

Advancing Patient Engagement Through Information Design

Choosing Wisely Talks

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Learning Program

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Funding and Partners

- Physician Learning Program (PLP)
- Alberta Health Services (AHS)
- Strategic Clinical Network™ (SCN)



Physician
Learning
Program



Learning Objectives

- Background
- Development of the Patient Storyboard
 - Stakeholder engagement
- Implementation
- Results of the patient survey
- Future directions

What are Strategic Clinical Networks™

Networks of people who are passionate and knowledgeable about specific areas of health, challenging them to find new and innovative ways of delivering care that will provide better quality, better outcomes and better value for every Albertan.

Mission

- The Emergency SCN's mission is to support quality patient and family centred emergency care driven by education, innovation and practice changing research through collaboration.

Vision

- Build an inclusive network that supports the advancement of evidence informed emergency care for all Albertans.

Our goal is to increase awareness and educated patients and clinicians about CT scanning and Mild Traumatic Brain Injury (MTBI) in the Emergency Department

Why was this needed?

- Choosing Wisely Alberta was looking for tools that increase patient awareness and SDM
- Wanted to support current province-wide mTBI and CT Stewardship project
- CT in mTBI most commonly ordered CW low value test (Lin et al.)
- Patient expectations cited as reason for ordering CT (40.8% in Lin study)

Why a Patient Storyboard?

- Decision aides allow people to participate in health care decisions
- Engaging patients can change their expectations
- PDA's are not meant to advise a treatment option
- <http://www.ipdas.ohri.ca/what.html>

Why not just a handout?

- Captive audience
- Current pamphlets in ED end up in garbage
- Language barriers
- No way of assessing impact
- Limited \$\$ Resources

Calgary Emergency Departments  Feb 23
9:57 a.m.

Alberta Children's Hospital For Patients 17 & Under	02 : 30 HOURS MINUTES
Foothills Medical Centre For Patients 15 & Older	02 : 24 HOURS MINUTES
Peter Lougheed Centre	01 : 37 HOURS MINUTES
Rockyview General Hospital	02 : 46 HOURS MINUTES
South Health Campus Children's Dr: 1 pm - 1 am	01 : 35 HOURS MINUTES

If you are in need of serious medical attention, please call 911 or go directly to your nearest emergency department

Partnerships

- ED & Mount Royal University communication degree/information design (MRU) student partnership - Spring of 2016
- Spring presentations - approx. 40 students
- Partnership between, Choosing Wisely Alberta, AMA, Emergency SCN™, Physician Learning Program, 2 Calgary ED's, AHS communications
- Hired MRU summer student to coordinate project and develop Patient Storyboard

Work Back Schedule

		Workback Schedule																																												
		Week 1				Week 2 July				Week 3				Week 4				Week 5				Week 6 August				Week 7				Week 8				Week 9												
Deliverables	Duration	27	28	29	30	1	4	5	6	7	8	11	12	13	14	15	18	19	20	21	22	25	26	27	28	29	1	2	3	4	5	8	9	10	11	12	15	16	17	18	19	22	23	24	25	26
Discovery phase	15 d	[Gantt bar]																																												
Kick Off	3 d	[Gantt bar]																																												
Strategic Direction	10 d	[Gantt bar]																																												
Develop Key Messages	4 d	[Gantt bar]																																												
Research/Data Analysis	15 d	[Gantt bar]																																												
Workback Schedule	6 d	[Gantt bar]																																												
Content Phase ??	7 d	[Gantt bar]																																												
Data - Daniels Team	4 d	[Gantt bar]																																												
Changes/Adjustments	3 d	[Gantt bar]																																												
Design Phase	28 d	[Gantt bar]																																												
Concept Sketches/Rough	8 d	[Gantt bar]																																												
Patient FG - Language	?	[Gantt bar]																																												
Patient FG - Visuals	?	[Gantt bar]																																												
Visual Design	16 d	[Gantt bar]																																												
Motion Graphic	24 d	[Gantt bar]																																												
		components										storyboards										1st Draft																								
Development Phase	24 d	[Gantt bar]																																												
1st patient Digital Draft	7 d	[Gantt bar]																																												
1st clinician Digital Draft		[Gantt bar]																																												
Critique - Internal	2 d	[Gantt bar]																																												
Critique - Choosing Wisely	1 d	[Gantt bar]																																												
Critique - Patient FG	1 d	[Gantt bar]																																												
Revisions	9 d	[Gantt bar]																																												
Critique - Patient FG 2	1 d	[Gantt bar]																																												
Complete Print	2 d	[Gantt bar]																																												
Product Testing	5 d	[Gantt bar]																																												
Deployment Phase	25 d	[Gantt bar]																																												
Marketing plan	25 d	[Gantt bar]																																												
ESCN Comm. Plan	3 d	[Gantt bar]																																												
ESCN Activity Plan	1 d	[Gantt bar]																																												
PP - Operations	4 d	[Gantt bar]																																												
PP - SCNs	4 d	[Gantt bar]																																												
Campaign Materials	3 d	[Gantt bar]																																												
Launch/Release	?	[Gantt bar]																																												

Development

Implementation

Assessment

Future
Directions

What we needed from the patients?

