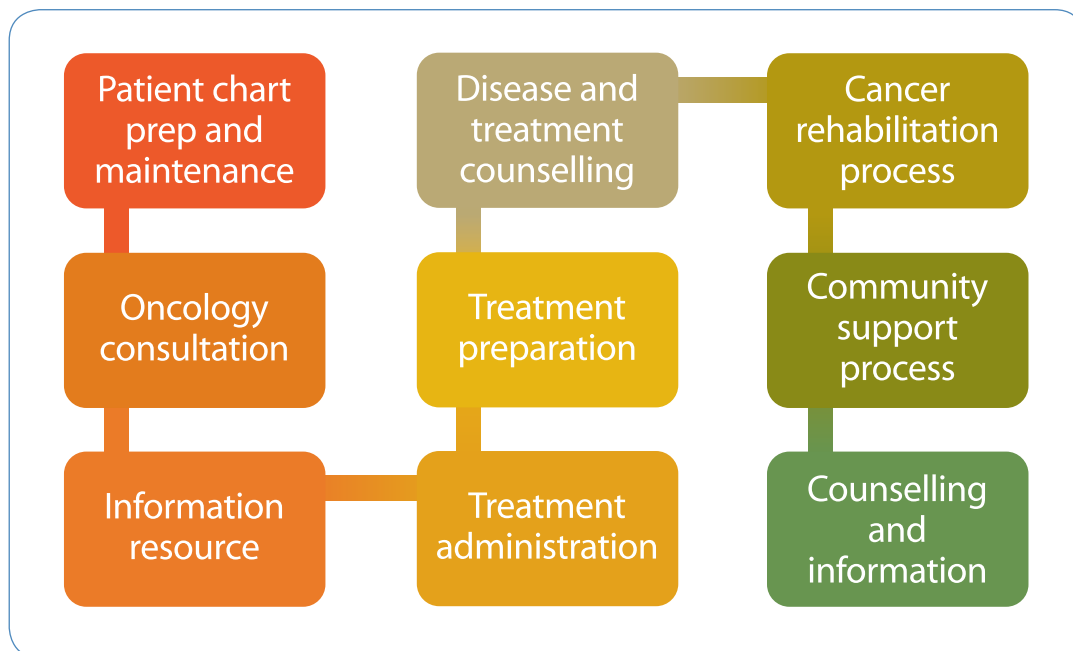
- + Set a limit of 5 to 10 stops
- + Focus on what happens 80% of the time

For micro level care maps, also consider the following questions for the analysis:

- Are there bottlenecks or barriers to accessing care?
 - What are the patient referral practices and patterns?
 - Who has responsibility for specific aspects of care?
 - Are there too many or redundant steps in some processes?
 - What are the communication processes among various stakeholders?
 - What are problems for patients, families, staff and providers?
- d. Have the group make recommendations about which stakeholder groups identified in the care map should be involved in the healthcare re-design process.
- e. Plan for next steps.

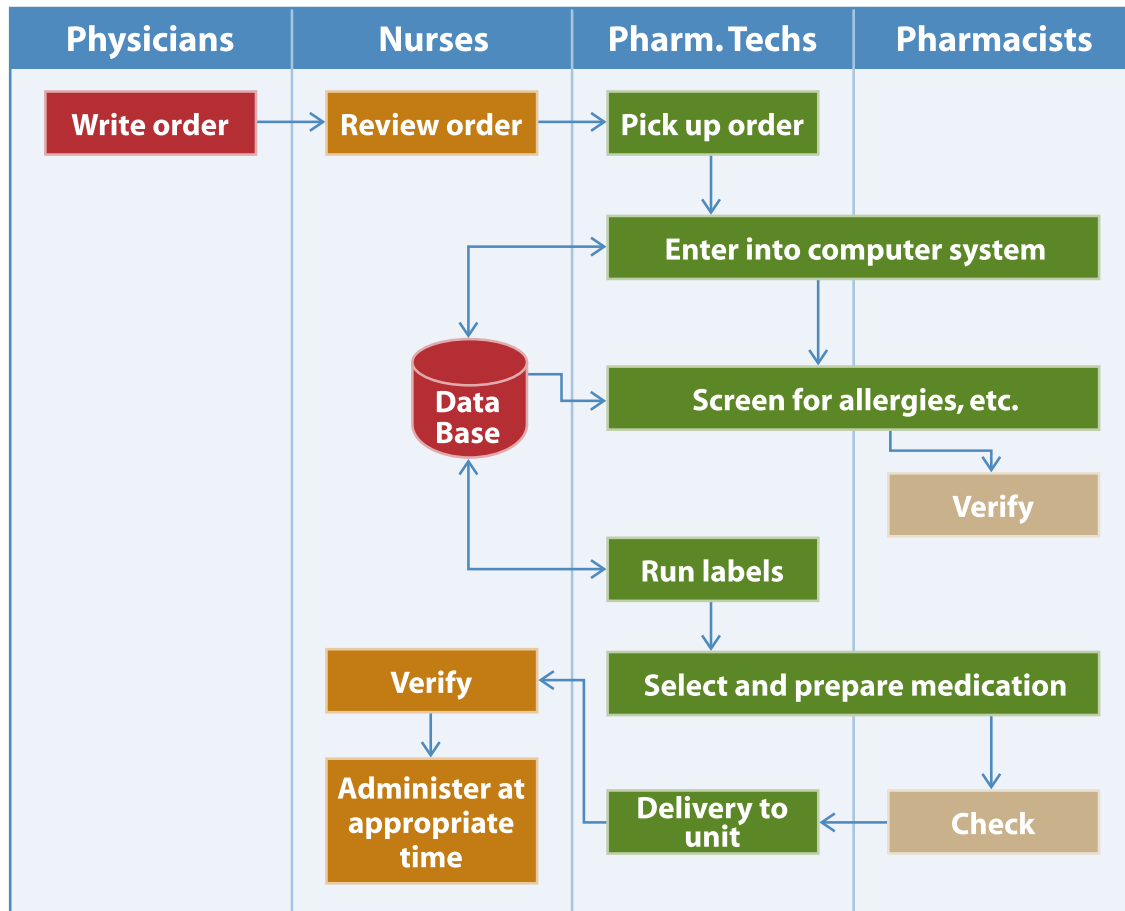
Macro level care map: Provides a graphical representation of a process from start to finish. A macro or high level process map shows the broad boundaries of a process and consolidates micro or smaller processes within its broad categories. The example below provides generic boundaries of process for providing oncology services to a population.

