

Barriers and Enablers to Registered Nurse Prescribing in General Practice

A survey of Nurse Practitioners' perspectives

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Aim - To describe the perspective of NPs, working and prescribing in general practice settings, regarding potential barriers and enablers to the implementation of the recently introduced 'Registered Nurse Prescriber in Primary Health and Specialty Teams' scope of practice (Nursing Council of New Zealand [NCNZ], 2017).

Background - Registered Nurse [RN] prescribing has been evaluated within the international literature as a safe and clinically appropriate strategy to improve patient access to medicine/treatment and better utilise the health workforce. Registered nurses, working within general practice teams and authorised as meeting the specific criteria of the NCNZ can now prescribe from a specified list of medicines.

Methods - This research utilised an exploratory descriptive methodology, applying an electronic survey (May 2017) to a non-probability sample of NPs self-identifying as working and prescribing within New Zealand [NZ] general practice (n=36).

Findings - The participating NPs were supportive of RN prescribing within NZ general practice and considered the education and training requirements to be adequate. Concerns regarding role confusion and impact on the NP role including team dynamics were identified as the major barriers.

Discussion - This survey strengthens international research suggesting that best practice is more readily achieved when collaborative partnership, effective communication including information sharing and wider system support networks are facilitated. Consideration must now focus on how supports can improve effective initiation to enhance safe and efficient nursing care. This formative data provides a basis for further discussion and exploration to support the successful implementation of RN prescribing within general practice.

Introduction

This research responded to a call from a national nursing commentator urging 'lessons from the past' (Wilkinson, 2011) to guide future developments of RN prescribing in NZ. The intent of this research was that by acknowledging the barriers and enablers faced by NPs, within their prescribing experience in general practice, the introduction and implementation of Practice Nurse [PN] prescribing within general practice teams could be more efficiently integrated. The premise of this study acknowledges NPs as having valuable wisdom to apprise the implementation of RN prescribing.

Recent changes to NZ's legislation (Medicines 'Designated Prescriber - Registered Nurses' Regulations 2016) and regulation reflects expanding international acceptance that nurse prescribing is a safe and clinically appropriate intervention that is responsive to the rapidly changing demands for innovative health care. The 'Designated Prescriber - Registered

Nurse' (NZ Gazette, 2016) role is significant to the nursing profession, health care teams and the communities they serve. The Nursing Council of NZ [NCNZ] has amended nursing scopes of practice to allow specifically educated and authorised nurses to prescribe within primary health and specialty teams (NCNZ, 2017) which includes, but is not limited to, general practice settings. Primarily the initiative aims to improve safe patient access to healthcare, including medicines, which is seen as particularly advantageous for patients living rurally or with complex long-term health conditions (Ministry of Health [MoH], 2017; NCNZ, 2017). It also has implications for nurses individually, professionally and within the teams they work.

This research specifically considers the 'Designated Prescriber - Registered Nurse in Primary Health and Specialty teams' level of prescriber (NCNZ, 2017), and references it as such [DPRN] within the clinical setting of general practice. The DPRN role provides an opportunity for PNs, authorised and meeting the necessary educational criteria, to share decision-making and work under the designation of a doctor or NP, to prescribe from a restricted list of medicines (NCNZ, 2016a) that are frequently prescribed for common and long-term conditions.

The literature describes the large international variation in nurse prescribing and clinical contexts. It suggests that barriers exist at a number of levels and have a complex interplay which may be different for each clinical setting including general practice. Earlier national research concluded that whilst RN prescribing is met with enthusiasm from RNs working in primary health care [PHC], successful integration depends on multi-layer support strategies (Wilkinson, 2015). Awareness of potential barriers, as experienced by others, may offer increased opportunity for developing strategies to enhance effective and safe implementation.

The development of RN prescribing has the potential to change the delivery of nursing care within general practice and challenge the current understanding and expectation of the various scopes of practice and clinical responsibilities. This research offers new national data at the formative stage of RN prescribing to potentially guide and inform PNs and general practice teams.

Research method

This research utilised an electronic survey via REDCap (Research Electronic Data Capture) (University of Otago, 2016) to obtain exploratory, descriptive, quantitative data from a non-random sample of NPs, working and prescribing within NZ general practice settings. The survey was a specifically developed, non-validated tool. Participants were accessed via, but not limited to, the membership of Nurse Practitioners New Zealand, a section of the College of Nurses Aotearoa. Data was retrieved via REDCap and exported as a Comma-separated values [CSV] (with labels) file to Microsoft Excel (2016) for analysis. The survey was active for four weeks (1 - 29 May 2017).