- Design elements- size, font, colour etc.,
- Wording – level of comprehension
- Storyboard effectiveness
- Information gathering
- Key messaging
- Beliefs

Patient Focus Group

- 75+ patients- Patient Engagement/Experience-AHS
- Electronic surveys 2 weeks – volunteer
- Conducted internal to patient advisors provincially

- Face to face focus group 4 hours – volunteer
- Feedback from surveys and tested with focus group
- Tested key messaging, imaging, size, colour, etc.,

Patient Focus Group- Languages

- Multicultural understanding
- Translatability
- Graphics/imagery
- Storyboard effectiveness
- Information gathering
- Cell phone usage

What we thought....

Facts About Your Head Injury.

Computed tomography (CT) scans are a valuable tool used for diagnosing illness and injury in people. However, the use of CT scans for head injuries has seen a regular increase over the last few years. This is putting patients at risk for possibly avoidable radiation exposure. The Canadian CT Head Rule is a tool used by doctors to identify patients very unlikely to have any serious injuries requiring special treatment. If you have one or more of these findings, you might need a head CT. If you have none of these, a CT is unlikely to be helpful.

Words to know...

Mild Traumatic Brain Injury (MTBI) -

A head injury temporarily affecting how your brain works, such as change in consciousness (being knocked out or confused), or amnesia (loss of memory)

CT scan -

A computed tomography (CT) scan combines many x-rays taken from a machine that circles the body, creating a 3D picture on a computer screen.

Ionizing Radiation -

A type of energy that is used in X-rays and CT scans. It has been proven to increase the risk of cancer in high doses.

Low Risk -

A minor head injury patient with not life-threatening injuries and would not be considered for a CT.

Moderate Risk -

A minor head injury patient that could be categorized with a life-threatening injury. This patient would require further observation and would be considered for a CT.

High Risk -

A minor head injury patient that has a life-threatening injury and would require a CT.

Need for Neurological Intervention -

The need to undergo the following procedures within 7 days: Craniotomy, elevation of skull fracture, monitoring of intracranial pressure, or placement of a nasal tube.

The Canadian CT Head Rule (CCHR)

The Canadian CT Head Rule is a tool used by doctors to identify patients very unlikely to have any serious injuries requiring special treatment. If you have one or more of these findings, you might need a head CT. If you have none of these, a CT is unlikely to be helpful.



Dangerous Mechanism
A fall from higher than 3ft, or 5 stars, a pedestrian hit by a motor vehicle, or a pedestrian thrown from a vehicle



Vomiting
2 or more vomiting episodes



Amnesia
Loss of memory before the injury happened



Suspected skull fracture

basal skull fracture - occurs at the base of the skull. May show as bruising and/or swelling around the eyes, ears, and nose

open skull fracture - occurs when the skin is broken and the bone is showing

65+

Age

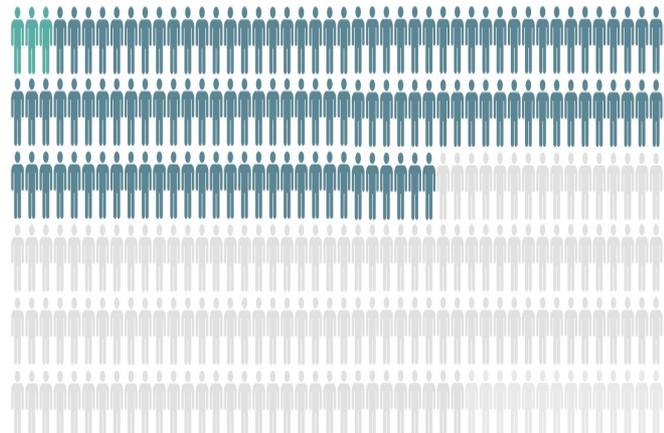
65 or older

There is only a **0.01%** risk of needing neurosurgery if CCHR negative

Do You Need a CT Scan?

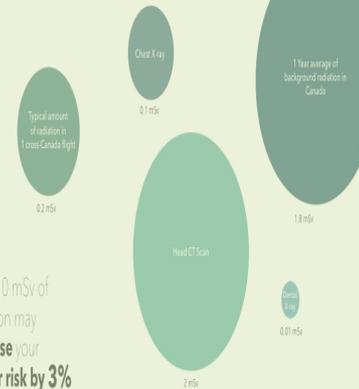
Why a CT Scan may not be necessary

In a study of 14 032 people with Mild Traumatic Brain (Head) Injury...



Risks of CT Radiation

Clinical imaging is one of the biggest sources of ionizing radiation to the general population. It can increase the risk of cancer in high doses.



4 Questions to ask your Doctor

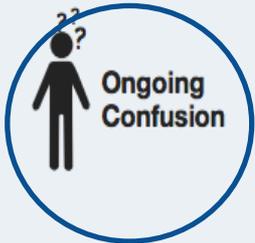
- 1 Do I really need this test, treatment, procedure?**
Tests are used so that you and your doctor can decide the best way to treat your issue. They may be necessary - or not necessary.
- 2 What are the downsides?**
Discuss the risks and benefits of any test or procedure so that you can make an informed decision with your doctor.
- 3 Are there simpler, safer options?**
Ask about your options. There may be a test, treatment, or procedure with lower risks and/or faster.
- 4 What happens if I do nothing?**
Ask your doctor what would happen if you waited to get a test, treatment or procedure now.

n = 50

What they wanted.....

