



AUTHOR(S):

TITLE:

YEAR:

Publisher citation:

OpenAIR citation:

Publisher copyright statement:

This is the _____ version of an article originally published by _____
in _____
(ISSN _____; eISSN _____).

OpenAIR takedown statement:

Section 6 of the "Repository policy for OpenAIR @ RGU" (available from <http://www.rgu.ac.uk/staff-and-current-students/library/library-policies/repository-policies>) provides guidance on the criteria under which RGU will consider withdrawing material from OpenAIR. If you believe that this item is subject to any of these criteria, or for any other reason should not be held on OpenAIR, then please contact openair-help@rgu.ac.uk with the details of the item and the nature of your complaint.

This publication is distributed under a CC _____ license.

A Model of Consultation in Prostate Cancer Care: Evidence from a systematic review

Catherine, Paterson, PhD, MSc, BA, RAN; Ghulam, Nabi, MCh, MD, FRCS

Academic Affiliations: Academic Section of Urology, Division of Cancer, School of Medicine, University of Dundee (Dr Paterson and Professor Nabi)

Correspondence: Catherine Paterson (BA [Distinction], MSc [Distinction], PhD, RAN), Academic Section of Urology, Division of Cancer, School of Medicine, University of Dundee [Email: c.i.e.paterson@dundee.ac.uk](mailto:c.i.e.paterson@dundee.ac.uk)

Conflicts of Interest: The authors have no funding or conflicts of interest to disclose.

Acknowledgements: The work was supported by funding from Prostate Cancer UK.

Consultation models in prostate cancer care: Evidence from a systematic review

Modern healthcare in the UK and internationally is currently undergoing a difficult but a profound change process especially in the way it delivers healthcare¹⁻³. A number of government strategies are now in place to provide healthcare services through the expansion of traditional nursing roles, such as Advanced Specialist Nurses^{4,5}. The role of the Advanced Specialist Nurse has been defined as, ‘a registered nurse who has acquired the expert knowledge base, complex decision-making skills and clinical competencies for expanded practice, the characteristics of which are shaped by the context and/or country in which s/he is credentialed to practice. A master's degree is recommended for entry level’⁵. Central to the development and expansion of such roles, which includes advanced cancer specialist nursing roles encompasses a variety of advanced skills that might include non-medical prescribing^{6,7}. The Department of Health defines a non-medical prescriber as ‘independent prescribing is prescribing by a practitioner (e.g. doctor, dentist, nurse, pharmacist) responsible and accountable for the assessment of patients with undiagnosed or diagnosed conditions and for decisions about the clinical management required, including prescribing’⁷. Therefore, central to safe and effective prescribing practice, non-medical prescribers may need to formulate a differential diagnosis and evidence-based management plans during clinical consultations.

A clinical consultation has been described as an encounter that is a two-way process of information exchange between a healthcare professional and patient. Such a consultation maybe initiated by the patient when they are ill or by the healthcare professional to provide health promotional intervention, or a screening intervention⁸. There are various approaches to consultation, and over recent decades there has been an evolution of various consultation models in the literature, but for the most part consultation models have been developed for General Practitioners up until now⁸, and not specifically for advanced nursing roles in cancer

care. Collectively, the nursing profession has endured significant changes in role development that has resulted in more autonomous roles both in community and acute care settings. The term consultancy has only been applied within the medical context predominantly, whereas nowadays, consultancy has become an integral part of many advanced nursing roles in contemporary healthcare⁹.

The development of consultancy skills within the context of prostate cancer care is ever pressing, as highlighted in the Improving Outcomes Strategy for Cancer ² which recognises that not enough attention has been given to the long-term consequences of a cancer diagnosis, the need to maximise service delivery for the ever increasing number of individuals surviving the disease, or how to enable individuals to return to active lives following the completion of initial cancer treatment. Thus, effective consultancy skills are paramount in delivery of supportive care for men affected by prostate cancer ¹⁰.

Supportive care is a person-centred approach to the provision of the necessary services for those living with or affected by cancer to meet their informational, spiritual, emotional, social, or physical needs during diagnosis, treatment, or follow-up phases including issues of health promotion and prevention, survivorship, palliation and bereavement ^{11, 12}. The physical and psychological sequelae of prostate cancer and its associated treatments have been well-documented (e.g. urinary, bowel, and sexual dysfunction, pain, fatigue, spinal cord compression, hot flushes, difficulties with self-image and masculinities) but little is known about men's perceptions about the impact of these on their lives, and the areas in which they most require assistance ¹⁰. One approach to quality of life evaluation that assesses supportive care requirements is needs assessment ¹³.

Supportive care needs can be defined as requirements for care arising during treatment and illness to manage symptoms and side-effects, enable adaption and coping, optimise

understanding and informed decision-making, and minimise decrements in functioning ¹⁴. Therefore, identifying and addressing such needs during clinical consultation with men affected by prostate cancer can prevent patient distress, improve quality of life and improve overall satisfaction with care ¹², whilst reducing healthcare utilisation and costs ¹⁵.

This literature review aimed to critically appraise existing models of consultation and make recommendations for a model of consultation within the scope of clinical practice for prostate cancer care.

Methods

A systematic review was conducted according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines published in 2009¹⁶. The following electronic databases were searched: DARE, Cochrane, MEDLINE, BNI, and CINAHL that used a wide range of keywords and free text items to increase the sensitivity and inclusiveness of the searches. Examples of search terms included: “consultation models”, “consultation”, “nurses”, “doctors”, “communication”, “interpersonal skills”, “prescriber”, “biomedical”, “psycho-social”, “holistic”, “person-centred”, “autonomous” “prostate cancer” and “assessment”. Databases were searched from the earliest date available to 2015 using truncation, wildcards and Boolean logic. Additional searches were performed in Index to Theses, Google Scholar, Google and manual library searches. All of the publications were managed using the software package Endnote X4.

Inclusion and exclusion criteria were applied to all records identified. The electronic searches began in September 2015 and concluded on the December 2015. The following pre-selection criteria were applied to all records.

Inclusion Criteria

- Literature that detailed a theoretical model of consultation
- Qualitative and quantitative methods irrespective of research design that have tested consultation models in clinical practice
- Studies published in the English language
- Studies conducted with adults (≥ 18 years old)
- Studies published in peer-reviewed journals with no date parameters

Exclusion Criteria

- Literature that did not describe a model of consultation
- Studies that did not explicitly test consultation models in clinical practice

All literature sources were reviewed by members of the research team using a pro forma checklist to make decisions to include or not to include studies, based on the inclusion/exclusion criteria. All articles which met the inclusion criteria were retrieved in full-text. Any disagreements were resolved through discussion. One author extracted data from the final sample of literature sources.

