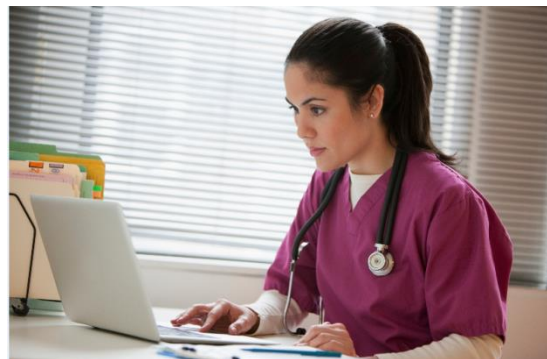


Advancing Professional Practice and Care through Digital Health



June 3, 2015



Overview of Panel Discussion

1. To provide an overview of the Clinical Adoption strategy and the resulting clinician and change management research.
2. To review and discuss the pan-Canadian findings and implications from a first ever quantitative survey of Canadian nurses and Community Pharmacists access, usage and impact of technology on practice.
3. To review and discuss key benefits & barriers; short term and long term actions to advance engagement, access and evidence informed based decision support and care.

Vision

Healthier Canadians through innovative digital health solutions



Clinical Engagement Strategy



Clinician Education Campaign



www.knowingisbetter.ca



Transforming Practice, Improving Care

Timely Access to
Information

Collaboration &
Communication

Improves
Efficiencies & Avoids
Duplication



Information Management
& Education

Decision Support
& Workflow



Connecting
the Team
*Communication &
Collaboration*







Connecting
the Patient
Self-Management

ePractice
Clinical/Health
Informatics

Connecting
to Evidence
Based
Information
*Knowledge
Based Practice*

Quality Measures
*Continuous Quality
Improvement*



National Change Management Framework Elements		Key Findings
	Governance & Leadership	Only 39% of respondents state a senior leader is accountable for change most or all of the time
	Stakeholder Engagement	Only 36% state a structured stakeholder engagement process is used most or all of the time
	Communications	Only 46% state key messages delivered by the senior leader most or all of the time.
	Workflow Analysis & Integration	Only 43% respondents indicate that workflow analysis and integration is conducted on change initiatives most or all of the time.
	Education & Training	Only 61% of respondents state they provide training segmented by user type and role most or all of the time
	Monitoring & Evaluation	Only 35% of respondents state their change management process includes review and monitor change tactics

NURSING PRACTICE - CURRENT STATE

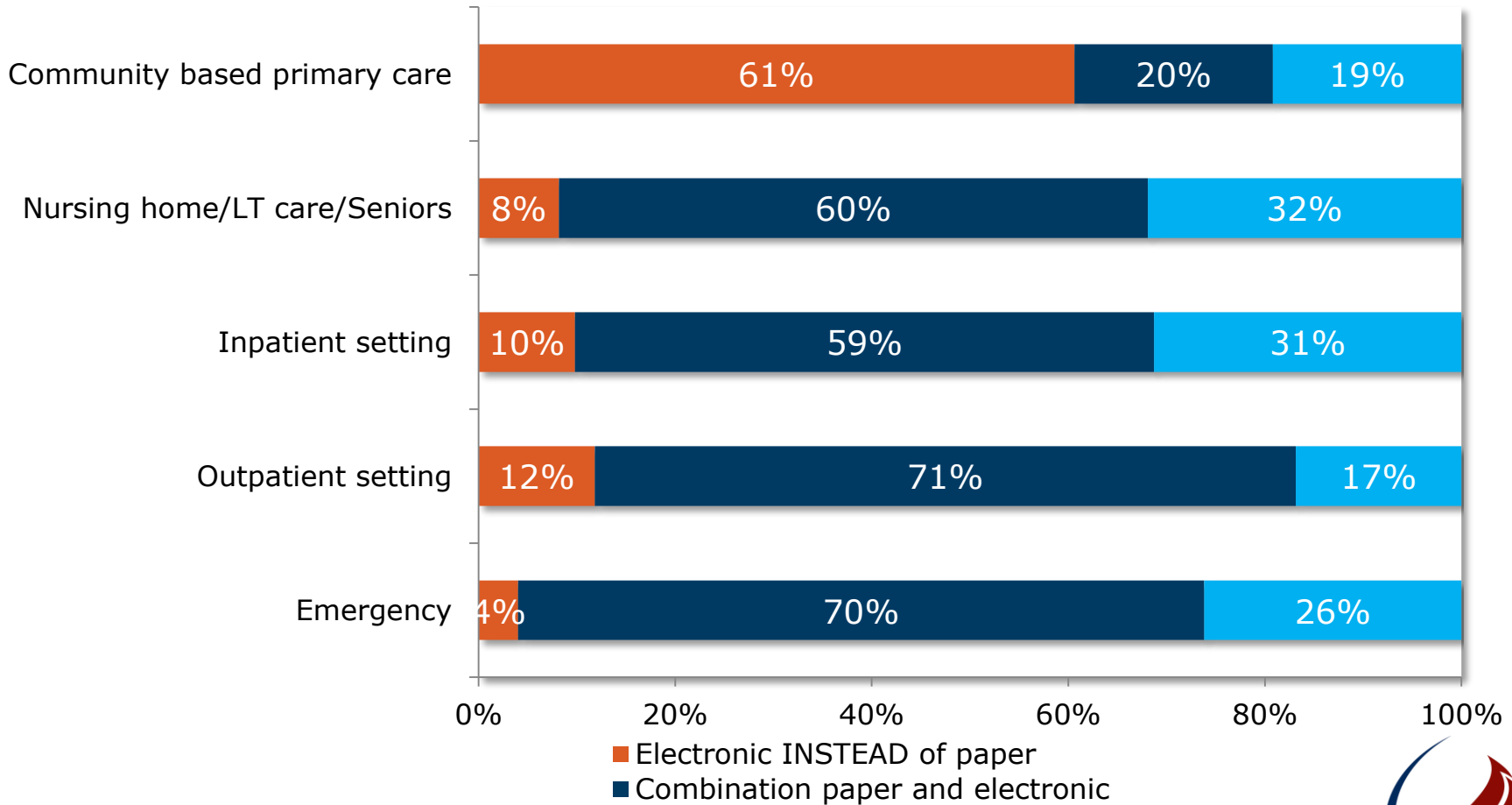
Nursing Practice

The National Survey of Canadian Nurses: *Use of Digital Health Technologies in Practice*, is the first ever quantitative survey of Canadian nurses to explore their access, use and impact of using technology in nursing practice.

This inaugural survey was undertaken jointly by the Canadian Nurses Association and Canada Health Infoway. It was conducted between February and March 2014 by Harris Decima. 1,094 surveys were completed by nurses in direct practice. The data has been weighted to be representative of the actual nursing population.



Q3. Thinking about your MAIN patient care setting, which of these describes the patient record keeping system that you use? Please check ONLY ONE



While most Canadian nurses work with a combination of paper and electronic record keeping, **1 in 4 work** in a paper environment and 2 in 10 are electronic.

Wide variance in electronic use across the practice care settings.