Choose Wisely: Do You Need a CT Scan?

If you have a head injury and 1 or more of the following...



Ongoing
Confusion



Skull
Fracture



Vomiting
2 or more vomiting
episodes

65+

Age
65 years or older



Dangerous
Mechanism

A fall from higher than 3ft, or
5 stairs, a pedestrian hit by
a motor vehicle, or occupant
thrown from a vehicle

*** Concussions do not show up on a CT Scan ***

...then you might need a CT scan

The Canadian CT Head Rule

The Canadian CT Head Rule is a tool used by doctors to identify patients very unlikely to have any serious injuries requiring special treatment. If you have one or more of the above, you might need a head CT. If you have none of these, a CT is unlikely to be helpful.

There is a **1 in 7,814** risk of needing neurosurgery if you have a negative Canadian CT Head Rule.

Google™ Translate & Survey



Available on
iTunes



GET IT ON
Google play



Download the free
Google Translate app to
see this poster in your
language



+ many more languages

We need your help!

Please answer a few of
our questions - **tell us
what you think**



AHS Survey Select
REB approved
Volunteers Services – iPads
Target 100 surveys

International Patient Decision Aid Standards (IPDAS)

- Goal: Enhance the quality and effectiveness of patient decision aids
- Using evidence informed criteria to improve the content, development, implementation, and evaluation

III. Effectiveness: Does the patient decision aid ensure decision making is informed and values based?

Decision processes leading to decision quality. The patient decision aid helps patients to ...

- recognise a decision needs to be made 12.1
- know options and their features 12.2, 12.3
- understand that values affect decision 12.4
- be clear about option features that matter most 12.5
- discuss values with their practitioner 12.6
- become involved in preferred ways 12.7

Decision quality. The patient decision aid ...

- improves the match between the chosen option and the features that matter most to the informed patient 12.8

IPDAS

- Used IPDAS checklist to assess quality of Patient Storyboard
- Made revisions to Patient Storyboard to align with IPDAS

Additional Learnings

- Choosing Wisely AMA
- Operational feedback – ED's
- Volunteer services
- Awareness campaign for the nurses

Additional Learnings

- Infectious control
- Observation in waiting room
- Outcome measures-consult both patient and HCP's

Nurses need to know....



Choosing Wisely Canada is a national campaign to help physicians and patients engage in conversations about unnecessary tests, treatments and procedures, and to help physicians and patients make smart and effective choices to ensure high-quality care.

Why It's Important to Choose Wisely

- Unnecessary tests, treatments and procedures take away from care by potentially exposing patients to harm, leading to more testing to investigate false positives and contributing to stress for patients.
- Unnecessary tests, treatments and procedures put increased strain on the resources of our health care system.

Please visit <http://www.choosingwiselycanada.org/> to learn more.

What is happening in your Emergency Department

A focus of the Choosing Wisely campaign is communicating the evident behind being better stewards of CT imaging for Mild Traumatic Brain Injury (MTBI)

Research shows:

- The use of CT scans for head injuries has seen a regular increase over the last few years. This is putting patients at risk for possibly avoidable radiation exposure. The Canadian Head CT Rule is way for doctors to assess who would benefit from a CT scan taking the best course of action for their patients' health and safety.

Physician information

Choosing Wisely Canada is a campaign to help clinicians and patients engage in conversations about unnecessary tests, treatments and procedures.

CT Scans and Mild Traumatic Brain Injury

The use of CT scans for Mild Traumatic Brain Injuries (MTBI) has seen a regular increase over the last few years. This is putting patients at risk for potentially avoidable radiation exposure. The Canadian

CT Head Rule (CCHR) is a set of guidelines developed in Canada to identify patients very unlikely to have any serious injuries requiring special treatment.

The Canadian CT Head Rule includes patients with acute head injury. *Wick, Lee G et al. The Lancet. Volume 387, Issue 1006, 1393 - 1399*

Do you use the Canadian CT Head Rule?



LOW RISK

CT is not recommended when no risk factors are present (0.01% chance of neurosurgical intervention)

The risk of being CCHR negative and needing neurosurgery is

1 in 7,814

1. Wick, Lee G et al. The Canadian CT Head Rule for patients with acute head injury. *The Lancet*. Volume 387, Issue 1006, 1393 - 1399. doi:10.1016/S0140-6736(15)01062-5



MEDIUM RISK

CT can be considered if risk factors have been shown to be predictive of traumatic CT findings, but not neurosurgical interventions

(0.01% chance of neurosurgical intervention)



HIGH RISK

CT is recommended when risk factors are present (0.1% chance of neurosurgical intervention)

44%

The Canadian CT Head Rule can reduce the need for a CT scan by 30% or more

increase in the number of CT scans in Alberta Emergency Departments between 2010 and 2018



2.5 hours

of additional wait time per patient in the Emergency Department with a CT scan ordered

1. Canadian Association of Emergency Physicians and Related Emergency Imaging Centers. *Canadian Emergency Physicians Journal*. Volume 58, Issue 1, 2014. doi:10.1016/j.cjeme.2014.01.001

Do you know the risks of Medical Imaging?