This research is cross-sectional in design, applying the survey at a single point of time with the data describing a snapshot perspective at the time of national infancy of RN prescribing which therefore does not predict the perspective of change (for example impact or altered scope/roles). Approval for this research was received from the Human Ethics Committee and Kaitohutohu Māori of the University of Otago.

Findings

Demographics

The demographics of the participating NPs (n=36) included ethnicity (NZ European n=23/64%, NZ European & Maori n=4/11%, Maori n=4/11%, Other n=5/14%) and clinical setting (Urban n=16/44%, Urban/Rural n=13/36%, Rural n=7, 19%). The participants all self-identified as clinically experienced nurses working and prescribing within NZ general practice with experience ranging from 1 month to 11 full-time equivalent years. The NPs indicated they perform a number of roles including Leader (n=20), Educator (n=16), Quality Advisor (n=13), Policy Advisor (n=12), Manager (n=4) and other responsibilities (n=9) including Business owner, Mentor, Supervisor, Project initiatives including District Health Board [DHB]/Primary Health Organisation [PHO] and Advisory executive representation. Notably the NPs indicated that they had experience in supporting, supervising and mentoring other nurses (83%) including 66% for 88 NP's (mean 2.51, SD 2.9, R 0 - 15); 17% for 8 Diabetes Nurse prescribers (mean 0.23, SD 0.55, R 0 - 2) and 25% for 14 RN prescribers (mean 0.4, SD 0.77, R 0 - 3).

Support

The survey asked participants whether they supported the DPRN role within general practice. The mean percentile of 72% (n=35, SD 25.57, R 5 - 100) suggested the majority of participants support this role. 'Strong support' (100%) was indicated by 9 (25%) participants. There were 20 (57%) participants that gave a score of over 75% and 29 (83%) gave over 50%. There were 6 (17%) participants that provided scores less than 50% and 1 (3%) participant indicating low support by scoring under 25%.

Education and Training

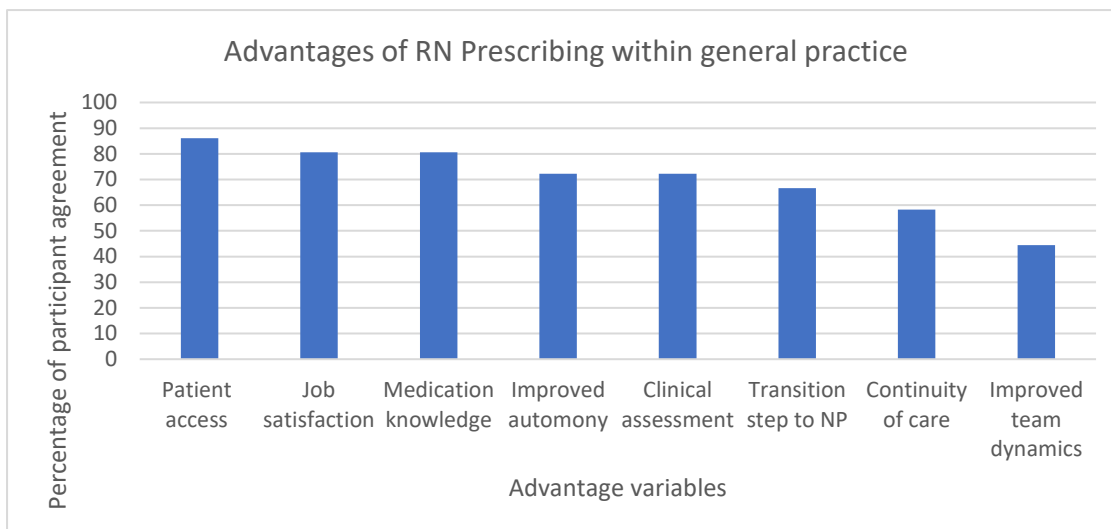
The survey asked "How adequate and appropriate do you believe the education and training requirements are?". The mean percentile of 69% (n=35, SD 26.59, R 0 - 100) suggests participants consider it to be sufficient. 'Very adequate/appropriate' (100% was indicated by 6 (17%). There were 18 (51%) participants that gave a score of over 75% and 28 (80%) gave over 50%. There were 7 (19%) participants that provided scores less than 50% with 3 (8%) participants indicating concern of inadequacy/inappropriateness by scoring under 25%.