This review used a narrative synthesis and tabulation of literature to generate broad findings and conclusions. Specifically, the narrative synthesis undertook the following steps: *data reduction* (sub-group classification based on the levels of evidence and the review questions), *data comparison* (iterative process of making comparisons and identifying relationships) and finally, *conclusion and verification* (checking primary data sources for accuracy and confirmability). This process has been applied to several systematic reviews including prostate cancer^{17, 18}.

The research steering group included a Professor of Surgical Uro-oncology with a special interest in prostate cancer, Senior Prostate Cancer Clinical Specialist Nurse, and service users to inform the appraisal of models of consultation.

Results

Of the 1829 publications retrieved from the search 1464 were excluded following the application of the inclusion/exclusion criteria, see figure 1.

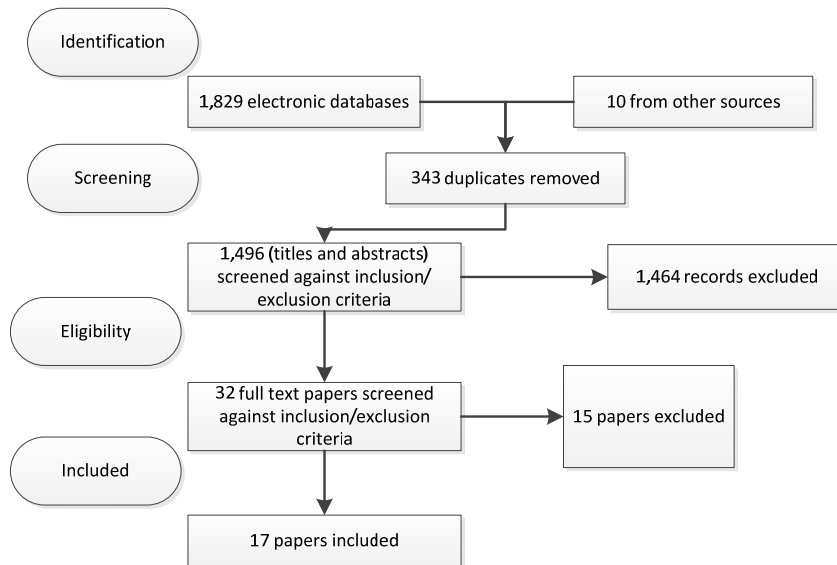


Figure 1. PRISMA Diagram

This left 32 publications reviewed in full, 15 articles were excluded^{8, 9, 19-31} with reasons because they did not meet the inclusion criteria, see figure 1. This left 17 papers which fully met the inclusion criteria. Noteworthy, there is a lack of empirical evidence to test the effectiveness of the included consultation models in routine clinical practice, underscored by the levels of evidence D (summary review articles and discussions of relevant literature and conference proceedings not otherwise classified)³²⁻⁴⁵, C1 (descriptive and other research or evaluations [e.g. convenience samples])^{34, 46-52} see Table 1 for an overview of the included consultation models.

(Please insert Table 1 here)

The vast majority of consultation models have been developed for GP's use in clinical practice, with only 3^{37, 40, 43} developed for specialist nurses and, 1 consultation model for using use in emergency care^{47, 48}. The development of the early consultation models were predominately biomedical and do not address psycho-social factors for example, Stott and Davis (1979)⁴⁴, Byrne and Long (1976)³⁴, or focussed entirely from the patients perspective and lacked guidance on the steps involved in the consultation process, such as Maslow (1954)⁴¹, Berne (1964)³³, Helman (1984)^{38, 39}. More recent models of consultation delineate specific steps in the consultation process such as Pendleton et al., (1984, 2003)^{49, 50}, Neighbour (1987)⁴², Calgary-Cambridge (1996)⁵³ and Consultation Assessment (2006)³⁷.

Synthesis of evidence to inform Consultation Model for Prostate Cancer Care

There were seventeen consultation models included in this review. There were a number of beneficial features that ranged across a number of models that included a person-centred consultation ^{35, 39-41, 43, 52, 53}, development of shared management plans ⁵⁰ and safety netting ^{40, 42}. However, one of the main limitations that featured across all of the reviewed models is the lack of standardised assessment of the patient's problems or areas that are of most concern to the patient to guide the consultation, a feature particularly relevant in supported self-management for prostate cancer care ¹⁸.

A recent systematic review has identified that men affected by prostate cancer can experience a range of supportive care needs as detailed in table 2. The classification of the domains of prostate cancer survivorship care needs and has been informed by existing international clinical guidelines ⁵⁴⁻⁶⁰. Healthcare professionals have identified challenges in providing optimum supportive care and identification of unmet needs due to limited time and resource in the clinical setting ¹². As a consequence, asking men to complete patient-reported outcome measures prior to their clinical consultation, communication between the patient and the healthcare professional can be improved, patients can experience greater satisfaction with care, enable an opportunity for tailored self-management advice, and promote targeted and better management of side-effects in line with patient need ^{61, 62}. Table 3 provides a summary of existing validated quality of life assessment tools for use within prostate cancer care. Evidence supports the use of patient reported outcomes in routine clinical practice ⁶³ enabling a systematic and "real time" assessment of person-centred supportive care needs, to enable interventions to be appropriately targeted within the consultation. Point-of-care quality of life assessment is not yet widespread in prostate survivorship care, but a recent study identified that patients quality of life and satisfaction with care was better compared to patients who did not

complete point-of-care quality of life assessments in routine follow-up care ⁵⁷. Therefore, using validated patient reported outcome measures during consultations with patients, can increase the specialist nurses/clinician's awareness of the multifaceted factors that can negatively affect quality of life and can facilitate tailored self-management plans which are protocol driven at the individual level of need ¹⁰ as detailed in Table 2.

Based upon critical appraisal of existing models of consultation to date, none of the reviewed models are suitable for use in prostate cancer care for the following reasons: 1) no recognition of the cancer care continuum and its influence on consultation, 2) lack of supported self-management as a long term condition, 3) no appreciation of the complex factors that influence consultation for each individual man affected by prostate cancer (demographic, self-efficacy, cultural, etc.) and 4) very little acknowledgement of the evidence base to inform management plans within the consultation itself. Therefore, a new model of consultation has been informed from critical review of existing models of consultation, expert guidance from men affected by cancer and expert clinicians in prostate cancer care, see Figure 2. The Prostate Cancer Model of Consultation clearly delineates the man and his caregiver, spouse, partner at the centre of this model of care. The Prostate Cancer Specialist Nurse provides a hub of survivorship care embedded within the wider multidisciplinary team with clear role distinction and overlaps with other disciplines. For example, the Consultant Urological Surgeon will only be involved with the treatment of radical surgery itself, but the specialist nurse can further support treatment decisions through information and support, if required. Whereas, often the specialist nurse will take the lead on managing the after effects of treatment and symptom management as detailed in Table 2. Evidence supports that often prostate cancer specialist nurses take the lead on triggering referrals to wider members of the MDT such as physiotherapist, sexual counsellors or referrals back to the overall responsible clinician ⁵⁸ as conveyed in figure 2. Each member of the MDT team has defined roles in providing optimal care and treatment but as a collective

team their contributions fit together and complement care delivery, like a jigsaw puzzle, tailored to the individual man and his partner. At the centre of survivorship care, the prostate cancer specialist nurse acts as the “hub” along the cancer care continuum.

