Community Implementation of the 3 Wishes Program: A Compassionate End-of-Life Care Initiative for Critically Ill Patients

*Brenda K. Reeve MD[1] *Brittany B. Dennis MBBS PhD[2,3]
William Dechert MSc[1,4] Barbara Longo RN BScN[1] Diane Heels-Ansdell MSc[3]
Alison Scholes[1] France J. Clarke RRT[3,4] Deborah J. Cook MD MSc[2,3,4]

*indicates equal contribution

Affiliations
1 Department of Critical Care, Brantford General Hospital, Brantford, Canada
2 Department of Medicine, McMaster University, Hamilton, Canada
3 Department of Health Research Methods, Evaluation, and Impact, McMaster University, Hamilton, Canada
4 Department of Critical Care, St. Joseph's Healthcare Hamilton, Canada

Correspondence: DJ Cook, Departments of Medicine & Health Research Methods, Evidence and Impact, McMaster University Health Sciences Center, Room 2C11, 1200 Main Street West, Hamilton, Ontario, Canada, L8N 3Z5; debcook@mcmaster.ca

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Author Email Contact Information:
Brenda K. Reeve: brendareeve@hotmail.com
Brittany B. Dennis: brittany.dennis@medportal.ca
William Dechert: wdechert@stjosham.on.ca
Barbara Longo: blongo@rogers.com
Diane Heels-Ansdell: ansdell@mcmaster.ca
Alison Scholes: a.scholes@queensu.ca
France J. Clarke: clarkef@mcmaster.ca
Deborah J. Cook: debcook@mcmaster.ca

ABSTRACT

Purpose: The Three Wishes Project promotes a personalized dying experience through eliciting and facilitating individualized terminal wishes for patients and families. We aimed to evaluate the adaptability of the 3WP to a community intensive care unit (ICU), describing patients cared for with this palliative approach and local implementation strategies.

Methods: In a 15-bed community hospital ICU in Southern Ontario from 2017-2019, patients whose risk of death was deemed ≥95% by the attending physician, or patients undergoing life-support withdrawal were invited to participate. We abstracted patient data from medical records, the type, timing and cost of each wish, which person or service made and facilitated each wish, successful wish completion, and reasons why not. Data were summarized both narratively and statistically in this observational descriptive methods study.

Results: For 101 dying patients, the 3 Wishes Project helped to realize 99.2% of 483 terminal wishes. This initiative was introduced as an interprofessional intervention and championed by nursing staff, responsible for most patient enrolment (75%) and wish facilitation (75%). Wishes included humanizing the ICU environment with belongings and blankets, musical performances, smudging and bathing ceremonies, and keepsakes. The cost was $5.39 per patient (SD $22.40), with 430 (89.8%) wishes incurring no cost. The program comforted patients and their loved ones, motivating clinicians to sustain this end-of-life intervention.

Conclusions:
We documented successful implementation of the 3 Wishes Project in a community hospital, demonstrating program adaptability and uptake outside academic centers at relatively low cost, underscoring the program's inherent flexibility to promote compassionate end-of-life care.

Key Words: 3 Wishes Project; 3WP; terminal illness; palliative care; critical care; intensive care unit; community medicine

INTRODUCTION

Death and dying are undoubtedly sacred processes, valued and experienced differently across cultures. In Buddhist traditions, the last thought of the moment of death determines character of the next reincarnation. For the Anishnabe (Ojibway) tribe, the time of death is a spiritual transcendence, where Mother Earth reclaims the physical form, and the Creator father carries the spirit to its origin place.[1] Despite its sanctity, the majority of deaths in Canada occur in hospital,[2] guided by clinicians, yet often absent of an individualized approach.

This is particularly true for dying critically ill patients; in the intensive care unit (ICU), technology deployed for monitoring and treatment can render the setting impersonal, noisy and sterile. End-of-life care is ideally congruent with the goals of the patient – sometimes expressed in written or verbal advanced directives, but often expressed real-time during serious illness by family members. Despite the high mortality of critically ill or injured patients, optimal strategies for providing personalized care to dying patients and methods to help families navigate the dying and grieving processes remain understudied in the ICU setting.