*** Medical imaging is one of the biggest sources of ionizing radiation to the general population. It can increase the risk of cancer in high doses ***

1 Year Average Background Radiation in Canada

(0.0004)

Head CT Scan

(0.002)

Government of Canada. *Canadian Council of Ministers of the Environment. *Report on the State of the Environment and the State of the Environment Report 2013**

Do you know what patients think?

90%

of patients reported that it was important to be informed of imaging risks

66%

believed that their scan was definitely necessary and that the results would lead them to feel better or live longer

34%

of patients did not know that the scan exposed their body to radiation

5%

of patients believed that scan radiation would increase their lifetime risk of cancer

Barry et al. Patient Knowledge of Understanding of Radiation From Diagnostic Imaging. *AMA Intern Med*. 2013;173(10):1111-1117. doi:10.1093/iamn/133.10.1111

4 Questions to discuss with your patients

- 1 Why is this test, treatment, or procedure needed?
- 2 What are the downsides?
- 3 Is there a simpler, safer option?
- 4 What could happen if the patient does nothing?

Evaluation

Public

Google translate analytics

Survey in WR

QR code and iPad

Physicians

Survey pre & post (pending)

Awareness

CT utilization

Limitations: Testing how well Google Translate translates Medical

- The app could translate a variety of medical terms from English to Spanish and it successfully did so **over 90%** of the time.
- Some medical terms it simply doesn't know or don't exist in some languages.
GRADE 7 level

Development

Implementation

Assessment

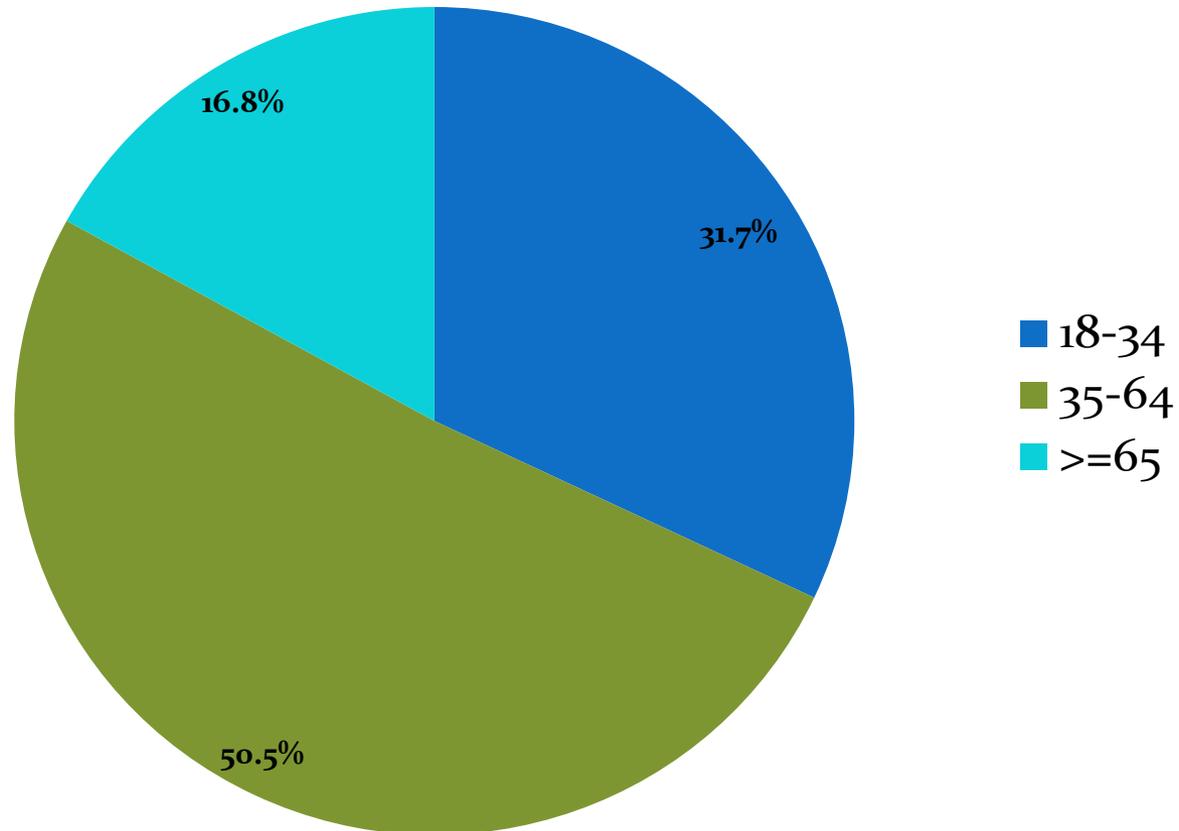
Future
Directions

Evaluation

- Pilot ran at Foothills Medical Centre & Peter Lougheed Centre waiting rooms from Nov 15th - Jan 17th
- Two ways to collect the data:
 1. Trained volunteers via iPads
 2. Patients could voluntarily scan the QR codes on the infographic to take them to the survey and google translate
- Survey was given to any patient in the waiting room
 - not just for MTBI patients
- 115 Responses were collected
- Study approved by Research Ethics Board