65% use electronic records to enter and retrieve clinical patient notes



Canadian Nurses - all practice settings

Top 3 functionalities in use



1. Electronic records to enter and retrieve clinical notes

2. Electronic Ordering of Lab tests

3. Electronic list of all medications taken by an individual patient



Access and use of specific functionality and tools

	Use on a computer or laptop	This is available but I do not have access	This is not available
Electronic records to enter and retrieve clinical patient notes	63%	4%	31%
Electronic list of all medications taken by an individual patient	53%	10%	34%
Electronic access to provincial/territorial patient information systems (e.g. drug, laboratory, diagnostic images)	43%	13%	37%
Electronic clinical decision support tool (e.g. Application for medications, dosages, BMI calculator)	41%	5%	40%
Electronic referral to other physicians or health care provider (e.g. physiotherapist, social worker, dietitian)	35%	7%	51%
Electronic reminders for recommended patient care (following clinical practice guidelines)	29%	4%	58%
Electronic transfer of clinical/patient medical information securely to other health professionals	24%	7%	55%
Access to provincial electronic health record	15%	9%	58%

30 - 60% Don't Have Access

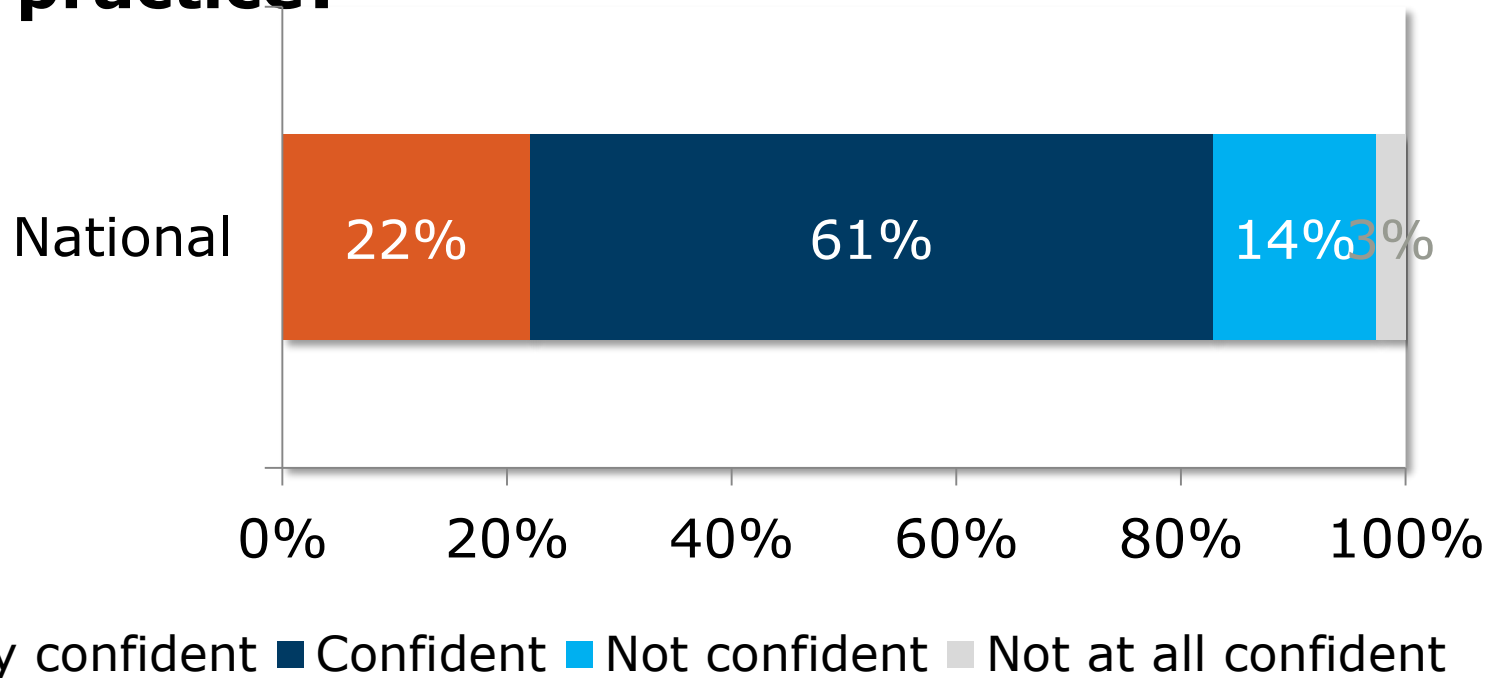
49 per cent do not feel they have adequate access to the tools for their role.

57 per cent say the types of digital health tools in their practice are not adequate for their role.

Canadian nurses are poised for digital health leadership, 83 per cent are confident in using digital tools.



Q18. How would you rate your confidence in using electronic clinical information systems and tools in clinical practice?



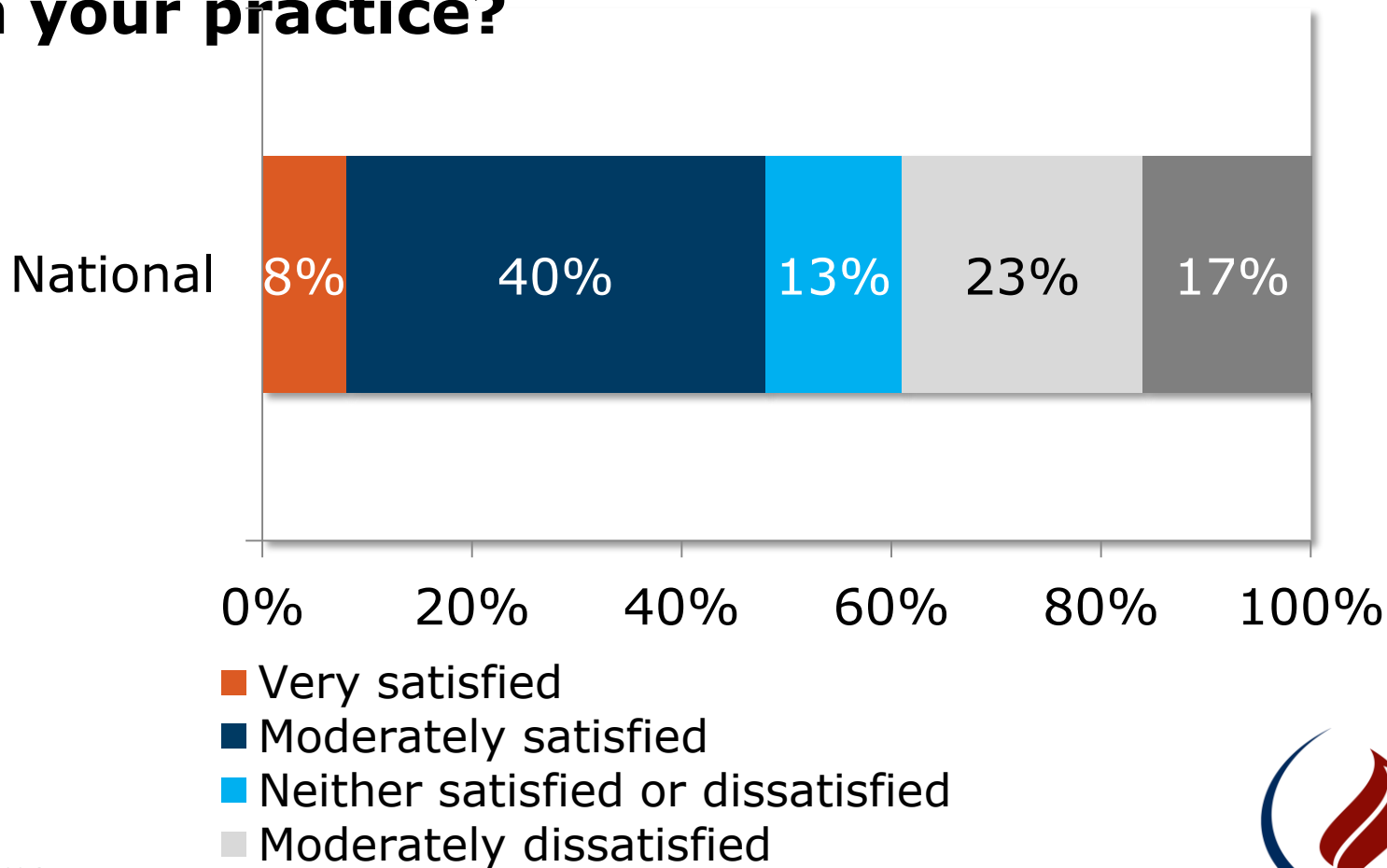
Nurses are split in their **satisfaction** with the digital tools/systems currently in use in their practice.

86 per cent of nurses had **little or no input** into the introduction of digital health systems.

