Title

The development of leadership outcome-indicators evaluating the contribution of clinical specialists and advanced practitioners to healthcare: a secondary analysis.

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Abstract:

Aims. To report a secondary analysis of data collected from the case study phase of a national study of advanced practitioners and develop leadership outcomes-indicators appropriate for advanced practitioners.

Background. In many countries, advanced practitioners in nursing and midwifery have responsibility as leaders for healthcare development, but without having leadership outcome measures available they are unable to demonstrate the results of their activities. In Ireland, a sequential mixed method research study was used to develop a validated tool for the evaluation of clinical specialists and advanced practitioners. Despite strong evidence of leadership activities, few leadership-specific outcomes were generated from the primary analysis.

Design. Secondary analysis of a multiple case study dataset.

Methods. Dataset comprised twenty-three case studies of advanced practitioner/clinical specialists from 13 sites across each region in Ireland from all divisions of the Nursing Board Register. Data were collected 2008-2010. Data sources included non-participant observation (n=92 hours) of advanced practitioners in practice, interviews with clinicians (n=21), patients (n=20) and directors of nursing/midwifery (n=13) and documents. Analysis focused on leadership outcome-indicator development in line with the National Health Service's Good Indicators Guide.

Results. The four categories of leadership outcomes for advanced practitioner developed were: i) capacity and capability building of multidisciplinary team; ii) measure of esteem; iii) new initiatives for clinical practice and healthcare delivery and iv) clinical practice based on evidence.

Conclusions. The proposed set of leadership outcome-indicators derived from a secondary analysis captures the complexity of leadership in practice. They add to existing clinical outcomes measuring advanced practice.

SUMMARY STATEMENT
Why this research is needed?
- Evaluation of advanced practitioner outcomes is a high priority in performance-managed health services.
- Outcome evaluation research in advanced practice is limited by a narrow range of patient, care and performance-related outcomes.
- Leadership is particularly under-represented in terms of research-informed indicators.

What are the key findings?
- Provides evidence of leadership outcomes of advanced practitioners that is research-informed by a national multiple case study dataset.
- Adds a new set of leadership outcomes to existing clinical outcomes measures for advanced nursing-midwifery practice.
- Makes visible the leadership contribution of advanced practitioners to policy-makers, administrators and the nursing-midwifery profession.

How should the findings be used to influence policy/practice /research/ education?
- Researchers should test the utility of the leadership outcomes and report on the relevance of these outcomes in their area of practice.
- Policy makers and research commissioners should consider including leadership outcomes in future evaluations of advanced practitioner roles.
- The concept of leadership outcomes and indicators should be included in advanced practice leadership development programmes.

INTRODUCTION

In performance-managed health services, clinical specialist and advanced practitioners need to evaluate their role in the delivery of patient care and demonstrate accountability to managers, policy-makers and others in and outside the health services (Doran & Pringle 2011). In Ireland, the SCAPE (Specialist Clinical and Advanced Practitioner Evaluation) study (Begley *et al.* 2010*)* was commissioned to develop, as one of the deliverables, a validated tool for evaluating the outcomes of clinical nurse/midwife specialists (CSs) and advanced nurse/midwife practitioners (APs). The resultant evaluation tool listed outcomes categorised under three headings of: i) patient/ client outcomes, ii) outcomes for nurses, midwives or other health professionals and, iii) outcomes for healthcare services. Although policy-makers in Ireland consider leadership a key feature of the CS/AP role (National Council for the Professional Development of Nursing and Midwifery (NCNM 2008a, b), specific leadership outcomes were not identified in the SCAPE tool: instead, elements of leadership were incorporated into some outcomes. In appraising metrics for nursing, Griffiths *et al.* (2008) challenge researchers to begin a programme of outcome development that focuses on outcomes rather than processes, includes technical specifications for outcomes and validation by research. The SCAPE case study, which captures the complexity of leadership in practice, provides a unique opportunity to make visible the advanced practitioner's leadership contribution in the healthcare system and develop specific leadership outcomes. The purpose of this paper, therefore, is to report a secondary analysis of the SCAPE case study dataset to generate leadership outcomes, which are derived from and are relevant to the advanced practitioner's practice.

Background

Evaluation of the outcomes of the advanced practice nurse or midwife has become a high priority internationally due to increasing demand for outcomes and performance indicators that are relevant to healthcare initiatives, quality metrics, workforce planning strategies and policies for healthcare reform (American Association of Critical Care Nurses 2012, Royal College of Nursing 2012, National Health Service Leadership Academy 2011, Delamaire & Lafortune 2010, Griffiths *et al.* 2008, Bryant-Lukosius & DiCenso 2004). The concept of outcome measurement in advanced practice nursing is not new. Early studies, for example Sackett *et al.* (1974), used clinical and patient outcomes to compare advanced nurse practitioners with family physicians in primary healthcare to determine the advanced practitioner quality of care and ability to perform at expanded scope of practice levels. With continuing development of advanced practice, numerous studies have been carried out over the decades to determine the impact of advanced nurse practitioner care on patient outcomes, process of care, resource use and clinical outcomes (Kleinpell 2013). With increasing demands for evaluation, the nursing-midwifery profession faces the challenge of developing metrics, which include outcomes that capture the critical aspects of professional practice and make visible the contribution of nursing-midwifery to healthcare (Griffiths *et al.* 2008).

