

# **The Pro-Vac Movement - Promoting conversation about vaccine safety: A Quality Improvement and Education Initiative**

**February 2022**

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## Executive Summary

Vaccine hesitancy is one of the greatest risk to global health (1). Vaccine hesitancy remains an increasing problem with misinformation and false identification of risks have distorted parents and patients understanding and increased their hesitancy to update on routine childhood vaccinations.

Through a pilot study in the Southern Health and Social Care Trust (SHSCT), a team of paediatric doctors and nurse practitioners with a specialist interest in reducing vaccine hesitancy (Pro-Vac Movement team) carried out a prevalence study of vaccine hesitant mothers attending antenatal clinics. The team offered face to face vaccine safety talks designed to improve mother's confidence in vaccine safety. In addition, the team undertook awareness sessions for Health care Professionals (HCP) on having conversations with families about vaccine safety. The aim of this quality improvement (QI) project was to initially replicate the pilot study in the Belfast health and Social Care trust (BHSCT), followed by scaling up to other trusts in future in an effort to make this a regional movement.

Due to restrictions on attendance at clinics and workforce pressures on all departments during the COVID-19 pandemic, direct replication of the QI did not occur. The team changed the overall aim of the project to virtual training and education resource development, with a focus on improving HCP confidence in having conversations about vaccine safety with concerned parents.

- Four vaccine hesitancy scenarios were filmed, edited and disseminated.
- Six vaccine themed posters were designed, developed and disseminated to all General Practitioners (GP) and paediatric departments across Northern Ireland.
- The Pro-Vac Movement team presented their work across virtual platforms to HCP regionally, nationally and internationally.

## Context

The COVID-19 pandemic changed the direction of the QI project. Whilst in person workshops and a prevalence study involving antenatal mothers were the goals of the initial QI pilot, creation of a virtual platform and education resource development became the new overall aims of the project. Due to increased concerns about pregnant women attending hospital during the COVID-19 pandemic, the prevalence study involving antenatal mothers in the BHSCT was not carried out.

The timeframe for completion was also extended as workforce pressures meant that the Pro-Vac Movement Team had to prioritise their workload and focus on care delivery. The project was restarted in September 2020.

The initial Pro-Vac Movement team consisted of the following SHSCT staff:

- Colm Darby - Advanced Neonatal Nurse Practitioner (ANNP)

- Vincent McLarnon- Advanced Paediatric Nurse Practitioner (APNP)
- Dr Shilpa Shah- Paediatric Consultant
- Dr Aimee Henry- Paediatric Trainee Doctor
- Dr Martin Hanna- Paediatric Trainee Doctor
- Dr Rachel Hurst- Trainee GP

New Pro-Vac champions were recruited in the Belfast Trust and Northern Trust.  
New Pro-Vac champions:

- Dr Stephen Mullan- Paediatric Emergency Medicine Consultant (Belfast Trust)
- Dr Sandya Tirupathi – Paediatric Neurology Consultant (Belfast Trust)
- Dr Laura Johnston- Paediatric Trainee Doctor (Belfast Trust)
- Dr Nicola Farlane- Paediatric Trainee Doctor (Belfast Trust)
- Dr John McCabe- Paediatric Consultant (Northern Trust)
- Dr Lynsday Loughins- Emergency Medicine Consultant (Southern Trust)
- Dr Declan Hann- General Practitioner.

The aims of the QI project became:

- Develop and film four scenarios, based on staff experiences involving vaccine hesitant parents that would have been used in the face to face workshops.
- Develop posters based on each of the scenarios for display in GP practices and paediatric areas across Northern Ireland.
- Present the scenarios and the process of development and implementation of the Pro-Vac Movement work across virtual platforms.
- Gain feedback and assess the possibilities for further development opportunities.

## Background

Despite the success of vaccination programmes, there is a small but growing section of the population that has concerns about the role of vaccines in today's society. A natural fear of side effects has been used by anti-vaccination campaigners on social media to misrepresent vaccine safety and this has been compounded by the perception that development of the Covid-19 vaccine was rushed.