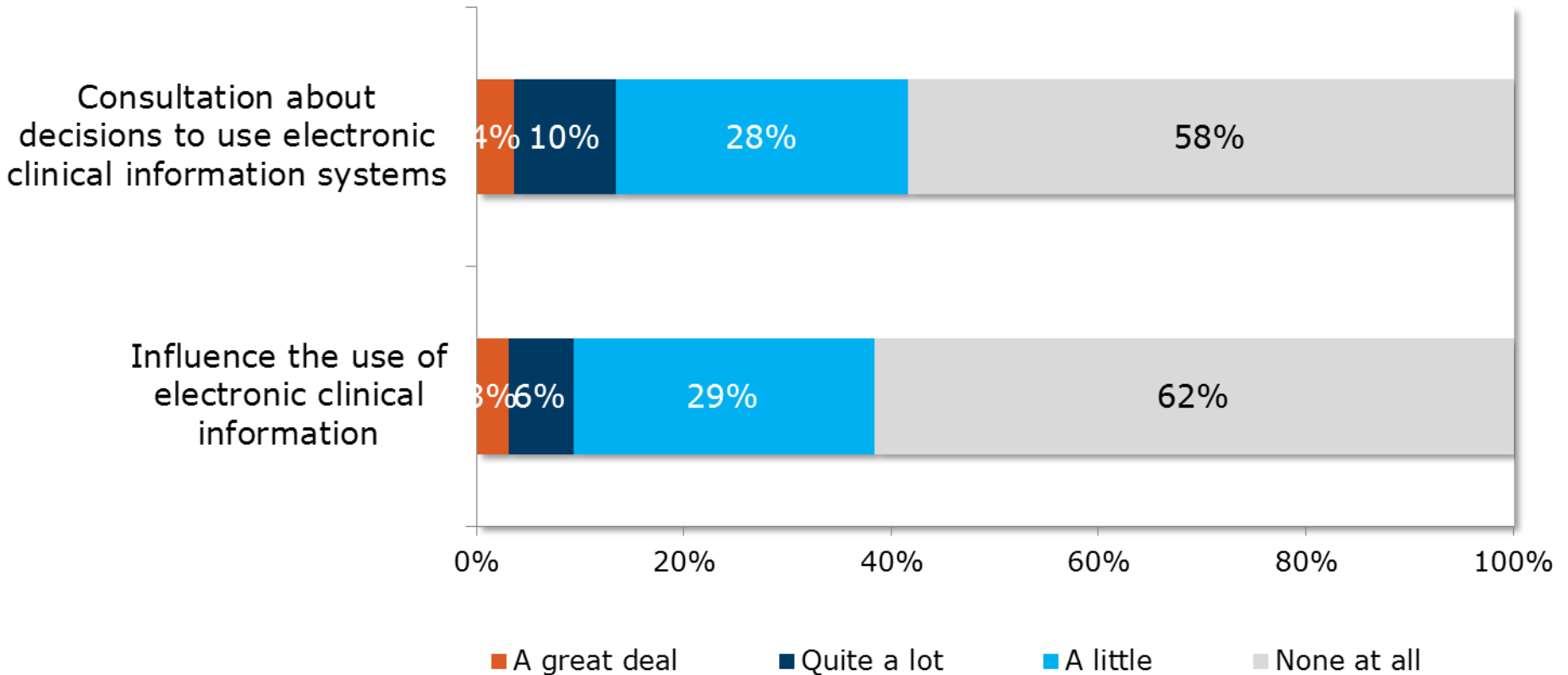
91 per cent of nurses state they have **little to no influence** in the use of digital health tools in their practice.



Q12. How satisfied are you with the electronic clinical information and tools that you currently use in your practice?



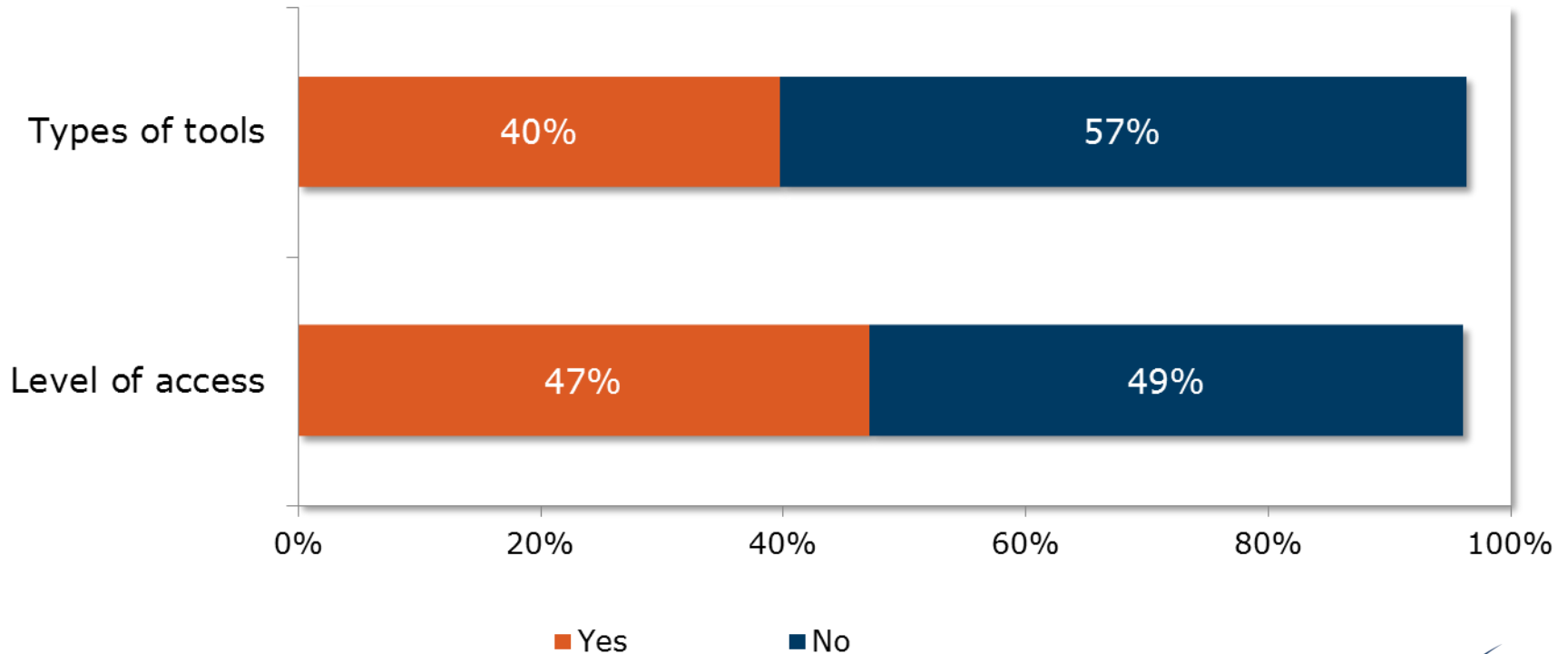
Opportunity to improve nursing consultation prior to implementation



Base: All respondents in clinical practice providing direct care (n=931)
Excludes those who responded: Not applicable - no electronic systems in place



Nurses opinion is split on adequacy of tools and level of access



Base: All respondents in clinical practice providing direct care (n=933)
Base: All respondents in clinical practice providing direct care (n=937)
Excludes those who responded: Don't know and Not applicable - no electronic systems in place



Nurses identify a number of benefits associated with the use of digital health tools:

- Improved continuity of patient care and communication between the care team (78 per cent)
- Improved patient safety (72 per cent)
- Improved lab/diagnostic response time to support decision making (71 per cent)



