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Best Free Paper 2004 - Category: Oral Presentation
- presented on 26 September 2004in Prague

INTEGRAL ENDOSCOPY TRAINING FOR GASTROENTEROLOGISTS, FELLOWS AND NURSES; THE ROLE OF NURSE-TEACHERS:

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Objective
Improving quality of our endoscopy unit by the introduction of practical training sessions for the entire team (gastroenterologists, fellows & nurses) in order to share experiences between disciplines, to improve skills and to benefit from the joint practice.

Methods.
In our large volume, tertiary referral endoscopy unit, we have organized monthly training sessions for all endoscopists and nurses (maximum 20 per session divided in four groups) since 2 years.
Five senior nurses (>5yrs experience) from our endoscopy-unit have developed a training program consisting of four stations. Each station is supervised by one nurse and one experienced gastroenterologist. All trainees rotate between the 4 stations, spending at least 1,5 hrs at each station. xxxxxxx country

Station 1: Simbionix training (interactive computerised simulator).
Knowledge of endoscopic procedures, hands-on training of equipment involved.
Station 2: EASIE model (pig's stomach specimen with bleeding focuses) to practice haemostasis techniques.
Station 3: ERCP materials and knowledge of equipment.
Station 4: EASIE model (pig's stomach specimen with duodenum) to practice ERCP-skills.

We developed a questionnaire to evaluate the usefulness of these training sessions. All trainees were asked to fill out a questionnaire before and after the training session. Results were calculated by comparing pre- and post training questionnaires.

Results:
In the fall of 2003, 46 participants completed a training session and filled out their questionnaires before and after. Questionnaires showed that 40 out of 46 participants (92 %) reported an improvement in their skills at end of the training day.

Conclusions.
Structured training sessions combining gastroenterologists, fellows and nurses show a very high success rate with regard to improvement of skills.

Best Free Paper 2004 - Category: Poster Presentation
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A DAY FREE FROM GLUTARALDEHYDE BUT WITH DISINFECTED ENDOSCOPES.
PARADOX OR REALITY?

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Background:
Manual washing and final decontamination of flexible endoscopes in an endoscope washer-disinfector is common practice in all endoscopy units. National and international guidelines recommend a standardized protocol to achieve an endoscope which is safe for patients and personnel. The present study was undertaken to examine the microbiological quality of manual and automatic decontamination, and to compare the effect of a glutaraldehyde based process to a process with super-oxidized water.

Endoscopes and Washer-disinfectors:
All endoscopes were of Olympus brand. Belimed and Olympus washer-disinfectors were used.

Methods:
Samples for quantitative microbiology were collected aseptically before and after manual prewashing of the endoscopes and after final decontamination in the endoscope washer-disinfector. Sampling was done by separate flushing of all endoscope channels with broth containing neutralizers for glutaraldehyde and chlorine. The fluid was inoculated directly as well as after filtering through a membrane filter onto agar plates and incubated aerobically and anaerobically for 5 days. Colonies were counted and identified by conventional microbiological methods. Numbers were given as total number of colony forming units (CFU) per endoscope channel.

Results:
So far 27 endoscopes have been examined (8 duodeno-, 12 gastro-, 2 entero- and 5 colonoscopes). Bacterial growth after final processing in the endoscope washer-disinfector was detected in one or more channels in 12 of 27 endoscopes (44%).
The degree of contamination varied between 3 and 1610 CFUs per channel. The dominating organisms were Gram positive cocci and Gram positive spore-forming rods. The air-water channel was contaminated in all cases (12/12), whereas additional contamination of the the biopsy channel and the jetchannel was found in 2 endoscopes. There was a trend towards more frequent contamination in endoscopes desinfected with glutaraldehyde (9/16 vs. 3/8).

Discussion:
Although the degree of contamination was low in most cases, the frequent contamination of the air-water channel is not acceptable. In particular, the lack of efficacy of 0.2% glutaraldehyde at 55 ^{o} C is disturbing. Studies are in progress to find out whether suboptimal manual cleaning or insufficient function of the washer-disinfector is the cause of the problem.

Set up and instruction of the endoscopy unit in Dahka/Bangladesh

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Introduction:
The endoscopy unit in the ICDDR, B is actually based in the Travellers clinic. This clinic is an outpatient clinic within the ICDDR, B which offers a vaccination service and processes clinical specimens submitted by individuals and clinics within Dhaka for clinical pathology, microbiological and biochemical tests. The nursing staffs allocated to the travellers' clinic consists of one nurse which gives the vaccination and assists the endoscopic procedures. The endoscopes presented as a gift from the Foundation for the Promotion of Gastroenterological Research, Switzerland are 2 Pentax video-coloscopes and one gastroscope. It also includes an endoscope cleaner (mechanical distribution of the disinfectant trough the endoscopes). The processor and light source and the video screen are 4 resp 5 year old equipment used by the Department of Gastroenterology in Basel.

Aim:

Four nurses where chosen to be trained. One nurse responsible for the traveller's clinic was experienced in assisting endoscopies, two other nurses have had basic training to assist in the procedures. One of these nurses spent a 2-week training in Japan in a busy endoscopy unit. One nurse who was assigned to attend the introduction of the equipment was an experienced staff nurse without prior experience in endoscopy.

Method:
The first and most important steps where to introduce the nursing staff to the new equipment and the special precautions which are necessary in handling a video-endoscope. After unpacking and installation of the light source and the monitor, the nurses where trained to prepare the endoscope for a diagnostic procedure including checking the electrical equipment, connecting the air and water supply and the suction pump. All these functions had to be tested before the procedure. The functions of the monitor and light source were explained and retrained again, first by explaining the functions and later by practical examples simulating an diagnostic endoscopy. A step-by-step approach to problems which might occur during the procedure was trained. A list of the steps for the examination was prepared for later reference. During the introduction members of the Biomedical Engineering Unit (Head: Syed Saiful Huq) were present to be able to understand and repair minor problems related to the new equipment. The second step was to train the cleaning procedure.

Conclusion:
The instruction of the nursing staff to assist endoscopic procedures was very successful and was attended with great interest. The nurses had already basic knowledge of the procedures and where especially introduced into the handling of video endoscopes. A long time was spent for the training of the cleaning procedures of the endoscopes.

Guidelines for Safe Care in Bronchoscopy

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The talk will be based on the *"Guidelines on Diagnostic Flexible Bronchoscopy"* produced by the British Thoracic Society in 2001

The areas covered by these guidelines are as follows:

- Complications, contraindications and pre-cautions;
- Sedation and anaesthesia/analgesia;
- Cleaning and disinfection including glutaraldehyde usage;
- Staff safety;
- Bronchoscopy in the intensive care unit;
- Data collection and staff training;
- Patient satisfaction.

For a copy of the full PDF version of the guidelines - please contact: Christiane.Neumann@swbh.nhs.uk

References:
D Honeybourne, J Babb, P Bowie, A Brewin, A Fraise, C Garrard, J Harvey, R Lewis, C Neumann, C G Wathen, T Williams. British Thoracic Society Working Party. *Guidelines on Diagnostic Flexible Bronchoscopy.* Thorax 2001; 56 (Suppl 1): 1i-21i

Safety and sedation during endoscopic procedures. BSG 2004. This report was originally published in 1991 and has been updated by Dr Robin Teague on behalf of the Endoscopy Section Committee of the British Society of Gastroenterology. (www.bsg.org.uk)

WHAT CAN BE DELEGATED TO UNQUALIFIED PERSONNEL?

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Background:
In the majority of European countries levels of qualification of staff working in Endoscopy varies. In addition to qualified / registered nurses, it is possible and quite usual that a variety of ancillary personnel is working in Endoscopy units, such as doctor's assistants, nursing auxiliaries, health care assistants, operating department practitioner, endoscopy technician as well as young persons doing their civilian service.

There are a variety of reasons to employ different levels of staff in Endoscopy:

- Shortage of qualified nurses
- Limited financial recourses for personnel costs and staff recruitment
- Reduction of staff with higher qualification ("Qualified endoscopy nurses are too expensive")
- Change in health care systems (Proliferation of new categories of health workers at all levels, creation of new qualifications at lower academic levels)
- In some countries doctor's assistants traditionally work in GP's offices and also assist during endoscopy procedure performed in these settings.

