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Pilot Evaluation of Implementation and Uptake of Healthy Work Environment Best Practice Guidelines SUMMARY REPORT

RNAO Registered Nurses' Association of Ontario
L'Association des infirmières et infirmiers autorisés de l'Ontario

Healthy Work Environments Best Practice Guidelines Pilot Evaluation Summary Report: Degree of Presence of Recommendations in Action in Nursing Practice and Nursing Work Settings

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Executive Summary

In 2005, RNAO, with funding from the Ontario Ministry of Health and Long-term Care, launched a four year research project aimed at evaluating the implementation and uptake of its six foundational Healthy Work Environments Best Practice Guidelines (HWE BPG) in nine healthcare settings in Ontario. This report is the summary of findings stemming from that pilot evaluation. The six foundational HWE BPG implemented were: *Collaborative Practice Among Nursing Teams; Developing and Sustaining Effective Staffing and Workload Practices; Professionalism in Nursing; Developing and Sustaining Nursing Leadership; Embracing Cultural Diversity in Health Care: Developing Cultural Competence; Professionalism in Nursing; and Workplace Health, Safety and Well-being of the Nurse.*

The objectives of the evaluation were to: (1) determine the presence or extent of HWE BPG recommendations in action before and after guideline implementation in nursing practice and in nursing work settings; (2) document strategies and processes used to implement the different HWE BPGs across an array of nursing work settings; and (3) assess nurse perceptions of organizational factors and levels of worth, usefulness and effectiveness contributing to the uptake of the HWE BPGs implemented in nursing work settings.

Using both qualitative and quantitative methods, the HWE BPG Pilot Evaluation followed a longitudinal time-series design with data collected on the same variables across three regular intervals: pre-implementation, 3 months post implementation and 6 months post implementation. In addition, measures of perceived usefulness, worthiness, effectiveness, and implementation readiness were applied to nurse and nurse manager surveys at post implementation intervals only.

The pilot organizations represented acute care, long-term care, community care, and mental health nursing work settings in Ontario and were selected for participation in the study based on their response to an RFP issues by RNAO. Each organization was committed to identifying 3 different units/teams as implementation sites. The participating organizations were randomly assigned to a HWE BPG Implementation and Evaluation Grouping that determined which 3 HWE BPGs were implemented at their site.

Pilot evaluation nurse findings clearly showed that HWE BPG implementation does make a difference generally. That is, regardless of HWE BPG implemented, once a given guideline is implemented nurses experienced the presence of best practice guideline recommendations on average to a greater extent than experienced in their nursing practice and nursing work setting prior to guideline implementation. Supporting this contention is the nurse data finding that for each HWE BPG implemented, the average presence level of all recommendations contained in a given HWE BPG 6 months following guideline implementation surpassed the overall presence level reached in nursing practice and nursing work settings prior to the implementation of a given HWE BPG.

Pilot evaluation nurse findings also indicated that implementation makes a difference specifically. That is, nurse findings demonstrated that the implementation of a particular HWE BPG impacts nursing practice and nursing work settings in particular ways, reflective of the specific HWE BPG recommendations.

Nurse manager pilot evaluation findings also further indicated that implementing HWE BPGs makes a difference to nursing practice in general regardless of the HWE BPG implemented, and specifically for each guideline implemented.

Further, the data showed that a focus on implementing HWE BPG recommendations does make a difference for nurses in their perceptions of their work environment. As such nurses reported that implementing the Healthy Work Environment Best Practice Guidelines improved: the quality of their nursing practice, the quality of their nursing work environments, and patient outcomes in their nursing work setting. Nurses also indicated they highly valued the focus on healthy work environment BPGs and that the HWE BPG recommendations were a fit within their workplace context. They also indicated they will continue to focus on the elements of healthy work environments in their nursing practice and nursing work setting.

In addition to making a difference for patients, and organizations, nurses indicated that implementing the HWE BPGs had a positive impact on the nursing team. For instance, nurses experienced increased use of the HWE BPGs as a resource for evidenced-based practice and decision making and as an opportunity to discuss and develop effective solutions for issues related to nursing team dynamics (such as team relations, workplace/team norms, staffing norms, communication styles and other elements of team culture).

The study also provided evidence of best strategies to support successful implementation which included: strong leadership; incorporation of HWE BPGs into the organizational strategic vision; participation of point of care staff in selecting specific recommendations to address workplace challenges; education related to specific guideline content and planned changes; champions supported to lead and sustain changes; and regular opportunities for review, evaluation and celebration. Overall the results and particular experiences from pilot sites strongly indicated that organizations should focus on addressing long standing communication, teamwork, conflict, and leadership challenges through use of HWE best practice guidelines and their related recommendations that can help teams objectively address such work place matters.

Finally, based on the HWE BPG Pilot Evaluation findings several recommendations were identified related to implementation of HWE BPGs to maximize output and facilitate sustained outcomes. These recommendations include: bundling of guidelines, in particular those related to leadership, teamwork and professionalism to leverage effort and maximize output; involving staff at point of care, and management levels for full engagement and best effects; using a planned, resourced process with full involvement of all staff; targeting efforts to key workplace challenges identified by staff; and initiating further research to determine how best to sustain healthy work environments based on implementing HWE BPGs.

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1.0. Introduction

This report focuses on the Registered Nurses Association of Ontario (RNAO) Healthy Work Environments (HWE) Best Practice Guidelines (BPG) Pilot Evaluation undertaken in nine health care organizations in Ontario. The primary purpose of the evaluation was to evidence the presence of HWE BPG recommendations prior to, and following, the implementation of six HWE BPG in nursing work settings. These guidelines listed in order in which they were analyzed and are discussed in this report included:

- *Developing and Sustaining Effective Staffing and Workload Practices*; [1]
- *Professionalism in Nursing*;[2]
- *Collaborative Practice Among Nursing Teams*; [3]
- *Embracing Cultural Diversity in Health Care: Developing Cultural Competence*; [4]
- *Workplace Health, Safety and Well-being of the Nurse*; [5] and
- *Developing and Sustaining Nursing Leadership.* [6]

Secondary and tertiary purposes included documenting organizational factors contributing to the uptake of HWE BPG and monitoring processes used to implement HWE BPG in nursing work environments. Nurses and nurse managers completed surveys specific to the HWE BPG implemented in their work environment prior to, 3 months post and 6 months post guideline implementation. Each HWE BPG survey included four sections: demographics; measures evidencing HWE BPG specific recommendations in action; organizational components; and measures evidencing effectiveness, usefulness and worthiness of the HWE BPG implemented. These latter measures were administered during the 3 and 6 month post implementation intervals only.

This report begins by providing background on the HWE BPG project and its organizing framework. Thereafter the HWE BPG Pilot Evaluation project is described, the research design is outlined and the data collection methods are introduced. Next, survey design, pre-testing, project timelines, limitations, and sampling details are outlined. This is followed by a summary of findings per HWE BPG as recorded by nurses and by nurse managers. Subsequently, nurses' experiences with organizational characteristics associated with the implementation of each HWE BPG and their perceptions of levels of worthiness, effectiveness and usefulness of the HWE BPG implemented in their nursing work setting are reviewed. Recommendations stemming from key messages consistent across HWE BPG, conclude the report. The following acronyms are used in this report.

- HWE Healthy Work Environments
- BPG Best Practice Guideline(s)
- RNAO Registered Nurses Association of Ontario

2.0. Background Healthy Work Environments Best Practice Guidelines Project

In July of 2003 the Registered Nurses 'Association of Ontario (RNAO), with funding from the Ontario Ministry of Health and Long-Term Care, (MOHLTC), commenced the development of evidence-based best practice guidelines in order to create healthy work environments for nurses. Just as with clinical decision-making, it is important that those focusing on creating healthy work environments make decisions based on the best evidence possible.

The Healthy Work Environments Best Practice Guidelines Project is a response to priority needs identified by the Joint Provincial Nursing Committee (JPNC) and the Canadian Nursing

Advisory Committee. [7] The idea of developing and widely distributing a healthy work environment guide was first proposed in the RNAO *Ensuring the care will be there: Report on nursing recruitment and retention in Ontario*[8] submitted to MOHLTC in 2000 and approved by JPNC.

Healthcare systems are under mounting pressure to control costs and increase productivity while responding to increasing demands from growing and aging populations, advancing technology and more sophisticated consumerism. In Canada, healthcare reform is currently focused on the primary goals identified in the Federal/Provincial/Territorial First Ministers' Agreement 2000,[9] and the Health Accords of 2003[10] and 2004 [11]:

- the provision of timely access to health services on the basis of need;
- high-quality, effective, patient/client-centred and safe health services; and
- a sustainable and affordable health-care system.