The 3 Wishes Project (3WP) was developed in an academic teaching hospital with the goal of bringing peace to a patient's final days and comforting families. This program aims to honour the individual, promote patient legacy, support families, and enrich relationships among patients, families and clinicians – all integral to patient-and family-centred end-of-life care[3–5] by eliciting and facilitating terminal wishes for dying patients and their loved ones. Wishes range from enhancing the clinical environment with personal belongings, to life celebrations, pet visitation, religious ceremonies, and musical performances.[4] Multi-centred program evaluation in four North American academic centres demonstrated the 3WP to be a valued, affordable, and sustainable program which honours the inherent dignity of each patient.[4] However, the transferability of this program to a community setting is uncertain. The overall objective of this study was to evaluate the adaptability of the 3WP to a community hospital ICU, describing patients cared for with this palliative approach and local program implementation strategies.

METHODS

This observational study describes implementation of 3WP within a single level-3 15-bed ICU in a community hospital in Southern Ontario affiliated with McMaster University. The 3WP begins through conversation which allows the bedside team to learn about the dying patient as a person, informing them about the patient's interests, values and aspects of their life which are important to them. The team helps to elicit, then facilitate, individualized wishes made by patients and their families, with additional acts of compassion from clinicians representing additional wishes. While the 3WP can operate as a stand-alone approach to practice, this program evaluation involved a research component described herein, alongside the clinical program.

Patients were eligible to participate if their risk of death in the ICU was deemed ≥95% by the attending physician, or if withdrawal of life-sustaining technology was planned. Verbal consent by the patient (if not precluded by their illness), or substitute decision maker (if available) confirmed participation in the clinical aspect of the project. Informed consent was waived for retrospective data collection for the research component. This study was approved by the Brantford General Hospital Research Ethics Board on October 19, 2017.

Data Collection

The clinical team or research coordinator abstracted patient information from electronic and paper-based medical records onto pre-tested case report forms, including demographics, admitting diagnosis, comorbidities, advanced life supports administered, withheld and withdrawn, clinical course (length of stay in the ICU, time and location of death), clinician engagement, allied health services involved, and family member presence at the time of death. We also collected the type, timing and cost of each wish, which person or service made and facilitated each wish, whether the wish was successfully facilitated, and reasons why not. Anonymized data were entered by the research coordinator using the encrypted software program REDCap.[6]

Statistical Analysis

All analyses were performed using the statistical software, SAS Version 9.4 (Cary, NC, USA). Descriptive statistics included means and standard deviations (SD) for continuous variables, and absolute counts and percentages for categorical variables.

Role of Funding Source

This work was supported by the Canadian Institutes for Health Research (Foundation Grant 143243) which had no role in study design and conduct of the study, data collection, management, analysis, or interpretation; or the preparation, review, or approval of the manuscript.

RESULTS

Summary of the 3WP Community Start-up

The program was introduced to the Brantford ICU following a multidisciplinary reverse site visit to the originating institution at St. Joseph's Healthcare Hamilton, followed by an on-site Grand Medical Rounds presentation. A one-day workshop facilitated by the original team addressed the goals and genesis of the 3WP, sharing examples of common wishes elicited, and suggested strategies for project initiation. Launch of the 3WP in the Brantford ICU was accomplished through the initiative of the local physician lead, support of other intensivists, the ICU Nurse Manager and a research coordinator.

Clinical staff and volunteers helped with data collection, communicated openly with families of dying patients, and created individualized keepsakes through direct discussions with patients and their loved ones. Various community members also participated including a group of senior citizens who donated hand-knitted blankets. Once the program was clearly established, ongoing support by the hospital foundation was offered to purchase any needed supplies.

