

FRAMEWORK FOR NATIONAL PERFORMANCE INDICATORS FOR NURSING AND MIDWIFERY



An Roinn Sláinte
DEPARTMENT OF HEALTH



FRAMEWORK FOR NATIONAL PERFORMANCE INDICATORS FOR NURSING AND MIDWIFERY

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FOREWORD BY THE MINISTER FOR HEALTH



Over the years, we have developed the nursing and midwifery professions and rightly so. Significant investment has been made and it's important that we demonstrate its effect.

It is vital, therefore, that we measure the outcomes and contribution of nursing and midwifery interventions and initiatives on client/patient care. This framework will assist in demonstrating the impact of nursing and midwifery across key areas of our health services, through the use of performance indicators.

Currently, we have limited data on the nursing and midwifery workforce to inform workforce planning, service planning, recruitment and retention, training and development, and disaster and emergency planning. Therefore, the first priority action from this framework is the development of a minimum data set for the nursing and midwifery workforce.

Once the minimum data set is implemented, we will know the accurate number of nurses and midwives employed in our health services.

The significance of this work cannot be underestimated in facilitating the management of the health services and the development of performance indicators for nursing and midwifery.

The use of performance indicators will further embed an ethos of performance improvement in nursing and midwifery and help both professions to make visible their contribution to a culture of quality and safe patient care.

A handwritten signature in blue ink, appearing to read 'Simon Harris'.

Simon Harris TD
Minister for Health

FOREWORD BY THE CHIEF NURSING OFFICER



I am delighted to introduce this Framework for National Performance Indicators for Nursing and Midwifery.

In 2010, the Health Information and Quality Authority (HIQA) published guidance on the development of key performance indicators in health care. This framework builds on that guidance but is tailored to nursing and midwifery and captures issues that predominate in nursing and midwifery services.

The Strategy for the Office of the Chief Nursing Officer 2015–2017 contains a suite of integrated policies that are designed to revolutionise the way nursing and midwifery services will be delivered in the future. The performance indicators developed and endorsed for use at national level, as a result of this framework, will be incorporated in the HSE National Service Plan and will measure the impact of these and other policies.

I am confident that by implementing this framework, we will be able to unambiguously demonstrate the magnitude of the nursing and midwifery contribution to the health service.

I look forward to working with all of our partners, particularly the HSE and NMBI, and other key stakeholders to implement this framework.

A handwritten signature in black ink that reads "Siobhan O'Halloran". The script is cursive and fluid.

Dr Siobhan O'Halloran
Chief Nursing Officer

SECTION 1 – INTRODUCTION

1.1 What is the purpose of this Framework?

The purpose of this Framework is to (i) set out the policy context for the use of nursing and midwifery performance indicators (PIs) to demonstrate the relationship between inputs and outcomes/impact; (ii) provide guidance on PIs including clarifying the relationship between Structure, Process and Outcome PIs; and (iii) ensure that there is a standardised approach to their development, prioritisation, endorsement and implementation.

1.2 How will this Framework benefit the health service user?

All nursing and midwifery policy is developed with the aim of meeting the needs of the health service user. PIs will tell us whether or not we are achieving our policy objectives.

1.3 Performance measurement

Performance measurement in healthcare settings has become very important in recent years as a way of ensuring that the delivery of health services is improving all the time. The Irish health service requires significant funding and performance measurement is one tool used to inform the allocation of resources in a way that facilitates the achievement of policy objectives. It also allows healthcare settings to assess and continually improve their own performance and compare it to similar settings.

1.4 What are PIs?

PIs are measures of performance that are used by organisations to measure how well they are performing against targets or expectations. PIs measure performance by showing trends to demonstrate that improvements are being made over time. PIs also measure performance by comparing results against standards or other similar organisations. This helps organisations to improve the service they provide by identifying where performance is at the desired level and also identifying where improvements are required. Performance measurement promotes accountability to all stakeholders, including the public, service users, clinicians and the Government. It does this by facilitating informed decision-making and safe, high quality and reliable care through monitoring, analysing and communicating the degree to which organisations meet key goals (HIQA, 2010, updated 2013). There are three types of PIs: Structure, Process and Outcome and these are explored in further detail in 2.B.2.

1.5 Why do we need Health Service PIs?

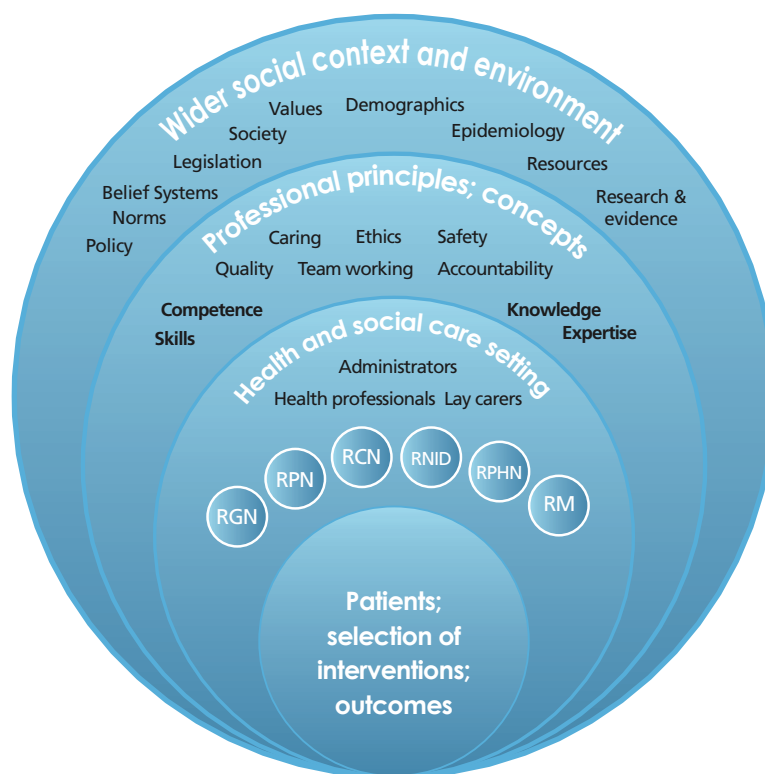
In the health service, information plays a pivotal role in promoting improvements in the safety and quality of client care. The delivery of care that is safe, client-centred, compassionate, effective and efficient is the responsibility of all health care professionals (HSE, 2015) and requires information that is of good quality, comparable and can be shared within the health sector.

Health service PIs identify good practice and provide comparability within and between similar services. They also identify opportunities for improvement and the need for a more detailed investigation of standards. The ultimate goal of PIs is to contribute to the provision of a high quality, safe and effective service that meets the needs of service users (HIQA, 2010, updated 2013).

1.6 Why do we need specific Nursing and Midwifery PIs?

PIs for nursing and midwifery identify specific and measurable elements of the quality and quantity of nursing and midwifery care provided. Nursing and midwifery care is critical to achieving positive client outcomes and PIs are needed to evaluate nursing interventions and implement initiatives to improve quality and quantity. They are also important in providing accountability and assurance to the public (Skills for Health, 2016). In addition, they identify areas of good practice that must be recognised and celebrated (HSE, 2015).

Nursing and midwifery care is delivered in a complex environment and there are multiple factors that influence nursing and midwifery practice as indicated by the National Council for the Professional Development of Nursing and Midwifery (June 2010) in the following figure (Figure 1):



Given this complex environment, it is important to develop PIs that capture the contribution made specifically by nurses and midwives to the health service. When it comes to the development of these PIs, Griffiths et al. (2008) state that the aim is to "...identify a relatively small number of indicators that still relate clearly to the multifaceted and somewhat elusive concept of quality nursing care".

Evidence shows that the nurse staffing and skill mix resource has a direct impact on patient and staff outcomes (Aiken et al., 2014), so it's vital to be able to demonstrate the benefits for patients of investment in this resource.

The pay for nursing in 2015 was €2.2 billion¹. However, the total cost of the nursing and midwifery resource includes additional costs, for example, education and regulation costs.

The Health Service Personnel Census shows that nursing (including midwifery) is the largest staff category in the public health service accounting for almost 34% of all staff:

¹ This figure includes both statutory and section 38 agencies.

Table 1 Number (WTE) of staff employed in the public health service, as at July 2016		
Staff Category	WTE (excl'd. career break)	% of Total
Medical/Dental	9,356.62	8.86
Nursing	35,712.36	33.81
Health & Social Care Professionals	15,002.76	14.2
Management/Admin	16,451.36	15.57
General Support Staff	9,487.46	8.98
Patient & Client Care	19,630.39	18.58
Total	105,640.95	100

Since the publication of The Report of the Commission on Nursing in 1998, there has been significant investment in nursing and midwifery initiatives including:

- the appointment of the Chief Nursing Officer at Assistant Secretary level in the Department of Health and the establishment of the CNO's Office;
- the location of undergraduate nursing and midwifery education in the universities and higher education sector;
- the enactment of legislation and regulation giving prescriptive authority to nurses and midwives;
- the enactment of the Nurses and Midwives Act 2011;
- the development of career pathways, to enable role expansion across clinical management and education dimensions; and
- the establishment of a national structure for leading and implementing the development of capacity and capability within the nursing and midwifery workforce.

The Commission on Nursing enabled significant developments in the nursing and midwifery resource and the monitoring of PIs is essential to demonstrate the contribution of the professions to safe patient care. This can be achieved through the use of nursing and midwifery PIs at both national and local levels.