Nurses are a vital component in achieving these goals. A sufficient supply of nurses is central to sustain affordable access to safe, timely health care. Achievement of healthy work environments for nurses is critical to the safe delivery of patient care, and recruitment and retention of nurses. Numerous reports and articles have documented the challenges in recruiting and retaining a healthy nursing workforce.[8,12-16] Some have suggested that the basis for the current nursing shortage is the result of unhealthy work environments.[17-20] Strategies that enhance the workplaces of nurses are required to repair the damage left from a decade of relentless restructuring and downsizing.

There is a growing understanding of the relationship between nurses' work environments, patient/client outcomes and organizational and system performance.[21-23] A number of studies have shown strong links between nurse staffing and adverse patient/client outcomes.[24-34] Evidence shows that healthy work environments yield financial benefits to organizations in terms of reductions in absenteeism, lost productivity, organizational healthcare costs,[35] and costs arising from adverse patient/client outcomes.[36]

Achievement of healthy work environments for nurses requires transformational change, with "interventions that target underlying workplace and organizational factors". [37] It is with this intention that RNAO has developed these guidelines. RNAO believes that with full implementation, they will make a difference for nurses, their patients/clients and the organizations and communities in which they practice. It is anticipated that a focus on creating healthy work environments will benefit not only nurses but other members of the healthcare team. It is also believed that best practice guidelines can be successfully implemented only where there are adequate planning processes, resources, organizational and administrative supports, and appropriate facilitation.

The Healthy Work Environments Best Practice Guidelines were developed to support health care organizations in creating and sustaining positive work environments. This work is led by the RNAO, with funding from the Ontario Ministry of Health and Long-Term Care and initial support from Health Canada, Office of Nursing Policy. The initial goal of the program was the development of six foundational best practice guidelines and systematic literature reviews related to healthy work environments.

3.0 Organizing Framework for the Healthy Work Environment Best Practice Guidelines

The organizing framework for the HWE BPGs is a comprehensive conceptual model (Figure 1.) that presents the healthy workplace as a product of the interdependence among individual (micro level), organizational (meso level) and external (macro level) system determinants as shown in the three circles of the model in Figure 1.

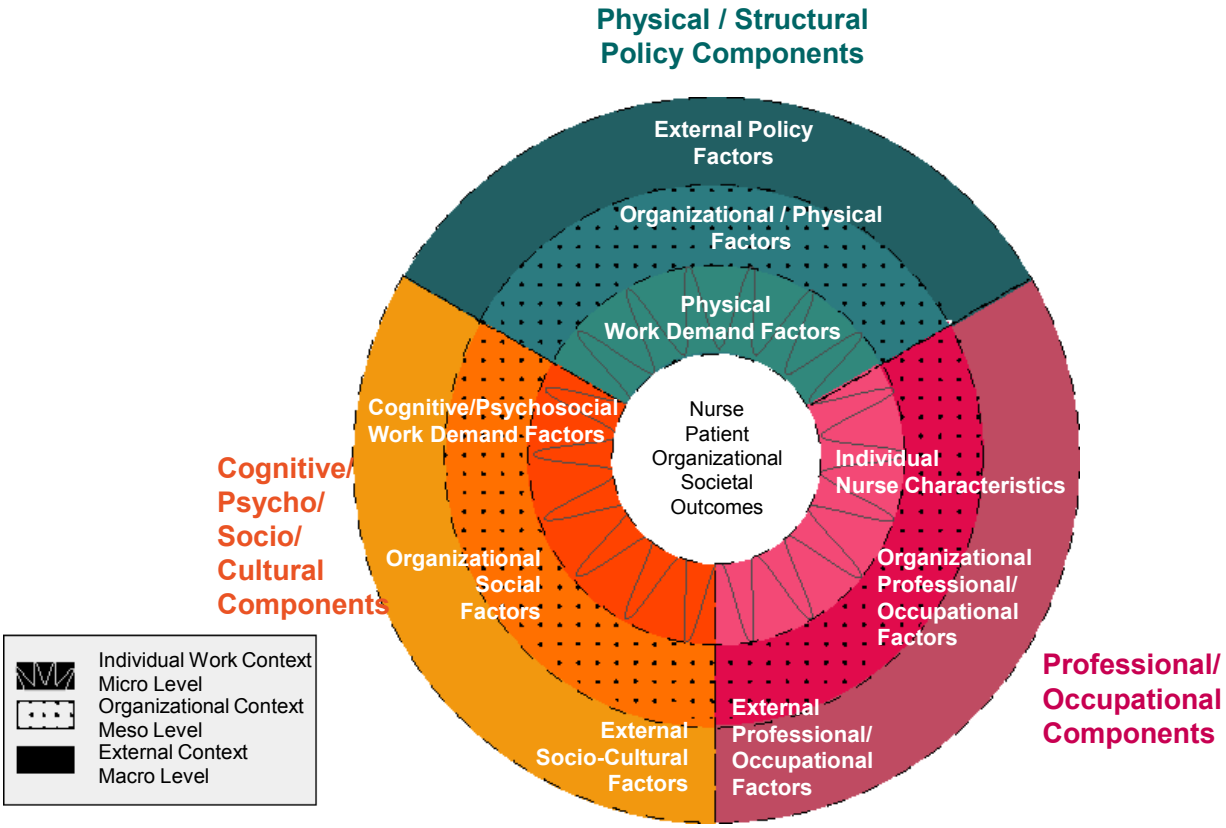

Figure 1. Conceptual Model of Healthy Work Environments for Nurses-Components, Factors, and Outcomes (38-40)

At the core of the circles are the expected beneficiaries of healthy work environments for nurses – nurses, patients/clients, organizations and systems, and society as a whole, including healthier communities.[41] The lines within the model are dotted to indicate the synergistic interactions among all levels and components of the model. The model suggests that the individual's functioning is mediated and influenced by interactions between the individual and her/his environment. Thus, interventions to promote healthy work environments must be aimed at multiple levels and components of the system. Similarly, interventions must influence not only

the factors within the system and the interactions among these factors but also influence the system itself.[42, 43]

The assumptions underlying the model are as follows:

- healthy work environments are essential for quality, safe patient/client care;
- the model is applicable to all practice settings and all domains of nursing;
- individual, organizational and external system level factors are the determinants of healthy work environments for nurses;
- factors at all three levels impact the health and well-being of nurses, quality patient/client outcomes, organizational and system performance, and societal outcomes either individually or through synergistic interactions;
- at each level, there are physical/structural policy components, cognitive/psycho/social/ cultural components and professional/occupational components; and
- the professional/occupational factors are unique to each profession, while the remaining factors are generic for all professions/occupation.

At the individual level, physical/structural policy components include the requirements of the work which necessitate physical capabilities and effort on the part of the individual. Included among these factors are workload, changing schedules and shifts, heavy lifting, exposure to hazardous and infectious substances, and threats to personal safety. At the organizational level, the organizational physical factors include the physical characteristics and the physical environment of the organization and also the organizational structures and processes created to respond to the physical demands of the work. Included among these factors are staffing practices, flexible and self-scheduling, access to functioning lifting equipment, occupational health and safety polices, and security personnel. At the system or external level, the external policy Factors include health care delivery models, funding, and legislative, trade, economic and political frameworks (e.g. migration policies, health system reform) external to the organization.

At the individual level, the cognitive and psycho-social work demand factors include the requirements of the work which necessitate cognitive, psychological and social capabilities and effort (e.g. clinical knowledge, effective coping skills, communication skills) on the part of the individual. Included among these factors are clinical complexity, job security, team relationships, emotional demands, role clarity, and role strain. At the organizational level, the organizational social factors are related to organizational climate, culture, and values. Included among these factors are organizational stability, communication practices and structures, labour/management relations, and a culture of continuous learning and support. At the system level, the external socio-cultural factors include consumer trends, changing care preferences, changing roles of the family, diversity of the population and providers, and changing demographics – all of which influence how organizations and individuals operate.

Professional/Occupational components at the individual level, the individual nurse factors include the personal attributes and/or acquired skills and knowledge of the nurse which determine how she/he responds to the physical, cognitive and psycho-social demands of work.[vii] Included among these factors are commitment to patient/client care, the organization and the profession; personal values and ethics; reflective practice; resilience, adaptability and self confidence; and family work/life balance. At the organizational level, the organizational professional/occupational factors are characteristic of the nature and role of the profession/occupation. Included among these factors are the scope of practice, level of autonomy and control over practice, and intradisciplinary relationships. At the system or external level, the external professional/occupational Factors include policies and regulations at

the provincial/territorial, national and international level which influence health and social policy and role socializations within and across disciplines and domains.

4.0 Project Description

In 2005, RNAO, with funding from the Ontario Ministry of Health and Long-Term Care, launched a four-year research project aimed at developing, pre-testing and implementing measures to evaluate and assess the presence of the HWE BPG recommendations in nursing practice and nursing work settings in Ontario. An independent third party evaluation team, spearheaded by Sara White and Dr. Linda O'Brien-Pallas, designed a pre-post evaluation to capture the process and assess the outcomes stemming from HWE BPG implementation in nursing work environments in Ontario.