We created a periodic multidisciplinary staff newsletter about the 3 Wishes Project. Excerpts reflected the personal meaning and professional pride associated with providing this type of end-of-life care, exemplified as follows:

"I am honoured to be able to assist families with end of life care. Three wishes for me...[is] *enlightening and shows us what is truly important to that individual in their final moments. It's both heart-breaking and beautiful to witness." – Nurse*

At semi-annual retreats organized by the original project management office, Brantford General staff and other local and international groups shared their data and experiences with each other. Social media was instrumental in promoting this program, generating interest from local businesses including a coffee shop which supplied a coffee-maker with ongoing replenishment of coffees, teas, and condiments. Families who experienced the program often donated supplies such as books, toys, toiletries, tissues, and rhythm strip vials. The costs of this two-year program were covered primarily through donations, fundraising and grant support. Grant funding was used exclusively for partial salary of the research assistant, comprising approximately 8 hours/

week for the first 6 months, then approximately 3 hours/week thereafter. Momentum was sustained by a successful in-hospital fundraiser. Numerous donations of consumables and periodic additional fundraising fuelled the clinical aspect of the program.

Patient's Clinical Course and Facilitation of the 3WP

In this study, we included 101 dying patients (Table 1) with a mean age of 68.1 years (SD 15.9); 56 (55.4%) were female. Patients were predominantly Caucasian (95, 94.1%); the next highest proportion was Indigenous (5, 5.0%). Patients generally presented directly to the ICU from the emergency department; 91 (90.1%) had medical admitting diagnoses, while 7 (6.9%) had surgical conditions and 3 (3.0%) were admitted secondary to trauma. Life-support interventions (Table 2) were withdrawn immediately prior to death (mechanical ventilation and inotropes from 60 (59.4%) patients, and 41 (40.6%) patients, respectively). Throughout the dying period, consultations were obtained from health professionals representing spiritual care (38, 37.6%), palliative care (16, 15.8%), social work (53, 52.5%), and psychology (1, 1.0%).

The length of ICU stay was a median 6 (interquartile range [IQR]: 3-10) days. Enrollment in the 3WP was most often towards the end of ICU admission (median days from ICU admission to enrollment in 3WP: 5; IQR 2-9). Patients were introduced to the 3WP primarily by bedside nurses (76, 75.2%) and the 3WP team (local lead investigator, research coordinator and nurse manager), other ICU physicians and the spiritual care team. Of 101 patients, 98 (97.0%) died in hospital, with 78 (79.6%) dying in the ICU; a designated palliative care bed was secured for 11 (11.2%) patients. At the time of death, 87 (88.8%) patients had family or friends present at the bedside. Of 12 patients deemed eligible for organ donation, organ donation was realized for 5 patients – 3 after cardiac death and 2 after neurologic death determination.

Description of Wishes

Overall, a mean of 4.7 (SD 1.6) terminal wishes were facilitated for each patient (total range of 3-11 wishes/patient). The 479 total terminal wishes facilitated in this study represented a 99.2% completion rate; only 4 were not realized due to logistical reasons or medical reasons. Each of the wish categories described in the original 3WP study[4] were facilitated. Figure 1

displays the wish categories. Humanizing the environment included decorating a patient's room with memorabilia such as emblems of the birthplace region of the patient. Celebrations included a New Year's cheer, and arranging for an antique car show outside a patient's hospital window. Spiritual wishes included smudge ceremonies, a cedar bath, last rites, a wedding, and bedside baptism. Keepsake included paired crochet hearts – one to pin on a patient's chest and an identical heart as a family memento (Image 1); another involved arranging a bedside ultrasound of a patient's partner to visualize their unborn child. Music included playing the patient's favourite songs on tablets or phones, and live performances with family and friends. For family connections, unlimited visiting hours and pet visits were arranged; one extraordinary example involved temporarily liberating an incarcerated person to spend time with a dying loved one.

The majority of wishes were elicited while patients were still alive (97.7%), with only 2.3% elicited in the post-mortem period by families and friends. Wishes were most often elicited by the ICU team (75.2%), followed by family members (21.3%) and the 3WP team (3.5%). Wishes made directly by patients accounted for only 6.2% of wishes, reflecting their critical illness; thus, family members and ICU staff wished for 48.9% and 49.3% of wishes, respectively.

The mean cost per wish was $1.14 (SD $10.41); notably, 430 (89.8%) of the 483 wishes elicited were at no cost to the program. The total cost of all 479 wishes facilitated for 101 patients was estimated to be approximately $5.39 per patient (SD $22.40).