Delegation and responsibilities:
The delegation of nursing tasks to unqualified staff has two main reasons: The shortage of qualified nurses has increased in many European countries. Parallel to this trend the overall workload in endoscopy has also increased significantly. Delegation to unqualified staff relieves nurses and gives them time to concentrate on more specialised tasks.

Endoscopy nurses are responsible to ensure the patient's physical safety and psychological well-being before, during and after the procedure, to prevent any hazards or complications, including infections, and to ensure a patient-focused organisation and management of the endoscopy unit.

Before nursing tasks can be delegated, the following points have to be taken into account:
- Based on national regulations and guidelines, standards have to be developed in each department. They are directions for safe practice.
- Job descriptions for each position within the team should include clear statements concerning professional and legal responsibilities and line management (authority to delegate).
- The "unqualified" personnel need to be competent within their limits of knowledge and training. In addition to technical skills, they need to have basic education and specialised knowledge relevant for the delegated task. If the person has direct patient contact, they also need be trained in communicative skills.
- Independent from the professional qualification, each person is accountable in law for his or her actions and omissions. While ancillary nursing personnel have the responsibility to act safely and effectively within their sphere of competence and limits, nurses have the duty of direct or indirect supervision on a regular basis, with all its adherent legal consequences. It is essential to clarify in advance who has the professional, organisational and legal responsibility in case of complications.

Delegation in Endoscopy:
In the majority of European countries unqualified staff is working autonomously in the following areas: registration desk, reprocessing area and transport of non-sedated patients. In other areas (e.g. patient care and assistance during procedure, recovery area, transport of sedated patients) unqualified staff can only work under supervision of qualified nurses, as their training does not give them the competence to work independently. Whatever area unqualified staff is working in, the legal responsibility for their *delegated* tasks ultimately lies with the trained nurse delegating, the department manager responsible for the job policies, and with hospital management consenting to this delegation.

Conclusion:
If nursing tasks are delegated to unqualified staff, appropriate regulations need to be in place, delineation of working areas and responsibilities have to be defined, and legal accountability has to be clarified.

References:

- ESGENA. European Job Profile for Endoscopy Nurses. 2001; www.esgena.org
- International Council of Nursing. Position Statement 2000: Assistive or Support Nursing Personnel; www.icn.ch
- U.Beilenhoff, E. Kern-Waechter. Stellenbeschreibung für Krankenschwestern / -pfleger in Endoskopieabteilungen. Endopraxis 1/1999; 22-24

Introducing a Quality Management System to an Endoscopy Environment.

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OBJECTIVE:
To describe the experience of introducing a Quality Management System, i.e. the ISO 9001:2000®, to the Endoscopy environment.

ABSTRACT
Quality in healthcare is described as those activities aimed at doing the right thing consistently, ensuring the best possible clinical outcomes for patients, customer satisfaction, staff retention and good financial performance (NSAI 2000). Quality Management Systems e.g. International Standard Organisation (ISO) & European Foundation for Quality Management (EFQM) Models, are frameworks adopted by organisations i.e. manufacturing or service, which direct and controls their quality activities.

Initial quality activities in healthcare were individual initiatives within organisations e.g. patient satisfaction surveys or patient information leaflets etc. Integrated systemic approaches e.g. ISO, or Benchmarking, were widely rejected or implemented reluctantly in a fragmented, erratic manner. The focus was on the quality of the organisation as opposed to the quality of clinical care delivered.

Evidence based practice changed this. Acceptance that best practice required a direct, demonstrative recent and robust evidence base and that the establishment of agreed standards and guidelines, as found in a quality system, would be the best means of facilitating delivery of consistently good clinical outcomes.

In 1997, the Gastro-Intestinal (GI) Unit at the Mater Misericordiae University Hospital applied and succeeded in attaining the International Organisation for Standardisation (ISO) accreditation i.e. ISO 9002®. Subsequently in 2003, following an audit the revised award i.e. ISO 9001:2000® was awarded. It is to date the only Endoscopy unit in Ireland with ISO accreditation.

This unit holds a strong commitment to quality in all aspects of patient service and clinical practice. The ISO formula was selected as it was considered to be more service orientated. Involving a multi-disciplinary team effort. All existing unit policies and guidelines had to be adapted to Standard Operational Procedures (SOPs), the basic working template of the ISO system. Every aspect of practice involved in the patient's pathway through the service, from referral to discharge, e.g. assisting at therapeutic ERCP or ordering replacement scrubs, were formulated and documented as SOPs. All these practices then are audited incrementally, ensuring the system is maintained and supported, while simultaneously identifying the need for change, and demonstrating a commitment to continual improvement.

In place the system provides for a structure, controlled, consistent, safe, user-friendly, patient orientated service for each client i.e. patient, referral source, supplier etc. attending the Endoscopy service at the Mater Hospital. In addition outcomes such as reduced referral waiting times, improved patient satisfaction and the introduction of effective nursing competency programme have been made easier. The excessive documentation requirement and the restrictive nature of the measured outcomes, not always applicable to medical or nursing care have been the main criticisms of its implementation.

In conclusion introducing a Quality Management System has been a positive and beneficial experience and limitations experienced with the ISO format may be addressed with the use of an alternative model such as European Foundation for Quality Management Award which has a greater emphasis on achievable results and leadership.

Colorectal Cancer prevention and the nursing role

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Colorectal cancer is the second most common cause of cancer death in the UK after lung cancer. It is estimated that there are more than 34,000 new cases of colorectal cancer diagnosed in the UK each year and around 16,000 deaths. The survival rates for colorectal cancer in the UK are amongst the lowest in Europe and almost 20% lower than in the US. Poor survival rates for colorectal cancer in the UK has a correlation with the advanced stage at which most cancers are diagnosed.

Colorectal cancer is however potentially preventable as available evidence has shown that most colorectal cancers arise from previously benign adenomatous polyps and that resection of these polyps prevent cancer. In 2002 the baseline findings of the first UK randomised control trial examining the hypothesis that a single flexible sigmoidoscopy (FS) screening procedure offered to the general public around the age of 60 could lower the incidence and mortality of colorectal cancer. Baseline results from the trial indicate that a one off screening FS at the age of 60 gives a high yield of neoplasia in up to 15% of the trial population and could reduce the risk of fatal colorectal cancer by 60%. FS was demonstrated to be safe, acceptable to the public and feasible for national implementation. Findings conclude that the high detection rates of neoplasia within the distal colon will lead to a reduction in the incidence of colorectal cancer.

In 2002 the Secretary of State for Health made a public statement supporting the development and implementation of a national screening programme for colorectal cancer within the next 5 years. Any national colorectal cancer screening programme to be implemented will lead to an increase in the demand for endoscopic services to assist with the detection and treatment of colorectal neoplasia. In the UK there is already a recognised lack of medical manpower to provide endoscopy services for patients who are currently in the NHS system.

Nurse endoscopists have demonstrated their effectiveness in performing screening FS for colorectal cancer in the US. They have demonstrated clinical effectiveness in their endoscopic and clinical practice in the UK and their role is continually evolving to develop advanced endoscopic practice. Nurse endoscopists are ideally suited to provide a screening role as they have to demonstrate accuracy and effectiveness as part of their practice, characteristics which are crucial to endoscopy screening programmes.

Margaret Vance is a Nurse Consultant in Gastroenterology at St Mark's Hospital Harrow and is currently undertaking a PHD examining the feasibility of a nurse led flexible sigmoidoscopy colorectal cancer screening programme for the UK.

HEALTH CONDITION OF ENDOSCOPY PROFESSIONALS: RESULTS OF A NATIONAL ENQUIRY

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Introduction
Nurses and doctors in endoscopy units work under high physical strain. The aim of our enquiry project was to evaluate their health conditions; the results of the survey may help to minimise professional health risks in endoscopy.

Methods
We mailed a validated questionnaire ("Freiburger list of complaints") together with explanations to all members of our National Society of Gastroenterology and Hepatology (n=971) and to all members of the National Society of Endoscopy Nurses (n=210). This questionnaire contains 80 items in 10 groups; we added 25 questions regarding demographic and insurance data as well as on health problems considered typical for endoscopy. The ten groups of the questionnaire are related to problems and restrictions in general well being and emotions, as well as to those in the cardiovascular and gastrointestinal system, head- throat irritations, mental distress, sensory restrictions, joint and back pain, and skin problems.