Vaccine hesitancy is therefore an emerging area of research; however literature on ways to counsel vaccine-hesitant parents is currently limited (2). A number of available research studies have qualitative designs, and some quantitative studies

were observational in nature (3-5).

From a systematic review of the available evidence at the point of the pilot development, a number of factors had been identified as contributing to vaccine hesitancy:

1. Previous Experience- fear of vaccine side-effects/ scepticism of vaccine effectiveness (6, 7).
2. Natural and Organic living- rejection of medicine/preference for natural exposure for immunity development (7).
3. Perceptions of other parents- vaccine hesitant parents view it as a duty to warn other parents and disseminate information for children's safety (5).
4. Experiences of interactions with health professionals- Staff have been reluctant to discuss risk and safety which can lead to hesitancy development in parents (8,9).
5. Information sources, challenges and preferences- confirmation biases based on sourcing information aligning to pre-existing beliefs or emotional narratives as information sources, even without credible evidence may resonate greater for some parents (9).
6. Distrust in Health Care Services- Belief that pharmaceutical companies have influence over healthcare providers' decisions and that information on risk is withheld to promote financial gain (10).
7. Mandatory Vaccine Policies- Parents do not appreciate fear as the primary strategy to promote vaccines and prefer shared decision-making practice (11).

Several of these factors influenced the original pilot study design and also influenced the redesign of this QI project.

The key factors that the team considered they would be able to effectively improve through this QI project were;

- Experiences of parents- interacting with HCP when discussing their reasons for vaccine hesitancy.
- Information sources available to both parents and staff in relation to vaccine safety.

This QI project would provide filmed scenarios for healthcare staff and posters for HCP and parents. The aims of the project were to:

- Improve staff knowledge of common vaccine safety concerns and as a result, be able to provide the correct information to parents when discussing vaccine safety.
- Improve parents' experience and reduce/ eliminate hesitation.

Vaccine themed posters for display in GP surgeries and paediatric departments were designed to provide answers to common vaccine safety concerns parents may have. This would provide parents with the necessary information, to allow them to make informed decisions without always having to ask HCP for advice. This would help to ensure informed autonomous decision making.

Methodology: include interventions & interpretation and strategy for change in this section.

A summary of the timeline in months with achievements is detailed below

#### October 2020

ANNP Colm Darby and APNP Vincent McLarnon were finalists in the Advanced Practice Award Category at the RCNi awards 2020, for their work with the Pro-Vac Movement. ANNP Darby presented an outline of the pilot project and its outcomes to the judging panel along with the future plans for the Pro-Vac Movement team.

Pro-Vac Team members (Dr Shilpa Shah, Dr Aimee Henry, Dr Marty Hanna and ANNP Colm Darby) presented at the NICON 2020 Conference and Exhibition. Their presentation focused on change champions and how the Pro-Vac Movement was enhancing change across the region.

Pictochart Posters were developed containing common questions asked by parents about vaccine safety.

Regional Medical Teaching- Pro-Vac Movement Teaching was provided to all paediatric trainee doctors and consultants. Five presentations by Dr Shilpa Shah, Dr Aimee Henry and ANNP Colm Darby were held by Zoom. Presentation content included a summary of the Pro-Vac Movement, discussions of two scenarios and then three minutes on how to communicate effectively with vaccine hesitant parents.

#### November 2020

ANNP Colm Darby met with BNL productions to discuss video production and costing.

The Ulster Medical Journal published an article about the Pro-Vac Movement including the pilot study aim, methods and results.

Dr Lyndsay Loughlins (Emergency Department Consultant SHSCT) added as a Pro-Vac Champion to the group.

Dr Stephen Mullan (ED Consultant), Dr Sandya Tirapathi (Neurology Consultant), Dr Declan Hann. Identified as new Pro-Vac champions in BHSCT.