DISCUSSION

In this study we documented successful implementation of the 3WP in a community hospital caring for 101 dying critically ill patients. The program aided in realizing 99.2% of 483 terminal wishes elicited. Our findings illustrate how compassionate interprofessional clinicians working synergistically can provide individualized care for dying patients including those who may have difficulty advocating. Bedside nurses were not only responsible for enrolling 75% of patients, but they also facilitated 75% of the wishes, reflecting strong patient advocacy. for themselves.

In this study, on average, 5 terminal wishes per patient were facilitated. Staff were more often involved than in original report,[4] accounting for close to half of the wishes made, in contrast to the 5% of wishes made by staff reported in the 3WP multi-site program evaluation.[4] Despite a similar proportion of approximately 90% of patients dying with family or close friends at the bedside in this community hospital versus the recent multi-centre evaluation,[4] the high proportion of wishes facilitated by ICU clinicians in this study reflects strong staff engagement. Acknowledging that the provision of compassionate end-of-life care and facilitation of terminal wishes is not novel to nursing care, the formalization of this process through the 3WP helped to create norms whereby compassionate acts are prevalent, approached with the means and structure to enable more consistent implementation. The 3WP emerged as a successful nurse-championed hospital initiative like others such as rapid response critical care teams,[7,8] smoking cessation clinics,[9] diabetes education,[10] and hospital admission avoidance initiatives for the elderly.[11] Many nursing-led projects are cost-effective,[10] sustainable,[7] and favourably impact organizational culture, promoting effective communication between teams and patients.[12]

While patients in this study appear to be less racially diverse than in the multicentre report, (94.1% Caucasian vs 70.0%), there was greater representation of Indigenous persons (5.0% vs 2.7% in the prior report).[4] The uptake of a palliative care program among communities with First Nations representatives is important, considering barriers to end-of-life care such as isolation from families, limited access to public transportation, and cultural insensitivity to optimal end-of-life care for First Nations persons.[13] Trauma-informed care (TIC) requires acknowledgement of the historic effects of colonialism including organizational level

discrimination and intergenerational trauma.[13] TIC aims to prevent the perpetuation of discriminatory care stemming from western misconceptions about First Nations culture.[13,14] Wishes elicited from patients and families in this study aligned with TIC, fostering relationships with clinicians in the wish generation process. Moreover, the 3WP is a primarily patient and family-led initiative, promoting the unique and culturally-informed needs of all dying patients.

Beyond the favourable influence that the 3WP has for patients, family members, and healthcare professionals,[5] this study demonstrates strong engagement of a community hospital in a combined clinical and research project. Community centres deliver most healthcare in Canada, accounting for 80% of the inpatient beds in Ontario, and 49-100% in other provinces across Canada.[15] However, community centres are typically under-represented in research generation[16] as most studies are designed and tested exclusively in academic settings.[17] Previous work suggested that hospitals participating in research versus those which do not, have improved outcome for patients[17] including increased adherence to guidelines,[18] as well as higher nursing and physician satisfaction and employee retention.[19] Anticipating the barriers to research in the community setting such as the delivery-focused model of care and relatively fewer human and other resources compared to academic centres,[16] we documented successful uptake of the 3WP, strong staff partnership, and program sustainability beyond the research component. Our findings align with vision of a paradigm shift of increased research participation and academic contributions from community hospitals today.[16,17,20]

Limitations of this study include no qualitative interviews of patient, family or clinician experiences, or measurements of quality end-of-life care. Strengths include the realization of close to 100% of terminal wishes, demonstrating incorporation of a personalized affordable end-of-life interventions in this setting. Other differences from the original study[3] and multicenter evaluation[4] include nursing-led project implementation and early support from community agencies.

CONCLUSIONS

The 3 Wishes Project is a patient and family-centered palliative care initiative, successfully adapted to this community hospital at relatively low cost. The lack of strict

protocolization and personalized design of this intervention underscores its inherent flexibility, with potential to promote individualized end-of-life care outside academic centers in other hospital wards, homes or the hospice venue. For consideration in other rural or remote venues, participatory research and more intentional cultural adaptation are needed.

