Abstract

Objective: The objective of the study was to explore the impact of implementation of the Public Health Amendment (Vaccination of Children Attending Child Care Facilities) Act 2013 on child-care centres in the Northern Rivers region of New South Wales (NSW), from the perspective of child-care centre directors.

Importance of study: Immunisation is an effective public health intervention, but more than 75,000 Australian children are not fully vaccinated. A recent amendment to the NSW Public Health Act 2010 asks child-care facilities to collect evidence of complete vaccination or approved exemption before allowing enrolment.

Methods: Ten child-care centre directors participated in a semiscripted interview. Interviews were recorded, transcribed and analysed.

Results: Common themes included misinterpretation of the amendment before implementation, the importance of adequate notice for implementation, lack of understanding of assessment of compliance, increased administrative requirements, the importance of other public health efforts, and limited change in vaccination rates. Child-care centres differed in their experience of the resources provided by the government, interactions with Medicare, and ease of integration with existing record-keeping methods.

Conclusions: Participants felt that the amendment was successfully implemented. The amendment was felt to have fulfilled its aim of prompting parents who had forgotten to vaccinate, but failed to significantly affect conscientious objectors. Overall, the amendment was perceived to be a positive step in improving vaccination rates, but its impact was largely complementary to other components of the multifaceted vaccination policy.
Introduction

Vaccination is a successful and cost-efficient public health intervention. An Australian study estimated that the infant varicella vaccination program alone could prevent 4.4 million cases of chickenpox over 30 years. Australia’s national vaccination rate is slightly more than 90%. More than 75,000 children are incompletely immunised – they are 22.2 times more likely to acquire measles and 5.9 times more likely to acquire pertussis than those who are completely immunised. A US study demonstrated that growing antivaccination sentiment, whereby parents are selectively vaccinating or refusing vaccinations, is leading to geographic clustering of unvaccinated children who have a higher risk of contracting vaccine-preventable diseases. A similar phenomenon appears to be occurring in the New South Wales (NSW) Northern Rivers region, which has one of the lowest vaccination rates in Australia and the highest number of conscientious objectors. Compared with the national average of 91.5% of 5-year-old children being fully immunised, postcodes within the Northern Rivers region have the nation’s lowest vaccination rates for 5-year-old children, with 66.7% of 5-year-olds fully immunised in Broken Head postcodes and 70.2% in Brunswick Heads postcodes. Currently in Australia, a family’s eligibility for the Child Care Benefit and Child Care Rebate, and the Family Tax Benefit Part A depends on their child being either fully vaccinated, on a recognised catch-up schedule or medically exempt. Although some financial incentives for general practitioners to immunise have ceased, other programs to support childhood vaccination exist, including school-based vaccination days for older children and community education programs (e.g. Save the Date to Vaccinate). The change to vaccination policy (Box 1) in NSW amends the Public Health Act 2010 for enrolment requirements for child-care facilities and is part of what NSW Health Minister Jillian Skinner describes as a “multifaceted approach to lifting the vaccination rate”. Under new Commonwealth legislation introduced on 1 January 2016, conscientious objection is no longer an exemption category for vaccination requirements for families applying for the government payments referred to above. Since policy makers continue to try to increase vaccination rates, continued feedback about policy implementation and impact remains vital. A review by Bowen and Zwi described the ability to “better contextualise evidence for more effective policy making and practice” as the “key challenge to public health”. It highlighted the importance of assessing the capacity of systems to implement policy as a mechanism for optimising public health practice and informing policy issues. The aim of this study was to add to the evidence base of attitudes towards vaccination legislation.

Box 1. Summary and aims of the Public Health Amendment (Vaccination of Children Attending Child Care Facilities) Act 2013

The amendment states that, before allowing enrolment, child-care facilities must acquire documentation from each child’s caregiver proving that the child is one of the following:

a) Fully vaccinated
b) On a catch-up schedule
c) Exempt based on a medical reason
d) A conscientious objector who has been counselled by an authorised vaccination provider.

The aims of this amendment are to:

- Prompt parents who have forgotten to keep vaccinations up to date
- Ensure that conscientious objectors have received counselling from an immunisation provider
- Assist child-care facilities in excluding unvaccinated children in the event of a disease outbreak.

Methods

Qualitative methods were used to allow an in-depth exploration of the experiences of child-care centre directors. Ethics approval was obtained from the Western Sydney University Human Research Ethics Committee (approval number HI9067).