A Pro-Vac Session for paediatric nurses was organised within the SHSCT- attended by Lead nurses, ward managers, deputy sisters, Band 6 and Band 5 nurses, student nurses and health care assistants. A 40 minute presentation was conducted via zoom discussing three areas- Prematurity and Vaccines, an MMR scenario and having conversations with parents who are refusing vaccinations (ANNP Colm Darby, APNP Vincent McLarnon and Dr Aimee Henry).

Dr Shah completed the meeting with a discussion on bias and how this impacts on vaccine acceptance. Pre and Post session data were gathered and added to the previous data from other sessions.

Dr Shilpa Shah recorded a podcast with Ruth Rodgers (Head of communication in SHSCT). They also discussed recording further vaccine related topics over the next couple of months.

### December 2020

Dr Shilpa Shah and ANNP Colm Darby presented to 86+ medical attendees at SHSCT Medical Education seminar. The presentation focused on Vaccine Hesitancy- who, what why and how! This presentation was open to all directorates.

Royal College of Nursing Deputy Editor Elaine Cole contacted ANNP Colm Darby following the RCNi awards, to discuss writing and publication of an article about having conversations with vaccine hesitant parents and patients. This was developed and submitted on 7/12/2020.

### February 2021

A graphic designer was contacted and Pictocharts forwarded for development.

Dr Nicola McFarland and Dr Laura Johnston were added to the Pro-Vac Movement team.

A meeting was held with Dr Jullian Johnston (PHA) at which adding the Pro-Vac scenarios and posters to the PHA vaccine website was discussed.

A meeting was held with BNL Productions- Film scripts were discussed and risk assessments were carried out.

### March 2021

Filming of the scenarios took place in Craigavon Area Hospital with BNL Productions. Dr Shilpa Shah, ANNP Colm Darby, Dr Marty Hanna, APNP Vincent McLarnon and Sarah Reid (Actress) participated in the recording.

Dr Shilpa Shah and ANNP Colm Darby created a Pod cast on Preterm Infants and Vaccines in conjunction with the Southern Trust Communications team. A video was added to the SHSCT staff newsletter and displayed on TVs in meeting hubs.

A Pro- Vac talk was held via Zoom in Craigavon Area Hospital in partnership with the Education Team at the SHSCT. Staff from many disciplines attended.

#### April 2021

Dr Shilpa Shah and ANNP Colm Darby met with the BNL editing team and edited the videos. Videos were then disseminated across the health care trust's paediatric medical teams in Northern Ireland, Queens University Nursing team and across the Southern Health and Social Care Trust Paediatric department.

ANNP Colm Darby gave a presentation about the Pro-Vac movement at the Medall conference. A neonatal scenario was also shown. There were 250 attendees across the UK from both medical and nursing backgrounds.

#### May 2021

Dr Shilpa Shah met with Nick Medford from John Moore University Liverpool. They discussed the Pro-Vac Movement team and videos were shared around the medical and nursing team at the John Moore University Liverpool.

#### June 2021

ANNP Colm Darby presented the Pro-vac Poster at the RCPCH conference and the Reason Conference.

#### July 2021

Posters finalised

#### August 2021

Posters printed and arrived at Craigavon Area Hospital.

#### September 2021

Posters packaged and sent out to GP surgeries and hubs, Paediatric wards and departments across Northern Ireland.

### Analysis & Interpretation

The Pro-Vac team had developed a number of scenarios to perform at workshops as part of the initial QI pilot project. The team, using their specialty connections across the BHSC, had also arranged for new champions, to promote the movement and arrange for workshops within their own departments.

Unfortunately the COVID-19 pandemic hampered the subsequent project implementation and direction. Hospitals were overwhelmed as a result of



unprecedented pressure from COVID illness, resulting in, redeployment of nursing and medical staff with increased staff pressure. Hospital teaching initially was cancelled and then reduced to small groups using virtual platforms.

