

# Patient-centered laboratory medicine

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Is it more than a catchphrase?

How can one define patient-centered lab medicine since we have so little direct contact with the patient?

Is it patient-centered or patient-centred?

## There are numerous definitions of patient-centered care. Here's CIHI's

- Patient-centred care means that the patient/client (and their family, if applicable) is at the centre of their own health care.
- Patient-centred care involves listening to patients and families and engaging them as a member of the healthcare team when making care decisions.
- When the patient is at the centre, the healthcare system revolves around their needs rather than the needs of healthcare providers, fiscal pressures or space allocation.
- Patient-centred care does not mean patients get exactly what they ask for, but rather that patients are working with their healthcare providers to determine health goals that are realistic and achievable.

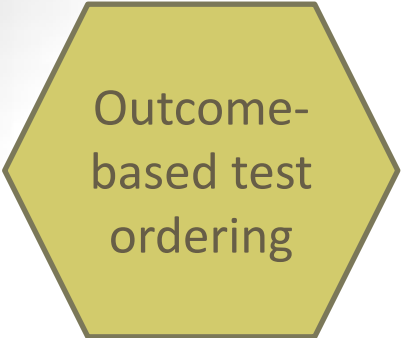
## Patient-centered quality domains from the BC Quality and Safety Council defined for the lab

Domain	Definition
<b>Acceptability</b>	Laboratory services meet defined customer requirements: For patients: availability of laboratory services, the quality of the interaction with laboratory staff and availability of results.
<b>Appropriateness</b>	Examinations requested are likely to support patient management: the right tests are ordered at the right time.
<b>Accessibility</b>	Appropriate access to laboratory services and information is provided.
<b>Safety</b>	Systems and practices are organized to minimize potential harm.
<b>Effectiveness</b>	Laboratory services support and enhance patient care. Aspects of effectiveness include: <sup>1</sup> <ul style="list-style-type: none"><li>- Faster or more accurate diagnosis</li><li>- Improved treatment choices</li><li>- Avoidance of mistakes in diagnosis or treatment</li><li>- Improved patient flow</li><li>- Improved patient satisfaction or well-being</li></ul>

<sup>1</sup>MJ Hallworth et al. Clin Chem 2015 61:4 589-99

Ideally, any laboratory test performed would provide information that would lead to an improved patient outcome






Outcome-based test ordering


*Begin with the end in mind – Stephen Covey*

“ Evidence based laboratory medicine (EBLM) assists clinical management of patients by integrating into clinical decision making the best available research evidence for the use of laboratory investigations with the clinical expertise of the physician and the needs, expectations and concerns of the patients, in order to improve the care and outcomes of individual patients and the effective use of healthcare resources.”

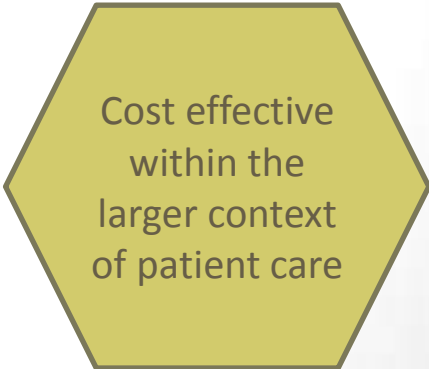
A Rita Horvath, 2013



Valid for making clinical management decisions



Effective in improving outcomes



Cost effective within the larger context of patient care

Outcome-based test ordering

### *How do we change the paradigm?*

- Establish efficient methods for evaluating new biomarkers before they're introduced.
- Establish strong working relationships with clinicians to improve practices

Awareness

Acceptance

Adoption

Adherence

- Education & training
- Electronic prompts
- Public awareness

- Use of clinical champions
- Professional body endorsement

- Clinical guidelines
- Decision-support systems
- Peer review

- Clinical audit
- Personalized feedback
- Reminders
- Updating of test menus



Access  
to lab  
services

*Ensure that we provide appropriate access to laboratory services*

There are many challenges:

- Servicing remote and rural locations
- Meeting needs of patients with special needs
- Meeting the needs of housebound patients
- High demand in the morning
- Need for access for working people
- Cultural and language issues
- Increasing complexity of investigations



Access  
to lab  
services

*Some of the strategies being used or considered*

- Servicing remote and rural locations – use of POCT provided by nursing or laboratory staff
- Meeting needs of patients with special needs – tiers of service plan for pediatric testing, specialized collection facilities for certain patient groups
- Meeting the needs of housebound patients – home collection services
- High demand in the morning – appointments, triage systems, self-service kiosks
- Need for access for working people – review hours of operation
- Cultural and language issues – awareness and understanding, access to translation services
- Increasing complexity of investigations- ensure staff have ready access to the information needed





Assess  
service  
quality

*We need to establish meaningful and ongoing communication with our customers to understand their needs and address them to the best of our abilities.*

### *What matters to patients?*

Not everyone will have the same priorities and needs, however, feedback from the Patient Voices Network provides some insights into what's important:

- Waiting times, especially for patients who are fasting or have special needs
- Customer service – patients want to be treated with respect
- Cleanliness of the facilities
- Respect for privacy
- Ability of staff to problem-solve
- Listening to patients who have problem veins




Assess  
service  
quality

*What is important to  
caregivers in  
providing patient-  
centered care?*

*Some of the elements include:*

- Availability of lab services and test menu;
- Establishing turnaround times that support good clinical care;
- Report formats that are understandable and highlight results requiring follow up;
- Delivery mechanisms that are accurate and fit their practices;
- Notification of critical and abnormal results;
- Consultative service;
- Access to lab staff as needed.