The HSE introduced process PIs in the form of Quality Care Metrics (QCM). A range of organisations (across acute hospitals, midwifery, children's, older persons, intellectual disability, mental health services and public health/community nursing services) currently gather data on a monthly basis that provide an indication of care quality aligned to evidenced based standards, policies and procedures. The HSE is currently identifying a new suite of QCM using a robust academic evidence-based framework that will determine a range of new process measures sensitive to the influences of nurses and midwives and agreed through national consensus. This work is aligned to the policy direction of the CNO's Office and this Framework.

The Office of the Nursing and Midwifery Service Director (ONMSD) (2015) in the HSE highlights the benefits of nursing and midwifery QCM as a measuring system that:

- monitors and assesses performance against evidenced based standards;
- quantifies trends and characteristics;
- highlights exceptional care and areas of risk which require immediate attention;
- provides a standardised system to track and benchmark the quality of care;

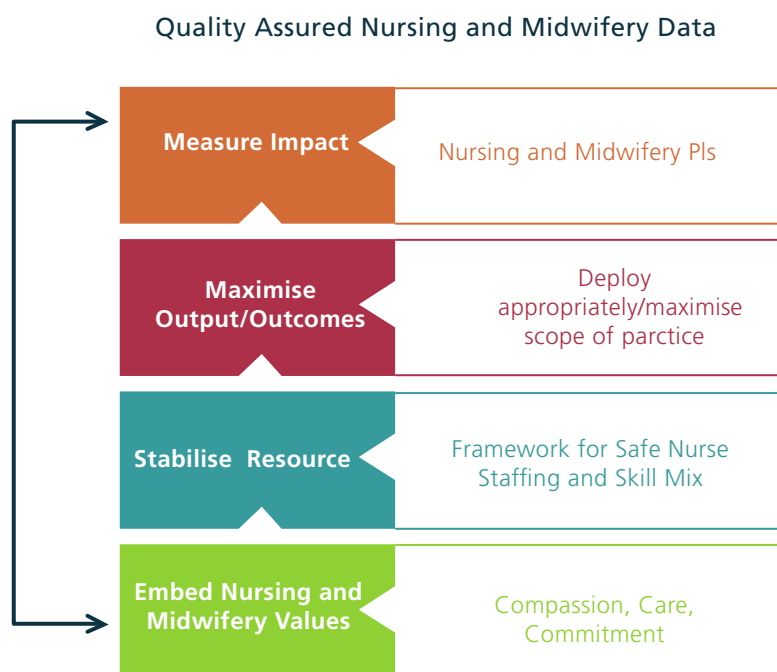
- offers direction on educational needs for healthcare staff; and
- promotes staff engagement and accountability for the quality of care.

It adds that in addition to providing real time information to nurses and midwives about how clients are benefiting from quality care delivery, QCM data enables managers to monitor individual ward performance and organisational progress in delivering safer, quality focused client care.

VanDeVelde-Coke et al. (2012) conclude that “Equipped with the right information, nurses can better demonstrate their value, advocate for the impact their profession has on the entire system, and focus their efforts on those factors that have the greatest effect on healthcare outcomes, confirming that nurses make a difference”.

1.7 Why do we need National Nursing and Midwifery PIs?

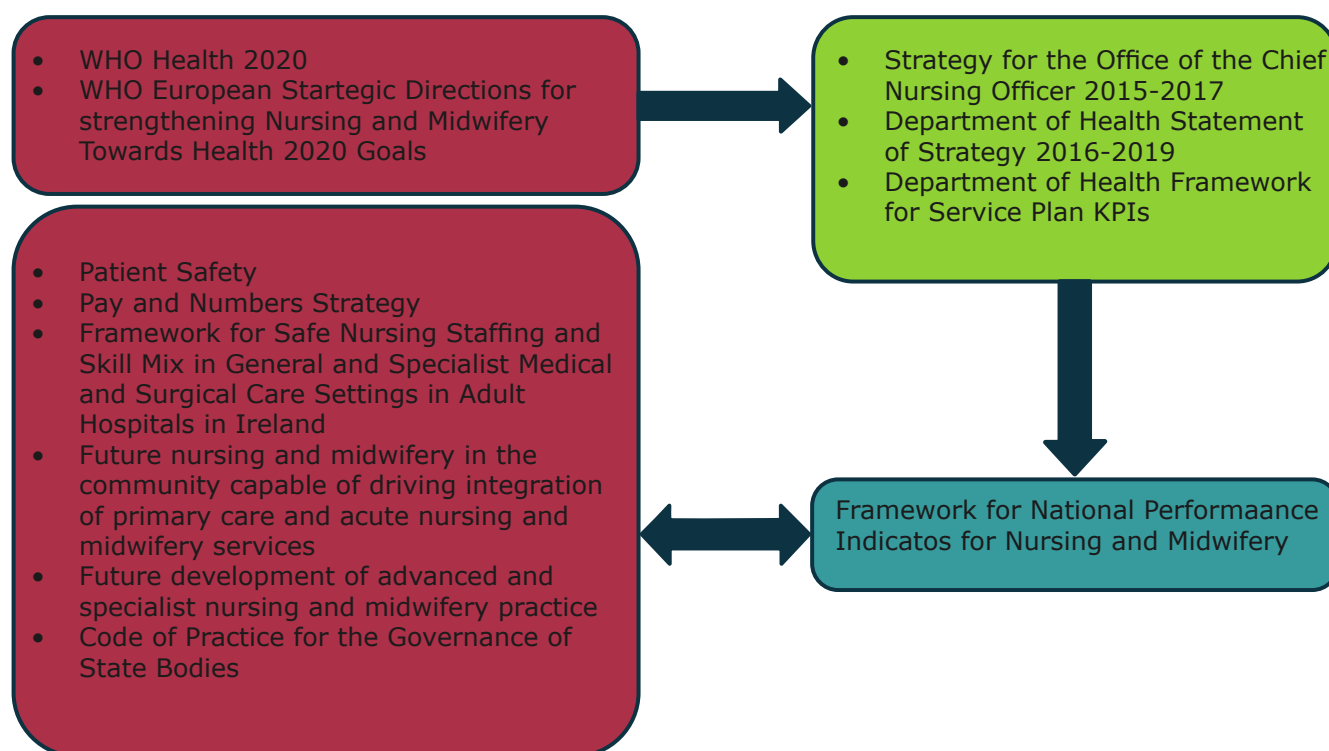
National nursing and midwifery PIs are needed to evaluate the implementation and effectiveness of policy and to show the impact of the investment in nursing and midwifery at a national level. The first step in this pathway (Figure 2) is to continue to embed the core values of nursing and midwifery practice, i.e., Compassion, Care and Commitment (Department of Health, 2016). Then, the nursing and midwifery resource must be stabilised using the Framework for Safe Nurse Staffing and Skill Mix. This aims to apply a consistent method to determine optimum nurse staffing and skill mix levels. Nursing and midwifery outputs/outcomes will be maximised by deploying staff appropriately and maximising their scope of practice. Finally, PIs will be used to measure the impact of these initiatives, informed by quality assured nursing and midwifery data. Figure 2:



National PIs are also needed to allow for benchmarking between hospitals or other healthcare settings. However, currently there is a lack of quality assured nursing and midwifery data with which to plan the nursing and midwifery resource to optimise client care.

1.8 What is the policy context of this Framework?

The following figure (Figure 3) shows the position of this Framework in the context of overall policy:



The Strategy for the Office of the Chief Nursing Officer was informed by the Department's Statement of Strategy and relevant World Health Organisation (WHO) reports (Health 2020 and European Strategic Directions for Strengthening Nursing and Midwifery Towards Health 2020 Goals).

It contains four strategic objectives as follows:

- To provide expert policy input and direction to support government priorities and to optimise public investment in the health system;
- To strengthen the role of nurses and midwives by optimising the scope of practice across the health service;
- To enhance the impact of nurses and midwives and demonstrate this through the utilisation of robust data intelligence;
- To enable nurses and midwives to serve as full partners in health care design and improvement by enhancing leadership, competency and opportunities.

The development of this Framework is one of the priority actions cited in the Strategy and it will facilitate the achievement of the aforementioned strategic objectives. This Framework has been developed in line with the Department's Framework for Service Plan KPIs and in consultation with the ONMSD in the HSE.

In addition, it will assist in monitoring the impact of relevant policies on:

- patient safety (National Patient Safety Office);
- workforce planning (Pay and Numbers Strategy; and Framework for Safe Nurse Staffing and Skill Mix in General and Specialist Medical and Surgical Care Settings in Adult Hospitals in Ireland);
- nursing and midwifery (Future nursing and midwifery models in the community capable of driving integration of primary care and acute nursing and midwifery services, and Future development of advanced and specialist nursing and midwifery practice); and

- regulation (Code of Practice for the Governance of State Bodies).

In other countries, PIs are contained within overarching frameworks for assessing the performance of the health system. Within these frameworks, PIs are categorised under health system goals (and/or domains or dimensions of performance). There is currently no analogous health system performance framework in Ireland. Therefore, national nursing and midwifery PIs should be categorised under the strategic objectives set out in the Department of Health's Statement of Strategy 2016–2019:

- Support people to lead healthy and independent lives;
- Ensure the delivery of high quality and safe health and social care;
- Create a more responsive, integrated and people-centred health and social care service;
- Promote effective and efficient management of the health services;
- Develop a high-performing Department to lead and oversee the health and social care sector.

This format will maintain the flexibility required to measure the impact of nursing and midwifery policy as the preferred model of care emerges.

SECTION 2 — FRAMEWORK FOR NATIONAL PERFORMANCE INDICATORS FOR NURSING AND MIDWIFERY

SECTION 2. PART A — MINIMUM DATA SET

2.A.1 What is a Minimum Data Set?