However, there was also a growing vaccine hesitancy movement because of the perception that the development of the COVID-19 vaccine had been rushed. As a result, as soon as they were available, the Pro-Vac Movement team developed COVID-19 fact sheets and then changed the aims of their project from it's original plan to a virtual set up with workshops being filmed as an educational resource.

In relation to subsequent staff training, virtual platforms made reaching greater numbers of people easier, as staff were able to log in from home or from their workspace. However, because hosts provided the platform for the team to present, gathering post presentation evaluations and data for the project was difficult. Virtual platform development and experience varied across departments and many unfortunately did not have the function for polling or use of evaluation forms built into their virtual platform packages.

Scenario scripts were further developed with the assistance of Sarah Reid (Actress) who also helped with production. She also worked with Dr Shilpa Shah, ANNP Colm Darby, Dr Marty Hanna and APNP Vincent McLarnon when filming their scenarios, with overall direction and management being provided by BNL productions. Following a number of weeks and several editing sessions, four education scenarios were produced;

- Prematurity and Vaccines.
- Allergies and Additives.
- MMR and Autism.
- Vaccine refusal conversations.

With help of a graphic designer, posters, to be displayed in waiting areas for parents and staff, were developed. These posters were designed to complement each scenario.

Posters were then distributed to paediatric wards and health centres across Northern Ireland with a covering letter explaining the role of the Pro-Vac Movement team and the poster development.

Analysis of feedback from sessions where feedback was available allowed the team to alter the content of their next sessions, with greater emphasis on the discussion of bias and having conversations with vaccine hesitant parents.

## Results

Unfortunately, not all sessions were able to be evaluated with pre and post confidence scores due to the previously mentioned limitations of virtual platforms. Feedback was especially difficult to gather when meetings were hosted by other HCP. However, as the team grew in confidence and gained more experience in the use of virtual platforms- more effective feedback was collected. Qualitative data was collected from staff in relation to both presentations and videos on the response from the presentations and videos distribution-

### Feedback from virtual training sessions

#### Paediatric Seminar November 2020

Very informative- loved the scenarios- best way to learn

I feel that I can have better conversations with parents now

More confident

Having this resource would benefit new junior staff

In all my years of nursing no one has ever explained these to me- Ive always just deferred the questions to the doctors.

#### Medical Education Seminar December 2020

Very interesting- the scenario discussion engaged well.

There is no information that I was not aware off like the Sniffles study.

I like the style of teaching

Developing these as recorded videos should be part of our medical training

Having these videos on loop in waiting area would be good for parents

Excellent presentation

Feeling more empowered now

COVID has diluted the right information available- we need to the right information for parents.

The Public Health Agency would benefit from this style of vaccine teachings especially for health visitors who often are left to deal with the post vaccine effects and hesitancy associated.

### Feedback on the Videos and Posters

Excellent videos and scenarios- the posters compliment these well

I'm so glad these videos were developed- I've shared them with my colleagues already.

Very professional

Great source of information to make my job easier- the video of the parent holding her baby resonates with me- I've seen an increase in hesitancy with new parents.

These videos deserve an award- we need to record more of these- looking at

HPV and COVID.

The difficult conversation with the vaccine refusal parents is a tough conversation- this was capture well. The importance of remaining calm and understanding came across well.

These posters are clear and concise- perfect for parents.

The posters explain the evidence well for parents without patronizing or coming across rude.

I would display these posters on my ward with a vaccine theme around each scenario every month.

He posters look very professional- like the PHA or government posters.