Child-care centres were chosen to ensure representation across location, size and type of facility, as well as by snowballing, whereby participants suggest other centres with different perspectives for potential recruitment. Recruitment continued until the simultaneous coding process showed that data saturation was reached.

Participants were telephoned before in-person interviews were conducted at the child-care centre. Flexible, semistructured interviews were conducted with consenting child-care centre directors for 15–45 minutes between September 2014 and February 2015. There were five interviewers, and each conducted at least two interviews. Each interviewer transcribed their own interviews.

The interview schedule (Table 1) was slightly modified during the study to reflect increasing knowledge of the topic. The terms ‘immunisation’ and ‘vaccination’ were used interchangeably.
Analyses

Concurrently with data collection, the data were analysed using a standard general inductive approach to qualitative data analysis. Throughout this process, input was sought from an immunisation expert. Notes were taken during the interviews to assist interpretation. Initial codes were derived from the meaning units arising from data from the first two interviews. One researcher read the first two transcripts and generated an initial coding scheme using an Excel spreadsheet. This was presented to the immunisation expert and refined. Two other researchers then further refined the hierarchical coding scheme and coded the interviews. The coding scheme was altered as themes emerged from new data. A third researcher reviewed the coding and themes identified, before finalising the coding scheme.

Results

Of the 12 child-care centres approached, two centres declined to participate. Hence, 10 child-care centres from various localities within the Northern Rivers region completed the interview. The themes that arose from the interviews are described below.

Perceptions of the amendment and its aims

All interviewees identified the aim of increasing vaccination rates:

*Obviously, the idea is that it will raise the immunisation rates. (ID2)*

Three interviewees recognised forgetful parents and conscientious objectors as specific targets. None of the interviewees thought of managing disease outbreaks as an aim.

One interviewee misinterpreted the amendment as providing an opportunity for centres to refuse enrolment to unimmunised children:

*We can now make a decision about whether we have immunised or unimmunised children ... we could choose to be a 100% immunised centre. (ID10)*

However, this viewpoint was not repeated in any other interviews.

Some interviewees believed that this misperception was also held by parents:

*Some parents will come in and say, I thought everyone had to be immunised. (ID6)*

Most centres believed that it fell to them to correct any misunderstanding:

*We started about 6 months before [implementing the Act] ... putting out information from the preschool explaining the legislation, because there was lots of sensationalist articles and such around at the time. (ID9)*

Perceived success of the amendment with regard to its official aims

Participants were questioned about whether they believed that the amendment fulfilled its official aims (see Box 1).

Vaccination rates

All but one participant estimated no significant change in overall vaccination rates since the introduction of the amendment.

There was unanimous agreement that views on vaccination among conscientious objectors were unchanged, reflected in the lack of perceived change in their vaccination rates:

*... for people that are choosing not to vaccinate their children, it is a conscious decision, it’s not just...*
something they’ve forgotten … they’re passionate about it so they’re going to get the [conscientious objector] forms. (ID8)

The compulsory counselling from an immunisation provider required to complete the conscientious objector forms was reported as ineffectual by 9 of the 10 child-care centres:

I think it’s very easy to get the form. So I can’t see that they’re going through the process of counselling. (ID8)

The amendment was seen to have prompted “lazy” or “forgetful” parents whose children were not vaccinated or had fallen behind in the schedule:

… what I found is that [the amendment] pushed them to go and finish the immunisations. (ID5)

Two centres specifically stated that they felt that the amendment had raised awareness of vaccination requirements:

There’s more awareness of immunisation and the time periods … The information is out there and … they’re required to look at it. (ID7)

Outbreak response
The majority of the child-care centres claimed that their disease outbreak response remained unchanged:

It’s pretty much the same. We know we need to report anything that is an event, of serious harm to the children or to the community … So it probably wouldn’t change things very much at all. (ID4)

Only one centre reported that this amendment had sharpened their awareness of their children’s immunisation status.