Measures indicating the presence of individual, unit and organizational recommendations contained in each HWE BPG were developed and pre-tested. Once all measures and surveys were finalized and ethics approval was obtained for all participating healthcare organizations, pre-implementation baseline data was collected from nurses, nurse managers and health care administrators. After a 9 week data collection period, each health care site and nursing team/unit/department implemented their assigned HWE BPG. Three months following the start of HWE BPG implementation in a nursing work setting, the 3 months data collection interval began and lasted for 9 weeks. After a minimum of 6 months following the implementation of the assigned HWE BPG, data were collected for a period of 9 weeks for the final data collection interval.

5.0. HWE BPG Pilot Evaluation Objectives

Specific objectives of the HWE BPG Pilot Evaluation were to:

1. Determine the presence/extent of HWE BPG specific recommendations in action in nursing practice prior to and following guideline implementation.
2. Determine the presence/extent of HWE BPG specific recommendations in action in nursing work environments prior to and following guideline implementation.
3. Assess organizational readiness for HWE BPG adoption and implementation in nursing work settings.
4. Determine perceived effectiveness, usefulness and worthiness of the HWE BPG in nursing work settings according to nurses and nurse managers.
5. Document processes used to implement HWE BPG across nursing work environments.

6.0. Evaluation Design and Methodology

6.1. Evaluation Design

Using both qualitative and quantitative methods, the HWE BPG Pilot Evaluation followed a longitudinal time-series design with data collected on the same variables across three regular intervals: pre-implementation, 3 months post implementation and 6 months post implementation. Measures of perceived usefulness, worthiness, effectiveness, and implementation readiness were applied to nurse and nurse manager surveys at 3 and 6 month post implementation intervals only.

Each data collection interval spanned 9 weeks. The collection of pre-implementation data ensured the capture of baseline data; whereas 3 and 6 months post implementation data

collection intervals ensured the capture of short-term and interim outcomes and implementation processes. Data collection was staggered by respondent type to ensure organizational capacity and cascading support.

6.2. Evaluation Methodology

Health care organizations participating in the HWE BPG Pilot Evaluation came to the project by way of their response to a Request for Proposal sent out by RNAO in February 2006. Selection criteria included the following pilot evaluation requirements:

1. a commitment of a minimum of three participating nursing work environments;
2. ability to obtain local ethics research board study approval;
3. allocation of a Research Liaison per site to manage project deliverables and meet minimum sample targets;
4. agreement to follow the minimum standardized data collection work processes and activities calendar;
5. capacity for onsite electronic and hardcopy survey completion;
6. provision of an onsite HWE BPG Champion with demonstrated upper-level management support; and
7. a commitment to participate in regularly scheduled information and knowledge exchange sessions.

Nine health care organizations (representing acute care, long-term care, community care, and mental health nursing work settings in Ontario) were selected for participation in the study. The participating organizations were randomly assigned to a HWE BPG Implementation and Evaluation Grouping (Group 1 or Group 2) by the evaluation team. Group1 included: *Collaborative Practice Among Nursing Teams*, *Professionalism in Nursing*, and *Developing and Sustaining Effective Staffing and Workload Practices* HWE BPGs. Group 2 included: *Developing and Sustaining Nursing Leadership*, *Embracing Cultural Diversity in Health Care*, and *Workplace Health, Safety and Well-being of the Nurse* HWE BPG. Using this method, neither participating sites nor RNAO were able to self-select the HWE BPGs assigned to a given nursing work setting. Specifically, at the time of group assignment, each health care organization had an equal chance of assignment to either Group 1 or Group 2.

While all health care sites were required to provide a minimum of three nursing teams/units/programs/departments (note the term *unit* will be used here on in to refer to the teams, units, programs or departments that were nurse settings which implemented a HWE PBG within a project pilot site) to participate in the pilot evaluation, several sites provided more than 3 nursing units. In such instances, each unit was randomly assigned to *one* HWE BPG associated with their allocated HWE BPG Implementation and Evaluation Grouping.

Participating sites committed one full-time data collector (Research Liaison) for the duration of the HWE BPG Pilot Evaluation at their site. The onsite Research Liaison managed the evaluation within each participating site and was responsible for ensuring project timelines and samples sizes were met. Research Liaisons: maintained consistent project communication, participated in information sharing teleconferences, aided respondents, and documented implementation and data collection strategies used within nursing units.

Nurse, nurse manager and administrative surveys were available in both electronic and hardcopy formats. To assist information sharing a project website (www.evaluationrnaobpgs.com) was developed and an electronic data collection system was used to facilitate data capture and storage of all pilot evaluation content. Respondents electing

to complete their surveys electronically entered their invited user URL online via the internet. Respondents were then prompted to enter in their unique username and password via a secure log-in process. After verifying their username and password, respondents were automatically directed to their respondent specific HWE BPG survey in a web-based format. Regardless of completion method (hardcopy or electronic), all respondents were provided with a project description and a consent letter. Each consent letter outlined details necessary for informed consent while stating that survey completion was recognized as providing informed consent.

7.0. Evaluation Survey Design

Nurse and nurse manager surveys were designed based on the original research objectives, a selection of tested and reliable measures and the related literature. External and internal reviewers across health care sectors and nursing groups refined the survey questions to increase their reliability and validity.

Individual nurse, nurse manager, unit and organizational level data were collected for each HWE BPG. Respondents included nurses, nurse managers, health care administrators, and onsite Research Liaisons. Nurse data were collected through 6, HWE BPG specific, nurse self-report surveys. Nurse manager data were collected through 6, HWE BPG specific, nurse manager self-report surveys. Alongside nurse and nurse manager data, organizational data were also collected through the use of 2 administrative surveys.

Adding to the robustness of nurse, nurse manager and administrative data, Research Liaisons completed weekly journaling activities related to experiences, strategies, challenges and successes encountered through the course of the HWE BPG Pilot Evaluation Project at each healthcare site. Implementation strategies, workplace challenges, data collection strategies, and organizational changes impacting the study were recorded weekly for each participating unit during the pre-implementation, the 3 months post implementation, and the 6 months post implementation data collection intervals. Upon completion of the pilot evaluation, Research Liaisons forwarded their journaling material to the evaluation team.

8.0. Pre-testing

Prior to finalizing the HWE BPG surveys, obtaining research ethics board approval and beginning the HWE BPG Pilot Evaluation; the evaluation team pre-tested all nurse, nurse manager and administrator surveys. The purpose of this pre-testing was to ensure (1) clarity and operational appropriateness of survey questions, and (2) that respondents understood and were able to respond to all survey questions.

Nurses, nurse managers and administrators involved in pre-testing were from outside of the HWE BPG Pilot Evaluation pool and were representative of nursing work settings participating in the pilot evaluation. Each health care organization and nursing work setting was sent the following information: pilot testing instructions; HWE BPG specific nurse surveys; HWE BPG specific nurse manager surveys; administrative surveys; and return packaging for comments and feedback. Surveys, for all target respondent types, were returned to the evaluation team by February 13, 2007. By March 14th, 2007 the HWE BPG Pilot Evaluation Team had reviewed all pilot testing feedback and had revised the surveys accordingly. A total of 22 nurses, 10 nurse managers, and 4 administrators completed and returned the pre-test surveys.

9.0. Evaluation Timelines and Information Sharing

Prior to initiating the HWE BPG Pilot Evaluation, Research Liaisons and HWE BPG Champions from each participating healthcare site were invited to a two-day orientation session. At this session participants were oriented to the project and its operational details. Thereafter bi-monthly information sessions were held via teleconference. Each Research Liaison and HWE BPG Champion was invited to participate. These knowledge exchange sessions were leveraged as opportunities to maintain consistent data collection procedures and to foster a sharing of strategies, approaches and collective problem-solving thereby strengthening the implementation and data collection processes for each unit.

Pre-implementation data collection commenced in July 2007 and ended in November 2007. HWE BPG implementation in participating nursing units began in October 2007. The 3 months post implementation data collection interval started in January 2008 and ended in May 2008. The 6 months post implementation data collection interval began in May 2008 and ended in October 2008.

Since sites began data collection at different times during the data collection period, based on their organizational readiness, the electronic data collection system was activated for each site according to their specific data collection timeline. Respondents attempting to enter survey data following the data collection period for their site were greeted with a note of thanks for their interest and were informed of the date to which they could return to complete an active survey. Notifications of this activation timeline were sent to each Research Liaison and HWE BPG Champion following the completion of their data collection intervals.