By applying an analysis of variation (ANOVA) no significant association was found for practice setting (Urban/Rural/Urban-Rural) on level of support ($F(2,32) = 0.086$, $p = 0.917$), nor training/education ($F(2,32) = 0.436$, $p = 0.651$).

Advantages and Disadvantages

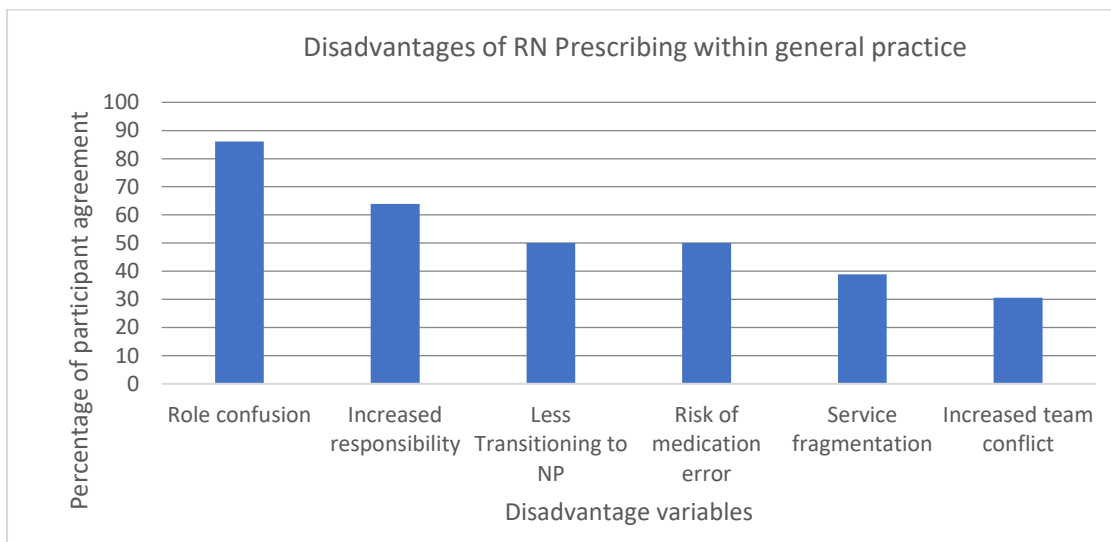
The survey asked "please identify which ADVANTAGES you believe RN prescribing offers within a general practice setting". Eight options were provided. Participants (n=35) indicated the main advantage as 'Improved patient access to the medications/services they need' (86%) followed by 'increased job satisfaction' (80%), 'improved knowledge of medication' (80%), 'improved autonomy/accountability' (72%), 'improved clinical assessment skills' (72%), 'a possible step toward becoming an NP' (67%), 'increased continuity of care' (58%). The minority of participants selected 'improved team dynamics' (44%) (Figure 1).

Figure 1: Advantages of RN Prescribing within general practice



The survey asked “please identify which DISADVANTAGES you believe RN prescribing presents within a general practice setting”. Six options were provided. Participants (n=35) indicated the main disadvantage as ‘confusion of roles’ (86%) followed by ‘increased responsibility/role not reflected (e.g. longer appointment times, remuneration)’ (64%). The other disadvantages were identified by half or less of the participants; less RN’s transitioning to NP (50%), risk of medication errors with multiple prescribers (50%), fragmentation of service provision (39%), increased team conflict (30%) (Figure 2).