An emergent trend in previous research on advanced practice internationally (Delamaire & Lafortune 2010) is the use of a narrow range of outcomes and an over-reliance on traditional medical and patient outcomes as evaluation measures of the advanced practitioner role. This may be because, historically, research objectives have been dominated by a need to determine whether advanced nurse practitioners provide safe patient care and can substitute for doctors, despite the philosophy that their role is primarily one of advancing nursing practice. A meta-analysis of US advanced practice

nurse outcomes research during the years 1990-2008 (Newhouse *et al.* 2011), reveals that only eleven patient outcomes were used across the thirty-seven studies included. The eleven outcomes used as evaluation measures were: patient satisfaction; self-reported perceived health; functional status; glucose control; lipid control; blood pressure; emergency department visits; hospitalisation; duration of ventilation; length of stay; and, mortality. Similarly, a systematic review of nurse practitioners' outcomes in primary care settings that included thirty-four studies from Canada, UK and USA (Horrocks *et al.* 2002), shows the predominant use of patient satisfaction, quality of care, resource use, healthcare cost and health status related outcomes as the measures of empirical evidence on which people could make decisions about the substitution of doctors by advanced nurse practitioners. In Bryant-Lukosius *et al.'s* (2004) PEPPA (Participatory, Evidence-based, Patient-focused Process, for guiding the development, implementation and evaluation of Advanced practice nursing) framework for advanced practitioner outcomes research, measures such as the Minnesota Satisfaction Questionnaire-SF (Weiss *et al.* 1967) or the Burlington Health Professional Satisfaction Survey (Bachelor *et al.* 1975) are limited to self-reports of satisfaction with various aspects of work, rather than being linked to specific leadership activities of advanced practitioners. With the on-going changes in healthcare structure and the expectation that advanced practitioners will be leaders in quality improvements and healthcare reform, the challenge for researchers now is to select outcomes that acknowledge the leadership dimension of the advanced practice role (Hickey & Brosnan 2012, Kleinpell 2013). To date, the international trend and main focus in advanced practice research has been on patient care and process-related outcomes and other important components of the role, such as leadership outcomes, have been neglected. There is a risk that future commissioners and researchers will rely on the clinical outcomes used in previous studies without due consideration of other potential outcomes.

Researchers are now beginning to identify leadership activities of advanced practitioners and the barriers and facilitators to performing those activities (Pulcini *et al.* 2010, Kilpatrick *et al.* 2012, Elliott *et al.* 2013); however, research on leadership outcome development is lacking. Pulcini *et al.* (2010) report that 77% (n=79) of nurse practitioner/advanced practice nurses are involved in policy-making or healthcare planning activities at local level and 61% are involved at national level. In Canada, Kilpatrick's *et al.* (2012) multiple-case study of nurse practitioners reveals that 14-15% of advanced practitioner's time is spent carrying out activities such as coaching, teaching, protocol development and research. A more expansive list of clinical and professional leadership activities by advanced practitioners was generated in the SCAPE study in Ireland and includes activities such as guiding/co-ordinating the activities of the MDT, initiating changes in patient care through practice development, introducing/developing patient care services, acting as a positive role model for autonomous decision-making and engaging in professional organisations at national and international levels (Elliott *et al.* 2013). Whilst there is evidence to support the view that advanced practitioners are enacting leadership functions and that leadership activities comprise a significant proportion of their working day, the scope of future evaluation research and design is limited by the absence of validated leadership outcomes that are appropriate to advanced practice nursing and midwifery.

The advanced practice nurse is recognised by the International Council of Nurses (ICN 2009) as a global entity although an international survey, involving 32 countries, demonstrates there is a lack of consensus across titles, regulation and scope of practice (Pulcini *et al.* 2010). Countries have adopted different strategies to develop and implement advanced practice nursing which perhaps accounts for the diverse range of

titles, role definitions and responsibilities. Although differences exist, there is a tacit

expectation among international policy-makers that the advanced practitioner's role

includes leadership. Competencies for advanced practice nursing identify leadership as

a component of the advanced practitioner role (Schober & Affara 2006). In Ireland, the

national guidelines for APs make explicit that they are charged with responsibility for

providing clinical and professional leadership (NCNM 2008a). The CS leadership role is

narrower and is embedded in the core functions of patient advocacy, education, training,

audit, research and consultancy (NCNM 2008b) (Table 1). The introduction of advanced

practice nurses and midwives in Ireland provides a unique opportunity to examine the

evidence for leadership from the initial years 2002-2010 and to generate leadership

outcomes that are appropriate for advanced practitioner level and are derived from

actual practice in healthcare organisations.

THE STUDY

Aim

The aim of this secondary analysis of a multiple case study dataset is to identify and

define key leadership outcomes and their indicators from a national study of clinical

specialists and advanced practitioners in Ireland.

Design

The SCAPE study, conducted in Ireland in 2008-2010 with the aim of evaluating the

roles and outcomes of clinical nurse/midwife specialists and advanced nurse/midwife

practitioners, generated a large dataset comprising twenty-three case studies of

CS/APs. Secondary analysis, which provides researchers with a viable mechanism for

re-analysis of an original dataset to answer new and high impact research questions

(Doolan & Froelicher 2009, Heaton 2008, Szabo & Strang 1997), was conducted. To

achieve the aim of outcome development, an analytic framework based on Penchon's (2008) basic construction of outcomes and indicators was used to guide data analysis. The secondary analysis of the SCAPE case study dataset, therefore, was designed to: i) identify and 'title' the leadership outcomes; ii) provide a working definition of each outcome; iii) identify indicators for each outcome and, iv) demonstrate data that feeds into the indicator. For Penchon (2008), this level of detailed information provides for transparency as to how outcomes are defined and constructed, so that people who need to make decisions about which outcomes to include in their performance evaluation will be able to assess whether or not an outcome is appropriate.

Setting and recruitment

The SCAPE dataset comprised a purposive sample of 23 CS/APs, taken from the total population (n=2101) (NCNM 2008c), from 13 health service provider sites across each region in Ireland. To capture maximum variation across disciplines and practice contexts, CS/APs from all divisions of nursing recorded by the Irish Nursing Board Register (general, mental health, intellectual disability, children's and public health nursing) and midwifery, were included. Recruitment was assisted by the National Council for the Professional Development of Nursing and Midwifery, where the national database of CS/APs in Ireland was held and facilitated by the Directors of Nursing and Midwifery (DON/DOMs).