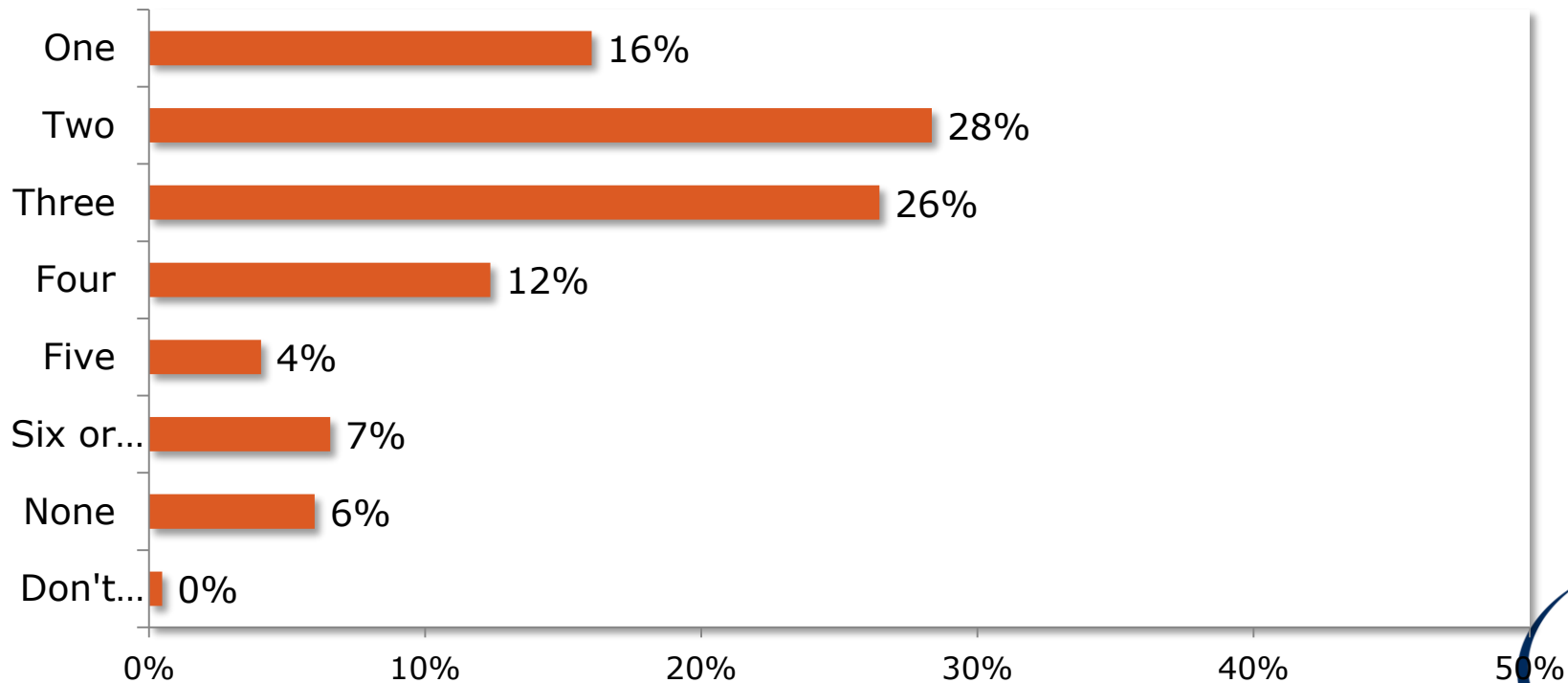
While nurses recognize the benefits for both themselves and their patients, there are a number of factors impacting the full realization of digital health in nursing practice:

- Use of both paper/electronic records (61 per cent)
- Multiple log-ins to access different clinical information systems (54 per cent)
- Lack of available equipment (48 per cent)

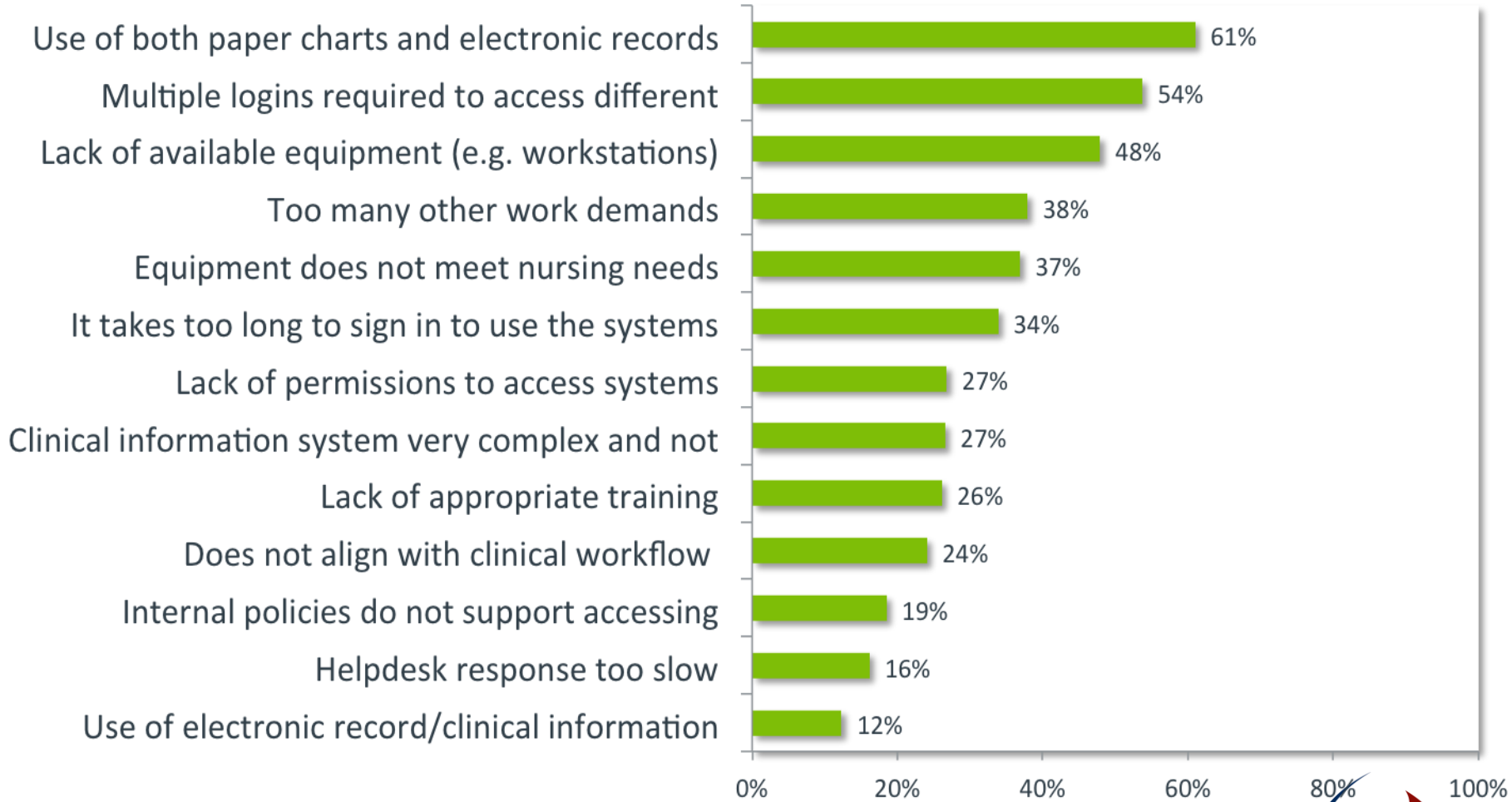


Generally more than one log-in required

Q8. On a typical working day, please indicate how many different logins (usernames and passwords) you use to access electronic record/clinical information systems to manage patient care.



Challenges



Opportunities

- ✓ Capitalize on nursing confidence
- ✓ Improve nursing access
- ✓ Enhance nursing input into:
 - Types of tools
 - Planning for implementation
 - Education



COMMUNITY PHARMACISTS PRACTICE CURRENT STATE

Background and Methodology

- As part of Infoway’s Clinical Engagement Strategy – Direct Care Providers, in partnership with the Canadian Pharmacists Association (CPhA), we invited community pharmacists to participate in a survey to understand their use and perceived benefits of electronic systems in practice.
- Harris/Decima hosted a Web-based survey and provided analysis of results.
- CPhA and provincial pharmacy associations distributed survey to its members. Survey was open from Apr 15 to May 12, 2014.
- Total N=447 (*all respondents*). The data were weighted to reflect the universe of pharmacists in a community setting.*

*Source: Pharmacists Workforce, CIHI, 2012. Weighting factors that were applied are within the industry standards (under 2.5)

Provincial Distribution of Responses

- The table below highlights the number of completions by province*.