Respondent Demographics

Age Range of Survey Respondents



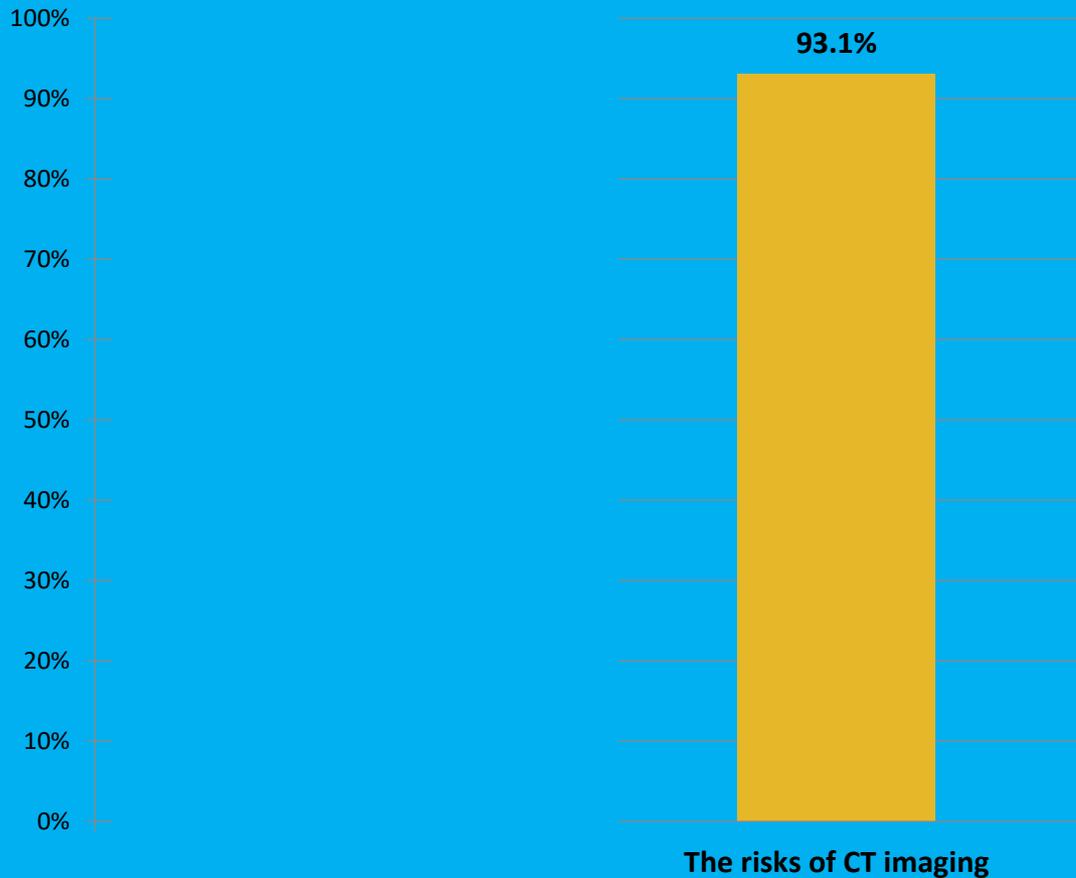
Impact on Health Literacy

This Poster Helped Me Understand



Impact on Health Literacy