Participants

Inclusion criteria specified that CS/APs were approved by the NCNM and were at least 1 year in post. Other case study participants were required to have had direct experience of working with, or received care from CS/APs. Each case study involved a CS/AP, a director of nursing/midwifery, a clinician (staff nurse/midwife, doctor, clinical manager or

allied healthcare professional) and a patient/client or family member, to provide the perspectives of all stakeholders.

Data collection methods

Non-participant observation of 23 CS/APs, using a structured observational tool (Begley *et al.* 2010), was conducted for a total of 92 hours (4 hours' observation of each CS/AP). Twenty-one clinicians who worked with the 23 CS/APs, 20 patients/clients cared for by the CS/APs and the 13 Directors of Nursing or Midwifery in charge of the study sites, were interviewed using a structured interview guide developed for the SCAPE study (Begley *et al.* 2010). Documentary evidence from the case study sites, including audits, clinical practice policies/guidelines, work-programmes and diaries, was also gathered.

Ethical considerations

Approval for the study was obtained from the Faculty of Health Sciences Research Ethics Committee of the authors' university and all local research ethics committees in the study sites. All participants gave written informed consent prior to taking part. Consent to conduct non-participant observation of care was obtained from clinicians and patients or parents/guardians. All transcripts of interviews or observation sessions were anonymised and study identifiers were applied to ensure confidentiality. This secondary analysis of the case study dataset was a further refinement of the original SCAPE study aims and involved the principal investigator, two researchers and an international expert from the original research team.

Secondary case study dataset analysis and rigour

All case study data (interviews, observations and written records) were managed and analysed using NVivo 8 ©. Three researchers initially independently analysed one case

study dataset (interviews, observation and documentary evidence relating to one CS/AP), specifically searching for leadership outcomes, indicators of these outcomes and supporting evidence from the data. They then met to compare their preliminary findings, isolate emergent outcomes and their indicators and reach a consensus on outcomes. There was strong congruence between their individual assessments. The remaining 20 datasets were then analysed under those agreed outcome headings, with any non-conforming data saved under a 'to be discussed' heading. A further consensus meeting examined the data excerpts under this heading and apportioned them to appropriate categories. Four core outcome categories were agreed, each with several outcomes and their respective indicators. The data were then entered into a table under the three headings 'outcome-indicator-data', to enable further analysis and the development of an overarching definition for each outcome category. The questions suggested by the National Health Service Institute for Innovation and Improvement (NHSIII) (Penchon 2008) were then posed of our data, to begin the process of checking that sufficient high quality data were present for each outcome and indicator, as 'an indicator without trustworthy data to feed it, is often worthless and sometimes dangerous' (Penchon 2008, p.10).

FINDINGS

The case study dataset included non-participant observation (n= 92 hours) of CS/APs in practice, interviews with clinicians (n =21) who worked with the CS/AP, patients (n =20) who had received care from the CS/AP and directors of nursing/ midwifery (n=13) and documents from each case study site including audits, clinical practice policies/guidelines, work programmes and diaries.

Leadership outcomes for advanced practitioners

To be designated as a leadership outcome, the pre-requisite components of outcomes (the title, how the outcome is defined, the indicators and data that fed into the indicators) were generated for each of the four outcome categories (Table 2). Penchon (2008) highlights the importance of transparency in how outcomes are defined and constructed, so that policy makers and nurses who need to make decisions about which outcomes to include in the performance appraisal are able to assess whether or not an outcome is appropriate for their evaluation (Table 3). The criterion domain on which leadership was assessed was the advanced practitioner's role as leader in the MDT in initiating, developing and integrating new initiatives into the healthcare organisation. For example, the leadership dimension in capacity and capability building of the MDT is characterised by the CS/AP 'setting up' educational programmes rather than simply providing such programmes.

1 Capacity and capability building of multidisciplinary team

The core outcome, capacity and capability building of the MDT, is an end result of the CS/APs' educational interventions to increase the MDT member's clinical skill-set. As a definition, it denotes an increase in the number of MDT members with new clinical competencies for specialist patient care due to the advanced practitioners' educational interventions. The SCAPE case study dataset provided clear evidence that CS/AP's led on some educational interventions that were initiated and developed by CS/APs specifically in response to an identified need.

> CS virtually single-handedly, she has set up a stand-alone module in conjunction with [university], for caring for the child with tracheostomy for nurses and also

12

together with her colleagues, [is] putting together a similar module for healthcare

assistants in the community…the stand alone module in conjunction with the

[university], she really virtually did all the work for that. (Consultant interview-CS

site)

AP is pro-active in the promotion of Practice Nursing and has been involved with

the curriculum design on several courses for practice nurses. (Observation- AP

site)

The CS/APs had higher levels of responsibility not only for programme development but

also in the area of formal assessment for clinical skills competency:

Nurses working in GP practices… we facilitated the practice nurse coming in and

taking her smears here under [CS]'s supervision and getting signed off [as

competent in cervical smear testing].   (Director of Nursing interview-CS site).