(Please Insert Figure 2 here)

Discussion

This review set out to critically review existing models of consultation to inform an appropriate model of consultation for use in prostate cancer care. Historically, the majority of consultation models have been developed for GP’s and therefore, limits their transferability for use in cancer care. The limitation of such models is evident such as Byrne and Long (1976)³⁴ which is heavily focussed on the bio-medical approach and lacks consideration of psycho-social factors that might be important to the patient during consultation. Traditionally, consultations have been carried out by doctors and focussed on a very disease-focussed model whereby the doctor leads the consultation with very little input from the patient³². The critique of such models is that they primarily focus on the physical processes such as pathology, biochemistry and disease status, while psychological and social factors, or indeed the individual man are not fully considered in management plans.

Consultation models provide structure for complex interactions in modern healthcare⁸. Each consultation with a patient/family is exceptionally unique, and provides the healthcare professional with a very privileged glimpse into a person’s life and concerns at that moment time. The nurse consultation provides the main opportunity to explore the patient’s problems and identify areas of most concern. Evidence supports that patients value nurse consultations, and some patients have reported greater satisfaction with nurse consultations in comparison to GP consultations, as patients articulated that they felt they understood their condition more clearly and had more time allocated to them compared to GP’s⁶⁴.

A number of consultation models have attempted to embed a person-centred approach to consultation such as ^{40, 42, 50, 52, 53} but we argue how can such models be implemented in a standardised way to ensure that the individual consultations between healthcare professionals and patients are targeted to areas that are of most concern to the patients? Inevitably, healthcare professionals all have different levels of interpersonal and communication skills, and thus some individuals will be more successful in eliciting concerns from patients than other healthcare professionals. Moreover, evidence acknowledges that the clinician's comprehension of the effect of the disease and treatment on the patients' daily lives is poorly understood ⁶⁵. As a consequence, in response to this problem, over the past three decades, many standardised measures have been developed to capture patient reported outcomes, including quality of life, anxiety and depression, symptom status, physical function, mental health, supportive care needs, and wellbeing. The prostate cancer consultation model is the first, to date, to recognise the important of systematic assessment of the patients concerns to then target the consultation, which may result in greater satisfaction with care, tailored self-management advice, and promote targeted and better management of health problems in line with patient need/priorities ^{61, 62}.

One of the main criticisms of consultation models to date is that they risk over-simplifying a high complex interaction between the patients/family and their healthcare professional. More recent consultation models in the literature begin with establishing a rapport and identifying problems and concerns. Many models suggest using good interpersonal skills and facilitating problem identification through the use of open-questions. While open questions are aimed to enable patients an opportunity to answer in their own words or own way, often men affected by prostate cancer are reticent or embarrassed to disclose concerns such as erectile dysfunction, changes in body image or fear of cancer recurrence ¹⁰.

The Prostate Cancer Consultation Model clearly distinguishes that patients' needs during the consultation with a healthcare professional may change over the cancer care continuum, and new and emergent needs will may affect the man's quality of life over time ¹². Furthermore, our model of consultation for use in cancer care is also one of the first models to embed the evidence-base and research as a pre-requisite to the consultation to ensure optimum evidence-based shared management plans ⁴⁶. The findings from this review has identified that no matter the clinical context of the consultation there are common factors that must be completed by the healthcare professional that include: 1) establish and maintain a good relationship, 2) structure the consultation, 3) obtaining and gathering of relevant information, 4) prioritizing, 5) clinical reasoning and judgement, 6) information giving, 7) management plan, 8) record-keeping and safety netting.

In light of recent changes in the economy and the drive for cost-effective healthcare, current cancer care practice needs to be reviewed and revised ^{2,3}. This review has made an important contribution by developing a model of consultation for prostate cancer care that advanced specialist cancer nurses can use as up until now, there is no model fit for use in cancer care. The Prostate Cancer Care Model of Consultation provides an illustrative framework that cancer nurses can use in the development of their roles and clinical practice. But undoubtedly, this field needs further research to empirically test models of consultation in routine clinical practice. Further research is needed to understand whether the models of consultation improve nurse education in advanced roles, their effect on nurse and patient satisfaction, administrative efficiency, and patient outcomes/safety.

One of the major challenges of this review is the confines of the evidence presented, as such our findings are constrained due to the limitations of the reported literature. Despite this the review team follow-up a rigorous and transparent review methodology based upon the PRIMSA guidelines (Moher, 2009) to promote reproducibility. This review has enabled a

broad summary of the evidence which has facilitated refinement of future research directions and identified a number of important clinical implications in consultation in prostate cancer care.

Conclusion

This systematic review has identified that there are many models of consultation in the reported literature. We have developed a consultation model informed from critical appraisal of the evidence for the context of cancer care, but further research is needed to empirically test consultation models in routine clinical practice. Consultation models should not be followed rigidly but adapted to the individual healthcare professional allowing natural warmth, compassion and empathy to flow the consultation to ensure individual personalised care.