Following each data collection interval the HWE BPG Pilot Evaluation Team, in partnership with RNAO, sent thank you letters addressed to the Research Liaison, the HWE BPG Champion, nurses, nurse managers, and administrators from each participating health care organization. Coinciding with these notes of appreciation, summary reports of select recommendations in action stemming from their site-specific nurse survey data were sent to the HWE BPG Champions for their information and dissemination to their sites. In several cases, sites elected to share their results in information and feedback sessions with health care personnel. The HWE BPG Pilot Evaluation Team consulted the onsite Research Liaisons and HWE BPG Champions on the selection of recommendations to be included in these summary reports for the purposes of knowledge transfer throughout their healthcare organization. In reviewing the summary of results for each participating nursing unit, healthcare sites were able to assess the degree to which HWE BPG recommendations were observed in the nursing work setting during each data collection interval and compare these results to the associated study averages.

10.0. Study Limitations

It was a limitation of this study that although minimum sample targets were provided, not all units were able to meet these targets. In addition, the sample size for managers was small and in some cases post-implementation was reduced to very low numbers. While it was not the ultimate intent of this pilot evaluation to reach representative samples, small numbers of response in some units pose a limitation of the data for those sites wishing to generalize findings further than those who responded per data collection interval. Also, several sites experienced turnover of their Research Liaisons and organizational restructuring both of which impacted the rates of response and consistent project management strategies across sites. While natural attrition was expected across data collection intervals, withdraws from the project by several units and one healthcare site was unexpected.

Further, due to the scope of the recommendations contained in the HWE BPGs, the surveys were lengthy and the evaluation design was resource intensive. However, the design and scope of measures proved beneficial for the participating sites. Since the surveys provided sites with tacit measures of best practices in action, many health care organizations used these measures to develop targeted HWE BPG implementation strategies and to strengthen their healthy work environment improvement initiatives. Complications in their local context also created limitations and challenges in measuring the impact of some recommendations in healthcare organizations across different types of nursing work settings.

11.0. Description of the Sample

At pre-implementation, 10 healthcare sites participated in the HWE BPG Pilot Evaluation. One health care site was unable to continue through post implementation data collection due to competing resource demands leaving a total of 9 health care sites (representing acute care, long-term care, mental health and community care nurse settings) participating for the complete evaluation life cycle. Ontario health care sites completing the HWE BPG Pilot Evaluation included:

1. Centre for Addiction & Mental Health
2. Headwaters Health Care Centre
3. Hotel Dieu Hospital
4. Kingston General Hospital
5. Queensway Carleton Hospital
6. Saint Elizabeth Health Care Centre
7. Sunnybrook Health Sciences Centre
8. William Osler Health Centre
9. York Central Hospital

11.1. Sample by BPG

Tables 1. and 2. show the total number of nurse and nurse manager respondents respectively for each HWE BPG survey per data collection interval. A total of 517 nurses and nurse managers completed HWE BPG specific pre-implementation surveys, 317 completed post implementation surveys 3 months after guideline implementation, and 223 completed post implementation surveys 6 months after guideline implementation.

Table 1. Total Number of Valid Nurse HWE BPG Specific Surveys by Data Collection Interval

HWE BPG Specific Surveys	Pre-Implementation	3 Month Post implementation	6 Month Post implementation
Cultural Competence and Diversity Survey	55	13	17
Health, Safety and Well-Being Survey	59	25	16
Leadership Survey	96	25	24
Workload Staffing Survey	83	58	37
Professionalism Survey	91	88	52
Teamwork Survey	94	87	63
TOTAL	**478**	**296**	**209**

Table 2. Total Number of Valid Nurse Manager HWE BPG Specific Surveys by Data Collection Interval

HWE BPG Specific Surveys	Pre-Implementation	3 Month Post implementation	6 Month Post implementation
Cultural Competence and Diversity Survey	6	1	1
Health, Safety and Well-Being Survey	7	1	1
Leadership Survey	8	1	0
Workload Staffing Survey	3	4	2
Professionalism Survey	8	7	7
Teamwork Survey	7	7	3
TOTAL	**39**	**21**	**14**

11.2. Demographic Characteristics of the Sample

Tables 3a to 3c depict the socio-demographic characteristics of the sample of nurse and nurse manager respondents that participated in the HWE BPG Pilot Evaluation. For instance, across intervals the overwhelming majority of nurses and nurse managers worked in a full-time permanent position in which their immediate supervisor was a nurse. The majority of nurses: cared for 5 to 8 patients on a given shift over the past 3 months; were members of a nursing union; were female; had obtained a RN Diploma as their highest nursing educational credential; and held a RN professional license.

Table 3a. Demographic Characteristics of the Nurse and Nurse Manager Sample

Demographic Characteristics		Pre-implementation	3 Months Post implementation	6 Months Post-implementation
Employment Status	Full-time	71.29%	72.67%	68.92%
	Part-time	21.29%	21.54%	24.32%
	Casual	7.42%	5.79%	6.76%
Employment Type	Permanent	94.47%	97.71%	96.26%
	Temporary	5.58%	2.34%	3.70%
Immediate Supervisor is a Nurse	Yes	93.06%	93.07%	86.11%
	No	4.37%	5.28%	13.43%
	Not Sure	2.58%	1.65%	0.46%
Average Number Patients Cared For on a Given Shift in the Past 3 Months	Less than 5	37.09%	29.86%	33.81%
	5 to 8	46.52%	55.21%	47.14%
	9 to 15	11.07%	7.64%	12.38%
	16 to 20	2.05%	1.74%	0.48%
	20 or more	3.28%	5.56%	6.19%

Table 3b. Demographic Characteristics of the Nurse and Nurse Manager Sample

Demographic Characteristics		Pre-implementation	3 Months Post implementation	6 Months Post implementation
Member of a Nursing Union	Yes	86.27%	85.27%	83.72%
	No	13.73%	14.73%	16.28%
Gender	Female	93.37%	95.05%	92.56%
	Male	6.63%	4.95%	7.44%
Age	18 to 24	4.55%	6.86%	4.31%
	25 to 34	21.34%	19.93%	16.27%
	35 to 44	26.88%	26.14%	25.36%
	45 to 54	28.06%	26.47%	28.71%
	55 to 64	16.40%	18.30%	21.05%
	65 or older	2.77%	2.29%	4.31%
Number of Children Living With You	0	45.49%	43.93%	45.54%
	1	19.02%	17.38%	19.72%
	2	23.92%	29.18%	23.47%
	3	9.41%	6.56%	9.39%
	4 or More	2.16%	2.95%	1.88%
Number of Dependents Living With You	0	65.08%	67.11%	67.14%
	1	20.04%	20.47%	19.52%
	2	9.52%	7.38%	6.67%
	3	3.77%	4.36%	5.24%
	4 or More	1.59%	0.67%	1.43%

Table 3c. Demographic Characteristics of the Nurse and Nurse Manager Sample

Demographic Characteristics		3 Months Post Implementation	3 Months Post implementation	6 Months Post-implementation
Highest Nursing Educational Credential Achieved	RN Diploma	45.13%	46.69%	43.54%
	RPN Diploma	17.89%	18.87%	22.97%
	BScN/BN	27.44%	28.48%	27.27%
	BScN in Psychiatric Nursing	0.20%	0.00%	0.00%
	MScN	2.19%	0.99%	0.96%
	PhD Nursing	0.00%	0.00%	0.00%
	Post RN Diploma/ Certificate	7.16%	4.97%	5.26%
Nursing Professional License	RN	80.63%	80.53%	73.49%
	RPN	18.79%	19.47%	26.05%
	Other	0.59%	0.00%	0.47%

12.0. Data Analysis

Quantitative and qualitative data were categorized, coded and analyzed using Microsoft Excel and SPSS v. 17.0. HWE BPG Pilot Evaluation team members analyzed case study journaling data independently. Each of the three team members read the journal entries and organized the data into thematic categories. Team members then consulted one another for clarification and consensus of developing issues, themes and the selection of quotes representative of the various themes within the data.

13.0. Healthy Work Environment Best Practice Guideline Implementation Processes

13.1. Implementing Healthy Work Environment Best Practice Guidelines

Following the pre-implementation data collection interval, each health care organization implemented their assigned HWE BPG according to self-determined unit and organizational needs. Prior to implementation, Research Liaisons provided nurses, nurse managers, health care administrators, and senior management with HWE BPG Pilot Evaluation project details including a copy of the assigned guideline(s).

Using a participatory consensus building approach, nursing teams selected individual recommendations, particular to each HWE BPG, to implement within their nursing work setting. Selection took place through document and professional practice reviews, self-reflection activities and group discussions. Several sites elected to have their Chief Nursing Officer, senior leadership and/or HWE BPG Steering Committee oversee the selection of recommendations and design of implementation strategies on nursing units.