In terms of leadership, the creation of a work environment that enables individuals to

develop sustainable abilities appropriate for a constantly changing healthcare

organisation is recognised as a pre-requisite for capability building (Fraser & Greenhalgh

2001). Data showed that CS/APs were instrumental in creating work environments

where the MDT was motivated to make improvements to their clinical practice and

patient services and in advancing their professional development:

AP was persuading me to do my Master's degree. I firmly believe it wouldn't have

happened if it weren't for her encouragement…. I just haven't come across

anyone who was as motivating and as inspiring as she was. (Staff nurse

interview-AP site)

13

CSs are extremely energised, fresh in their thinking, very much proactive as regards education and about taking services forward. (Director of Nursing interview-CS site)

Although CS/APs are frequently involved in formal knowledge transfer through presentation at research conferences or public patient education media events, evidence relating to a leadership dimension was required. Only data providing evidence of CS/APs as leaders in the organisation of formal or media events to facilitate knowledge transfer to clinicians and the public were included, for example:

AP co-facilitates National Irish Sexual Health Conference each year. Joint research with Social work colleague…AP with the Health Services Executive and Crisis Pregnancy Agency developed a DVD for [secondary] level schools as part of their sex education resource. (Observation- AP site)

CS involved with the parents' group, Tracheostomy Advocacy Group. There's a tracheostomy day every year and she's always been very much involved in choosing speakers, coordinating with the parents, the organiser… (Consultant interview- CS site)

2 Measures of Esteem

The leadership outcomes commonly used across management research and derived from leadership theory include outcome measures for attitudes such as job satisfaction and tangible outcomes such as customer ratings (Hiller *et al.* 2011). In this study, the

Measures of Esteem outcome constitutes a recognition of the satisfaction with the CS/AP's leadership functions and indicates that the CS/AP is held in particularly high regard by colleagues, senior managers, MDT or by external bodies. Measures of esteem embody a measure of being valued and recognised by others in the MDT rather than being linked to self-esteem measures. Esteem measures include MDT satisfaction and positive evaluation of the CS/AP's clinical leadership and the follow on impact this had on improved patient care and healthcare services:

> CS is the person who really would bring about a good quality of care, so in the area of stroke the crucial thing is that it's a coordinated MDT approach and she is the person who facilitates that. (Consultant interview- CS site)

> CS is making an impact in terms of education and training…change in culture in practice in terms of hand washing and infection control auditing at ward level has been a big practice change the last couple of years. (Director of Midwifery interview- CS site)

Another measure of esteem is the formal recognition of the CS/AP's clinical expertise and ability to lead the profession by being nominated as a member of national and international committees, especially committees with a remit for the development of clinical practice standards and guidelines and strategic planning of future health services:

> CS is involved in developing nationally, guidelines, protocols, care plans, check-lists. Member of National Discharge Planning Steering Committee to improve the quality of the service nationwide, worked with consultants, airway nurses and

senior members in the Health Services Executive to develop a national discharge protocol. (Clinician interview- CS site)

Staff are very proud that they have an AP and she is often brought in for undergraduate students…good as a role-model…good for students to know that this post is there and this is the way nursing is developing. (Director of Nursing interview- AP site)

3 New initiatives for clinical practice and healthcare delivery

New initiatives for clinical practice and healthcare delivery is a core outcome that includes CS/AP-led initiatives in their healthcare organisations for the introduction of new patient services, clinical practices, healthcare processes and support measures that lead to improved patient services and support networks for healthcare practitioners across the wider healthcare system. The SCAPE dataset provided clear evidence that CS/APs were instrumental in the development of new patient services and clinical practices in response to an identified need and were responsible for the integration of these new services and clinical practices in the MDT and large healthcare organisations:

CS assessed the need for a nurse-led clinic for grommet and compiled the proposal which resulted in additional funding for the clinic and audiologist allocation once a week. (Observation- CS site)

CS introduced smear taking clinics…that was her initiative… we are now the centre, we've got two more posts in there now at [clinical nurse manager] level. Both are doing the colposcopy course. (Director of Nursing interview- CS site)

Following a review of services, AP developed a young person's services in the GUIDE services which she has audited. AP developed and runs an outreach sexual health education programme facilitated in the community for young teenagers. (Observation –AP site)

A key leadership dimension of the CS/AP's role involved being pro-active in planning for future services and spear-heading initiatives to expand scope of practice that have a national impact on the nursing profession:

AP seeking that next year review, local anaesthetics regarding eyes may to be looked at for inclusion. AP is qualified as a Registered Nurse Prescriber and is seeking paediatric X-ray prescribing status and is campaigning at a national level as paediatrics are currently not legally entitled to be included in the course. (Observation- AP site)

A further dimension of leadership involved initiatives, such as professional networking organisations which provide a forum for discussing practice and professional issues with colleagues and ultimately resulted in the development of the profession and practice at a national level:

AP set up Society of Sexual Transmitted Disease Ireland nurse's sub-section. (Observation- AP site)

AP was Founder Chair and is committee member of the Forum in Ireland for Nurses in Child and Adolescent Mental Health. (Observation- AP site)

4 Clinical practice based on evidence

Evidence-based clinical practice is the end result of the CS/AP's research interventions and input into increasing the MDT members' use of evidence and research in clinical practice. As a definition it denotes the CS/AP's input in key areas such as: up-to-date clinical practice guidelines based on research and international best-practice standards implementation in the healthcare organisation; increased use and application of research by MDT in clinical practice; generating new knowledge by leading on a research team; evaluation of patient care for quality assurance mechanisms; and benchmarking against national/international standards of care. It was clear from the evidence that CS/AP's led on a wide range of evidence and research related initiatives that resulted in an increased use of research in clinical practice and service development and in promoting a culture of innovation and improved healthcare delivery:

> CS brings that evidence to the hospital and instigates the change in care… introducing something new or taking something away. For example, we used to always put acute strokes in compression stockings. That's no longer evidence-based treatment, so it's all about bringing people up-to-date with best practice. (Consultant interview- CS site)

> [Referring to CS tissue viability audits] we would use that information and benchmark it against other hospitals on a regular basis. A lot of large academic teaching hospitals carry out their prevalent studies on tissue liability and pressure sores, so we'd have an opportunity to benchmark ourselves against other hospitals, both from the [hospitals] perspective and a national perspective and then we compare that information internationally. (Director of Nursing interview- CS site)