Figure 2: Disadvantages of RN Prescribing within general practice



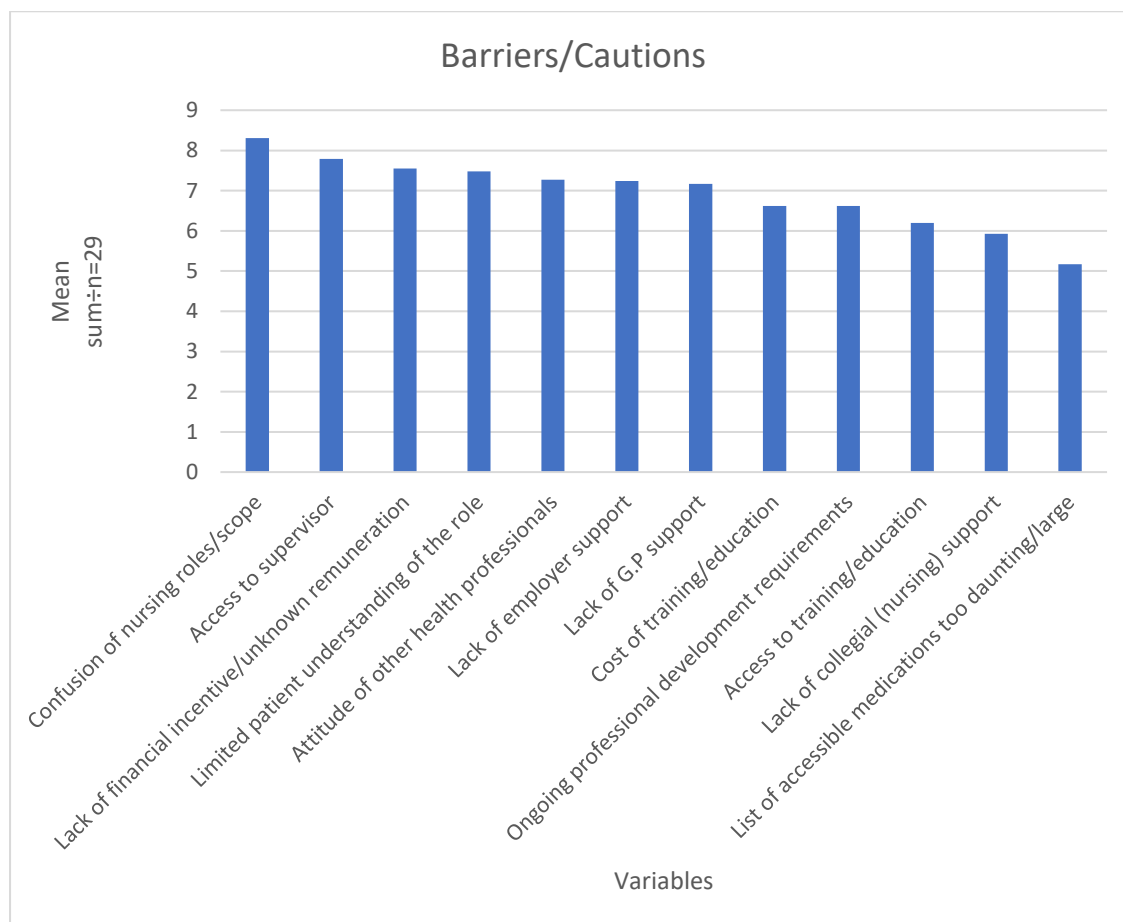
Barriers and Enablers

The data for both Barriers and Enablers considered twelve variables and introduced ranking to enable value/priority to be assessed. Participant instruction was to “use 0 for any factors that you don’t believe and then number upwards to reflect importance i.e. the item that you consider to be most important will have the highest number” and a scale ranging from 0 to 12 was provided. This section was completed by 29 participants (n=29).

Barriers

The survey asked participants to rank BARRIERS/CAUTIONS to RN prescribing within general practice. The mean ranking of the 12 variables ranged from 5.17 - 8.31 presenting a small variation between the individual barriers which made it difficult to differentiate importance as perceived by the participants. It did however suggest that each of the variables, identified from literature, resonated with this group and were all valued as being of medium to high importance (Figure 3).