*All phases of the path of workflow must be considered -*



High-quality  
examination

Pre-examination

- Test selection
- Sample collection, identification and transportation
- Sample integrity
- Timing of testing

Examination

- Analytic performance
- Reference and therapeutic ranges
- Turnaround times
- Test interpretation
- Reflex testing
- Referred testing

Post-examination

- Test reporting
- Consultative services
- Handling of critical values, highly complex tests

*And, as appropriate, tailored to make them meaningful for individual patient management.*




Patient-  
centered  
records

*Patient-centred care demands that the patient's information be consolidated and accessible to those who have legitimate access to it*

The Laboratory Agency's Informatics plan outlines the vision for the future state:

*Authorized clinical users will have access to comprehensive laboratory results (complete lab record) on patients with appropriate privacy controls to fully inform treatment and care regardless of who ordered the test or where the test was performed. Robust patient search tools (search, sort and filtering capabilities) will allow clinical users to view data in a variety of ways.*

*Wendy Johnson,  
Director, Informatics*



Access to  
and use of  
results


*We do not know the extent of failures in the post-examination phase , however the medical literature indicates there is great cause for concern.*

The WHO's World Alliance for Patient Safety has identified poor test result management as a priority patient safety area.

The US Emergency Care Research Institute's (ECRI) 2017 report on patient safety concerns for health care organizations lists test result reporting problems as #4 of the top 10 patient safety concerns.

The failures in this phase include:

- Transmission failures
- Failures to access results
- Failures to act on results
- Misinterpretation of results
- Misdirected reports



Access to  
and use of  
results

## *What can be done?*

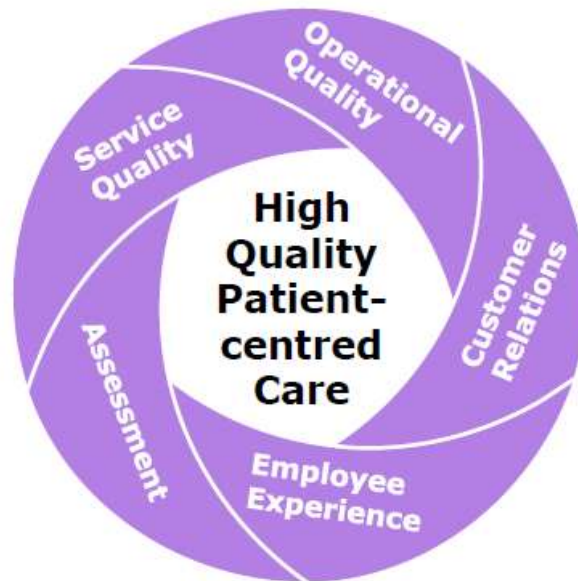
- Ensure systems for reporting critical values are robust
- Monitor electronic reporting systems to identify failures of transmission
- Implement and maintain a provider registry to decrease incidence of misdirected reports
- Eventually, move to electronic reporting for which results can be reconciled with orders.
- Encourage and support patients' access to their lab records.

The Quality Initiative of the Agency is developing a Quality Framework with the goal of ensuring sustainable, high quality patient-centered care.

- To achieve this we have created a Quality Working Group with representation from public and private laboratory providers and the Diagnostic Accreditation Program to:
  - Document the current state of quality management system implementation, quality improvement initiatives, gaps and issues;
  - To develop a common understanding of what patient-centered laboratory medicine requires and identify the key elements of this (quality constructs);
  - Use information from the current state, other stakeholders and relevant literature to develop recommendations for improvement in these key areas;
  - Develop provincial quality performance measures.

# Quality Constructs of Patient Centred Care

- The quality of services delivered by the laboratory as determined by customer groups
- The quality of processes used throughout the path of workflow – from test ordering through result reporting – that impact on the quality of service
- The use of objective, ongoing measurements to determine operational and service quality, includes internal and external assessments
- The implementation of systems to ensure ongoing two-way communication with customer groups
- The composite of laboratory staff performance and fulfillment at work





## Further reading:

- MJ Hallworth et al. Current evidence and future perspectives on the effective practice of patient-centered laboratory medicine. Clin Chem 2014; 61:589-99
- AR Horvath. From Evidence to best practice in laboratory medicine. Clin Biochem Rev 2013;34:47-49
- <https://www.ecri.org/press/Pages/Top-10-Patient-Safety-Concerns-for-2017.aspx>