

Recurrent adverse events following
vaccination with influenza vaccine
can lead to vaccine hesitancy
in adults:
CANVAS 2017/18 results from the CIRN

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for

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Statements

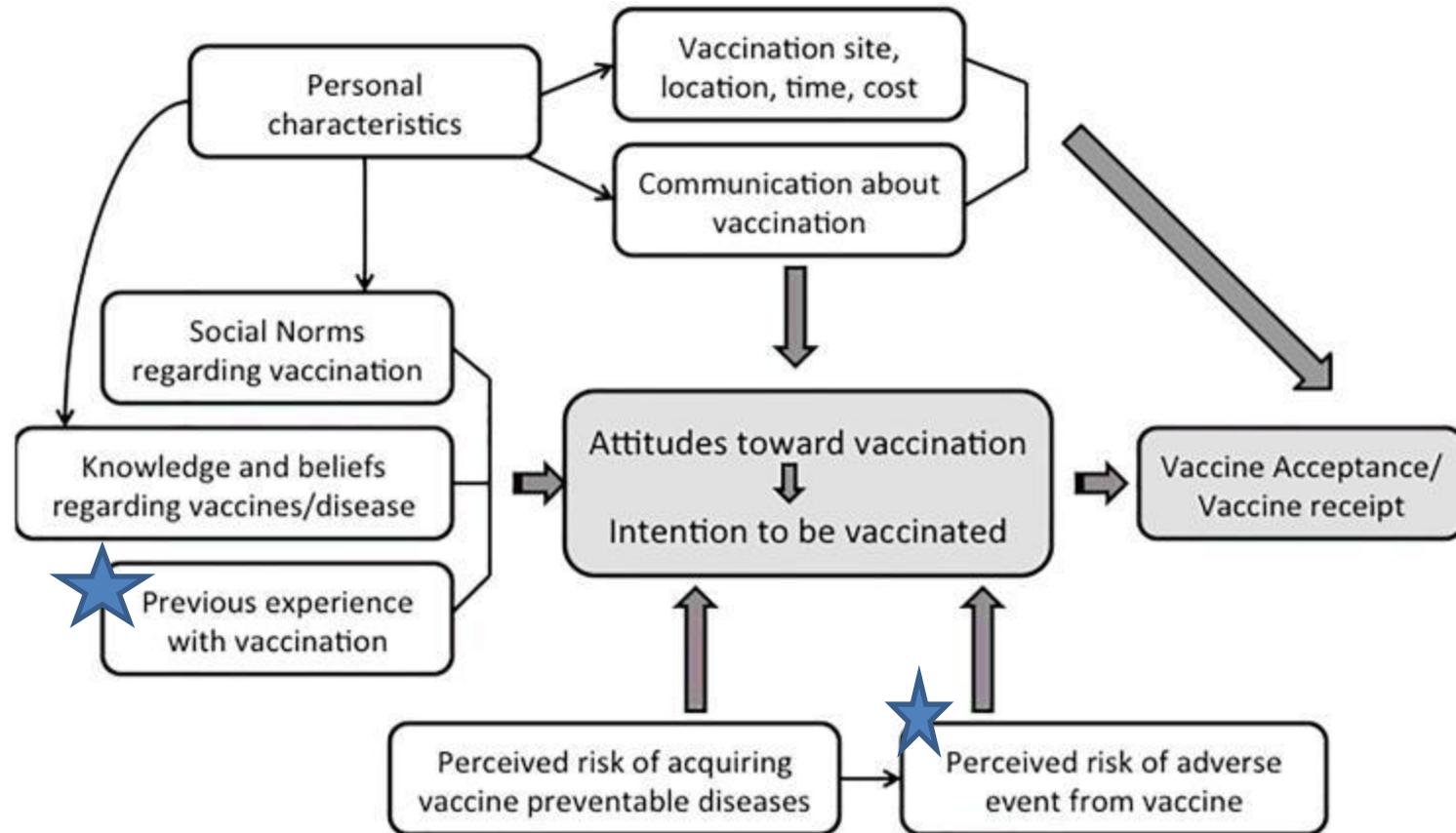
- I have no actual or potential conflict of interest in relation to this presentation/these findings
- This project was funded by CIRN, the Canadian Immunization Research Network, which is funded through a CIHR-PHAC grant



Research Question

- Incidence and impact on intent to be revaccinated of recurrent health events following receipt of influenza vaccination by adults

Conceptual model: Factors that drive attitudes regarding vaccination



CANVAS

- Canadian National Vaccine Safety Network
- Annual survey since 2009
- Goal: Assess vaccine safety
 - 7 day post vaccine responses compared with control responses (7 day pre vaccine campaign)
- Recruit adults and parents of children after receipt of influenza vaccine
- 2017 survey: 30,173 responses