AP is lead researcher on a prospective study on the analysis of occupational injury patterns in patients attending the Emergency Department. (Observation- AP site)

CS initiates, participates in, evaluates audit… and she uses the outcomes of audit to improve service provision. (Observation- CS site)

DISCUSSION

The proposed four leadership outcome categories of: i) capacity and capability building of MDT, ii) measures of esteem, iii) new initiatives for clinical practice and healthcare delivery and iv) clinical practice based on evidence, represent a secondary analysis of the SCAPE case study dataset. In contrast to the previous SCAPE outcome categories of: i) patient/client outcomes; ii) outcomes for nurses, midwives or other health professionals and; iii) outcomes for healthcare services (Begley *et al.* 2010), this expanded set of new leadership-specific outcomes can be used when evaluating the complex contributions of advanced practitioners. One possible explanation to account for differences in the outcomes relates to the original data sources and the hegemony of patient and clinical outcomes in the literature that was available to inform the original SCAPE study. Although the SCAPE study used various sources including literature, grey literature and systematic reviews to provide a quality knowledge-base for the development of validated outcomes, it drew from extant literature and previous outcomes research. Consequently, the knowledge-base was limited by the absence of leadership outcomes appropriate for advanced practitioners. Although key stakeholders and advanced practitioners also informed the initial knowledge-base, it appears that their

thinking was bounded by the extant literature and they did not identify the leadership outcomes of their work in interviews. It is, therefore, unsurprising that leadership outcomes constructed in a deductive approach are different from those generated in an inductive approach using a multiple case study dataset, which provided comprehensive accounts of advanced practitioners in everyday practice, as the primary source. The set of four leadership outcome categories generated from this secondary analysis is not intended to replace existing advanced practitioner outcomes that measure patient and clinical practice outcomes, but to add to what is already identified as important by policy-makers and the nursing and midwifery professions. These leadership outcome categories provide evidence of the advanced practitioner leadership roles and of specific subcomponents of the impact of their leadership capabilities.

While outcomes cannot provide a complete view, they are a powerful mechanism to measure quality and highlight what is considered important in healthcare systems. The added value of leadership outcomes for advanced practitioners, therefore, is that they make visible what previously was not recognised, namely the leadership contribution of advanced practitioners to the development of nursing, midwifery and healthcare. Griffiths *et al*. (2008) warn that by not including important elements in the metrics for nursing, the profession faces increasing invisibility in a performance-managed health service. International policy and initiatives promoting leadership, such as, the International Council of Nurses' Leadership for Change programme™(ICN undated), the UK Leadership Framework (Department of Health 2011), Sigma Theta Tau International's Leadership Institute (Sigma Theta Tau International 2013) and the US Clinical Nurse Leader programme (AACN 2007) are powerful drivers shaping expectations for all healthcare professionals. The expectation that nurses provide leadership is clear. However, the mechanisms for measuring leadership performance are greatly hindered

by the absence of 'good' quality (Penchon 2008) leadership outcomes. The significance of this becomes apparent when one considers the role of outcomes as measures of evidence for evaluating interventions in clinical practice (Kleinpell 2013), evaluating advanced practitioner roles (Begley *et al.* 2010, DiCenso & Bryant-Lukosius 2010, Delamaire & Lafortune 2010, Guest *et al.* 2004) and informing strategic decision-making about staff mix in nursing (Harris & McGillis Hall 2012). Developing state-of-the-art metrics for nursing is challenging (Griffiths *et al.* 2008), but current circumstances provide an imperative for the profession to pursue the development of relevant measures of the advanced practitioners' contributions to healthcare. 'Naming' leadership outcomes and their indicators is the first step in a process leading to the development of high quality outcomes that are scientifically sound and usable (Griffiths *et al.* 2008, Penchon 2008). The results of this study can be used to inform advanced practitioner education, clinical practice and research. Implications for education include reinforcing the importance of teaching leadership concepts in advanced practitioner educational programmes. In clinical practice, advanced practitioners need to be encouraged to assume leadership roles to promote multidisciplinary teamwork and develop new initiatives for clinical practice. Future research should further explore the leadership role components and validate the categories of the leadership outcomes for advanced practitioners.

Limitations

Although these leadership outcomes have been tested and internally validated in case study dataset, they are still in the preliminary stages of development and therefore should be considered as 'candidate' (Griffiths *et al.* 2008, p.23) outcomes. The data examples that fed into the 'Expression of respect by external body' outcome were limited and additional research would help determine if there is sufficient evidence to support

this outcome in the future. Further testing is required to increase the specification of all the leadership outcomes, their usability and feasibility across advanced practitioners in other countries.

CONCLUSION

The development of outcomes and key indicators that are relevant to the advanced practice nurse-midwife presents numerous challenges. The proposed set of leadership outcomes captures the complexity of leadership in advanced practice contexts and adds to the clinical and patient outcomes in the existing metrics for evaluating advanced practice. We invite researchers and advanced practitioners from other countries to test the utility of these leadership outcomes and comment on the relevance of the outcomes-indicators in their speciality area of practice. This may lead to greater specification and further refinement of the key outcomes-indicators that address important leadership issues. Further validation of the advanced practitioner leadership role components can help to more clearly elucidate the impact they are making. While the large dataset of case studies encompassed all divisions of nursing-midwifery recorded by the Irish Nursing Board Register, additional research is needed which examines the impact of specific leadership roles in specialty practice areas. The development of robust leadership outcomes enables advanced practitioners to make visible the leadership component of their role and enables policy-makers to determine the effectiveness of leadership components in future evaluations of advanced practitioner roles.