Results
Only 8% of doctors but 35.7% of nurses returned the completed questionnaire. Of the *doctors*, 55% complained about back pain, 17% about varices, 15% about aching fingers and hands, 11% had troubles with their skin, 9% with their eyes and 8% suffered from hypertension. 5% mentioned hip pain and 4 % tendovaginitis. In comparison to average values from the general population in the Freiburger questionnaire 14 % of doctors have significantly more health problems, especially concerning skin diseases (+26.7%), emotional hypersensitivity (+21.4%), heart and circulation problems (+21.3%) and gastrointestinal complaints (+21.3%). Mean days off work because of illness were 2.4 per year. There was no correlation between health problems and age or number of endoscopies per day and a weak correlation with the number of ERCPs. Of the *nurses*, 57% complained about back pain, 24% about varices, 17% about aching fingers and hands, 32% had troubles with their skin, 28% with their eyes and 9% suffered from hypertension. 13% mentioned hip pain and 8 % tendovaginitis. In comparison to the average Freiburger questionnaire values, 29 % of nurses have significantly more health problems, especially related to skin diseases (+39%), pain syndromes (+36%), gastrointestinal complaints (+36%), emotional hypersensitivity (+29%), sensomotoric problems (+25%), head-neck-problems (24%) and heart and circulation problems (+21%). Mean days off work because of illness were 7.0 per year. There was no correlation between complaints and age or number of endoscopies or ERCPs per day. Nurses mentioned health problems significantly more frequent than doctors ($p<0.05$) although they were younger on average.

Conclusions
Working in endoscopy units seems to be related to health restrictions above average, whereby nurses seem to be more frequently affected than doctors. They also had more days off work. The most prevalent problems are back pain, varices and aching fingers and hands. Further studies have to elucidate specific responsible factors for these problems and evaluate prophylactic measures.

NURSE'S EVALUATION OF A SYSTEM ALLOWING INTRADUCTAL EXCHANGE DURING ERCP

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Background
Co-working between GI assistants and physicians during ERCP is essential for difficult cases where fine manipulations of the guide wires are required for accessing biliary or pancreatic ducts. Former systems designed for saving time during exchange of devices were limiting the role of the GI assistant in this setting.

Patients and methods
As part of a multicenter trial, pilot evaluation of a new system called "FUSION" (Wilson Cook Medical, Winston-Salem, USA) allowing intraductal exchange (IDE) was performed in our center, on a total of 37 patients requiring therapeutic ERCPs (EST : n=22 ; stones removal : n=10 ; dilatations : n=8 ; stenting : n=23 ; brushing : n=2). A total of 60 intraductal exchanges were successfully performed. In 14 cases, it was decided to move from the short to the long wire system successfully. Since the beginning, the nurse involved in this evaluation was prospectively noting the advantages and disadvantages regarding comparisons with previously used short wire system or classical system.

Results
The following advantages (A) and disadvantages (D) were noticed :
A.
Possibility to move from the short wire technique with manipulations of the wire by the physician to the long wire technique with GIAssistant help at any time.
Placement of multiple stents using the same wire, without the need for replacement of the wires.
Short wires easier to handle by the nurses.
No need for wire handling by GIA during short wire guided exchanges.
Removability of stents on the wire in case of misplacement.
Compatibility with all the other systems.
D.
Limited co-working possibilities during stent insertion on short wires.
IDE impossible in some very high stricture at the level of the hilum.

Conclusion
This new system allowing IDE offers similar possibility to the classical system while having some major technical advantages, especially for stent placement, with limited disadvantages concerning physician-nurse interactions.

IMPLEMENTATION OF BIOTRACK SPECIMEN TRACKING SYSTEM INTO AN ENDOSCOPY DEPARTMENT

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Introduction: The taking of a biopsy is an important part of many endoscopic procedures. It is essential that all biopsies taken are correctly labelled to avoid misdiagnosis or the need for a repeat procedure.
Aim: The Biotrack system is a simple method of labelling specimens that helps nursing staff to reduce or eliminate errors. It provides a unique way of clearly identifying both the patient and the biopsy site.
Method: The Biotrack system was introduced into the Endoscopy Department in Nov. 2002 as a way of raising standards of practice by reducing the number of specimens that were returned by the Histopathology laboratory due to incorrect or unclear labelling. Each sheet of labels has three sections of identical labels, each with a unique 7-digit identification number and common biopsy sites pre-printed on them. A separate sheet is used for every patient and the labels are attached to the histology form, the patients nursing record and inside the specimen cassette. A label containing only the unique identification number is kept in a logbook with the patient details to allow for checking in case of a discrepancy. After the biopsy has been labelled, the sheet has the patient's name and number, the consultant and the date written on it, is signed by the nurse responsible for the specimen labelling and then filed in the patients medical notes.
Results: Prior to the introduction of Biotrack, there was some resistance to the implementation of this change by both nursing and medical staff. This was primarily due to concerns about additional paperwork causing delays to already busy endoscopy lists and to the perception that specimen labelling wasn't really a problem. However,

staff training was carried out and the system was only used on quieter lists for a three month trial period to allow staff time to familiarise themselves with it.

Use of the Biotrack system has now become part of the routine for staff. Nurses like the system and feel that it gives them more confidence with labelling specimens correctly, especially when multiple biopsies are taken. Accountability for labelling and preparation of specimens for transfer to the laboratory is more clearly defined. When there is a discrepancy with labelling of a specimen, it is usually quick and simple to resolve.

Although the effectiveness of this system hasn't been formally evaluated, it is clear to both Endoscopy and laboratory staff that the number of incorrectly labelled specimens has fallen dramatically.

Conclusion: Implementation of the Biotrack specimen tracking system into the Endoscopy Department appears to have had positive benefits to both patients and staff. Anecdotal evidence from pathology and Endoscopy staff indicates a significant reduction in specimen labelling errors. However, a full evaluation of the system by monitoring specimen labelling discrepancies before and after implementation of this system should be undertaken.

CARBON DIOXIDE INSUFFLATION DURING COLONOSCOPY: SAFE EVEN IN SEDATED PATIENTS?

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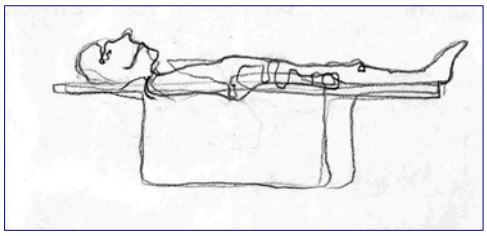
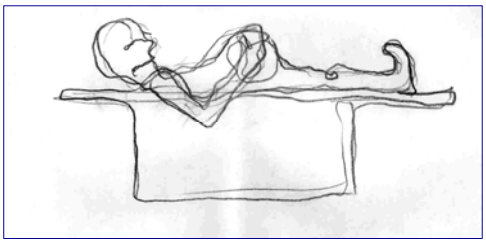
Background:

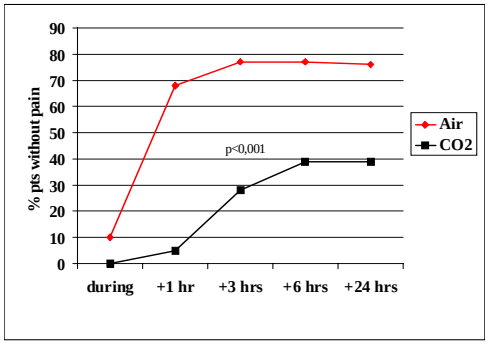
Recent data have shown that use of carbon dioxide (CO2) insufflation during colonoscopy (instead of air), can reduce post–procedural pain significantly.
The present study was designed to study the effects and safety of replacing air with CO2 also in sedated patients.