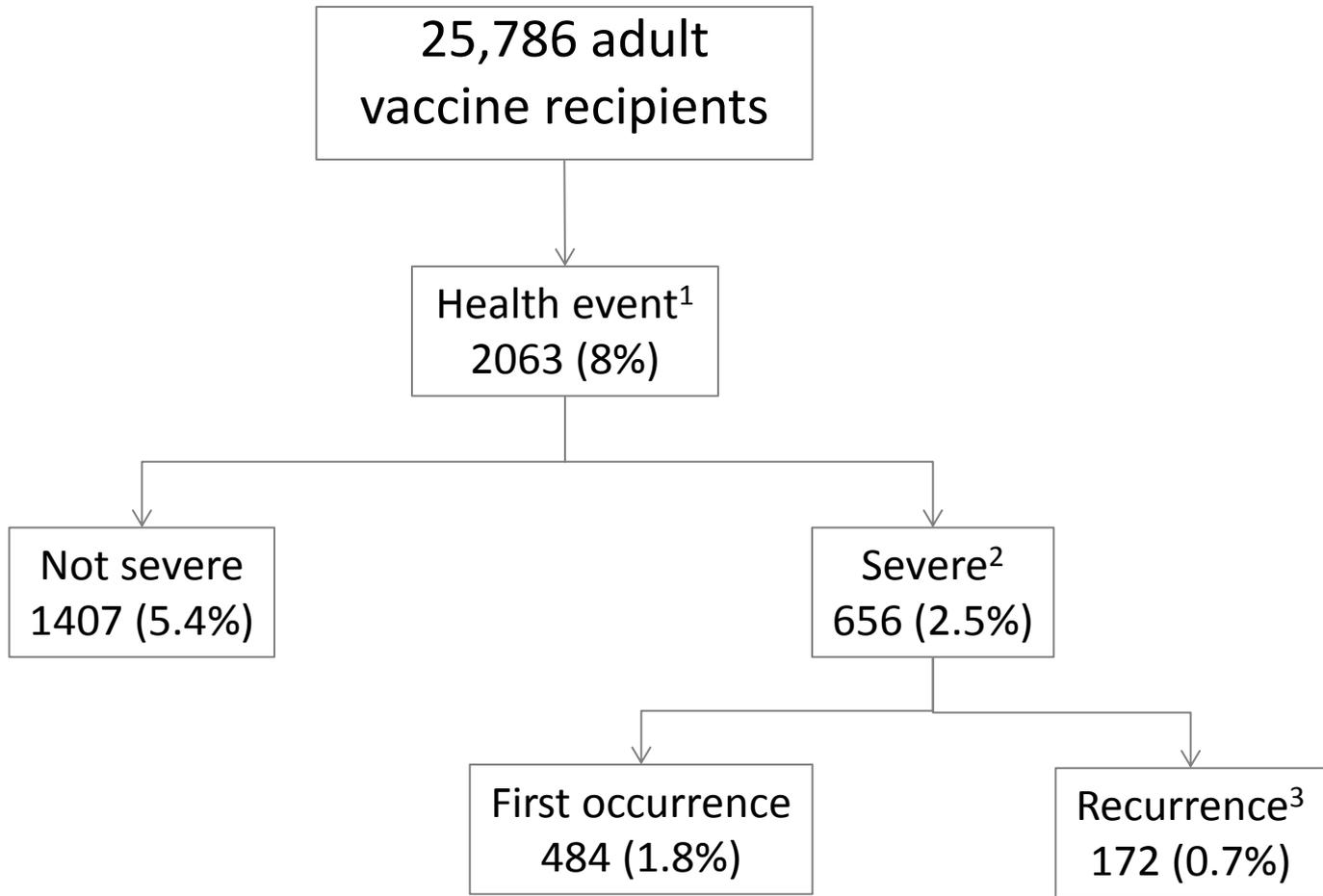
Methods

- 2017/18 influenza vaccine
- Adults (15 years or older) recruited following vaccination
- 7 sites across 5 provinces
 - Halifax, NS
 - Sherbrooke & Quebec City, QC
 - Ottawa & Toronto, ON
 - Calgary, AB
 - Vancouver, BC
- Various vaccine providers
 - Hospital (staff), public health, pharmacies, self-registration...
- Post-vaccination survey : 8 (+3) days after vaccine
- Control: 14+ days before [next] immunization campaigns

Participants

N=25786

50 & older	59%
Female	63%
Vaccinated 2/2 previous years	87%
Province: Quebec	58%
Provider: Public health	56%



Factors associated with “health event” within 7 days of influenza vaccination

	Non-severe (N=1407)	Severe, first (N=484)	Severe, recurrent (n=172)
15-49 years	Ref		
50 & older	0.7 (0.6, 0.8)	0.7 (0.6, 0.8)	0.6 (0.4, 0.8)
Female	Ref		
Male	0.7 (0.7, 0.8)	0.6 (0.5, 0.8)	0.7 (0.5, 1.0)
Vaccine, 2 of 2 previous	Ref		
1 of 2	NS	NS	NS
0 of 2	1.7 (1.3, 2.1)	1.5 (1.0, 2.2)	NS (1.5)

Multinomial logit: compared to NO event, adjusted for province

Frequency of recurrence

- Frequency

- Every 27% (21-34)
- 2 of 3 19% (13-25)
- 1 of 3 28% (22-36)
- < 1 of 3 26% (20-33)

- Risk factors

- 50 years or older OR 0.4 (0.2-0.8)
- Males OR 3.4 (1.6-7.0)
- Vaccinated 0 of 2 OR 7.0 (1.5-32)

Type of event, by recurrence

	First event (N=484)	Recurrent (N=172)
Allergy-like	12% (9, 15)	16% (11, 22)
Acute respiratory	51% (46, 55)	66% (58, 72)
Gastrointestinal	16% (13, 19)	8% (4, 12)
Generally unwell	21% (18, 25)	11% (7, 17)

ARI 1.4% of all respondents

Association with revaccination

- **First event** (how symptoms affect thinking for 2018)
 - None at all 69%
 - Not sure 25%
 - Not likely to be revaccinated 5%

- **Recurrent event** (how symptoms affected thinking for 2017/next season)
 - None at all 29%
 - Reviewed benefits & risks 59%
 - Skipped ≥ 1 season 12%

Conclusions

- 0.7% report recurring AEs (similar symptoms)
- Recurring AEs more likely to be ARIs
- 27% after *every* flu shot

Future research

- % with severe AEs who are revaccinated
- % with non-severe AEs with recurring AEs

Questions?