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Table1: National guidelines on Advanced Practitioner and Clinical Specialist leadership

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Leadership role of advanced practitioners
• Advanced nurse/midwife practitioners are pioneers and clinical leaders in that they may initiate and implement changes in healthcare service in response to patient/client need and service demand. • They must have a vision of areas of nursing/midwifery practice that can be developed beyond the current scope of nursing/midwifery practice and a commitment to the development of these areas. • They provide new and additional health services to many communities in collaboration with other healthcare professionals to meet a growing need that is identified both locally and nationally by healthcare management and governmental organisations. • Advanced nurse/midwife practitioners participate in educating nursing/midwifery staff and other healthcare professionals through role-modelling, mentoring, sharing and facilitating the exchange of knowledge both in the classroom, the clinical area and the wider community.   (NCNM 2008a: 7).
Leadership role of clinical specialists
• Implements changes in healthcare service in response to patient/client need and service demand. • Uses the outcomes of audit to improve service provision. • Provides leadership in clinical practice and acts as a resource and role model for specialist practice. • Generates and contributes to the development of clinical standards and guidelines. • Provides mentorship/preceptorship, teaching, facilitation and professional supervisory skills for nurses and midwives and other healthcare workers.   (NCNM 2008b: 8).

Table 2: Leadership outcomes for advanced practitioners

Outcome category	Outcomes
1. Capacity and capability building of multidisciplinary team (MDT)	1.1 New course development 1.2 Training and mentoring across MDT 1.3 Motivation of staff for professional development 1.4 Formal knowledge transfer to clinicians and public
2. Measures of Esteem	2.1 Multidisciplinary team satisfaction 2.2 Nominated representative of profession on national/ international committee 2.3 Expression of respect by multidisciplinary team member 2.4 Expression of respect by external body
3. New initiatives for clinical practice and healthcare delivery	3.1 New service 3.2 New practice 3.3 New professional, MDT or patient support initiative
4. Clinical practice based on evidence	4.1 Advanced practitioner-led clinical practice guideline development, review and implementation. 4.2 Increased use/application of research evidence in clinical practice. 4.3 Knowledge generation/research to inform clinical practice 4.4 Advanced practitioner-led evaluation of quality patient care

Table 3: Leadership outcome-indicators for advanced practitioners

Outcome category: 1. Capacity and capability building of multidisciplinary team

Definition: Increased number of MDT members with new knowledge or clinical skills for specialist patient care due to advanced practitioners' educational interventions. These include curriculum development in response to identified need, supervision/mentoring of training and formal assessment including competency assessment of clinical skills. It also includes advanced practitioner facilitation, which increases the MDT members' motivation to engage in advancing their professional and practice development and advanced practitioner-led formal or public media events to facilitate knowledge transfer to clinicians and the public.

Outcome	Indicator/s	Examples of data that fed into the indicator
1. 1 New course development	• Education programme initiated by advanced practitioner in response to identified need.	CS virtually single-handedly, she has set up a stand-alone module in conjunction with [university], for caring for the child with tracheostomy for nurses and also together with her colleagues, [is] putting together a similar module for healthcare assistants in the community…the stand alone module in conjunction with the [university], she really virtually did all the work for that. (Consultant interview-CS site) Chest tubes, tube management and chest pain management - that was identified as a learning need. APs identified that and introduced an education programme. (Director of Nursing interview-AP site) AP is pro-active in the promotion of Practice Nursing and has been involved with the curriculum design on a number of courses for practice nurses. (Observation- AP site) AP compiled a curriculum document for a proposed Postgraduate Diploma in Prison Nursing, awaiting accreditation from the Irish Prison Service, university and approval by stakeholders. (Observation-AP site)
1.2 Training and mentoring across MDT	• Training members of MDT to learn new clinical skills or specialist patient care; • Assessor for clinical skills competency of MDT members; • Responsibility for induction programmes for new MDT member; • Responsibility for mentoring/ supervising staff to develop new skills.	AP is helping me train my first year registrar. I'm sure the registrar prefers training with AP than with me because she takes much more time than I do, so absolutely she is training the younger doctors coming through. (Consultant interview-AP site) Nurses working in GP practices… we facilitated the practice nurse coming in and taking her smears here under [CS]'s supervision and getting signed off [as competent in cervical smear testing]. (Director of Nursing interview-CS site). AP who does Newfill clinic procedure, has trained one other nurse who sees 1 client per week. (Observation-AP site) CS has up-skilled [MDT members] to deal with things like parenting, counselling to a certain degree and recognising issues that might arise at home. CS mentors people, developing the skills of younger nurses and care staff coming out. (Director of Intellectual Disability

		Services interview-CS site) AP educates Senior [doctors], Specialist Registrar training programme (ED), student nurses on clinical placement, new staff nurses to A&E. AP mentors other AP candidates and provides role modelling and clinical teaching. (Observation-AP site)
1.3 Motivation of staff for professional development	• Staff motivation for professional development; • Staff motivation to develop /improve clinical practice.	AP was persuading me to do my Master's degree. I firmly believe it wouldn't have happened if it weren't for her encouragement…. I just haven't come across anyone who was as motivating and as inspiring as she was. (Staff nurse interview-AP site) Various projects we have …if they [CSs] weren't as dynamic as they were, none of this would occur. (Consultant interview-CS site) CSs are extremely energised, fresh in their thinking, very much proactive as regards education and about taking services forward. (Director of Nursing interview-CS site) AP gave the impetus that was needed to help people say, 'I can move in there too.' (Director of Nursing interview-CS site)
1.4 Formal knowledge transfer to clinicians and public	• Conference organisation by advanced practitioner in collaboration with colleagues; • Health education resource/public media events.	Co-facilitates National Sexual Health Conference each year. Developed a DVD with the Health Services Executive and Crisis Pregnancy Agency for 2nd level schools as part of their sex education resource. (Observation-AP site) CS involved with the parents' group, TAG (Tracheostomy Advocacy Group). Tracheostomy day every year and she's very much involved in choosing speakers, coordinating with parents, organisers, calling everybody in to help on the day. (Consultant interview-CS site) CS co-authored research report:- Relationship between Maternal Methadone Dosage and Neonatal Abstinence Syndrome. (Observation-CS site) CS conducted health promotion talks on mental health in local schools and on a radio programme on local radio. (Observation-CS site)

Outcome category 2: Measures of Esteem

Definition: Positive evaluation of advanced practitioner's contribution to improved delivery of patient care and healthcare services. Formal recognition of: advanced practitioner's clinical expertise and ability to lead profession by being invited to act as member of national/international committees that are responsible for policy, procedures and strategic planning of health services; clinical expertise through MDT actions of patient referral including complex cases, consultation and invited lecturer for another healthcare profession; and, advanced practitioner's expertise recognised by external body through receiving award or scholarship.