A data set is a set of data that is collected for a specific purpose and a minimum data set (MDS) is the core data identified as the minimum required for that purpose. Once PIs have been developed, it is necessary to determine what data needs to be collected for each PI being used to measure performance. This should be achieved by creating a minimum data set and be based on what data are feasible to collect. (HIQA 2010, updated 2013)

2.A.2 What is a Nursing Minimum Data Set?

A nursing² minimum data set (NMDS) provides a formal structure for electronic data sets to support nursing and midwifery care in all settings. What distinguishes it from other healthcare data sets is the inclusion of nursing care elements, i.e., nursing diagnoses, interventions and nursing outcomes (National Council for the Professional Development of Nursing and Midwifery, 2009).

According to Werley et al. (1991), the purpose of a NMDS is to:

- establish comparability of nursing data across clinical populations, settings, geographic areas, and time;
- describe the nursing care of patients/clients and their families in a variety of settings, both institutional and non-institutional;
- demonstrate or project trends regarding nursing care provided and the allocation of nursing resources to patients/clients according to their health problems or nursing diagnoses;
- stimulate nursing research through links to the detailed data existing in nursing information systems and other health care information systems; and
- provide data about nursing care to influence clinical, administrative, and health policy decision-making.

2.A.3 Why is a minimum data set required for the nursing and midwifery workforce?

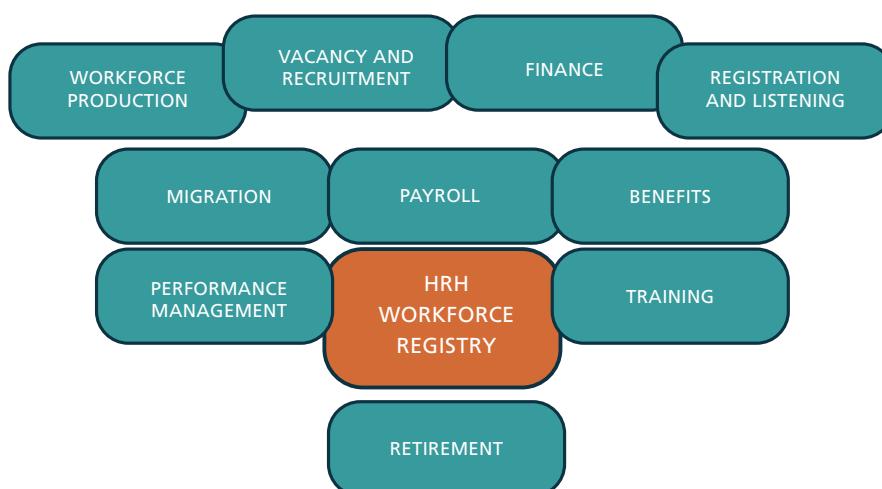
Currently, there is a dearth of data on nursing and midwifery in the Irish health system and there is no NMDS. The most important NMDS is a MDS for the nursing and midwifery workforce. Such a MDS would ensure the availability of quality assured data for forecasting and budgeting; distribution of the workforce; training and development; and recruitment and retention (World Health Organisation, 2015).

In addition, this MDS would allow for the identification of cohorts of nurses and midwives with specialist skills for emergency or disaster planning. It would also enhance the accuracy of reporting on our nursing/midwifery workforce to international organisations such as the OECD.

The WHO (2015) describes a health workforce registry as a critical component of the Human Resources for Health Information System (as shown in the following figure (Figure 4)) which in turn is vital to any Health Information System.

² The extracts referenced here do not specifically mention midwifery, however, for the purpose of this document 'nursing' should be read as 'nursing and midwifery'.

Functional Components of Human Resources for Health (HRH) Information System



2.A.4 Nursing and midwifery workforce registry

All nurses and midwives who practise in Ireland must, by law, be listed on the Register of Nurses and Midwives which is maintained by the Nursing and Midwifery Board of Ireland (NMBI). This means the register is the ideal place to collect data on the nursing and midwifery workforce (both in both public and private sectors). The data will be conveniently collected from registrants upon their first registration or renewal of registration. The following is an example of a minimum data set ^{3,4} for the nursing and midwifery workforce:

- Identification number
- Name
- Gender
- Date of birth
- Place of birth
- Home address
- Phone number
- Email address
- Language
- Country of primary nursing/midwifery qualification
- Country of training
- Year of first registration in Ireland
- Highest level of education/training completed to date applicable to nursing/midwifery practice
- Division of the register: General; Midwives; Children's; Psychiatric; Intellectual Disability; Public Health; Nurse Tutor; Nurse Prescribers; Advanced Nurse Practitioners; Advanced Midwife Practitioners
- Division of the register in which you are practicing
- Specialist qualifications
- Employed/Unemployed/Employed but not working in healthcare/Retired
- Employed full-time/part-time/temporary/contract basis/agency
- Employment sector: Public/Private/Voluntary
- Employment setting: Primary Care/Acute Care/Social Care
- Employment type: clinical practice/management/administrative/education/research/regulation/sales/Other (Please specify)
- Grade
- Name of place of employment
- Address of place of employment

This process will be simplified for registrants through the provision of dropdown options and definitions of terms.

The data set will be agreed by key stakeholders (Department of Health (CNO's Office, Research & Development and Health Analytics Unit); HSE; and the NMBI)) who will specify their data requirements and the purpose/use of data.

³ The WHO (2015) recommends the following MDS: Identification Number; Full name; Birth history, Citizenship, Country of Residence, and Language; Address; Contact Information; Education, Professional Licence, and Certification; Employment Status; Employment Address.

⁴ The Department of Health (2002) recommends the following MDS: Health Board/Authority Region; Place of Employment; Work Address/Assignment; Sex; Date of Birth; Nationality; An Bord Altranais (Irish Nursing Board) Personal Identification Number; Grade/Job Title; Position Title (local title); Commitment; Contract; Registrable Qualifications; and Academic Qualifications.

2.A.5 Developing Minimum Data Sets for PIs

A minimum data set should be developed based solely on the essential data required to operationalise a PI. As data collection can involve the use of additional resources it is essential that only the minimum amount of data, required to enable effective decision making, is collected (HIQA, 2010, updated 2013).

The MDS should be developed using the following steps (Table 2), adapted from the HIQA guidance (2010, updated 2013):

1. Define the level of health information	<p>Ideally, the required data should be collected as part of routine service delivery. Whether or not the available data meets the requirements of the measurement process should have been determined during feasibility testing. If requirements are not met there will be a need to collect additional data.</p> <p>Data are routinely collected during the delivery of healthcare in order to manage care. These data are then processed at different levels within the healthcare system according to the needs of the system and the purpose of the information as follows:</p> <ul style="list-style-type: none"> • episode-level: which is necessary to facilitate the management of care for each individual service contact. Episode level data records details of a service user's journey through the health service and includes data such as socio-demographic details, referral details, and clinical details. Episode level data are based on the concept of an 'episode of care' which commences at the first contact with the service and is a means of describing and recording relevant information in relation to the care provided to an individual service user during a defined period of time. A unique identifier for individuals is necessary in order to report episode-level information • case-level: which is necessary to facilitate the management of care for each individual service user. Case-level data are an aggregate of all the episodes an individual service user has during a reporting period and is derived from episode level data • facility-level: which is necessary to facilitate the management of the service facility. Facility-level data includes data relating to the facility such as number of beds, staffing, expenditure and also includes episode-level and case-level data • system-level: which is necessary for policy and planning purposes on a system wide or national basis. System-level data are an aggregate of all data elements in a particular region and is derived from episode, case and facility-level information. <p>Frequently, the PI will require data to be processed from different levels, using a combination of data during analysis, to achieve a measurement.</p>
2. Define the frequency of collection	<p>The urgency of decisions to be made based on the PI or the level of monitoring required, will determine the frequency of data collection.</p>

3. Document the data collection process	<p>It is necessary to write detailed data collection specifications to ensure that data are collected and measured consistently and to reduce the risk of bias. There should be a data development process which results in data standards that contribute to a consistent approach to data collection and use. Data standards are agreements on the representation, format, and definition of common data. These data standards will then assist in the process of ensuring data collection is of high quality and enable consistent and comparable reporting of data and information.</p> <p>Data can be collected manually, electronically or a combination of both. Methods of data collection need to be explored to determine the feasibility of the PI and answer the following questions:</p> <ul style="list-style-type: none"> • can existing data sources be used? During the feasibility analysis existing data sources will have been identified and where possible these should be utilised. However, if an existing data source does not meet the needs of the project, then it should not be used • can existing data sources be enhanced? If the existing data source provides data closely aligned with the required data but not completely fulfilling the requirements, it may be possible to enhance the existing data source. Before enhancing an existing data source it is necessary to consult with others using the data source to ensure the modification does not impact on other uses of the data • is a new method of data collection needed? If a new data source is required it should be determined that the reporting burden does not exceed the benefits gained from collecting the data.
4. Identify data sources	<p>The most efficient way to collect data are to incorporate the collection process into routine service-user care, which involves standardising documentation to ensure the required information is already being recorded for operational purposes.</p> <p>Data sources/methods include:</p> <ul style="list-style-type: none"> • administrative databases that are readily available and therefore will involve minimal expenditure for data collection, however, the information may not be specific enough and may not be reliable • medical record data that are also readily available and contain more detail than administrative data, including diagnosis, treatment and outcome • prospective data collection, which involves collecting data specifically for quality measurement purposes - it is more specific and can define exactly what data are required. It is, however, not readily available and expensive to collect • survey data, which involves collecting data regarding knowledge, attitudes and behaviours and is not otherwise available. It is not readily available and is expensive to collect.