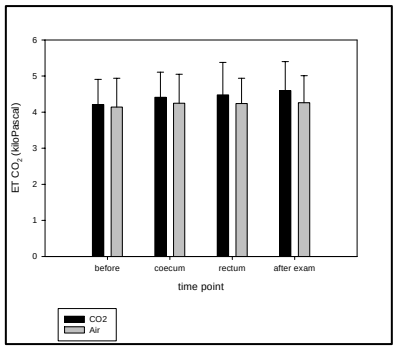


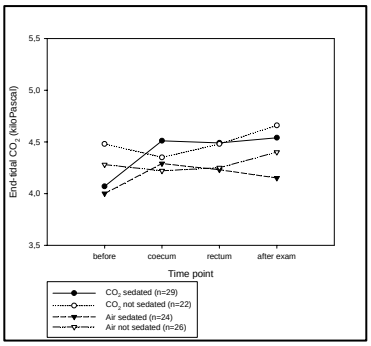


Methods:

102 consecutive patients scheduled for colonoscopy at our institution were randomly assigned to the use of either air (n=51) or CO_2 insufflation (n=52) Endoscopist and patients were blinded. End tidal (ET) CO_2, a non invasive parameter for arterial pCO_2, was registered before, twice during and 10 minutes after the examination. Patient`s pain during examination and at 1,3, 6 and 24 hour following examination was registered using a questionnaire with 100 – mm visual analouge scale (VAS)







Results:

Mean end – tidal CO2 values – AIR versus CO2 group .

Mean end – tidal CO2 values – SEDATED v UNSEDATED group

Pain during and after colonoscopy AIR v. CO2 group

Conclusion:
CO_2 insufflation is safe during colonoscopy also for sedated patients. CO_2 was found to be superior to air regarding post–examination pain.
We thus recommend CO_2 insufflation in colonoscopy for both sedated and non sedated patients.

NOSOCOMIAL INFECTION AND NURSING CARE RELATED TO ENDOSCOPIC BILIARY PROSTHESIS INSERTION.

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INTRODUCTION:
Many patients already present incurable disease when diagnosed with gastrointestinal neoplasias, such as neoplasms (pancreatic tumors, cholangiocarcinomas and metastasis) that obstruct the bile ducts. Relieving bile duct obstruction by endocopic methods is a valid alternative to surgery for patients with very advanced disease or those with a high surgical risk.
In our centre, the Infectious Diseases Unit follows a surveillance system for Nosocomial Infection (NI) in the Gastroenterology Service. An infection is considered nosocomial when it is not present either in the incubation period or clinical phase at the time of hospital admission.

AIM:
To determine the incidence of NI related to (EBPI), and to establish the corrective measures before, during and after the procedure.
MATERIAL AND METHODS:
Retrospective analysis included: All patients with (EBPI), from January 1996 to April 2002. Microbiological records: etiology and bacteria responsible for NI, antibiotic sensitivity of bacteria isolated in patients with (EBPI), on the 14 days post- procedure for early NI detection. We excluded patients coming from other hospitals or with cholangitis prior to the endoscopic procedure. Antibiotic prophylaxis was Cefoxitin 1gram i.v. 2 hours before and 6 hours after the endoscopic procedure. Nursing records and procedures related to the (EBPI), were reviewed.

RESULTS:
From a total of 350 biliary prosthesis in 276 patients, 203 in 163 patients met the inclusion criteria.
The incidence of cholangitis was 11/203 (5.41 %) and the average time per episode of cholangitis following biliary prosthesis insertion was 3 days (0.5 – 13). Some infecctions were polymicrobial. Bacteria isolated in blood were: 11 Enterobacteriaceae (3 Enterobacter cloacae, 3 Klebsiella pneumoniae, 2 Escherichia coli, 1 Klebsiella oxytoca, 1 Citrobacter freundii, 1 Serratia marcescens). 3 Nonfermentative gram-negative bacilli (2 Pseudomona aeruginosa, 1 Stenotrophomona maltophilia). 5 Enterococci (3 E. faecalis, 2 E. faecium). 1 Streptococcus (1Viridans streptococcus).
Bacterial sensitivity in vitro was 6/20 (30 %) for cefoxitine, 18/20 (90 %) for imipenem and 19/20 (95 %) for piperacillin-tazobactan.
Nursing care was described in the nursing records before, during and after the procedure. Low compliance of some recommendations of cleaning and disinfecting strategies were detected and they were reviewed and corrected.

CONCLUSIONS:
Cefoxitin is not adequate for prophylaxis of BPI
We recommend the use of a protocol of nursing care describing the procedure over the three periods. Established guidelines of disinfection and sterilization methos for this procedure.

CONSTRUCTIVISM IN EDUCATION

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"Humans can only clearly understand what they have themselves constructed" Giambattista Vico (1668-1744)

Constructivism is a philosophy of learning and a way of thinking. The emphasis is on the active and meaningful development of selves as well as systems. It means lifespan development and it is both social and cultural. Constructing meaning is learning. Meaning requires understanding wholes as well as parts. And parts must be understood in the context of wholes. Therefore, the learning process focuses on primary concepts, not isolated facts. Constructivism has its background in Cognitive psychology.
Learning is a social, active, mental process of adjusting our mental models to accommodate new experiences. By reflecting on our experiences, we construct our own understanding of the world we live in. Each of us generates our own "rules" and "mental models," which we use to make sense of our experiences. Learning involves language: the language we use influences learning. Learning is contextual because we learn in relationship to what else we know, what we believe, our prejudices and our fears. We need previous knowledge to learn and it takes time to learn: learning is not instantaneous. For significant learning we need to revisit ideas, ponder them, try them out, play with them and use them. We need motivation is for learning; we have to know "the reasons why".

The learner construct new ideas or concepts based upon their current/past knowledge. He/she selects and transforms information, constructs hypotheses and makes decisions and constructs knowledge for themselves, each learner individually and socially. The learner needs to do something (an active learner) because learning is not the passive acceptance of knowledge. He/she takes responsibility for own learning and becomes problem solver and her/his autonomy initiative and intellectual identity are accepted and encouraged. He or she is engaged in dialogue with the teacher and with other learners. Social discourse helps the learner to change or reinforce their ideas. The learner and the teacher should engage in an active dialog (i.e., socratic learning)The teacher gives opportunities to learn and he/she must understand the mental models that learners use to perceive the world and the assumptions they make to support those models. The purpose of learning is for an individual to construct his or her own meaning, not just memorize the "right" answers and regurgitate someone else's meaning. Higher-level thinking is always encouraged in constructivism. The teacher encourages the learner to connect and summarize concepts by analyzing, predicting, justifying and defending their ideas. He/she provides opportunities for the learner to learn and uses raw data, primary sources, manipulatives, physical, and interactive materials. The focus is on the learner in thinking about learning He/she arranges required resources, acts as a guide to learners while they set their own goals and 'teach themselves' He/she has to provide activities which engage the mind as well as the hands and emphasize patients' ability to solve real-life, practical problems.
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The Basel Rotation Model for Endoscopy Personnel

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Introduction
With the development and increased use of fiberoptic endoscopy, the need for structured training and education among endoscopy personnel likewise increased.
- 1975 The first professional society for endoscopy personnel was founded.
- Since 1980, special professional societies for certified nursing staff (AKP) and nursing assistants (MPA) have become established.
- 1980 - 1990 First courses were held in "continuing professional education in the functional area of endoscopy," including practical courses at external endoscopy departments
- 1998, the "European Endoscopy Nurses Forum (EENF)" was founded by ESGENA (European Society of Gastroenterology and Endoscopy Nurses and Associates).
- Since 2000, there has been a "gastroenterological endoscopy" continuing education module for nursing assistants (MPA) in Germany and Austria.

However, Switzerland has had, to date, no structured training for endoscopy nursing staff.

Goal
The goal of the project is, for the area of gastroenterological and pneumological endoscopy in Switzerland:
1. to develop and offer an individually-tailored continuing education and training model with structured rotation courses, as well as
2. a complete continuing education course for AKP and MPA with a view toward developing and offering specialized professional training.

Method
Since 1998, individually tailored rotations have been offered; and since August 2001, these have been supplemented with a structured rotation catalogue.
One month before the rotation begins, participants choose from the catalogue that module that they find interesting.
Based on this selection, an individual (max. 2 people) rotation program is set-up that lasts between 3, 5 to 10 days.
This program specifically contains:
- Theoretical and practical instruction
- A "learn and teach" situation (After learning the method, they learn to teach it to others.)
- Active participation in the respective examinations and subsequent discussion with a mentor

Finally, each participant receives a written verification, signed by the Head of Continuing Training and Education *as well as* by the Medical Head of the Department, addressed to the participant's employee an rotation coordinator.

Results
Between May 1998 and Nov. 2004, a total of 45 rotations were made.
Professional training of the participants: 23 x AKP, 11 x MPA, 11 x Industry
Working location of the participants: 13 x Hospital, 21 x Practice, 11 x Industry
The following graphs provide information regarding the time frames required and the selected theme modules .