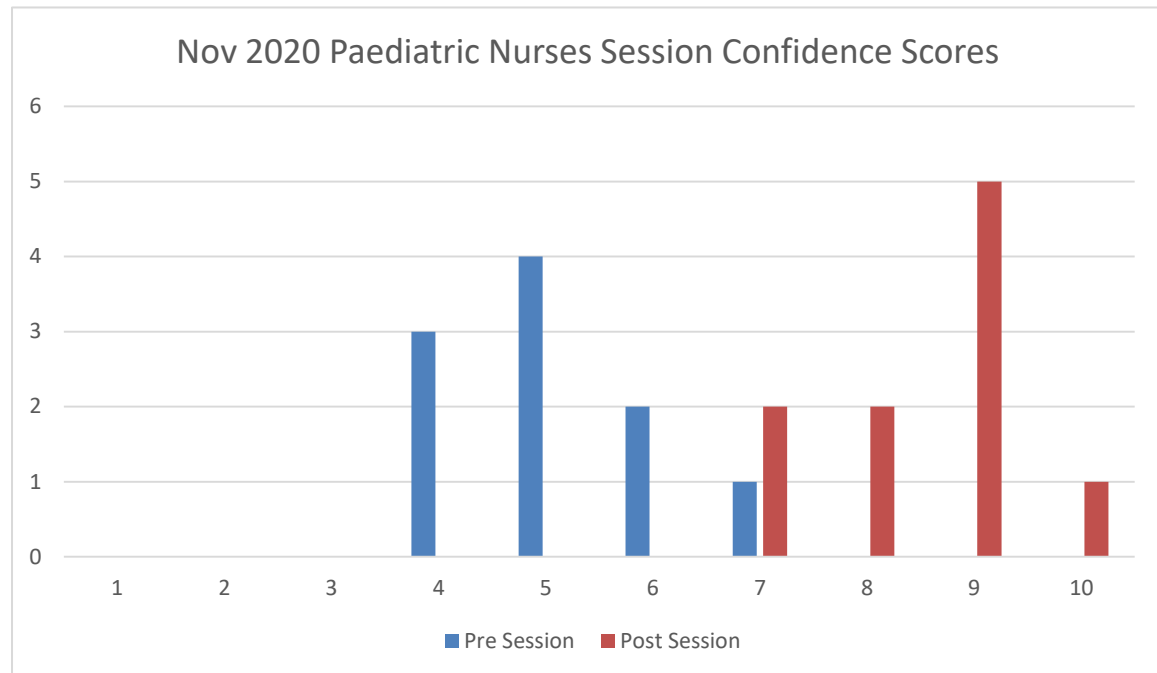
There needs to greater national recognition of the groups effort to reduce hesitancy- they should do a small talk on the news about these scenarios- to help parents especially coming up to the school vaccine timings.

Can't wait to see what else they produce in the future.

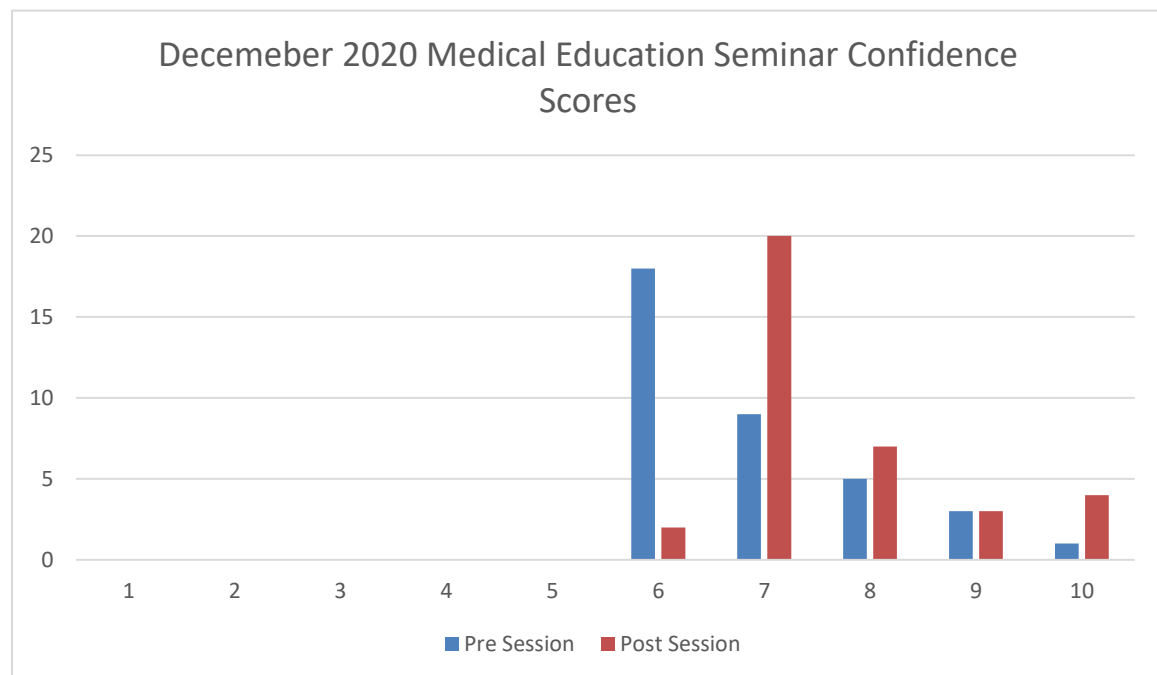
I teach in Queens and there is not enough preparation on this topic to equip nursing for their placements- students are often asked these questions by parents as they often spend more time with the parents on the ward.