Implementation of the amendment
Introduction of the amendment
All the participants agreed that adequate notice had been given of the introduction of the amendment, with an information toolkit posted in a timely manner. This gave the centres time to incorporate the necessary changes into their enrolment processes and inform parents. One centre described the process:

It was the changeover period that was a bit tricky, [especially for] the children that hadn’t been required to do that the previous year and … were … enrolling the next year … (ID2)

Regulation
While the majority of child-care centres reported increased vigilance with paperwork in anticipation of an audit, no-one reported undergoing regulation or investigation:

We suspected [that we] would be closely scrutinised but … no-one has ever come to do an audit. (ID9)

In … 11 months, I’ve never had anyone check my immunisations to see if that’s happening. (ID3)

Usefulness of the resources
For some, the toolkit informed them of what changes they needed to make to comply with the amendment:

We went through it to make sure that we were covering the law that was coming in, so it was useful in that way. (ID9)

Others distributed the included resources – in particular, pamphlets – to inform parents. One centre with a high proportion of conscientious objectors did not distribute them because they were perceived to be of little use among these parents.

For a few, the spreadsheet in the toolkit was very useful:

The spreadsheet was so easy to use that I didn’t really read the whole document [rest of the toolkit]. (ID1)

However, the majority reported not using the spreadsheet or not having seen it.

Integration of the amendment into current processes
A varied amount of work was required by child-care centres to comply with the amendment. The major determinant of the amount of work was the existing systems they had in place for recording the immunisation status of their children.

A few reported having to rewrite their centre policy. One described it as:

... a painful process … we had a copy of their Blue Book [NSW Personal Health Record], and as of January that was no longer an acceptable piece of evidence … so we had to go back to every single family that didn’t have the proper print-out and ask them to get a print-out. (ID1)

On the other hand, a couple of the centres used software packages, which were already tracking immunisations for them. For these centres:

… it wasn’t a big deal … we were always recording whether kids were immunised or unimmunised, now we just need the documentation to prove it. (ID8)

Parents’ experience of the amendment, as perceived by child-care centre directors
Interaction with Medicare
As perceived by directors of child-care centres, parents had a good understanding of how to access Medicare.
The directors received mixed reviews from parents regarding the usability of the myGov website and the ease of interaction when visiting Medicare in person.

**Delay in starting child care**

Three centres raised the issue of delay in starting child care as a result of waiting for Medicare paperwork. One interviewee identified lower socioeconomic groups as being particularly affected:

> No transport, no internet or computer to … access that paperwork and they may also be behind in their immunisation. (ID6)

**Ongoing administrative processes and sustainability**

**Child-care centre administration**

Many of the interviewees reported already having some method of recording children’s immunisation status. However, the amendment led to all child-care centres adopting a standardised level of record keeping and awareness:

> That is a positive that’s come out of this. It’s made me a lot more vigilant about having the paperwork. (ID1)

There was a clear distinction between the smaller centres, which found it much easier to track children’s immunisation status, and the larger centres, which reported difficulty with the ongoing tracking and follow-up of the large number of children under their care:

> It is hard when you’ve got 115 families and probably 130 kids through your door each week. It’s hard to keep track … it’s one of those jobs that falls … (ID3)

**Added time and money for child-care centres**

Although some child-care centres did not consider the ongoing process to be time consuming, others expressed concern about the time and resources allocated to updating staff, communicating with parents and keeping paperwork up to date:

> … our business is educating and caring for children, and public health policy and this legislation has just been another job that we need to do … there’s more and more of those sort of bureaucratic decisions made that we are on the receiving end of, and it takes up our time and resources. (ID9)

**Administrative barriers**

Delays from administrative bodies, including Medicare, were reported to be adversely affecting the ability of child-care centres to provide their service effectively. One example (ID6) was the 2–3-week delay to post appropriate forms after parents contacted Medicare by telephone. Interviewees expressed discomfort about deciding whether the child’s enrolment should also be delayed in the interim:

> … if I was following the letter of the law, there would be some families who wouldn’t be starting care because we haven’t got that [immunisation history statement] in our possession. Maybe I’m doing the wrong thing but I’m trying to help families who are desperate for care. (ID6)

Another example was waiting for vaccination providers to notify the Australian Childhood Immunisation Register of immunisations, which could lead to a 1-month delay before the child’s immunisation statement was available:

> Depending on the person who has given the child the immunisation, we are sort of relying on them to do that expediently … possibly they might do it once a month. (ID6)

**Sustainability**

The nature of the vaccination schedule means that tracking the immunisation status of children under the age of 18 months, when vaccinations are more frequent, was considered more tedious and difficult:

> [It is] an ongoing process, especially the children in the nursery who are updated every – well – 2, 4, 6, 12 and 18 months have to get their shots again, after each of those shots to ask them for the paperwork again. After the 18-month one, it’s not till they are 4 again, so it’s not a big issue for the older children, but for families who have younger children it’s … saying, “Yes, I know you’ve just given me paperwork but I need it again”. (ID1)

However, despite the criticism and the pitfalls, none of the participants questioned the sustainability of the amendment.