Conclusion
The rotation model described has proven itself as a useful method for continuing education and training.
This teaching form has the advantage that even when new techniques and methods are introduced, they can be learned and questioned in their entirety and in all of their complexity.
The implementation of a structured, advanced training tailored to the individual needs is supported by a standardized rotation catalogue.
We should strive to achieve the integration of this teaching form as a future component of "Advanced Training and Education for Endoscopy Personnel in Gastroenterology / Pneumonology" for MPA and AKP.

Supporting the Hepatitis C patient.

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Abstract.- Being diagnosed with Hepatitis C can be devasting for some patients. This session will discuss how the Clinical Nurse Specialist can support the patient and family and provide valuable information with regard to the virus, its transmission, lifestyle changes, further staging of the disease and treatments available. All of which are essential in order for the patient to make an informed choice with regard to further management and treatment of their disease.

Ethics Committees - The potential Role of Clinical Ethics Committees vs. Research Ethics Committees

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Introduction
Consideration of ethical issues in healthcare institutions has recently become an important and frequent part of discussions in healthcare, both at the level of the individual patient and in the community. A number of factors have contributed to this including, research into the mapping of the human genome, techniques for assisted reproduction and improved life support which offer new opportunities for treatment but which also raise ethical concerns. Recent public revelations in the United Kingdom such as enquiries into organ donation and retention, HIV and hepatitis C infection in the blood transfusion service, the removal of organs of dead children at post-

mortem examination without the consent of the parents, and the paediatric cardiac surgery inquiry at Bristol, have highlighted the importance of healthcare ethics. To protect the individual patient from unethical treatment or interventions, institutions have established two types of Ethics Committees: Research Ethics Committees (REC) and Clinical Ethics Committees (CEC). The function of these two types of committees is different, as is their legal power and often the location.

Research Ethics Committee (REC) were established after the Second World War in the light of the Nazi Medical Experimentations, which neither sought consent from the participants nor protected them from unreasonable interventions and torture. RECs have been established much longer than CECs and according to the new European Law on Good Clinical Practice in research (GCP) all clinical trials have to be approved by RECs before commencement.
RECs concentrate on the ethical aspects of research. While medical treatment is in the interest of the patient, as the patient (hopefully) will benefit from the treatment, medical and nursing research cannot be in the patient's best interest as benefit is often unlikely or unknown and the patient might actually be harmed. REC concentrate firstly on the burden which is put on the patient, and if what is required can be ethically defended, and secondly, on patients having enough information about the study to give informed consent.

Clinical Ethics Committees (CEC) have been a feature of the healthcare systems in North America since the 1970s and only more recently in Europe. The functions of these committees include policy development on ethico-legal matters, provision of individual consultation about specific clinical cases and the organisation of ethical education among clinical staff.
CECs provide support and advice to health professionals and patients on ethical issues arising from clinical practice or patient care. The support can take different forms; some institutions have formal committees and case reviews, others meet on demand and use clinical ethicists. Their work falls into four broad areas: providing ethics input into hospital policy and guidelines around patient care, facilitating ethics education of health professionals within the institution, giving advice to clinicians on individual cases, and giving advice to patients when asked. Examples of consultations are around withdrawal of treatment, capacity to give consent, late abortions, *Do-not-resuscitate* orders etc.

Summary
Both clinical and research ethics committees provide a vital part in the protection of patients and must be utilised by staff as appropriate to ensure ethical standards in patient care.

References:

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COOPERATION OF PARENTS AT ENDOSCOPIC PROCEDURES OF THEIR CHILD IMPROVES MEDICAL CARE QUALITY

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Introduction
Endoscopy of gastrointestinal tract is a difficult and unpleasant procedure for a child. It is important that the child and his parents who are included in all stages of the procedure are well prepared for it.

Aims
Aims of this study were to determine the advantages and disadvantages of the parents being present and actively involved in the endoscopic procedure of their child.

Methods
Parents of 31 children (aged 1 to 17 years, mean age 10 years) that were (on their own request or the request of the child) (19) or were not (12) present at the endoscopic procedure filled out a questionnaire where they assessed their presence at the procedure by importance and their feelings at the procedure, the ones not present at the procedure listed their reasons for not being there.

Results
During the endoscopy in 68% the mother was present with their child, in 7% father was involved and in 25% no parent was present. According to the parents the most important factors are a qualitatively carried out procedure (97%), friendly medical staff (97%), clear instructions after the procedure (87%), explanation of the course of procedure (77%), presence of the parents (71%) and short waiting period (64%).
During the procedure 58% of parents felt safe, 68% gained greater trust to medical workers, 68% felt they offered their child security, 16% felt helpless, 10% were scared, 3% of the parents felt nauseus.
20% of children aged from 9 to 17 years didn't want their parents being present at the procedure, 7% of the parents didn't have the courage to participate.

Conclusion
The study showed that parents being present at the procedure is equally important as other factors(sufficient information procedure, quality of the procedure, friendly endoscopic team, easy-to- follow instructions). Parents are pleased that they have a choice to be involved. Children are more relaxed, cooperate better and cope easier with the unpleasantness of the procedure if their parents are present, hence their presence is indicated and necessary.

CREATION OF AN INFORMATION SHEET FOR PATIENTS UNDERGOING PH_METRIES

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Non having any information sheets for patients regarding this procedure , we decided to do one.It is fonctional exam allowing to measure the oesophagal Ph and thus exposition to acid during 24 hours.This exam is daily performed in our unit .This examen is performed for patients presenting gastroesophagal reflux , pyrosis and regurgitations , after conventionnel therapy with proton pump blockers failed.Other indications are unexplained nocturnal cough resistant to any antisecretion therapy.Contraindications are arrhythmic cardiac problems and important oesophagal varices .

Nurses role his role or her role is of high importance in preparing the patient physically and psychogically , as the exam recquires his participation .The nurse welcomes the patient , informing him about the exam procedure , giving him advice for the next 24 hours and finally answering questions .She or he prepares the single use material for putting inthe Ph metry tube , calibrating the device and installing the patient .She or he assists the physician , while he puts in the PH metry tube .

Technic interruption of medication before the exam , proton pump inhibitors should be stopped one week before the exam.Interruption of anticalcic drugs and nitrates after medical advice.The patient should be fasting for 6 hours before the exam.This exam is performed by placing a Ph metry tube after local nasal anesthesia .The tube is connected with a small box allowing a 24 hours registration of the ph .While carrying this device , the patient should live a normal life, but he should not drink any sparkling or acid drinks.Furthermore , he has to write down the eating hours , and the times he went to bed and got up .Any symptoms like heart burning pain and cough should as well be written down. He comes then back 24 hours later for removal of the tube .

QUALITY IMPROVEMENT PATIENT'S INFORMATION FOR ERCP

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Introduction:
Patients undergoing ERCP are at significant risk for complications.
According to Dutch law, physicians are obliged to give patients detailed information, and sufficient time before any investigation, to consider and ask additional questions related to the procedure.
Objective:
To compare the additional value of a newly designed questionnaire sent to the physician and patient prior to referral (group B), versus our current way of information (group A).
Patients:
We plan to include 100 patients referred from other hospitals to our department for ERCP (for the first time or after failed attempt elsewhere).
Methods:
The first 50 consecutive patients (group A) are at pre-assessment invited to fill in an 8-points questionnaire (yes or no), with the following questions:

1. did you undergo an ERCP before?
2. did your physician discuss the ERCP procedure?
3. are you aware of any complications?
4. was it possible to ask additional questions?
5. did you receive a brochure?
6. are you informed about alternatives procedures (other than ERCP)?
7. has attention been paid to continuation or discontinuation of your current medication?
8. what is your overall impression of the quality of information for the planned ERCP procedure?

In the second group of 50 consecutive patients (group B) a fax with detailed information and an ERCP brochure will be sent to the referring physician with the request: (I) to discuss with the patient: the procedure, complications, medication and alternative procedures, (II) to hand over the ERCP brochure and (III) to sign the informed consent and to return this to our department (via the patient).
Upon arrival in our hospital for the ERCP, patients explicitly are asked to fill in the questionnaire, mentioned in the group A paragraph.

Results:
The study of group A was completed at the time of abstract submission. The results show that patients were not adequately informed. 72 % of the patients has been verbally informed by the referring physician and of that group just 36 % has been made aware of complications. 40% received a brochure.20 % was informed about alternative procedures. 48 % attention has been paid to current medication.
In the months July and August we will include the patients of group B.