This team deserves an award for the effort and merit that they have gone to with the aim to improve outcomes for children by reducing vaccine hesitancy.

Quantitative data was collected on post confidence scores for several of the virtual sessions-



The November 2020 Paediatric Nurses session group shows the increase confidence scores post session compared with initial pre confidence score.



The December 2020 Medical Education Seminar session confidence scores notes a high confidence level pre session however data indicates that confidence scores improved for confidence levels post session.

## Discussion

The COVID-19 pandemic, its overall effect on the health service and specifically its effect on the Pro-Vac Movement team led to a re-orientation of their initial QI project. Due to the Panemic, the team was unable to host in-person sessions across other trusts in Northern Ireland.

Health service pressures and re-deployment of staff led to a temporary cessation of the project. However, as pressures eased the team decided that it was essential to continue with the project, especially in light of a growing vaccine hesitancy movement because of the perception that the development of the COVID-19 vaccine had been rushed.

The team decided that given the general restrictions on face to face meetings with lack of group engagement opportunities, in person sessions would not be possible. However, they also decided that the educational aspect could continue with filming of already developed scenarios. Although the team were not professional actors their amateur acting skills gave a level of authenticity to the scenarios, as these were their actual lived experiences that were being recorded. Whilst professional actors would have increased the level of performance, the decision to use team members for recording was taken to increase authenticity. There were also obvious financial reasons for not using professional actors.

Evaluation and feedback were not always possible following virtual teaching sessions due to virtual platform package limitations that each host had. Most of the evaluation data that it was possible to gather was qualitative, with a limited amount of quantitative data. However, analysis of the qualitative data guided the content of each subsequent session. Attendees wanted to have a greater understanding of the decision-making process and they wished to have more advice on having conversations with vaccine hesitant parents. Media speculation and social media discussion on vaccine development and safety concerns were prominent at this time and this may have led to the wish for the rationale for vaccine refusal to be discussed in more detail.

Although the COVID pandemic meant that the Pro-Vac Movement team could not meet the aims or timescales of its original project, the team considers that it had actually delivered an improvement educational resource, that can be utilized by a greater number of health professional teams to support vaccine hesitancy awareness.

Health care professionals, who watched the scenarios and were involved in virtual teaching sessions, all reported an improved confidence in having conversations with vaccine hesitant parents. The initial aim of the Pro-Vac movement was to improve healthcare professional confidence and this has certainly been achieved

through this project, both regionally and nationally, through the use of virtual platforms.

## Conclusion

The challenges of the COVID-19 pandemic with resultant staff working pressures, health service constraints and reduced educational opportunities meant that the original aims of the Pro-Vac project had to be changed.