**Integration with existing policies**

Many mentioned the existing Child Care Benefit as being more influential in increasing vaccinations because of the monetary incentive provided:

> … the funding is the one thing that will make them [get vaccinated] … if they don’t get paid a week, they will quickly go out and get their needles. (ID1)

A few participants acknowledged the significant influence of the media and government campaigns on immunisation rates:

> Through media campaigns and things like that, you know Save the Date to Vaccinate and the mobile apps … and also, reminders coming out from child-care centres to help them keep on top of things … (ID10)
Discussion

Media reports that unvaccinated children would be unable to attend child care may have contributed to fear of exclusion in parents of unvaccinated children. The burden to correct this misinformation fell on the child-care centres. One child-care centre director misinterpreted the amendment as allowing refusal to enrol unvaccinated children. Despite media reports that child-care centre operators could face fines if immunisation records were not up to date and the availability of information on fines on government websites, one child-care provider reported not receiving any such information.

Some participants perceived an increased workload as a result of implementation of the amendment – for example, rewriting their centre policy – while others found that existing systems were easily adaptable to the new requirements. Influencing factors included the size of the centre and the age of enrolled children, as some age groups have a less intensive immunisation schedule.

For centres with effective systems already in place, the amendment added no significant benefits to their ability to identify unvaccinated children in the event of a disease outbreak. However, one centre with less thorough systems of recording vaccination status perceived that its new systems were useful in identifying unvaccinated children.

Conscientious objectors’ views were perceived to remain unchanged, despite the requirement for counselling from an immunisation provider before acquiring necessary paperwork. This approach was supported by the NSW Shadow Minister for Health, Dr Andrew McDonald, who stated that “true conscientious objectors will not take up vaccination despite the encouragement of everybody who wants them to vaccinate”. According to Associate Professor Julie Leask from the University of Sydney, 3%–7% of children are undervaccinated because of parents refusing some or all vaccinations, and “these parents … have intractable views”. Although objectors form a minority, their aggregation makes herd immunity a challenge, and investigation of policy implementation and its effect is essential.

Another potential confounding factor for the perceived impact of the amendment on vaccination rates is the Child Care Benefit scheme. The pre-existing linkage of Child Care Benefit payments with vaccination compliance was seen to be an effective measure for improving vaccination rates for families receiving the benefit. However, it was seen as less effective for higher socioeconomic families who are able to forgo the payment. Thus, the new amendment may have added benefit of targeting families who do not receive the Child Care Benefit but still use child care.

Strengths and limitations

An in-depth exploration of the perceived impact of the amendment from the perspective of child-care providers has not previously been conducted. A limitation of the study was the inclusion of only child-care centres, whose perceived views of parents and vaccination providers might not be representative of all child-care providers. Other limitations were the small sample size, restriction to only one region and the potential that the participants were not representative of all child-care centres.

Implications and future research

Future research could assess the amendment’s direct effect on vaccination rates of children attending child-care facilities and the incidence of vaccine-preventable diseases. A larger or more diverse sample may yield more results about the policy’s impact on identification of unvaccinated children during disease outbreaks. Direct interviews with parents and vaccination providers may reveal issues not addressed by child-care centre directors.

Conclusion

Overall, child-care centre directors perceived the amendment as being successfully implemented in the Northern Rivers region and particularly effective in prompting parents who had forgotten to vaccinate. For one centre, it also aided the identification of unvaccinated children during an outbreak, thereby fulfilling two aims of the new amendment. However, most directors observed that it failed to significantly affect conscientious objectors, another aim of the policy. Overall, the effects of the amendment were felt to be largely complementary to other effective public health policies that are in place. Further research and tracking of vaccination rates over time are required to show whether the amendment affected vaccination rates.

Competing interests

None declared

Author contributions

SEW, SXK, LSG and LEW were responsible for designing, drafting, reviewing and editing the manuscript, and contributing to data collection. SXK also oversaw the data analysis. ACF was responsible for designing, reviewing and editing the manuscript, and contributing to data collection and data analysis. SP and VH were responsible for reviewing the data analyses, and reviewing and editing the manuscript. MT contributed to development of research questions and formation of the data collection tool.
References

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