All sites began their implementation strategy building sessions with a project launch for participating nurses, nurse managers, nurse educators and directors from pilot nursing units. In some nursing units, core HWE BPG implementation teams were struck, met weekly and provided communication and updates back to unit/nursing team members. Documented meeting minutes were used to identify themes and priorities for HWE BPG implementation. Core team members and unit nurses together reviewed all recommendations and determined the extent to which recommendations were currently in practice, linked recommendations to key issues and concerns, and ensured alignment with strategic direction and operational goals. Throughout the guideline implementation process, core teams functioned to assist HWE BPG uptake and implementation by increasing awareness and influencing all nursing team or nursing unit members as role models and change agents.

In other nursing units, the HWE BPG Champion and the Research Liaison developed the HWE BPG implementation strategy for each nursing unit. Thereafter the implementation plan was presented to nursing teams and senior leadership. In these instances, the HWE BPG Champion and Research Liaison provided ongoing HWE BPG project details to unit staff, Nursing Advisory Committees, Operations Directors Groups, Patient Care Managers Groups, Advanced Practice Nurses Groups, and Clinical Educator Groups throughout the HWE BPG Pilot Evaluation lifecycle. Also during the implementation phase, most nursing units produced articles for newsletters within the health care organization and maintained HWE BPG updates as a standing item in regular nursing team meetings with minutes documented and later distributed to all nursing team members.

Once an implementation strategy was established, each health care organization designed and implemented interactive HWE BPG specific education sessions for unit nurses. In most cases, staff time was reserved for nurses to attend these education sessions. Several health care organizations also established professional journal subscriptions for participating units and developed a corporate strategy for HWE BPG implementation and evaluation. Additionally, many health care pilot sites sent nurse representatives to the HWE BPG RNAO Summer Institute and ensured the orientation of new staff to the specific HWE BPG implemented in their nursing unit/team.

13.1.1. Implementing Developing and Sustaining Effective Staffing and Workload Practices

Most nursing units began implementing the *Developing and Sustaining Effective Staffing and Workload Practices* HWE BPG by generating a list of non-nursing tasks they perform in their current nursing role. Nursing staff tended to review the formulated list with senior administrators who worked together to allocate the non-nursing tasks to the appropriate person(s).

One nursing unit implemented the *Developing and Sustaining Effective Staffing and Workload Practices* HWE BPG by working in partnership with their Central Staffing Office to devise strategic, logistical and tactical implementation strategies. Strategic strategies included the alignment of staffing to accommodate replacement, orientation, and professional development. Logistical implementation strategies included considering acuity and level of complexity of patients based on available resources. Tactical implementation strategies included developing mechanisms to balance the required and actual staff numbers necessary in a nursing work setting.

13.1.2. Implementing *Professionalism in Nursing*

When implementing the *Professionalism in Nursing* HWE BPG, interactive education sessions tended to deal with issues such as: modeling nursing professionalism; knowledge and application; respectful communication; conflict resolution; therapeutic relationships; and teamwork. For instance, one session focused on the meaning and understanding of self-regulation, the use of legislation, standards of practice and clinical standards of care to clarify ones' own scope of practice. Following the session, unit nurses identified which HWE BPG recommendations they would like to implement in order to promote professionalism within their nursing team. Another education session included acknowledging one's own feelings and behaviours, learning about different communication styles; communicating effectively; and supporting staff to develop and integrate values and knowledge to assist them in complex situations by using strategies that are helpful, ethical and satisfying.

One *Professionalism in Nursing* pilot unit created a "Centre for Excellence". Four journal subscriptions were purchased for the unit around which regular and scheduled discussions were planned. Another health care organization removed the barrier of re-imbursements to professional conferences by paying associated costs upfront.

13.1.3. Implementing *Collaborative Practice Among Nursing Teams*

Nursing units implementing the *Collaborative Practice Among Nursing Teams* HWE BPG implemented this guideline by conducting a number of interactive education sessions. Education session topics included conflict resolution; teamwork; personality profiles; leadership; roles, responsibilities and scopes of practice; and change management. For instance, one session focused on change management theories dealing with issues of individual accountability, resistance to change, managing resistance and ways this HWE BPG can support

nurses through change. Another session focused on open-communication between team members.

13.1.4. Implementing Embracing Cultural Diversity in Health Care: Developing Cultural Competence

Prior to implementing the *Cultural Diversity in Health Care: Developing Cultural Competence* HWE BPG, nurses in all nursing work settings reviewed their unit/team/workplace culture and selected areas for development and focus in relation to the guideline specific recommendations. For instance, one nursing unit elected to focus on communication between nurses that is respectful of differences in language and interpretation. Another pilot unit revised their unit vision to be inclusive of cultural competence and cultural diversity as a unit priority. Moreover, to encourage cultural understanding, another nursing unit launched their implementation phase by holding a potluck lunch where staff was encouraged to bring their favorite cultural dish. This generated discussion of cultural differences and similarities in a non-threatening situation.

Nursing units implementing the *Embracing Cultural Diversity in Health Care: Developing Cultural Competence* HWE BPG tended to participate in education sessions including exercises focused on indentifying and understanding personal values through self-reflection and interactions with colleagues. The purpose of these sessions was to create an environment that would enable team members to cross cultural barriers by understanding their own values and beliefs about diversity and engaging in dialogue with their work teams.

13.1.5. Implementing Workplace Health, Safety and Well-being of the Nurse

Nursing units implementing the *Workplace Health, Safety and Well-being of the Nurse* HWE BPG tended to begin by striking a Steering Committee or core team to oversee the implementation strategically and at the unit level. Membership often included representation from unit nursing staff, Human Resources, Finance, Unit Manager Groups, Program Director Groups, and Decision Support.

Most nursing units/teams implementing this guideline conducted a unit-specific work environment assessment prior to developing HWE BPG implementation strategies. Factors identified through this process often included nurse shortage, changes in workload and staffing, absenteeism, hospital reorganization, and leadership challenges. One nursing unit identified seven key strategies to enhance the workplace health and safety of unit nurses, from a staff perspective. Nurses from another pilot unit chose to focus on strategies aimed at defining unique and shared scopes of practice, strengthening professional practice and teamwork within the nursing team.

Nursing units tended to take the implementation process as an opportunity to review and address barriers to nurse health, safety and well-being within the nurse practice setting. Nursing teams consistently reviewed individual HWE BPG recommendations and possible options for application in their work environment with suggestions from unit nurses put forth to and finalized by Steering Committees and/or nursing leadership. For example, nurses on one unit outlined the need for quick response resources to deal with an infection outbreak in their unit. A nurse representative evaluated literature on infection control procedures and worked with the HWE BPG Champion to research current requirements and to develop an outbreak preparation box to be housed in accessible locations in the nursing work setting.

13.1.6. Implementing Developing and Sustaining Nursing Leadership

Educational sessions for nursing units implementing the *Developing and Sustaining Nursing Leadership* HWE BPG, tended to focus on developing leadership competencies, highlighting transformational leadership attributes within nursing teams, team building and communication. For instance, one nursing unit chose to implement this guideline by conducting weekly group discussions on transformational qualities and characteristics within the nursing team. Each week the nursing team reviewed and/or was coached and mentored to facilitate leadership development. Following each meeting unit specific implementation progress was summarized based on ongoing feedback from all team members.

Another unit implementing the leadership HWE BPG chose to highlight the leadership work of the nursing team by having a team photo and team interview spotlighted in the hospital newsletter. Applying the guideline differently, a further nursing unit chose to focus on 'nurse as leader'. Nursing team members participated in interactive education sessions on modeling leadership, inspiring a shared vision, challenging processes, and enabling others to act. Following each session, team meetings included ongoing discussions on the continued application of these behaviours in their nursing work setting.

13.2. Environmental Challenges

Nursing units reported several environmental challenges impeding the implementation of HWE BPG recommendations. Such challenges included the instability of the work environment; competing research demands; logistic difficulty in bringing nurses together for educational sessions; and paid time for coverage during training sessions. Research Liaisons also recorded staffing issues (finding coverage while nurses attended educational sessions), workload issues (large caseloads which makes it difficult to find time to schedule education sessions), and organizational climate (such as limited organizational leadership support) as impediments to HWE BPG implementation strategies ultimately impacting the uptake of the HWE BPG recommendations in nursing work settings.

13.3. Success Factors

"Tools were available to assist in the organizing and implementation of the HWE BPGs" (Research Liaison)

"A manager reported receiving three voicemail messages from nurses stating that this project has improved their work life." (Research Liaison)

"*Other units [are] declaring they would like to implement one of the HWE BPGs…two more units will work on HWE in 2008-09)."* (Research Liaison)

Research Liaisons consistently recorded several factors as critical success factors for guideline implementation and uptake of HWE BPG recommendations in nursing work settings. While nurses working in pilot units could not self-select the specific HWE BPG to be implemented in their nurse setting, nursing team members did self-identify issues from which implementation strategies were developed. Research Liaisons stated that this self-identification of issues was critical to gaining high levels of engagement and nurses' personal ownership over the project, which were critical factors for HWE BPG implementation and uptake success.