5. Identify data for development	<ul style="list-style-type: none"> • Once a decision has been made on a PI that fulfils the performance measurement aims and the MDS has been identified, each data element within the MDS should be described in detail. High quality data collection processes in which the data set is well defined and standardised ensures that the same data are not collected, counted or reported differently for different purposes. This results in a reduction in the burden and use of resources for data collection and facilitates the principle of 'create once, use often'. • Data should be clearly defined and standardised for comparability purposes and should not be reliant on or limited by the capability of one particular system, organisation or data collection tool.
6. Assess compliance with Information Governance	<ul style="list-style-type: none"> • Healthcare information is sensitive and therefore provision must be made to ensure security and confidentiality of data held on service users. • Information governance is the process whereby organisations and individuals ensure that personal information is handled legally, securely, efficiently and effectively, in order to deliver the best possible care. • The data set should comply with data protection legislation and guidelines and should have respect for service users' privacy and confidentiality.
7. Plan Data Quality Checks	<ul style="list-style-type: none"> • There should be clear definitions for each data element in the MDS to ensure data collectors have a good understanding of what, how and when data needs to be collected. • There should also be routine data quality checks to minimise the occurrence of reporting and input errors . • Quality checks can be introduced at all stages of the measurement process, such as data collection, processing, analysis, use and dissemination.

SECTION 2. PART B — PERFORMANCE INDICATORS

2.B.1 Evidence Review

In 2012, the Department of Health established the National Nursing and Midwifery KPI Steering Committee, the aim of which was to identify and agree an implementation plan for national nursing and midwifery high level KPIs. The Steering Committee identified four nursing and midwifery KPIs for national reporting of which two (pressure ulcer prevention and falls prevention) were included in the HSE's National Service Plan (NSP) 2015 with a commitment to their development and associated reporting by Q3 2015. Two other KPIs (no. of nurses prescribing medication and no. of nurses prescribing ionising radiation) appeared in the NSP 2016.

PIs are invaluable tools that contribute to the performance monitoring process. However, for PIs to be effective, they need to have clear definitions to ensure that the data collected are of high quality (that is, consistent, reliable and in keeping with shared definitions) and to enhance their validity and reliability. Valid PIs measure what they are intended to measure and reliable PIs will consistently produce the same result regardless of who performs the measurement.

The Department of Health commissioned an evidence review, in 2015, to contribute towards the development of this Framework. Following a competitive tendering process, Skills for Health was chosen to undertake the review. A mixed methodological approach (comprising an online survey and telephone survey of a sample of nurses and midwives at various grades) was used in the review to gather information on the current range and extent of the use and impact of nursing and midwifery PIs across a range of services nationally, to inform the development of this Framework. The online survey was distributed to 163 organisations and respondents were invited to respond on behalf of their organisations (the response rate was 29%). For the telephone survey, twelve 35–60 minute telephone interviews were conducted.

The key findings of the evidence review are as follows:

- Performance Indicators (PIs) are being collected on a significant scale throughout a range of organisational types and locations throughout the Republic of Ireland.
- The PIs being collected span Structural, Process and Outcome types.
 - In terms of 'Structure' PIs of the 39 different unprompted PIs were mentioned. 'Sickness and Absence' rates were the most commonly identified, with 23 mentions in total; 'Use of Agency Staff' was mentioned 15 times. Training, including compliance was mentioned 6 times.
 - HSE Nursing and Midwifery Quality Care Metrics accounted for a great many of the Process PIs used.
 - The most mentioned Outcome type PIs included Falls with 15 mentions, Pressure Ulcers 14, and Patient Experience measures.
- However, there is a great deal of confusion amongst respondents about what are the Structural, Process and Outcome PIs. Some of this is around nomenclature and this needs to be addressed. However, there needs to be more development around the technical knowhow of PIs. Respondents needed to appreciate the fact that the use of the terminology reflects the 'logic chain' of structural, process and therefore outcomes and how they interact.
- The most popular reporting frequency of data across all PI types was monthly. However, there were some important variations between each PI 'type'.
- There was a reliance on manual collection of data, with some references to handheld devices as well as other systems of collection.
- Across all PIs (Structural, Process and Outcome), Excel was the system referred to most for compiling the evidence (67%). Of the others, a number of bespoke/specialist systems were referred to by around 17% of respondents.
- There is a 'mixed economy' of approaches taken to gather, compile and analyse PIs and their associated metrics. Some of these make sense, e.g., HR might be more appropriate for staffing levels. However, the diversity of involvement from a wide range of actors might indicate a degree of inefficiency in how metrics are systematically collected and reported.

- There are strong indications that (i) the application of PIs is having an influence on the delivery of health care in the Republic of Ireland. The regular reporting of PIs is making such measures familiar to nurses and midwives and is therefore providing positive motivation; and (ii) PIs are being utilised in ways that can improve practice. Respondents from both the online survey and the telephone survey cited a range of improvements that spanned efficiency gains, improvements to staff development and clinical outcomes.

There was a wide range of examples listed by respondents about how the data are used to improve practice. The examples focused on the ongoing monitoring of conditions and their development. Action plans developed based on the deficits of individual wards, was a specific example. Risk identification and management were also mentioned on a number of occasions, and are linked in particular to the assessment for risk of fall and pressure ulcers, for example. Another also mentioned, 'tracking' and 'trending' of the data that will, over time, demonstrate areas that need improvement. So in this example, whilst immediate actions plans were not in development, the data was being used to provide trends upon which to inform decisions on necessary actions related to emerging patterns.

- Tangible changes to practice were also highlighted by respondents. One example was related to an initiative measuring falls risk assessment, whereby when compared with the data on falls incidence, a positive correlation was revealed, through the reduction in the number of falls. Additionally, based on the overall level of fall risk measurement, actions that included alarm mats were introduced that alerted staff to 'at risk of fall' patients that were mobilising, and thereby alerting staff to attend to the patient to prevent a fall on subsequent mobilisation.
- PIs are often being reported upwards to management. The online survey indicated that overall the reporting of PIs was commonly reported to 'middle, senior and board level management'. Structural PIs were more likely to be presented up to board level.
- There is demand for the provision of support and guidance for the development of PIs across all 'types' and also to promote their use more widely. Thirty-eight percent (38%) of respondents were not confident about developing their own PIs in the future. A significant minority of respondents (40%) indicated they were unaware of guidance that had been developed for developing PIs.

The evidence suggests that there is a desire among nurses and midwives to measure and improve performance which is a positive finding. It shows that there is a need for this Framework to assist with a standardised approach to the development of PIs. There is also a need for PIs to be developed for use at both national and local level. Local level PIs are necessary to achieve, measure and maintain high performance in specific settings, whereas, national PIs are needed to monitor the implementation and effectiveness of policy and to show the impact of the investment in nursing and midwifery. While some local level PIs could have nationwide applicability, not all PIs could or should be adopted for use at a national level. Therefore, it is necessary to put a system in place to ensure that potential national PIs can be assessed, prioritised, endorsed and implemented.

2.B.2 Types of indicators

HIQA's (2010, updated 2013) guidance on PIs states that:

One of the most significant developments in relation to performance monitoring in the last 30 years has been Avedis Donabedian's division of healthcare into structure, process and outcome, for the purpose of defining and measuring quality. Donabedian has contributed significantly to improvements in the quality and safety of health and social care through his lifelong commitment to the use of performance measures. According to Donabedian, healthcare quality can be assessed using a three-part model based on the structures, processes and outcomes of the healthcare system. This division of healthcare has allowed the identification of data across the full spectrum of healthcare that contributes to monitoring the quality of the various constituents of healthcare delivery.

The evidence review (see 2.B.1) found that there is a great deal of confusion amongst respondents around Structure, Process, and Outcome PIs. The differences between these PIs can be summarised as follows (Skills for Health, 2016):

Structure PIs

Structure PIs relate to the resources of the healthcare system that contribute to its ability to meet the healthcare needs of the population. Structural indicators refer to the resources used by an organisation to deliver healthcare and includes buildings, equipment, the availability of specialist personnel and available finances. Examples of such indicators include:

- Agency Nurse WTE use
- Sick Absence Rate
- Staff Turnover Rate

Process PIs

Process PIs relate to the care delivered to the service user and how well it is delivered. Process indicators measure the activities carried out in the assessment and treatment of service users and are often used to measure compliance with recommended practice, based on evidence or the consensus of experts. Examples of these indicators include:

- Medication administration practice
- Assessment of falls risk
- Assessment of pressure ulcer risk

Outcome PIs

Outcome PIs relate to the stage of health of the individual or population resulting from their interaction with the healthcare system. It can include lifestyle improvements, emotional responses to illness or its care, alterations in levels of pain, morbidity and mortality rates and increased level of knowledge. Such examples include:

- Incidence of falls
- Incidence of pressure ulcers
- Patient experience of care

Griffiths et al. (2008) highlight the difference in the use of structure, process and outcome PIs as follows:

- staffing and skill mix are linked to patient outcome but their use as indicators would stifle change and create perverse incentives. Use of 'staffing matched to planned staffing' as part of a suite of indicators including outcomes has more potential;
- process indicators should be used with caution because of potential for gaming and difficulty in linking specific processes and patient outcomes; and
- patient experience of compassionate care is an important outcome in its own right and may provide the best measure of the nursing contributions to shared outcome and evaluation of complex processes that are otherwise elusive.

EXAMPLE SHOWING THE USE OF EACH TYPE OF PI

If we wanted to assess a potential relationship between the use of agency nursing staff and the incident of falls in a particular health care setting, we could examine three PIs: (i) Agency Nurse Use (a structure PI); (ii) Assessment of Falls Risk (a Process PI); and (iii) Incidence of Falls (an Outcome PI).

The Agency Nurse Use PI will tell us whether there is a high or low number of agency staff in that setting. The Assessment of Falls Risk PI will tell us if the required number of assessments is being undertaken. The Incidence of Falls PI will tell us how many patients have fallen. All three PIs will cover the same period of time (but this can be compared to other periods of time to show trends).