Figure 2 Example of a macro level care map



Micro Level Mapping: Provides the detailed steps or processes within a broad category. In the example below the broad category is “medication administration”. The micro processes are organized for four categories of personnel involved in medication administration.

Figure 3 Example of a micro level care map



*Adapted from (Modernization Agency, 2005; Institute for Innovation & Improvement, 2009; Health & Community Care, 2006; Nursing & Midwifery Office, 2004)

Other care mapping strategies

There are a number of other care mapping strategies that can be used alone or in combination with the group exercise outlined above to describe the patient journey.^{16,18,19}

Some of these strategies include:

- Shadow or walk with a patient through their healthcare experience,
- Have patients complete a diary to identify and comment on their healthcare experiences,

- Review patient health records to document involvement with and use of health services, and
- Interview patients to identify and describe their healthcare experiences using a structured or semi-structure questionnaire.

The strengths and limitations of these strategies are summarized in Table 5.^{16,18,19}

TABLE 5

Strengths and limitations to consider when selecting care mapping strategies

Strategies	Strength	Limitation
Shadow a patient	Requires little planning, time, resources or expertise Collects information from the patient’s perspective Can collect detailed information Can validate or further inform initial drafts of the care map developed by the healthcare team	May need to shadow a number of patients to obtain a representative picture Lack of team building opportunities and stakeholder involvement
Patient diary	As above	As above Potential for incomplete recording of information
Audit health records	As above	As above May not reflect patients’ perspectives
Survey using structured interview or questionnaire	Can collective detailed information from multiple perspectives	Time and expertise required to collect and analyze the data

Selecting care mapping strategies will depend on your goals and the level of patient and stakeholder involvement required, the amount and type of information you want to collect, time constraints, resources and expertise.

Next Step

In the next chapter we build on the accomplishments of Step One, by establishing a healthcare planning team that includes representatives of key stakeholder groups identified from the macro level care map developed from the group exercise. The care map is also further developed and specific details about patient needs and gaps in care are identified.

Implementation Pointers

Maintain the focus on the priority population and key issues to ensure that the planning team does not get overwhelmed by the number of possible issues that may surface.

Once you have undergone the process of defining the potential problem or issue, the target priority population and the scope of the care delivery model project, clearly write the purpose statement on a large flip chart.

Revisit or post the project statement at all planning meetings in order to stay on track and to prevent “scope creep”.

In subsequent meetings, the project statement can be revised or modified as new information is sought from additional people.

Project statements can also appear as part of the brand on all healthcare planning documents and communication materials. Here are a few examples (be creative and have fun):

- Spark the light of hope...caring for people with cancer
- An ounce of prevention...screaming until we are heard
- Striving for 3 in 3 (top three goals in 3 years)





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Additional Care Mapping Resources

Books:

- Damilio, R. (1996). Basics of process mapping. Productivity Press.
- Madison, D. (2005). Process mapping, process improvement, and process management: A practical guide to enhancing work and information flow. Chico: Paton Press.

Websites:

- <http://www.strategosinc.com/mppng1.htm>
- http://www.isixsigma.com/tt/process_mapping
- http://www.cps.gov.uk/Publications/finance/process_mapping.html

Process mapping software:

- Smartdraw (www.smartdraw.com)

Articles:

- Gourishankar, T. (2003). A simple process map. *Quality Progress*, 36(1), 104.
- Marrelli, A.F. (2005). The Performance Technologist's Toolbox: Process Mapping. *Performance Improvement*, 44(5), 40-44.
- Snyder, K.D., Paulson, P., & McGrath, P. (2005). Improving processes in a small health-care network: A value-mapping case study. *Business Process Management Journal*, 11(1), 87-99.