"*What I found most interesting was that divergent points of view were expressed and respected and that there was more openness to looking at other possibilities*." (Nurse Manager)

"*I am the happiest I've ever been in my group practice*." (Nurse)

"*The BPG was instrumental in moving forward positive changes among the leadership team*" (Clinical Resource Nurse)

"*Sharing information with the nurses and being visible as a leader are the most important things I have learned from this BPG*." (Nurse)

Research Liaisons also indicated that consistent and visible senior leadership and a dedicated project lead were crucial to successful HWE BPG implementation and uptake in nursing work settings. Specific examples of senior leadership support included insuring paid education and survey time for nurses along with overall organizational support for the project and alignment of the project with organizational vision and synergies with other projects. In all cases, the project lead at each participating health care site (Research Liaison) was responsible for working with all internal project stakeholders, RNAO, the researchers, and the other pilot sites. Researchers indicated that having a local lead was instrumental to gaining full nurse engagement by making education available "at the frontlines".

14.0. Summary of Nurse Findings: Presence of HWE BPG Recommendations in Action

14.1. Measuring Presence of HWE BPG Recommendations in Nursing Practice and Nursing Work Environments

Each HWE BPG recommendation evaluated in the HWE BPG Pilot Evaluation was measured by way of a series of indicators designed to capture the recommendation in action in nursing practice and nursing work settings. Measures indicating presence of a recommendation in action were organized according a summative subscale resulting in a total possible range of presence specific to each recommendation. Presence is here defined as the degree to which a recommendation or sub-recommendation is observed in nursing practice and nursing work settings. Each HWE BPG is comprised of general recommendations and sub-recommendations both of which were measured according to summative subscales with minimum limits of the summative subscale ranges representing a general absence of a recommendation in nursing practice and nursing work settings. In contrast, maximum limits of summative subscale ranges depict a fullness of presence of the recommendation in action in nursing practice and nursing work environments. Thus when tabulated, the summative subscale score achieved per recommendation is analyzed relative to the units available within the recommendation specific subscale range. By plotting the summative subscale score obtained on this range, the degree of presence reached, in nursing practice and nursing work settings per recommendation, was established.

14.2. Developing and Sustaining Effective Staffing and Workload Practices

The degree to which the *Developing and Sustaining Effective Staffing and Workload Practices* (Workload Staffing) HWE BPG was present in participating nursing work settings was measured by the extent to which 12 individual nurse sub-recommendations were observed in nursing practice and nursing work environments. This HWE BPG was 52.05% present in nursing work settings prior to implementing the guideline, 56.11% present 3 months post implementation, and 63.60% present 6 months post implementation.

After implementing the Workload Staffing HWE BPG, nurses consistently averaged fewer overtime hours worked over the last 3 months, recorded steady increases in perceptions of

improved quality of care delivered, and progressive presence increases for the 12 sub-recommendations recorded. For example, all nursing work settings implementing the Workload Staffing HWE BPG reported an hourly decrease in all forms of overtime worked over last three months. Averaged hours of voluntary paid overtime worked by nurses decreased from 4 hours and 30 minutes at pre-implementation to 2 hours and 31 minutes six months after implementing the Workload Staffing guideline. Nurses also indicated that they averaged fewer voluntary unpaid overtime hours worked per week once the Workload Staffing HWE BPG was implemented in their nursing work setting, with 3 hours and 19 minutes recorded at pre-implementation. One hour and 16 minutes averaged at 3 months post implementation, and 34 minutes averaged 6 months post guideline implementation.

In terms of average involuntary unpaid overtime hours worked per week over the last 3 months, prior to implementing the Workload Staffing HWE BPG nurses reported an average of 4 hours and 15 minutes of involuntary unpaid overtime. Three months following guideline implementation nurses averaged 14 minutes of involuntary unpaid overtime per week over the past 3 months decreasing further to an average of 4 minutes 6 months after implementing the Workload Staffing HWE BPG.

Nurses were asked if they were planning to leave their current nursing position. Subsequent to guideline implementation, fewer nurses reported planning to leave their current nursing position within the next 12 months (10.59% at pre-implementation, 3.51% at 3 months post implementation, and 5.56% at 6 months post implementation). Similarly, on average over 91.67% of nurses reported at 6 months post implementation, they had no plans to leave their current nursing position in the next 6 months up from 89.41% at pre-implementation. Notably nurse's perceptions of the ease of finding an acceptable job in nursing decreased from pre-implementation to 6 months post implementation. Prior to guideline implementation 79.27% of nurses felt if would be easy to fairly easy find an acceptable job in nursing compared to 85.96% after 3 months post implementation and 78.38% after 6 months post implementation.

Once implemented, nurses on units implementing the Workload Staffing HWE BPG experienced an incremental increase in their perceptions of improved quality of patient care in their nursing practice environment. On average 15.85% of nurses reported improved quality patient care over the last 12 months at pre-implementation, increasing to 32.76% and finally 37.84% following the implementation of the Workload Staffing guideline in their work environment. After guideline implementation fewer nurses reported deteriorated quality of patient care with 28.05% reporting deteriorated quality of care in their nursing environment at pre-implementation, 25.86% after 3 months post implementation and only 16.22% of nurses after 6 months following the implementation of this guideline.

14.3. Professionalism in Nursing

The presence of the *Professionalism in Nursing* HWE BPG was measured according to the extent to which 26 individual nurse sub-recommendations were recorded as in action in nursing practice and nursing work settings. Overall, the *Professionalism in Nursing* HWE BPG recorded a 63.05% average presence in nursing practice and nursing work settings at pre-implementation, 70.24% presence 3 months post implementation, and 67.86% presence 6 months post implementation.

14.4. Collaborative Practice Among Nursing Teams

The level of presence of the *Collaborative Practice Among Nursing Teams* HWE BPG in participating nursing work settings was measured by the extent to which 33 individual nurse sub-recommendations were observed in action in nursing practice and nursing work settings. Each of the 6 general individual nurse recommendations were present in nursing practice and nursing work settings to a greater extent 6 months after guideline implementation when compared against pre-implementation presence levels. Nurses recorded an overall 57.98% presence level of the *Collaborative Practice Among Nursing Teams* HWE BPG prior to guideline implementation. This presence level increased to 61.75% 3 months post implementation and furthered strengthened to a 64.65% presence level 6 months post implementation.

14.5. Embracing Cultural Diversity in Health Care: Developing Cultural Competence

The degree to which the *Embracing Cultural Diversity in Health Care: Developing Cultural Competence* (*Cultural Competence and Diversity*) HWE BPG was present nursing practice and nursing work settings was measured by the extent to which 33 individual nurse sub-recommendations were reported to be in action in nursing practice and nursing work settings. Overall, each *Cultural Competence and Diversity* HWE BPG general recommendation evaluated, increased in presence in nursing practice and nursing work environments after guideline implementation. On average, these general recommendations were 60.82% present at pre-implementation, 63.65% present 3 months following guideline implementation, and 69.35% present 6 months following guideline implementation.

14.6. Workplace Health, Safety and Well-being of the Nurse

Presence of the *Workplace Health, Safety and Well-being of the Nurse* HWE BPG was measured by the extent to which 13 individual nurse sub-recommendations were observed in action in nursing practice and nursing work settings. Nurses recorded the *Workplace Health, Safety and Well-being of the Nurse* HWE BPG recommendations evaluated as 46.97% present in their nursing practice and nursing work environments at pre-implementation. Three months following guideline implementation a 47.77% presence level was recorded which further strengthened to a 59.78% presence 6 months after guideline implementation.

14.7. Developing and Sustaining Nursing Leadership

The *Developing and Sustaining Nursing Leadership* HWE BPG in nursing practice and nursing work settings was measured by the degree of presence of 17 sub-recommendations in action. Individual nurse guideline recommendations averaged a 60.82% presence prior to guideline implementation. With a small decrease in presence 3 months post implementation (59.88% presence) an increase in presence was recorded 6 months post guideline implementation (62.58% presence).

15.0. Nurse Manager Summary of Findings: Presence of HWE BPG Recommendations in Action

Measurement of each HWE BPG recommendation involved a series of indicators designed to capture the recommendations in action in nursing practice and nursing work settings according to nurse managers. Like the presence levels arising out of the recorded nurse data, measures indicating the extent of presence of a recommendation in action were organized according to a summative subscale resulting in a total possible range of presence specific to each recommendation and sub-recommendation. Specifically, the minimum limit of the summative subscale range represented a general absence of a recommendation in nursing practice and nursing work settings. In contrast, the maximum limit of the summative subscale range depicted

a fullness of presence of the recommendation in action in nursing practice and nursing work environments. When tabulated, the summative subscale score achieved per recommendation was considered relative to units available within the subscale range. By plotting the recorded average score on this range, the percentage of presence reached in nursing practice and nursing work settings, according to nurse managers, per HWE BPG general and sub-recommendations is established.