Table 1. Models of Consultation

Author and Year	Model/Approach	Comment/Limitations	Level of Evidence
Weiner (1948) ⁴⁵	Very basic model of the initiation of the sender and interpretation by the receiver. This includes improving communication, information, transmitter, receiver, destination, feedback, seeking clarification and reflection.	Basic model can be easily applied to clinical settings, but no detail about the biomedical and psychosocial factors to take into account during consultation.	D
Maslow (1954) ⁴¹	Hierarchy of human needs. Overarching theoretical model of basic needs (physical, safety, love) must be satisfied before higher level of needs can be addressed.	At first glance this may not seem like obvious model for consultation, but may help to identify the fundamental reason why a patients needs to see a healthcare professional. Maslow's theory spans a holistic approach to healthcare, but lacks a framework to guide clinical consultation per se.	D
Balint (1957) ³²	Fundamental aspect of this model is the Doctor patient relationship. Incorporates a bio-psychosocial view that takes in to account the following factors, active listening, hidden agenda, dynamics, apostolic function of doctor, analysed case history.	This model takes into account the self-awareness of the Doctor, and their limitations of practice. This model is a holistic approach to consultation taking in many important factors, but lacks specific guidance on how to carry out consultation in clinical practice, remains Doctor-Centred.	D
Berne (1964) ³³	Model based on three distinguished ego states Parent (authority, critical and caring, routine decision making, conserves time and energy) Adult (logical, autonomous, objective appraisal of reality), child (intuitive, creative, spontaneity and enjoyment). Transactional approach to consultation a "game" of social interchange.	This model is underpinned by psychoanalytical principles to consultation. The defined ego states could be inconsistent. Difficult model to apply in routine clinical practice due to a lack of structure to guide consultation. Lacks biomedical factors.	D
Byrne and Long (1976) ³⁴	6 steps to the consultation: a) establishing a relationship, b) discover the reason for attendance, c) verbal and/or physical exam, d) consider the condition, e) detail investigation or treatment and f) terminate the consultation.	This framework is based In biomedical model. Easy steps to follow, but maybe difficult to put in logical order, due to the natural flow of human conversation. Psycho-social factors not detailed in the model. No mention of shared management plans. Establishing a relationship should not just be at the start of the consultation i.e. rapport should be built throughout.	C1 (research based in general practice)
Stott and Davis (1979) ⁴⁴	Four elements to this framework 1) management of presenting problems, 2) modification of help-seeking behaviours, 3) management of continued problems and 4) opportunities for health promotion.	This model takes into consideration existing problems (such as co-morbidities), self-management, and health-promotion. It lacks specific guidance on how to evaluate presenting problems. Developed specifically for GP consultations and teaching.	D
Helman (1984) ^{38,39}	Seven key steps to consultation: a) what has happened? b) Why has it happened? c) Why has it happened to me? d) Why now? e) What would happen to me if nothing were done about it? f) What are its likely effects on other people if nothing is done about it? g) What should I do about it?	This model is person-centred, comes from an anthropological stance. It lacks guidance how to carry out clinical practice due to a lack of structure to guide consultation. Aspects of this model may help the healthcare professional to connect with the patient.	D

Pendleton et al., (1984, 2003) ^{49, 50}	Seven key steps: 1) define reasons for attendance, 2) consider other problems, 3) choose appropriate action for each problem, 4) Share understanding, 5) share decision and responsibility, 6) use time and resources appropriately and 7) maintain relationship	This model emphasizes patient and doctor working in partnership to cooperatively define problems and their management. Elements of self-management and patient-centred partnership.	C1 (research based in general practice)
Neighbour (1987) ⁴²	Five key steps: 1) connecting, 2) summarising, 3) handing over, 4) safety netting and 5) housekeeping	Person-centred partnership model that could be consider straight forward to implement in clinical practice. Addition of “safety netting” (for example, has the Doctor covered all outcomes, arrange follow-up review, etc.).	D
Fraser (1994, 1999) ^{35, 36}	The Leicester Assessment Package has seven key steps to consultation: 1) interviewing/history taking (20%), 2) physical exam (10%), 3) patient management (20%), 4) problem solving (20%), 5) behavioural and relationship with patients (10%), 6) anticipatory care (10%), and 7) record-keeping (10%).	Pragmatic holistic model developed for GP’s. Person-centred partnership model that could be considered straight forward to implement in clinical practice.	D
Stewart et al., (1995, 2003) ^{51, 52}	Six steps. 1) Exploring the disease and illness experience, 2) understanding the whole person, 3) finding common ground, 4) incorporating prevention and health promotion, 5) enhancing the patient-doctor relationship, and 6) being realistic (resources and time management).	Pragmatic holistic model developed for GP’s. Includes bio- psychosocial factors and is focussed on person-centred partnership model.	C1 (research based in general practice)
Calgary-Cambridge Observation Guide (1996) ^{53, 66}	Fundamental stages in the “Medical Interview” consultation: 1) Initiating the session, 2) gathering information, 3) building the relationship, 4) explanation and planning, 5) closing session.	Pragmatic holistic model developed for GP’s. A patient-centred approach to consultation that promotes partnership. This model of consultation includes safety netting	C1 (research based in general practice)
Nursing Model for Stoma Care (2013) ⁴⁰	Nine steps: 1) establish trust, 2) consider the problems from the ostomist’s perspective, 3) review ostomist’s medical history and medications, 4) examine the ostomists problems, 5) Discuss a plan with the ostomist, 6) prescribe as required, 7) pre-evaluate the ostomists understanding, 8) arrange timely follow-up, and 9) document	Pragmatic holistic model developed for specifically for stoma specialist nurses. Descriptive paper that lacks critically review of all existing consultation models in reported literature.	D
Person-Centred Consultation Model (2011) ⁴³	Person-Centred Model of Consultation: 1) patient and healthcare professionals agenda, 2) patients thoughts and feelings, ideas, concerns, expectations, effects, patients individual experiences of illness, 3) Healthcare professional signs (examination), symptoms (history), investigations and tests and understanding pathology 4)	Pragmatic holistic model developed for nurses. Includes bio- psychosocial factors and is focussed on person-centred partnership model. Descriptive paper that lacks critically review of all existing consultation models in reported literature.	D

	Explanation and planning – shared understanding and decision making.		
The 5 ^c of Consultation Model (2012) ^{47, 67}	Five steps: 1) Contact (building relationship), 2) Communicate (concise story and ask focused questions), 3) Core question (have a specific question or request of the consultant, decide on reasonable timeframe for consultation), 4) collaboration (discussion between emergency physician and the consultant, including management, tests and patients status), 5) closing the loop (ensure both parties are on the same page regarding plan and maintain proper communication in patients status)	Biomedical model of consultation developed for emergency medicine. Lacks psycho-social aspects and thus limits transferability of this model to other clinical specialities.	B2 (context of research in A&E)
Consultation Assessment and Improvement Instrument for Nurses (2006) ³⁷	Seven steps: 1) interviewing, 2) examination, diagnostic testing and practical procedures, 3) care planning and patient management, 4) problem solving, 5) behavioural/relationship with patients, 6) health promotion/disease prevention, 7) record keeping	Pragmatic holistic model developed for nurses. Includes bio-psychosocial factors and is focussed on person-centred partnership model.	D
Evidence-based Patient Choice Consultation ⁴⁶	Model encompasses 6 factors: 1) Establishing the nature of the problem, 2) Doctor Patient relationship, 3) decision making, 4) time issues, 5) research/evidence/medical information, 6) patient perspectives.	Pragmatic holistic model. Includes bio-psychosocial factors and is focussed on person-centred partnership model.	C1 (context of research in General Practitioners)