However, these changes have actually led to development of a greater resource than initially planned in the original project. Filmed scenarios with professional contributions and associated educational posters are an educational resource that will enhance learning for healthcare teams. They will improve their knowledge and skills in relation to vaccine hesitancy and will help them to have conversations with vaccine hesitant parents/patients.

With QI projects, development and continuation of projects are required as demand continues leading to support the need for further Pro-Vac work. The support would allow for further Pro-Vac work with healthcare professionals regionally and nationally to provide better training and education on vaccine safety and on managing conversations with vaccine hesitant parents and patients.

Whilst COVID-19 has hindered the opportunities for face to face teaching and learning that we have been accustomed to in the past, use of virtual platforms has provided new opportunities to reach greater numbers of HCP regionally. It has also allowed the Pro-Vac Movement team to work other areas and countries and provide opportunities for healthcare providers in these areas to improve their knowledge of vaccination safety. They will also be more comfortable when having conversations about vaccine safety with parents. Replication of our project has commenced in Newcastle and Plymouth.

## References

- (1) World Health Organisation. Ten Threats to Global Health in 2019. Accessed from <https://www.who.int/news-room/spotlight/ten-threats-to-global-health-in-2019>
- (2) Majid U, Ahmad M. The Factors that promote vaccine hesitancy, rejection, or delay in parents. *Qualitative Health Research*. 2020;30(11).
- (3) Mendel-Van Alstyne JA, Nowak GJ, Aikin AL. What is 'confidence' and what could affect it?: A qualitative study of mothers who are hesitant about vaccines. *Vaccine*. 2018;36(44):6464-6472.
- (4) Austvoll-Dahlgren A, Helseth S. What informs parents' decision-making about childhood vaccinations? *Journal of Advanced Nursing*. 2010; 66(11):2421-30.
- (5) Blaisdell LL, Gutheil C, Hootsmans NA, Han PK. Unknown Risks: Parental Hesitation about Vaccination. *Medical Decision Making*. 2016;36(4):479-89.
- (6) Brunson EK. How parents make decisions about their children's vaccinations. *Vaccine*. 2013;31(46): 5466–5470.
- (7) Dubé E, Vivion M, Sauvageau C, Gagneur A, Gagnon R, Guay M. "Nature Does Things Well, Why Should We Interfere?": Vaccine Hesitancy Among Mothers. *Qualitative health research*. 2016;26(3): 411–425.
- (8) Swaney SE, Burns S. Exploring reasons for vaccine-hesitancy among higher-SES parents in Perth, Western Australia. *Health Promotion Journal of Australia: Official Journal of Australian Association of Health Promotion Professionals*. 2019;30(2):143-152.
- (9) Painter JE, Viana De O Mesquita S, Jimenez L, Avila AA, Sutter CJ, Sutter R. Vaccine-related attitudes and decision-making among uninsured, Latin America immigrant mothers of adolescent daughters: a qualitative study. *Human Vaccines and Immunotherapies*. 2019;15(1): 121-133.
- (10) Helps C, Leask J, Barclay L. Understanding non-vaccinating parents' views to inform and improve clinical encounters: a qualitative study in an Australian community. *British Medical Journal Open*. 2019;9:26-29.
- (11) Gullion JS, Henry L, Gullion, G. Deciding to opt out of childhood vaccination mandates. *Public health nursing*. 2008;25(5):401–408.

## **Project Team**

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### **Pro vac 1 Scenario 1 Vaccines and Prematurity**

Link: [Scenario 1 - Vaccines and Prematurity \(vimeo.com\)](#)

### **Pro vac 2 Scenario 2 - MMR Vaccine**

Link: [Scenario 2 - MMR Vaccine \(vimeo.com\)](#)

### **Pro vac 3 Scenario 3 - Allergies and Vaccines**

Link: [Scenario 3 - Allergies and Vaccines \(vimeo.com\)](#)

### **Pro vac 4 Scenario 4 - The Unimmunised Child**

Link: [Scenario 4 - The Unimmunised Child \(vimeo.com\)](#)





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