This Poster Helped Me Understand



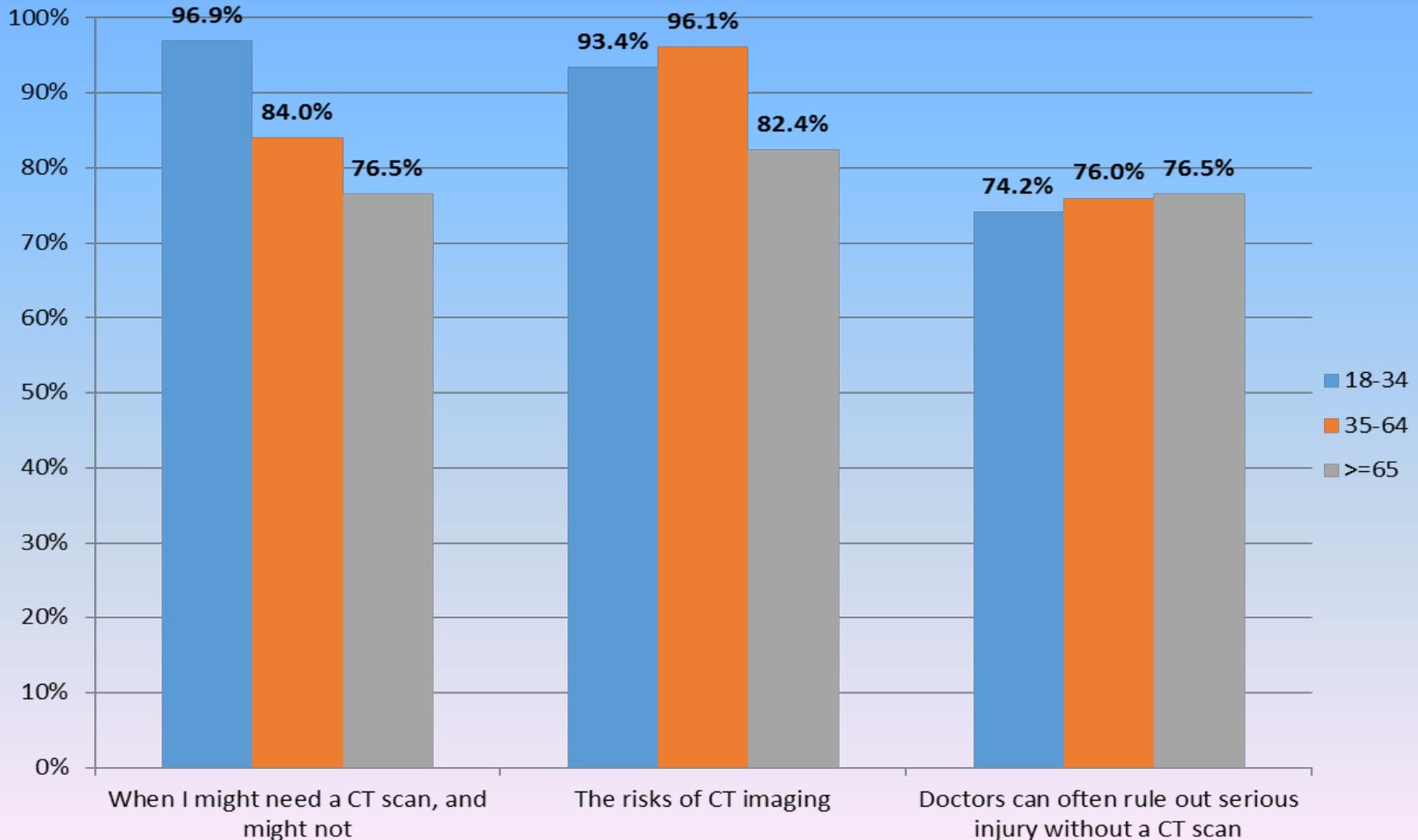
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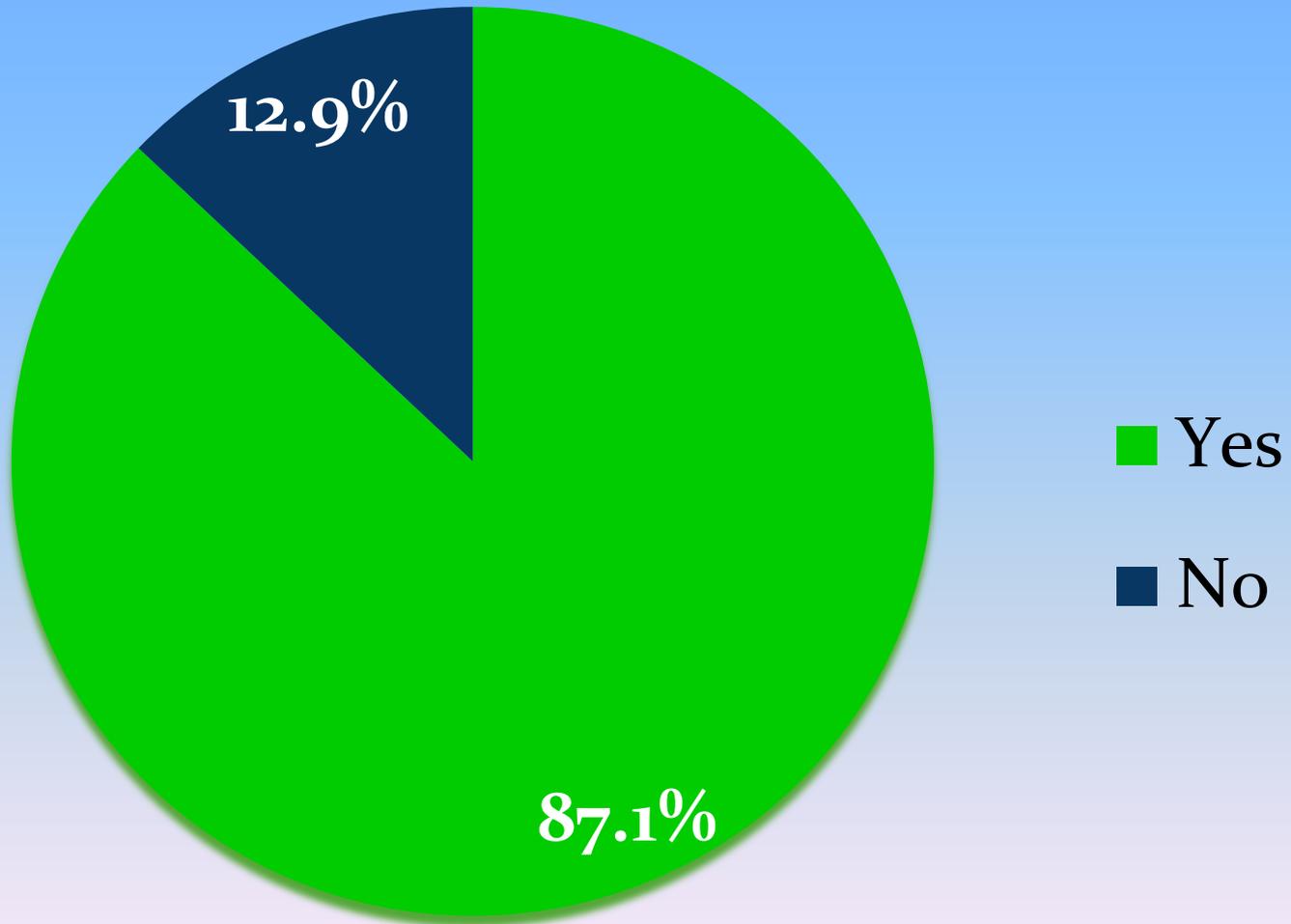