The nurse manager numbers were a small population by comparison to the general nurse numbers, and with attrition throughout the study, the numbers were very low for some guidelines in the post implementation surveys. However, the results mirror very closely those of the general population of nurses studied on the units. Some results are shared here to reflect the general positive trend of presence of the guideline recommendations post implementation, and how this was reflected in the work of nurse managers.

For instance, when the *Workload Staffing* HWE BPG was implemented nurse managers experienced a greater ability to determine nurse utilization rates, a greater alignment of nurse staffing budget with unit demands, steady increases in the presence of appropriate nursing skill mixes to meet unit need, and continuous increases in decision-making authority. Nurse managers also recorded incremental increases in their ability to produce flexible work schedules and hold the authority and responsibility necessary for managing their nursing work settings with the implementation of the *Workload Staffing* HWE BPG.

After implementing the *Professionalism in Nursing* HWE BPG, nurse managers experienced an overall greater presence of the best practices recommended. Specifically, with the implementation of this guideline, nurse managers recorded increases in the presence of: nursing teams using evidenced-based rationale for their nursing practice; communicating and sharing strategies to improve patient care and health outcomes; and their organization sharing health outcomes information to a greater extent than prior to guideline implementation. With the implementation of this guideline nurse managers also experienced a stronger spirit of inquiry, enhanced collegiality, an increased sense of autonomy in their nursing work settings, and a greater degree of advocacy.

Specific to the *Collaborative Practice Among Nursing Teams* HWE BPG, with implementation, nurse managers experienced more supportive teamwork values and behaviours within the nursing work setting, increases in contributing to culture that supports effective teamwork, and increases in the establishment of teamwork processes and structures. With the implementation of the *Cultural Competence and Diversity* HWE BPG, nurse managers experienced greater levels of self-awareness, new learning, retention of nurses in the unit, and workplace policies and procedures emphasizing cultural diversity.

16.0. In Perspective

At post implementation intervals, nurses were asked about their perspectives regarding organizational and HWE BPG factors contributing to the adoption of the HWE BPG recommendations in nursing work settings and nursing practice. Specifically, nurses' perspectives on the organizational culture for change, educational supportive processes and organizational characteristics of innovation present post guideline implementation. [44-45] Nurses were also asked for their perceptions regarding the worth, usefulness and effectiveness of the HWE BPG implemented in their nursing work setting. This section details some of these findings.

16.1. Organizational Culture for Change

With each post implementation data collection interval larger percentages of nurses experienced an openness to new ways of doing things and feelings of "let's get things done" in their nursing teams. Also, regardless of the HWE BPG implemented, higher percentages of nurses reported increased morale in their nursing team 6 months following guideline implementation (59.70%) compared to 3 months post implementation percentages (41.54%). With the exception of those implementing the *Professionalism in Nursing* HWE BPG, larger percentages of nurses reported good communication between nurses and administration with each successive implementation interval. More nurses also perceived managers as strong advocates for nursing in their organization as the guideline implementation timeline increased. Additionally, six months after guideline implementation fewer nurses reported (72.18%) experiences of having too many patients/clients for the nursing team to care for adequately compared to percentages recorded 3 months following post implementation (80.80%).

16.2. Educational Supportive Processes

In terms of tactical application of the HWE BPG, larger proportions of nurses found the guideline implemented in their work setting easy to use after 6 months post implementation (76.54%) than they did at 3 months post implementation (59.86%). Six months after implementing a HWE BPG, a greater proportion of nurses: felt well prepared to carry out the guideline with existing unit resources; felt that the results from using the guideline were apparent to them; and stated they were able to carry out the essential recommendations contained in the guideline implemented in their nursing work setting.

16.3. Perceived Characteristics of Innovation for HWE BPG Implementation

Six months after implementing a HWE BPG 73.80% of nurses felt the guideline had improved the quality of care they provided compared to 56.67% of nurses 3 months after implementing a guideline in their workplace setting. Sixty-three percent of nurses 3 months after guideline implementation compared to 76.99% of nurses 6 months post implementation felt the HWE BPG implemented in their work setting was advantageous for their job. Eighty-six percent of nurses reported the guideline implemented in their nursing work setting to be compatible with their daily practice six months after the guideline was implemented, up from 75.73% of nurses 3 months post implementation. While 60% of nurses 3 months post implementation stated that results from using the guideline were apparent to them, this percentage rose to 71.90% of nurses 6 months following guideline implementation in their nursing practice and nursing work environments.

A larger proportion of nurses could explain why using the guideline implemented in their nursing environment was beneficial for nurses on their unit at the 6 months post implementation data collection interval, (83.78%), when compared to the 3 months data collection interval (59.81%). While only 46.94% of nurses felt the guideline had been easy to implement 3 months after

guideline implementation this percentage rose to 69.57% of nurses implementing a HWE BPG 6 months following guideline implementation. Coinciding with these progressive increases across post implementation intervals, a larger proportion of nurses saw a fit between the guideline implemented on their unit and existing unit policies and procedures.

16.4. Perceived Worth, Usefulness and Effectiveness

Three months after guideline implementation, 87.10% of nurses stated that they would likely continue to apply the HWE BPG implemented in their nursing work setting to their nursing practice. Six months after implementation this percentage rose to 92.44% of nurses surveyed. Similarly, the percentage of nurses evaluating the HWE BPG implemented in their nursing work setting as worthy rose from 87.41% 3 months to 93.23% 6 months post implementation.

Nurses perceived a significant change in patient care with guideline implementation overtime. Six months after a guideline was implemented in their nursing setting 84.39% of nurses agreed that if fully implemented in their work environment, the HWE BPG recommendations would make a significant change in the way nurses cared for patients/clients compared to 76.36% of nurses reporting this perspective 3 months post guideline implementation.

When asked about the extent they currently use the HWE BPG implemented in their nursing practice and nursing work environment 81.06% of nurses at 3 months post and 89.03% of nurses at 6 months post implementation reported using the recommendations either always or sometimes when caring for patients/clients.

17.0. Post-implementation Perspectives Summary

The mean difference in the evaluation of each HWE BPG and the strength of change in nurse perceptions of post-implementation factors per BPG was assessed from 4 aspects: Perceptions of Change and Innovation (PCI), Educational Supports (EDU), Perceived Worth, Effectiveness and Usefulness (PW) and Organizational Culture (OC). Each aspect was assessed using a subscale by averaging the responses to predetermined survey questions. In total, 4 subscales were created for each BPG and each subscale was ranged from 1 to 4.

A two-sample t-test was used to test the difference in each of the subscale scores between the 3 and 6 months follow up. ANOVA was used to compare the relative strength of each HWE BPG at 3 and 6 months with respect to the four evaluation subscales. .

The t-test results showed that almost all 4 evaluations (by 4 subscales) for each HWE BPG were higher at 6-month than 3-month follow-up with the exception of the PW scale for the Professionalism HWE BPG and the Workload HWE BPG. The significant findings are as follows. PCI (Perceptions of Change and Innovation) subscale for the Culture HWE BPG had a significantly higher average score at 6-month follow-up than at 3-month follow-up. EDU (Educational Supports) and PW (Perceived Worth, Effectiveness and Usefulness) subscales for the Health and Safety HWE BPG had a significantly higher average score at 6-month follow-up than at 3-month follow-up. EDU (Educational Supports) and OC (Organizational Culture) subscales for the Workload HWE BPG had a significantly higher average score at 6-month than at 3-month follow-up.

The ANOVA results indicated that the Professional HWE BPG had the highest perceived worth, effectiveness and usefulness at 3-month follow-up, it is significantly higher than the Teamwork HWE BPG and the Health and Safety HWE BPG at 3-month follow-up but not significantly higher at 6-month follow-up. The Professionalism HWE BPG was also the most valued from the

perspective of organization culture at both 3 and 6-month follow-up. It is significantly higher than the Culture, Teamwork, Workload, and Health and Safety BPG at 3-month follow-up, but only significantly higher than the Health and Safety BPG at the 6-month follow-up.

18.0 Conclusion

The HWE BPG pilot evaluation was a crucial step in determining the impact of HWE BPG implementation in nursing practice settings. The HWE BPG model is rooted in the belief that full HWE BPG implementation will make a difference for nurses, their patients/clients and the organizations and communities in which they practice. The pre and post design enabled the capture of the impacts of implementation in nursing practice and nursing work settings, through the measurement of changes in the presence of the HWE BPG recommendations in action in nursing practice settings over three data collection intervals.

Presence levels analyzed from nurse and nurse manager findings show that implementation *does* make a difference generally regardless of HWE BPG implemented. That is, regardless of HWE BPG implemented, once a given guideline is implemented nurses experience the presence of best practice guideline recommendations on average to a greater extent than experienced in their nursing practice and nursing work setting prior to guideline implementation. Supporting this contention is the nurse data finding that for each HWE BPG implemented, the average presence level of all recommendations contained in a given HWE BPG 6 months following guideline implementation surpassed the overall presence level reached in nursing practice and nursing work settings prior to the implementation of a given HWE BPG.