Table 2. Classification of Domains of Survivorship Care Needs

Domain of need	Effects	Supported self-management
Physical Needs	<p>Surgery (radical prostatectomy, open, laparoscopic, robotic-assisted) Urinary incontinence (stress), urinary symptoms (urgency, frequency, nocturia, dribbling), urethral stricture formation, Erectile dysfunction (ED), lack of ejaculation, orgasm changes (without erection, associated incontinence), penile shortening</p> <p>Radiation (external beam or brachytherapy) Urinary incontinence (stress), urinary symptoms (dysuria, urgency, frequency, nocturia, dribbling), urethral stricture formation, ED, decreased semen volume, faecal urgency, frequency, incontinence, blood in stool, proctitis, fecal pain and inflammation</p> <p>Hormone therapy Loss of libido, ED, hot flushes/sweats, weight gain, abdominal obesity, changes in body image, emotional reactions and mood changes, depression, gynaecomastis, Anemia, body hair loss, dry eyes, fatigue/decreased</p>	<p>Lower urinary tract symptoms: Urinalysis to exclude infection, IPSS, uro-flowmetry, post-void residual urine volume and frequency volume chart. Reduction of fluid intake at specific times aimed at reducing urinary frequency when most inconvenient. Recommended total daily fluid intake of 1.5Lts to 2 Lts. Avoidance/moderation of caffeine and alcohol which may have a diuretic and irritant effect. Relaxed and double-voiding techniques. Urethral stripping to prevent post-micturition dribble. Distraction techniques, such as penile squeeze, breathing exercises, perineal pressure and mental ‘tricks’ to take the mind off the bladder and toilet, to help control irritative symptoms. Bladder re-training, by which men are encouraged to ‘hold on’ when they have sensory urgency to increase their bladder capacity (to around 400 mL) and the time between voids. Consider prescribing alpha-blockers (i.e Tamsulosin) for weak flow, or anticholinergics (eg Oxybutynin) for bladder over activity. Refer to physiotherapist for pelvic floor rehabilitation. Refer men with persistent leakage or other urinary symptoms to Urologist for further evaluation (eg urodynamic testing, cystoscopy) or for discussion of urethral sling or artificial urinary sphincter for incontinence. Use validated tools to monitor function over time.</p> <p>Erectile Dysfunction: Advise men and, if they wish, their partner, about the potential loss of ejaculation and fertility and offer sperm storage. Consider referring men, and their partners, for psychosexual counselling. Offer PDE5 inhibitors to men who experience loss of erectile function. If PDE5 inhibitors fail to restore erectile function or are contraindicated, offer a choice of: intraurethral inserts, penile injections, penile prostheses or vacuum devices. Encourage the adoption of exercise and lifestyle changes, psychosexual therapy or psychological counselling, encourage partner support, encourage the man to schedule sexual contact with or without intercourse, to assist in the management of low desire, assess co-morbidities, concurrent medication and life style habits (such as smoking) that could affect sexual function. Use validated tools to monitor function over time.</p> <p>Bowel dysfunction: Assess asking about change in consistency regularity. Give advice or refer to specialist as appropriate. Diarrhoea – investigate the cause: Drink plenty of liquid up to 1.5 to 2 litres a day to replace lost fluid. Avoid coffee and citrus fruits. Review medications. Skin care at back passage: use unscented baby wipes instead of toilet paper to wipe yourself after you’ve been to the toilet, advice to have a warm bath to help soothe pain and help with healing, pat the area dry with a soft towel after a shower or bath – don’t rub. Applying Vaseline around the back passage can help. Avoid wearing tight trousers or underwear. Cotton underwear will help to keep the area ventilated. Prescribe medication as required. Constipation – investigate the cause: Advice on gentle exercise (if able, brisk walking for at least 30 minutes, three times per week), is conducive to a more normal bowel routine. Eat food rich in fibre such as: fruit, vegetables, nuts, seeds, pulses, and wholemeal bread, etc. Drink plenty of liquid up to 1.5 to 2 litres a day. Prescribe medication as required.</p> <p>Gynaecomastia: Discuss with consultant and if required refer to oncologist. For men starting long-term bicalutamide monotherapy (longer than 6 months), offer prophylactic radiotherapy to both breast buds within the first month of treatment. Choose a single fraction of 8 Gy using orthovoltage or electron beam radiotherapy. If radiotherapy is unsuccessful in preventing gynaecomastia, weekly tamoxifen should be considered. Provide psychological support as men can experience feelings of embarrassment, review analgesia for pain/discomfort, use of blinding and camouflage. Mastectomy/liposuction.</p> <p>Hot flushes: Offer medroxyprogesterone (20 mg per day), initially for 10 weeks, to manage troublesome hot flushes caused by long-term androgen suppression and evaluate the effect at the end of the treatment period. Consider cyproterone acetate or megestrol acetate (20 mg twice a day for 4 weeks) to treat troublesome hot flushes if medroxyprogesterone is not effective or not tolerated, discuss with Consultant. Inform men that there is no good-quality evidence for the use of complementary therapies to treat troublesome hot flushes The British Complementary Medical Association has lists of registered practitioners throughout the UK. Advice to cut down on alcohol, nicotine and hot drinks that contains caffeine, particularly coffee and tea. Advice to wear several layers of light clothing (preferably cotton) that you can easily take off or put back on depending on your body temperature. Advice lukewarm baths and showers are less likely to trigger sweats than hot ones. Flushes and sweats are often worse at night. Advice to put a soft cotton towel on your bed that you can easily change if it gets wet during the night. Use light bed wear and cotton clothing to help you feel cooler at night. Some men take evening primrose oil (no scientific evidence has demonstrated efficacy), but men have reported some benefit. The yoga breathing technique known as the ‘cooling breath’ or ‘sheetali’ may help reduce body temperature. Take sips of cold or ice drinks</p> <p>Pain: Conduct a neurological assessment (assess for symptoms such as of radicular pain, any limb weakness, difficulty in walking, sensory loss or bladder or bowel dysfunction), use locally agreed pain scale and request bone profile. Appropriate referral to Multidisciplinary team (MDT). Review analgesia based on</p>