Conclusion:
Despite, the in our opinion quite poor patient-information (of the A group), 64 % informed us that they were satisfied with the quality of the information.

INCIDENCE OF LANGUAGE BARRIERS IN IMMIGRANT PATIENTS ADMITTED TO A GENERAL HOSPITAL IN BARCELONA

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In recent years there has been a substantial increase in the number of immigrant patients admitted to public hospitals in the city of Barcelona. Language difficulties and socio-cultural differences may influence treatment results in this patient group. The frequency of these socio-cultural phenomena in our setting is unknown.

OBJECTIVES
To analyse the incidence of language difficulties at several levels in immigrant patients admitted to a hospital and their correlation with demographic variables.

MATERIAL AND METHODS
A total of 69 immigrant patients admitted to the Gastroenterology Section of the Hospital del Mar between January 2001 and December 2002 were enrolled in the study. We determined age, sex, continent of origin, and level of difficulty with comprehension in Spanish (total language barrier) from data in nursing records.

RESULTS

The average age of patients 43±2; (19-88) and 65.2% were men. Distribution according to continent of origin was: 24 Asia, 20 Europe, 14 America, 8 Africa and 1 Oceania. Only 19 patients (27.5%) faced a total language barrier. These patients were younger than those without a total language barrier(35±2 vs. 46±2 years; p 0.005) and were mainly Asiatic (57.9% vs. 30%; p 0.003). The relationship to language difficulties and socio-cultural differences can not be evaluated from conventional nursing records.

CONCLUSION
We detected a total language barrier in 27.5% of immigrant patients admitted to our centre, the highest frequency being in Asians.
Further prospective studies are needed to determine the total language barrier in nursing diagnosis (NANDA).

THE GUIDELINES OF PEG NURSE PRACTICE IN KUOPIO UNIVERSITY HOSPITAL

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Background:
Percutaneous endoscopic gastrostomies (PEG) have been performed in Kuopio University Hospital (KUH) since 1987. Nowadays PEGs are inserted to some 50 patients yearly. Patients come from various departments (e.g. neurological, oncological, paediatric) of KUH or from other institutions. For adults the procedure is done under local anaesthesia in the endoscopy unit and for children in general anaesthesia at the operating theatre. The timing of patient education concerning the procedure is planned invidually.

The Role of the PEG Nurse:
By increase of PEGs about 10 years ago it proved out necessary to educate a nurse for PEG issues. Patient inquiries showed that patients were willing to get more information about PEG already before the procedure. In the beginning one of the nurses in the endoscopy unit was trained to get experience of the PEG. By now all five nurses of the endoscopy unit are familiar with PEG matters. The PEG nurse is *an assistant nurse:* she assists the doctor in performing the gastrostomy. In addition, she changes the gastrostomy buttons and balloon-type tubes. The PEG nurse acts as a *contact person* to the patient, between patient's relatives, doctors, ward nurses, dietician, general healthcare and other institutions, giving information about patient education and care. The most significant role of the PEG nurse is to act as *a guide*. The guiding process is multiphasic and it can last for weeks or months depending on the patient's condition and need for PEG tube. The patient information is given before and after the procedure, when changing the PEG tube to a button or a balloon-type tube or removing the PEG tube. The patient is also taught to change the button or balloon-type tube by herself/himself. In case of problems, the patient is allowed to contact to the PEG nurse by telephone or by personal visit. The duties of the PEG nurse also include *education* and *teaching* of nurses of other hospitals and general health care. The PEG nurse also gives lessons on national education courses.

Conclusion:
The guidelines of PEG nurse practice help in carrying out the primary nursing. Further, the patient can get quickly expertise advice in case of problems. We have done in our endoscopy unit a quality assurance study of the guiding of PEG patients, home care advice, a video on using the PEG button, and guiding principles of the new PEG nurse.

ENDOSCOPY PERFORMED BY SPECIAL TRAINED NURSES

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Introduction: In need of more endoskopists to diagnose colorectal tumours, as recommended by the Danish Institute for Health, our department have trained two nurses to perform flexible sigmoideoscopy.
This is a method to take advantage of the experience of nurses already available in the department, and a good prospect of increasing qualifications as a nurse.

It is important to notice, that the endoscopies are performed at the responsibility of a qualified gastroenterology specialist, who has delegated this procedure to the special trained nurses.

Method: To educate qualified nurses, a training programme was made containing a theoretical and a practical part.
The endoscopic examinations, performed by the nurses, are recorded on a CD-rom and finally surveyed by a gastroenterology consultant.
The specialist trained nurse and an assistant nurse work together in the operating theatre. A nurse in the recovery room welcomes and prepares the patient to the examination, and finally she discharges the patient immediately after the examination. If the patient has been sedated, a short rest in the recovery room is usually required. The assistant nurse in the operating theatre cares for the patient during the examination, and she assists if biopsies are taken. Furthermore, it is her responsibility to clean and prepare the endoscopes during the day.
If needed during the examination the nurse can call a gastroenterological surgeon for assistance. This is essential when discovering malignant tumours or inflammatory bowel diseases in order to start treatment immediately.

Results: We have independently performed sigmoideoscopy for a period of 18 month. During this period we have examined approximately 600 patients. An average of 9 patients is examined daily. Most of the patients suffer from irritable bowel syndrome, inflammatory bowel diseases and haemorrhoids, but frequently we discover colorectal tumours. There have been no perforations or other major complications to the procedures.

Conclusion: The period from referral to examination is reduced significant by allowing the special trained nurses to perform the endoscopies.
We experience that the patients are satisfied to be examined by nurses.
Judged by the supervising surgeon, the quality of the examinations is at least as good as examinations performed by the gastroenterology surgeons at the hospital, who by the way are pleased with this arrangement. It leaves them available for other tasks during the day.

PANCREAS PSEUDO CYST DRAINAGE USING ENDO ULTRA-SOUND

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A PPC (Pancreas Pseudo-cyst) forms following an episode of pancreatitis, acute or chronic, or as a result of pancreas trauma. Many PPCs resolve within a few weeks without treatment, others increase in size and can cause much discomfort, pain, nausea and in some cases infection.
Until the 1980's the only way to treat unresolved cysts was surgery. Percutaneous drainage using x-ray is an alternative method of treatment. Since the 1980s drainage has been carried out endoscopically. This procedure proved to be quite risky with the possibility of bleeding or perforation causing leakage into the retro-peritoneal cavity.
Since EUS became more popular in the late 1990's an endo ultra-sound would often be carried out immediately prior to the drainage procedure, this reducing risks considerably.
Since 2000 there has been am endoscope available which can be used for the entire procedure.
The advantages of this endoscope for this procedure are:

*Only one endoscope is needed *Endoscope imaging *Ultra-sound imaging
*Doppler function *Instrument lift *Large instrument channel

Although EUS renders this procedure as significantly safer, the specialist and the endoscopy nurse have to be prepared for complications occurring during the procedure.
The endoscopy nurses require experience and skill to assist in this procedure to ensure that everything goes smoothly.

Two endoscopy nurses are required to assist with this procedure:
One endoscopy nurse has the important task of preparing the patient for the procedure (in much the same way as for an ERCP) and cares for and monitors the patient during and immediately after the procedure. It is imperative that the patient lies very still and that the endoscope is held in position during the procedure. The nurse also makes a written report of medication given and after care.
The second endoscopy nurse is involved with preparing all the equipment and instruments necessary for the procedure and assists the specialist during the procedure. This requires concentration, skill and efficiency to avoid accidental removal of the guide wire or incorrect placement of the pigtail stents

The procedure is carried out as follows:
Using endoscopic imaging the bulging from the pseudo-cyst is located, if it is present. This is followed by ultra sound (US) imaging to measure the distance between the PPC and the stomach or duodenum wall and determine the optimal site of drainage. If no bulge is seen the cyst can only be visualised with US. At this point blood vessels can also be located to avoid them being punctured, in some cases the Doppler function is used at this stage. Using diathermy a small puncture is made into the cyst through the stomach or duodenum wall. The wire is removed from the diathermy needle and some fluid is aspirated from the cyst for laboratory purposes. After a guide wire has been introduced into the cyst a dilatation balloon is used to widen the puncture hole to allow for the introduction of at least 3 double pigtail stents and possibly a naso-cystic drain to allow for irrigation. The procedure is now completed.