Figure 3: Summary of Barriers/Cautions to RN prescribing within general practice



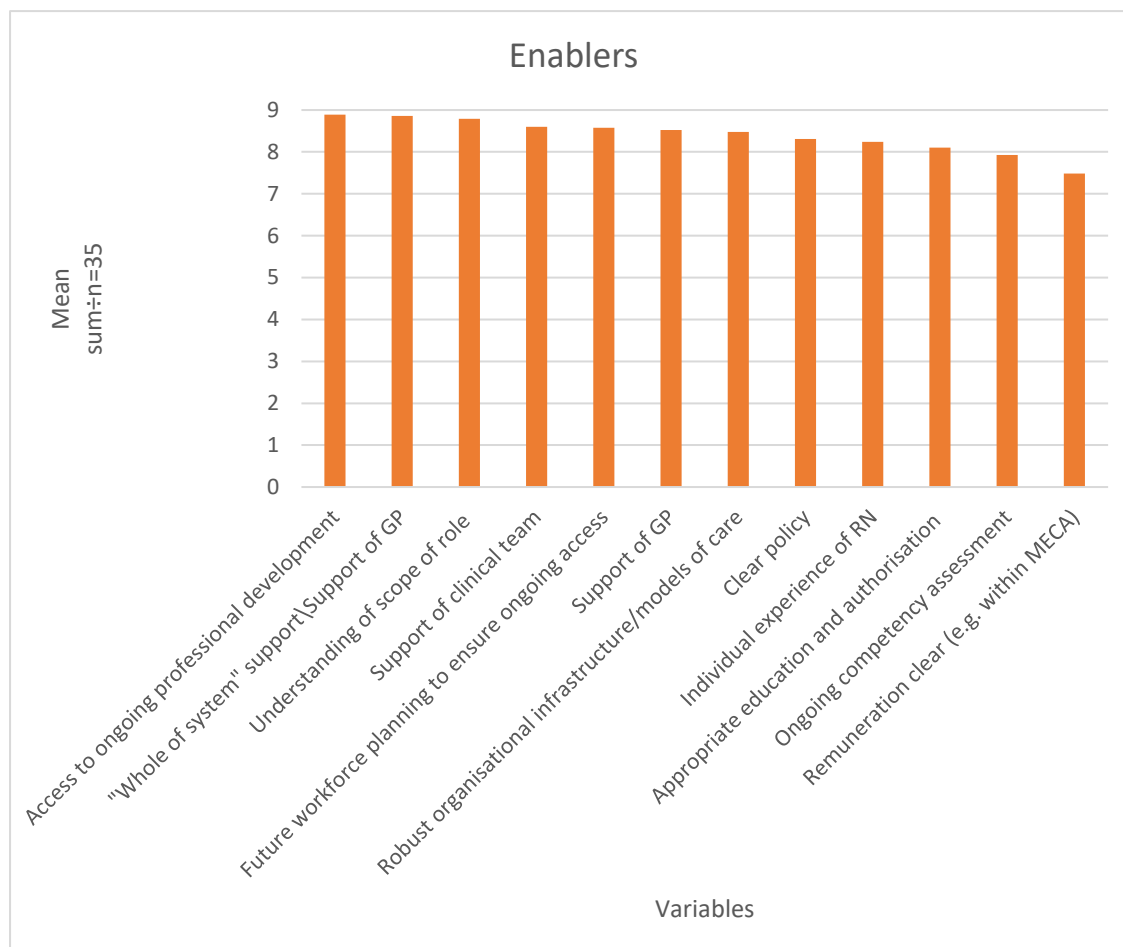
Confusion of nursing roles/scope' was the variable most identified by participants and the highest ranking (of 12) was given by the largest number of respondents (n=7, 24%). 'Access to supervisor (as demand increases)' had the largest number of respondents ranking 10 (n=6, 21%) and 7 (n=5, 17%).

Enablers

The survey asked to participants to rank ENABLERS/SUPPORTS to RN prescribing within general practice. The mean ranking of the 12 variables ranged from 7.48 - 8.89 (Figure 11). Similarly, to the Barriers section, this small variation made it difficult to differentiate importance as perceived by the participants. It again suggested that each of the variables,

identified from literature, resonated with this group and were all valued as being of medium to high importance (Figure 4).

Figure 4: Summary of Enablers/Supports to RN prescribing within general practice



‘Accessible ongoing professional development’ was the variable most identified by the largest number of participants (n=7, 24%). ‘Whole of system support’ had the largest number of respondents ranking 11 (n=7, 24%).

Discussion

This research reinforces that whilst much has been done to develop RN prescribing in NZ, a paradigm shift must now occur toward preparing and supporting nurses and their teams to actualise improved patient access to medication and care within the varied general practice context. The aim of this research was to explore the potential barriers and enablers to RN prescribing within the NZ general practice setting. The intent of this research was that by acknowledging the barriers and enablers faced by NPs, within their prescribing experience in general practice, the introduction and implementation of the DPRN role could be enhanced. It is accepted that by learning from the past, the replication of the difficulties may be reduced and the supportive actions may be enhanced to maximise efficient integration of the DPRN role within general practice teams.