Pilot evaluation nurse findings also clearly showed that implementation makes a difference specifically. That is, nurse findings demonstrated that the implementation of a particular HWE BPG impacts nursing practice and nursing work settings in particular ways. For instance, specific to the implementation of the *Workload Staffing* HWE BPG, nurses implementing this guideline reported working fewer overtime hours, were less likely to plan to leave their current nursing position in the next 12 months, and were less likely to report a deterioration of quality of patient care within the nursing environment following guideline implementation, as compared to pre-implementation. The same was the case for each of the other HWE BPGs which when implemented resulted in nurses experiencing improvements in the workplace related to the focus of the guideline. Such improvements included stronger team functioning, demonstration of professional attributes in self and others, ability to appreciate and effectively work with diverse teams, changes in policy and practices related to workplace health and safety, and a greater sense of mutual accountability and responsibility for workplace practices.

Further, the pilot evaluation data showed that a focus on implementing HWE BPG recommendations made a difference for nurses in their perceptions of their work environment. For example the nurse findings indicated that nurses perceived HWE BPG recommendations to be a fit within their workplace context and indicated that they will continue to focus on the elements of healthy work environments in their nursing practice and nursing work setting. In addition to making a difference for patients, and organizations, nurses indicated that implementing the HWE BPG had a positive impact on the nursing team. For instance, nurses experienced increased use of the HWE BPGs as a resource for evidenced-based practice and decision making and as an opportunity to discuss and develop workable solutions for long-standing issues within the their nursing teams (such as team relations, workplace/team norms, staffing norms, communication styles and other elements of team culture). Such outcomes

reinforce the crucial importance of creating healthy work environments for nurses and other health care professionals to enable clinical excellence for patients across all health care settings.

19.0 Recommendations

Based on the HWE BPG Pilot Evaluation findings the following recommendations for HWE BPG implementation and further study are proposed:

1. Due to the overlap of areas of focus across the HWE BPGs, especially in those related to nursing teams, leadership and professionalism, **it is recommended that implementing HWE BPGs should be planned to utilize similar implementation strategies and/or to build on strategies and results from one guideline to initiate the implementation of others.**

2. The HWE BPG recommendations address all levels in health care organizations and were used in development of indicators for evaluation surveys**. It is recommended these evaluation indictors should be used provide tangible direction for developing implementation strategies at all levels in the organization.**

3. Implementing a HWE BPG is time-consuming and requires resources, commitment and support from senior leadership, management and frontline staff. Several factors were critical to the successful uptake of HWE BPG recommendations in nursing practice and nursing work settings. **It is recommended that future implementation plans include provisions for such factors, including**:
    a. Appointment of a designated onsite HWE BPG Champion;
    b. Appointment of a dedicated onsite Project Manager to troubleshoot and facilitate implementation;
    c. HWE BPG initiative as a standing item at team meetings and on nursing committees;
    d. Organizational recognition for participation;
    e. Integration of HWE BPG initiative into professional development events throughout the health care setting;
    f. Collection of lived experience stories from frontline staff regarding the impact of the HWE BPG on their nursing practice and nursing work setting;
    g. Nursing staff implementing HWE BPG regularly disseminate findings internally and externally;
    h. Continual feedback and communication loops including summary reports of interim data and status updates on HWE BPG initiatives;
    i. Integration of HWE BPG commitment into organizational planning goals and individual work plans;

j. Point of care staff be provided with the opportunity to self-select HWE BPG recommendations to work on and develop and build implementation strategies;
k. Allocation of financial resources;
l. Develop and implement strategies to promote a celebratory environment for healthy work environment initiatives;
m. Use HWE BPG implementation processes as opportunities for research capacity building within nursing teams; and
n. Incorporate mechanisms to monitor changes in client, nurse and organizational outcomes related to HWE BPG initiatives.

4. Since some recommendations were found to decrease 6 months post implementation when compared to the higher 3 months levels, while others continued to increase, **further research is recommended to assess longer-term impacts of HWE BPG implementation in nursing work settings, and factors which affect sustainability of healthy work environments**.

5. Measuring the presence of the HWE BPG is a complex task given the scope of the recommendations and the project objective to measure the recommendations in action in nursing practice and in nursing work settings. **It is recommended that factor analysis be completed on the HWE BPG related surveys developed for this research to generate shorter more refined tools for ongoing measurement of organizational effectiveness in creating HWEs and for future research in this area.**

6. It is recommended that further analysis of the rich pilot evaluation data be undertaken in order to learn more about the process and client and nurse, and organizational outcomes of HWE BPG implementation.

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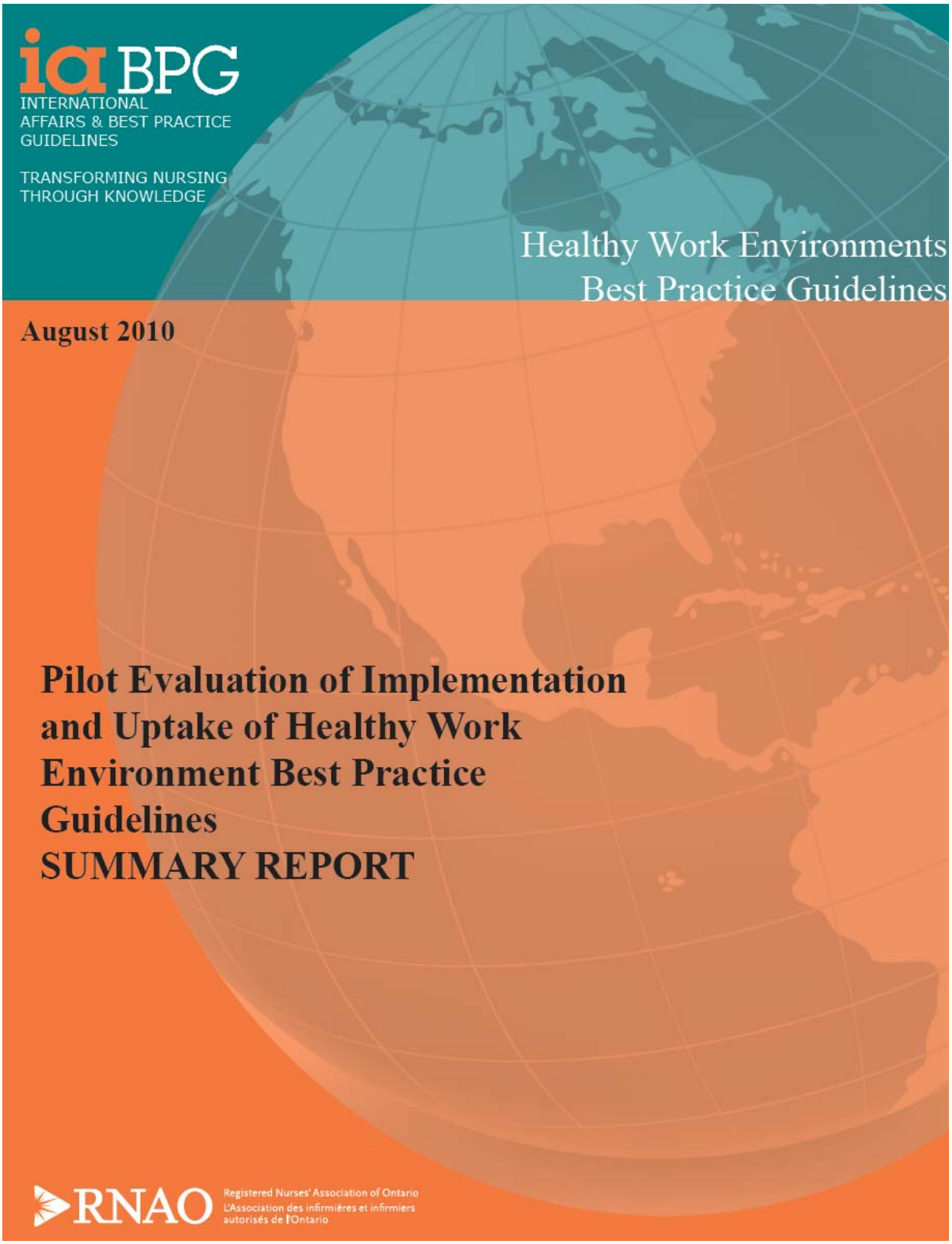
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AFFAIRS & BEST PRACTICE
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Healthy Work Environments
Best Practice Guidelines
August 2010
Pilot Evaluation of Implementation and Uptake of Healthy Work Environment Best Practice Guidelines
SUMMARY REPORT
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