Conclusion:
Prior to and during this procedure many important routine nursing tasks are carried out by one endoscopy nurse. These tasks are important to promote the well-being and comfort of the patient allowing the other endoscopy nurse to concentrate on preparation of the technical side of the procedure.
Especially in larger centres, the role of the endoscopy nurse is becoming more technical. Frequently our specialists are improving their techniques as new equipment and new instruments become available. As endoscopic nurses we have to make sure that we keep up to time with our specialists. Endoscopy nurses can improve their skills and knowledge by following specially formulated courses and visiting congresses. On the job training (which is given routinely in our centre) is important so that nurses are familiar with all the equipment used during intricate procedures in order to be proficient, to ensure that the procedure is completed in as short a time as possible in the interest of the patient.
We have a very demanding and dynamic profession. We have to keep our minds open and welcome new techniques with enthusiasm to keep up with the ever changing aspects in our profession.

THE IMPLICATIONS OF CHANGE IN DECONTAMINATION OF EQUIPMENT FOR GASTROINTESTINAL ENDOSCOPY

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Introduction
All patients undergoing digestive endoscopy should be examined and treated without risk of infection or side effects that may result from inadequately reprocessed endoscopic equipment (ESGENA 1999).
In the last few years there have been new recommendations and guidelines for the decontamination of endoscopes and accessories. The key influence to change in practice has been the emergence of variant Creutzfeldt-Jakob Disease (vCJD). There is no known method of disinfection or sterilisation of equipment following exposure to prions.
Inadequate reprocessing of endoscopic equipment is a potential source of cross infection. Endoscopy induced infections are usually due to procedural errors in decontamination.

Objective
The objective of this paper is to discuss the issues of change in practice, in relation to the cleaning and disinfection of endoscopes and accessories.

Method
Reasons to implement change; Health and Safety, Infection Control issues, patient and staff safety, the legal implications of negligence, the provision of a medical device which is fit for its purpose following manufactures guidelines.
The issue of variant Creutzfeldt-Jakob Disease requires the change in practice to use single use cleaning brushes, biopsy forceps and port inlet valves.
The cost implications for single use accessories can be worked out using the number of procedures performed each year for cleaning brushes, the number of therapeutic upper and lower endoscopic procedures would relate to the number of biopsy forceps and inlet port valves required.

Summary
Undertake a risk assessment to quantify the risk. Patients' safety vs. cross infection vs. litigation. Prepare a business case with evidence for change to best practice with a cost evaluation. Work closely with Health and Safety and Infection Control for advice.

Conclusion
Single use brushes, guide wires and biopsy forceps should be used to minimise the risk of transmitting prion disease. Biopsy inlet seals should be discarded after the insertion of biopsy forceps, wires and snares.
There are legal implications, patient's safety and evidence to support the change in good ethical practice.

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News from Industry – Olympus: Changing the way ERCPs are performed: V-System

Olympus Europa GmbH, Anja Schuster

The classic situation during biliary and pancreatic procedures: Assisting nurses have to handle a long guidewire while sliding Endo-Therapy devices along it to be inserted into the endoscope – a cumbersome and time consuming process that very often moves the guidewire out of position.

With the numbers and importance of biliary and pancreatic procedures on the rise, it was about time to rethink the whole ERCP procedure as we know it today. For this reason, Olympus set up an interdisciplinary team of dedicated engineers, doctors and designers. Initially the team analysed hundreds of ERCPs and identified three main procedural and ergonomic challenges:

1. Guidewire manoeuvrability
2. Guidewire positioning, and
3. Exchange and control of Endo-Therapy devices during the procedure

Based on this intensive research and analysis, the engineers, doctors and designers started development for a new ERCP approach. The result: The new V-System. With this system, Olympus is not simply offering a new tool for ERCP but proposing a whole new way of performing it.

The V-System combines three main innovations and benefits: The ability to lock the guidewire with the endoscope safely into place, an all new V-Holder™ for improved control and exchange of devices while the guidewire stays in place and a shorter guidewire – LinearGuideV™ – for better manoeuvrability and guidance. Plus a complete range of matching Endo-Therapy devices for biliary and pancreatic procedures.

The new V-Scope is basically a classic duodenoscope, like those employed every day for ERCP-procedures. What makes it different is a V-shaped groove at the tip of the forceps elevator. The dedicated guidewire LinearGuideV™ fits precisely into the V-groove and improves device manipulation to and from the bile and pancreatic ducts. The guidewire runs along the V-shaped groove, and – once positioned in the desired location – can be fixed and locked in place at the touch of the elevator lever. This way, Endo-Therapy devices can now be inserted and exchanged without the wire moving away from its position and sliding out of the papilla.

This locking into position also allows a shorter guidewire section outside the instrument: That not only means less handling of material for the nurse. It also adds a plus in hygiene, since less material comes into contact with non-sterile areas.

Thanks to the efficient design, the V-System gives full control to the physician over the Endo-Therapy devices during the exchange of instruments. The appropriate V-System Endo-Therapy devices are equipped with an additional half ring, by which they may be clipped to a specially developed V-Holder™ – the Endo-Therapy control device of the new V-System. The V-Holder™ plays an integral role for the overall system. It is mounted to the V-Scope and assists the operator in a very efficient way to control the guidewire and to exchange ERCP devices. V-System covers all technical and ergonomic aspects of biliary and pancreatic procedures – from start to finish – and thus is able to significantly facilitate ERCP.

The complete system brings more safety, comfort and confidence to the physicians in charge as well as to the assistants. Moreover, patients benefit from shorter surgery or treatment periods.

V-System at a glance

• One-touch-locking of guidewire
• Easier exchange and handling for ERCP instruments
• Shorter procedure time
• Less fluoroscopy needed
• Wide range of Endo-Therapy instruments

Endomicroscopy - first confocal endomicroscopy system to visualise mucosa at a cellular level

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With the PENTAX confocal endomicroscopy, microscope images of the body are possible even during endoscopy: With this new technology epithels, connective tissue and blood vessels of the mucosa of the colon can be visualised in the living organism in detail at a cellular level. In this way it is possible for the physician performing the examination to reliably diagnose or exclude an intraepithelial neoplasia during endoscopy without the need to take a tissue sample beforehand. The precision of the diagnosis is comparable to that following a conventional biopsy whereby the sample taken is then examined histologically. With this new method intraepithelial neoplasias can be diagnosed and differentiated from healthy tissue with an accuracy of 99% and that consequently endomicroscopy can be regarded as an equivalent to conventional histology. Worldwide more than 300 patients were examined until now. Beside 2 clinical abstracts and an oral presentation on DDW 2004 there is the first publication in GASTROENTEROLOGY currently in print (Kießlich et al). Also pathologists stated the endomicroscopy as a method with great potential which allows the endoscopist to differentiate between neoplastic and non-neoplastic epithels. It appears then that the main indications in the near future, in addition to colitis ulcerosa with its flat growing neoplastic focuses, are also Barrett's oesophagus as conventional methods are not sensitive enough in this case. The market launch is scheduled for the beginning of 2005.

Endoscopic fundoplication for GERD

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Some patients with gastro-esophageal reflux disease have troublesome symptoms, which respond poorly to proton pump inhibitor or other drug treatments. Others do not want to take medications long term. The medical costs of treating reflux are high and if surgery was effective, safe and inexpensive it might be very cost effective. Although laparoscopic or open surgical operations such as Nissen fundoplication for reflux seem effective in skilled hands, there are drawbacks to surgery. The main complications include impairment of swallowing, gas bloat, and a small mortality rate. A safer, less invasive, effective method for treating reflux using flexible endoscopes without incision and entering the peritoneal cavity might offer advantages for patients.
Working mechanism: Prerequisites for the invention of an endoscopic sewing machine were a method for passing a needle and thread through tissue, a method for catching the thread and then pulling the needle back through the tissue leaving the thread passing through the tissue. Other requirements included the development of methods for endoscopic knot tying, locking and cutting thread. All these were developed and modified for routine clinical use over some years (1-3). The basic rather simple stitch action in the current Bard Endocinch uses a hollow needle with a slot and a rod to force a metal tag, attached to thread, through the needle once it is pushed and has penetrated tissue. To place a full-thickness stitch in human gastric tissue, a sewing suction capsule with a cavity of a tested inner diameter and depth is mounted on a conventional flexible endoscope, which is provided with an extra suction channel running outside along the scope. Suction applied through this channel will suck the tissue into the cavity. A 17 gauge needle mounted on a wire-would coil catheter is pushed through the stomach wall through an endoscope using a large handle to apply mechanical force, which is mounted on the tip of the accessory channel. The tag mounted on thread is then pushed in a hollow needle through a double layer of tissue. The tag is caught in a retention chamber in the capsule of the sewing machine. When the needle is withdrawn, the tag tilts and is caught within this chamber and the endoscope withdrawn pulling the thread through the tissue. To form plications, this procedure can be repeated. Once the sewing process is finished a knot pusher, performing a very small mechanism "collet and sleeve" is used to lock the

thread. The same device, pushed through the accessory channel of the endoscope can cut the thread similar to a guillotine and in a single action and releases the knot.