Outcome	Indicator/s	Examples of data that fed into the indicator

2.1 Multidisciplinary team satisfaction	Members of MDT highly valued: • the expert level of clinical decision-making, diagnosis and clinical care; • efficient management of resources; • efficient management of clinics; • ability to identify service needs/MDT education needs; instrumental in assuring quality patient care.	CS would regularly pick up clinical problems that are new, that somebody without her experience wouldn't, we wouldn't have detected. (Consultant interview-CS site) Patient had seen doctor but AP noticed a rash and called consultant to review. It was a serious condition; consultant acknowledged it was an important 'pick up'. (Observation-AP site) You couldn't have a better person to be doing that [assessment]… she [AP] is very up-to-date with everything that's going on. (Social worker interview- AP site) AP has been a very efficient use of resources. AP now can treat these conditions and bypass being seen by the doctor…In a review of clinic attendance … AP saw more patients than the consultant. (Director of Nursing interview-AP site)
2.2 Nominated representative of profession on national/ international committee.	• Is nominated as representative of the profession; • member of national committee; • member of international committee (committees are related to clinical and professional practice, for example, national guideline & protocol development); • member of Editorial Review Board; • member of Advisory Board for strategic planning of national health service.	Member of National Discharge Planning Steering Committee to improve the quality of the service, worked with the Health Services Executive to develop a national discharge protocol. (Observation-CS site) CS fed into the national guidelines for stroke care and The Irish Heart Foundation. (Clinician interview-CS site) AP involved with national groups including the International Primary Care Respiratory Group and acted as Practice Nurse advisor to the Irish College of General Practitioners in a review of their documentation on employing a practice nurse. (Observation-AP site) Member of the Editorial Review Board of the European Journal of Emergency Medicine. (Observation-AP site) Represents Registered Nurse Prescribers on Pharmacy Board. Represents APs on Advisory Board in Department of Health & Children. (Observation-AP site)
2.3 Expression of respect by multidisciplinary team member.	MDT demonstrate respect by: • referring complex patient/client cases to advanced practitioners; • inviting advanced practitioner to act as consultant to the MDT; • acknowledging advanced practitioner as clinical expert; • Inviting advanced practitioner to lecturer.	I refer patients to [AP] where I feel she has expertise that would be superior to some of my own junior doctors. That would particularly refer to complex wound management, nail bed injuries and that sort of clinical problem. (Consultant interview-AP site) We would be using her for advice and to lean on and to run things by, anyway. (Social worker interview-AP site) CS's advice was constantly being sought on the ward round from the doctors, nurses and patients. Queries were addressed to her from all levels of staff and patients directly, via phone and email. (Observation-CS site) AP asked by consultant to teach junior doctors how to carry out ankle, shoulder, knee assessments. (Observation-AP site)

| 2.4 Expression of respect by external body. | • Invited speaker by services outside advanced practitioner's own organisation;
• Recognition of excellence-award/ scholarship. | AP won a scholarship to South Africa Hospice/community setting to teach STI and HIV course. (Observation-AP site) |

Outcome category 3: New initiatives for clinical practice and healthcare delivery

Definition: Advanced practitioner-led project development within healthcare organisation for the introduction of new patient services, new clinical practices, new healthcare processes and new support measures leading to improved patient services. Advanced practitioner is pro-active in planning for future services needs and nurse or midwife-led initiatives. Advanced practitioner initiated support mechanisms for MDT, practice and patient groups.

Outcome	Indicator/s	Examples of data that fed into the indicator
3.1 New service	• Initiated assessment of service need; • Development of new nurse-led or midwife-led clinic, increased number of clinics, extended services to other patient groups; • Initiated new programme for patient care, e.g. screening programme; • Future planning of service needs and identifying further nurse or midwife-led initiatives.	CS assessed need for a nurse-led clinic for grommet, compiled the proposal that resulted in additional funding for the clinic and audiologist allocation once a week. (Observation-CS site) CS introduced smear taking clinics…that was her initiative… we are now the centre. (Director of Nursing interview-CS site) CS established another clinic to cope with increased numbers attending the service and increased work-load demand… has helped to reduce congestion and improve management during the clinic periods. (Observation–CS site) AP brought in screening programmes, like the Well Man screening programme.(Consultant interview-AP site) CSs want to expand [nurse-led clinics] …to meet a greater amount of the population. They are always analysing what clinics they are providing. (Director of Nursing interview-CS site)
3.2 New practice	• Introduction of new practice in patient care, for example, new assessment tool, care pathways, care processes or documentation processes; • Integration of new practices into MDT and organisation; • Advanced practitioner-led initiatives to expand scope of practice.	We've gone from Patient Controlled Analgesia to bolus morphine to epidural, to paravertrebals. It wouldn't happen if we didn't have clinical nurse specialists. (Clinical Nurse Manager III interview-CS site) AP seeking that, in next year's review, local anaesthetics regarding eyes may be looked at for inclusion. AP is qualified as a Registered Nurse Prescriber and is seeking paediatric X-ray prescribing status, is campaigning at national level as paediatrics are currently not legally entitled to be included in the course. (Observation-AP site) A lot of care pathways, integrated pathways within the hospital and the outpatient services which [CS] would be really responsible for. (Consultant interview–CS site) AP developed the Near Patient Testing system which includes a hand-held immediate international normalised ratio (INR) reading machine, a computerised