Impact by Age Group

This Poster Helped Me Understand

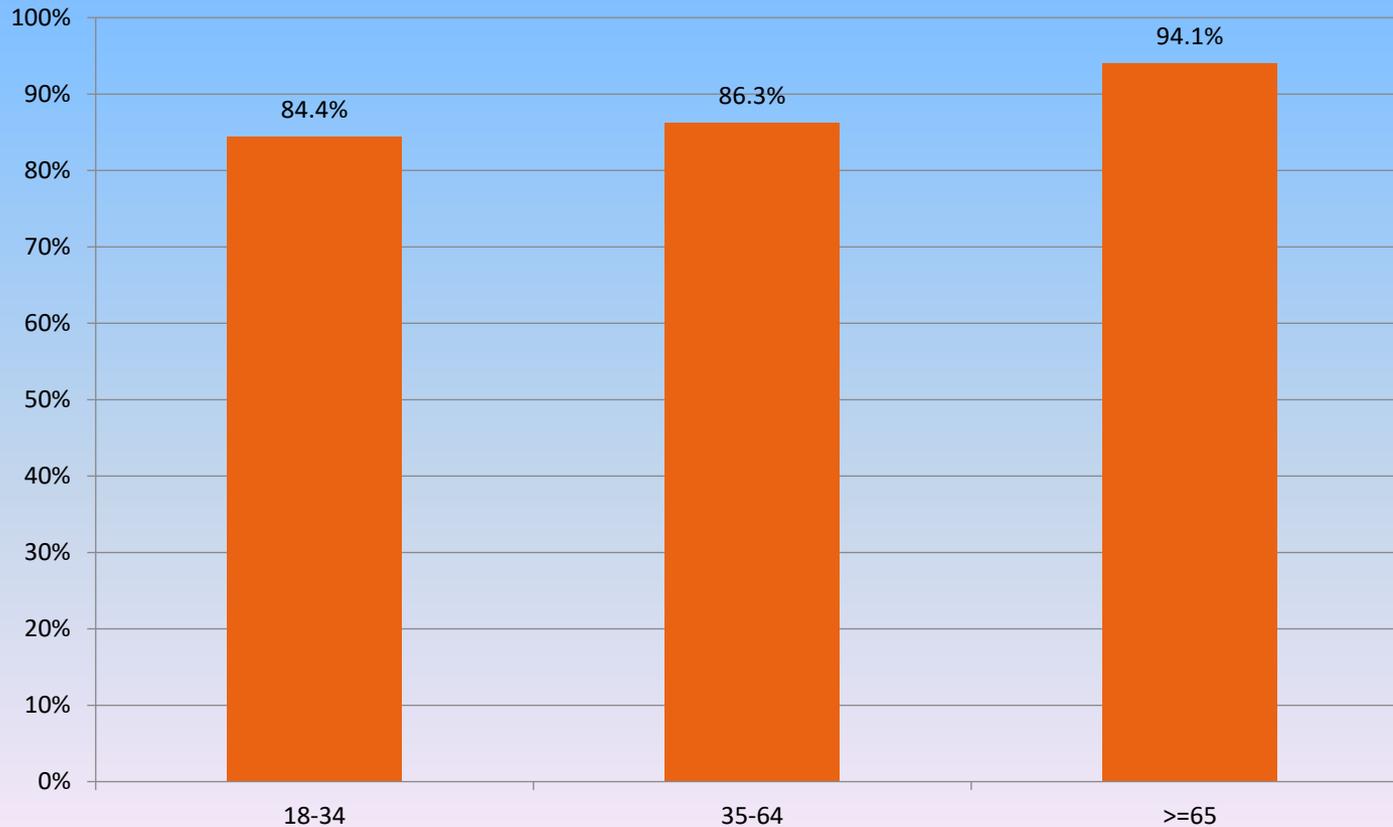


I Am Now More Likely to Ask my Doctor About the Risks



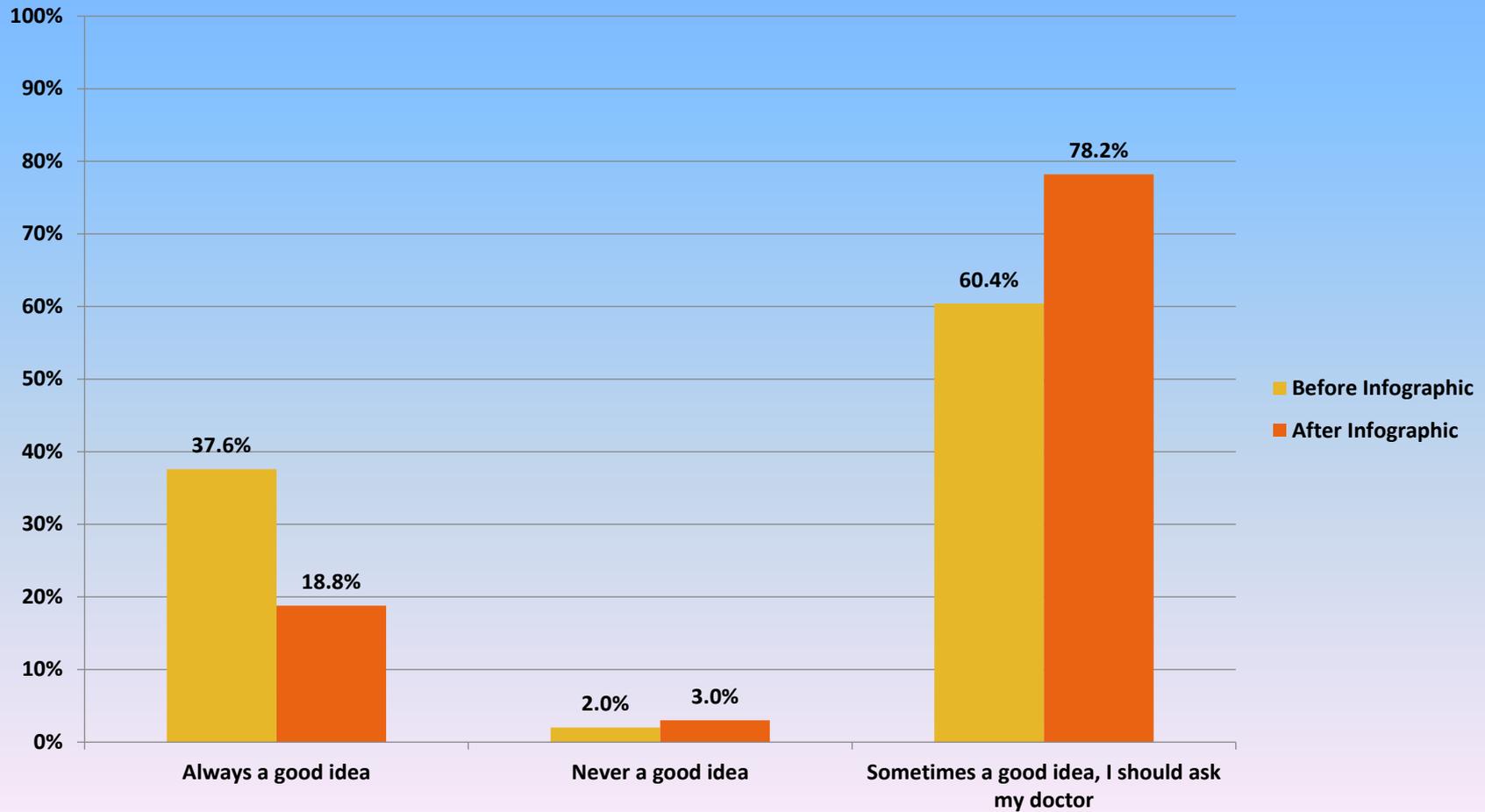
Impact by Age Group

I Am Now More Likely to Ask my Doctor About the Risks and Benefits of CT Scans



Before and After

I Think a CT Scan for Head Injury is...



Patient Comments

- I love the graph!!!! That stuck out most as a visual comparison.
- Good presentation
- After reading it, give the patient a brochure to review while waiting.
- Not impressed with poster size
- The more you know right
- Thank you!

Patient Comments

- Do doctors follow this?
- I always have asked about risks and benefits to medical imaging therefore I'm not more likely to ask now as I was already in the habit
- Risk of radiation exposure is an important question that the public needs to be aware of the issue of head injury and the warning signs needing further investigation is also valuable
- I have been trying to get a CT scan at this hospital alone for over a year. Is this poster your excuse for not having to give one?
- CT scan had also more benefits to detect full body and internal body serious issues

Future Directions

- Plan 16/103 largest sites – spread and scale
- Multimedia campaign planned – twitter, AH, UofC/Mt Royal, AMA
- Presented at Choosing Wisely National Conference
- Publication in Longwood's Journal

Development

Implementation

Assessment

**Future
Directions**

Future directions

- Other Choosing Wisely recommendations – transfusions, ? Antibiotics
- Potential hire of 2 students – Canada Summer Jobs
- Align with Physician Strategies

Development

Implementation

Assessment

**Future
Directions**



Summary

- Patient Storyboard changed expectations and understanding of the role of CT scans in mTBI
- This patient education initiative helped support CWC recommendations and has the possibility to be expanded to other