Province	Completions (unweighted)
Alberta	65
British Columbia	55
Manitoba	20
New Brunswick	21
Newfoundland	23
Nova Scotia	25
Ontario	114
Prince Edward Island	27
Saskatchewan	97
Total	447

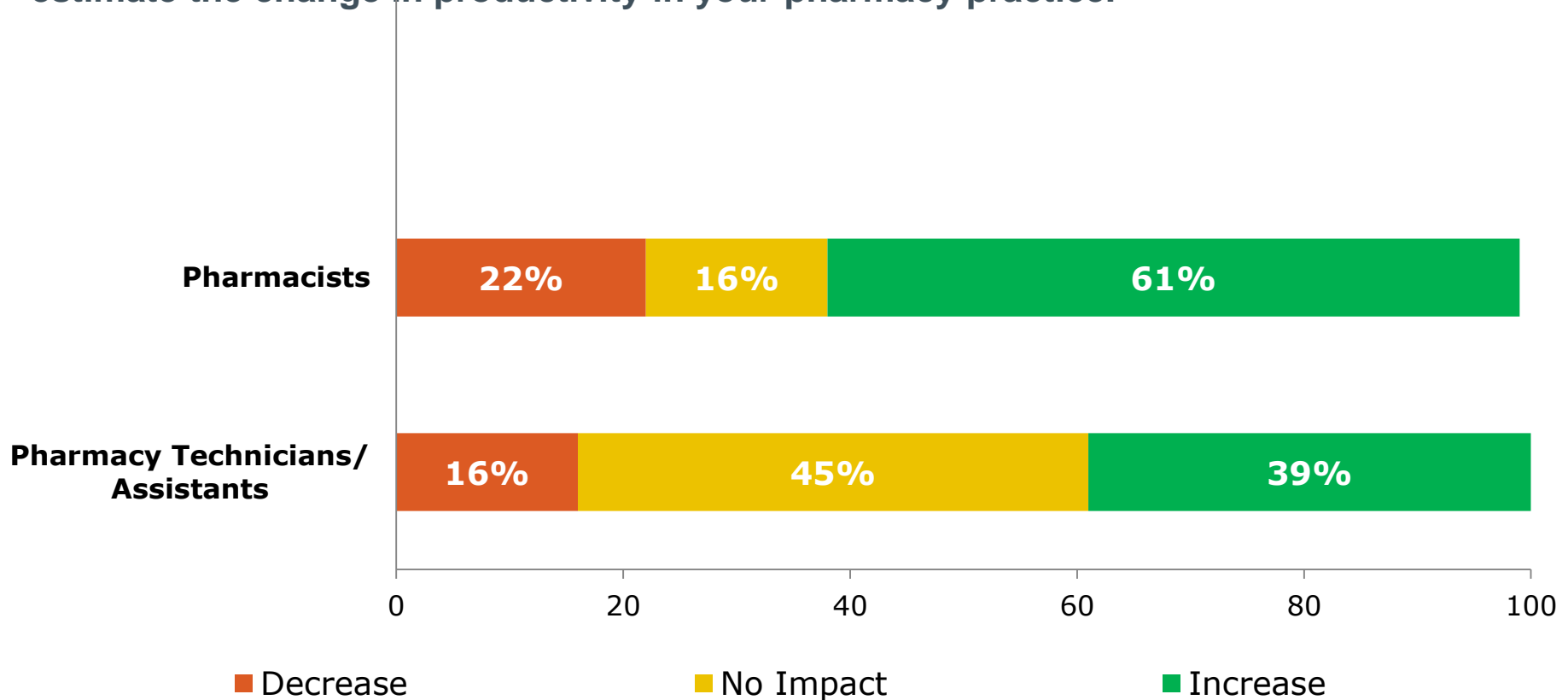
*Quebec, Nunavut, NWT and Yukon did not participate

Access and Use of Digital Health

- All use clinical decision support tools (e.g.):
 - Electronic warning for adverse drug interactions or contraindications (99%)
 - CPhA e-Therapeutics+/eCPS electronic clinical decision support tool (88%)
- 65% have access to and use patient medication profiles from a provincial drug information system (DIS).
- 22% have access to and use electronic access to laboratory test results from a provincial laboratory information system (LIS).
- Over 90% of those who cannot access to DIS or LIS would like to have access.

Provincial DIS - Impact on Productivity

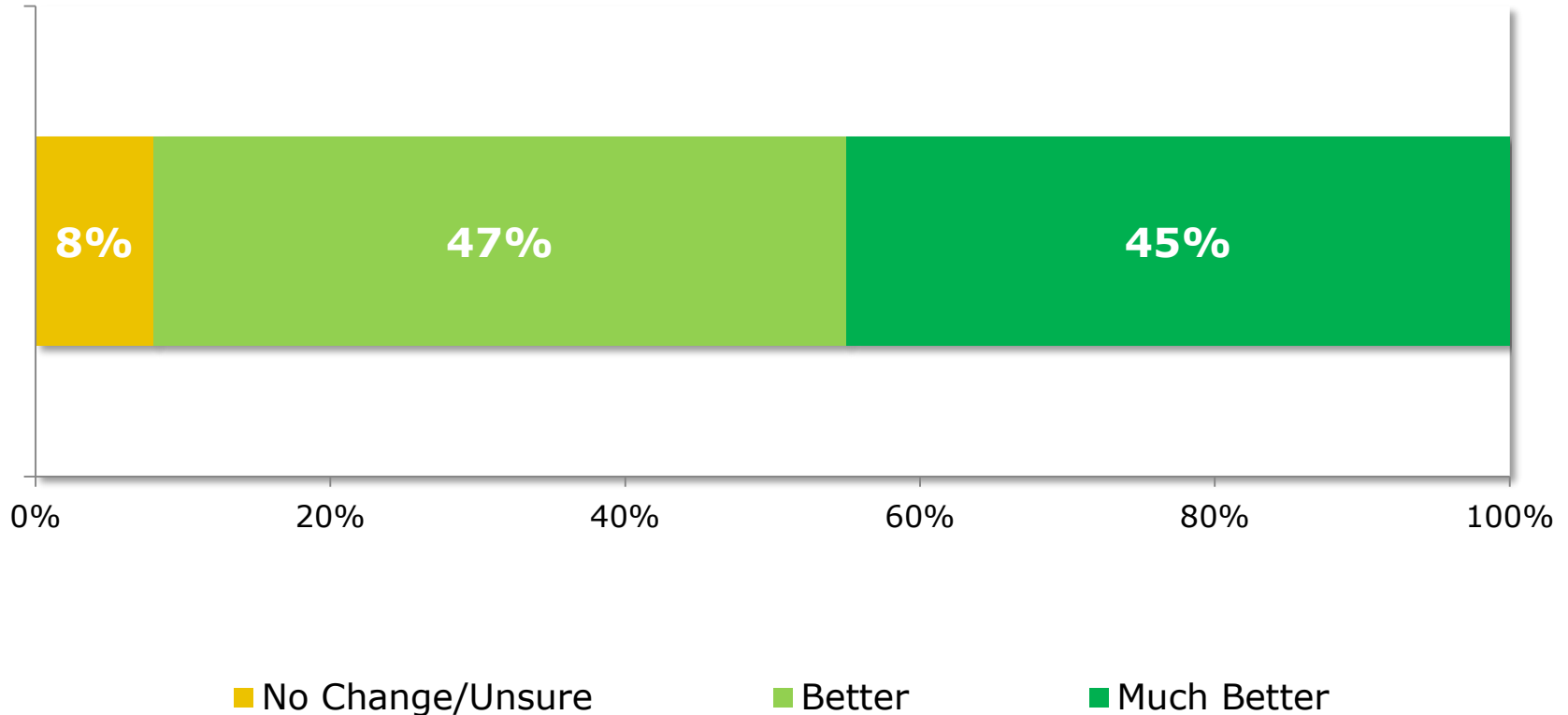
Since the availability of an electronic provincial drug system in your practice, please estimate the change in productivity in your pharmacy practice.



Previously practiced in non-DIS environment (n=107)

Provincial DIS – Impact on Quality of Care

How has the quality of the patient care you provide changed since the availability of an electronic provincial DIS?