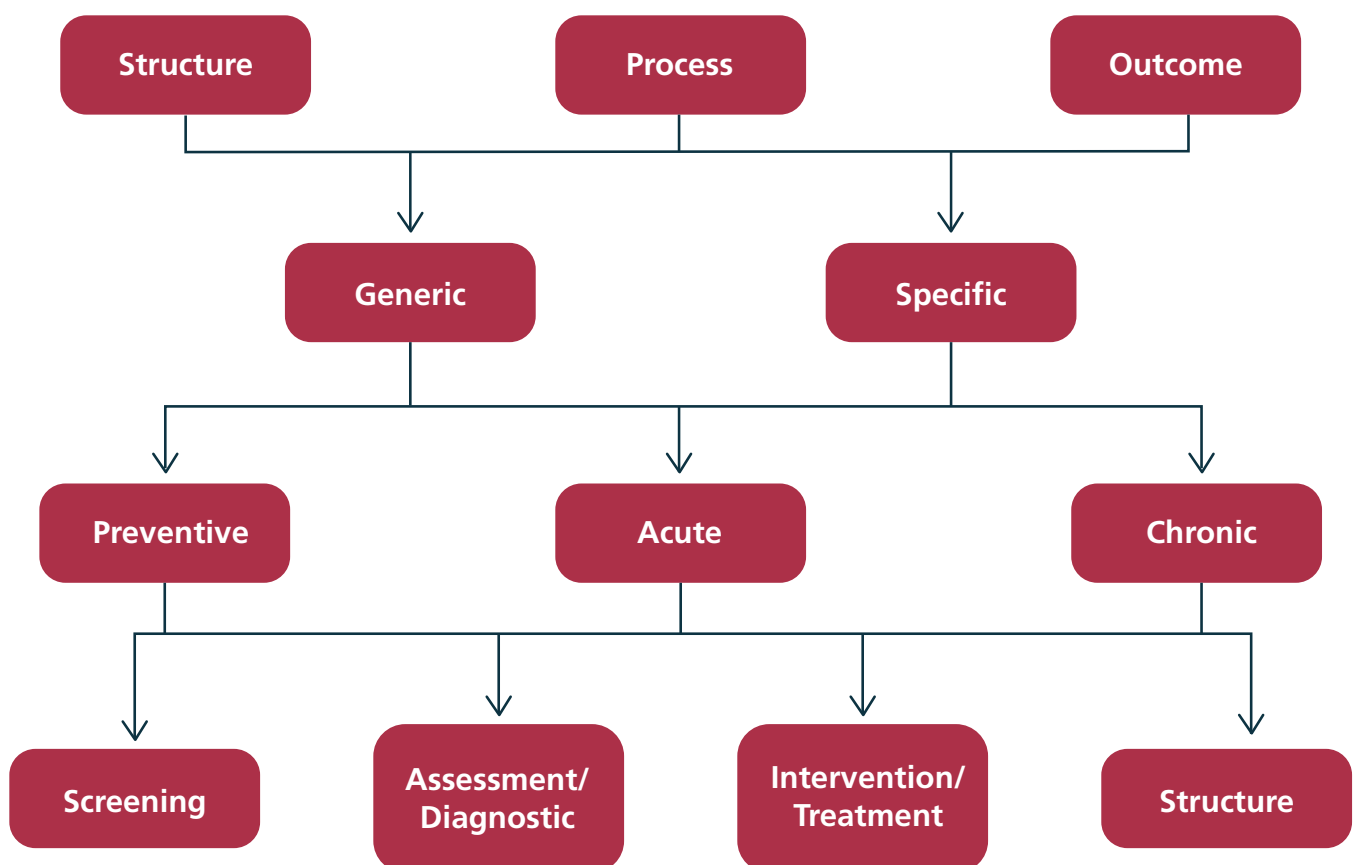
If the Incidence of Falls PI shows that a high number of patients have fallen within the timeframe concerned, the Assessment of Falls Risk PI can be examined. If it shows that insufficient assessments are being undertaken, action must be taken to ensure that this is addressed. For example, if a trend emerges that insufficient assessments are undertaken when there is a high volume of agency staff, a programme/process may need to be introduced for these staff to ensure compliance. Once the required number of assessments takes place, this should result in a reduction in the number of patient falls. If it doesn't other issues will need to be examined.

PIs can also be characterised according to whether they are generic or specific and by both the type and function of care for which the measurement is intended.

PIs can be targeted to measure performance that is relevant to all service-users or they can measure aspects of a service that are relevant to a specific service user population:

- generic PIs measure aspects of performance relevant to the majority of service users and do not target a specific service user population; and
- specific PIs are related to a specific service user population and measure particular aspects of care related to those service users.

PIs can be classified according to the type of care for which the measurement process was developed (for example, preventive, acute or chronic care) and according to the function of care, which can be screening, diagnosis, treatment and follow-up (National Council for the Professional Development of Nursing and Midwifery, 2010 (adapted from HIQA, December 2010)) as shown in Figure 5:



2.B.3 Considerations

Certain factors need to be considered when developing PIs to ensure that they are fit for purpose. The collection of data should be adequate for the PI without being onerous for the organisation. A mixture of Structure, Process and Outcome PIs should be developed and each category should contain a suite of PIs to give a more holistic view of the healthcare being provided.

The care experienced by clients must be monitored as they are the ultimate focus and beneficiaries of improved nursing and midwifery care. Gubb (2009) cautions against meeting targets at the expense of individual client experiences, "...performance is determined against crude indicators, not the expectations and experience of those using the service".

The NHS Outcomes Framework 2015/2016 (Department of Health, 2014) includes the domain 'Ensuring that people have a positive experience of care' and it contains the following indicators:

- Patient experience of primary care
 - GP services
 - GP out-of-hours services
 - NHS dental services
- Patient experience of hospital care
- Friends and family test
- Patient experience characterised as poor or worse
 - Primary care
 - Hospital care

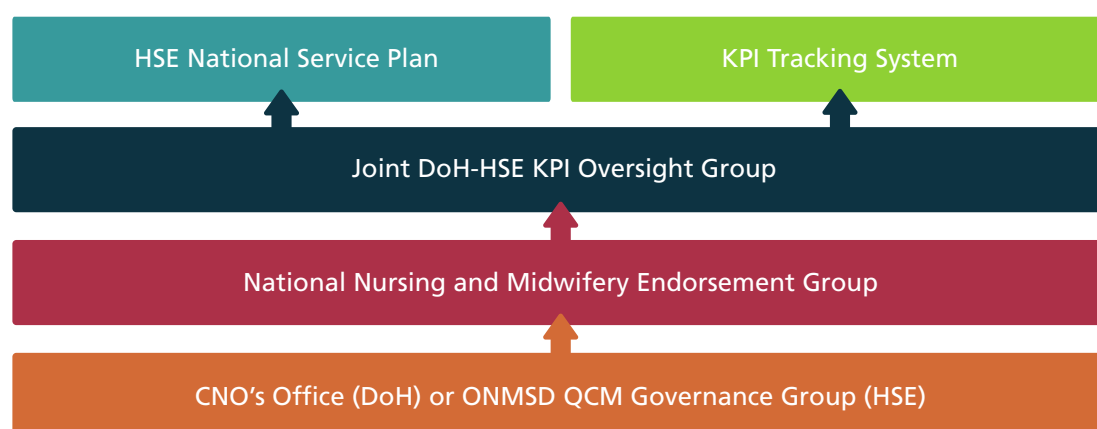
PIs of nursing and midwifery quality alone are insufficient and additional PIs of wider factors that underpin nursing and midwifery quality should be developed. Maben et al. (2012) suggest the following examples (Table 3):

Indicators of factors that underpin quality	Indicators of staff experience
<ul style="list-style-type: none"> • Staffing levels: supernumerary staff, bank/agency staff, staff/patient ratios • Skill mix: staff experience/knowledge/skills and expertise • Sickness rates • Vacancy rate/staff turnover • Appraisal/induction • Record of Continuous Professional Development/learning plan 	<ul style="list-style-type: none"> • Staff satisfaction and wellbeing • Practice environment/perceived quality • Perception of adequate staffing • Interprofessional relations • Staff intention to leave

Using a suite of PIs should prevent the creation of perverse incentives by ensuring that activity is not encouraged around PIs at the expense of other important outcomes (National Health Performance Authority, 2012). It would also introduce uncertainty in the way performance is assessed, as suggested by Bevan (2006), which would make some forms of gaming more difficult.

2.B.4 Governance

PIs can be developed for use at national level or local level. However, a robust system of governance is required for the prioritisation, endorsement and tracking of PIs developed for use at national level to ensure consistency of approach and high standards. A PI being proposed for use at national level must first be assessed to ensure that it meets certain criteria before being included in the HSE's National Service Plan (NSP). The following figure (Figure 6) sets out the pathway for a PI from development to inclusion in the NSP (where it becomes a KPI) and the KPI tracking system:



Once a PI has been identified for development by the CNO's Office, its development and pilot testing is overseen by the ONMSD QCM Governance Group. A request for the PI to be endorsed is then submitted to the National Nursing and Midwifery PI Endorsement Group. The oversight of National Service Plan KPIs is currently under review by the Department and the HSE. The creation of a joint DoH-HSE KPI Oversight Group is proposed in order to provide a governance structure around the inclusion and review of KPIs within the National Service Plan (NSP). Once the National Nursing and Midwifery PI Endorsement Group has endorsed a PI for use at national level, it would then request the joint DoH-HSE Oversight Group to prioritise the PI and approve its inclusion in the NSP. Any KPI included in the NSP would be logged in a KPI tracking system.