The findings of this survey were enriched by the substantial nursing experience of the NP participants, all of whom self-reported that they worked in a comprehensive range of roles,

including prescribing, within NZ general practice. It must be acknowledged that experience not only relates to roles and responsibilities, but also mastery, which is reflected in the definitions of the NP role (NCNZ, 2017; NPNZ, 2017a). Clinical competence at expert level evidences intuition, high levels of proficiency including analytic ability (Benner, 1984) and consequently NPs are a valuable source of nursing knowledge and wisdom.

The majority of participants indicated support for RN prescribing within NZ general practice and considered the education and training requirements as adequate. This was not affected by the location of their general practice setting. This is noteworthy given that the national RN prescribing initiative is consistent with the NZ health strategy (Coleman, 2016; MoH, 2014 & 2017b; O'Malley, 2016) to improve patient access to medicines and health care including within rural and remote areas (Hundleby, 2015; NCNZ, 2016b; O'Connor, 2016).

The issues identified within the international literature and presented in the survey, appeared to resonate with the participating NPs as relevant to the national general practice clinical environment. There was over 70% participant agreement in seven out of the eight options regarding "Advantages" suggesting improvements could be expected in terms of patient (access, continuity of care), nursing (medication knowledge, clinical assessment) and health care provision (job satisfaction, autonomy). This shows NPs are optimistic about RN prescribing which is consistent with the optimism shown by PHC nurses in Wilkinson's (2015) research.

'Improved team dynamics' was the only advantage that the majority of participants did not identify with. Nurse prescribing is most successful when all stakeholders see the advantages including effective implementation (Coull, Murray, Turner-Halliday & Watterson, 2013; Drennan, Grant & Harris, 2014). Nationally, as at 16 August 2017, there were 27 DPRN in primary health and specialty teams with the majority from primary health (Shanks, A, NCNZ, personal communication, 16 August 2017). This initial enthusiasm in uptake is encouraging with the consequences, including stakeholder experiences and impacts relating to the changing landscape of medicine provision, are being shared via professional journals of nurses (Jones, 2017; Manchester, 2016) and doctors (Hoare & McKee, 2017; Thomas, 2016 & 2017). It will be interesting to see future trends which may be influenced by the generation of discussion, not only supporting confidence in progression and management of challenges but providing transparency in the process.

The participants also identify potential disadvantages indicating challenges can be expected within the implementation of RN prescribing within NZ general practice. 'Confusion of nursing roles/scope' was identified as main disadvantage, the biggest barrier and a priority requiring support. Greater clarity of the DPRN including better understanding by others is an important priority area to inform PNs and their general practice teams to consider the prescribing opportunity and furthermore to ensure adequate professional development and clinical support is available to new prescribers (Coull et al, 2013; Courtney, Carey & Stenner, 2012; Kelly, Neale & Rollings, 2010; Maddox, Halsall, Hall & Tully, 2016; Wilkinson, 2015). This is not surprising given that this initiative signifies one of the largest advancements for nursing (NCNZ, 2016b), and is at an early stage of introduction and implementation. There is no dispute that a significant effort has been attributed to the planning stages, for example establishing the legislative and regulatory requirements enabling RN prescribing, however the findings suggest that the focus must now shift to the practicalities of initiating and supporting the implementation phase.

The NP participants ranked all of the 12 barrier variables as being of medium to high importance. Concurring with role confusion, the impact of the team was identified as a concern. The participants confirmed the potential barriers of lack of employer and GP support which is consistent with Wilkinson's (2015) NZ research highlighting the importance of the workplace for providing supportive resourcing (including funding). The NCNZ criteria for applying for authorisation as a DPRN requires support letters from both the employer and prescribing mentor (NCNZ, 2017). This offers an opportunity for the RN, GP or NP and employers to clarify the DPRN scope/role at a team level and may include formalised contracts at individual and organisational level (for example position descriptions and memoranda of understanding). Bowskill, Timmons and James (2013) suggest that governance and organisational agreements, for example a local prescribing policy and specific drug formulary, are important to establish and clarify boundaries of the prescribing role. The national governance requirements (NCNZ, 2016c), for example the medicines list (NCNZ, 2016a), are formalised and accessible. In the future the sharing of individual/organisational (for example general practice or DHB/PHO) policy and document templates may communicate a practical implementation strategy.