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Image 1: Crochet Hearts Crafted by Community Volunteers

Legend for Image 1: Community volunteers created pairs of crochet hearts - one to pin on a patient's chest and an identical heart for a family memento, as shown by bedside nurses. From top left to right: Amy Warwick, RN, Karyn Way, RN, Danielle DeVries, RN, Stephanie Ackland, RN, and then bottom left to right, Alyssa Forler, RN, Marin de Beer, RN, Kara Jonas, RN.

Table 1: Patient Baseline Demographics

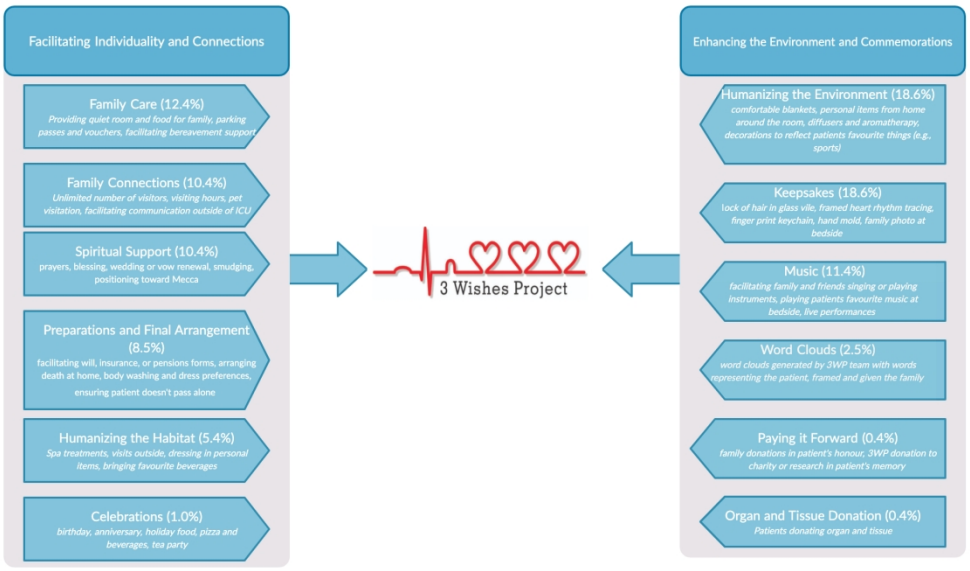
Baseline Demographics	
Age in years, mean (SD)	68.1 (15.9)
Female, n (%)	56 (55.4)
Race, n (%)	
White	95 (94.1)
Indigenous	5 (5.0)
Asian	1 (1.0)
APACHE II score, mean (SD)	24.9 (6.8)
Location prior to ICU, n (%)	
Emergency room	49 (48.5)
Hospital ward	37 (36.6)
Operating room	6 (5.9)
Other (in-patient rehabilitation ward)	1 (1.0)
Other hospital (emergency room or ICU)	8 (8.0)
ICU admitting diagnosis, n (%)	
Cardiovascular/vascular	20 (19.8)
Respiratory	38 (37.6)
Gastrointestinal	9 (8.9)
Neurologic	10 (9.9)
Sepsis	13 (12.9)
Trauma	3 (3.0)
Metabolic	4 (4.0)
Other	4 (4.0)
Admission category, n (%)	
Medical	91 (90.1)
Surgical	7 (6.9)
Trauma	3 (3.0)
Spiritual belief, n (%)	
Anglican	4 (4.0)
Baptist	8 (7.9)
Catholic	14 (13.9)
Christian	4 (4.0)
Jehovah's Witness	1 (1.0)
Lutheran	2 (2.0)
Protestant	7 (6.9)
United	10 (9.9)
Eastern Orthodox	1 (1.0)
Buddhist	1 (1.0)
Longhouse	1 (1.0)
Pentecostal	1 (1.0)
Unknown	14 (13.9)
None Indicated	33 (32.7)

Legend for Table 1: In this table, we present baseline demographics of enrolled patients.