2.B.5 Performance Indicator Prioritisation and Endorsement Process

PIs will be considered for endorsement by the National Nursing and Midwifery PI Endorsement Group once they have met the following criteria as set out in the HIQA guidance (2010, updated 2013):

Validity: Does the PI measure what it is supposed to measure?

A valid PI measures what it is supposed to measure and captures an important aspect of quality (and quantity, in the case of nursing and midwifery PIs) that can be influenced by the healthcare facility or system. Ideally PIs selected should have links to processes and outcomes through scientific evidence. Measures that have been selected using scientific evidence possess high content validity and measures selected through consensus and guidelines will have high face validity. Content validity refers to whether the PI captures important aspects of the quality of care provided. Face validity can be determined by the PI making sense logically and clinically or from previous usage.

Reliability: Does the PI provide a consistent measure?

The PI should provide a consistent measure in the same population and settings irrespective of who performs the measurement. Reliability is similar to reproducibility to the extent that if the measure is repeated you should get the same result. Any variations in the result of the PI should reflect actual changes in the process or outcome. Reliability can be influenced by training, the PI definition and the precision of the data collection methods. Inter-rater reliability compares differences between evaluators performing the same measurement. Internal consistency examines the relationship between sub-indicators of the same overall measurement, and, if reliable, there should be correlation of the results. Test/retest reliability compares the difference between results when the same evaluator performs the measurement at different times.

Explicit evidence base: Is the PI supported by scientific evidence or the consensus of experts?

PIs should be based on scientific evidence, the consensus of expert opinions among health professionals or on clinical guidelines. The preferred method of choosing PIs is through evaluating scientific evidence in support of each PI and rating the strength of that evidence. One example of a rating system is to give the highest rating to evidence ("A" evidence) from meta-analysis of randomised controlled trials and give a lesser rating ("B" evidence) to evidence for controlled studies without randomisation and a further lower rating ("C" evidence) to data from epidemiological studies. In healthcare, there may only be limited scientific evidence to support a PI and it becomes necessary to avail of expert opinion. There are a number of methods by which a PI can be developed through facilitating group consensus from a panel of experts, such as the Delphi technique, the RAND appropriateness method and from clinical guidelines.

Acceptability: Are the PIs acceptable?

The data collected should be acceptable to those being assessed and to those carrying out the assessment.

Feasibility: Is it possible to collect the required data and is it worth the resources?

There should be a feasibility analysis carried out to determine what data are currently collected and the resources required to collect any additional required data. The feasibility analysis should determine what data sources are currently available and if they are relevant to the needs of the current project. This will include determining if there are existing PIs or benchmarking processes based on these data sources. The reporting burden of collecting the data contained in the PI should not outweigh the value of the information obtained. Preferably, data should be integrated into service delivery, and, where additional data are required that are not currently part of service delivery, there should be cost benefit analysis to determine if it is cost-effective to collect. The feasibility analysis should also include what means are used to collect data and the limitations of the systems used for collection. It should also outline the reporting arrangements, including reporting arrangements for existing data collection and frequency of data collection and analyses.

Sensitivity: Are small changes reflected in the results?

Changes in the component of care being measured should be captured by the measurement process and reflected in the results. The performance indicator should be capable of detecting changes in the quality of care and these changes must be reflected in the resulting values.

Specificity: Does the PI actually capture changes that occur in the service for which the measure is intended?

Only changes in the area being measured are reflected in the measurement results.

Relevance: What useful decisions can be made from the PI?

The results of the measurement should be of use in planning and the subsequent delivery of healthcare and contribute to performance improvement.

Balance: Do we have a set of PIs that measure different aspects of the service?

The final suite of indicators should measure different aspects of the service in order to provide a comprehensive picture of performance, including user perspective.

Tested: Have national and international PIs been considered?

There should be due consideration given to indicators that have been tried and tested in the national and international arena rather than developing new indicators for the same purpose.

Safe: Will an undue focus on the PI lead to potential adverse effects on other aspects of quality and safety?

The indicator should not lead to an undue focus on the aspect of care being measured that may in turn lead to a compromise in the quality and safety of other aspects of the service.

Avoid duplication: Has consideration been given to other projects or initiatives?

Prior to developing the indicator, due consideration should be given to other projects or initiatives to ensure that there will not be a duplication of data collection.

Timeliness: Is the information available within an acceptable period of time to inform decision-makers?

The data should be available within a time period that enables decision-makers utilise the data to inform their decision-making process. If the data are required for operational purposes, then it will be required within a shorter timeframe than data used for long term strategic purposes.

While the criteria above are applicable to all PIs, a national nursing and midwifery PI would have to meet a further criterion:

Impact: Does it measure the impact of national nursing and midwifery policy?

National nursing and midwifery PIs should offer a high-level snapshot of the effect of national policy on service delivery.

Requests for endorsement of PIs for use at national level will be submitted to the National Nursing and Midwifery PI Endorsement Group along with the completed template shown in Appendix 1.

2.B.6 What makes a good indicator?

Before embarking on the development of PIs, it is useful to consider what makes a good indicator. According to Griffiths et al. (2008):

- indicators must be measurable with available data at reasonable cost;
- there must be evidence of variability associated with nursing and this variability must be substantial;
- for process or structure measures, evidence must support links to important outcomes;
- the indicator must be recognised as important (by the public, managers and nurses) and the contribution of nursing must also be recognised by nurses and others;
- nurses must have responsibility for actions that lead to the outcome in terms of legitimate authority, self-perception and sphere of practice;
- there must be sufficient knowledge to inform remedial action;
- measures should be chosen to minimise the risk of gaming, where improving performance on the indicators detracts from overall performance;
- measures, especially measures of outcome, generally need to be risk adjusted to ensure comparability across settings.

They also concede that the development of nursing and midwifery indicators is challenging but necessary to show the contribution to patient care made by nursing and midwifery. The key challenges identified are:

- defining data and full specification of indicators;
- adjusting for risk;
- improving the quality of clinical coding;
- identifying indicators for nursing's impacts in mental health, community, primary care and paediatric settings;
- identifying and defining indicators that cross care pathways and boundaries;
- timely reporting at the nursing unit level;
- delivering action to improve quality.

2.B.7 Matrix of National Nursing and Midwifery PIs

It is important when developing national nursing and midwifery PIs that, as far as possible, a mixture of structure, process and outcome PIs are developed for the areas specified in the following matrix (Table 4):

MATRIX OF NATIONAL NURSING AND MIDWIFERY PIs

(with sample PIs including indicators from Heslop and Lu (2014) and Griffiths et al. (2008))

Area	Structure	Process	Outcome
Nursing and Midwifery Workforce	<ul style="list-style-type: none"> Staffing levels (nursing hours per patient day) Practice environment Sick absence rates Nurse recruitment Nurse turnover Staffing bank/ agency 	<ul style="list-style-type: none"> Staff knowledge/ Skills/Expertise/ Education level Training Number of research collaborations 	<ul style="list-style-type: none"> Safety of nursing job Staff satisfaction and well-being Staff intent to leave Client/patient experience Nurse sensitive outcomes (Pneumonia, Urinary Tract Infection, Pressure Ulcer) Number of research papers published
Quality of Nursing and Midwifery Care	<ul style="list-style-type: none"> Patient characteristics Education level Years of experience Hours of nursing care per patient day Patient acuity Patient turnover Workload intensity 	<ul style="list-style-type: none"> Nursing intervention/nursing practice Nursing documentation Pressure ulcer prevention Falls prevention Nosocomial infection prevention UTI prevention 	<ul style="list-style-type: none"> Failure to rescue Pressure ulcer incidence Falls incidence Nosocomial infection incidence UTI incidence
Client/Patient Experience	<ul style="list-style-type: none"> Client/patient involvement Client/patient centred care Integrated care 	<ul style="list-style-type: none"> Medication administration errors Use of restraints Post-operative complications Length of stay 	<ul style="list-style-type: none"> Client/patient/family satisfaction with nursing care Client/patient/family satisfaction with pain management Unplanned hospital visits post discharge Vital signs status, self-care ability Symptom resolution/reduction Waiting time of nursing care Complaints
Regulation	<ul style="list-style-type: none"> Staffing levels at regulator Agency staffing at regulator Sick absence rates at regulator Staff turnover at regulator Sensitivity of nursing and midwifery register to meet workforce and national reporting needs 	<ul style="list-style-type: none"> Number of applications for registration processed Number of complaints referred to Preliminary Proceedings Committee Number of complaints referred to/heard by Fitness to Practise Committee 	<ul style="list-style-type: none"> Number of registrations Outcome of FTP hearings Regulator staff experience Nurse/Midwife employer experience Applicant/registrant experience Time taken to process registration application Time taken to process complaints referred to Preliminary Proceedings Committee Time taken to process complaints referred to/ heard by Fitness to Practise Committee

The areas in the matrix were chosen to reflect the need to give the fullest picture possible, i.e., including PIs of quality of nursing and midwifery care, PIs that underpin that quality (Nursing and Midwifery Workforce), and PIs that indicate what the experience is like from the client/patient's perspective. 'Regulation' has been added to reflect the vital role of the nursing and midwifery regulator (the NMBI) in nurse and midwife staffing due to its registration function.