Integration is a fundamental theme, requiring 'whole of system' support that may involve "significant culture change" (Wilkinson, 2015, p. 305), including at structural and organisational level, to enhance understanding and support from all stakeholders within the wider health system (Bradley & Nolan, 2007; Coull et al, 2013; Drennan et al, 2014; Hughes & Lockyer, 2013; Kelly et al, 2010; Latter et al, 2010; Lim, North & Shaw, 2014; Philips & Wilkinson, 2015; Wilkinson, 2015). Despite agreement within the literature regarding integrative principles there appears to be limited information regarding models of implementation or specific strategies supportive of efficient integration of RN prescribing into clinical practice. It is however suggested that effective integration of prescribing into PHC setting relies on trust within the relationships between the nurse, doctor, employer and clinical team (Bowskill et al, 2013). Nurse Practitioners must also be included within these relationships as they may have employer and/or mentoring roles within the NZ context.

A finding from this survey was that 72% of the participating NPs supported RN prescribing within general practice and the majority (83%) indicated that they have experience in providing the necessary support/supervision/mentorship. This finding supports a Netherlands study that identified that nurse specialists (n=375) held positive views about nurse prescribing potentially as a direct result of both their experience and eagerness to advance nursing (Kroezen et al, 2014). This bodes well for NPs being recognised as an integral resource to support emergent PN prescribers and provide guidance for the implementation of the DPRN role.

The findings of this survey raise important considerations for future progression (and discussed in more detail within the dissertation) and include:

- A need to protect access to training, supervision and ongoing professional development. Although the number of NPs within general practice is not clearly defined, they are few in number. A survey of NPs in 2016 (n=124) suggested that approximately half are funded or allocated time to teach others and only a third have succession planning in place for their position (NPNZ, 2017b). Nurse Practitioners are vital to supporting, supervising and mentoring DPRNs and strategies are critical to secure their ongoing engagement and support and must be prioritised;

- Strategic and organisational multi-level action plans, guidelines and review processes which is consultative and communicated with stakeholders (for example Health Workforce NZ);
- The potential for a preceptorial/nationally supported roll-out;
- Professional and Industrial leadership including integration of the DPRN scope within the New Zealand Nurses Organisation Multi-employer contracts;
- Impact of extension of prescribing rights to other health professions.

This discussion would not have been possible without the valued contribution and participation of the NPs and provides relevant information to all nurses advocating for optimal patient care.

Limitations

This research utilised a non-validated electronic survey tool and relies on self-reported data from a non-random sample. Therefore, the accuracy and generalisability of these findings to other populations and contexts cannot be assumed.

Conclusion

The introduction of RN prescribing in NZ is responsive to international evidence suggesting this intervention is safe and effectively addresses the increasing and rapidly changing demands for innovative primary health care. The 'Registered Nurse - Designated Prescriber; in Primary Health and Specialty teams scope' is now actualised and ready to be integrated within the clinical environment of general practice with the aim to increase patient access to medicine and appropriate care by facilitating better utilisation of the nursing, and health workforce. Effective integration of RN prescribing within NZ general practice is dependent on the commitment and support of the general practice team and the existence of DPRN employment positions.

The quantitative data from this survey, timed at the inception of RN prescribing in NZ, suggests that barrier and enabler themes identified within international and national literature, resonated with the NP participants. The NP participants indicated support for RN prescribing within NZ general practice (72%), endorsing the potential opportunity to improve the outcomes of patient care, enhance the contribution of nurses and effect new models of care within general practice care provision. This research also reinforces the existence of a complex interplay of structural, practice and individual issues that require a 'whole of system' approach to be applied and necessitating support at multiple levels to maximise effective and safe implementation for all stakeholders. However, there will be challenges and further work is ahead to ensure effective and safe implementation for all stakeholders. As experienced clinicians, prescribers and leaders NPs are a vital resource for supporting the training of novice RN prescribers and providing the ongoing mentorship to develop the implementation of the DPRN role.

The NP participants in this research have made a worthwhile contribution toward the successful integration of professional and safe RN prescribing within general practice. It is hoped that this research accurately presents the perceptions of the participating NPs and provides a foundation for further dialogue, debate and future exploration.

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