Previously practiced in non-DIS environment (n=107)

Community Pharmacists Top 3 Functionalities in Use



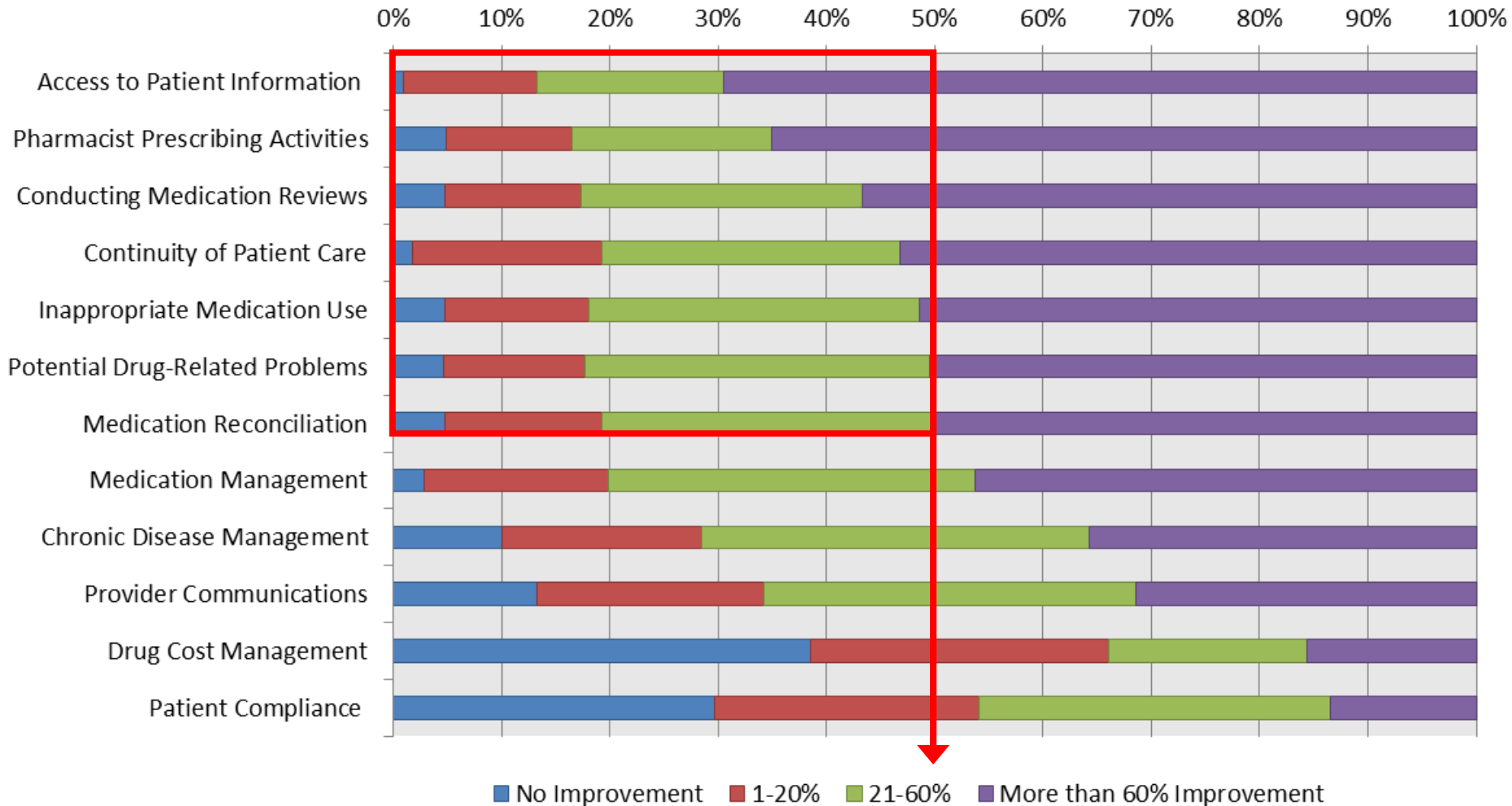
1. Electronic warning for adverse drug interactions or contraindications

2. Electronic reminders for recommended patient care

3. Electronic list of all medications taken by an individual patient (accessible through DIS)

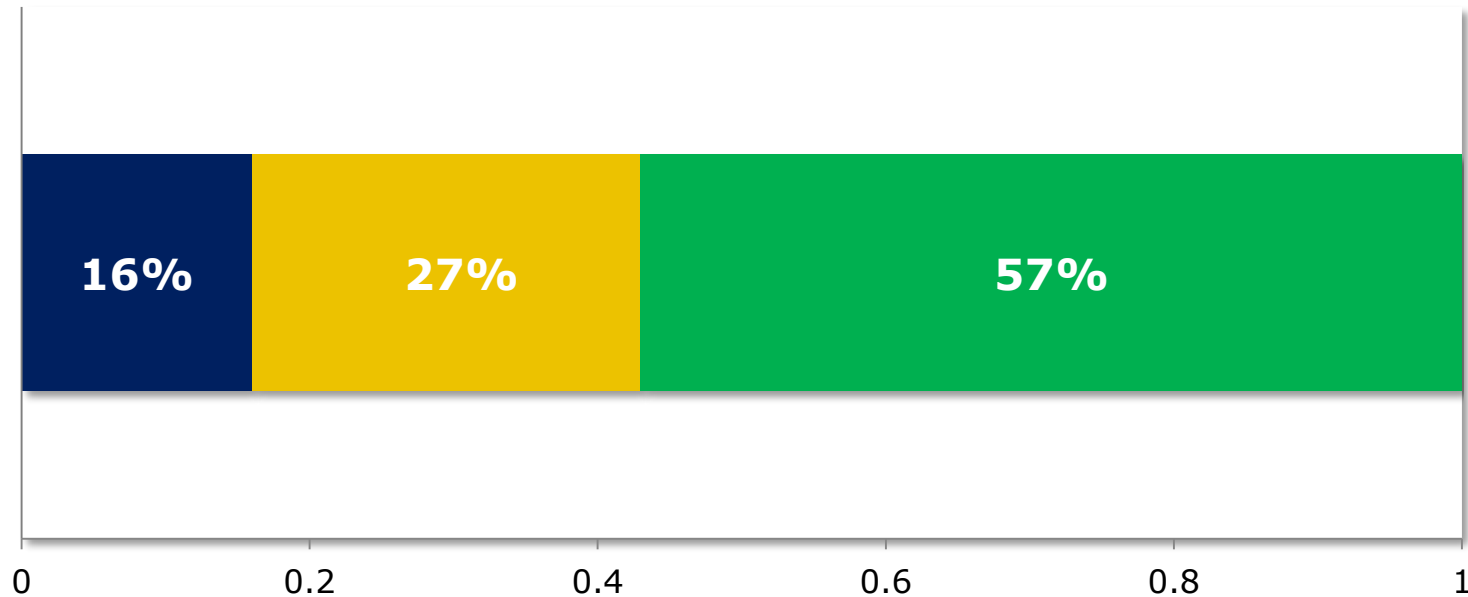
Impact of DIS on Clinical Practice

Since the availability of an electronic provincial drug system in your practice, please estimate the percent improvement in the following:



Access to Lab Results - Impact on Productivity

Since having electronic access to laboratory test results (available through provincial/ territorial information systems), the productivity at my community pharmacy practice has:

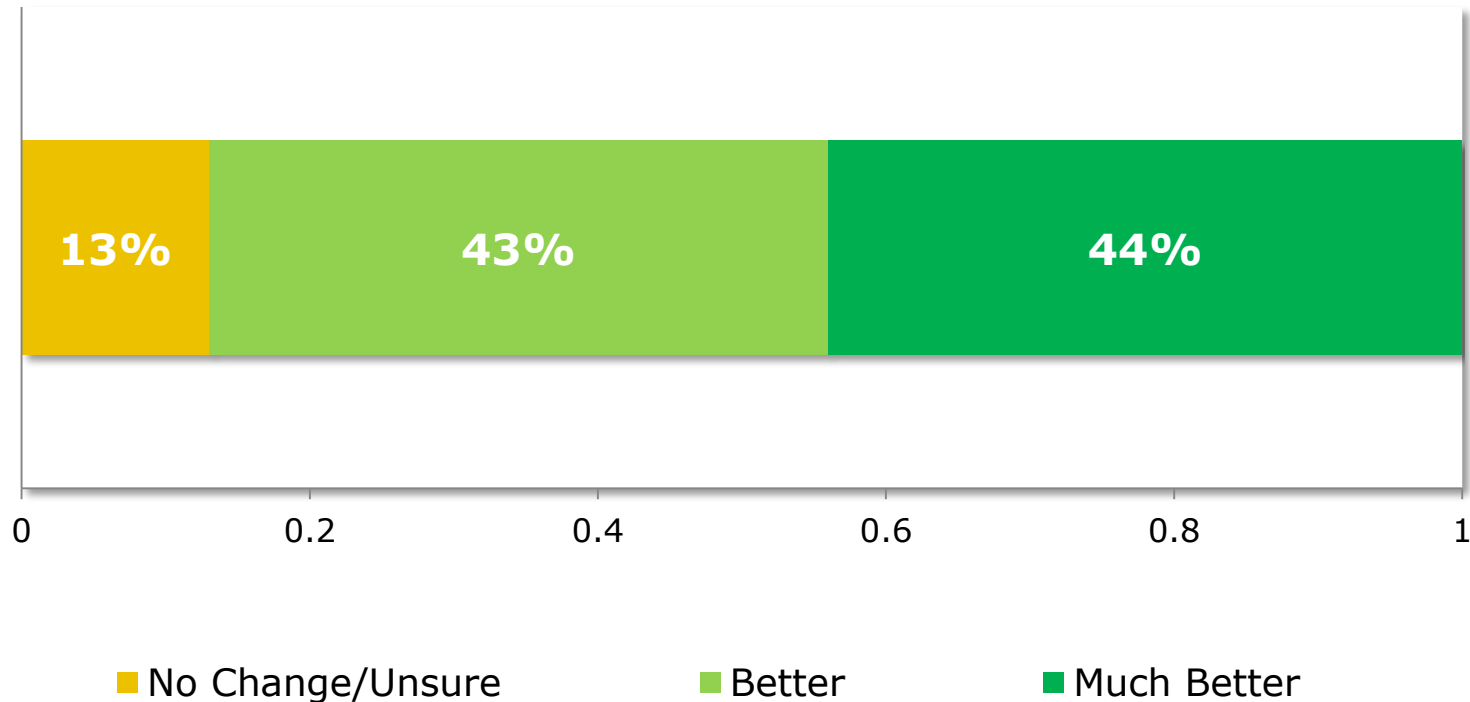


■ Greatly Decreased/Decreased/Unsure ■ No Change ■ Increased/Greatly Increased

Electronic Lab Access (n=102)

Access to Lab Results - Impact on Quality

How has the quality of the patient care you provide changed since having electronic access to laboratory test results (available through provincial/territorial information systems)?



Electronic Lab Access (n=102)

ELECTRONIC PRESCRIBING

e-Prescribing Definition: CMA-CPhA

“The secure electronic creation and transmission of a prescription between an authorized prescriber and a patient’s pharmacy of choice, using clinical Electronic Medical Record (EMR) and pharmacy management software.”

*e-Prescribing Joint Statement 2012
Canadian Medical Association & Canadian Pharmacists Association*

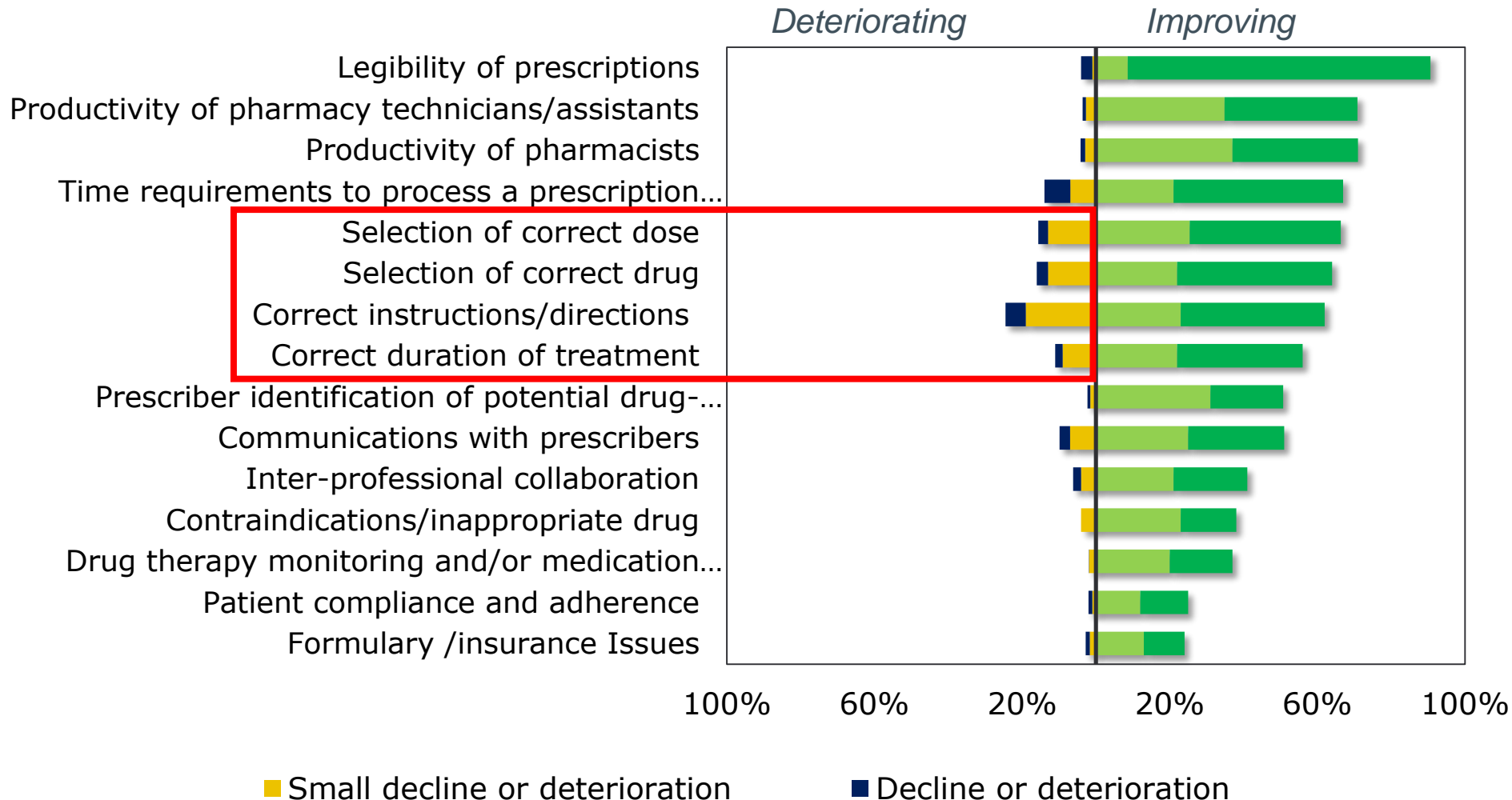
Prescription Sources

Please estimate the percentage of total weekly prescriptions received in your pharmacy practice from the sources listed below.

All respondents (n=447)

Source	Less than 20%	21 - 60%	More than 60%
Telephone (e.g. physician/prescriber calls)	95%	4%	0%
Handwritten and brought in by patient	55%	34%	12%
Handwritten and faxed to pharmacy	95%	4%	2%
Typed/Printed (i.e. computer generated & signed by prescriber) brought in by patient	43%	41%	16%
Typed/Printed (i.e. computer generated, printed in the prescriber's office with an electronic signature, stamped signature or are signed and then <u>faxed</u> to the pharmacy)	76%	21%	3%
Computer generated, printed with <i>electronic prescriber signature</i> and <u>brought in by patient</u>	72%	23%	5%
Auto-fax (i.e. generated from physician system to pharmacy fax with some form of <i>e-signature</i>)	88%	9%	3%
ePrescribing (i.e. from physician system directly to pharmacy practice management system)	97%	1%	2%
Prescription accessed through an electronic provincial Drug Information System (DIS)	98%	1%	1%

Early impact of moving from handwritten/verbal prescriptions



(n=340 to 353) depending on the respondents able to answer the question.