		package regarding dosing called INR Star and the use of the Warfarin Anti-coagulant Record booklet. AP sourced the equipment and was involved in securing funding. (Observation-AP site) CS initiated an appointment system to improve through flow and reduced waiting times for clients attending the clinics. (Observation-CS site)
3.3 New professional, MDT or patient support initiative	• Set-up of professional & practice networks; • Set-up of staff education/development initiative; • Set-up of patient support initiatives, for example, patient support groups, information booklets, facilitating patient access and use of health services.	AP set up Society of Sexual Transmitted Disease Ireland nurses' sub-section. Multiple networks set up with AP and community organisations including outreach youth club (Observation-AP site) AP was Founder Chair and is committee member of the Forum in Ireland for Nurses in Child and Adolescent Mental Health. (Observation-AP site) AP is an excellent business woman, runs a course in sexual health and generates money for fund that goes towards paying for us to go to conferences, for education and different courses. (Nurse interview-AP site) [CS is] very active in having established a stroke victims' support group. Which really evolved from [CS] inviting a similar kind of lead person for stroke support network in [PLACE] coming to talk to us here and from that the group got up and running. They produce booklets for stroke survivors telling them about various services. (Consultant interview-CS site) CS negotiated with management that her clients attending the warfarin clinic have their car parking fee waived due to the frequency of their attendances. (Observation-CS site)

Outcome category 4: Clinical practice based on evidence

Definition: Increased use of research-based evidence to inform guideline development and clinical practice. Advanced practitioner-led evaluation of patient/client care for quality assurance mechanisms and benchmarking against national/international standards and for service development. Advanced practitioner-led research initiatives leading to knowledge generation by research.

Outcome	Indicator/s	Examples of data that fed into the indicator
4.1 Advanced practitioner-led clinical practice guidelines development, review and implementation	• Advanced practitioner-led guidelines for clinical practice in-situ with evidence of the reference to research and international best practice standards; • Advanced practitioner-led review of clinical practice guidelines or implementation of guidelines into clinical	AP spearheaded [development of clinical practice policies]… there wouldn't be care guidelines without an advanced nurse practitioner. (Consultant interview-AP site) CSs would lead on policy and guidelines for the management of patients. (Director of Nursing interview-CS site) AP regularly reviews and is involved with updating of all protocols & guidelines for the Scope of Practice with reference to international best practice. Guidelines have recently been revised and detail advanced research-based reference sources and links.

	practice.	(Observation-AP site) CS will draw up the guidelines… then she'll eventually lead to them being actually implemented (Consultant interview-CS site)
4.2 Increased use/application of research evidence in clinical practice	• Increased use/application of research evidence by MDT in clinical practice; • Advanced practitioner facilitation of MDT to apply the research evidence to their clinical decision-making and patient care.	CS brings that evidence to the hospital and instigates the change in care… introducing something new or taking something away. For example, we used to always put acute stroke patients in compression stockings. That's no longer evidence-based treatment, so it's all about bringing people up-to-date with best practice. (Consultant interview-CS site) AP would be very proactive in relation to evidence-based practice. Looking at research in relation to wound care or splinting… AP would always be involved in searching for the up-to-date practice and ensuring we have best practice. (Director of Nursing interview-AP site) Tissue Viability Nurse telephoned the CS to discuss the care management of a child who has a small excoriated area around his tracheostomy site. CS provided evidence-based input into the choice of dressing and her rationale for this choice. (Observation-CS site) CS uses her specialist knowledge to provide evidence-based knowledge to her clients. (Observation-CS site) During consultations and education sessions she advised others on the use of evidence/research relevant to practice. (Observation-CS site)
4.3 Knowledge generation/research to inform clinical practice	• Advanced practitioner-led research in clinical practice; • Support others within MDT to carry out research.	AP is lead researcher on a prospective study on the analysis of Occupational Injury patterns in patients attending the Emergency Department. Current research by AP in conjunction with university on a retrospective review of patients presenting to the emergency department with glass-related injuries. (Observation-AP site) Conducted research on readmissions – focussing on reasons, length of time in hospital and level of care required. Used the outcome of the study to enhance how to provide a more supportive role for her clients. (Observation-CS site) AP encouraged me to do a study to identify exactly how the patients feel about how easy it is to access the service and how satisfied they are with the service and what they think could be improved. That gives us the hard evidence to say, 'these are the problems patients are having and now we're going about trying to address them,' trying to improve things and increase capacity and shorten waiting times. (Staff- nurse interview-AP site)
4.4 Advanced practitioner-led evaluation of quality patient care	• Advanced practitioner-led reports on quality of patient care; • Quality assurance and meeting national/international standards of best practice in patient care; • Benchmarking of patient care standards against	[Referring to CS tissue viability audits] we would use that information and benchmark it against other hospitals on a regular basis...a lot of large academic teaching hospitals carry out their prevalent studies on tissue viability and pressure sores, so we'd have an opportunity to benchmark ourselves against other hospitals, then we compare that information internationally. (Director of Nursing interview-CS site) Cervical Check audit the service [CS-led clinic]. They were with us recently, we see more women and we're

	national/international standards; • Information used to improve patient services.	performing very well within the time-frames… we're meeting all those targets, one of the few areas that is meeting the targets, they congratulated us on that. (Director of Nursing interview-CS site) CS initiates, participates in, evaluates audit… she uses the outcomes of audit to improve service provision. (Observation-CS site) I've always found [AP] trustworthy. He's our lifeline…I know [our child] is safe with [AP]. (Parent interview-AP site)