Psychological/ emotional/spiritual needs	<p>activity, risk of osteoporosis, cardiovascular disease, diabetes</p> <p>Active surveillance or watchful waiting Stress, anxiety, worry, uncertainty, risks of associated repeated prostate biopsy, PSAs and DREs, risk of disease progression</p> <p>Experience of psychological/emotional symptoms such as anxiety, depression, worry, despair, fear, existential concerns such as fear of death, death and dying, fears regarding afterlife</p>	<p>Guidance from the WHO Cancer Pain Ladder (World Health Organisation, 2015), consider referral to Palliative Care Team. Tens Machine, Cognitive Behavioural Therapy (CBT), Physiotherapy and Exercise, Relaxation, Hypnotherapy, Meditation Message Therapy, Visualisation (Imagery)</p> <p>Weight gain, fatigue general malaise and anaemia: Consider referral for physical activity programme for supervised resistance and aerobic exercise at least twice a week for 12 weeks to reduce fatigue and improve quality of life. Check haemoglobin and if below normal levels discuss with Consultant. Advice on healthy eating and well-being</p> <p>Weight loss: If unexplained weight loss refer to consultant. Refer to dietician if appropriate. Regular meals and snacks, little and often approach to eating, consider full fat milk, milky drinks and milkshakes, increase calories by adding double cream, fats and sugars to foods and drinks (fortifying), consider any underlying conditions which may affect appetite (e.g. depression, constipation etc.) and seek support to improve where possible, weigh in one month and complete weight monitoring chart.</p> <p>Psychological/emotional/spiritual needs: Consider using a screening tool such as the Distress Thermometer. Offer support of any psychological/spiritual concerns. Refer as appropriate to: Health and Well-being clinics, Support Groups, Counselling Service, Clinical Psychologist, Online Support Community, Religious support. Anti-depressant medicine, advice on learning ways to relax such as yoga or meditation as appropriate, exercise might ease feelings of anxiety or depression.</p>
Social Needs	<p>Experience of reduced social support, social isolation, loneliness, etc.</p>	<p>Social support: Explore any feelings of isolation and friends and family networks. Refer as appropriate to: Health and Well-being clinics, Support Groups, Counselling Service, Clinical Psychologist, and Online Support Community.</p> <p>Intimacy: Include intimate partners as much as possible. Consider rehabilitations ED treatments, intervene early, foster realistic expectations. Promote flexibility and talk in an open and non-judgemental manner options for sexual activity which is non-erection independent (sensual massage, genital caressing, mutual masturbation, external penile prosthesis, deep kissing, sex toys and oral sex). Encourage intimacy despite low libido: physical affection such as holding hands, hugging, physical touch, kissing and cuddling. Normalise the grieving process.</p> <p>Practical: Refer to appropriate Government Benefits or Charity Grants for financial support. If appropriate advise to consider applying for the European Health Insurance Card. Compare quotes for travels insurance. Refer to occupational therapist and social worker if needed.</p>
Interpersonal/Intimacy needs	<p>Experience of difficulties with self-image and masculinities, reduced libido, erectile dysfunction, compromised intimacy with partner, fertility, etc</p>	<p>Health system: Primary treating specialist is encouraged to provide a treatment summary and survivorship care plan. Assess for the presence of long-term effects of prostate cancer and its treatments using validated patient reported outcome measures in routine clinical practice. Encourage the inclusion of the caregivers, spouse or partners. Refer survivors to appropriate community-based and peer support resources. Provide written information to support diagnosis and treatments.</p>
Practical Needs	<p>Situations of transportation, out-of-hours access to healthcare, financial support. Experience of restriction in daily living tasks such as exercise, housekeeping, etc</p> <p>Experience of a lack of information, uncertainty of follow-up care,</p>	

Health System/Information/Patient-Clinician Communication Needs	Quality of communication, satisfaction with care, shared decision-making, etc	
---	---	--

Table 3 Point-of-care quality of life tools used in prostate cancer care

Instrument	Items	Cronbach's Alpha (range from low to high)	Mode of administration	Comments
Generic Measures of HRQoL				
<i>Medical Outcomes Study 36-Item</i> ⁶⁸	36	low of 0.65 to high of 0.94	Self or interviewer	Eight scales measure physical, psychological and social functioning, including subjective mental health status and vitality, bodily pain and general health perceptions.
<i>Nottingham Health Profile (NHP)</i> ⁶⁹	38	low of 0.77 to high of 0.85	Self	Includes a number of subscales for energy, pain, emotional reactions, sleep, social isolation and mobility. The performance section includes occupation, home tasks, sex life, social life, hobbies, holidays and personal relationships.
<u>Cancer-specific measures of HRQoL</u>				
<i>European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire – Cancer 30 (EORTC – C30)</i> ⁷⁰	30	low of 0.70 to a high of 0.90	Self	Multiple domains are assessed, physical, role, emotional, cognitive and social functioning, individual symptoms (dyspnoea, insomnia, appetite loss, constipation, diarrhoea, nausea and vomiting, pain, fatigue). In addition financial difficulties related to cancer. A prostate cancer-specific supplement developed to address prostate specific problems.
<i>Functional Living Index (FLIC)</i> ⁷¹	22	low of 0.64 to high of 0.87	Self	Assess quality of life for patients undergoing their treatment. Assesses psychological, social and physical functioning.
<i>Functional Assessment of Cancer Therapy – General (FACT-G)</i> ⁷²	28	low of 0.65 to high of 0.89	Self	Measures physical, social/family, emotional, functional well-being and the relationship with physician.
<i>Rotterdam Symptom Checklist (RSCL)</i> ⁷³	27	low of 0.83 to high of 0.90	Self	Measuring psychological distress, activity level scale and overall evaluation of life for cancer patients.
<i>University of California at Los Angeles (UCLA) Prostate Cancer Index</i> ⁷⁵	47	Low of 0.65 to high of 0.69	Self	Measures sexual, bowel, bladder function and pain domains.
<i>Expanded Prostate Cancer Index (EPIC)</i> ⁷⁶	20	Low of 0.65 to high of 0.93	Self	Measures sexual, urinary and bowel function and bother. It also assesses the overall satisfaction with the prostate cancer treatment.
<i>International Prostate Symptom Score (IPSS)</i> ⁷⁷	32	Low of 0.74 to high of 0.94	Self	Measures sexual, urinary, and hormonal function and bother. It also measures satisfaction with treatment.
<i>International Prostate Symptom Score (IPSS)</i> ⁷⁷	7	Low of 0.86 to high of	Self	Designed for benign prostatic hyperplasia (BPH)

European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire – Prostate (EORTC – PR25) <small>78</small>	0.92	assesses urinary symptoms only: frequency, nocturia, weak urinary stream, hesitancy, intermittence, incomplete emptying and urgency
25 Low of 0.70 To a high of 0.86	Self	Used in conjunction with the EORTC-C30, this measure assesses urinary, bowel, sexual symptoms and functioning, in addition to specific side-effects of prostate cancer treatment.