Table 2: Characteristics of the Clinical Course

Characteristics	
Advanced life supports at any time in ICU, n (%)	
Mechanical ventilation	67 (66.3)
Inotropes	65 (64.4)
Dialysis	4 (4.0)
Advanced life supports withdrawn just before death, n (%)	
Mechanical ventilation	60 (59.4)
Inotropes	41 (40.6)
Dialysis	0 (0.0)
Spiritual Care consult in ICU, n (%)	38 (37.6)
Palliative Care consult in ICU, n (%)	16 (15.8)
Social Work consult/involvement, n (%)	53 (52.5)
Psychology consult/involvement, n (%)	1 (1.0)
Organ Donation Coordinator consult, n (%)	24 (23.8)
Consent for donation, of 24 patients with a consult, n (%)	3 (12.5)
Yes, donation after cardiac death	2 (8.3)
Yes, donation after neurologic death	7 (29.2)
No donation made	12 (50.0)
Patient ineligible for organ donation	
Did the patient die in hospital, n (%)	
Yes	98 (97.0)
No	2 (2.0)
Still in palliative unit	1 (1.0)
Enrollment in 3WP initiated by	
Principal Investigator	8 (7.9)
3 Wishes Team	5 (5.0)
Bedside Nurse	76 (75.2)
Spiritual Care	1 (1.0)
ICU Attending MD	4 (4.0)
Other	7 (6.9)
Days from hospital admission to ICU admission, median (IQR)	0 (0-3)
Days from ICU admission to death, median (IQR) *	6 (3-10)
Days from hospital admission to death, median (IQR) *	9 (4-16)
Days from ICU admission to enrolment in 3WP, median (IQR)	5 (2-9)
Days from enrolment in 3WP to death, median (IQR) *	1 (0-1)

Legend for Table 2: In this table, we show characteristics of the clinical course of enrolled patients. *For patients who did not die in hospital, the date of ICU discharge was used to calculate days from hospital admission to death, days from ICU admission to death, and days from enrollment in 3 Wishes to death.



Caption : Figure 1: Summary Diagram of 3WP Patient Wish Categories Visual pictograph outlining individual wishcategories with a summary of examples beneath. The percentages reported reflect the representation ofwish categories among the 483 wishes documented during the study period.

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STROBE Statement—Checklist of items that should be included in reports of ***cross-sectional studies***

	Item No	Recommendation
Title and abstract	1	(*a*) Indicate the study's design with a commonly used term in the title or the abstract, Page 2
		(*b*) Provide in the abstract an informative and balanced summary of what was done and what was found Page 2
Introduction		
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported Page 3
Objectives	3	State specific objectives, including any prespecified hypotheses Page 3
Methods		
Study design	4	Present key elements of study design early in the paper Page 4
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection Page 4
Participants	6	(*a*) Give the eligibility criteria, and the sources and methods of selection of participants ,Page 4
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable, Page 4
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group, Page 4
Bias	9	Describe any efforts to address potential sources of bias, N/A
Study size	10	Explain how the study size was arrived at N/A
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why Page 5
Statistical methods	12	(*a*) Describe all statistical methods, including those used to control for confounding, N/A
		(*b*) Describe any methods used to examine subgroups and interactions, N/A
		(*c*) Explain how missing data were addressed, N/A
		(*d*) If applicable, describe analytical methods taking account of sampling strategy, N/A
		(*e*) Describe any sensitivity analyses, N/A
Results		
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed, Page 6-7
		(b) Give reasons for non-participation at each stage n/a
		(c) Consider use of a flow diagram n/a
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders, Page 6-8
		(b) Indicate number of participants with missing data for each variable of interest, N/A
Outcome data	15*	Report numbers of outcome events or summary measures, N/A
Main results	16	(*a*) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were

		adjusted for and why they were included, N/A
		(*b*) Report category boundaries when continuous variables were categorized, N/A
		(*c*) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period, N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses, N/A
Discussion		
Key results	18	Summarise key results with reference to study objectives, Page 9
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias, Page 10
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence, Page 10
Generalisability	21	Discuss the generalisability (external validity) of the study results, Page 10
Other information		
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based, Page 5

*Give information separately for exposed and unexposed groups.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.