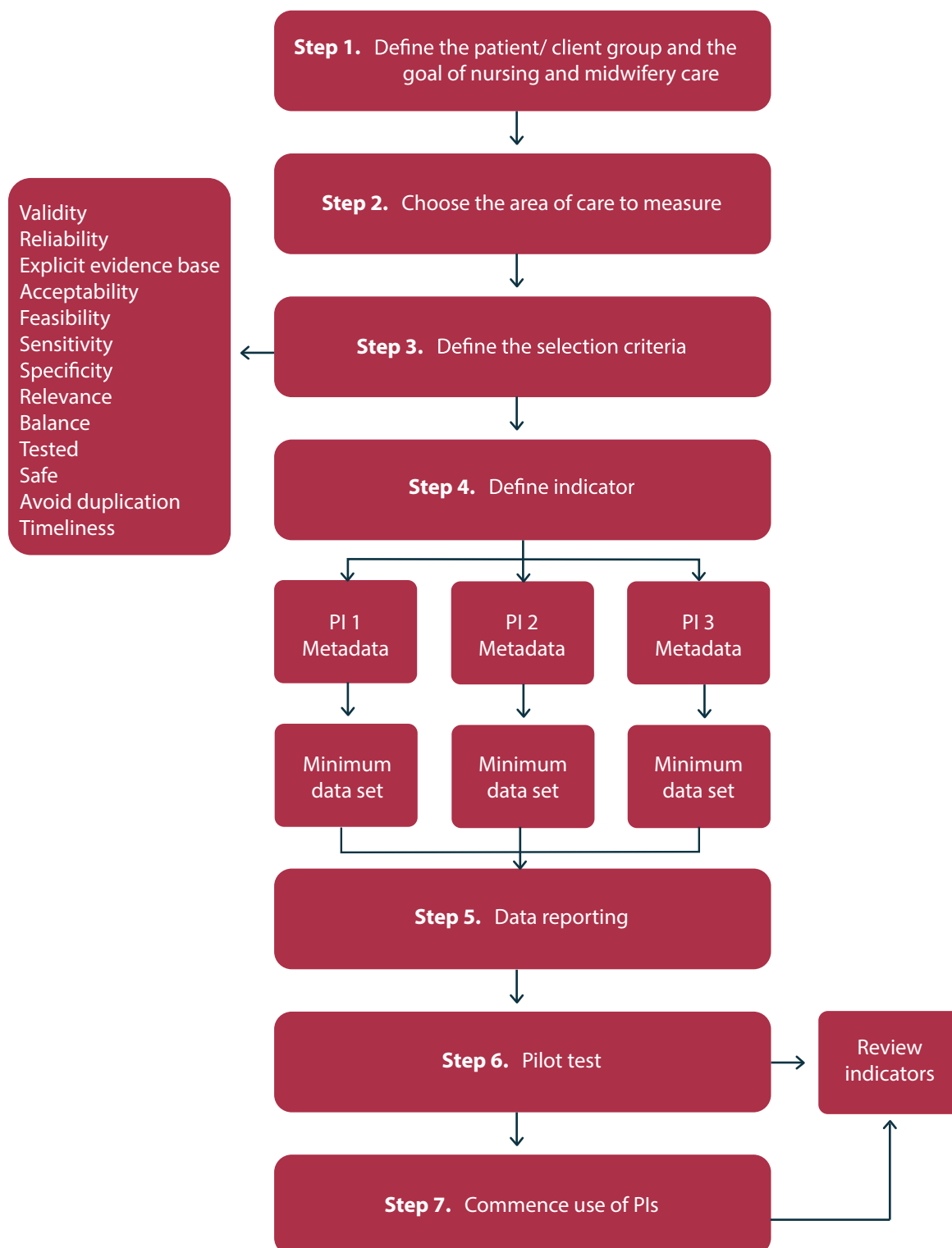
2.B.8 Process for developing the PIs

Certain factors need to be considered when developing PIs to ensure that they are robust and fit for purpose. These factors, adapted from the HIQA guidance (2010, updated 2013), are as follows (Table 5):

1. Define the audience and use for measurement	<ul style="list-style-type: none"> • Define the goals of the measurement • Reasons for measurement • Intended audience for measurement • Identify the domains for which the measurement is intended • Identify a balanced suite of PIs
2. Consult with stakeholders and advisory group	Consult, as appropriate, with all relevant stakeholders (decision-makers; clinicians; service providers; data capture and analysis staff; service users; and national/regional committees that have responsibility for health information and standards to ensure compliance, etc.) throughout the data development process bearing in mind that the service user is the most important stakeholder. Advisory group membership should include the relevant health professionals and stakeholders for the area being measured. It should include epidemiologists (or healthcare quality experts with experience in epidemiology) to ensure that the data collection and analysis methodology is reliable and valid.
3. Choose the area to measure	Choose the area to be measured based on: <ul style="list-style-type: none"> • the importance of the problem • service-user safety • potential for improvement • controllability by health or social care system/professionals.

4. Achieve a balance in measurement	<p>A number of approaches have been developed to assist in identifying a balanced set of PIs including:</p> <ul style="list-style-type: none"> • the 'balanced scorecard' (developed by Kaplan and Norton) suggests four perspectives of a performance indicator set to provide a comprehensive view of the performance of an organisation: <ul style="list-style-type: none"> • service user perspective measures how an organisation meets the assessed needs and expectations of the service user • internal management perspective measures the key business processes that have been identified as necessary for a high quality and effective service • continuous improvement perspective measures the ability of the organisation's systems and people to learn and improve • financial perspective measures the efficient use of resources to achieve the organisations objectives. It is important to note that there are differences between the application of the balanced scorecard for a health sector organisation and for a healthcare sector, e.g., in the units of analysis, purposes, audiences, methods, data and results (Zelman et al., 2003). • The "Three Es" framework uses the three domains of economy, efficiency and effectiveness: <ul style="list-style-type: none"> • economy which measures the acquisition of human and material resources of the appropriate quality and quantity at the lowest cost • efficiency which measures the capacity to provide effective healthcare using minimum resources • effectiveness which measures the degree to which the organisation attains established goals. • Performance frameworks identify domains of healthcare performance that can be used as a basis for the development of performance indicator sets • The process of achieving a balanced set of PIs can be assisted by incorporating the structure, process and outcome classification into the methodology for assessing the healthcare system. These classifications are interdependent and structure can have an impact on processes which in turn can have an impact on outcomes.
5. Determine selection criteria	<ul style="list-style-type: none"> • PIs should be chosen based on the judgement and consensus of experts and potential users. • Section 5 outlines selection criteria for PIs that will also be used by the National Nursing and Midwifery PI Endorsement Group.
6. Define the indicator	<p>A clear definition of the indicator should be prepared to ensure it is appropriately interpreted by those with responsibility for collecting the data (the template in Appendix 1 sets out the type of detail required).</p>

The process for the development of nursing and midwifery PIs is summarised in the following figure (Figure 7) (National Council for the Professional Development of Nursing and Midwifery, 2010 (adapted from HIQA, December 2010)):



2.B.9 Pilot Test Performance Indicators

As part of its development, a PI must be tested through a pilot to refine it and ensure that it is fit for purpose. A clear plan for the pilot should be prepared that includes the criteria for selecting the pilot site(s), proposed length of pilot test, training and education of participants and information to be obtained from the pilot.

The HIQA guidance (2010, updated 2013) suggests that the information to be obtained from the pilot can be posed as a number of questions, such as:

- are there validity and reliability issues in relation to data collection?
- is the information obtained from the PI of use in decision-making?
- can the PIs contribute to improved service and quality of care?
- have there been any issues identified through quality checks and are data recorded consistently?
- what additional measures that were not in place for the pilot, need to be instituted for the PIs to be rolled-out successfully?
- are there any modifications necessary to the PI specifications?

The pilot test can also be used to validate the PIs against the selection criteria used for prioritising and endorsing the PIs (see 2.B.5).

2.B.10 Determine review frequency

There should be a plan to review the PI at regular intervals to assess whether it needs to be modified in accordance with changes in the health service. In addition, PIs should be assessed for removal or replacement. Reeves et al. (2010) propose assessing indicators based on their recent history of achievement and exception reporting rates.

2.B.11 What are Metadata?

Metadata are data that define and describe other data (HIQA 2010, updated 2013).

2.B.12 Data Reporting

It is envisaged that over time national nursing and midwifery PIs will be included in the HSE's annual National Service Plan as KPIs. Data reporting on these KPIs will take place through the HSE's monthly Performance Report.

2.B.13 Tracking Performance Indicators

KPIs that have been endorsed for inclusion in the National Service Plan, by the proposed Joint DoH–HSE Oversight Group, will be logged in a KPI tracking system.

The data to be collected for each PI will vary depending on the PI and, therefore, so will the system for its collection. For example, the HSE's QCM are currently collected on the Test Your Care (TYC) System, which collects nursing care process indicators and patient experience questions to monitor and improve standards of patient care. The TYC System is available nationally to agreed services implementing nursing and midwifery QCM. Users access the QCM system on TYC using a personalised username and password issued by the regional NMPD Project Officer. Names of individuals who may access the data entry field and the reporting fields are determined by the clinical service and supplied to the NMPD Project Officer who arranges the issuing of passwords. Users have access to locations as determined by their hospital/service governance or as agreed by the relevant Director of Nursing/Director of Midwifery.

Nursing and midwifery workforce data and patient acuity/dependency data would ideally be collected in hospital/community settings using an appropriate IT system (or systems, if one is not able to accommodate both hospital and community and/or nursing and midwifery data). There are systems in existence that manage and utilise nursing resources through the collection of patient acuity and bed utilisation data. These systems also allow for extensive reporting.

The minimum data set for the nursing and midwifery workforce would be agreed with the NMBI and collected by the NMBI, using an augmented version of its current registration system. These data could be provided to the Department of Health on an annual basis.

2.B.14 Conclusion

The evidence review (Skills for Health, 2016) indicated that although PIs are being collected on a significant scale and are being used to improve a range of areas including efficiency, staff development and clinical outcomes, there is a demand for the development of appropriate guidance. It is intended that this Framework will provide the required policy direction and guidance.