References

1. Department of Health. Improving Outcomes: A Strategy for Cancer. London: Department of Health; 2013.
2. Department of Health. Improving Outcomes: A Strategy for Cancer – Third Annual Report. **Department of Health**. 2013.
3. Department of Health Macmillan Cancer Support & NHS Improvement. The National Cancer Survivorship Initiative Vision. London: Department of Health; 2010.
4. Nursing and Midwifery Council. **The Code: Professional standards of practice and behaviour for nurses and midwives**. London: Nursing and Midwifery Council; 2015.
5. International Council of Nurses. Definition and Characteristics of the Role. Available at: <http://international.aanp.org/Practice/APNRoles>, 2015.
6. National Health Service Education for Scotland. Prescribing and Patient Group Direction. Available at: <http://www.nes.scot.nhs.uk/education-and-training/by-theme-initiative/prescribing-and-patient-group-direction/non-medical-prescribing.aspx>.
7. Scottish Government. Guidance for Nurse Independent Prescribers. Available at: <http://www.gov.scot/Publications/2006/08/23133351/0>.
8. Denness C. What are consultations model for? **InnovAit**. 2015;6(9):595-599.
9. Christensen M. The consultative process used in outreach: a narrative account. **Nursing in Critical Care**. 2009;14(1):17-25 19p.
10. Paterson C, Robertson A, Smith A, Nabi G. Identifying the unmet supportive care needs of men living with and beyond prostate cancer: A systematic review. **European Journal of Oncology Nursing**. 2015;19(4):405-418 414p.
11. Hui D. Definition of supportive care: does the semantic matter? **Curr Opin Oncol**. 2014;26(4):372-379.
12. Carter N, Bryant-Lukosius D, DiCenso A, Blythe J, Neville AJ. The Supportive Care Needs of Men With Advanced Prostate Cancer. **Oncology Nursing Forum**. 2011;38(2):189-198.
13. Bonevski B, Sanson-Fisher R, Girgis A, Burton L, Cook P, Boyes A. Evaluation of an instrument to assess the needs of patients with cancer. Supportive Care Review Group. **Cancer**. 2000;88(1):217-225.
14. Ream E, Quennell A, Fincham L, et al. Supportive care needs of men living with prostate cancer in England: a survey. **British Journal of Cancer**. 2008;98(12):1903-1909.
15. Brown ML, Lipscomb J, Snyder C. The burden of illness of cancer: economic cost and quality of life. **Annu Rev Public Health**. 2001;22:91-113.
16. Moher D, Liberati A, Tetzlaff J, Altman, D. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. **BMJ**. 2009;339:b2535:332-336.
17. Paterson C, Jones M, Rattray J, Lauder W. Exploring the relationship between coping, social support and health-related quality of life for prostate cancer survivors: A review of the literature. **European Journal of Oncology Nursing**. 2013;17(6):750-759.
18. Paterson C, Jones M, Rattray J, Lauder W. Identifying the self-management behaviours performed by prostate cancer survivors: a systematic review of the evidence. **Journal of Research in Nursing**. March 26, 2014 2014;20(2):96-111
19. Abel J, Dennison S, Senior-Smith G, Dolley T, Lovett J, Cassidy S. Breaking bad news -- development of a hospital-based training workshop. **Lancet Oncology**. 2001;2(6):380-384 385p.
20. Henry SG, Czarnecki D, Kahn VC, et al. Patient-physician communication about early stage prostate cancer: analysis of overall visit structure. **Health Expectations: An International Journal Of Public Participation In Health Care And Health Policy**. 2015;18(5):1757-1768.

21. Dawlatly SL. Do our consultation models meet our patients' needs? **The British Journal Of General Practice: The Journal Of The Royal College Of General Practitioners**. 2014;64(622):245-245.
22. Arborelius E, Krakau I, Bremberg S. Key factors in health counselling in the consultation. **Family Practice**. 1992;9(4):488-493.
23. Seale C, Anderson E, Kinnersley P. Comparison of GP and nurse practitioner consultations: an observational study. **British Journal of General Practice**. 2005;55(521):938-943 936p.
24. Harris A, Redshaw M. Specialist nursing. Professional issues facing nurse practitioners and nursing. **British Journal of Nursing**. 1998;7(22):1381-1385 1385p.
25. Chapleau A, Seroczynski AD, Meyers S, Lamb K, Buchino S. The Effectiveness of a Consultation Model in Community Mental Health. **Occupational Therapy in Mental Health**. 2012;28(4):379-395 317p.
26. Angeles-Llerenas A, Alvarez del Río A, Salazar-Martínez E, et al. Perceptions of nurses with regard to doctor-patient communication. **British Journal Of Nursing (Mark Allen Publishing)**. 2003;12(22):1312-1321.
27. DeRenzo EG, Vinicky J, Redman B, Lynch JJ, Panzarella P, Rizk S. Rounding: a model for consultation and training whose time has come. **Cambridge Quarterly of Healthcare Ethics**. 2006;15(2):207-215 209p.
28. Gottlieb MC, Handelsman MM, Knapp S. A Model for Integrated Ethics Consultation. **Professional Psychology: Research & Practice**. 2013;44(5):307-313 307p.
29. Booth K, Maguire P, Hillier VF. Measurement of communication skills in cancer care: myth or reality? **Journal Of Advanced Nursing**. 1999;30(5):1073-1079 1077p.
30. Williams A, Jones M. Patients' assessments of consulting a nurse practitioner: the time factor. **Journal Of Advanced Nursing**. 2006;53(2):188-195 188p.
31. Evans M, Sharp D, Shaw A. Developing a model of decision-making about complementary therapy use for patients with cancer: A qualitative study. **Patient Education & Counseling**. 2012;89(3):374-380 377p.
32. Balint M. **The Doctor, his patient, and the illness**. London: Pitman Medical Publishing; 1957.
33. Berne E. **Games People Play**. Harmondsworth: Penguin; 1964.
34. Byrne P, Long B. **Doctors talking to patients**. Exeter: The Royal College of General Practitioners; 1984.
35. Fraser R. **Clinical Method; a general practice approach**. Oxford: Butterworth Heinemann; 2000.
36. Fraser R, McKinley R, Mulholland H. Consultations competence in general practice: establishing the face validity of prioritized criteria in the Leicester assessment package. **British Journal of General Practice**. 1994;44:109-113.
37. Hastings A. Assessing and improving the consultation skills of nurses. **Nurse Prescribing**. 2006;4(10):419-442.
38. Helman C. **Culture, Health and Illness**. London: Arnold/Heinemann; 2001.
39. Helman C. The culture of general practice. **British Journal of General Practice**. 2002;52:619-620.
40. Lowther C. Consultation and prescribing: a model for stoma care. **Gastrointestinal Nursing**. 2013;11(7):19-24 16p.
41. Maslow A. **Motivation and Personality**. New York: Harper and Row; 1954.
42. Neighbour R. **The Inner Consultation**. Dordrecht/Boston/London: Kluwer Academic Publishers; 1987.
43. Perry G. Conducting a nurse consultation. **Clinical Nursing**. 2011;6(9):433-440.
44. Stott N, Davis R. The exceptional potential in each primary care consultation. **Journal of the Royal College of General Practitioners**. 1979;29:201-205.
45. Weiner N. **Cybernetics: or Control and communication in the animal and the machine**. New York: Wiley; 1948.