Results: The device has been mainly used to treat gastro-oesophageal reflux disease. It has also been used to close oesophageal and gastric perforations and attach pH radiotelemetry capsules to the oesophagus, stomach and duodenum. Endoscopic gastroplasty is a minimally invasive surgical procedure for gastro-esophageal reflux, which has been performed at flexible endoscopy without laparotomy or laparoscopy (4). Promising results have been reported in both European (5) and American series (6) using endoscopic sewing machine technology. Results of endoscopic gastroplasty performed in 107 patients with GERD were reported recently (6). It showed that this operation can improve reflux symptoms, measured acid exposure of distal esophagus and increase lower esophageal sphincter length and pressure. Symptoms assessed by DeMeester score improved from a median of 5 to 1 ($p<0.05$). Median lower esophageal sphincter length increased from 2-3 cms ($p<0.05$) and pressure increase from 5-8 mm Hg ($p<0.05$). Median % time pH < 4 decreased from 8.4 to 2.7 ($p<0.05$). A recent report described 22 patients, who completed their one year follow up (7). Pre procedure and 12 months post-procedure assessments included symptom scoring (DeMeester), upper intestinal endoscopy, oesophageal manometry and 24 hour oesophageal pH, and completion of quality of life (QOL) questionnaires. Heartburn symptom score was reduced from a mean value of 19.22 at baseline to 7.5 at 12 months ($n=22$) ($p<0.0001$). Regurgitation score reduced from a mean of 2.27 at baseline to 0.86 at 12 months ($n=22$) ($p<0.001$). Mean (SEM) pH DeMeester acid score was reduced from 44.1 (4.3) to 33.32 (4.73) ($p=0.028$) at three month post procedure. Percentage upright acid exposure and number of reflux episodes were also reduced significantly. Use of PPIs was reduced by 64% at 12 months post procedure. All QOL assessments showed significant improvement ($p=0.01$). Complications were relatively uncommon and included bleeding, over-sedation, and a single perforation. All transient post procedure complaints resolved within 72 hours in the latest study (7). The procedure can be performed in day-case patients, who can leave hospital few hours subsequent to the examination. A study using the sewing machine in 20 children showing impressing positive results will be presented at the BSG 2003.

CONCLUSION: There is, of course, room for improvement. More work is needed to make endoscopic suturing easier, quicker and more reliable. In my view the single most important next goal is to construct a device, which can place multiple stitches without the need to remove the endoscope between each stitch. However, the results presented show, that it seems to be a very effective method for the treatment of GERD in selected patients

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Nurses' Role in Capsule Endoscopy

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Wireless video endoscopy or video capsule endoscopy is a novel non-invasive technique to investigate the small bowel in patients with obcsure blood loss or other small bowel diseases.
The entire procedure, connecting the patient to the apparatus in the morning, and disconnecting the patient at the end of the day and analysing the stored capsule images, are time-consuming tasks for the doctor.
On our unit two nurses, a colleague and myself, both with more than twelve years experience in endoscopic images of the upper and lower GI tract perform this procedure.
The gastroenterologist, my colleague and I view the capsule video individually and make still photographs (thumbnails) of abnormalities.
After that we discuss our notes together.
In the near future we will be sufficiently trained enough so that the doctor can rely on our thumbnails and will not have to view the complete capsule video.
For the endoscopy nurse this procedure gives a new dimension and depth to our profession and a challenge detecting the lesions.

GI Nursing in the 21st Century

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GI Nursing in the last decade , has moved from Standing watching to Standing doing for endoscopy nurses, and also has seen development of specialist roles caring for patients with GI Cancers, inflammatory bowel disease ,nutritional deficiencies, and establishment of nurse led services, and created patient benefits not least of which is faster access to services. But what are the possibilities and challenges for the future GI practitioner? Advances in medicine and information technology bring higher public expectation, whether Health and Social care is funded from taxation, or via insurance based schemes ,.the pattern of demand and need is changing now, and will change further over the next 10-15 years. Economic review in the UK(1) recently demonstrated that the present pattern of service provision is not sustainable, and there needs to be a strategic shift to focus on prevention and early intervention and a step change in peoples responsibility for their own health and that of families and communities.

New legislation (2), encouraging greater public involvement in health care decisions, and a commitment to patient partnership working, will challenge and change the relationships and boundaries between the professionals and patients as the latter become more educated and informed through global media and internet sources.

Policy makers, professional groups and economists are beginning to form the Vision, of the Future Nurse(3), the Expert patient,(4) recognising that those with chronic disease often know more about it than the professionals, and the Future Health worker(5). Nurses communication skills and information interpretation, will be crucial and tested by new ways of working, telemedicine, and counselling of health risks associated with genetic makeup, as well as medication compliance, and life style advice in partnership with patients will play increasing roles In.proposed screening programmes for colon cancer ,the technical role of performing colonoscopy or sigmoidoscopy will require an increased number of endoscopists, but just as important a role will be by nurses testing the acceptability of such programmes, encouraging uptake of screening offered, and decreasing anxiety of possible diagnoses.

The future nurse and nursing teams are visualised as delivering integrated nursing across care settings .They will map, navigate, coordinate and follow the healthcare journey in partnerships with their patients and other members of the healthcare team, practicing without traditional boundaries of role or setting, but organised around integrated care pathways.

GI nurses already have some building blocks to move forward with this agenda, but need to work with their National nursing organisations, specialist groups, national and European, to develop in partnership with others ,recognition and accreditation of specialist and core nursing competencies, promoting a positive image of the nursing contribution to health, to family , politicians, policy makers, the general public and future generations of nurses.

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THE EU HEALTH STRATEGY AND THE OPPORTUNITIES FOR NURSES AND NURSING

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The European Public Health focus is shifting towards influencing the public and their attitudes and behaviour. Within this process, the population is an integral part, acting by empowerment. Empowerment of citizens only occurs when sufficient information is available to understand the condition, the changing needs, the options available and sources of information. This process of reform creates role opportunities and innovative processes. Gastroenterology & Endoscopy nurses meet many citizens undergoing colorectal cancer screening, and their role within the public health area needs to focus on bad nutrition, alcohol, smoking and obesity (EU Public Health Programme).

PCN coordinates the European project 'Developing a continuing professional development programme in public health for nurses' in which common standards (Bologna Declaration), evidence-based best practice in public health, free movement (Directive on Mutual Recognition) and equality issues within and between European Member States are key components for strengthening the role of nursing within public health. Public Health training in Europe has reached the level where we are developing a common understanding of the core competencies of professionals through networking and collaboration. Europe needs professionals who will be able to work in the new health monitoring system, having access to evidence-based training methods and exchange best practice, providing examples how to incorporate health and life style education into the everyday working life.

The European nurses are a significant partner in achieving the Lisbon targets: to make the EU the world's most dynamic and competitive economy. Health means wealth, not just in qualitative terms, but also in solid economic terms. A healthy society is a more confident and productive society, one that draws less on health care spending and welfare payments. Therefore, the policy formulation capacity of nurses within the National and European legislative process is the key to success.

The Standing Committee of Nurses of the EU (PCN) was established in 1971. PCN represents over one million nurses and is the independent voice of the profession. Members consist of national nurses' associations from the twenty-five EU Member States. Associate Members are drawn from nursing associations in countries which are members of the Council of Europe. The mission of PCN is to safeguard the status and practice of the profession of nursing and the interests of nurses in the EU and Europe.