Variability in clarification of electronic processes

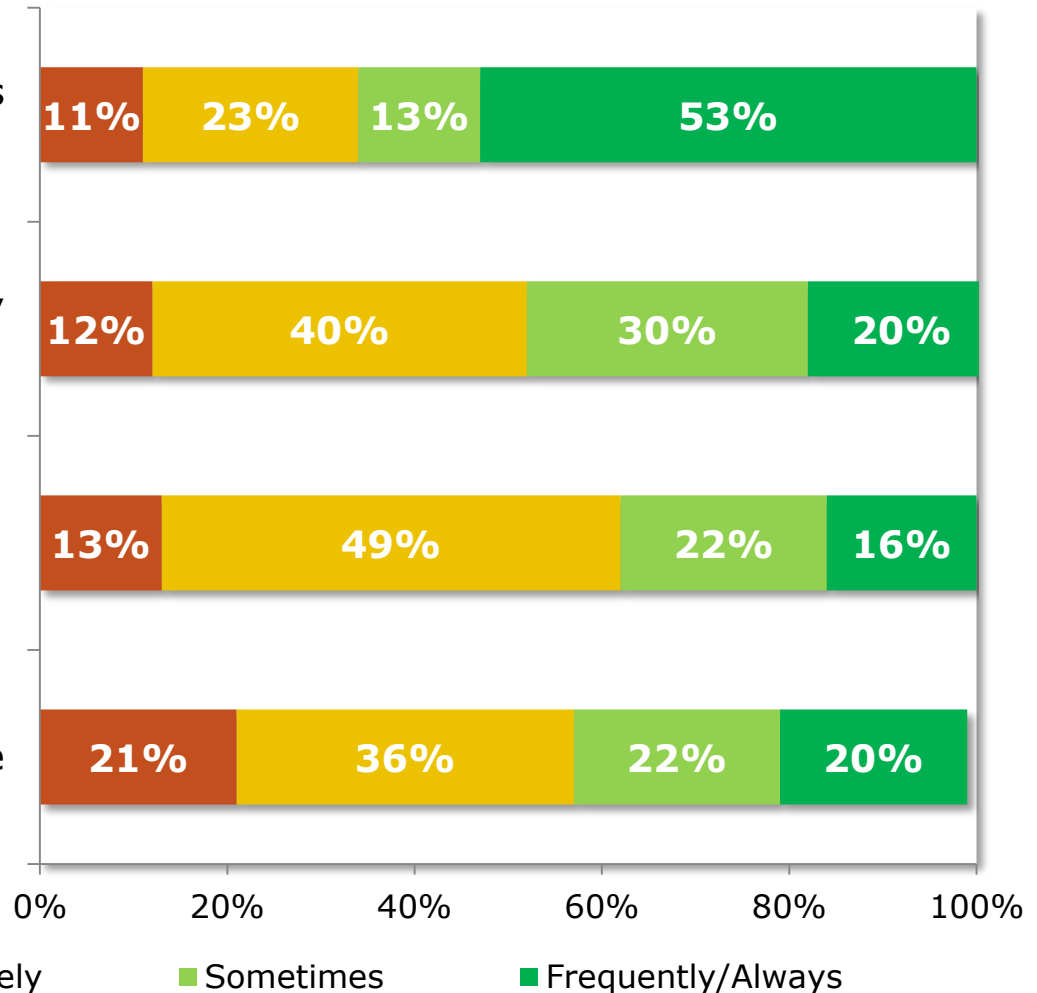
In your pharmacy practice, do you:

Accept auto-faxed/printed prescriptions with electronic signatures as received

Seek to verify the electronic signature by contacting the prescriber

Seek to verify with the prescriber that a unique prescription authorization process is in place

Receive a negative response from prescribers when seeking to verify the electronic signature



PHARMACISTS EXPANDED SCOPE OF PRACTICE

Leading Clinical Benefits for Community Pharmacists



Access to patient information



Pharmacist prescribing activities



Conducting medication reviews



Continuity of patient care

Previously practiced in non-DIS environment (n=107)

Pharmacists moving FROM Product-Focused Patient Care...



... Moving TO Outcomes-Focused Patient Care.





Pharmacists' Expanded Scope of Practice in Canada

Not implemented

	BC	AB	SK	MB	ON	QC	NB	NS	PEI	NL	NWT	YT	NU
Provide emergency prescription refills													
Renew/extend prescriptions													
Change drug dosage/formulation													
Make therapeutic substitution													
Prescribe for minor ailments/conditions													
Initiate prescription drug therapy													
Order and interpret lab tests													
Administer a drug by injection													
Regulated Pharmacy Technicians													

2011

Pharmacists' Expanded Scope of Practice in Canada

✓ Implemented in jurisdiction

P Pending legislation, regulation or policy for implementation

✗ Not implemented

BC AB SK MB ON QC NB NS PEI NL NWT YT NU

Provide emergency prescription refills



Renew/extend prescriptions



Change drug dosage/formulation



Make therapeutic substitution



Prescribe for minor ailments/conditions



Initiate prescription drug therapy



Order and interpret lab tests



Administer a drug by injection



Regulated Pharmacy Technicians





Pharmacists' Expanded Scope of Practice in Canada

✓ Implemented in jurisdiction

P Pending legislation, regulation or policy for implementation

✗ Not implemented

BC AB SK MB ON QC NB NS PEI NL NWT YT NU

Provide emergency prescription refills

✓	✓	✓	✓	✓	P	✓	✓	✓	✓	✓	✗	✗
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Renew/extend prescriptions

✓	✓	✓	✓ ⁴	✓	P ⁷	✓	✓	✓	✓	✓	✗	✗
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Change drug dosage/formulation

✓	✓	✓	✓	✓	P ^{7,8}	✓	✓	✓	✓	✓	✗	✗
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Make therapeutic substitution

✓	✓	✓	✗	✗	P ^{7,8}	✓	✓	✓	✓	✓	✗	✗
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Prescribe for minor ailments/conditions

✗	✓ ¹	✓	✗	✗	P ^{7,8}	✗	✗	✗	✗	✗	✗	✗
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Initiate prescription drug therapy

✗	✓	✓ ²	✗	✗	✗	✗	✓	✓ ²	✗	✗	✗	✗
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Order and interpret lab tests

✗	✓	P ³	✓	P	P	P	P	P ¹¹	✗	✗	✗	✗
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Administer a drug by injection

✓	✓	P ³	✓	✓ ⁶	P ^{7,9}	✓	✓	✓	✓	✗	✗	✗
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Regulated Pharmacy Technicians

✓	✓	P ³	P	✓	✗	✓	✓	✓	✓	✗	✗	✗
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Payment for Medication Management Services

	BC	AB	SK	MB	ON	QC	NB	NS	PEI	NL
Medication Review/Assessment – Basic/Standard										
Medication Review/Assessment – Specific for Diabetes										
Medication Review/Assessment – Advanced/Comprehensive										
Minor Ailments Assessment/Prescribing										
Smoking Cessation Services										
Immunization										
Prescription Adaptation, Renewals, Trial Rx, Refusal to Fill Rx, Pharmaceutical Opinion, etc.						<input checked="" type="checkbox"/>				

2015

Payment for Medication Management Services

	BC	AB	SK	MB	ON	QC	NB	NS	PEI	NL
Medication Review/Assessment – Basic/Standard	✓	✓	✓		✓		✓	✓	✓	✓
Medication Review/Assessment – Specific for Diabetes		✓			✓				✓	✓
Medication Review/Assessment – Advanced/Comprehensive		✓			✓			✓		
Minor Ailments Assessment/Prescribing		✓	✓					✓		
Smoking Cessation Services		✓	✓		✓					
Immunization	✓	✓			✓		✓	✓	✓	✓
Prescription Adaptation, Renewals, Trial Rx, Refusal to Fill Rx, Pharmaceutical Opinion, etc.	✓	✓	✓		✓	✓		✓	✓	✓

Summary of Results

- Community pharmacists are using and benefiting from digital health in practice.
 - Those using provincial drug information systems (DIS) and laboratory information systems (LIS) report increased productivity and quality of care.
 - Pharmacists are also reporting substantial improvement in clinical benefits related to expanded scope of practice activities.
 - Those who do not have access to a provincial DIS or laboratory test results would overwhelmingly like to have it to help inform patient care.
- EMR-generated prescriptions are increasing in prevalence and are associated with better legibility, however, there are opportunities for further benefits.

CASE STUDY – Floods in Calgary Area (High River) July 2013



ENABLERS: expanded scope of practice + access to information + payment models

Key Take Aways

- We have a baseline of where we are at
- Clinicians are looking for more
- We have a number of opportunities for improvement

We need to build capacity and integrate the required competencies into existing Professional Practice Frameworks and Models of Care

The Check List



- ✓ Visible Clinical & IT Leadership
- ✓ Budget for Change Management
- ✓ Selected Change Approach/Methodology
- ✓ Engaged Clinicians & Informatics Specialists
- ✓ Communication Plan & Key Messages
- ✓ Workflow Analysis & Practice Process Redesign
- ✓ Role Specific Training & Education
- ✓ Ongoing Technical, Operational & Clinical Support
- ✓ Pre & Post Change Indicators & Evaluation

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