46. Ford S, Schofield T, Hope T. What are the ingredients for a successful evidence-based patient choice consultation?: a qualitative study. **Social Science & Medicine**. 2003;56(3):589-602 514p.
47. Kessler C, Kutka BM, Badillo C. Consultation in the emergency department: a qualitative analysis and review. **The Journal Of Emergency Medicine**. 2012;42(6):704-711.
48. Kessler CS, Afshar Y, Sardar G, Yudkowsky R, Ankel F, Schwartz A. A prospective, randomized, controlled study demonstrating a novel, effective model of transfer of care between physicians: the 5 Cs of consultation. **Academic Emergency Medicine: Official Journal Of The Society For Academic Emergency Medicine**. 2012;19(8):968-974.
49. Pendleton D, Schofield T, Tate P, Havelock P. **The Consultation: an approach to learning and teaching**. Oxford: Oxford University Press; 1984.
50. Pendleton D, Schofield T, Tate P, Havelock P. **The New Consultation**. Oxford: Oxford University Press; 2003.
51. Stewart M, Brown J, Weston W, IR M, McWilliam C, Freeman T. **Patient-centred Medicine, Transforming the Clinical Method**. Thousand Oaks, CA: Sage; 1995.
52. Stewart M, Brown J, Weston W, McWhinney I, McWilliam C, Freeman T. **Patient-centred Medicine, Transforming the Clinical Method**. 2 ed. Oxford: Radcliffe Medical Press; 2003.
53. Kurtz S, Silverman J. The Calgary-Cambridge observation guides: an aid to defining the curriculum and organizing the teaching in communication training programmes. **Medical Education**. 1996;30:83-89.
54. Skolarus TA, Wolf AMD, Erb NL, et al. American Cancer Society prostate cancer survivorship care guidelines. **CA: A Cancer Journal for Clinicians**. 2014;64(4):225-249.
55. Elliott S, Latini DM, Walker LM, Wassersug R, Robinson JW. Androgen deprivation therapy for prostate cancer: recommendations to improve patient and partner quality of life. **J Sex Med**. 2010;7(9):2996-3010.
56. Walker LM, Wassersug RJ, Robinson JW. Psychosocial perspectives on sexual recovery after prostate cancer treatment. **Nat Rev Urol**. 2015;12(3):167-176.
57. Gilbert SM, Dunn RL, Wittmann D, et al. Quality of life and satisfaction among prostate cancer patients followed in a dedicated survivorship clinic. **Cancer**. 2015;121(9):1484-1491.
58. Paterson C, Alashkham A, Windsor P, Nabi G. Management and treatment of men affected by metastatic prostate cancer: evidence-based recommendations for practice. **International Journal of Urological Nursing**. 2015;10(1):44-55.
59. NICE. Prostate Cancer: NICE Guidance. **National Institute for Health and Care Excellence**. 2014;London.
60. Heidenreich A, Bellmunt J, Bolla M, et al. EAU Guidelines on Prostate Cancer. Part 1: Screening, Diagnosis, and Treatment of Clinically Localised Disease. **European Urology**. 2014;59(1):61-71.
61. Donaldson MS. Taking PROs and patient-centered care seriously: incremental and disruptive ideas for incorporating PROs in oncology practice. **Qual Life Res**. 2008;17(10):1323-1330.
62. Wu A, Snyder C. Getting ready for patient-reported outcome measures (PROMs) in Clinical Practice. **Healthcare Pap**. 2011;11(4):48-53.
63. Department of Health. Quality of Life of Cancer Survivors in England: Report on a pilot survey using Patient Reported Outcome Measures (PROMS). UK; 2012.
64. Shum C, Humphreys A, Wheeler D, Cochrane M, Skoda S, Clement S. Nurse management of patients with minor illnesses in general practice: Multicentred, randomised control trial **BMJ**. 2000;320:1038-1043.
65. Nelson E, Conger B, Douglass R, et al. Functional health status levels of primary care patients. **Jama**. 1983;249(24):3331-3338.
66. Munson E, Willcox A. Applying the Calgary -- Cambridge model. **Practice Nursing**. 2007;18(9):464-468 465p.

67. Kessler CS, Tadisina KK, Saks M, et al. The 5Cs of Consultation: Training Medical Students to Communicate Effectively in the Emergency Department. **The Journal of Emergency Medicine**. 11// 2015;49(5):713-721.
68. Ware JJ, Sherbourne C. The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. **Med Care**. 1992;30(6):473-483.
69. Hunt SM, McEwan J. The development of a subjective health indicator. **Sociology of Health and Illness**. 1980;2(3):231-246.
70. Aaronson N, Ahmedzai S, Bergman B, et al. The European Organisation for research and treatment of cancer QLQ-C30: A quality-of-life instrument for use in international clinical trials in oncology. **Journal of the National Cancer Institute**. 1993;85:365-376.
71. Schipper H, Clinch J, McMurray A, Levitt M. Measuring the quality of life of cancer patients: the Functional Living Index-Cancer: development and validation. **Journal of Clinical Oncology**. May 1, 1984 1984;2(5):472-483.
72. Cella DF, Tulsky DS, Gray G, et al. The Functional Assessment of Cancer Therapy scale: development and validation of the general measure. **Journal of Clinical Oncology**. March 1, 1993 1993;11(3):570-579.
73. de Haes J, van Knippenberg F, Neijt J. Measuring psychological and physical distress in cancer patients: structure and application of the Rotterdam Symptom Checklist. **Br J Cancer**. 1990;62(6):1034-1038.
74. Esper P, Mo F, Chodak G, Sinner M, Cella D, Pienta KJ. Measuring quality of life in men with prostate cancer using the Functional Assessment of Cancer Therapy-prostate instrument. **Urology**. 1997;50(6):920-928.
75. Litwin M, Hays R, Fink A, Ganz P, Leake B, Brook R. The UCLA Prostate Cancer Index: development, reliability, and validity of a health-related quality of life measure. **Med Care**. 1998;36(7):1002-1012.
76. Wei JT, Dunn RL, Litwin MS, Sandler HM, Sanda MG. Development and validation of the expanded prostate cancer index composite (EPIC) for comprehensive assessment of health-related quality of life in men with prostate cancer. **Urology**. 2000;56(6):899-905.
77. Barry MJ, Fowler FJ, O'Leary MP. The American Urological Association symptom index for benign prostatic hyperplasia. The Measurement Committee of the American Urological Association. **Journal of Urology**. 1992;148(5):1549-1557.
78. van Andel G, Bottomley A, Fosså SD, et al. An international field study of the EORTC QLQ-PR25: a questionnaire for assessing the health-related quality of life of patients with prostate cancer. **European Journal Of Cancer** 2008;44(16):2418-2424.