The first step in implementing this Framework will be the establishment of a group of key stakeholders to agree the minimum data set for the nursing and midwifery workforce. The second step will be the establishment of a group of key stakeholders to prioritise and endorse nursing and midwifery performance indicators for use at national level. Implementation will involve extensive consultation with stakeholders.

In acknowledgement of the constant evolution of the health services, it is recommended that this Framework be kept under regular review and updated, where appropriate.

SECTION 3 — REFERENCES AND APPENDIX

3.1 References

1. Aiken, LH, Sloane, DM, Bruyneel, L, Heede, KVD, Griffiths, P, Busse, R, Diomidous, M, Kinnunen, J, Kózka, M, Lesaffre, E, McHugh, M, Morenocasbas, MT, Rafferty, AM, Schwendimann, R, Tishelman, C, Achterberg, TV, Sermeus, W (2014), Bachelor's Education for Nurses and Better Nurse Staffing are Associated with Lower Hospital Mortality in 9 European Countries, *The Lancet*, 383(9931), p1824-1830
2. Bevan, G (2006), Have targets improved performance in the English NHS?, *British Medical Journal*, 332:419
3. Department of Health (1998), Report of the Commission on Nursing: A blueprint for the future. Government of Ireland, Dublin Stationary Office
4. Department of Health (July 2002), The Nursing and Midwifery Resource: Final Report of the Steering Group: Towards Workforce Planning (<http://health.gov.ie/wp-content/uploads/2014/06/The-Nursing-and-Midwifery-Resource-Towards-Workfoce-Planning-July-2002.pdf>)
5. Department of Health (June 2016), Office of the Chief Nursing Officer Position Paper One — Values for Nurses and Midwives in Ireland (<http://health.gov.ie/wp-content/uploads/2016/05/Final-position-paper-PDF.pdf>)
6. Department of Health UK (December 2014), The NHS Outcomes Framework 2015/16
7. Griffiths, P, Jones, S, Maben, J, and Murrells, T (2008), State of the art metrics for nursing: a rapid appraisal, National Nursing Research Unit, King's College London
8. Gubb, J (2009), Have targets done more harm than good in the English NHS? Yes, *British Medical Journal*, 338:a3130
9. Heslop, L and Lu, S (2014), Nursing-sensitive indicators: a concept analysis, *Journal of Advanced Nursing*, 70(11): 2469–2482
10. HIQA (2010, updated 2013), Guidance on developing Key Performance Indicators and Minimum Data Sets to Monitor Healthcare Quality
11. HSE (Office of the Nursing and Midwifery Services Director) (May 2015), Guiding Framework for the implementation of nursing and midwifery Quality Care Metrics in the Health Service Executive Ireland
12. Maben, J, Morrow, E, Ball, J, Robert, G, and Griffiths, P (November 2012), High Quality Care Metrics for Nursing, National Nursing Research Unit, King's College London
13. National Council for the Professional Development of Nursing and Midwifery (September 2009), Measuring the nursing and midwifery contribution: update 2
14. National Council for the Professional Development of Nursing and Midwifery (June 2010), Clinical Outcomes — Promoting patient safety and quality of care: implications for nurses and midwives
15. National Council for the Professional Development of Nursing and Midwifery (December 2010), Key Performance Indicators: a guide to choosing, developing and using KPIs for clinical nurse/midwife specialists and advance nurse/midwife practitioners
16. National Health Performance Authority (May 2012), Performance and Accountability Framework, subsection 4.1 (<http://www.nhpa.gov.au/internet/nhpa/publishing.nsf/Content/PAF>)
17. Reeves, D, Doran, T, Valderas, JM, Kontopantelis, E, Trueman, P, Sutton, M, Campbell, S, Lester, H (April 2010), How to identify when a performance indicator has run its course, *British Medical Journal*, 340
18. Skills for Health (2016), Towards a National Framework for Key Performance Indicators, Evidence Report

19. VanDeVelde-Coke, S, Doran, D, Grinspun, D, Hayes, L, Sutherland Boal, A, Velji, K, White, P, Bajnok, I, Hannah, K (2012), Measuring outcomes of nursing care, improving the Health of Canadians: NNQR (C), C-HOBIC and NQuiRE, *Nursing Leadership*, 25(2) July 2012: 26-37
20. Werley, H, Devine, E, Zorn, C, Ryan, P, Westra, B (April 1991), The Nursing Minimum Data Set: Abstraction tool for Standardized, Comparable, Essential Data, *American Journal of Public Health*, Vol 81, No 4, pp 421-426
21. World Health Organisation (2015), *Human Resources for Health Information System — Minimum Data Set for Health Workforce Registry*, WHO, Geneva
22. Zelman, WN, Pink, GH, and Matthias, CB (Summer 2003), Use of the Balanced Scorecard in Health Care, *Journal of Health Care Finance*, 29(4): pp 1-16

3.2 Appendix 1

Template (adapted from HSE KPI Template 2013, <http://lenus.ie/hse/handle/10147/267717>) to accompany request for endorsement of PIs for use at national level:

1.	PI Title	Exact title of PI. • This is the short title
2.	PI Description	Description of the PI including a description of the target population. • Where definitions exist in other documents these should be included here e.g. Vision for Change or HIQA report • Where definitions exist that are <u>very</u> long they can be referenced here
3.	PI Rationale Indicator Classification	Rationale for the measurement of the PI • Government or HSE priority • Importance of area e.g.: high incidence, high morbidity, high service-user volumes, costly to provide. Consequences of poor performance on target population • Potential for improvement if performance is known • Evidence to support outcome improvement if target reached • Existence of agreed/recognised target or benchmark Please tick which Indicator Classification this indicator applies to, ideally choose one classification (in some cases you may need to choose two): <input type="checkbox"/> Person Centred Care <input type="checkbox"/> Effective Care <input type="checkbox"/> Safe Care <input type="checkbox"/> Better Health and Wellbeing <input type="checkbox"/> Use of Information <input type="checkbox"/> Workforce <input type="checkbox"/> Use of Resources <input type="checkbox"/> Leadership, Governance and Management
4.	PI Target	Indicate the target for the PI — a target should be set for the PI to inform progress towards an acceptable level of performance. • This may take the form of expected activity or a benchmark against similar organisations or systems e.g. a HIQA target.
5.	PI Calculation	Indicate how the PI will be calculated. The target population is called the denominator and includes all services users or events that qualify for inclusion in the measurement process (for ratios the numerator is not included in the denominator). The subset of the target population that meets the criteria as defined in the indicator is called the numerator . • Specify whether PI is expressed as a proportion; ratio; percentage; or count and how it should be interpreted against target.
6.	Data Source Data Completeness Data Quality Issues	Indicate the data source(s) which will be used for the PI. This should give details of primary data collection, e.g. PHN records, patient charts, administration data bases, survey data. It should indicate the route through which data are communicated and collated, e.g. provided by PHNs to LHOs to RDO Business Unit to BIU. Data Completeness and any Data Quality issues Specify the % coverage of this PI. Specify any data quality issues known.
7.	Data Collection Frequency	Indicate how often the data to support the PI will be collected <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Bi-annually <input type="checkbox"/> Annually <input type="checkbox"/> Other – give details:
8.	Tracer Conditions	Indicate the terms which should be used to identify what should be included in the data. This should include synonyms, International Classification of Disease (ICD) and SNOMED (Systematised Nomenclature of Medicine Clinical Terms) where applicable.
9.	Minimum Data Set	Indicate what core data items (with definitions) should be collected for the purpose of reporting the PI. • The data lines can be included here or an example appended for information where there is a definitive minimum data set available.

10.	International Comparison	Indicate if this PI is collected in other jurisdictions outside of Ireland and therefore allows for international comparison.
11.	PI Monitoring	Indicate how often the PI will be monitored and by whom PI will be monitored on a (please indicate below) basis: <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Bi-annually <input type="checkbox"/> Annually <input type="checkbox"/> Other – give details: Please indicate who is responsible for monitoring this PI:
12.	PI Reporting Frequency	Indicate how often the PI will be reported (at a National level this will align with the agreed reporting timeframe in the NSP). <input type="checkbox"/> Daily <input type="checkbox"/> Weekly <input type="checkbox"/> Monthly <input type="checkbox"/> Quarterly <input type="checkbox"/> Bi-annually <input type="checkbox"/> Annually <input type="checkbox"/> Other – give details:
13.	PI Report Period	Indicate the period to which the data applies <input type="checkbox"/> Current (e.g. daily data reported on that same day of activity, monthly data reported within the same month of activity) <input type="checkbox"/> Monthly in arrears (June data reported in July) <input type="checkbox"/> Quarterly in arrears (quarter 1 data reported in quarter 2) <input type="checkbox"/> Rolling 12 months (previous 12 month period) <input type="checkbox"/> Other – give details: _____
14.	PI Reporting Aggregation	Indicate the level of aggregation – this refers to the combination of results to provide a broader picture of performance for example over a geographical location. <input type="checkbox"/> National <input type="checkbox"/> Regional <input type="checkbox"/> LHO Area <input type="checkbox"/> Hospital <input type="checkbox"/> County <input type="checkbox"/> Institution <input type="checkbox"/> Other – give details:
15.	PI is reported in which reports?	Indicate where the PI will be reported for example: <input type="checkbox"/> Corporate Plan Report <input type="checkbox"/> Performance Report (NSP/CBP) <input type="checkbox"/> CompStat <input type="checkbox"/> Other – give details:
16.	Web link to data	Indicate the web link to the data (where this is available)
17.	Additional Information	Include any additional information relevant to the PI
Contact details for Data Manager/Specialist Lead		Name: Email address: Telephone Number:
National Lead and Directorate		Name: Email address: Telephone Number: Directorate:

